

## Flood risk management

A project-specific flood model has been developed from the A9 crossing of the River Tay south of Dowally to north of Ballinluig, covering the River Tay, River Tummel, and their smaller tributaries including Dowally Burn, Sloggan Burn and Kindallachan Burn. The flood model is in line with industry standard practice and is capable of developing a picture of complex flooding situations.

The baseline model for the existing situation (without the new dual carriageway in place) identified extensive flooding during the 1 in 200 year flood plus climate change event, between Tay Crossing and Ballinluig. Flooding was predicted to the west of the existing A9 over a large proportion of the flood plain. Extensive flooding is also predicted in more frequent flood events for the existing situation. Photographs, gauge data and anecdotal evidence from local landowners of past flood events have been used to verify the model.

Scottish Environment Protection Agency (SEPA) and Perth & Kinross Council (PKC) as statutory consultees have been consulted during the assessment process and SEPA has been consulted on the flood model developed for the scheme. Transport Scotland and its consultants will continue to liaise with SEPA, PKC and affected landowners as the DMRB Stage 3 design develops.

The flood model is used to assess the impact of the proposed dual carriageway scheme on flood levels at properties and key receptors (buildings, railway, A9) in the floodplain. Due to the vast size of the floodplain, and the relatively small volumetric loss from the proposed scheme (less than 1% of the available floodplain), the flood modelling is demonstrating that flood level increases during a 1 in 200 year plus climate change event are small — generally less than 5mm in the absence of mitigation, except in isolated areas. The model has also been used to predict change in levels at more frequent storm events (20, 30, 50, 60, 75 and 100 year events).

The model has confirmed the need for Compensatory Flood Storage at the following locations:

- agricultural land to the east of the A9 between Guay and Kindallachan;
- agricultural land to the west of the A9 north of Kindallachan; and
- agricultural land to the west of the A9 south of Guay (Guay south overbridge option only).

These mitigation measures reduce the change in flood levels at key receptors (buildings, railway, A9) within the floodplain below 5mm.



South of Guay looking north



South of Guay looking west



View looking west towards Dalmarnock

**i** To view all the exhibition panels including the three strip plans, please visit: [transport.gov.scot/projects/a9-dualling-perth-to-inverness/a9-tay-crossing-to-ballinluig/](https://transport.gov.scot/projects/a9-dualling-perth-to-inverness/a9-tay-crossing-to-ballinluig/)



View looking north from the southern extents of scheme

## What happens next?

Following this Community Engagement Event, we will progress towards completion of DMRB Stage 3. This will include:

- reviewing feedback from this Community Engagement Event;
- identifying a preferred overbridge and junction location taking into consideration the assessment and feedback from the community engagement event;
- continuing consultation with key stakeholders;
- finalising the overall design, which will include further refining of side roads;
- completion of the DMRB Stage 3 Report;
- completion of the Environmental Statement; and
- publication of Draft Orders (definition of land required to be purchased to construct the scheme).

## Comments and feedback

Transport Scotland welcomes your comments and feedback on the overbridge locations, and any other information that has been presented today. We will use your comments and feedback to help inform the ongoing project development during DMRB Stage 3.

Please leave your comments in the feedback box provided at the event or email: [a9dualling@jacobs.com](mailto:a9dualling@jacobs.com)

You can also post to:  
**Sarah Morgan**, Stakeholder Manager, Jacobs UK Ltd, 95 Bothwell Street, Glasgow, G2 7HX.

**i** Please take time to consider the information presented and provide any comments you may have by **19 January 2018**.



### Jacobs

You may contact Sarah Morgan, Stakeholder Manager:

Telephone:  
**07833 936 426**  
Email:  
[sarah.morgan@jacobs.com](mailto:sarah.morgan@jacobs.com)

### Project

For further information on the Tay Crossing to Ballinluig project, and to view the community engagement event materials, drawings and strip plans, please visit:

[transport.gov.scot/projects/a9-dualling-perth-to-inverness/a9-tay-crossing-to-ballinluig/](https://transport.gov.scot/projects/a9-dualling-perth-to-inverness/a9-tay-crossing-to-ballinluig/)

### A9 Dualling Programme

For further information on the wider A9 Dualling Programme, please visit the Transport Scotland website at:

[transport.gov.scot/A9dualling](https://transport.gov.scot/A9dualling)

If you have any queries or any comment on the wider programme, please contact the A9 Dualling team by telephone or email.

Telephone:  
**0141 272 7100**  
Email:  
[a9dualling@transport.gov.scot](mailto:a9dualling@transport.gov.scot)

# A9 Dualling

## Tay Crossing to Ballinluig

### Community engagement event

December 2017

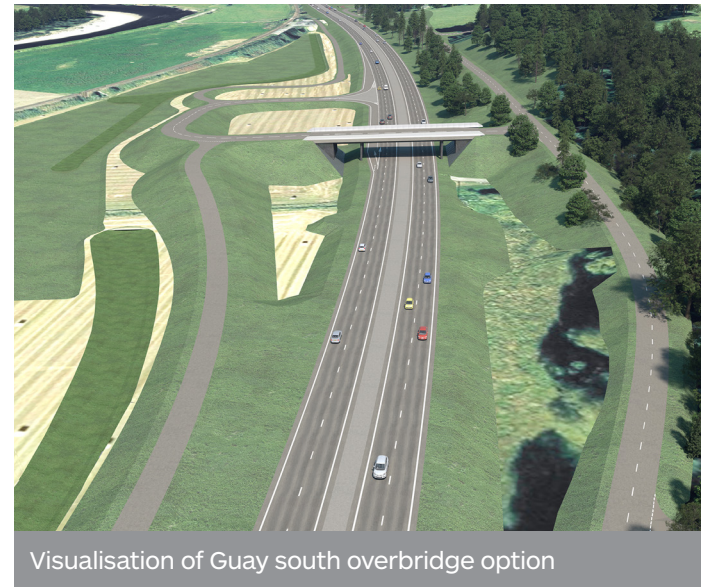


# Introduction

The Preferred Corridor and Route Decision was announced in December 2016, and the associated public exhibition held in February 2017. Since the public exhibition, we have been working to develop the design in a number of areas in accordance with the Design Manual for Roads and Bridges (DMRB) Stage 3 assessment process. These include:

- refining the mainline dual carriageway alignment;
- further developing the junction, side road and access design;
- progressing the drainage design and flood risk impact;
- developing proposals for Non-Motorised Users (NMUs); and
- developing proposals for public transport.

This leaflet provides a summary of the design development work undertaken since the public exhibition and provides details on the overbridge options and flood risk management.



Visualisation of Guay south overbridge option

Feedback forms are available today and we welcome your comments on the overbridge and junction and local access arrangements and any other aspect of the design. Further details can be found on the project website: [transport.gov.scot/projects/a9-dualling-perth-to-inverness/a9-tay-crossing-to-ballinluig/](https://transport.gov.scot/projects/a9-dualling-perth-to-inverness/a9-tay-crossing-to-ballinluig/)

# Design development

## Mainline Alignment

The mainline alignment has been refined following further assessment and design considerations:

- an interim roundabout at the south of the project has been provided to reduce diversion times for local residents. It is envisaged that the interim roundabout will be in place until such time that a junction at Dalguise is constructed as part of the Pass of Birnam to Tay Crossing project;
- we have reviewed how earthworks slopes will appear in the landscape, flattening or steepening them to achieve better integration with adjacent landform. We will continue this design work further as our landscape assessments continue, whilst consulting with key stakeholders;
- the designs for new and upgraded mainline structures have been developed; and
- we have raised the mainline alignment above the level of the 1 in 200 year plus climate change flood event.

## Junctions, side roads and accesses

- refinement to the design of the C502 Rotmell to Dunkeld junction to reduce the amount of disruptive construction work required on the existing side road;
- refinement of the design to relocate the side roads parallel to the A9 to assist in the constructability and minimises impact on properties in proximity to Dowally and Guay;
- realignment of the side road between Guay and Kindallachan to follow the existing General Wade's Military Road which assists in provision of compensatory flood storage; and
- where direct accesses to the A9 are to be closed, alternative access tracks have been provided. These new routes will provide access to areas of land, businesses and properties adjacent to the A9.

## Overbridge options

Following the Public Exhibition in February 2017, members of the local community suggested the consideration of an alternative overbridge and left-in left-out junction located between Dowally and Guay.

We have developed and assessed a viable alternative option at the suggested location. The alternative overbridge (Guay south overbridge option) was developed to a similar standard as the original Stage 3 overbridge (Kindallachan north overbridge option) to allow a comparative assessment to be undertaken considering engineering, environmental and traffic and economic impacts.

The graphics overleaf shows the location and layout of both overbridge and left-in left-out junction options.

### Benefits of the Guay south overbridge option over the Kindallachan north overbridge option:

- reduced land-take and less impact on residential properties; and
- reduced diversions of recreational paths, walks and reduced vehicle journey time diversions, particularly for those in Dowally and Guay.

### Dis-benefits of the Guay south overbridge option over the Kindallachan north overbridge option:

- greater volumetric loss of floodplain.

