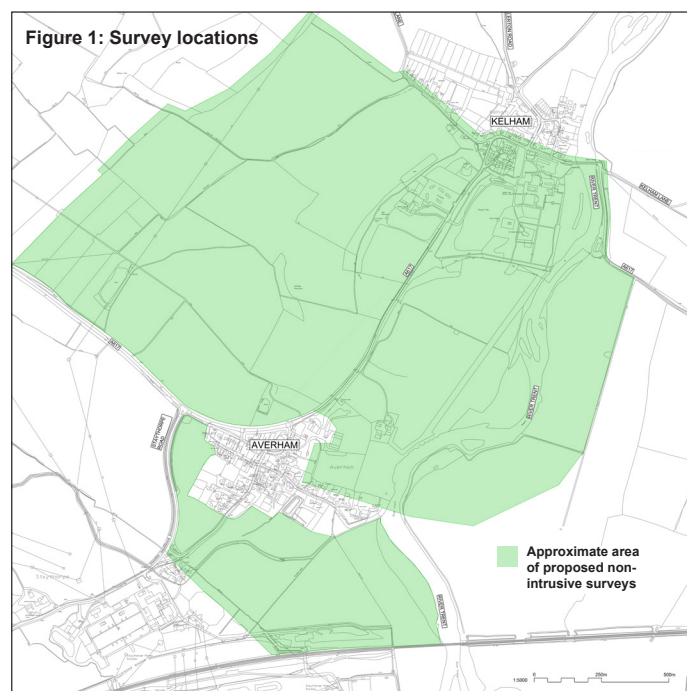


## A46 Newark Bypass update Surveys in Kelham and Averham

**The A46 is an important route connecting the M1 and Leicester to the A1 and central Lincolnshire. All of the road is a dual carriageway except for the section close to Newark. The single carriageway section causes traffic congestion which we want to improve by upgrading to a dual carriageway.**

As part of the project development process, we will need to undertake surveys to assess the appropriateness of floodplain compensation in fields near Kelham and Averham. Following further assessments undertaken by the designers on the Preferred Route Announcement, we have identified the need for flood compensation within the areas adjacent to the A46 Newark bypass scheme. Flood compensation is required when a new development is constructed within an existing flood plain, and as part of the development of the new highway design, National Highways will be consulting with the Environment Agency to confirm the volume and location for the flood compensation. Flood compensation generally involves the localised lowering of the ground to provide a connection to the floodplain.

National Highways will be undertaking survey work over the summer to assist in the development of the flood compensation design alongside the development of environmental enhancements and amenity solutions for the local communities. Figure 1 details the area where the surveys are to be carried out. This reflects the survey area only and not the extent of land required for the compensation works. The area required will be finalised following the output from the survey work and further design development over the summer.



Over the next few months, we will be carrying out surveys to gather information on the existing environment around the planned route of the improvement scheme. These surveys will help develop our understanding of the surrounding area which will inform our environmental impact assessments and development of the scheme design. This approach will minimise environmental impact as much as possible and will help us plan any potential mitigation measures.

### What surveys will we be undertaking?

We will be carrying out some other surveys to understand more about the local environment, from trees and wildlife to local archaeology. We will be looking at stream and ditch depths, surveying for utility services and understanding how the roads and fields drain.

These surveys will be carried out on foot using hand-held equipment. No digging or disturbance to the land is needed and, in most cases, nothing is left on site. These are known as non-intrusive surveys.

We will also be undertaking a small number of intrusive surveys to understand the nature of the ground and groundwater in the area. This means we will need to dig into the ground and leave some monitoring equipment in place afterward. Similarly, to check for hidden utility services, we will need to make some investigatory holes, but these will be filled in again immediately after the surveys are complete.

### We will contact landowners directly for permission to carry out all surveys.

More surveys may be required in the future and we will contact you again if this is the case. We may need to gather additional information about the soil, water quality and how pedestrians, cyclists and horse riders use routes in the area.

## Ecology surveys – what do they involve?

### Bat surveys

**What?** We will carry out external inspections of buildings, structures and trees from ground level for their suitability to support roosting bats. This could be in the form of daytime tree climbing inspection and dusk and dawn emergence/re-entry surveys. We may need to carry out further surveys along bat commuting or foraging habitats at dusk using bat detectors to record activity. As well as leave static sound detectors at strategic points along routes for one week per month in appropriate weather to record bat activity. This is the only bat survey that requires leaving equipment on site.

**When?** Up until October 2022.



### Badger surveys

**What?** We will record badger territories throughout the site by mapping any signs of badger activity, for example, setts, latrines, hair, footprints and paths, over a wider area.

**When?** Throughout the year.

### Bird surveys

**What?** This will involve a pair of ecologists walking along predetermined routes across bird habitats, recording the bird species they see and hear.

**When?** Summer breeding bird surveys will involve six visits between April and July 2023 inclusive throughout the site. We will be undertaking overwintering bird surveys throughout the site in November and December 2022 and January and February 2023.



### Barn owl surveys

**What?** We will be undertaking surveys on various trees, buildings and structures throughout the site for evidence of use by barn owls. Our surveyors, will undertake walkovers to identify suitable habitats and potential nesting and roosting locations. Nest verifications will be undertaken by observation from ground or tree climbing inspections. A nocturnal watch may be required if the tree is unsafe to climb.

**When?** Nest verifications will occur from August 2022.

### Great crested newt surveys

**What?** We will evaluate waterbodies for their suitability to support great crested newts. We may then test samples of water to see if there is environmental DNA from newts present, this will determine whether population surveys are required. These will involve a variety of methods, including torchlight searches (during night-time surveys), netting and searching the surrounding land and aquatic vegetation for newts and their eggs. We may also leave plastic bottle traps overnight in waterbodies to trap live newts inside, which are released the following morning unharmed.

**When?** From mid-March 2023.



### Invertebrate surveys (aquatic and terrestrial)

**What?** We will be undertaking surveys to look for aquatic invertebrates. This involves dislodging sediment in bodies of water and collecting invertebrates in a net. For terrestrial invertebrates we will visit preidentified suitable sites and collect samples of invertebrates. To do this we will use a net, suction sampler or other hand-held equipment such as a stick to beat vegetation and dislodge invertebrates and collection tray to take a closer look at any invertebrates we encounter. We may collect specimens for later identification.

**When?** We will undertake kick sampling surveys on watercourses (streams, ditches, etc.) from August onwards. Terrestrial invertebrate surveys will take place between August and September 2022.

### Otter surveys

**What?** These involve walking along watercourses, vegetated ditches and hedgerows suitable for commuting otters, and wooded areas connected to watercourses, to assess their suitability for foraging, resting and breeding otters. If we are unable to access the bank or wade through the water, we will use a boat or binoculars to search the opposite banks for signs of otters. A ranging pole will be used to gauge the depth of water and navigate around any submerged obstacles (for our safety) if we wade through the water. We may place wildlife cameras in strategic locations to confirm commuting routes, potential resting sites or holts (dens).

**When?** Throughout the year. These surveys are subject to it not raining 48 hours prior to the survey.



## Reptile surveys

**What?** We will make an initial visit to areas identified as being suitable for reptiles to set out refuges (roofing felt and corrugated metal mats designed to attract reptiles looking for shelter) along the boundaries of the land. These will be left in place for at least 14 days, and then 7 further visits will be undertaken to check the refuges to see whether there are reptiles on or under the mats. Refuges will be removed upon completion of the survey visits.

**When?** Autumn when the air temperature is between 10°C and 20°C.



## Water vole surveys

**What?** We will be undertaking water vole surveys along watercourses throughout the site. We will walk against the flow of water (upstream), either along the banks or wading within the water (where safe to do so and using a ranging pole) to search for signs of water vole and American mink activity. We will use binoculars to search the opposite banks for signs if we are unable to access the bank or wade through the water.

**When?** The first survey between July to September 2022 and the second survey will be at least 2 months apart. These surveys are subject to it not raining 48 hours prior to the survey.



## White-clawed crayfish surveys

**What?** White-clawed crayfish and fish surveys may be needed, depending on the results of river habitat surveys. We will walk along sections of suitable watercourses and conduct visual assessments of habitats that could support white-clawed crayfish. Where water depth is no more than 60cm, we will get into the water to search. Where it is not safe to this, we will leave traps in the watercourse to collect white clawed crayfish and release them unharmed after inspection. We may also visit the same watercourses at night to conduct torch-light surveys to look for white-clawed crayfish in a way that causes minimal disturbance to the animals.

**When?** Between July to September 2022.



## Condition assessment surveys

**What?** We will be undertaking a series of condition assessments throughout the site to inform calculations for Biodiversity Net Gain (BNG). BNG provides a baseline measurement of natural conditions to protect the existing environment and leave an area with greater biodiversity than was present before the development. The condition assessment varies depending on the habitat type. A condition assessment of rivers, known as the Modular River Physical (MoRPh) survey, involves recording observations. No equipment will be left on site.

**When?** We will undertake condition assessments between up until October 2022. The MoRPh survey will take place up until September 2022.

## Extended phase 1 habitat survey

**What?** Two surveyors will walk all accessible areas of the site mapping habitats and vegetation, recording signs of protected or notable species and the potential to support protected and notable species, as well as invasive species of plants and animals. This information will be used as part of the decision process for any future targeted surveys. During the survey we will take photographs and may use binoculars.

**When?** The majority of these surveys were completed at the start of 2022. The remaining surveys will be completed throughout the year.

## National vegetation classification survey

**What?** National vegetation classification surveys involve a single visit to a piece of land, where botanists will record habitat composition using a quadrat frame (square grid) or a tape measure.

**When?** July and August 2022 depending on the habitat type.

## River habitat survey

This involves walking a 500m length of the river taking photographs and making notes on the physical character, quality and naturalness of river habitats. There is no need for surveyors to enter the water.

**When?** Between August and October 2022.

## Tree surveys

**What?** We will be carrying out walked surveys of the site to determine the potential effects of the scheme on trees. The details collected from the survey will be used to provide a balanced judgement of the site, allowing the development to be integrated with the trees in this location. We will categorise the trees on site, select the trees appropriate for retention, review the options for incorporating these trees within the developed landscape and provide a methodology for tree protection during construction.

**When?** Throughout the year.

## Drainage surveys

**What?** We will undertake CCTV surveys of the existing drainage network to assess its condition and determine how it will be integrated into the proposed plans. This will involve putting cameras into the drains to record what is there.

**When?** Over the summer months.

## Ground investigation surveys

**What?** We will collect soil samples and carry out tests to assess the ground conditions underlying the site so that engineered elements, such as earthworks and structure foundations, can be safely designed. These will include drilling boreholes, digging small trial pits and pushing special instruments into the ground. We will fence off areas for safety and security during the ground investigation (GI) surveys and leave the equipment in place for the duration of the tests.

On completion of each exploratory hole, the location will be put back in its original condition.

**When?** Over the summer months.

## Non-intrusive archaeology surveys

**What?** We will be undertaking metal-detector and field walking surveys across the whole site, where practical. These involve walking and scanning identified fields and will help build a picture of the archaeological potential across the route.

We will also carry out a geophysical survey which will involve a quad bike with a trailer containing ground-penetrating radar (see image below).

**When?** August – January. The timescale for these surveys is dependent on the crops in those specific sites, as we would not want our work to have a negative impact on local farming. If the height of crops means we can't survey we will wait until after they have been harvested.



## Landscape surveys

**What?** These are walking surveys where we take a number of photographs from identified viewpoints at different times of year to establish any changes in view associated with the changing seasons. Landscape surveys help us assess the potential landscape and visual effects associated with the scheme and help inform the development of the engineering and environmental design. This includes assessing existing views from selected properties, recreational facilities, Public Rights of Way and businesses.

**When?** We will take photographs in summer and winter for comparison.

## Water quality surveys

**What?** We will collect water samples at locations on watercourses within the Newark-on-Trent and Kelham area, and carry out tests to assess the water quality of the samples to establish a baseline of the existing conditions of the watercourses. These surveys are non-intrusive and involve collecting two water samples from each location; one sample will be tested on site using hand-held equipment, and the other will be sent to a laboratory for analysis. The surveys will be carried out using Public Rights of Way (PRoW) and other publicly accessible land.

**When?** The first survey will occur over the summer months in 2022, expected to consist of two days on-site. Following this, the survey will re-occur quarterly to establish conditions across the year.

## River and floodplain surveys

**What?** We will be undertaking channel surveys of the River Trent and smaller tributary watercourses in Newark on Trent and the surrounding area. This is to determine the profile of the river channels so that flood risk in the area can be better understood. We are also undertaking topographic survey in some areas of the floodplain. These surveys will involve the use of topographic survey equipment, and will also involve the use of a boat on the River Trent.

**When?** Throughout the year.

## Where to find more information

For more information about this scheme, please contact National Highways:



**Email:** [A46newarkbypass@nationalhighways.co.uk](mailto:A46newarkbypass@nationalhighways.co.uk)



**Telephone:** 0300 123 5000



**Website:** [nationalhighways.co.uk/a46-newark-bypass](https://nationalhighways.co.uk/a46-newark-bypass)