

Welcome to the HS2 and Align engagement event for the early stages of the HS2 design of the Colne Valley viaduct, south portal and western valley slopes, part of the Phase 1 section of the railway.

We are here today to share our initial design proposals with you, and to seek your views. We value your input and are ready to answer any questions you may have about the concept designs, how they are likely to progress and how we can manage some of the environmental effects.

Please feel free to approach our team who are here today and ready to help. Alternatively you can ask questions and leave comments online, by email, or take a leaflet with you and send it back to us.

If you are unable to provide a written response, please speak to someone at our event who will be happy to help, or call the HS2 Helpdesk on 08081 434 434. Please provide feedback by Sunday 8th April 2018.

HS2 Project Overview

HS2 will form the high-speed backbone of Britain's transport network. It is a catalyst for growth: revitalising the country, creating new opportunities for jobs and skills, regenerating towns and cities, and bringing us all closer as a nation.

Opening in three phases between 2026 and 2033, the new network will connect eight of Britain's ten largest cities, making it faster and easier to travel for work, business and leisure.

Infrastructure Design Features

The Colne Valley viaduct and the south Chiltern Tunnel portal are key design features of the high-speed rail line. The Valley is a point of great pride for the region and a very popular local amenity. In this context, we wish to seek your views on the new infrastructure.

Working through detailed technical analysis, together with the Colne Valley Regional Park Panel and the HS2 Design Panel, we have developed initial design proposals considering the following key HS2 Design Principles:

- Contextual Approach
- Structural Honesty
- Functionality, Maintainability and Flexibility
- Safety and Security
- Value for Money
- Buildability
- Sustainability

Due to the high-value of the Colne Valley landscape, proposals have also followed the HS2 landscape principles, which are:

- Conserve
- Enhance
- Restore
- Transform

We have engaged with the Colne Valley Regional Park Panel and the HS2 Independent Design Panel. The proposals have now reached a level of design that we would like to share with the local community, so that we can consider your views during the next design stage.

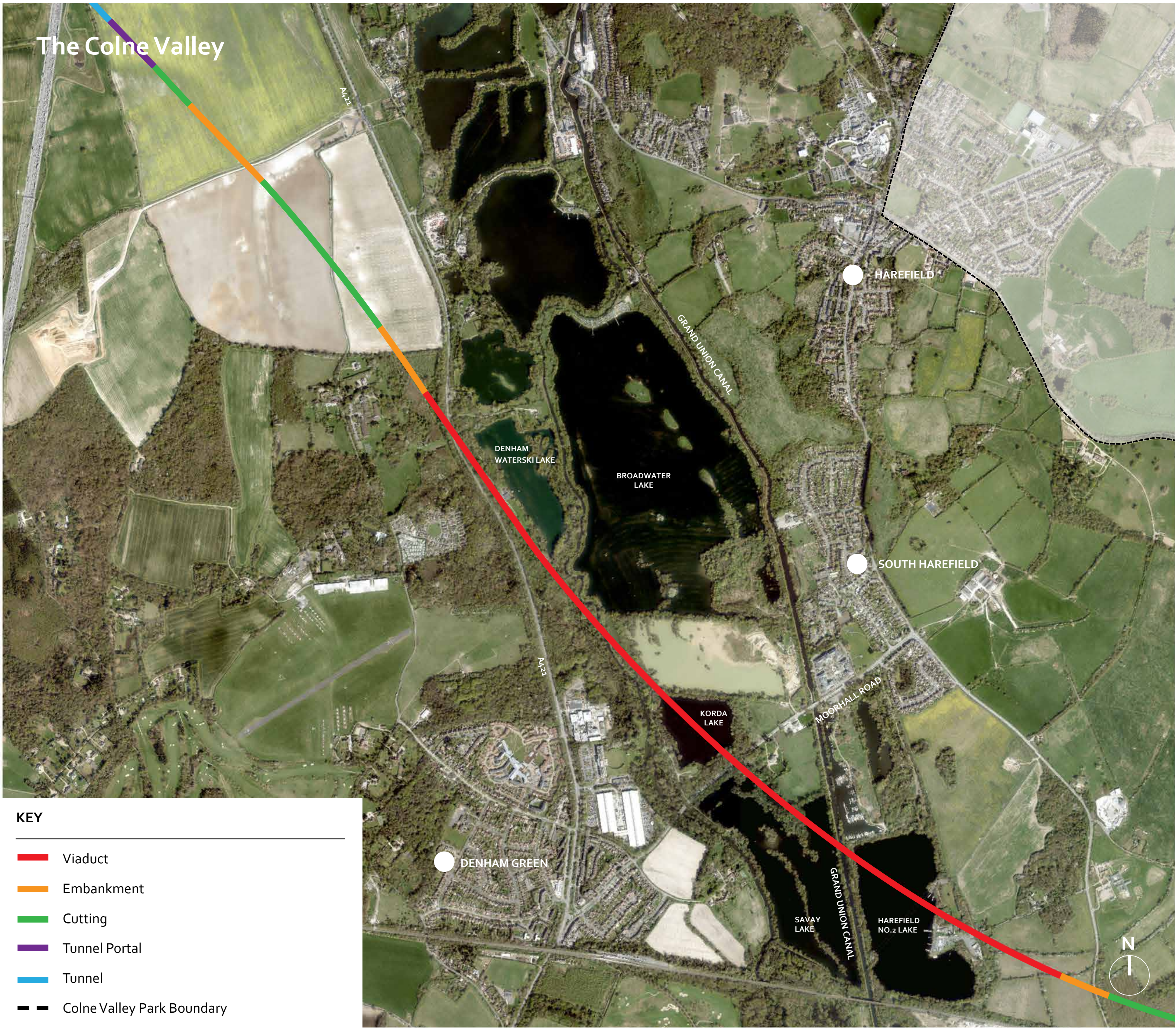
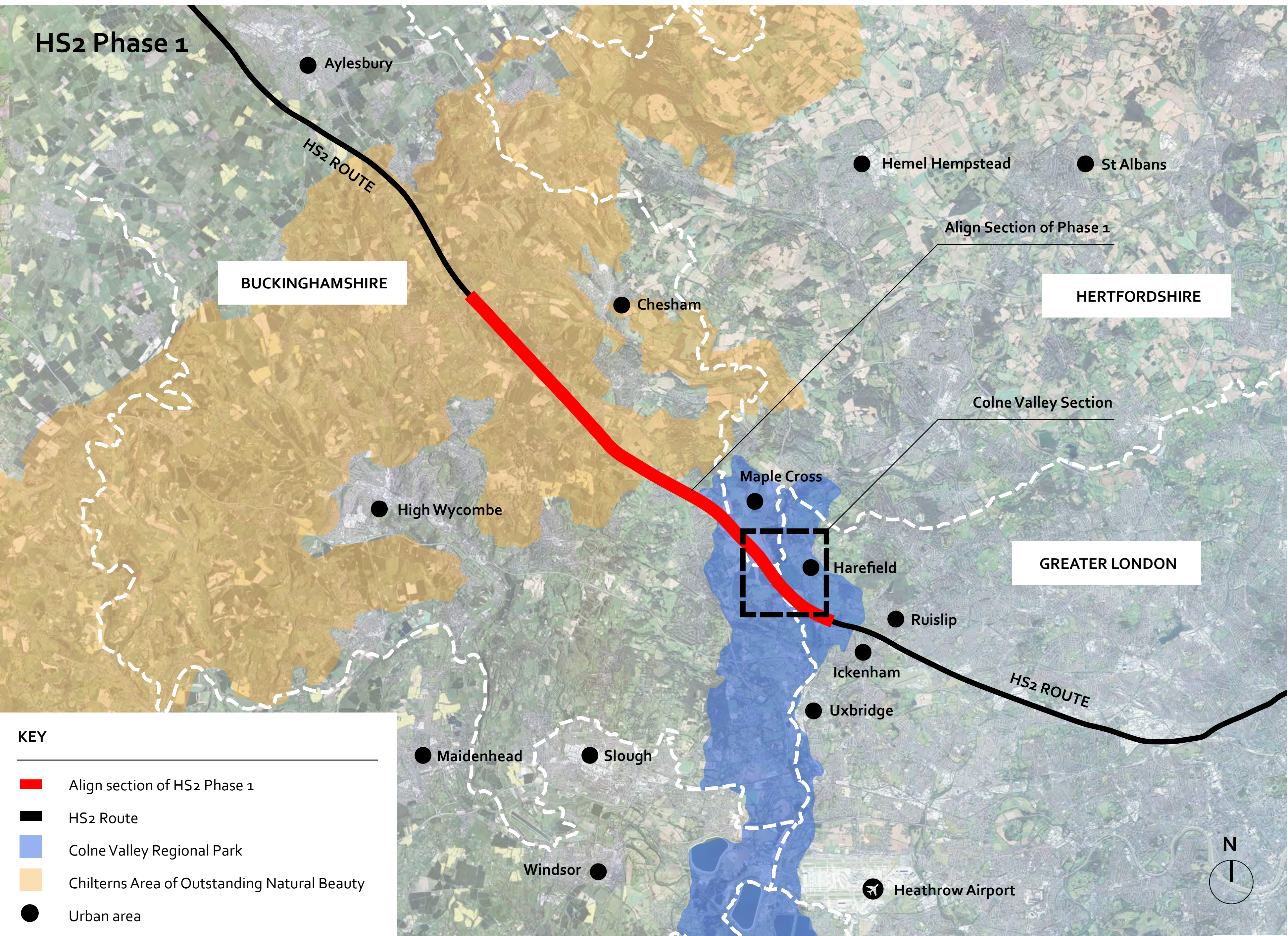
Who are designing the viaduct and portal?

Align JV is a joint venture of three British-based international infrastructure companies;

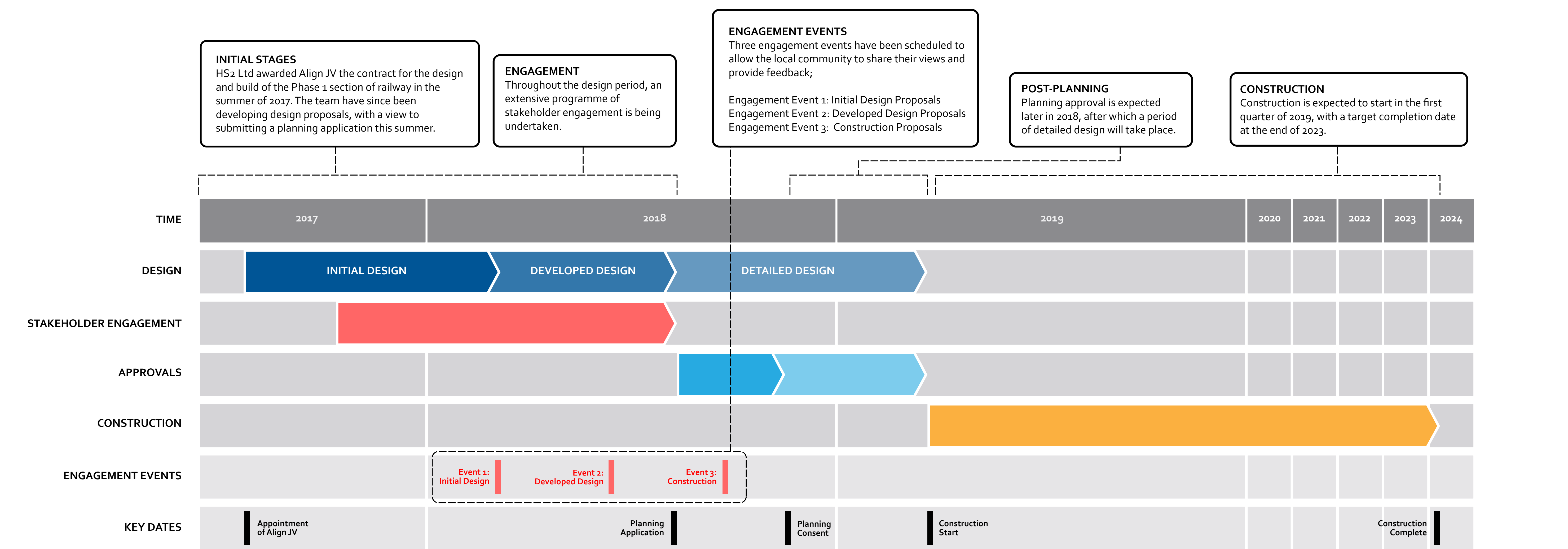
- Bouygues Travaux Publics
- Sir Robert McAlpine
- VolkerFitzpatrick

Their combined experience, both in the UK and worldwide, in delivering high-profile infrastructure projects safely, on time and on budget, has established their reputation. Therefore, their alliance was formed to deliver this section to the highest standards of excellence.

Align-D form the design team in charge of developing the infrastructure design proposals and engaging with key stakeholders. Each of the design team members has a recognised and successful track record of major project innovation, design and construction.



Project Timeline



Overview

The Colne Valley is a much loved landscape, an area of rich, diverse and attractive countryside that is valued by local residents and visitors alike. Therefore the proposed Colne Valley viaduct and portals must be designed in a way that best integrates with the local surroundings.

Detailed surveys have been carried out to gain a thorough understanding of the characteristics of the valley.

For this event, we have described two main character areas: The River Colne Valley and Western Valley Slopes, as illustrated in the Landscape Character Area Plan below.

River Colne Valley

The River Colne and its tributaries run through the valley, and their former gravel pits have been restored into a number of water features, providing a valuable wildlife and recreational resource.

A well-established network of public rights of way cross the area, including the Colne Valley Trail and Grand Union Canal Walk. A variety of habitats support a colourful and diverse wildlife, and some areas have been designated as Sites of Special Scientific Interest (SSSI), Nature Reserves and Local Wildlife Sites because of the fauna and flora found within. These are shown on the plan to the right.

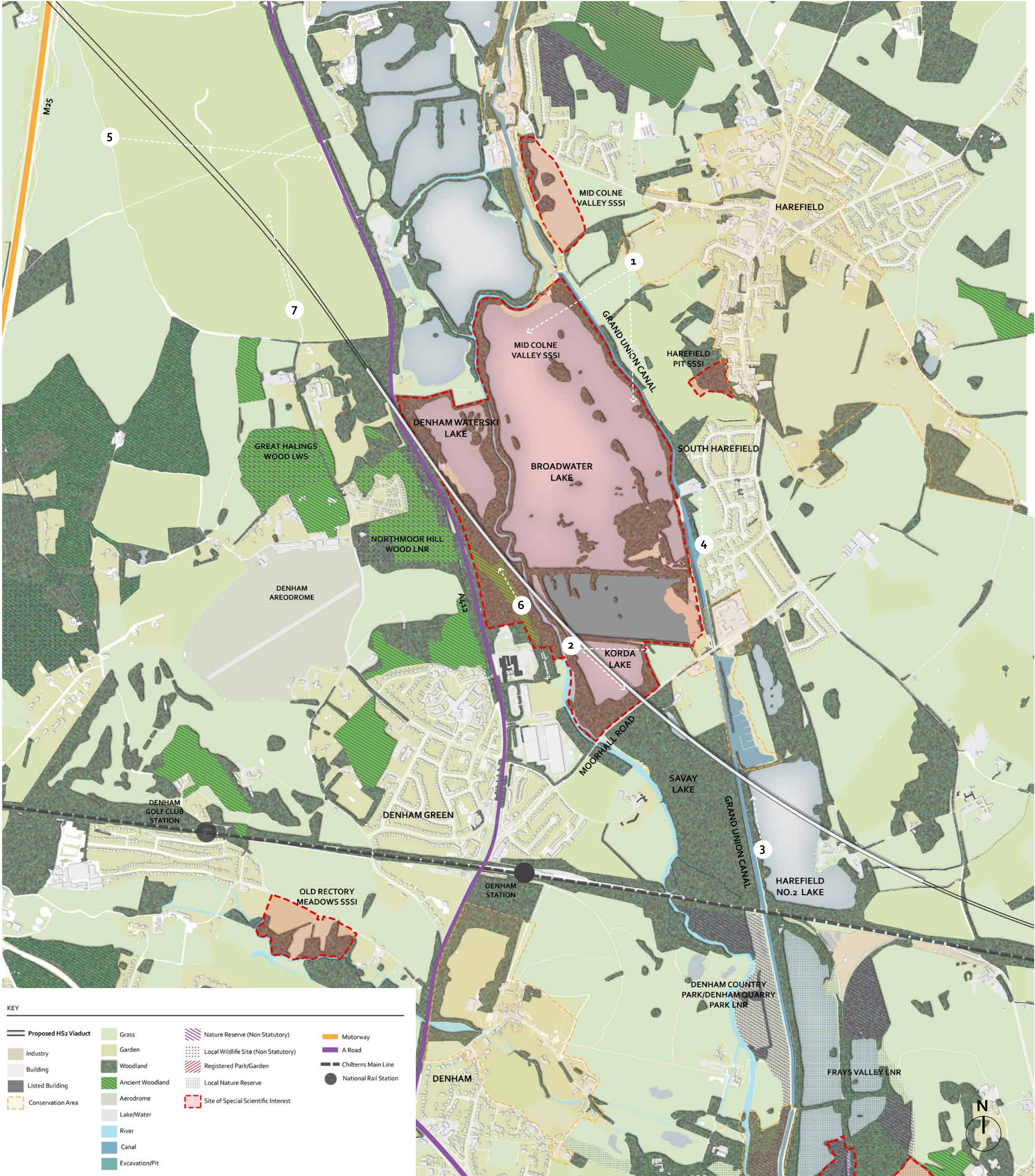
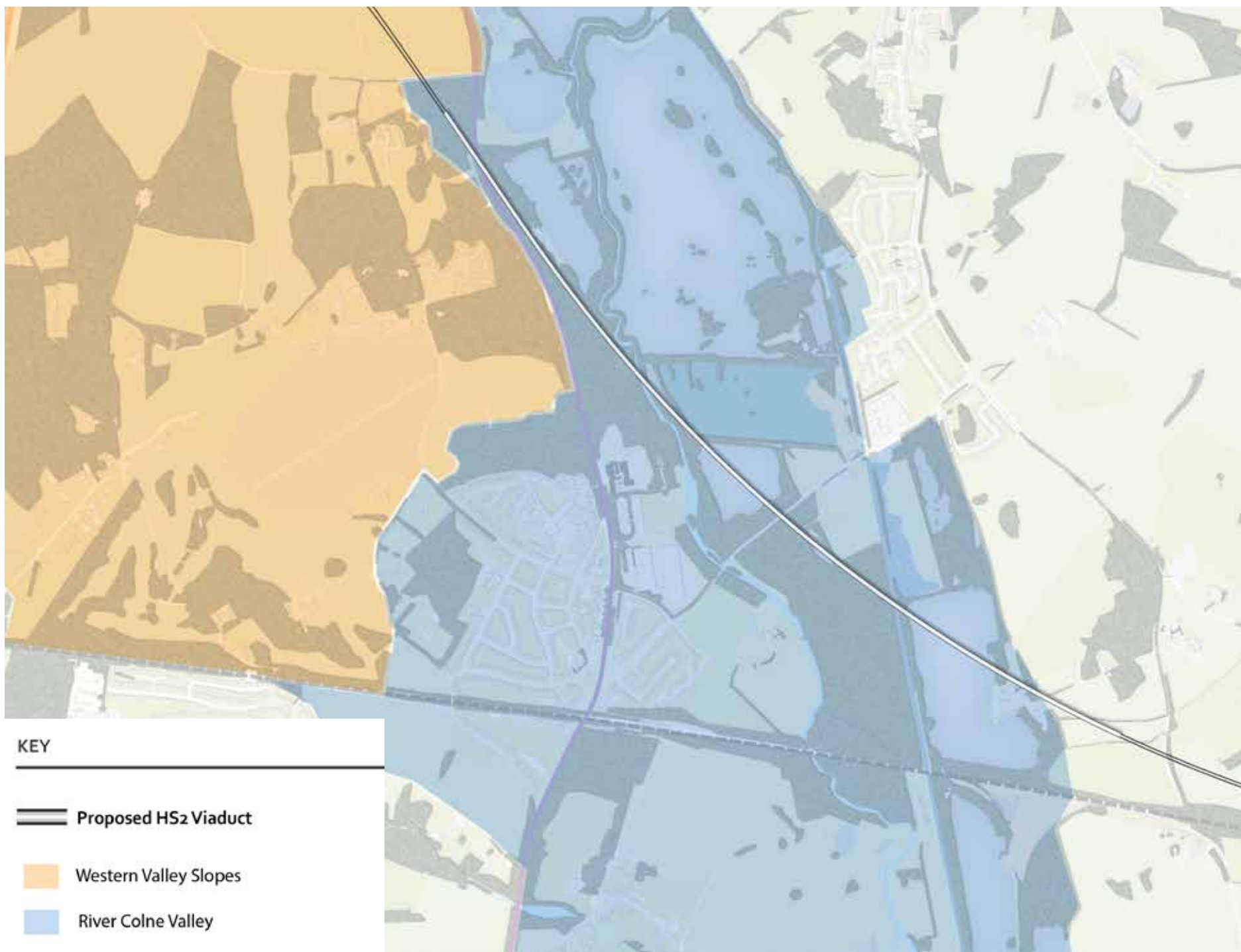
A lush landscape of trees creates a strong sense of enclosure within the valley landscape. However, there are long-distance views across the water features, from higher ground to the east and west, and along the Grand Union Canal.

Western Valley Slopes

The Western Valley Slopes include several dry valleys that form a varied landscape of vast and rolling farmland dotted with mature and ancient woodland. This creates a compelling landscape that combines openness and enclosure.

On the steeper valley slopes, winding lanes are a distinctive feature, in particular Tilehouse Lane, and several walking and cycling routes cross the area tracing along historic boundaries, such as Old Shire Lane.

Landscape Character Area Plan



Photographs



Overview

The existing public recreational assets are shown and described on the plan to the right. It is important to retain and enhance these areas, but there is also an opportunity to create and open up new recreational features within the valley landscape to the greater public benefit.

1 BROADWATER LAKE

Key Features

- Mid Colne Valley Special Site of Scientific Interest (SSSI) and Wildlife Trust Nature Reserve

Use

- Significant ornithological interest, particularly breeding woodland and wetland birds, including the tufted duck and wintering wildfowl
- Important habitat for Daubenton's bats
- Used for carp fishing
- Broadwater Sailing Club

Opportunities

- Possible enhancement of wetland habitats
- New recreational pedestrian routes along eastern edge

2 DENHAM WATERSKI CLUB

Key Features

- Lake enclosed by mature vegetation, providing tranquil and secluded environment despite proximity of the A422

Use

- Activities include water skiing, wakeboarding and open water swimming

Opportunities

- Possible connection to new river trails and creation of external seating or picnic areas to the lake edge

3 RIVER COLNE

Key Features

- The River Colne is the primary watercourse through the Colne Valley and provides a variety of wetland habitats

Use

- The river is largely inaccessible with some riverside trails to the south

Opportunities

- Diversion of the river will be avoided to minimise the impact on ecology and wildlife habitats

4 HILLINGDON OUTDOOR ACTIVITY CENTRE

Key Features

- In use since 1950 and located adjacent to Harefield No. 2 Lake

Use

- Activities include climbing, sailing, windsurfing, canoeing and angling

Opportunities

- Enhancement of existing site as a recreational gateway to the south of the park

5 GRAND UNION CANAL

Key Features

- Historic route, enclosed by canal-side vegetation

Use

- Barge mooring. Towpath used as a recreational pedestrian route

Opportunities

- Possibility of linking a public footpath on the western side to the Colne Valley Trail on the eastern side

6 HAREFIELD MARINA

Key Features

- Marina adjacent to the Grand Union Canal

Use

- 220 non-residential, rural moorings for cruisers and narrowboats

Opportunities

- Improved pedestrian connection from Grand Union Canal

7 KORDA LAKE

Key Features

- Lake enclosed by mature vegetation, providing a variety of wetland habitats

Use

- The lake is used as a water fishery, predominantly for carp angling

Opportunities

- Possible new pedestrian routes to provide better connection between lakes

| KEY | | | |
|------------------------------|-----------------------|--|------------------------|
| BUILT | Proposed HS2 Viaduct | CONNECTIVITY | ENVIRONMENT |
| | Industry | | |
| Building | Conservation Area | Colne Valley Trail/National Cycle Route No.6 | Grass |
| | | | |
| A Road | Motorway | Long Distance Path | Garden |
| | | | |
| Chilterns Main Line | National Rail Station | Circular Walk | Woodland |
| | | | |
| Public Right of Way | | Public Right of Way | Aerodrome |
| | | | |
| Grass | | River | Lake/Water |
| | | | |
| Garden | | Canal | Excavation/Pit |
| | | | |
| Woodland | | Activity Lake | Registered Park/Garden |
| | | | |
| Aerodrome | | Country Park | |
| | | | |
| Recreational | | | |
| | | | |
| Colne Valley Visitors Centre | | | |
| | | | |
| Golf Club | | | |
| | | | |
| Fishing | | | |
| | | | |
| Sailing | | | |
| | | | |
| Canoeing | | | |
| | | | |
| Wildlife | | | |
| | | | |
| Aerodrome | | | |
| | | | |
| Boat Loading | | | |
| | | | |
| Barges | | | |
| | | | |
| Waterskiing | | | |
| | | | |
| Swimming | | | |
| | | | |
| Recreational Route | | | |
| | | | |
| Canal | | | |
| | | | |
| Lake | | | |
| | | | |
| River | | | |
| | | | |
| Woodland | | | |
| | | | |
| Sports Ground | | | |
| | | | |
| Caravan/Mobile Home Site | | | |
| | | | |
| Picnic Area | | | |
| | | | |
| Public Park | | | |
| | | | |
| Pub | | | |
| | | | |

Landscape

The viaduct and tunnel portal will introduce major structures into the existing landscape so the design needs to create a cohesive setting in order to integrate them into their surroundings. It is important to minimise the visual impact of the viaduct and portal structures. However, a well-designed structure that is informed by its surroundings that can compliment the site and create more opportunities for recreation and leisure.

The Colne Valley has an excellent network of footpaths. There is opportunity to improve public access around the water features and wetland areas. The viaduct could open up new public access routes and create a variety of new experiences for local people and visitors.

Key crossing points and structural features of the viaduct can provide opportunities for landscaping that can be tailored to the viaduct's surroundings. Although the viaduct will be mainly in woodland, there will be locations from which the viaduct can be viewed along the valley floor and beyond.

Colne Valley Additional Mitigation Plan

KEY

Proposed HS2 viaduct

Industry

Building

Motorway

Chilterns main line

Key view

AMP project areas

Key crossing points

Grass

Garden

Woodland

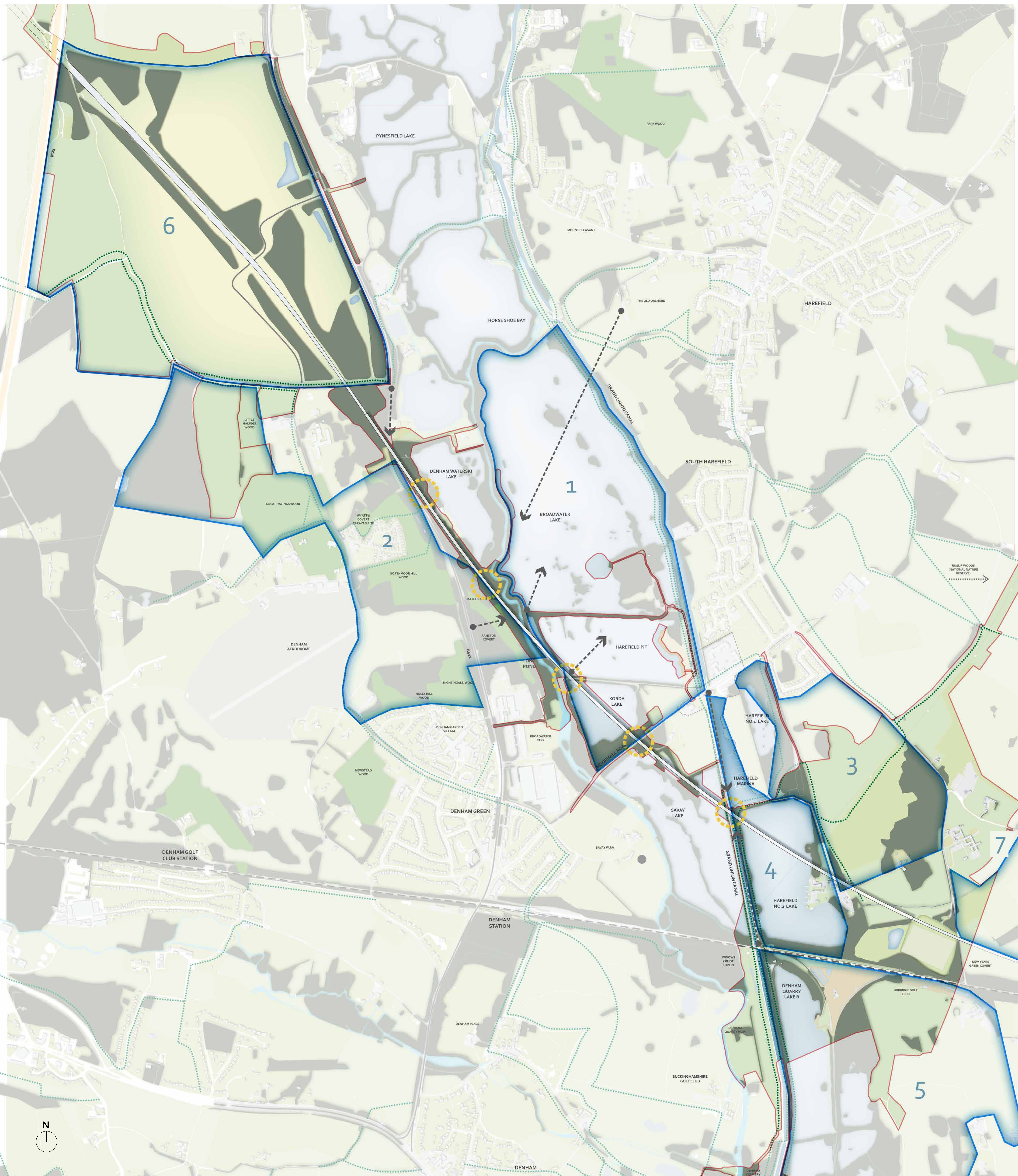
Aerodrome

Lake/water

River

Canal

Excavation/pit



Have your say...

A

Recreational Opportunities

We think that the following objectives are important. Do you agree?

Please rank their importance to you from 1 (high) to 6 (low)

Expand the existing footpaths to create circular recreational routes around the lakes

Provide views of the viaduct from the public rights of way

Ensure our plans align with the recreational proposals of the Colne Valley AMP

Connect existing and proposed footpaths with new railway structures

Maintain access to lakes for recreational purposes, such as sailing and angling

Improve access for the physically and mentally impaired where possible

Objectives

The objectives for the design of the Western Valley Slopes are:

- Mitigate the impacts of HS2 during construction and operation
- Reinstatement of the land after construction works have finished
- Work closely with landowners and the local community

Landscape Character

The character of the Western Valley Slopes is defined by the following elements:

- Topography and landform - rolling open farmland and dry valleys
- Geology and hydrology – well-drained calcareous soils and underlying chalk
- Historic landscape - woodland areas and field patterns
- Biodiversity and ecological value - chalk grassland and mature woodland (many ancient)
- Visual asset - panoramic views across the Colne Valley
- Recreation and access - many existing recreational routes, smaller pathways for walking and cycling

The analysis of the characteristics, has led to the following concepts for the landscape design illustrated on the plans opposite.



1 Core Areas

- Upper Western Fields**
- Minimal placement of excavated tunnel material to preserve dry chalk valleys
 - Reflect existing drainage processes
 - Replanting around railway structures including the tunnel portal
 - Proposed end use: Agricultural

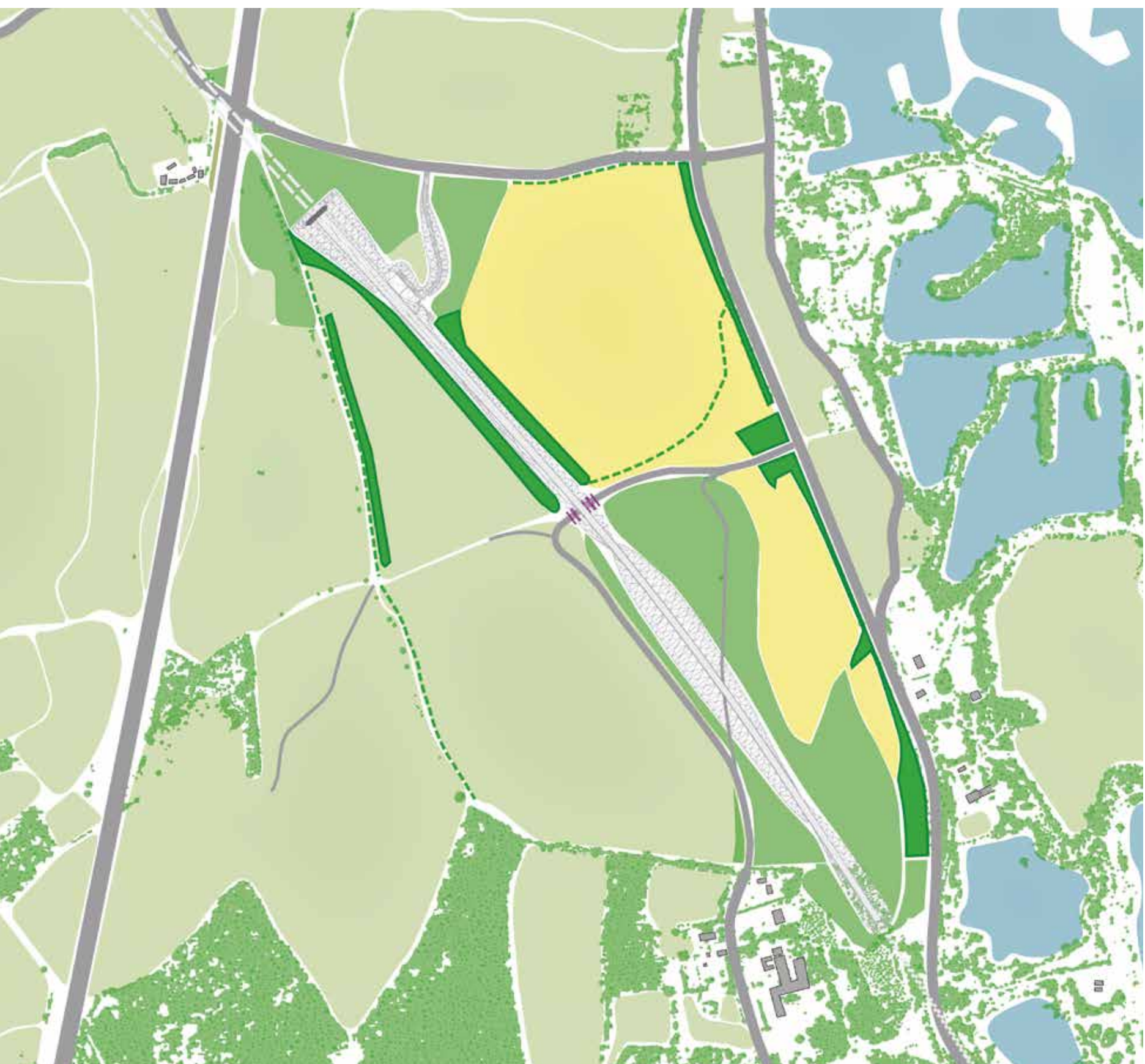
- Southeast Ridge**
- Placement of majority of tunnel excavated material
 - Proposed end use: Recreation provision and habitat creation

- Northeast Grassland**
- Reconstruction of hill profile to create open grassland habitat
 - Retain existing surface drainage patterns
 - Proposed end use: Recreation provision and habitat creation



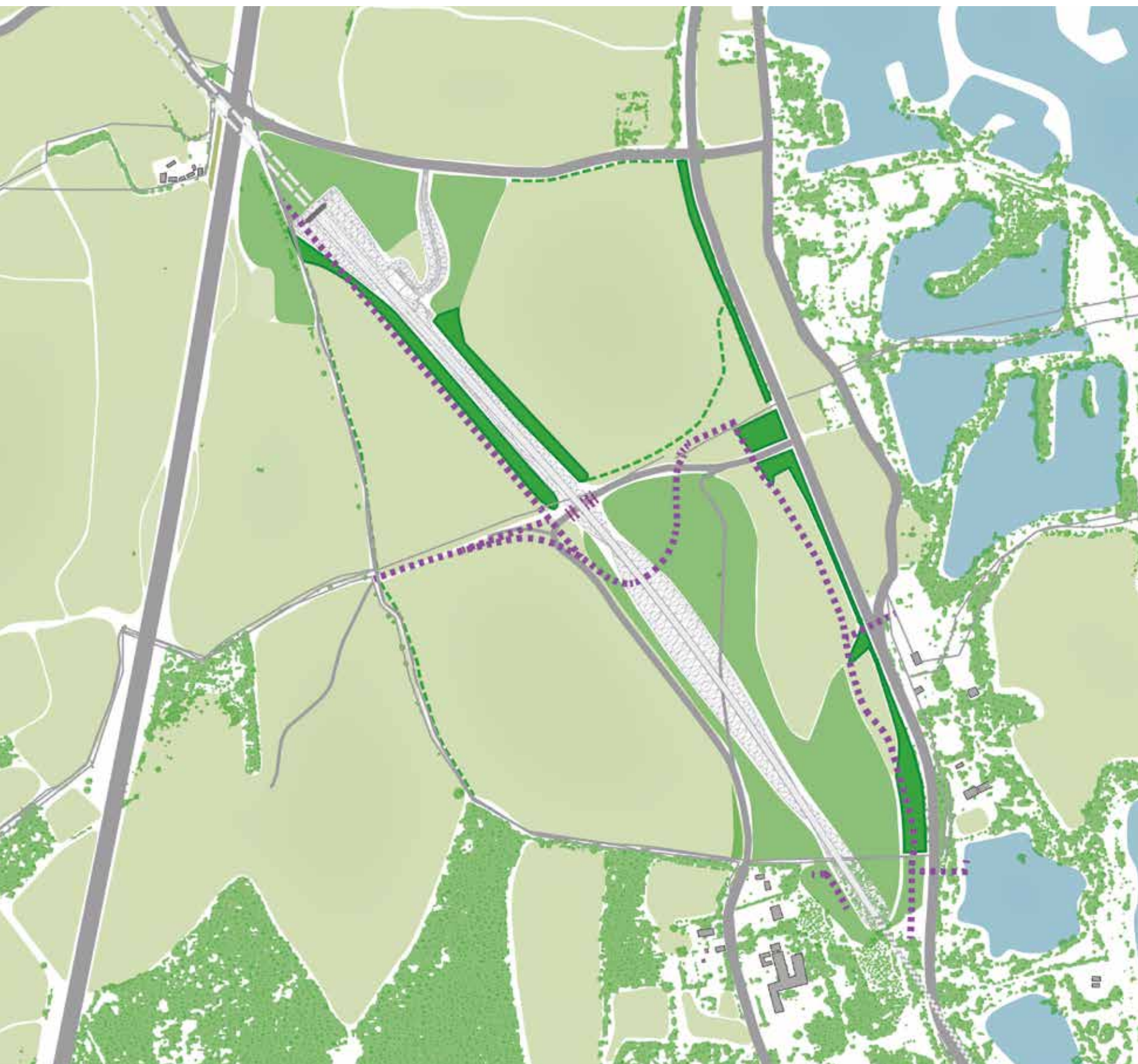
2 Landscape Fabric

- Plant and reinstate calcareous grassland woodland areas, by way of mitigating the various impacts of the infrastructure
- Create varied wildlife habitats and ecological corridors, in addition to providing field boundaries



3 Recreation and Access

- Establish rights of way, which connect the cycling and walking paths to the wider network. This will provide different opportunities to enjoy new views of the railway
- Maintain the rural character of routes, including Tilehouse Lane, before creating new boundaries



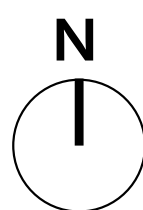
4 Topography and Drainage

- Preserve rolling landform including maintaining as far as practicable the dry valley areas to the west of the railway line
- Minimise extent of drainage infrastructure required by maintaining and mimicking the pattern of ridges and shallow valleys
- Prevent placement of tunnel excavation material on the most permeable areas to maximise water run-off infiltration



KEY

- Proposed woodland planting
- Existing woodland planting
- Proposed screen planting
- Proposed hedgerows
- Existing grassland
- Proposed grassland
- Existing routes
- Proposed routes
- Proposed ridges
- Proposed valleys
- Proposed drainage falls
- Proposed drainage ponds



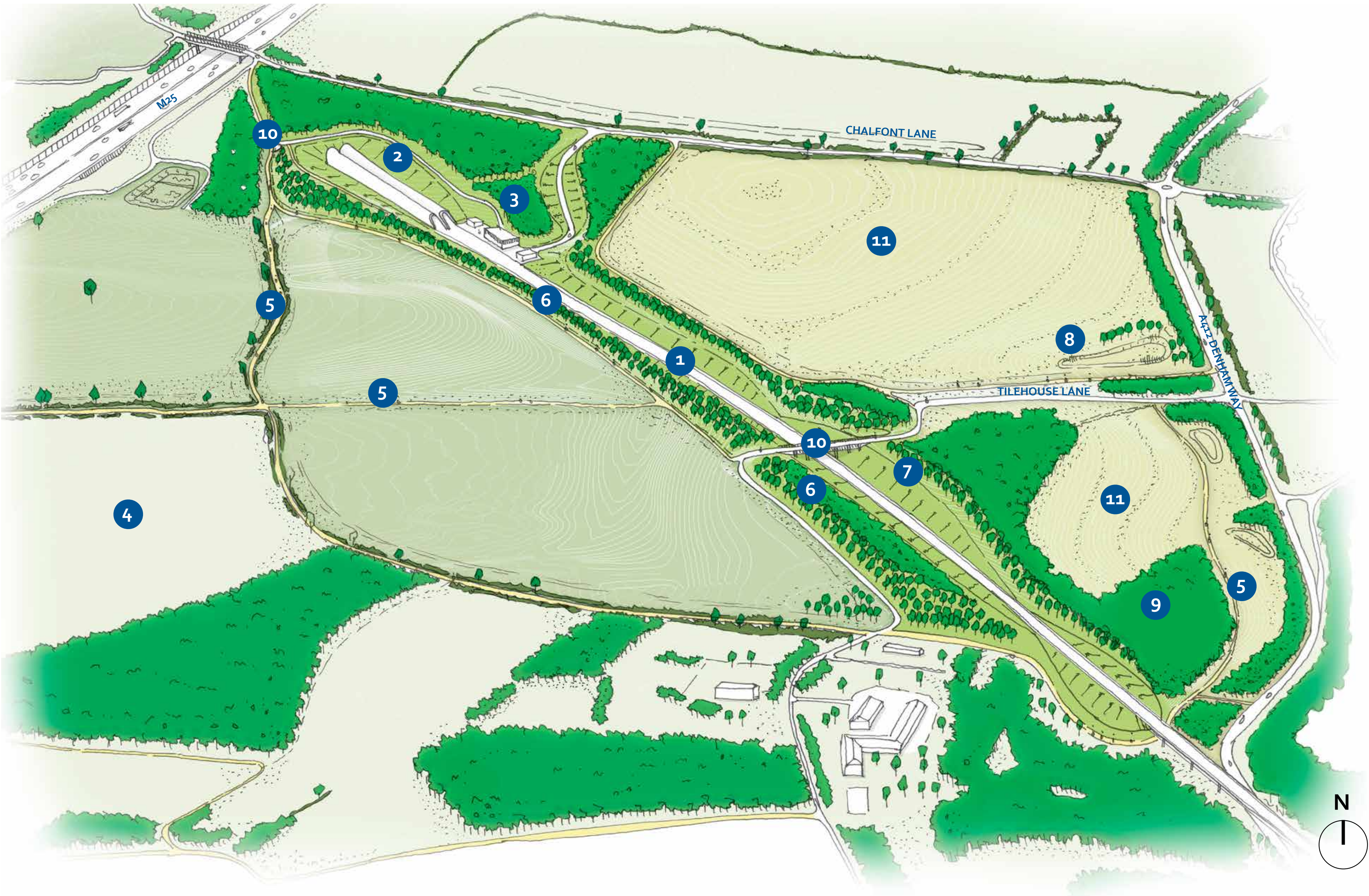
Proposed Landscaping

The sketch opposite shows the design concept for the Western Valley Slopes of the railway in operation once planted areas have matured. The key features are as follows;

- The eastern side of the railway line will be dominated by areas of grassland and mature woodland whilst the western side will be restored to farmland
- The undulating character of the Western Valley Slopes will have been retained and restored
- New field boundaries created on the western side of the track will blend in with the existing field patterns of the surrounding area whilst also providing important ecological habitats
- New routes will enhance the existing network giving opportunity for recreational activities

KEY

- Railway line
- Tunnel portal
- Compound buildings
- Area used for agriculture
- Public right of way
- Screen planting
- Grassed embankment
- Drainage ponds
- Woodland planting
- Potential viewing areas
- Habitat creation / informal recreation areas



Have your say...

B Western Valley Slopes

We think that the following objectives are important. Do you agree?

Please rank their importance to you from 1 (high) to 6 (low)

- Maintain a balance between farmland, wildlife habitats and recreation
- Reinstatement of habitat areas, including woodland and hedgerows
- Maintain the character of the valley slopes
- Use planting and land-shaping to integrate railway structures into the landscape
- Provision of new and interconnected habitats
- Opportunities for education and/or land art associated with habitat areas

Overview

What is a Tunnel Portal?

A tunnel portal is the term used to describe the structures at the railway's tunnel entrances and exits. When a train enters a tunnel, there is an increase in air pressure surrounding the train. In order to address this, the proposed tunnel portal contains perforations and has a flared entrance, acting to smooth the change in air pressure as the train passes through the tunnel.

Location

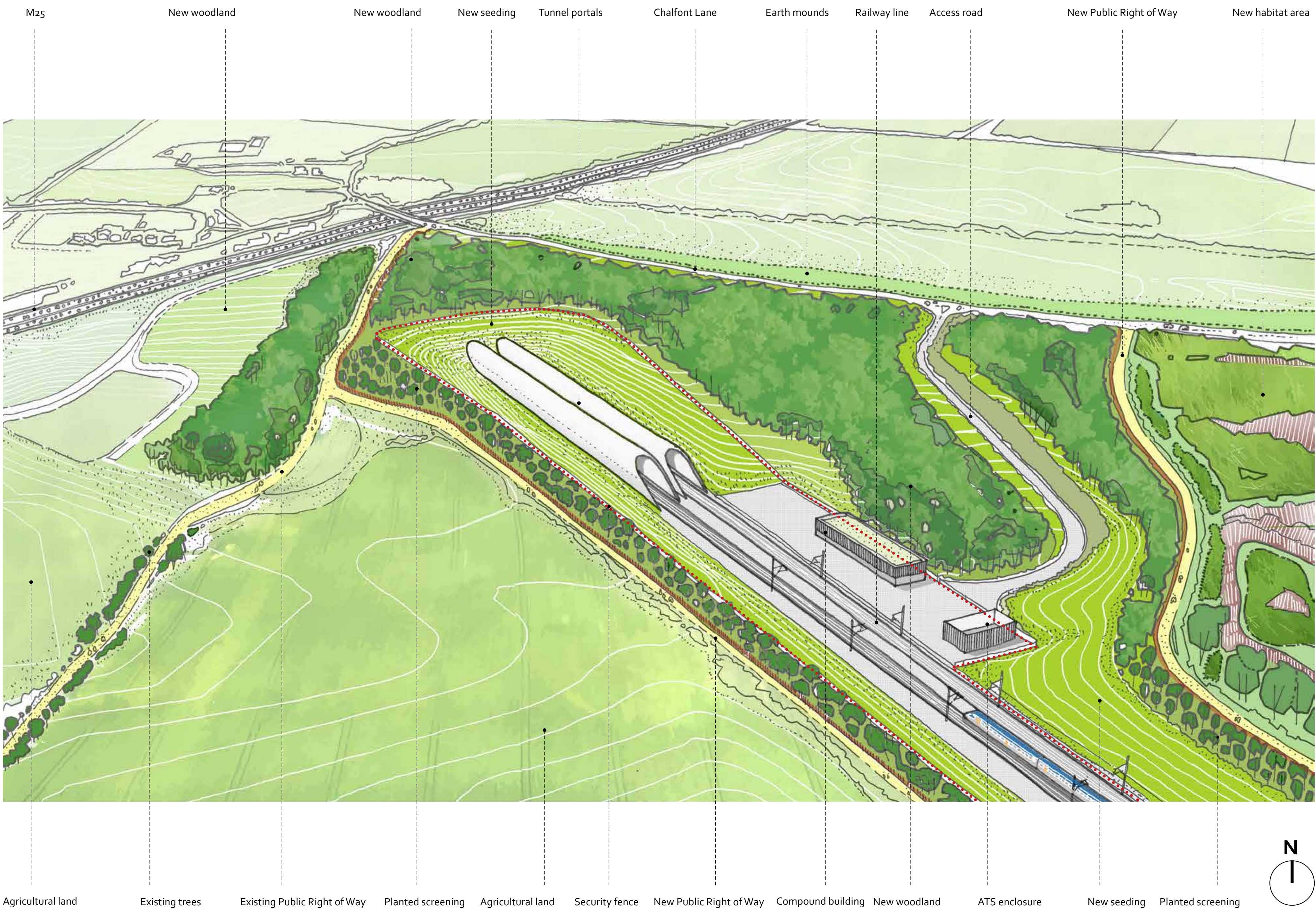
The Chiltern Tunnel south portal and cutting is located between Denham in the south and Maple Cross in the north and between the M25 Motorway and A412 Denham Way/North Orbital Road in undulating agricultural land.

Landscape Setting

- The design of the portal will aim to maintain the integrity of the existing landscape. This will be complemented by planting additional trees around the structure.
- From key viewpoints, earth mounds and planting will be used to mitigate the tunnel entrance.

KEY

| | |
|---------------------------------------|-------------------------------|
| <div></div> Area used for agriculture | <div></div> Woodland planting |
| <div></div> Public right of way | <div></div> Security fence |
| <div></div> Grassed embankment | <div></div> Hard landscaping |



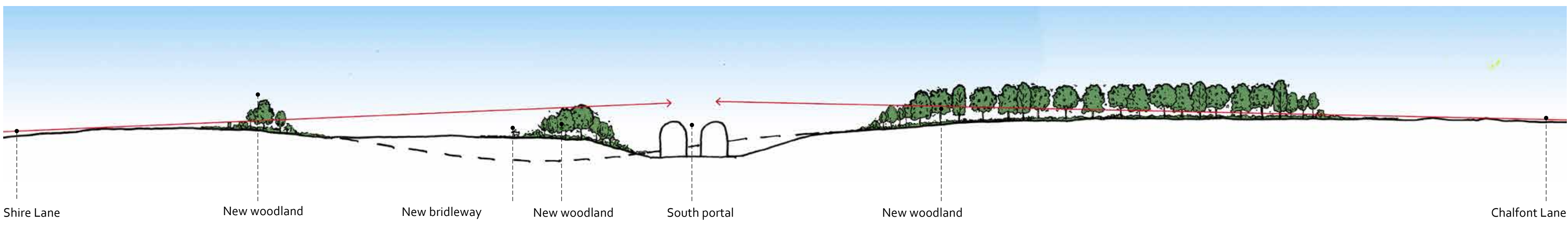
Landscape Views

In the vicinity of the portal there are two important viewpoints looking towards the portal structure. These viewpoints are located on Shire Lane (view 3) and Chalfont Lane (view 1) as indicated on the key plan below.

The section opposite shows the view line (red arrow) of a person standing on Shire Lane and on Chalfont Lane looking towards the portal structure. Existing landform in the middle distance obstructs the views of the portal.



Proposed Landscape Sections



View 1 - South from residential properties on Chalfont Lane



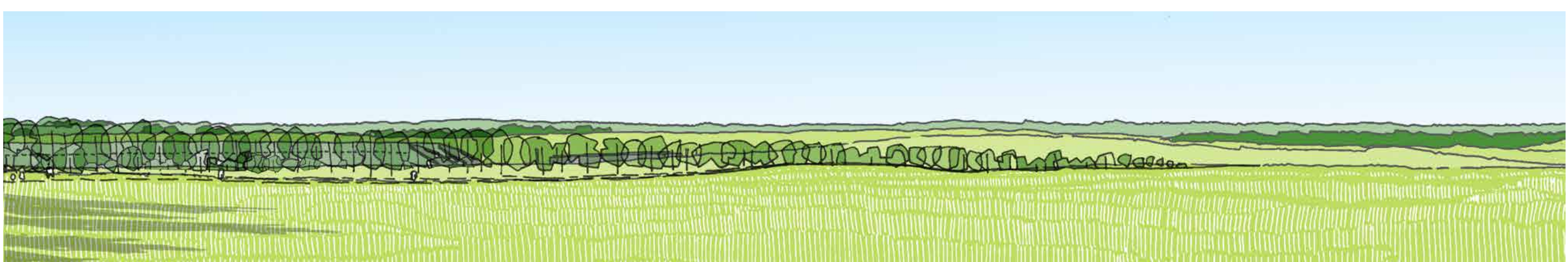
View 2 - East from properties adjacent to Shire Lane



View 3 - From east and north of Old Shire Lane



View 3 - From east and north of Old Shire Lane with planted screening



Portal

Structure

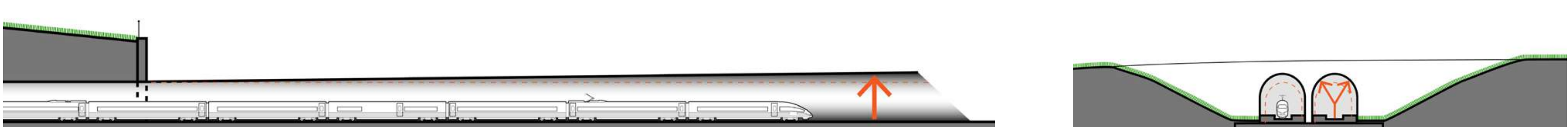
- The proposed solution comprises of two individual exposed arched portal structures
- The portal structures will be approximately 200m long and contain perforations 0.22m in height x 1m long at 2m intervals at the top of the portal side walls
- The 0.8m thick structure is likely to be formed of cast in situ concrete side walls and precast arched hood sections
- The use of precast concrete construction will maintain quality and reduce time on site

Compound

- A portal compound building will be located as close to portal structures as practical
- The portal building design will be driven by functional aesthetics whilst maintaining ventilation and access requirements



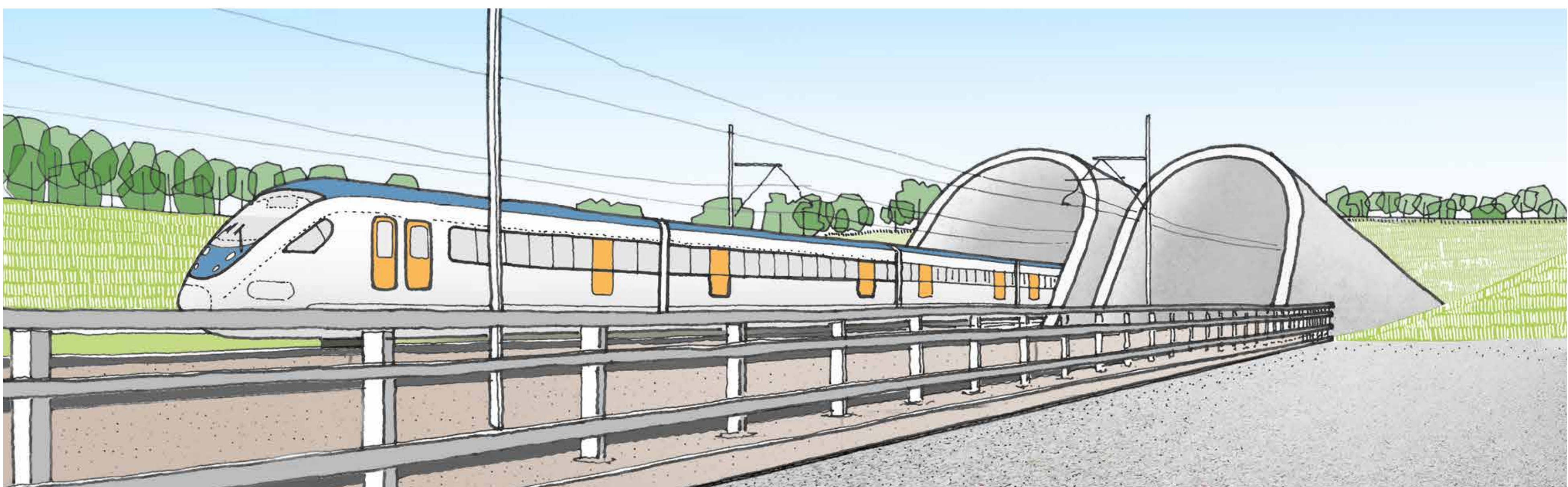
Proposed portal sections



View 4 - From Old Shire Lane Public Right of Way with Planted Screening



View 5 - Portal view from compound area



Have your say...

Tunnel Portal

We think that the following objectives are important. Do you agree?

Please rank their importance to you from 1 (high) to 6 (low)

- Reduce the width of the cutting
- Move the tunnel portal south to create more tunnel and less cutting
- Minimise changes to local lanes and public rights of way
- Portal structures screened by landscaping and new trees
- Ensure our plans align with the recreational proposals of the Colne Valley AMP
- Pursue a simple, clean form for exposed portal structures

ALIGN

Public Engagement Event 1
March 2018

Engagement

Since Align were awarded the contract to design and deliver this section of HS2, we have been developing proposals closely with key stakeholders and will continue to do so throughout the project. Key stakeholders include:

- Colne Valley Regional Park Panel
- Local Authorities including London Borough of Hillingdon, Hertfordshire County Council, Chiltern District Council, South Buckinghamshire District Council and Three Rivers District Council
- HS2 Independent Design Panel
- Canal & River Trust
- Natural England

We would also like to share with our design proposals with the local community throughout the project, so that we can consider your views during each stage of design. During this next design stage, a second public engagement event will take place prior to submitting a planning application. In addition, engagement shall be undertaken with special interest groups to ensure proposals meet the requirements of a diverse range of people wherever possible, including those who are mentally or physically impaired.

HS2 Act

The HS2 Act was accompanied by supporting documents, including drawings of the routes outlining the main works that would be undertaken and the land affected.

A baseline design for the Colne Valley viaduct was prepared as part of the HS2 Act in order to define the location and alignment of the viaduct, together with broad design principles relating to the scale, massing and appearance. The scheme comprised a 3,375m long viaduct with a typical span length of 60m and a concrete box girder viaduct deck.

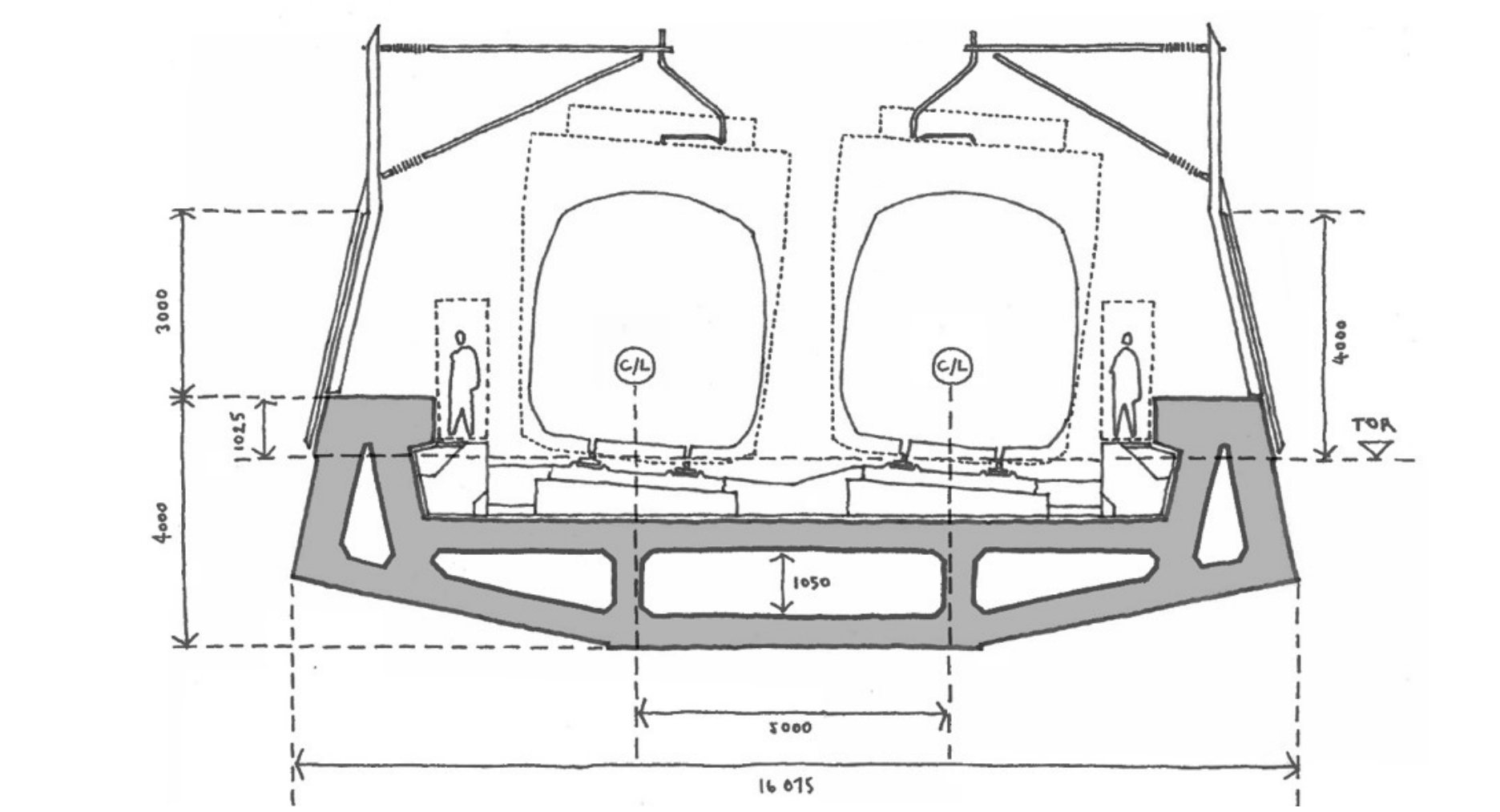
Specimen Concept Report

A report was commissioned by HS2 Ltd to consider outline concepts for the Colne Valley viaduct. It was developed through engagement with the Colne Valley Regional Park Panel and the HS2 Independent Design Panel, and has helped to inform the initial scheme design work and technical development.

The viaduct concept document explores a range of options and ideas for how it can be sensitively and aesthetically sited within the Colne Valley. The concept was developed around 14 key criteria. These include whether the design fits the landscape, maintains views and landscape 'flow', and is well proportioned and elegant.

The report assesses a series of options against the key criteria and selects a preferred option, as illustrated opposite.

Typical Cross Section



Transparent Noise Barrier and Typical Pier



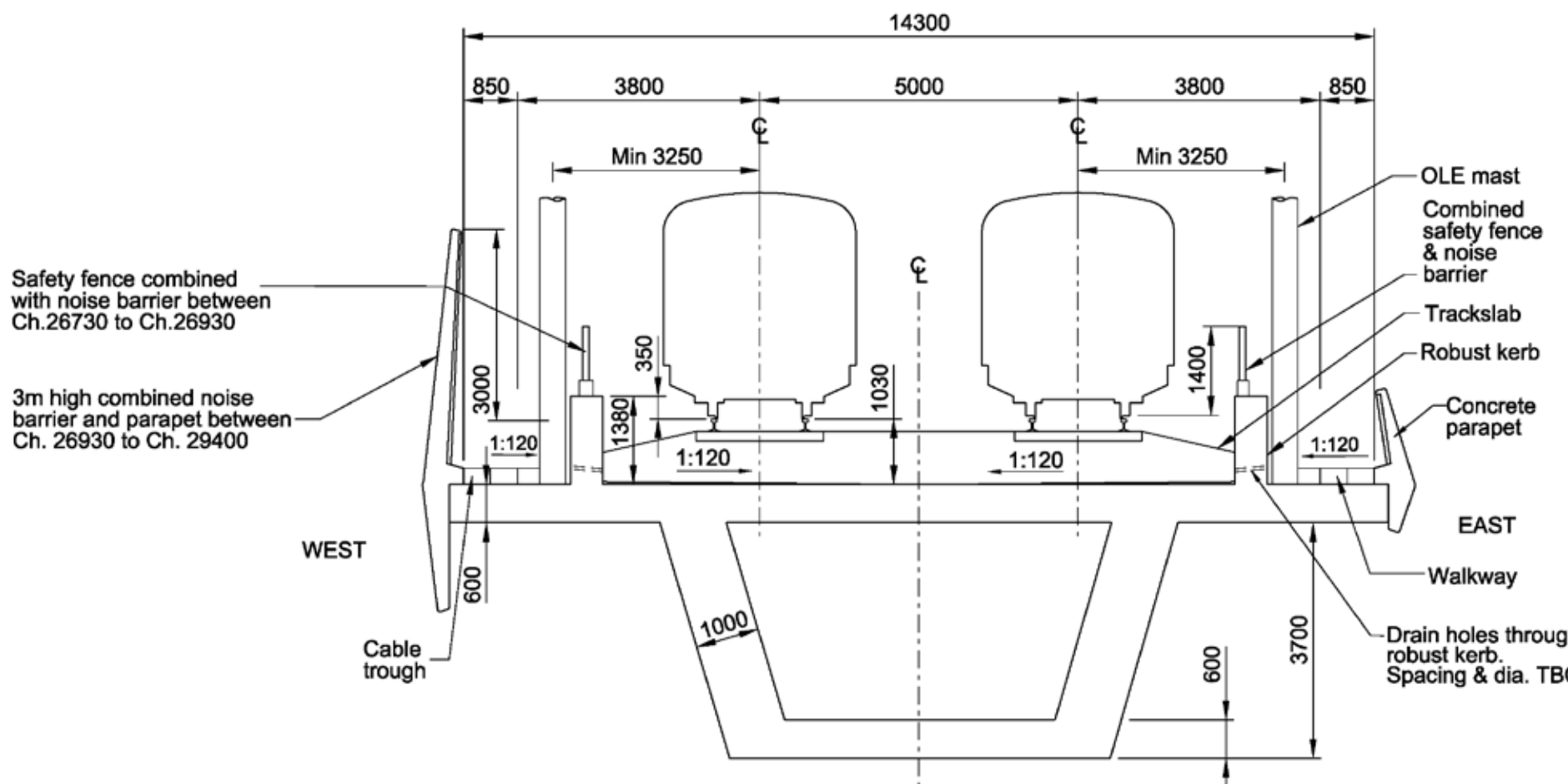
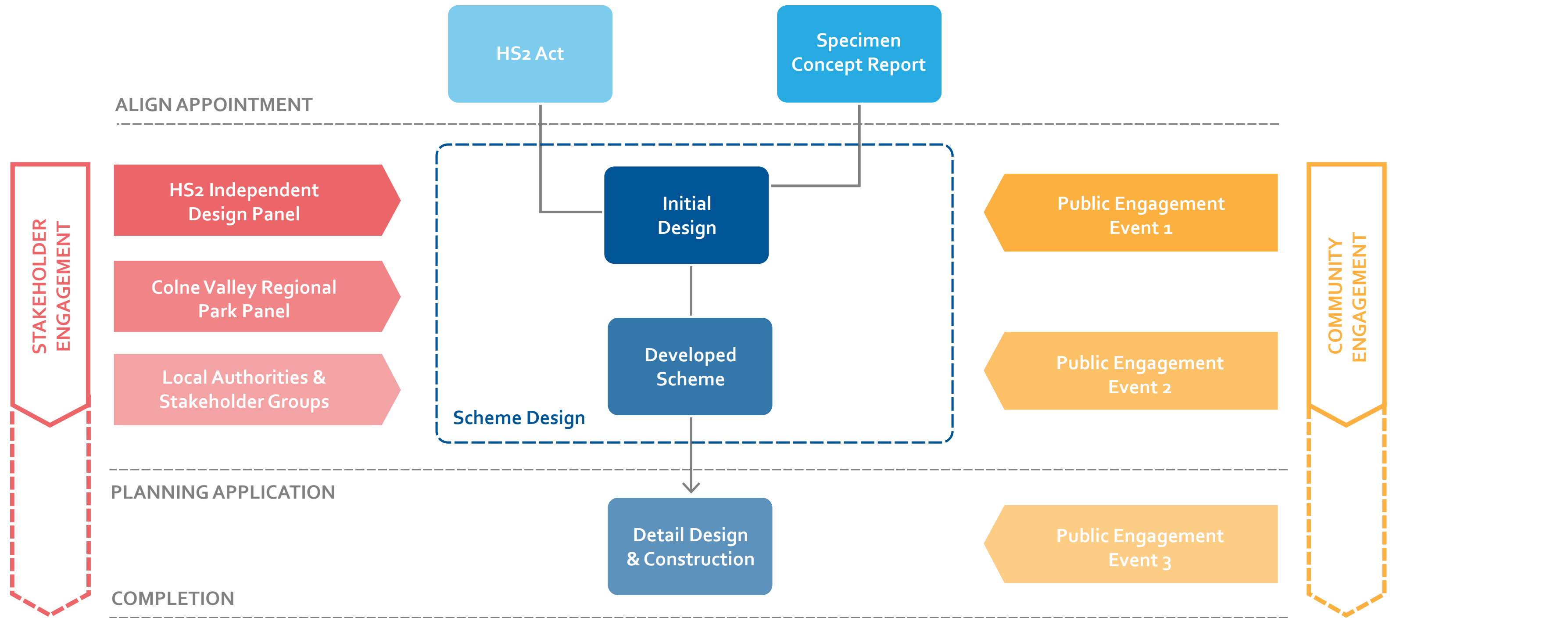
Evolution of the Specimen Design

What principles established by the Specimen Design have informed our initial proposals?

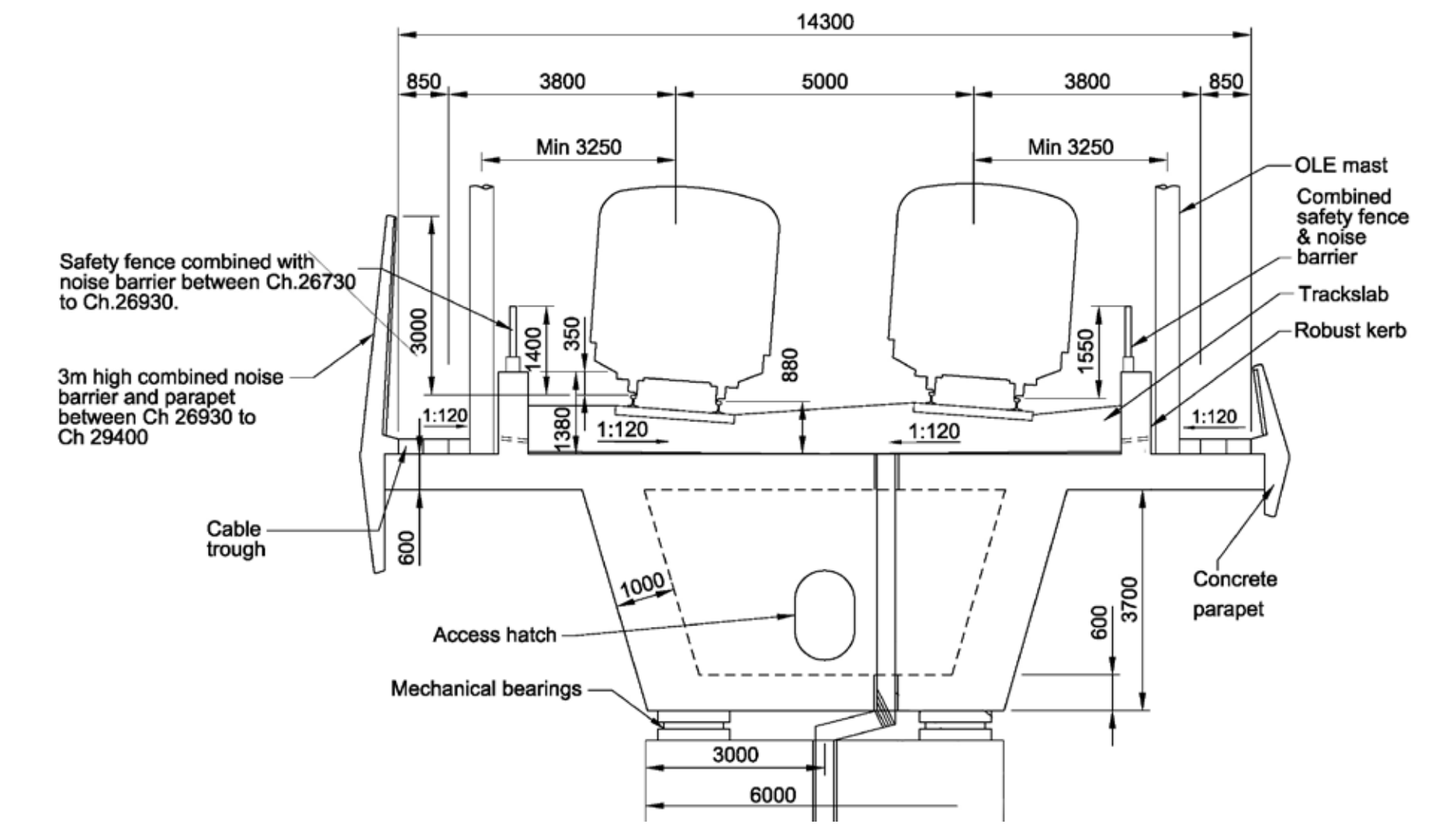
- Elegance over prominence
- Special spans over water
- Curvature and reflection over water
- Transparent noise barriers if minimum acoustic requirements can be achieved
- Use of pattern and texture at low level

What specific aspects have evolved?

- Reduction of the viaduct deck cross section
- Reduction in the volume of concrete used
- Targeted response to local features
- Allowance for thermal expansion
- Reducing the total number of land piers
- Bearings to water piers moved above the 1-in-100 year flood levels
- Maintenance access zone incorporated within the viaduct deck

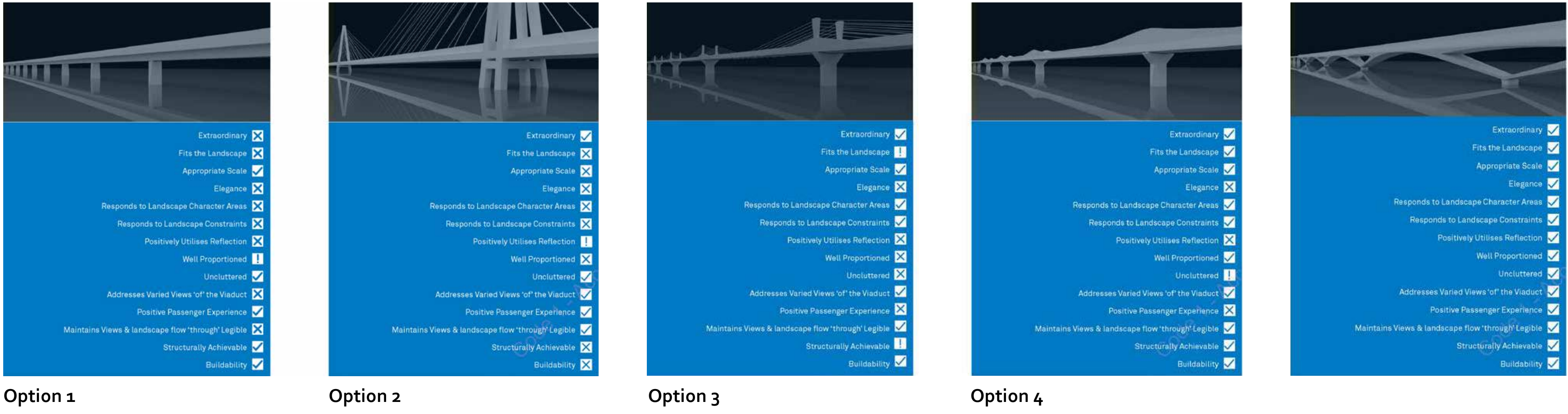


Typical Section (Straight Section)

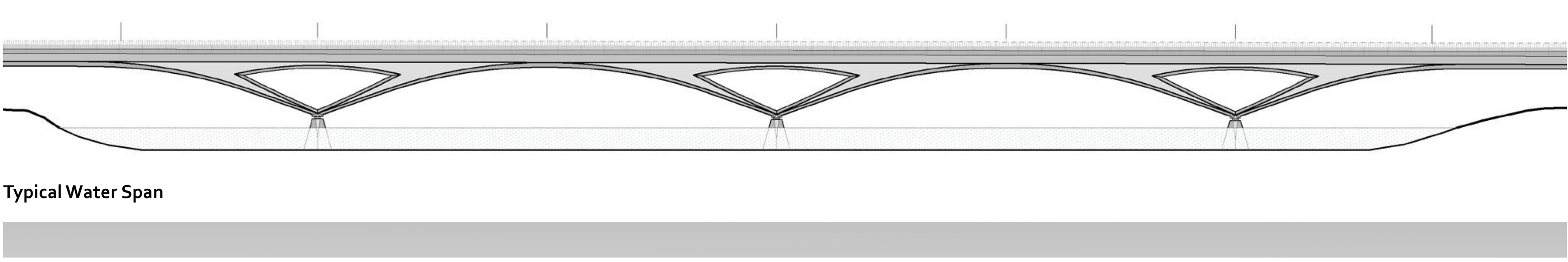


Typical Section at Pier

Options Appraisal



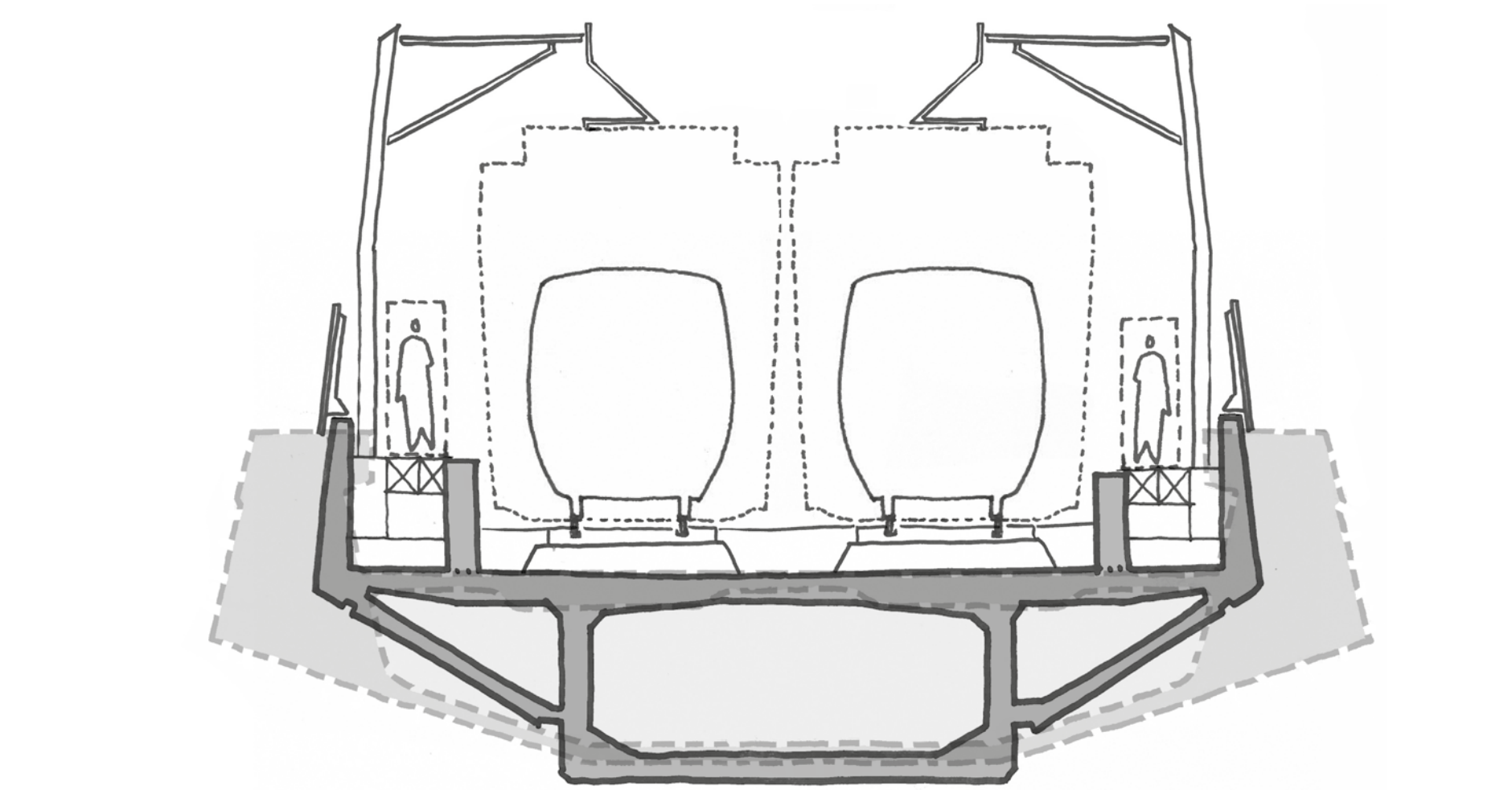
Special Spans Over Water



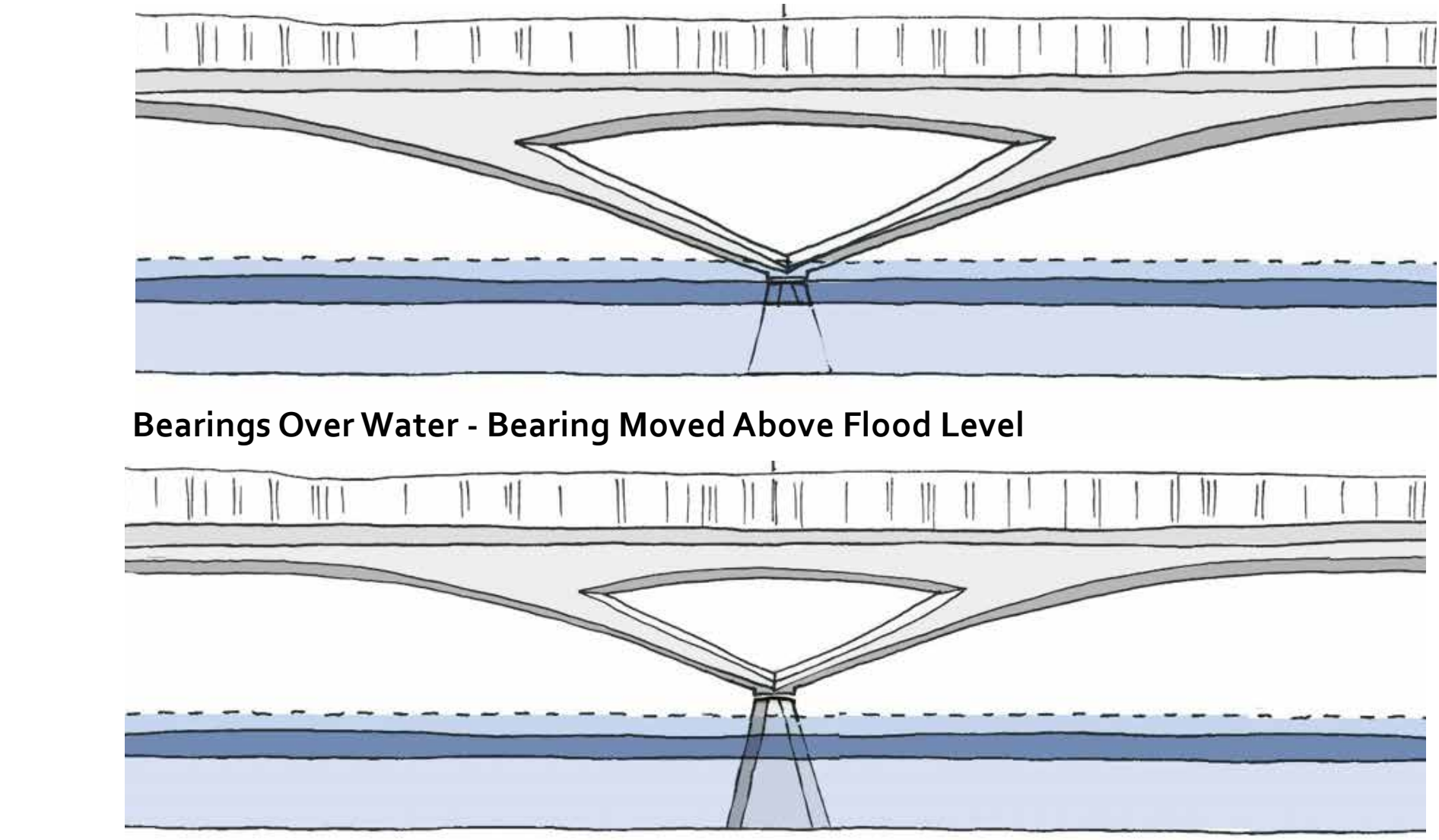
Typical Land Span



Render Sketch View Over Korda Lake



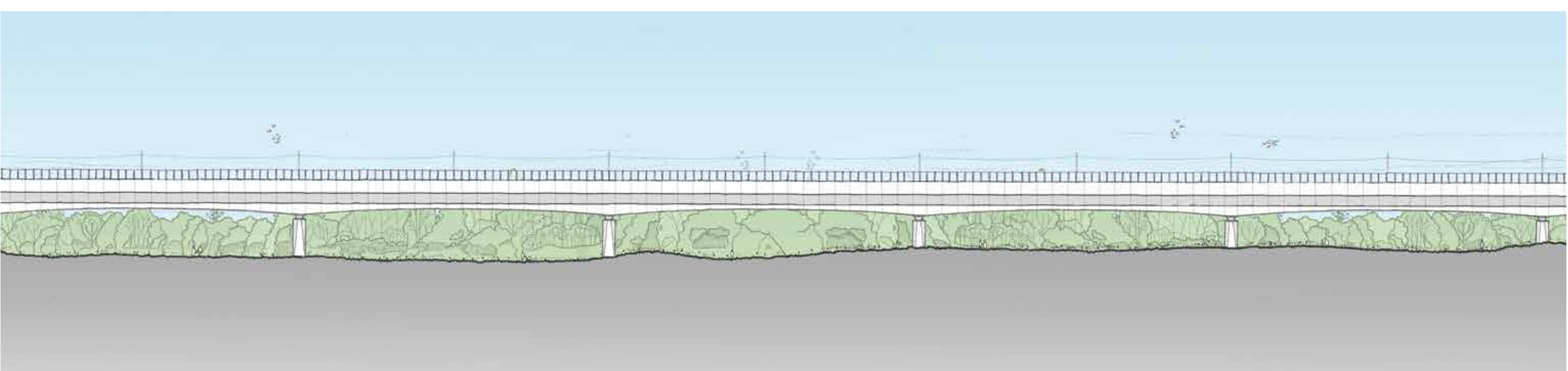
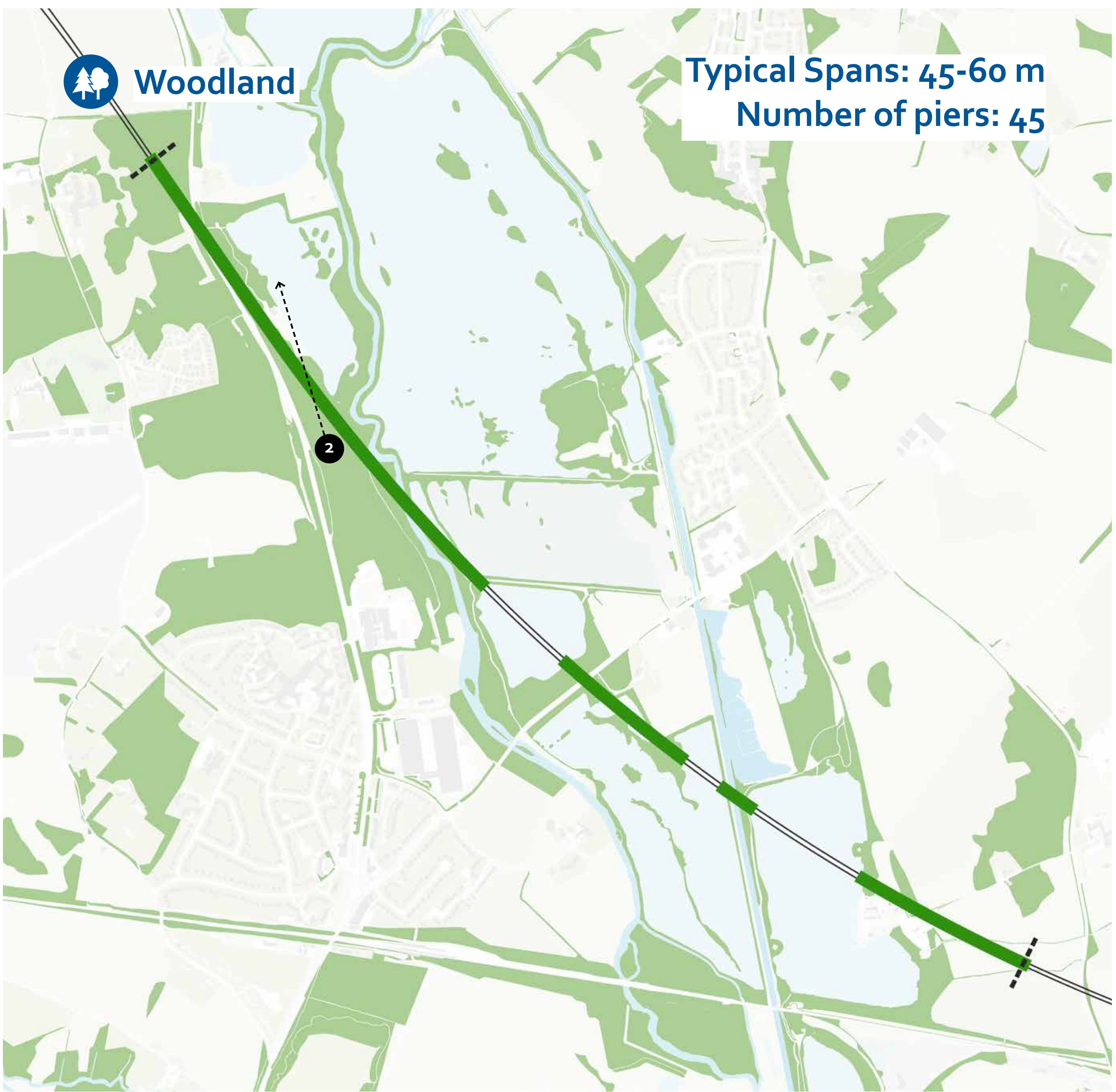
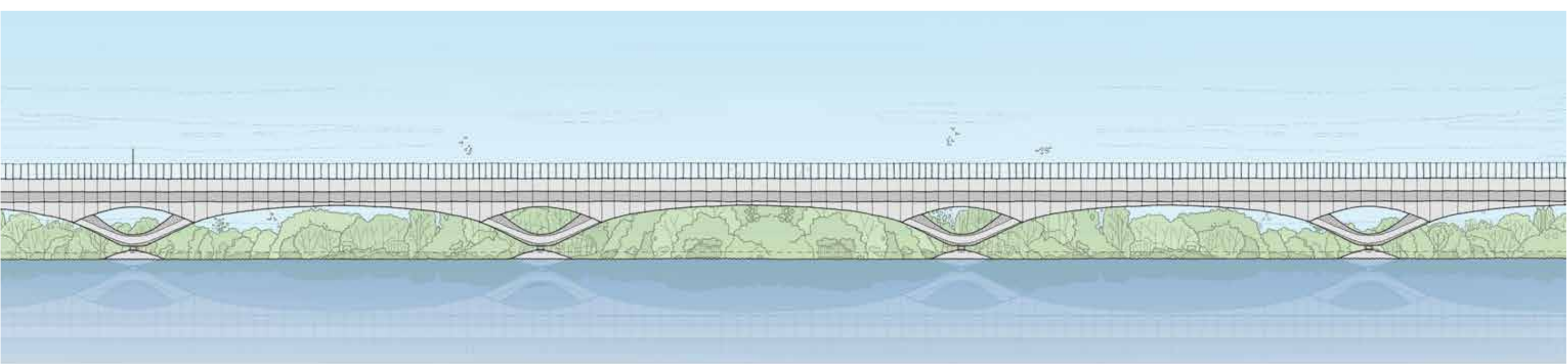
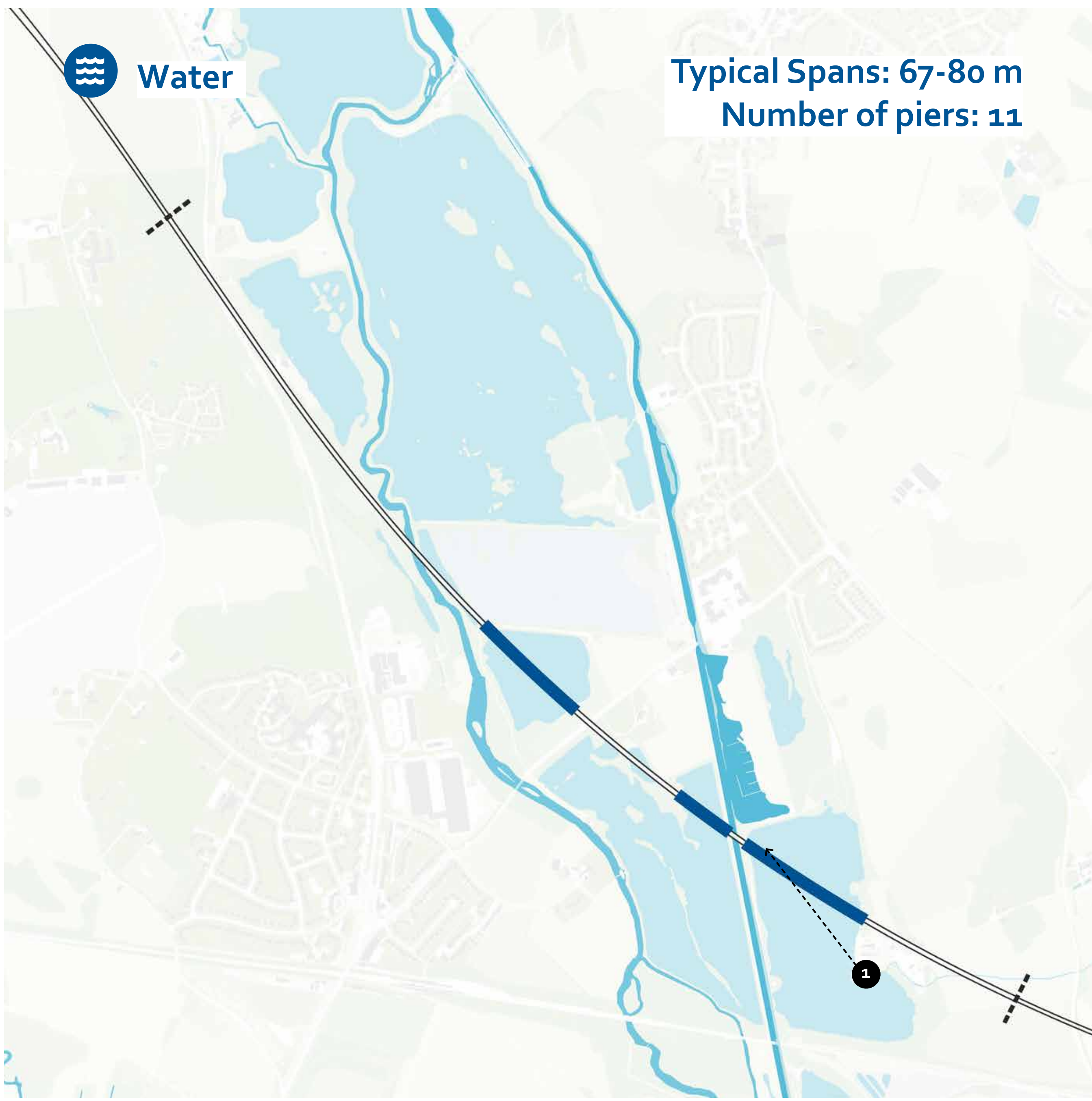
Cross Section Overlay



Bearings Over Water - Specimen Design

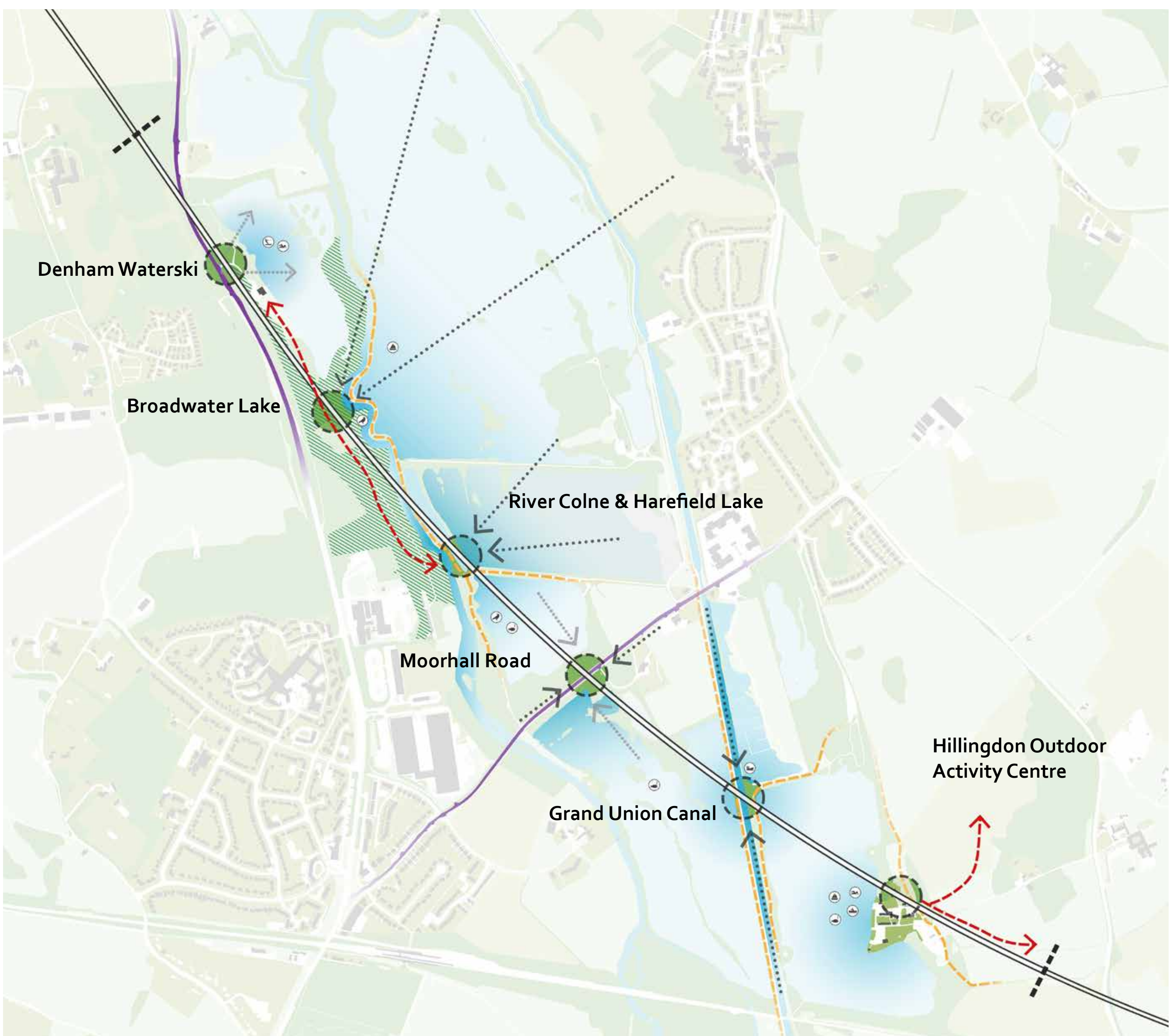
Character Areas

The viaduct design will factor in the varied characteristics of water and woodland



Response to Local Features

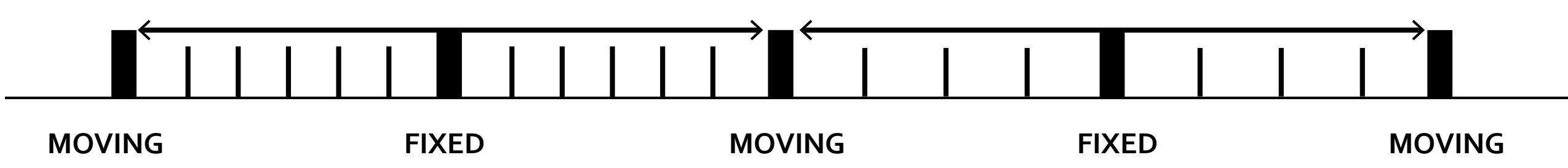
The structure and context of the viaduct is intended to respond to specific site features



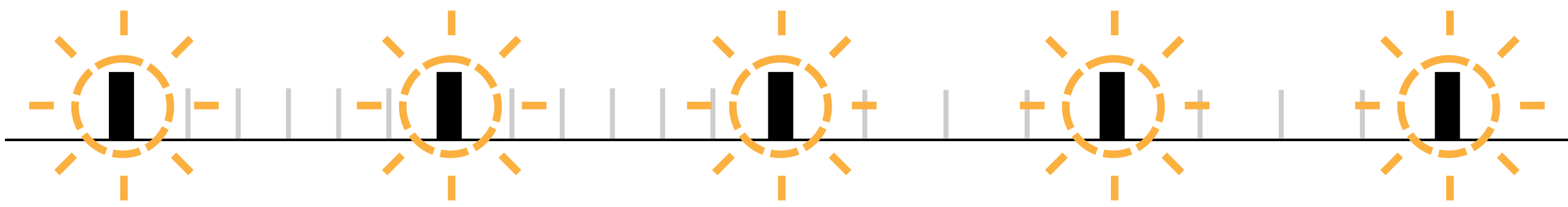
1. Structural spans will compliment the local character areas



2. Alternating fixed buttresses and expansion joints are required for thermal expansion



3. The above will be strategically located at key intersections with the landscape



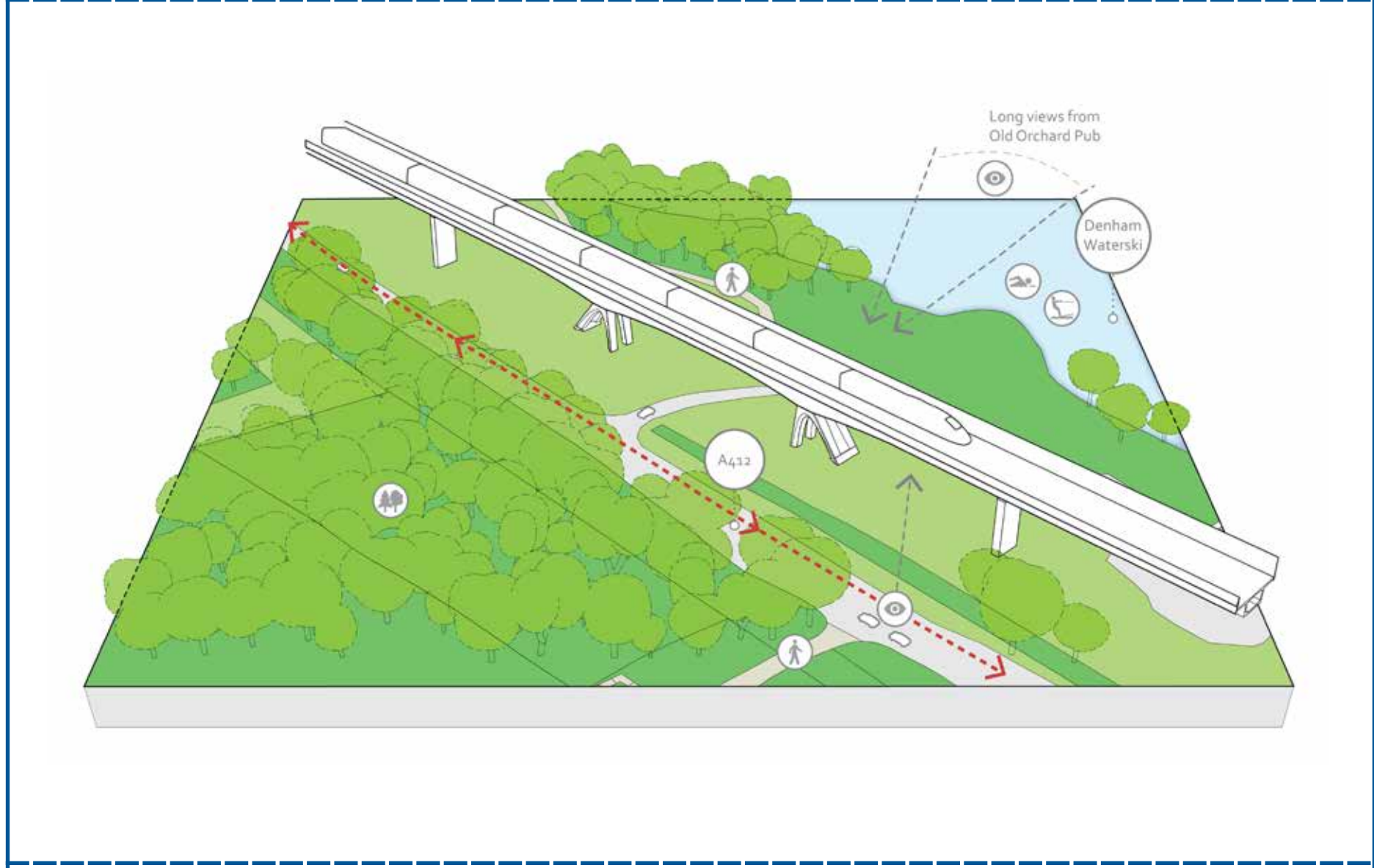
Have your say...

D Viaduct Design

We think that the following objectives are important. Do you agree?

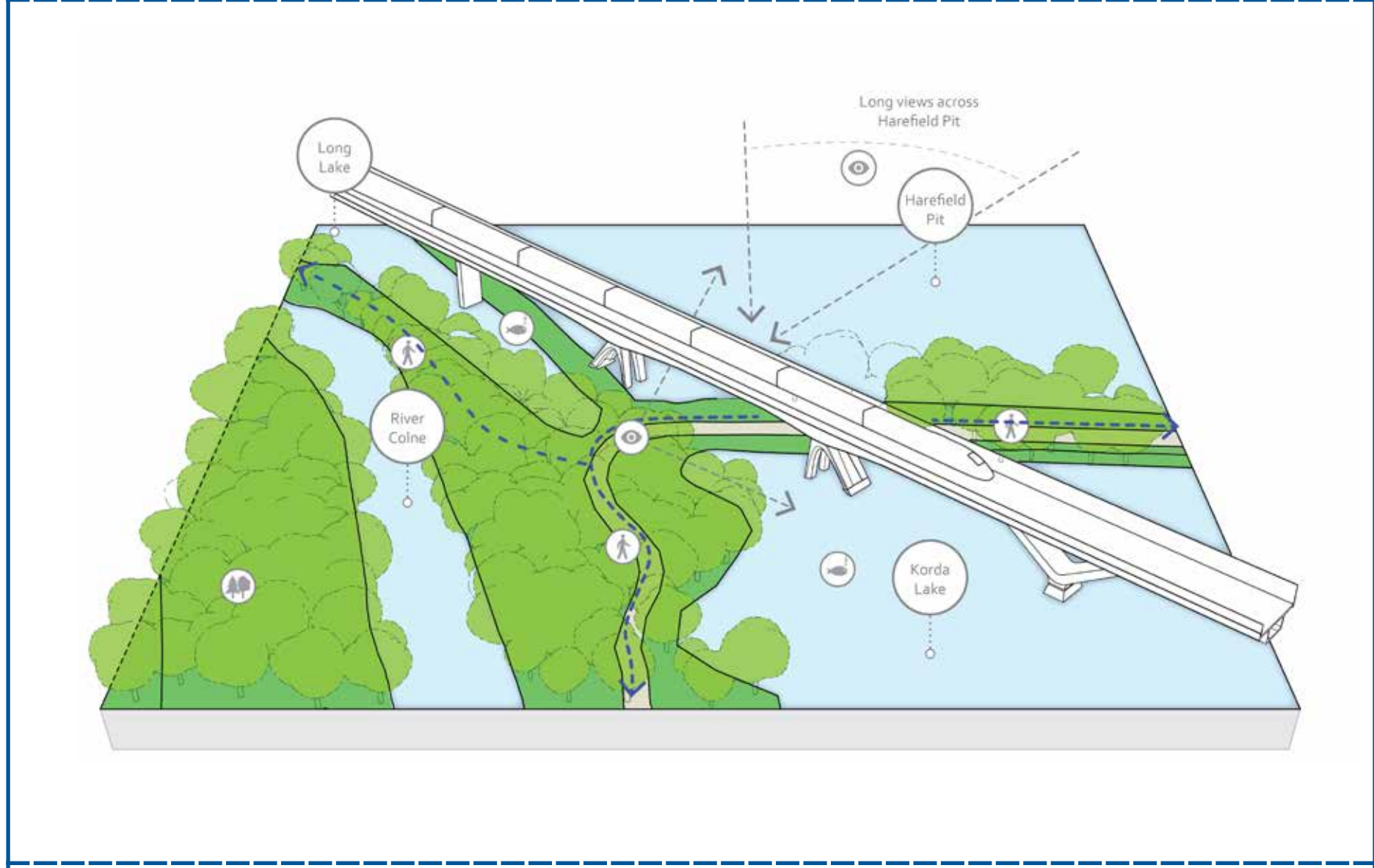
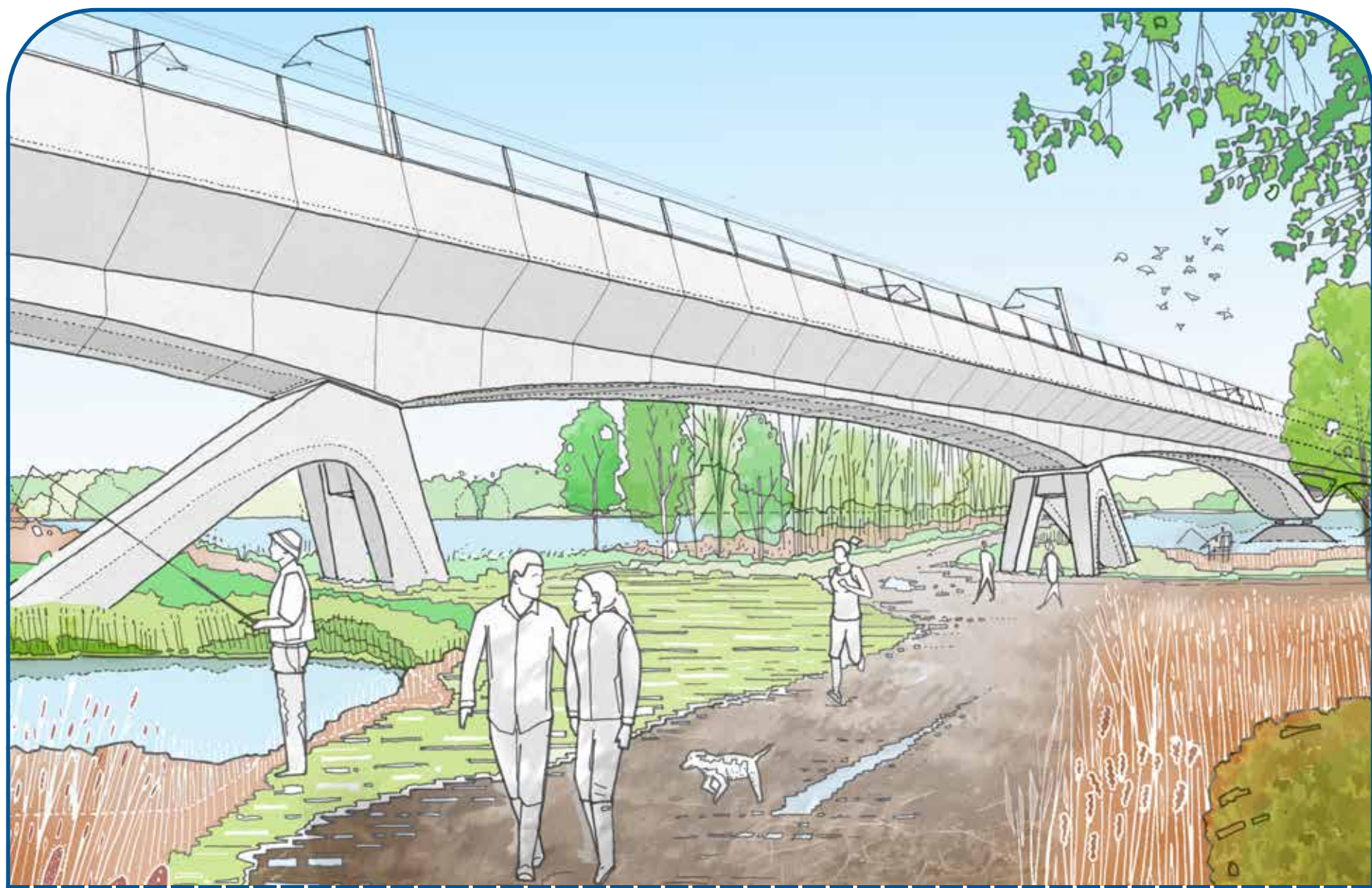
Please rank their importance to you from 1 (high) to 6 (low)

- Create different spans between piers over woodland and water
- Create special structures at key valley locations and crossing points
- Provide texture and pattern where the viaduct can be experienced close up
- Maximise open views of the landscape through the structure
- Pay special attention to places where people get close to the structures
- Create a consistent visual identity for the length of the viaduct



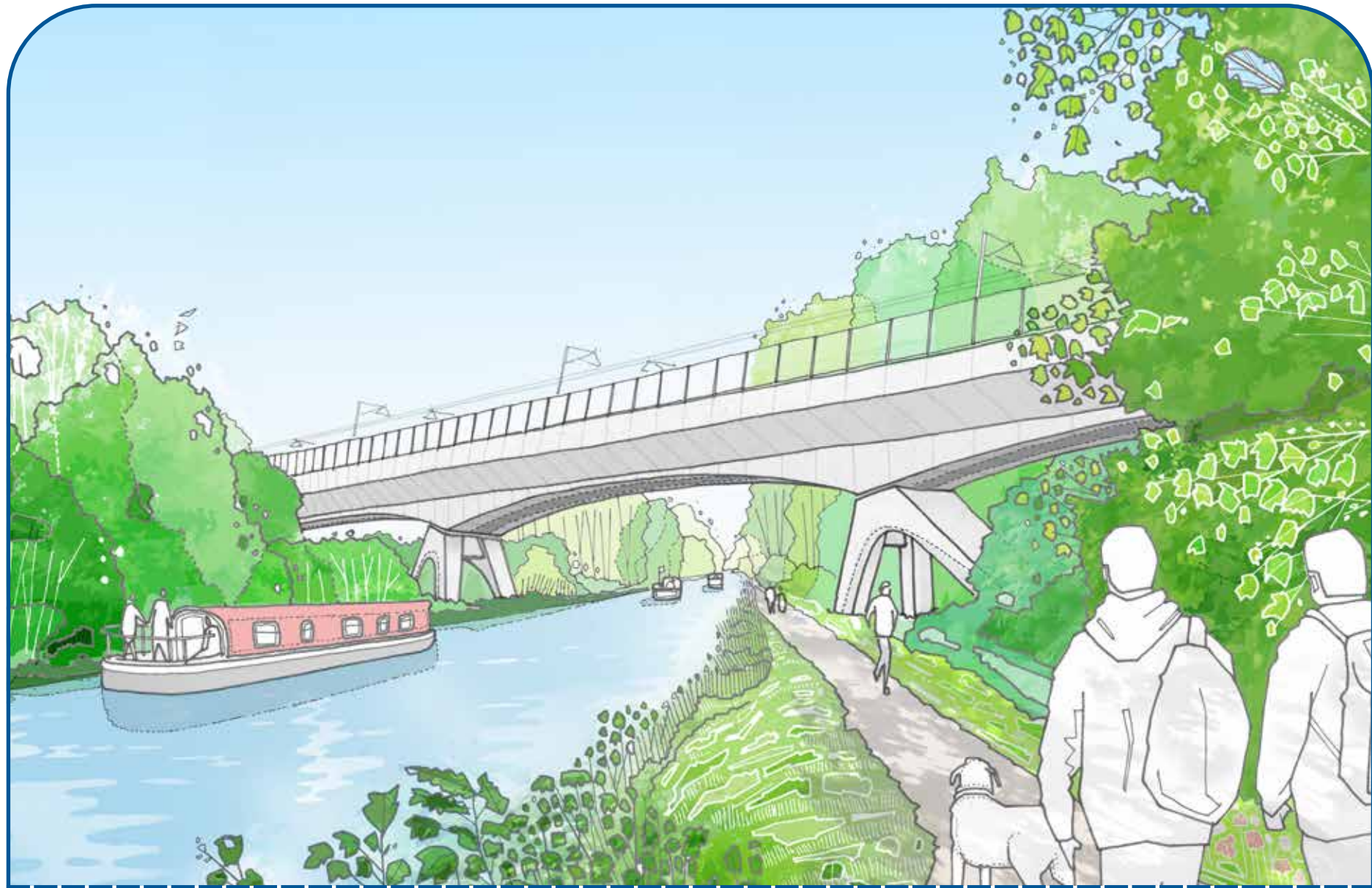
- Site Features**
- This crossing point will be visible to a great number of people, predominantly those travelling on the A412 which is parallel to the viaduct
 - It is located at the entrance to Denham Waterski Club
- Opportunities**
- There will be new views of the viaduct from the road and partial exposure of the water beyond
 - The viaduct could also help mark the entrance the Denham Waterski Club

Denham Waterski Club Fixed Butress



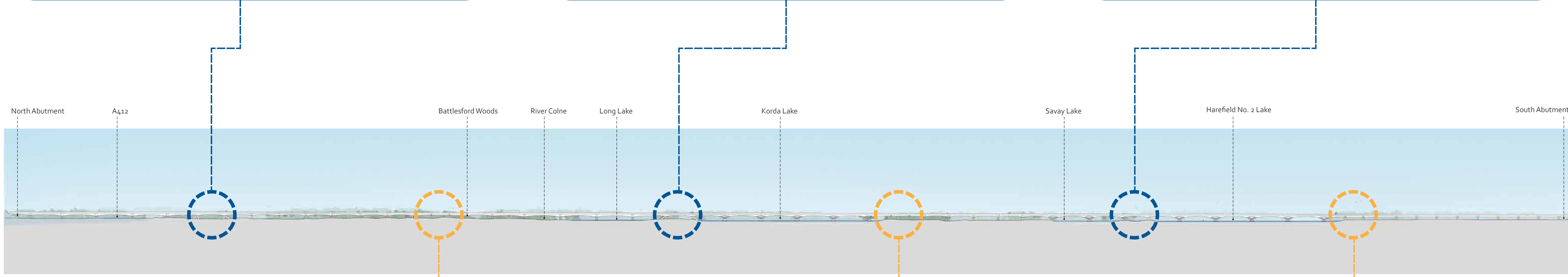
- Site Features**
- At this location, the viaduct will be visible from across Harefield Pit and the eastern valley slopes
 - It is uniquely situated at the edge of Korda Lake, Harefield Pit, Long Lake and the River Colne
- Opportunities**
- This site will provide a fantastic opportunity to improve existing recreational routes and create new strategic routes identified in the HS2 Additional Mitigation Plan for the Colne Valley
 - The viaduct and surrounding landscaping could create a place to stop and enjoy the variety of views across the surrounding lakes

Harefield, Korda and Long Lakes Fixed Joint



- Site Features**
- Boats and pedestrians using the Grand Union Canal will pass under the crossing
 - Cars and pedestrians will have long-distance views from Moorhall Road
 - Train passengers will have elevated views across the valley
 - Visibility from the lakes will predominantly be screened by woodland
- Opportunities**
- The crossing over Grand Union Canal will create a point of interest for boats and pedestrians using the canal
 - The enclosed character of the canal will be maintained by minimising tree clearance where possible

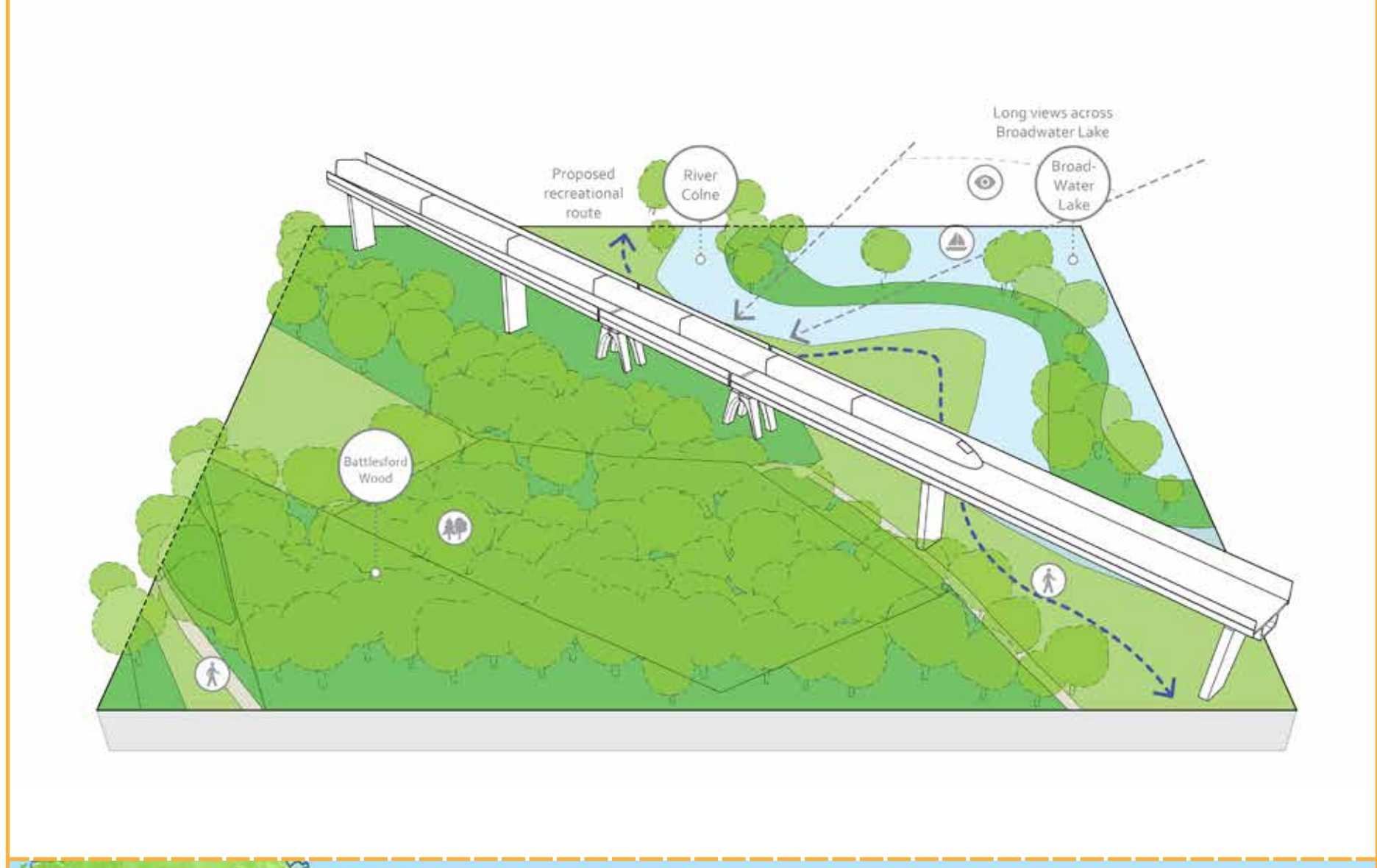
Grand Union Canal Fixed Butress



Proposed Long Elevation

River Colne and Broadwater Lake Expansion Joint

- Site Features**
- The viaduct in this location runs parallel to Battlesford Woods, designated as Ancient Woodland, and the River Colne
 - It will be visible from high-level vantage points on the eastern valley slopes
- Opportunities**
- This site presents an opportunity to create new waterside and woodland walks that connect previously inaccessible areas of the Park
 - The crossing itself could provide a stopping point for people to enjoy the range of local wildlife in a setting of high ecological value



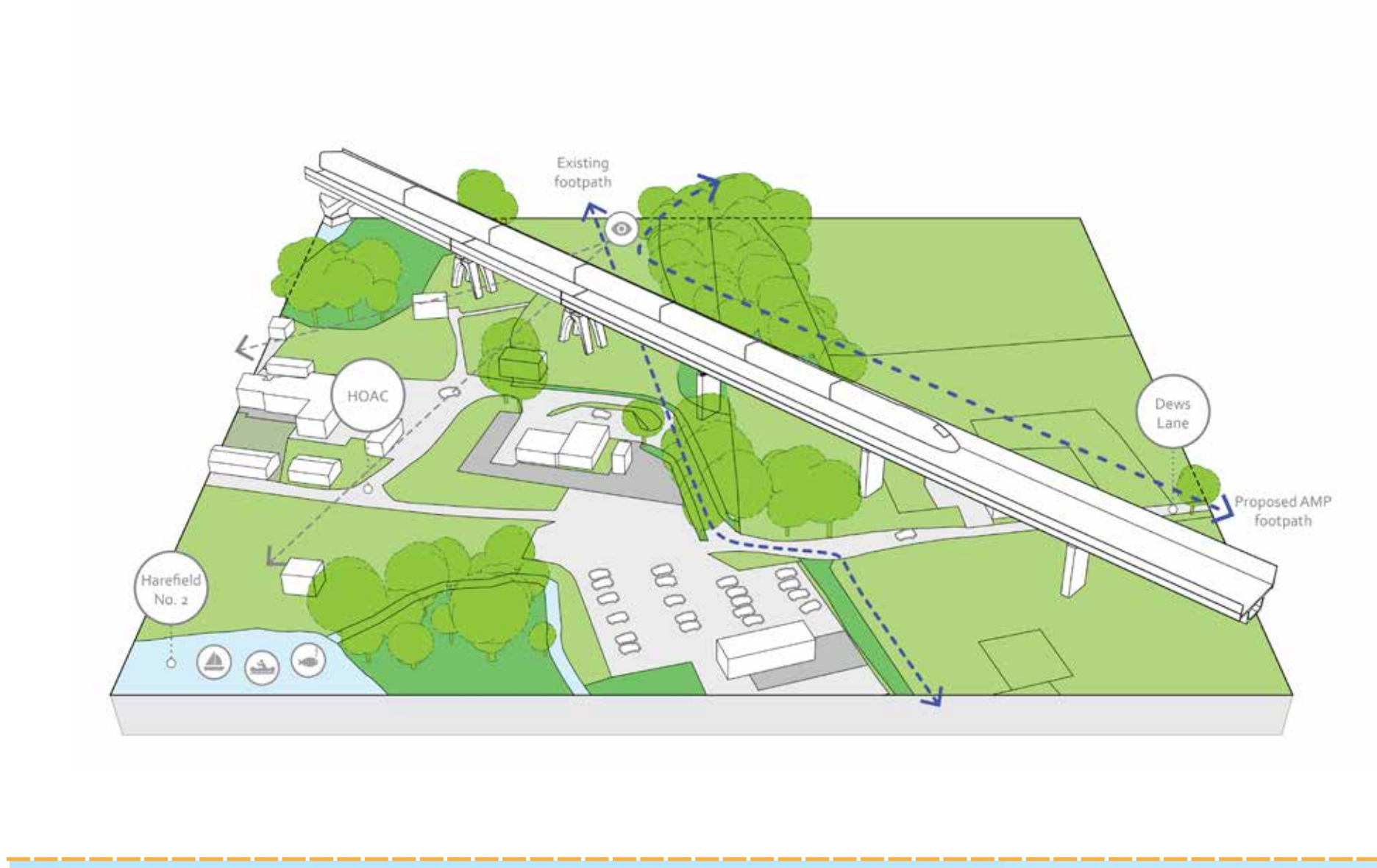
Moorhall Road Expansion Joint

- Site Features**
- The crossing of the viaduct over Moorhall Road is a key intersection with existing infrastructure in the Colne Valley
 - There will be far-reaching views of the viaduct along Moorhall Road
- Opportunities**
- There is an opportunity to create a unique focal point in this location
 - New views opened up from the pavement and road across Savay and Harefield No. 2 Lake



Hillingdon Outdoor Activity Centre Expansion Joint

- Site Features**
- The intersection at this location marks the end of enclosed woodland to the south
 - It is located at the crossing of existing and new footpaths proposed in the HS2 Additional Mitigation Plan for the Colne Valley
- Opportunities**
- The viaduct crossing in this location could serve to mark the start of new cycling and walking pathways to the south of the Park
 - The viaduct crossing and associated landscaping will aim to improve the recreational activities on the site and Harefield No. 2 Lake



Have your say...

E Viaduct Landscape Design

We think that the following objectives are important. Do you agree?

Please rank their importance to you from 1 (high) to 6 (low)

- Retain as much of the original woodland as possible
- Preserve the enclosure of the canal as a distinct and historic corridor
- Restore areas using native and indigenous species
- Enhance the biodiversity of the landscape
- Provide new and interconnected land and water wildlife habitats
- Fully integrate existing and proposed footpaths with the viaduct structure

Viaduct Deck

- The ongoing design of the viaduct deck aims to reduce the amount of concrete required wherever possible
- A safe and accessible maintenance area should be provided
- All drainage pipes and structural cables should be concealed to ensure the viaduct appears simple and uncluttered
- Sloping the sides of the viaduct deck makes the viaduct appear less visually prominent

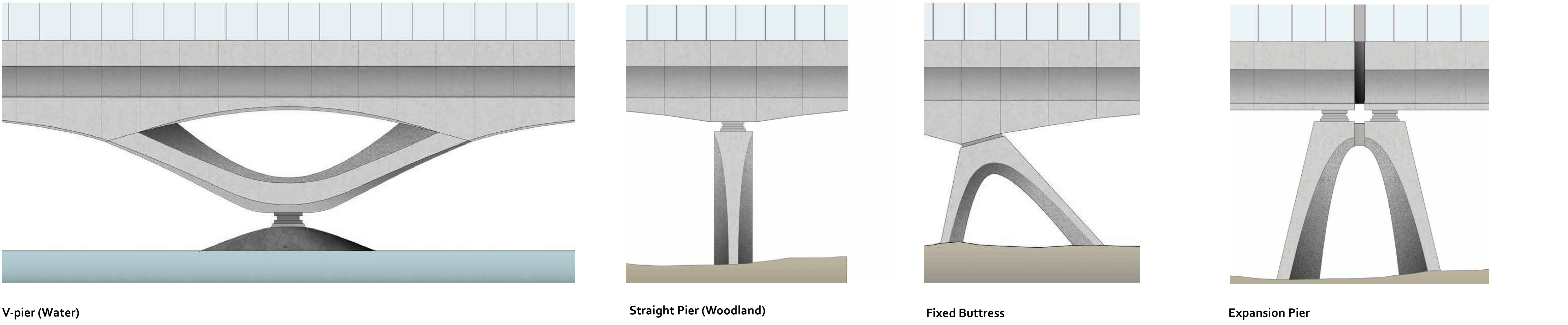
Woodland Piers

- Straight piers have been used over woodland areas, creating typical spans between 45-60 m
- The pier arrangement results in a slimmer deck profile
- The standard pier arrangements will factor in the character of the dense woodland where long-distance views are limited
- Woodland piers will mainly seen from close up, so opportunities to introduce patterns and texture at low level will be explored in more detail during the next design stage

Water Piers

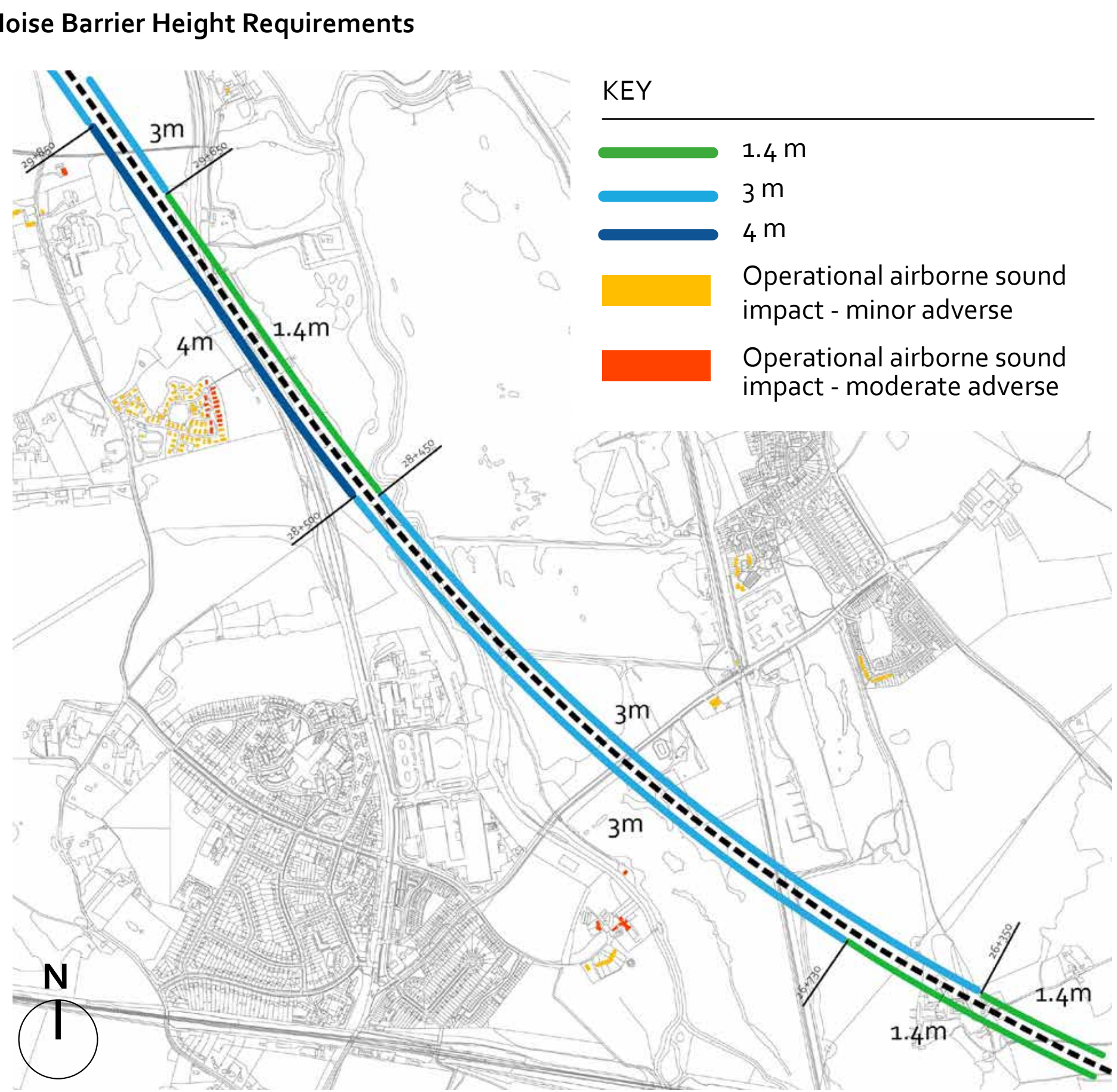
- V-shaped piers have been used over water areas to allow wider structural spans of 67-80 m
- Increased spans allow more openness over water and views through to the landscape beyond
- Introducing curvature creates a more elegant silhouette and positive water reflections
- Continuous curves can create a sense of movement and flow across the water
- Bearings need to be located above flood level
- Pier footings designed to allow for 600 mm movement whilst not appearing misaligned with the pier above

Unified Features



Noise Barriers

- Acoustic barriers reduce noise impact during train operation
- As illustrated on the plan below, 1.4 m, 3 m and 4 m high acoustic barriers will be at specified locations along the viaduct
- There is an aspiration to use transparent barriers to reduce the visual impact of the viaduct
- Technical investigations are currently being undertaken to establish whether transparent barriers can achieve the required acoustic reductions



Structural Efficiency

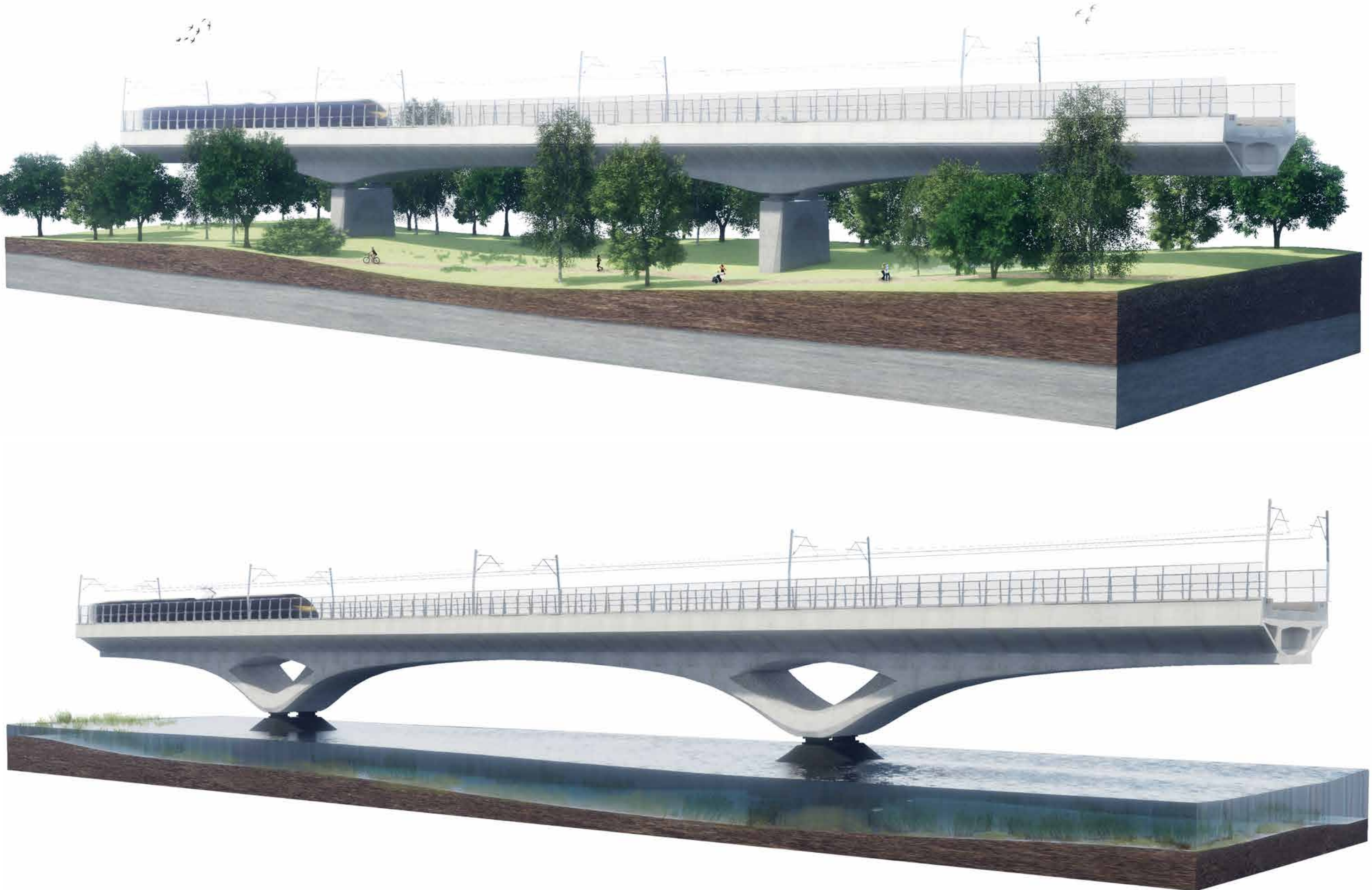
- Ongoing design proposals aim to optimise structural efficiency, thus reducing the amount of structural concrete required
- Location of structure below deck minimises deck width, thus reducing visual massing and environmental impact

Materials

- Concrete to be predominantly precast to improve quality and reduce time on-site
- Lighter shades of grey are being considered to reduce visual prominence
- Patterns and textures used at low level where the viaduct is experienced close-up
- Patterns and textures to be selectively used to create a unifying features
- Ongoing proposals will consider in more detail concrete colours, patterns and textures

Example colour options

Example texture options



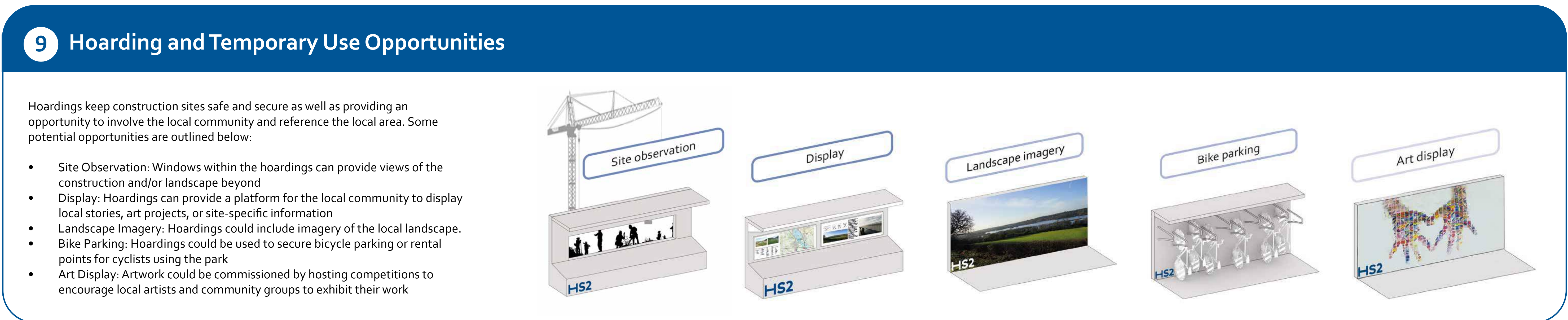
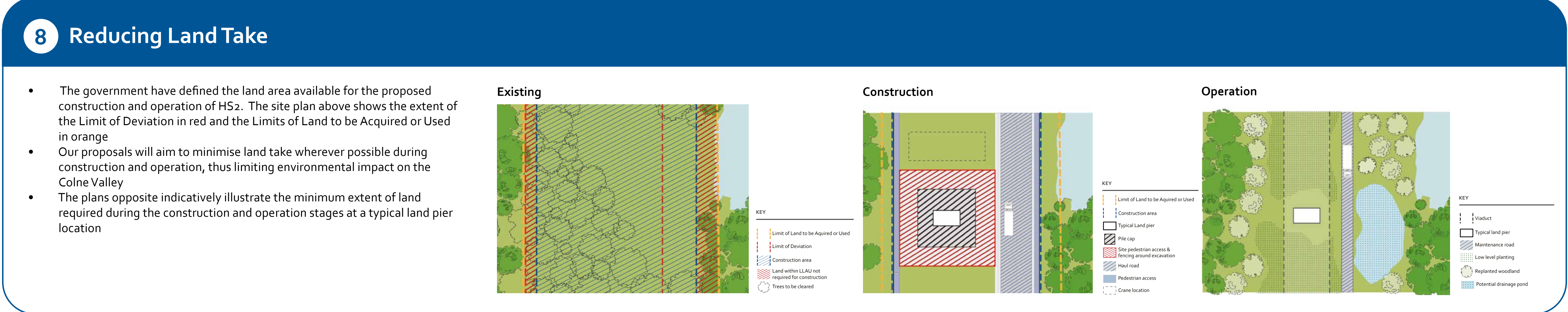
Have your say...

F Noise Barriers

We think that the following objectives are important. Do you agree?

Please rank their importance to you from 1 (high) to 6 (low)

- Protect local community from train noise
- Protect local wildlife from train noise
- Create visually unobtrusive barriers
- Barriers to be consistent with the viaduct design
- Enable train passengers to view the landscape
- The barriers are easy to maintain and clean



Have your say...

Construction

We think that the following objectives are important. Do you agree?

Please rank their importance to you from 1 (high) to 6 (low)

- Reducing lorry movements on local roads
- Reduce the amount of excavation that takes place
- Minimise disruption to the use of the Grand Union Canal during construction
- Build from the north, transporting components along the viaduct deck surface
- Use a precast approach to construction of the viaduct where possible
- Minimise temporary land take required for construction to reduce environmental impact

Thank you

Thank you for attending this engagement event. Please feel free to approach our team today. They are ready to assist with any questions you may have.

There are a number of considerations on which we would like your feedback. These are as follows:

- Recreational Opportunities
- Western Valley Slopes
- Tunnel Portal
- Viaduct Design
- Viaduct Landscape Design
- Noise Barriers
- Construction

Please let us know your views

We would like to hear your views and will consider all comments and suggestions before the next design stage.

Please provide feedback by Sunday 8th April 2018 in one of the following ways:

Post

- Please pick up a leaflet and return it by Freepost

Online

- If you are a resident of Ruislip, Harefield or Ickenham, please visit: www.hs2inhillington.commonplace.is
- If you are a resident of Maple Cross or West Hyde, please visit: www.hs2inherts.commonplace.is
- If you are a resident of Denham, please visit: www.hs2inbucksandoxfordshire.commonplace.is

Email

- colnevalleyviaductdesign@aligncgv.co.uk

If you are unable to provide a written response, please speak to someone at our event who will be happy to help, or call the HS2 Helpdesk on 0800 1 434 434.

Feedback Process

