

New water resources are required

As a region and as a water company we face a time of great uncertainty and change. The East of England is one of the driest regions in the country, with only two thirds of the average rainfall and a delicate environmental balance. It is also one of the fastest growing, with potential population growth of a million people by 2045.

We face four pressing and interlinked challenges.

Population growth

- We serve 20% more properties now than we did in 1998.
- Regional population is expected to increase by 20% over the next 25 years.

Climate change

- Climate change is one of the most significant threats we face.

Environmental protection

- Our region is environmentally sensitive and home to many internationally important wetland ecosystems.
- We need to reduce the amount of water we take from the natural environment to prevent actual or potential environmental harm.

Drought resilience

- Our customers have told us that the use of severe restrictions is not appropriate or acceptable.
- But parts of our system are vulnerable to severe drought, so we need to act now to reduce this risk.

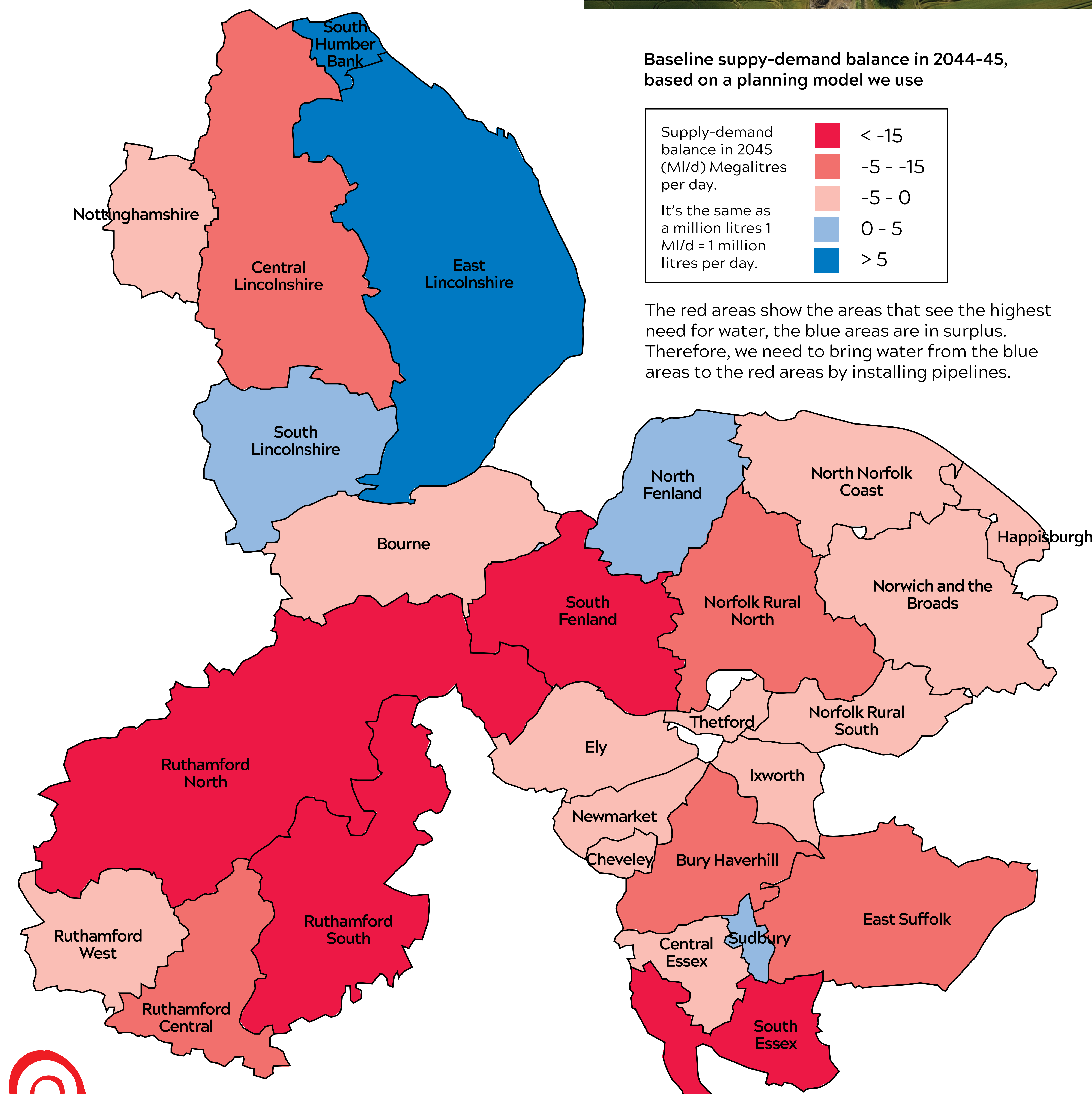


The scale of the challenge

Together, these challenges make our region particularly vulnerable to the impacts of climate change, including drought and flood. The East of England is officially classed as 'water stressed', meaning we must make careful use of this most precious resource to balance supply and demand.

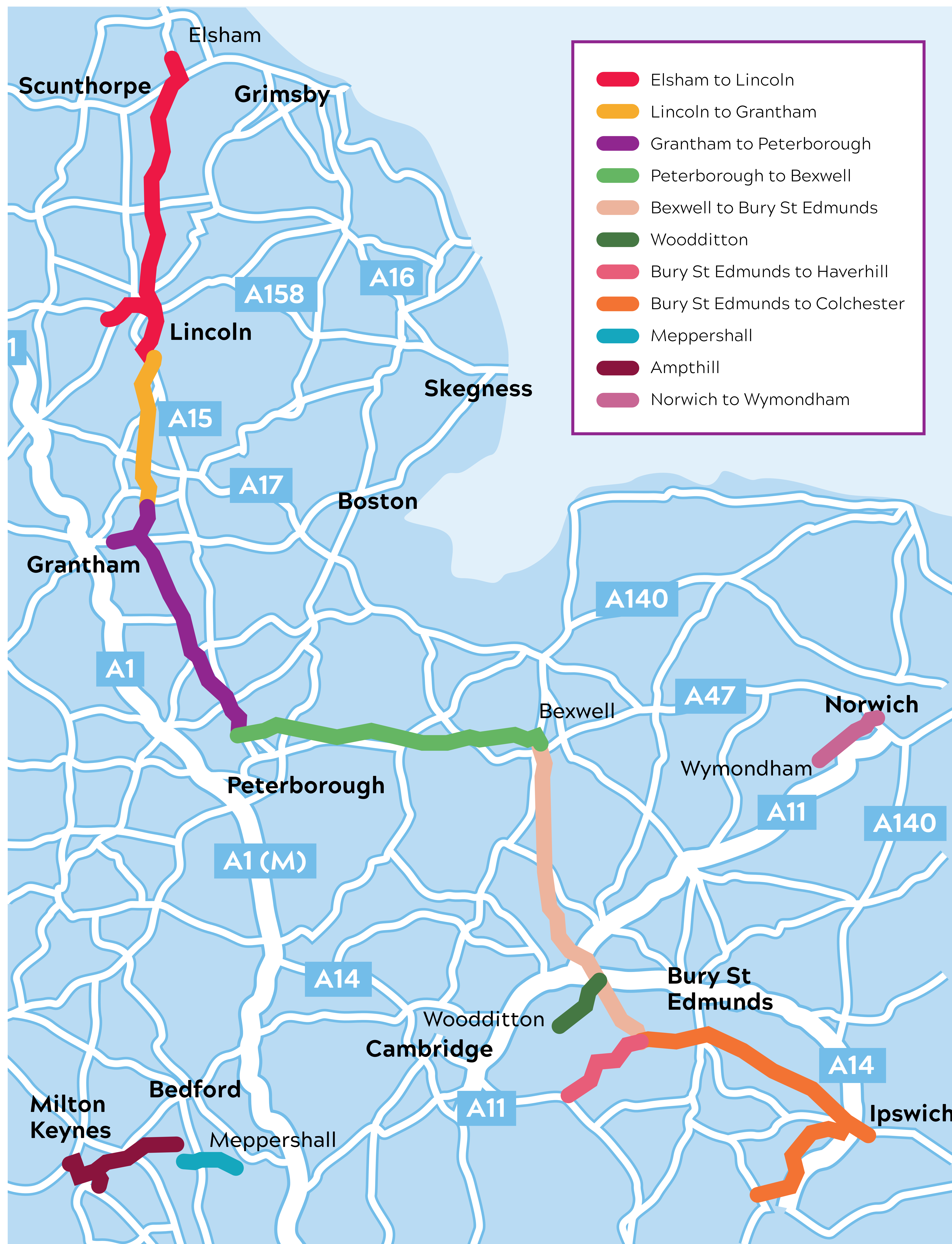
To tackle the challenge we will take a twin-track approach to our planning. We will reduce the demand for water for example, through reducing leakage, installing smart meters and investing in water efficiency measures. We must also look at new ways to supply water.

Within our area, we have a number of water resource zones.



As shown in the map above, some water resource zones are affected more than others.

We are laying a series of new pipelines



We will be building up to 500km of new interconnected pipelines - longer than the track being laid across the country for HS2 - one of the biggest infrastructure programmes for a generation.

The new pipelines will help us move water more freely around the region and move water from areas of surplus in north Lincolnshire, to the south and east of the region.

The new pipelines will also strengthen local resilience by reducing the number of homes and businesses which rely on a single water source.

The new **Bexwell to Bury St Edmunds** pipeline, including the spur to Woodditton, is part of this programme and will eventually join up with other new pipelines coming from the north and extending further south. These other pipelines are at various stages of planning.

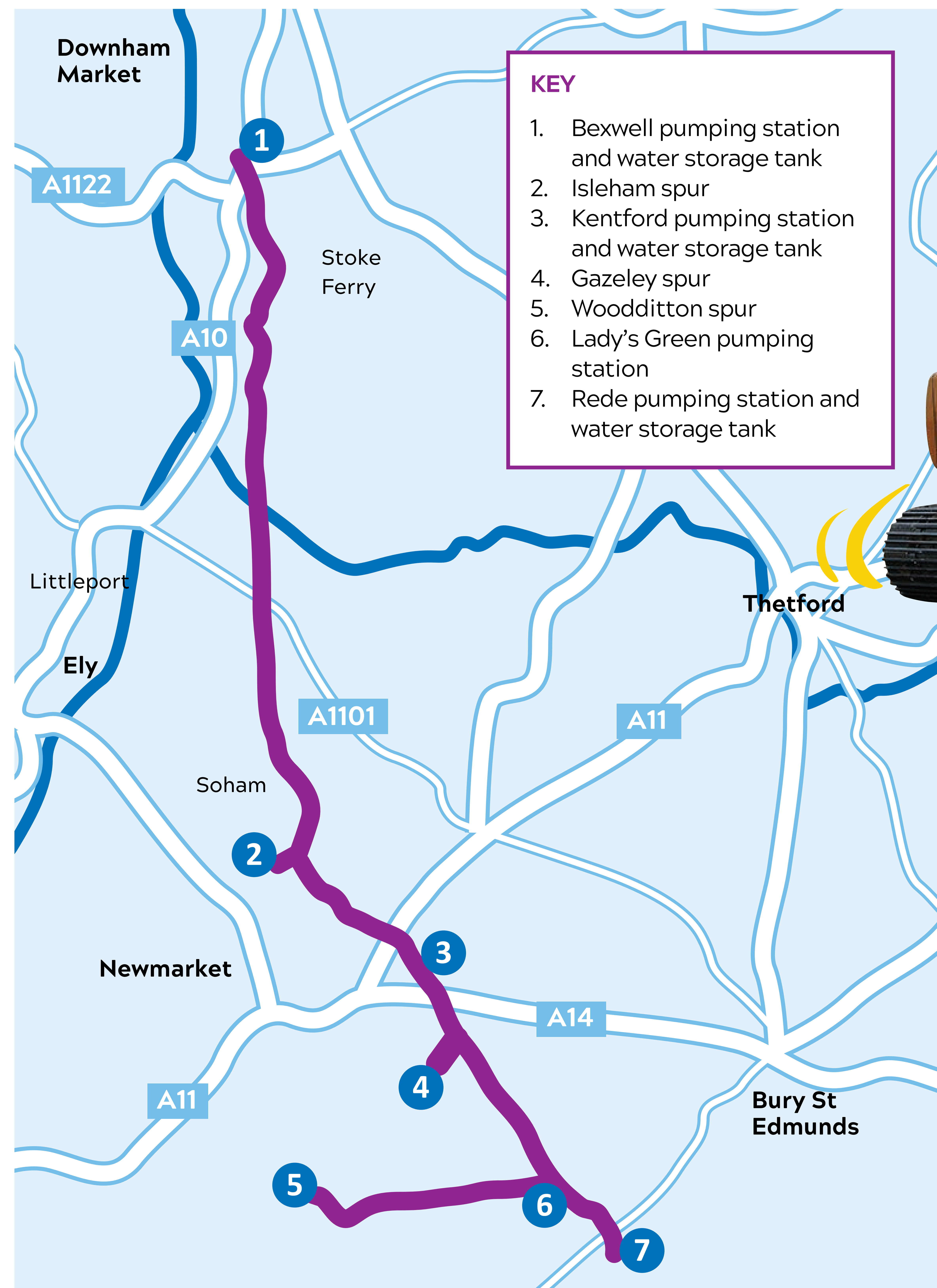


The Bexwell to Bury pipeline

The new 70km Bexwell to Bury St Edmunds pipeline will connect into our existing water network. The underground pipeline will run north to south from an existing water storage tank at Bexwell to an existing water storage tank at Rede, to the south of Bury St Edmunds.

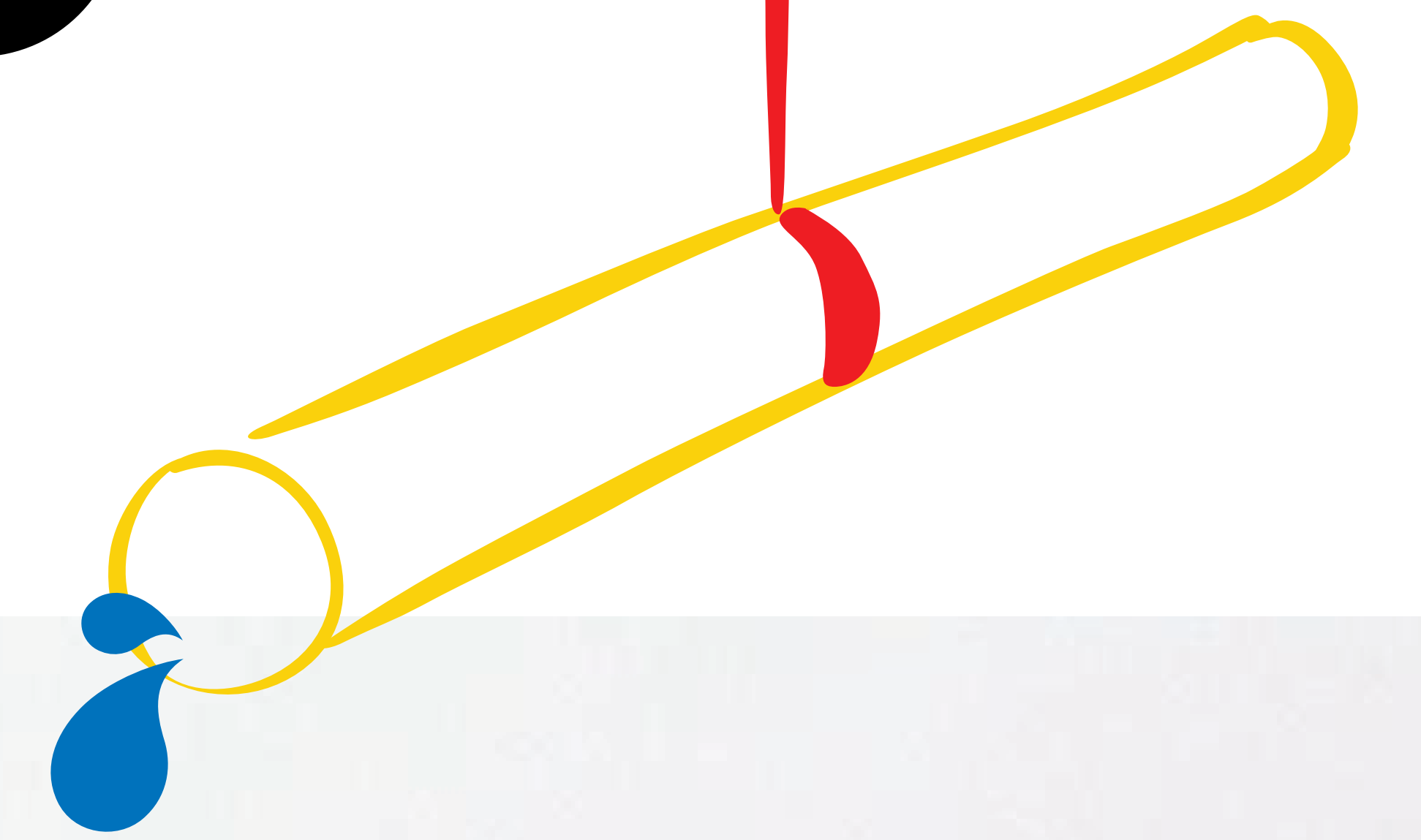
There will be three more pipeline spurs coming off the new pipeline. These spurs will connect into existing water infrastructure at the Isleham and Gazeley water treatment works, and the Woodditton water tower.

In addition to the underground pipeline, we will be constructing new above ground buildings including four pumping stations and three water storage tanks.



The preferred pipeline route

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anglianwater



We have worked hard to make sure that our preferred route minimises the impact on the environment and we will continue to work with local communities and landowners while we finish the design and consult the local planning authorities. For example, we have re-routed to avoid sensitive ecological sites, including Hilgay Fen County Wildlife Site and at other locations where site surveys have found badgers, water voles, bats and great crested newts.

We have planned the route to avoid most of the urban areas and villages to minimise disruption to you and your community.

We have been in contact with Sunnica Energy Farm who are planning a large-scale solar energy farm in the area. We have carried out surveys and investigations to see whether there are any environmentally sensitive areas such as protected species and archaeology. As a result, we have changed the route of the pipeline to avoid areas of archaeological interest to the south-east of Isleham.

We will continue to work with local communities, local planning authorities and landowners while we finish the design and as we construct the pipeline.



**Detailed and interactive
map - to be provided by
SPA GIS directly to the
digital team**

Summary of construction timescales



Phase of work	Types of activity	Approximate timetable
Engaging with customers and stakeholders about the preferred route	Sharing the route, listening to feedback	Spring 2021
Environmental investigation	Archaeological surveys and ecological monitoring	Ongoing during 2021
Ground investigations and archaeological trial pits	Digging trenches and boreholes to understand conditions below the surface	Spring 2021
Discussions with local planning authorities	Ongoing discussions with planning authorities to agree type of planning consents needed and make applications	Spring 2021
Enabling works (works needed prior to the start of construction)	Providing ecological protection for protected species such as badgers Limited vegetation removal, including some hedgerows to aid access	Autumn / Winter 2021
Construction	Site compounds set-up Cutting open trenches, laying pipes and backfilling (refilling of soil once the pipe has been installed) Trenchless pipelaying (when pipes are pushed through the ground) Construction of pumping stations, water storage tanks Temporary storage lagoons (to store water that will be used to test the pipeline after construction)	2022 - 2023
Commissioning (testing of the pipeline prior to becoming operational)	Cleaning the pipeline and connecting to network	2023 - 2024
Reinstatement after installation (the land will be reinstated to its original state where we can and with additional improvements in some areas)	Replacement of topsoil Restoration of access routes and fencing Reinstatement of road surfaces Reinstatement of drainage Replacement of vegetation	2024

Construction

Once construction gets under way, we will work hard to minimise the impact on communities and the environment along the route. We will keep you informed of our progress and let you know what you can expect to see when.

Construction is planned to start in Autumn/Winter 2021. We will start by creating access for the main construction works, build compounds and prepare sites along the route.

We will carefully manage our vehicle movements, and transportation of materials, around the rural roads to reduce the impact on local road users. We will manage any required road diversions or lane closures to reduce disruption and delays.



Construction techniques

Construction techniques we'll be using

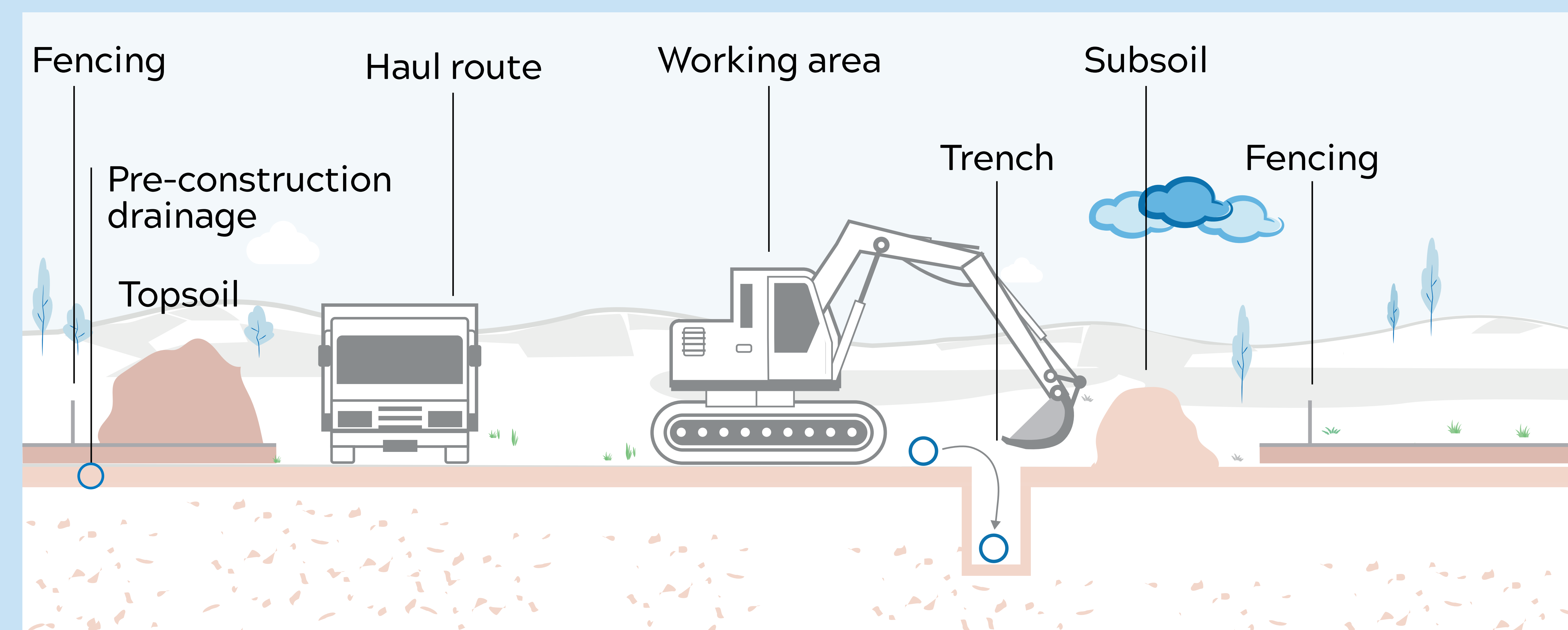
We will install pipes following good industry practice using tried and tested techniques. The most commonly used method to lay pipe is an **open cut trench**.

Where we need to minimise disruption to the surface - such as when we want to cross major roads, rivers, and railway lines - we will use **trenchless techniques**.

Our working area will be up to 40 metres wide, but will be narrower when we cross sensitive hedgerows, tree lines and water courses.

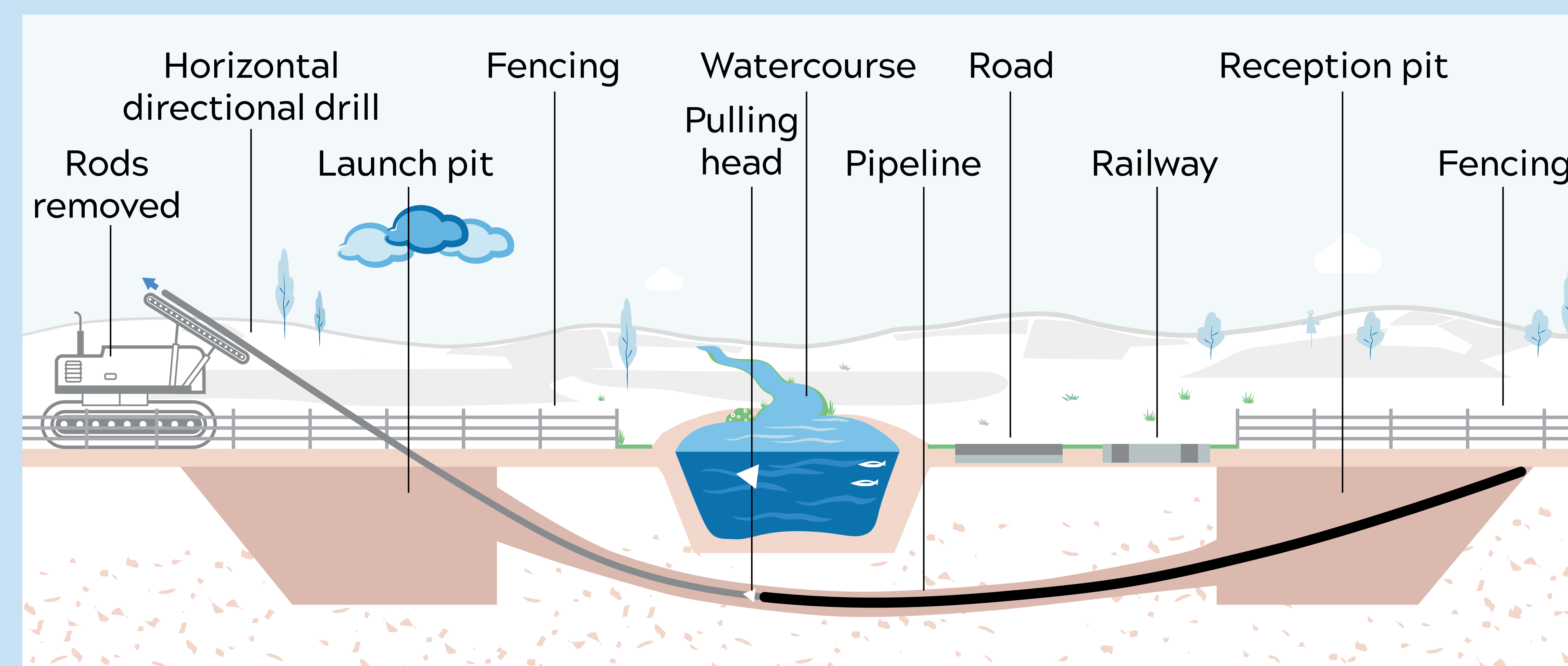
Open cut trenching

Open cut trenching will be used for most of the pipeline route which goes through open ground. Open cut is when a trench is dug out by a digger, the pipe is laid and then covered over (see picture below).



Trenchless techniques

This technique will be used to lay pipes underneath main rivers, railway lines and main roads (some A roads, with some B roads). We will use methods such as directional drilling or auger boring, when a machine will drill or 'bore' a hole through the ground from one side of an obstruction, to the other. The pipe is then pushed through the hole produced (see picture below).

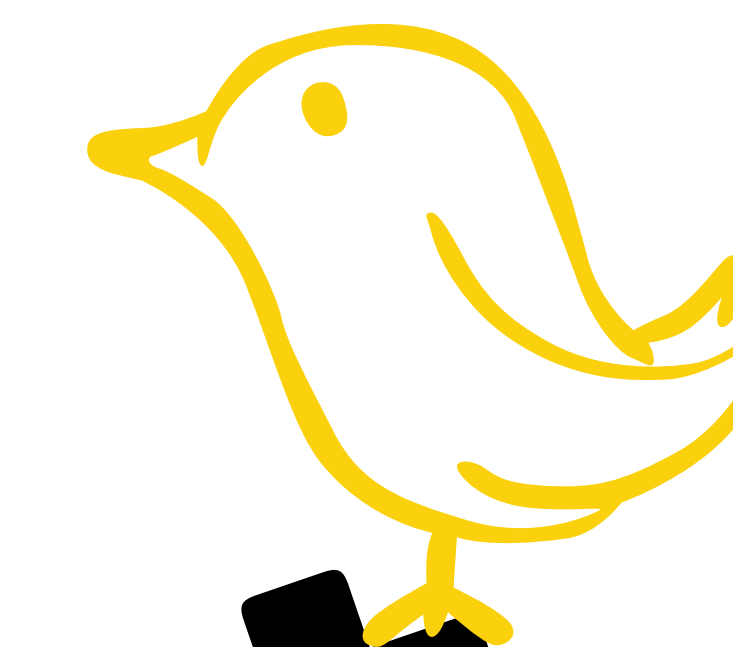


Post-construction activities - what happens after construction?

We need to test the pipeline before it's used to supply drinking water. This is called the 'commissioning phase'. During this phase we will pressure test for leaks and ensure the pipeline is clean. Water samples are taken and tested to make sure the water is safe to drink.

Once the water and the pipeline pass all the tests, we will reinstate land or habitats, such as planting new hedgerows and re-seeding grassland.

Protecting the environment



We have completed environmental, ecological and archaeological surveys along the route, and will continue to carry out surveys and studies throughout the design and construction of the pipeline. The information that we collect will be assessed and will help to ensure that we mitigate and manage our impacts.

During construction we will have some impacts on the environment. To ensure that we work safely and manage these impacts we will produce a Construction Environmental Management Plan. For example, the noise, light and vibration from plant and machinery may have an impact on some species and local communities. We will continue to monitor our impacts during all phases of work and will add more protection when needed.

Our aim is to avoid or protect sensitive areas, repairing and replacing habitats carefully. We will ensure that equipment, fuels and machinery are used and stored safely and will follow pollution control measures in our ways of working.

Once installed we do not expect the pipeline to leave any lasting impacts on the surrounding areas.





The current environment



There are different types of habitat along our preferred pipeline route. Some areas are agricultural land used for growing crops and managing livestock. In other areas, sites have been surveyed and found to have special or protected species present. We are taking these protected species and local wildlife sites into account when finalising the route.

It is important that we avoid these areas, where possible, and we have made some changes to the initial route after finding a number of protected species, including great crested newts, bats, badgers, and various bird and plant species.

The northern part of the preferred route passes through fen and peat habitats. We have moved the route to avoid the County Wildlife Site at Hilgay and are developing our ways of working in these sensitive areas. We want to understand ground conditions and land drainage as this will inform our approach to construction. We are starting detailed ground investigation work in spring 2021 so that we can plan work with landowners to manage land drainage, access and soils.



Protecting biodiversity

Maintaining mixed and diverse habitats is important as they provide food and shelter for different species. The more diverse the species, the healthier the environment.

Before we can lay the pipe, we will need to remove some hedgerows and other vegetation. Where possible, this will be timed to have minimum impact - such as during winter when crops have been harvested, the berries have been eaten and birds are not nesting.

Some temporary, reversible disruption may happen in some areas during construction and some wildlife corridors where animals travel may be disrupted. We will plan work to keep disturbance to a minimum and provide alternatives where feasible.

We are committed to enhancing biodiversity and will be supporting habitat improvements along the whole strategic pipeline where we can. Our reinstatement work will include replanting hedgerows and trees and reseeded grassland with the right mix of grass seed commonly found in the area.



Working with landowners and the local community



We want to be good neighbours and value our long-term relationships with the local communities and people who have our existing or planned pipelines on their land. We will work with landowners to agree the necessary rights to maintain, operate and inspect the pipeline.

We are committed to keeping the local community informed and we will update our website frequently. If you'd like to receive updates about this scheme, please provide your email address when you submit your survey.

