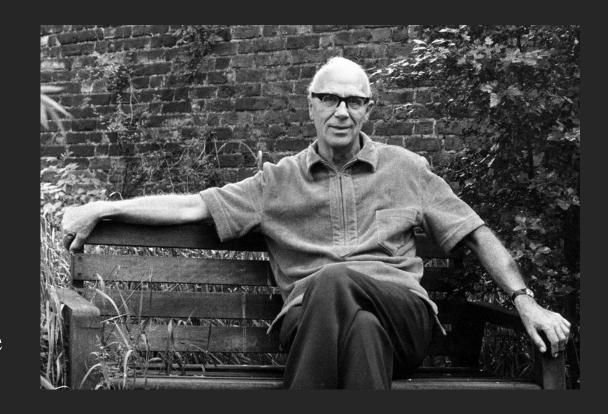


## Introduction

We are an independent firm of designers, planners, engineers, consultants and technical specialists offering a broad range of professional services.

Our creative spark and intellectual independence has been there from the very beginning. Our values derive from the beliefs and convictions of the firm's founder, the engineer and philosopher, Ove Arup.



# Major infrastructure projects

- A96 Dualling East of Huntly to Aberdeen
- Aberdeen New Harbour
- Hinkley New Nuclear Power Station
- Forth Road Crossing
- A303 Stonehenge
- A14 Cambridge to Huntingdon Improvement Scheme
- Heathrow 3rd Runway
- Tidal Lagoon Swansea Bay



Queensferry Crossing, Transport Scotland

# Consenting regimes

- Roads (Scotland) Act 1984
- Planning Act 2008 / Development Consent Application Orders
- Hybrid bill
- Highways Act 1980 (England & Wales)
- Transport and Works Act Order Applications
- Traffic Regulation Orders
- Environmental Impact Assessment Regulations



A96 Dualling East of Huntly to Aberdeen, Transport Scotland

# Stakeholder engagement in the consents process

- Process of dialogue and continuous engagement based on information and facts
- Opportunity to identify key issues and seek resolution/mitigation
- Articulation of key issues to the public and seek feedback on how these can be addressed
- Use of innovative techniques to make complex information accessible
- Evidence to consenting authorities that people and stakeholders have had the opportunity to comment on issues at the right time and with the ability to influence the outcome



Aberdeen New Harbour

## Case Study 1: Shale Gas Exploration in Lancashire



## Stakeholder issues

- Fracking in the United States
- Image and reputational issues
- Failed to disclose information e.g. the fracking fluid
- Lack of trust, suspicion and perpetuation of myths
- Lack of 'open book' sharing of information
- Lax permitting and monitoring of existing operations

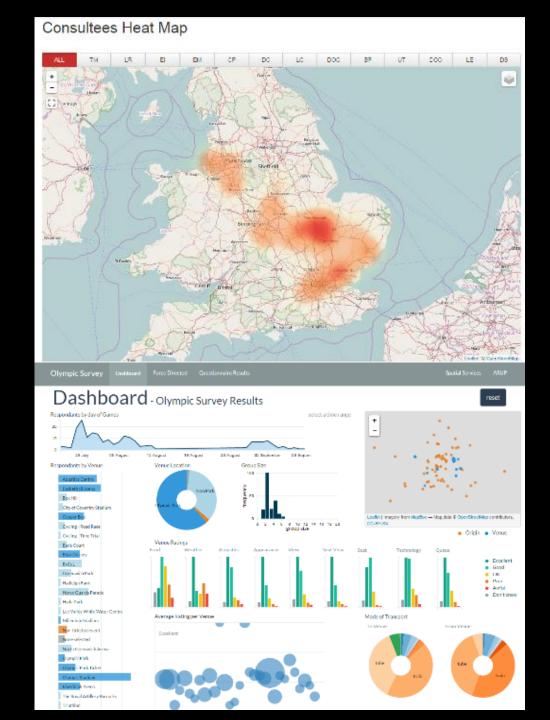


# Consultation Techniques

	PROJECT STAGE				
	Intro to Project	Project Update	Sites Launch	Findings from EIA	Post Submission
Information Day Event / Exhibitions	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	
Engagement with Key Stakeholders	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	
Workshops and Parish Council Meetings	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	
Community Liaison Group Meetings				$\sqrt{}$	$\sqrt{}$
Dedicated phone line	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
Newsletter Distributed		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
Brochure Distributed				$\sqrt{}$	$\sqrt{}$
Animations and Computer Images		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
On line Community Mapping		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	
Physical Model of the Site				$\sqrt{}$	
Downloaded Info from Web Site	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$	

## Consultation Database

- Platform to manage multiple consultations and stakeholder management tasks across whole project
- Provides a simple record of activity and comments with access to original documents
- GIS mapping of stakeholders and issues
- Dashboard reporting for design meetings and review design/options and feedback
- Filters by the status of consultees within the statutory framework
- Flag records by topic and assign to team members
- Efficient access to historic records during the Examination period



# Transport

**Issues Raised During Consultation** 

Concerns about number of HGV Movements

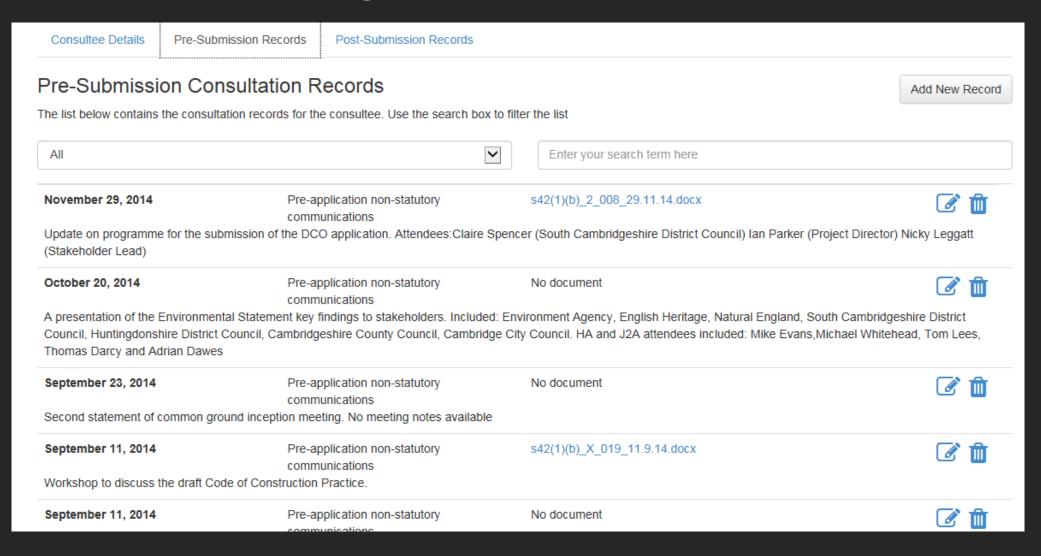
Concern about Lorry Route through Residential Areas

Concern about Enforcement and compliance to use roads at specific times of the day

### Mitigation Measures to be deployed

- Reduced the overall volume of fluid to be used, reducing flow back fluid transported off site
- Bringing similar activities together for different wells to reduce the number of times equipment is transported to and from the site
- Identifying a route that passes the lowest number of properties, using a private access through an MOD site
- Traffic Management Plan and enforcement measures to ensure all HGVs use an agreed route

# Provides a simple record of activity and comments with access to original documents



Case Study 2: HS2



YesTo

Yes to economic growth
Yes to UK High Speed Rail
Yes to environmental benefits



## Stakeholder issues

- Noise & Vibrations
- Landscape & Visual
- Property & compensation
- The Case for the scheme
- Myths and unknowns
- Challenge making complex information accessible



## Noise & Vibration

- Roadshows include sound booths that play simulations of the route in four locations along the route Independently verified
- Created by Arup, uses sound recordings taken from French TGV high-speed services and lays them over background recordings
- Makes a technical issue accessible
- Plan is to create 8 more for along the route



# Making complex information accessible

High Speed Rail Consultation Transport Noise - Summary Note

### Find out here about:

- what causes railway noise;
- how noise effects can be reduced;
- how we predict noise levels and the number of dwellings affected; · our current assessment of noise effects from HS2 (London to West
- Midlands): and what we would do next

### What causes noise?

The noise made as a train passes along a track comes from a number of sources:

- mechanical noise from motors, fans and other equipment on the train:
- · rolling noise from wheels passing along
- 170 190 **High Speed Rail Consultation** the train bo

electrical effects and

When we de



Arrangements for dealing with property blight

well as additional 'discretionary arrangements'.

we used a r Find out here about blight - the adverse effect that HS2 (London to West Midlands) may have on some people's ability to sell their property - and the arrangements that are, or would be, in place to address this. These include statutory provisions, which the government is obliged to provide by law, as

Locating the route away from areas of

Locating the route close to existing transport

· Lowering the route alignment or placing it in

population where possible:

A separate factsheet gives details on the Exceptional Hardship Scheme (EHS) which is currently in place for those who urgently need to sell their property and would experience exceptional hardship if they could not.

- If HS2 goes ahead, statutory blight provisions will apply to people whose property would need to be purchased in order to build or operate HS2. People who qualify can require Government to bring forward the purchase of their home.
- People who remain in their homes would. under current law, be able to apply for compensation for loss of value caused by certain physical factors (like the noise of trains), once the railway has opened and actual impacts are known.
- The Government is considering the options for additional support arrangements. Some possible approaches are described in Annex A of the "High Speed Rail: Investing in Britain's Future - Consultation" document and we are keen to hear your views on

### What statutory provision is there?

Department for

**Transport** 

If the Government decides, following consultation, to go ahead with building a new high speed line it is likely to bring in 'safeguarding directions'. These would identify a zone alongside the route within which it might be necessary to demolish properties in order to build or operate the line. Once this area is safeguarded, statutory blight arrangements would come into force. People whose property fell within the zone could then, subject to certain conditions, serve a blight notice on the Government requiring it to be purchased.

Those whose property fell outside this zone would still be able to claim statutory compensation if their property suffered a loss in value due to physical factors (including things like noise, dust and vibration) caused by use of the new high speed line. This compensation can be claimed once the actual impact of the operations is known (from one year after the new high speed line has opened). Compensation may also be payable for the effects of construction. On top of this, the Noise Insulation (Railways and Other Guided Systems)

### **High Speed Rail Consultation**

In Your Area 4: Denham to Amersham



### Find out here about

- what is proposed between Denham and Amersham;
- . what this means for people living in the area between Denham and
- what would happen during construction.

### What is proposed between Denham and Amersham?

Shortly after crossing the River Pinn the proposed line would enter a brief stretch of cutting. It would then cross the Coine Valley on a 21/4 mile long viaduct which would generally be 12 metres high, rising to 16 metres at its highest point. The route would then continue on a series of embankments and cuttings across farmland towards the M2

### What this means for people living in the area between Denham and Amersham

Adjacent to Denham the railway would cross the Colne Valley on a viaduct. We have positioned the structure so that it is at tree height. If the Government wishes to proceed with this proposal we would then obtain

### In Your Area 4: Denham to Amersham

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Amersham O Any future co likely to brand but no provis

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### Plan of viaduct and surrounding area



As noted above for most of its length the track level of the viaduct would be 12 metres above the surface, rising to 16 metres above at its highest point. The picture below gives an example of how the proposed viaduct might

### Looking north, this visualisation shows the HS2 railway crossing the Colne Valley



It would take two to three years to build the viaduct from several work sites along its length. We have not considered locations for work sites yet. We would work closely with local authorities and residents to ensure that any disruption during construction would be minimised, including construction traffic movements

We would ensure that our design and construction methods would keep any effects on water and habitats to a minimum. Potentia effects on the River Colne, protected groundwater and flood risk have been assessed and would be minimised. The viaduct would be designed so that it would not increase the flood risk associated with the Colne Valley

### Tunnel between the M25 and Old Amersham

### Why would the tunnel be needed?

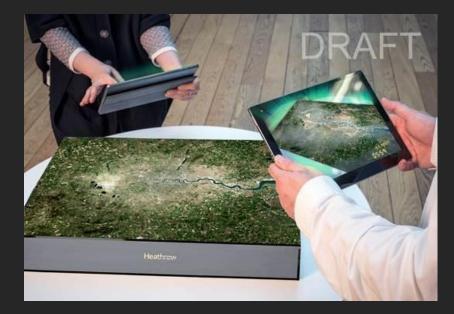
The Chilterns is an Area of Outstanding Natural Beauty (AONB) and we need to limit any effect the new line would have upon it, wherever possible. Tunnelling would avoid landscape and visual effects in this part of the AONR. To pass through this section of the route we propose to construct a six mile tunnel (please see map in the centre of this factsheet)

### What happens below ground?

The tunnel would pass about 30 metres below ground level (from surface to highest part of tunnel) for most of its length. It would be formed of two circular tunnel bores, each containing one track. The tunnel bores would be about 18 metres apart and would be linked by cross-passages every 250 metres. In the event of an emergency these would enable passengers to pass from one tunnel to the safety of the other

### What would I notice above ground?

Any ground settlement caused by the tunnel construction would be imperceptible owing to the depth of the tunnel. All properties above the tunnel, however would be independently surveyed before and after construction to ensure that in the very rare instance of any effects on property they would be rectified at no cost to the owner.





## Lesson Learned

- Early engagement identification of key issues in a timely manner
- Use of innovative tools to make complex information accessible
- Consent & license is the start of a new phase of stakeholder engagement
- Ongoing communications throughout the consents process – avoidance of myths and speculation
- Open, honest and based on fact