

Video summary	Before watching the video	During the video
<p>Paul Whitehouse visits the construction site of the River Thames Tideway project in London. London relies on a 150-year-old sewer system that was built for a population less than half its current size. As a result, around 40 millions of tonnes of raw sewage spills, untreated, into the River Thames each year.</p> <p>The Tideway Project is a major development programme for the River Thames that will be operated by Thames Water to combat this problem. 24 of these systems need to be upgraded, including Greenwich.</p> <p>In Greenwich alone, without Tideway, 8 million tonnes of untreated sewage are dumped into the River Thames each year.</p> <p>Tideway has been designed to intercept and divert this excess untreated waste to the waste treatment plant at Beckton.</p> <p>The design life is for 120 years and this should keep pace with the growing population of London. However, OFWAT (Office for Water Services) has no plans to build more super sewers of this nature to alleviate the stress on other UK river systems.</p>	<ul style="list-style-type: none"> • Using digital mapping software such as Digimaps, Arc GIS, or Google Maps, locate the River Thames and zoom into the London region. • Looking at Greater London on the map, discuss the likely pressure from the city’s population, on the River Thames before it flows out to sea. • Recap the population of London (8.797 million in 2021) and ask students to say where the sewage goes to from this large population. • Do students think it is all treated before being returned to the environment? If not, ask them to hazard a guess as to how many tonnes of sewage from London are released untreated into the Thames each year. Ask students to write down their estimate before watching the film. 	<ul style="list-style-type: none"> • You may wish to stop at relevant points during this short film to pose questions and check understanding or wait until the end. Useful questions might include: • How many tonnes of untreated sewage are released into the Thames in London each year? (Before Tideway becomes operational) • How many tonnes of untreated sewage are released each year just from Greenwich alone? • When were the existing sewers built in London? • Why have they not been upgraded before now to cope with the growing population?
After watching		
<ul style="list-style-type: none"> • Ask students to discuss their reactions to the film and the revelation of 40 million tonnes of untreated sewage being released into the Thames each year. • Investigate the scale of Beckton water treatment works, using the Tideway project website and other sources. • How much land does it take up and can it be found on the map? Students could use a digital mapping programme to measure the area currently used for treatment works. 		

Curriculum notes	Where next?	Links
<p>All these short clips build on students' understanding of human and environmental interactions and provide opportunities to practice geographical skills such as enquiry, mapping and fieldwork.</p> <p>At KS3, students can learn more about how human and physical processes interact to influence, and change landscapes, environments and the climate. At KS4, the film supports understanding about fluvial environments, flooding hazards and climate change, environmental management and fieldwork investigation.</p> <p>This video develops understanding of economic activity and natural resources (KS3), and supports students in researching and debating ethical issues in geography (KS4).</p>	<ul style="list-style-type: none"> • Using the Tideway website and other sources, gather data and create an infographic about the project. • If this 'super sewer' is urgently needed in London, where else do students think it may be needed? Ask students to identify other locations using annotated maps. • Compare this solution to sewage treatment with that of other countries. How well do other major cities dispose of their sewage? 	<ul style="list-style-type: none"> • KS3: Rivers and Water • GCSE: River landscapes in the UK • GCSE: River environments • GCSE: Rivers • GCSE: Managing the impacts of climate change • GCSE Geography - exam practice • National 4: Rivers • National 5: Rivers and valleys • Bitesize Careers: Jobs that use Geography • BBC News - London's new super sewer now fully connected