

Haweswater Aqueduct Resilience Programme (HARP)



HARP Delivery Team



Responsible for water and wastewater services in the North West of England.

Provider for the design, build, finance and maintenance of the replacement tunnels

Delivering the design and build of the replacement tunnels.

Haweswater Aqueduct Resilience Programme (HARP)



110 km pipeline built between 1933 and 1955

570 million litres of drinking water transported daily

2.5 million customers supplied across Cumbria, Lancashire and Greater Manchester

c. 50km of tunnels replaced through HARP

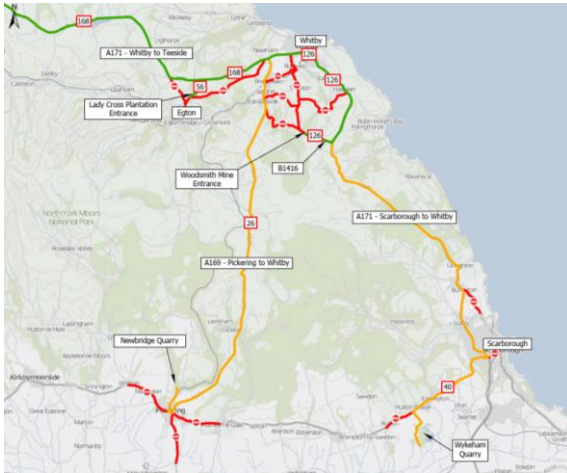
STRABAG UK experience in working in environmentally sensitive areas

Woodsmith project – North York Moors

CHALLENGES

- Working in a sensitive area (National Park)
- Strict Regulatory requirements by the National Park and North Yorkshire County Council Highways
- Minimise disruption to local communities, businesses and traffic
- Complex construction (deep ventilation shafts)

Allowed traffic routes within the National Park



SOLUTIONS

- Full compliance with National Park Authority and NYCC Highways rules
- Managed traffic flow to limit impact on road networks (summer holidays)
- Construction of Park & Ride arrangements
- Design solutions such as increasing the ring's length to reduce HGVs trips

Lady Cross site (extremely remote location, caravan park 200m away, dark skies designation area)



- Alignment of construction with environmental and community needs
- Early and continuous engagement with regulatory bodies
- Technical challenges overcome with innovative design and collaborative strategy

Lockwood Beck site (rural location, small access roads close to Lockwood Beck reservoir)



STRABAG UK experience in working in environmentally sensitive areas

Coire Glas – Scottish Highlands

CHALLENGES

- Working in a remote and environmentally sensitive area (Scottish Highlands)
- Compliance with strict SEPA environmental regulations
- Need to safely manage tunnel service water
- Minimising disruption to residents and local hospitality businesses
- Maintaining the integrity of asphalt access roads



SOLUTIONS

- Installed a state-of-the-art Water Treatment Plant to treat and safely discharge tunnel water
- Accurate planning of logistic movements
- Careful maintenance plans to manage road conditions and minimise disruption (extreme winter conditions)
- Supporting the client during regular community meetings

- Close collaboration with regulatory bodies like SEPA was critical for compliance and sustainability
- Proactive community engagement fostered trust and smooth project progression
- Infrastructure maintenance integrated into planning in remote projects

Coire Glas – Loch Lochy



Water Treatment Plant



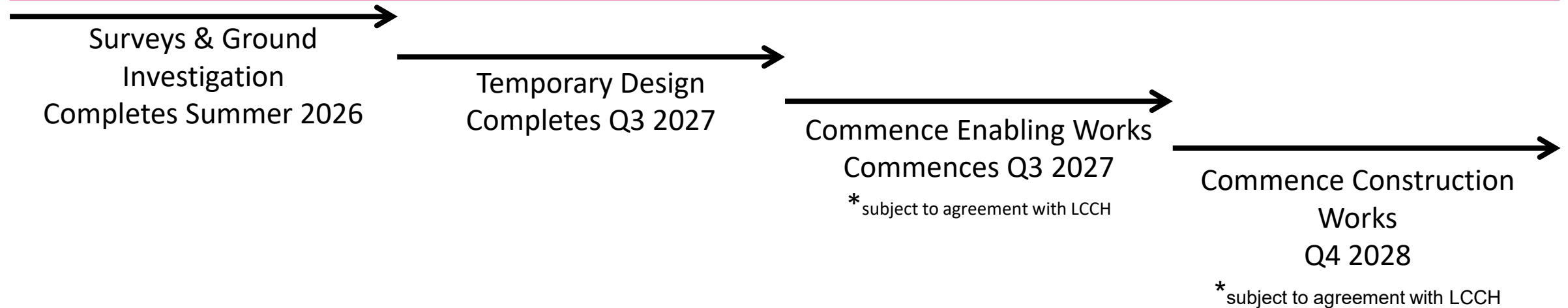
1 lane access road with residents and businesses



CURRENT STATUS

- Following the appointment of Cascade and STRABAG UK, ground investigations and surveys have begun to inform the Permanent & Temporary Designs, take detailed condition surveys of the surrounding roads and buildings and assess structures to allow assessment of the impact of the works.
- Upon completion of these works, the construction activities will commence.

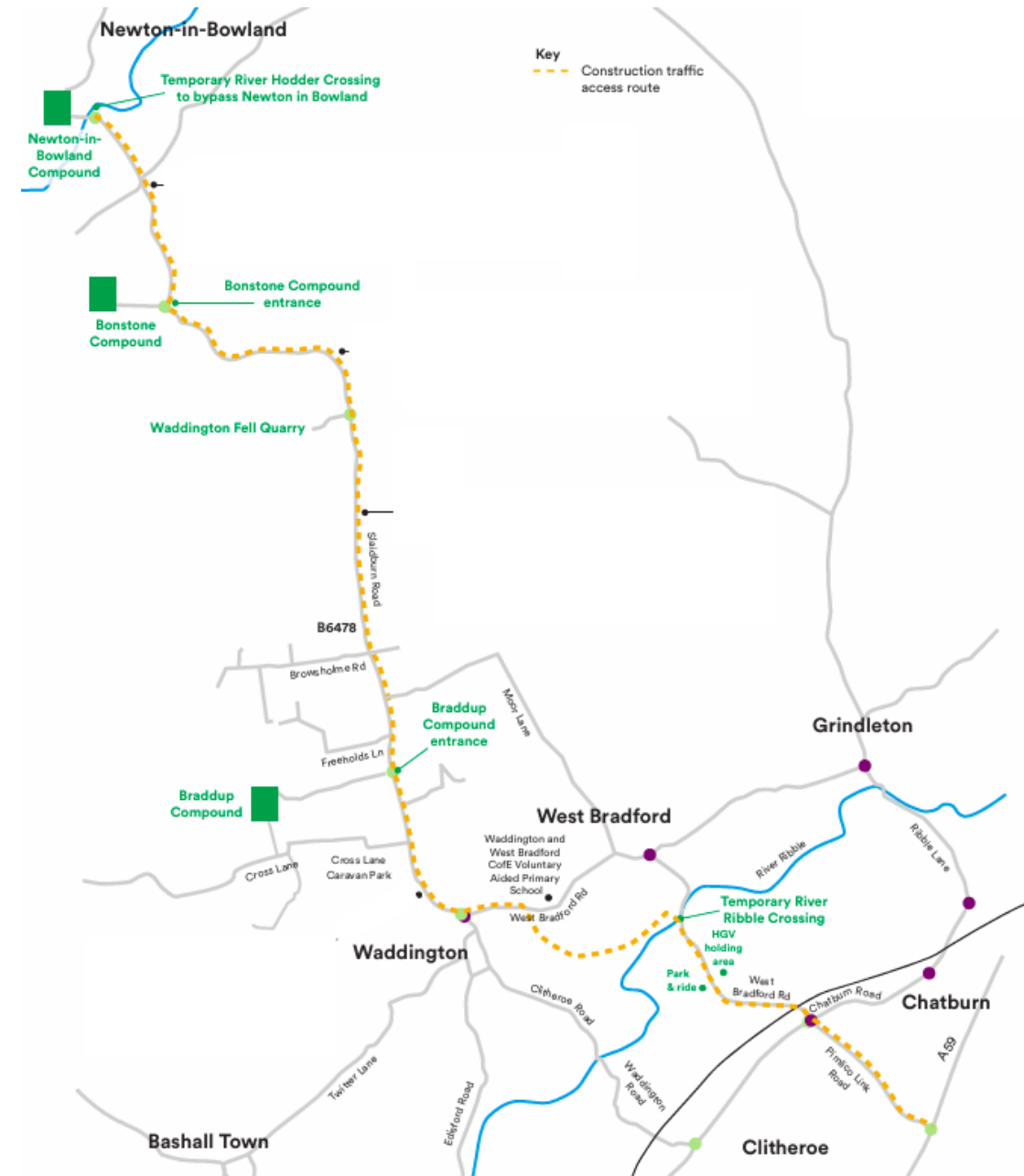
PHASING OF HARP PROJECT



Compounds

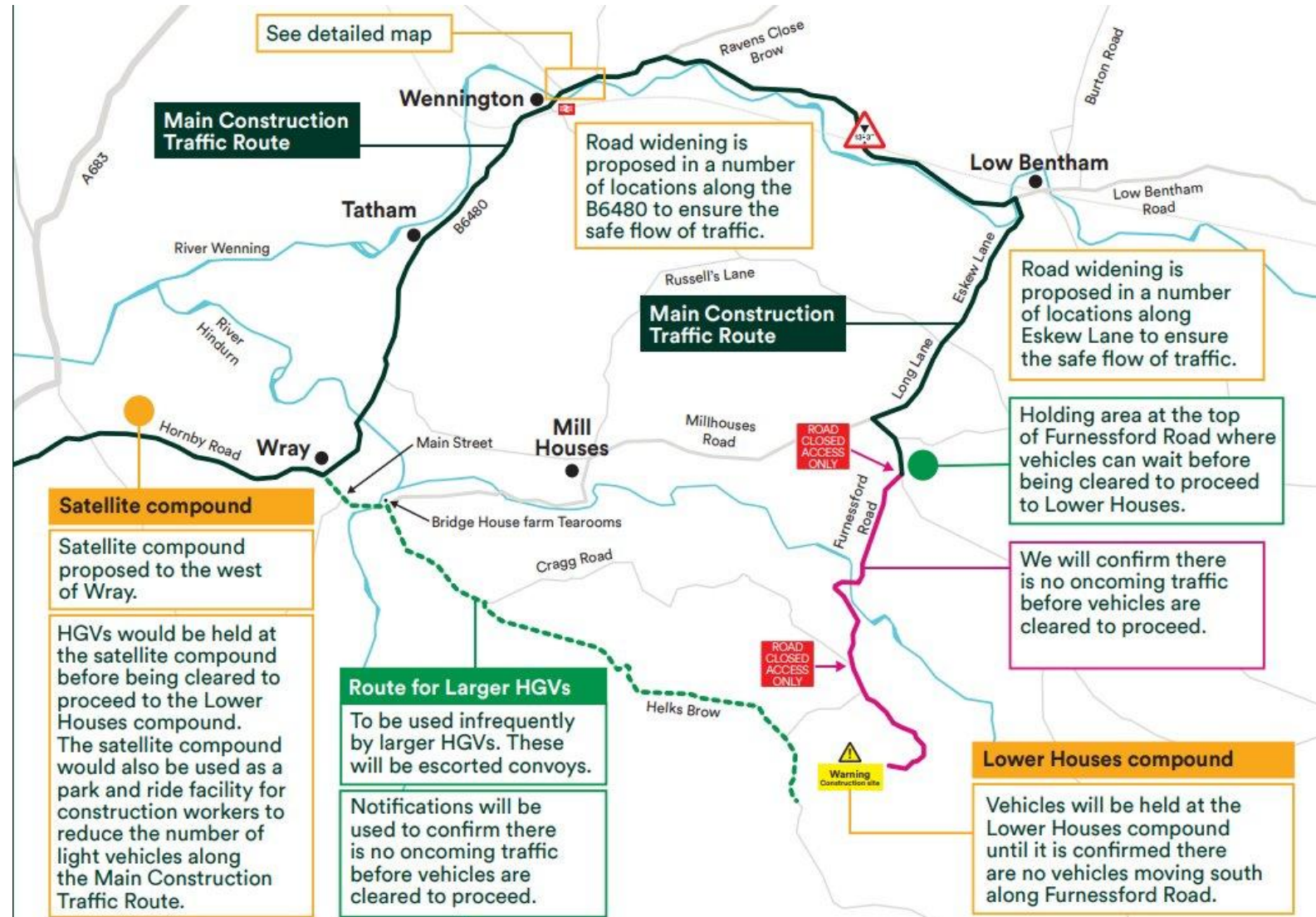
We'll be building four compounds at Braddup, Bonstone, Newton-in-Bowland, and the Lower Houses to launch and receive the Tunnel Boring Machines (TBMs).

Ahead of setting up the compounds we will need to undertake enabling works, to prepare the roads for the movement of Heavy Goods Vehicles (HGVs) and to keep traffic flowing in the area.



Lower Houses Compound

- The main construction traffic access to the site will be taken from Junction 34 of the M6, along the A683 through Wray, Tatham, Wennington and Bentham, along Eskew Lane, Long Lane, Fairheath Road, Spen Brow, Furnessford Road and Park House Lane to enter the Lower Houses site via an eastern access point.
- Our construction traffic access proposal will for the most part avoid Main Street in Wray which is narrow with buildings close by to the roadside.
- Temporary alternative parking for cars that usually park on Main Street will be provided nearby at the Bridge House Farm Tearooms when we do use Main Street.

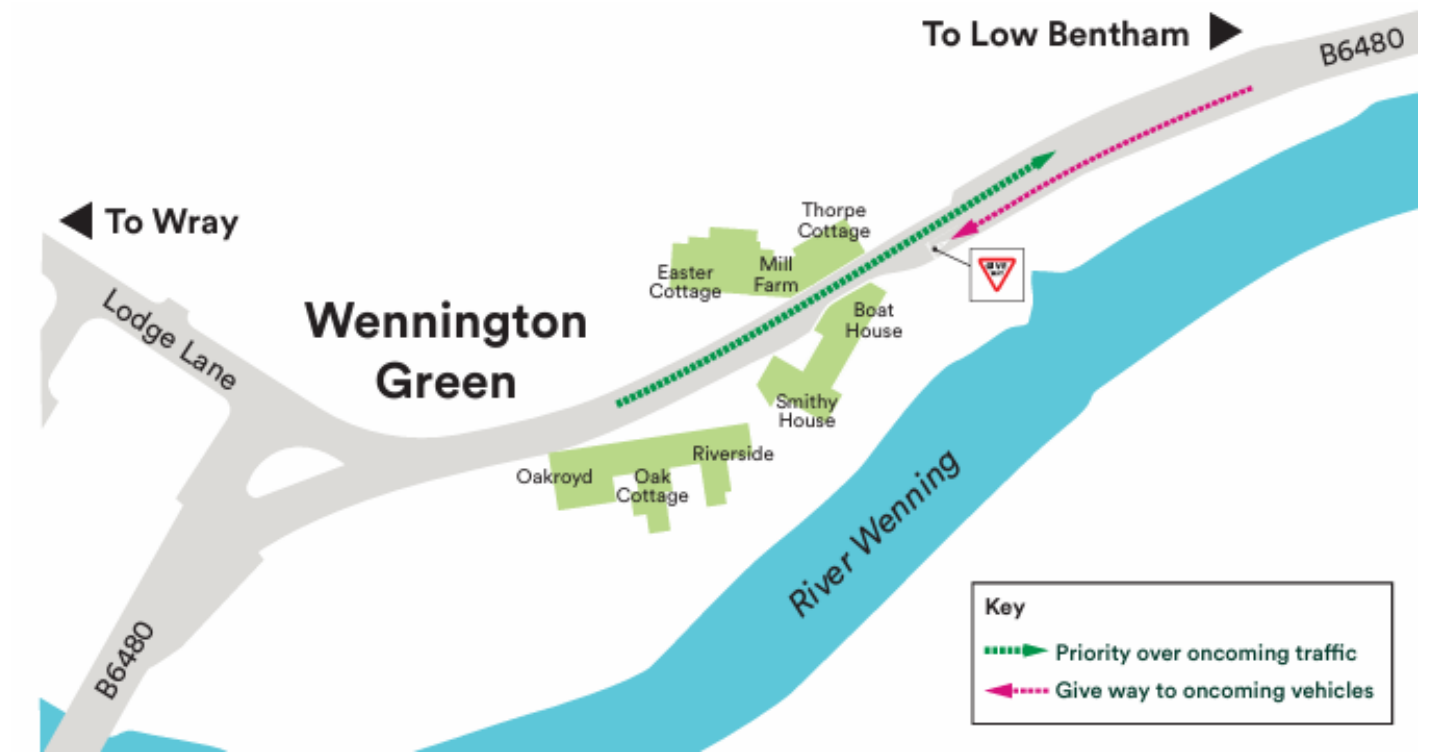


Lower Houses Compound access route

We will use a road closure along Furnessford Road to manage construction traffic and ensure it cannot meet in opposing directions.

Access will be given for people that live and work along this road, and we will have measures in place to ensure the road safety of all road users.

We will put in place priority passing at the Wennington 'narrows'.



The Haweswater Aqueduct Resilience Programme

Maintaining drinking water supplies across Cumbria, Lancashire and Greater Manchester for generations to come.



> 30% of the workforce will be local



Programme wide volunteering opportunities



An apprenticeship programme



A fund to support local causes



25% of project spend will be with Small Medium Enterprises (SMEs)



Local engagement plans with Community Liaison Groups and Stakeholder Officers to listen to and give local people a voice



To find out more about Strabag jobs for HARP visit strabag.co.uk/careers