

Introduction

To help the water along its way and to ensure that our water transfer doesn't adversely affect the navigation and recreational use of the canal network, our scheme will need to deliver some new equipment including gravity bypasses.



What are gravity bypasses?

Gravity bypasses already exist along the canal network and are used at locks and lock flights to help maintain water levels by allowing water to move from an upstream to downstream pound (the length of the canal between two locks). This avoids the lock gates having to act as weirs.

They allow water to be temporarily diverted out of the canal into an underground pipe and moved downstream, to bypass a lock or flight of locks, to keep the water moving through the canal.

You can find out more about how canal locks work on the Canal & River Trust's website [here](#).

Why do we need gravity bypasses?

There are a handful of locations where new gravity bypass structures will be needed to accommodate the additional water that will be moving through the canal. It's vital that navigation and operations at locks aren't impacted and these interventions will help transfer water in a controlled way, and at a sufficiently slow speed to help ensure the regular operation of the canal network.

How do gravity bypasses work?

Step 1: Water flows down the canal North to South until it reaches a location where it needs to flow downhill past a lock or flight of locks.

Step 2: Water is channelled into the bypass via an upstream weir structure built into the canal bank, then flows through an underground pipe, past the lock or flight of locks.

Step 3: Water flows back into the canal further down, via a similar weir structure to the entry point.



What do gravity bypasses look like?

Gravity bypasses are located mostly within the canal bank and will be largely underground to minimise visual impact.

We'll share indicative images of what they could look like at our next consultation.



Where will the gravity bypasses be located?

Gravity bypasses will be required at a number of locations along the canal section of the transfer.

In our current plans we will require gravity bypasses at Whilton Locks (also known as Buckby Locks), Stoke Bruerne Locks, Stoke Bruerne Flight and Cosgrove Lock.



At Whilton Locks bypass seven locks are spread over approximately 2.5 kilometres with significant distance between them, and we are proposing to bypass the locks in five separate locations.

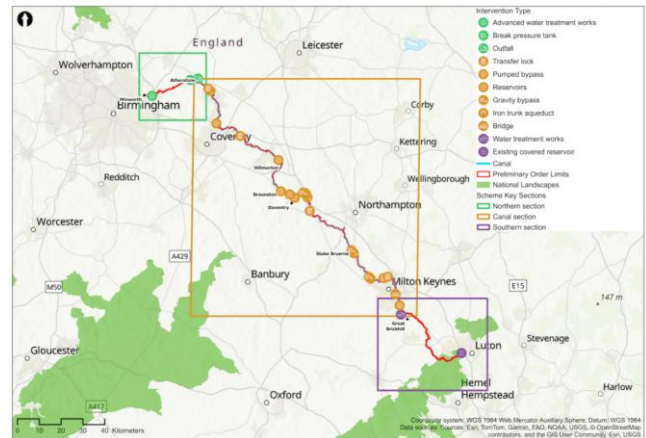
At Stoke Bruerne Flight, where a series of seven locks drop the level of the canal by approximately 12 metres, the proposed bypass will be approximately 680 metres long, and we are continuing to explore the best option for bypassing Stoke Bruerne Top Lock and the next lock down.

Cosgrove Lock will also require a bypass of approximately 32 metres.

Interactive map

We've published an easy to navigate map of our scheme so you can explore the key points along the route and identify where some of the key infrastructure might be in relation to where you live.

Take a look at our interactive map [here](#) which includes indicative locations of where the gravity bypasses may be needed.



Sharing more detail

We'll share more detailed design updates and potential mitigation suggestions at the next round of consultation, currently planned for early 2026, where your feedback will continue to play an important role in shaping the design of the GUCT scheme.



Answering your questions

If you have a general query about the scheme, please contact the team via **email:** contact@guctransfer.co.uk