A9 DUALLING
PERTH TO INVERNESS
Pass of Birnam to Tay Crossing

# A9 Dualling Programme: Pass of Birnam to Tay Crossing

## DMRB Stage 2 Scheme Assessment Report

## Executive Summary

A9P02-JAC-ZZZ-Z_ZZZZZ_ZZ-TN-ZZ-0001 | C03

October 2023

**Transport Scotland**

TS/MTRIPS/SER/2013/03

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| Project No: | A9P02 |
| Document Title: | DMRB Stage 2 Scheme Assessment Report, Executive Summary |
| Document No.: | A9P02-JAC-ZZZ-Z_ZZZZZ_ZZ-TN-ZZ-0001 |
| Revision: | C03 |
| Document Status: | A |
| Date: | October 2023 |
| Client Name: | Transport Scotland |
| Client No: | TS/MTRIPS/SER/2013/03 |
| Project Manager: | E.McMILLAN |
| Author: | C.KERR |
| File Name: | A9P02-JAC-ZZZ-Z_ZZZZZ_ZZ-TN-ZZ-0001.docx |

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# Executive Summary

The A9 corridor forms a strategic transport link between Central Scotland and the Scottish Highlands. The 177 kilometre route between Perth and Inverness consists of seven single carriageway sections interspersed between eight existing dual carriageway sections. Approximately 129 kilometres of these single carriageway sections are proposed to be dualled in order to complete the overall dualling of the A9.

The Pass of Birnam to Tay Crossing project commences at the northern extent of the current section of existing dual carriageway that extends from Perth to the Pass of Birnam. It extends approximately 8.4 kilometres bypassing the towns of Birnam, Little Dunkeld and Dunkeld to the east and Inver and The Hermitage, which is a National Trust for Scotland (NTS) protected site, to the west. The tie-in point with the following scheme, Tay Crossing to Ballinluig, is approximately 0.75 kilometres north of the current River Tay crossing.

Design and assessment work has been ongoing for the Pass of Birnam to Tay Crossing section of A9 dualling since 2004, with Design Manual for Roads and Bridges (DMRB) Stage 2 design and assessment beginning in 2009. Following public consultation in 2016, the local community requested more detailed consultation be undertaken to review options and investigate if other suitable alternative options, that address community concerns, were available. As a result, Transport Scotland agreed to the A9 Co-Creative Process, which was developed in collaboration with the Birnam to Ballinluig A9 Community Group and undertaken in 2018.

The outcome of the innovative A9 Co-Creative Process was the Community's Preferred Route Option, which was voted by the public. The Community's Preferred Route Option includes a 1.5 kilometre cut and cover tunnel in the locality of Dunkeld & Birnam Station. The option also includes an at-grade roundabout in the locality of the existing junction at Dunkeld.

Following completion of the A9 Co-Creative Process, further assessment work was undertaken on the Community's Preferred Route Option, which included consultation with key stakeholders and local residents. This assessment identified a number of challenges, which largely focussed on the construction complexity of the option, environmental effects and capital and maintenance costs. As a result, and as good practice dictates that a range of options should be comparatively assessed, three Additional Whole Route Options were developed. These options included ideas submitted by the public as part of the A9 Co-Creative Process and considered Transport Scotland and the local community's objectives.

Three junction options were considered at Murthly/Birnam for the Additional Whole Route Options. The initial focus of the DMRB Stage 2 assessment was to comparatively assess the Murthly/Birnam Junction options to determine a preferred junction option, which would be taken forward into the Additional Whole Route Options. Based on the outcome of the comparative assessment undertaken, it is recommended that **Option 2**, a grade separated junction in the locality of the existing Birnam Junction, with merge/diverge slip roads in the northbound direction and a merge slip road in the southbound direction, be utilised for the Additional Whole Route Options. This option limits loss of the River Tay floodplain, has the lowest overall effect on the landscape resource and the lowest anticipated costs.

Key features of the Community's Preferred Route Option and the three Additional Whole Route Options are summarised below.

- Community's Preferred Route Option (Option ST2A):
  - Estimated cost, £1,008 million to £1,626 million;
  - A9 dual carriageway in a cut and cover tunnel for approximately 1.5 kilometres in the locality of Dunkeld & Birnam Station, with Station Road extended to reconnect to the station and a replacement station car park on top of the tunnel;
  - Grade separated junction in the locality of the existing private access to Murthly Castle, providing a safer connection to Birnam via Perth Road; and

- At-grade roundabout in the locality of the existing junction at Little Dunkeld, providing a safer connection to Birnam and Dunkeld.

- Additional Whole Route Option 1 (Option ST2B):
  - Estimated cost, £420 million to £629 million;
  - A9 dual carriageway lowered into a 150 metre long underpass in the locality of Dunkeld & Birnam Station, with Station Road extended to reconnect the station and a replacement station car park on top of the underpass;
  - Grade separated junction in the locality of the existing junction at Birnam, providing a safer connection to Birnam via Perth Road; and
  - At-grade roundabout in the locality of the existing junction at Little Dunkeld, providing a safer connection to Birnam and Dunkeld.
- Additional Whole Route Option 2 (Option ST2C):
  - Estimated cost, £405 million to £546 million;
  - A9 dual carriageway generally at the same level as the existing A9 throughout, with a raised section in the locality of Dunkeld Junction to facilitate construction of a grade separated junction;
  - Replacement station car park on the site of the existing Birnam Industrial Estate, accessed from Station Road;
  - Connection of Dunkeld & Birnam Station to Birnam via a new pedestrian underpass, incorporating lifts, constructed below the proposed A9 dual carriageway;
  - Grade separated junction in the locality of the existing junction at Birnam, providing a safer connection to Birnam via Perth Road; and
  - Grade separated junction in the locality of the existing junction at Little Dunkeld, providing a safer connection to Birnam and Dunkeld.
- Additional Whole Route Option 3 (Option ST2D):
  - Estimated cost, £303 million to £420 million;
  - A9 dual carriageway generally at the same level as the existing A9 throughout;
  - Replacement station car park on the site of the existing Birnam Industrial Estate, accessed from Station Road;
  - Connection of Dunkeld & Birnam Station to Birnam via a new pedestrian underpass, incorporating lifts, constructed below the proposed A9 dual carriageway;
  - Grade separated junction in the locality of the existing junction at Birnam, providing a safer connection to Birnam via Perth Road; and
  - At-grade roundabout in the locality of the existing junction at Little Dunkeld, providing a safer connection to Birnam and Dunkeld.

All options include the same junction layouts at The Hermitage and Dalguise. A northbound left-in left-out junction is proposed at The Hermitage, and a grade separated junction, facilitating all movements, is included towards the northern extent of the scheme to access Dalguise.

Following consultation with the Birnam to Ballinluig A9 Community Group in late 2019, further consideration was given to an alternative option that incorporated a shorter cut and cover tunnel, approximately 450 metres long, which was originally developed through the A9 Co-Creative Process. It was concluded however, that although it had a reduced length of tunnel, the option would still have significant construction complexity, similar to the Community's Preferred Route Option (Option ST2A). Furthermore, it would also have similar environmental effects and not fully address concerns noted from some local residents and key stakeholders.

Based on the findings of the DMRB Stage 2 assessment, and considering feedback from the public and other stakeholders, the Emerging Preferred Route Option for the Pass of Birnam to Tay Crossing section of the A9 Dualling Programme is **Additional Whole Route Option 3 (Option ST2D)**. This option has less construction complexity than other options, comparatively lower overall environmental effects, and provides improved accessibility to Dunkeld & Birnam Station. There is also an opportunity to further enhance station accessibility and connectivity to Birnam, which will be investigated at future design and assessment stages, in consultation with the local community and key stakeholders.

The Emerging Preferred Route Option (Option ST2D) includes the community's favoured junction options, as voted through the A9 Co-Creative Process, at Dunkeld, The Hermitage and Dalguise. In addition, the junction option at Birnam is based on the principles of the community's second preference for a junction, which was a grade separated junction, restricted movements with a northbound diverge slip road and a southbound merge slip road only. However, to partly address traffic increases on Perth Road with such an option, a northbound merge slip road has been added. The Emerging Preferred Route Option (Option ST2D) also incorporates improved access to the station, with the opportunity to enhance further, which was noted as important to the local community.

Subject to approval from Scottish Ministers, the Emerging Preferred Route Option will be taken forward to undergo a DMRB Stage 3 assessment. As part of this assessment, the Emerging Preferred Route Option will be refined, developed and assessed, taking account of public and stakeholder feedback as necessary and appropriate. Environmental mitigation and assessment of the environmental effects will also be considered and reported in an Environmental Impact Assessment Report.