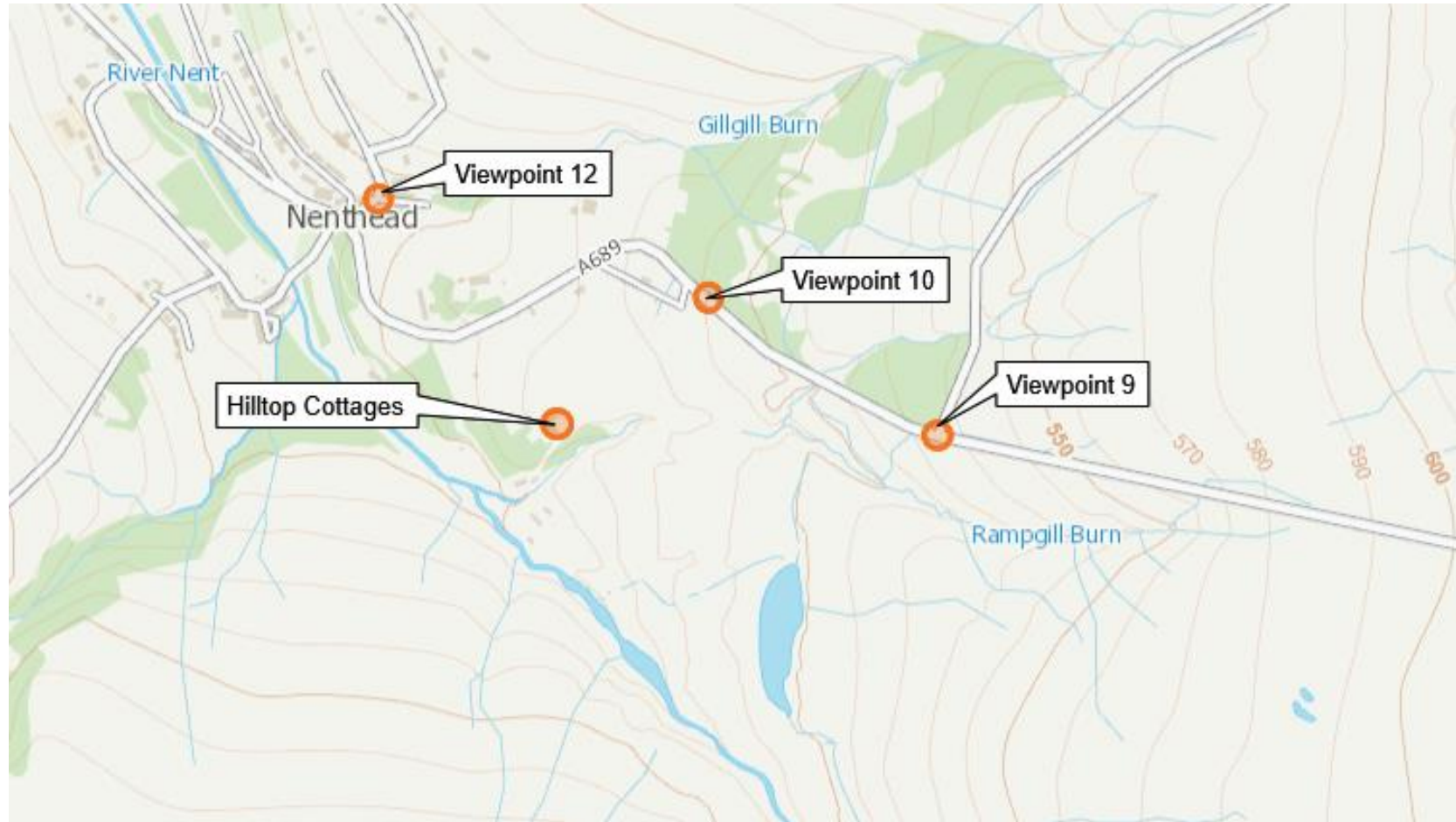


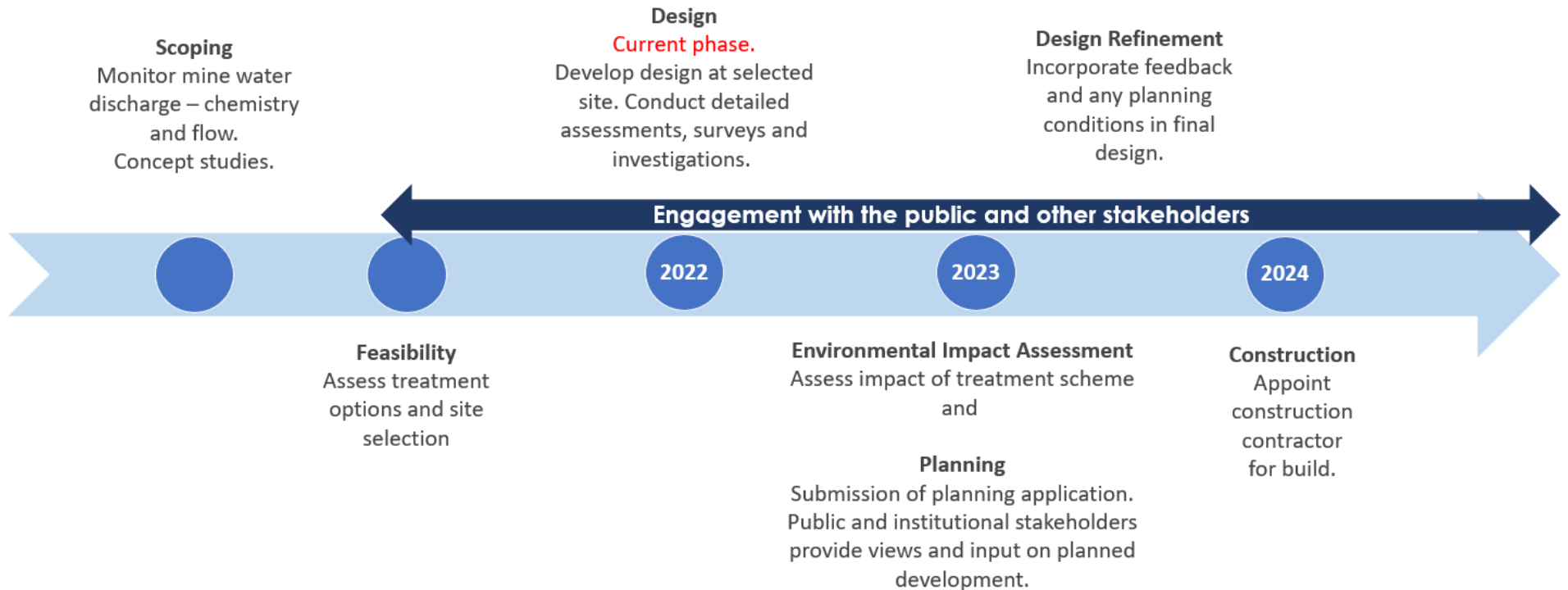
Visualisation Viewpoints

Location Map



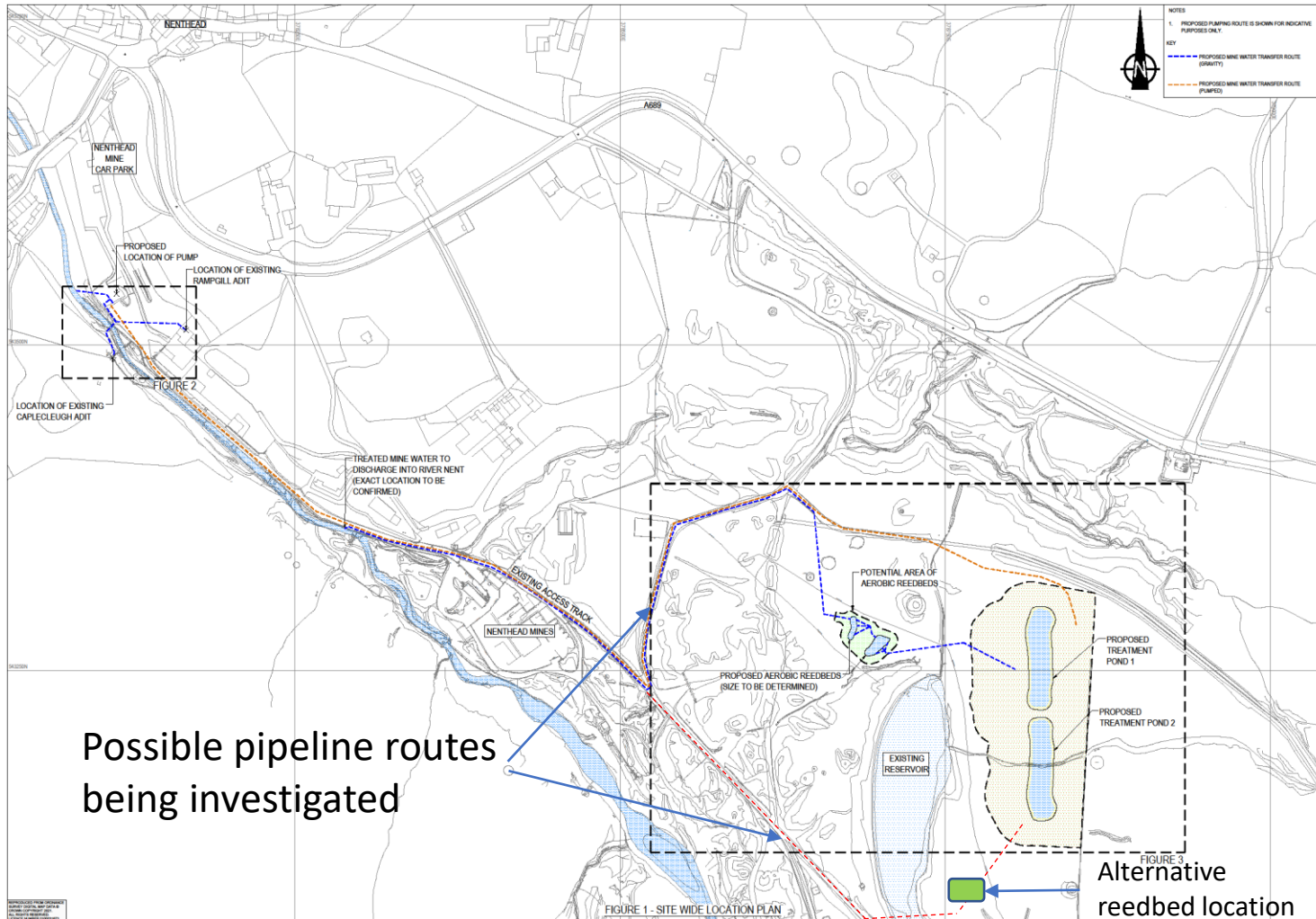
Indicative Project Timeline

subject to budget and permissions



Proposed Scheme Layout, May 2022

Potential options continue to be investigated for some elements



Possible pipeline routes
being investigated

Alternative
reedbed location

The River Nent

River Quality

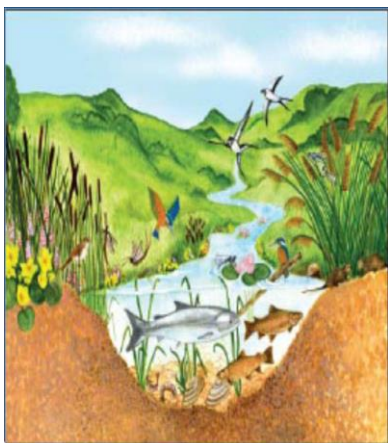
Rivers, lakes, coastal waters and groundwaters are a vital resource and support industry, wildlife, tourism and recreation. Good quality of our waters is fundamental to their continued usefulness. We need to protect them from pollution and manage them so that they reach and maintain “good ecological status” and “good chemical status”.

Under the Water Environment Regulations (2017), the Environment Agency monitors all rivers and other waters in England and compares the results to standards set by Government. The results for the Tyne catchment are published in the statutory Northumbria River Basin Management Plan. This plan explains the current condition of all water bodies, the reasons why any water body is polluted, and that usually, the objective is for all water bodies to reach good status by 2027.

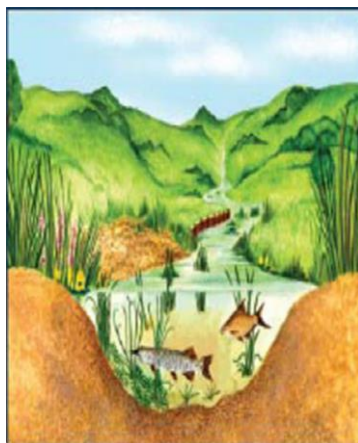
The Nent is the second most metal polluted river in England and is currently classed as poor for fish (so between moderate and bad) and moderate for invertebrates.

Through the Environment Act 2021, the Government is proposing a target that by 2037, we should reduce the length of rivers polluted by abandoned mines by 50% so as to reverse the damage our mining legacy continues to cause our river environments.

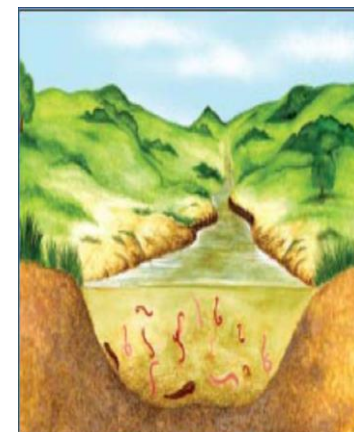
Good



Moderate



Bad



Ecology Survey Schedule

We have carried out several surveys to help us understand the existing ecological conditions at the site. The table below indicates when we will do more surveys during 2022 to make sure the information is up to date. This information will be used to minimise the impacts of our proposals to address pollution in 60km of the River Nent and South Tyne.

Survey	Scope of Survey	Survey Timing - Months	Survey Frequency	Survey Extent	Programme 2022																		
					Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec									
Ecology and Biodiversity																							
Ecological desk study	Collation of existing data from online sources and Cumbria Biodiversity Data Centre.	Anytime	n/a	2km from site boundary																			
Phase 1 Habitat Survey	Phase 1 Habitat Survey in accordance with the published method (JNCC, 2010). Also: Record of Invasive Non-Native Species (INNS) of plants; Incidental records of protected or priority species/ habitats or their field signs.	Apr-22	1 survey visit	Site plus a 50m buffer																			
Bat roost potential of Caplecleugh and Rampgill adits	Methodology will be based upon the Bat Conservation Trust's <i>Bat Surveys for Professional Ecologists: Good Practice Guidelines</i> (Collins, 2016).	Apr-22	1 survey visit - to be completed concurrently with the Phase 1 habitat survey	External assessment only.																			
Habitat Suitability Index (HIS) of waterbodies within 250m	Methodology based upon Oldham et al (2000). To be completed during Phase 1 habitat survey	Apr- 22	1 survey visit - to be completed concurrently with the Phase 1 habitat survey.	Waterbodies within 500m of site.																			
Breeding Bird surveys	Five survey visits shortly after dawn to identify evidence of nesting species within and adjacent to the Site.	April to June 2022	-Visit 1 – Fri 8th April -Visit 2 – Thurs 28th April -Visit 3 – Fri 13th May -Visit 4 – Thurs 16th June -Visit 5 – Thurs 30th June	Site and adjacent areas where appropriate.																			
Great Crested Newt eDNA surveys	Survey by GCN licensed surveyor, with reference to Natural England eDNA sampling protocol.	Completed between 15 th May and 30 th June.	1 survey visit (daytime) to each pond to collect water samples	We have allowed for the survey of nine ponds within 250 m of the site.																			
NVC survey	Survey by experienced botanist with reference to Rodwell (2006).	Optimum season for botanical surveys.	1 survey visit - June 2022	Areas of botanical interest identified during the PH1 habitat survey.																			
Otter and Water Vole	Waterbodies and habitats to be affected by the development with reference to monitoring the Otter (Chanin, 2003).	Between April & September inclusive	Up to 2 survey visits. One visit in each of mid-April to end June 2021 and one July to end of September 2021.	Suitable habitats and watercourses 250m upstream and downstream of any proposed works. Access will be required to both banks and up to 10m from the bank edge.																			
Reptiles	Any suitable terrestrial habitat will be identified during the desk study and Phase 1 Habitat Survey. Presence/absence surveys will be undertaken with reference to guidance provided in FrogLife Advice Sheet 10: Reptile Surveys (1999).	If required: Optimal - April to October depending on the weather.	One visit to set out refugia and 7 survey visits to confirm presence / likely absence.	Suitable habitat within the site.																			
Aquatic Macrophyte survey and fish habitat walkover	Representative reaches of the River Nent and receiving watercourses, and in the reservoir. Assessment of aquatic macrophytes for WFD status equivalent, and invasive Non-Native Species (INNS)	May - September	Single visit	Representative reaches of River Nent and receiving watercourses; Nenthead Reservoir																			
Fish eDNA sampling	eDNA survey for fish in the Handsome Mea Reservoir, River Nent and various leats (TBC) to establish fish community present	Any time (concurrent with above) Note: There is a minimum 6-8 week processing time by the external eDNA laboratory	Single visit	Handsome Mea Reservoir, River Nent and various leats (TBC)																			

Proposed location for the treatment ponds



Looking north towards Nenthead from above the Handsome Mea reservoir