



Canal &  
River Trust

11 October 2017

HS2Phase2bPRD@ipsos.com

Dear Sir/Madam

**HIGH SPEED TWO PHASE 2b CREWE TO MANCHESTER WEST MIDLANDS TO LEEDS  
EASTERN LEG ROLLING STOCK DEPOT CONSULTATION**

Thank you for the opportunity to comment on this proposal. Please find our response below:

The Trust is the guardian of 2,000 miles of historic waterways across England and Wales. We are among the largest charities in the UK, maintaining the nation's third largest collection of listed structures, as well as museums, archives, navigations, hundreds of important wildlife sites and being the largest owner and manager of fresh water fisheries in the UK.

The Trust has a range of charitable objects:

- to preserve, protect, operate and manage Inland Waterways for public benefit:
  - for navigation;
  - for walking on towpaths; and
  - for recreation or other leisure-time pursuits of the public in the interest of their health and social welfare;
- to protect and conserve for public benefit sites, objects and buildings of archaeological, architectural, engineering or historic interest on, in the vicinity of, or otherwise associated with Inland Waterways;
- to further for the public benefit the conservation protection and improvement of the natural environment and landscape of Inland Waterways;
- to promote, facilitate, undertake and assist in, for public benefit, the restoration and improvement of Inland Waterways;
- to promote and facilitate for public benefit awareness, learning and education about Inland Waterways, their history, development, use, operation and cultural heritage by all appropriate means including the provision of museums;

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- to promote sustainable development in the vicinity of any Inland Waterway for the benefit of the public, in particular by:
  - the improvement of the conditions of life in socially and economically disadvantaged communities in such vicinity; and
  - the promotion of sustainable means of achieving economic growth and regeneration and the prudent use of natural resources; and
- to further any purpose which is exclusively charitable under the law of England and Wales connected with Inland Waterways; provided that in each case where the Trust undertakes work in relation to property which it does not own or hold in trust, any private benefit to the owner of the property is merely incidental.

We believe that our canals and rivers are a national treasure and a local haven for people and wildlife. It is our job to care for this wonderful legacy – holding it in trust for the nation in perpetuity and giving people a greater role in the running of their local waterways. **The key objective for the Trust in responding to this consultation is to protect our assets and interests and to ensure that as the proposal develops the impacts of the scheme on our inland waterways network are appropriately mitigated.**

The consultation asks the following question: Do you support the proposal to locate the Eastern Leg Rolling Stock Depot (RSD) on a site East of Leeds in the Aire Valley adjacent to the M1? Please indicate whether or not you support the proposal, together with your reasons.

The proposal includes a rail chord to the RSD crossing over the Aire & Calder Navigation. The Aire & Calder Navigation is a commercial waterway (i.e. a waterway which, under the Transport Act 1968, is to be principally available for the commercial carriage of freight). At the crossing location, the navigation is both owned and managed by the Trust. We note that with this location of the RSD there is the possibility that additional maintenance sidings will be needed. At present, we do not object to the location of the RSD itself provided appropriate mitigation is provided to protect the waterway corridor but this situation may change should any maintenance sidings have an adverse impact on the waterway network or canal restoration projects. We do however have concerns regarding the impact of the associated rail chord on the Aire & Calder Navigation. We set our concerns out below and, without prejudice, suggested potential mitigation option.

## **Operational issues**

### **Minimum Air Draft**

To maintain navigation, it is essential that a minimum air draft (which is the distance from the highest point of the crest of the controlling weir (as defined by the Trust) to the lowest point of the crossing measured across the full width of the navigation) of no less than 5.5m is provided. Whilst the profile plan indicates a clearance between water and rail level of 8.4m the bridge beam will be deep. The depth of the beam will reduce the available air draft. It is critical to ensure that the minimum air draft, as defined above, is provided.

### Towpath Clearance.

To maintain access along the towpath it is essential that a towpath headroom which is specified as the distance between the highest point of the towpath and the lowest point of the crossing measured across the full width of the towpath should be no less than 2.75m. Whilst the profile plan indicates between 6.3 and 7m of clearance between towpath and rail level the bridge beam will be deep. The depth of the beam will reduce the available towpath headroom. It is critical to ensure that the minimum towpath headroom, as defined above, is provided.

### Obstruction to navigation

The rail chord crosses the navigation on a significant skew. Given the proposed length of the skew crossing, the bridge designer may consider locating piers within the navigation to reduce span lengths. This would cause an obstruction to navigation and is unacceptable to the Trust.

### Dredging

A pipe bridge crosses the navigation and intersects with the rail chord at chainage circa 0+550. It appears that the pipe bridge may need to be diverted. Changes may be required to the electricity lines which cross the navigation near the crossing point.

The waterways need to be dredged to maintain depth for navigation. It is not acceptable to the Trust to hinder dredging operations through the presence of overhead services. This will need to be considered in relation to any diversion of services.

Also see our comments on the impact on the character and appearance of the waterway.

### **Issues relating to infrastructure associated with a water abstraction**

There is a water abstraction point on the navigation which will be affected. This and the associated infrastructure needs to be protected or relocated in discussion with the abstractor.

### **Issues relating to the impact on the character and appearance of the waterway corridor**

The design of any crossing should be guided by the general and detailed principles for crossing design set out in the Secretary of State for Transport and Canal & River Trust agreement for Phase 1 of the HS2 project.

Where the viaduct lands on the northern bank of the Aire & Calder Navigation and on the southern and northern banks of the River Aire the loss of woodland should be minimised to protect the character of the waterway. Replanting should take place where necessary.

To provide screening to the RSD any loss of vegetation on the northern bank of the River Aire should be minimised. Replanting should take place where necessary.

Both the pipe bridge and electricity lines should be undergrounded as part of the scheme to remove visual clutter from the waterway corridor.

### **Without prejudice, potential mitigation**

To provide mitigation for some of the issues identified above we suggest that the rail chord alignment is relocated to the north of the proposed crossing point. This is shown on the attached plan titled Canal & River Trust Proposed Alignment of Leeds RSD Rail Chord.

We consider that the benefits of this are:

Reducing the length of the viaduct with the associated cost savings.

Removing the requirement for piers to be proposed in the navigation.

Reducing the visual impact on the waterway corridor due to a shorter structure passing over the waterway. Reducing the construction thickness of the bridge spans to facilitate a more considered and elegant crossing of the navigation and river, in the spirit of the HS2 Design Vision.

The pipe bridge may not need to be relocated.

Relocation will reduce the impact on the woodland habitat at the location of the proposed crossing.

It is acknowledged that the implications for Culvert 3 Stourton Culvert (Trust reference AL-006-003) will need to be considered as a result of this suggestion.

### **River Aire**

For your information, the Trust also own a significant stretch of the River Aire near to the RSD site. To remove visual clutter from the waterway corridor the electricity lines should be undergrounded.

### **Waterborne Freight Transport and the RSD.**

As stated above the Aire & Calder Navigation is a commercial waterway (i.e. a waterway which, under the Transport Act 1968, is to be principally available for the commercial carriage of freight). The Aire & Calder Navigation connects to the Humber Ports and has been identified by the Trust as a Priority Freight Route. The Leeds City Council Adopted Natural Resources and Waste Local Plan safeguards some wharf sites for unloading to protect the ability to use the canal for freight. It also allocates a site for a new wharf site and associated employment activities in the Stourton area. The Trust has obtained planning permission for change of use of the land to provide for the storage and distribution of aggregates with associated provision of a wharf.

The new location for the RSD site provides the opportunity for water transport to be used in the delivery of materials, such as aggregates and steel, to the site during both the construction and operational phases. We would be happy to assist in exploring such opportunities with you.

If you require any further information please do not hesitate to contact me. We look forward to further dialogue with HS2 Ltd to ensure that the developing proposal addresses the impacts on and opportunities for the waterway network.

Yours faithfully

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