8. Conclusion

8.1.1 The objectives for the A9 Dualling: Pass of Birnam to Tay Crossing scheme align with the strategic objectives of the A9 Dualling Programme. A summary of the objectives of the A9 Dualling Programme, and how the Design Manual for Roads and Bridges (DMRB) Stage 3 design for the proposed scheme contributes to their delivery, is outlined below:

Objective 1: To improve the operational performance of the A9 by:

- Reducing journey times; and
- Improving journey time reliability.

8.1.2 The proposed scheme will provide a saving of approximately one minute per vehicle travelling on the A9 between Pass of Birnam and Tay Crossing.

8.1.3 The dualling will provide a second lane in each direction to safely allow vehicles to overtake slower moving vehicles, such as farm machinery and HGVs, which will improve journey times and journey time reliability.

8.1.4 The proposed scheme includes the provision of an Intelligent Transport System (ITS) with strategically positioned Variable Message Signs (VMS) and CCTV cameras, which will better inform drivers of the operational performance of the A9 and the wider trunk road network.

Objective 2: To improve safety for motorised and non-motorised users (NMU) through:

- Reducing accident severity; and
- Reducing driver stress.

8.1.5 The proposed scheme will provide safer overtaking opportunities on the A9 between Pass of Birnam and Tay Crossing as well as reduce driver frustration. The proposed scheme is expected to result in a reduction in the number of fatal and serious injury accidents. It is modelled that the average number of accidents forecasted per year is anticipated to decrease by approximately two by 2036 with the proposed scheme in place, compared to the Do Minimum Scenario. However, the difference in total accident numbers between the Do-Minimum and Do-Something is anticipated to be negligible by 2051. Although it is projected that there will be a negligible change in quantity of accidents by 2051, the modelling indicates that there will be a reduction in the severity of the accidents.

8.1.6 The three existing at-grade major/minor junctions at Birnam, Dunkeld and Dalguise will be upgraded as detailed below:

- A grade separated junction incorporating a northbound merge, northbound diverge, and southbound merge only at Birnam;
- An at-grade five arm elongated roundabout at Dunkeld; and
- A grade separated junction permitting all movements at Dalguise.

8.1.7 These junctions will remove instances of right turning vehicles having to cross the central reserve into oncoming traffic, often travelling at the national speed.

8.1.8 The 13 existing at-grade direct accesses onto the A9 between Pass of Birnam and Tay Crossing will be rationalised with many being closed and access tracks rerouted. This has resulted in a reduction to three proposed left-in, left-out junctions onto the A9 carriageway (The Hermitage, Network Rail Maintenance Access Track and Inver Maintenance Access Track (North)), of which the latter two are anticipated to have low/infrequent usage, and six new or realigned direct accesses from the A9 carriageway onto the side roads of the proposed scheme.

8.1.9 The two existing lay-bys on the existing dualled section of the A9 at the Pass of Birnam, located to the immediate south of the scheme extents, are to be retained and will be upgraded to Type A layouts. These will be fully segregated from the dual carriageway running lanes by a kerbed segregation island and will include a dedicated parking lane to separate parked vehicles from vehicles that are entering or exiting the lay-by, creating a safer area for all users in the lay-by. No other parking lay-bys are proposed within the scheme extents due to the space constraints throughout.

Objective 3: To facilitate active travel within the corridor.

8.1.10 Within the length of the proposed scheme, the existing network of Cycle Routes, Core Paths and undesignated local paths which interact with the proposed scheme have been carefully considered as the DMRB Stage 3 design has developed. Where existing walking, wheeling, cycling and horse-riding (WCH) routes are being impacted by the new carriageway alignment, provision is included for realignment of the routes. At locations where existing WCH routes cross the A9 at-grade, provision is included for the realignment of the routes crossing under the A9 carriageway via existing or proposed grade separated crossings. Where existing WCH routes cross under the A9 through underbridges or underpasses, the widening/lengthening of these structures will allow for the WCH route to be retained to minimise journey length increases. Other enhancements to the WCH network in the vicinity of the proposed scheme have been considered and included in the proposed scheme design where feasible.

8.1.11 Furthermore, the DMRB Stage 3 assessment has been informed by consultation with Non-motorised User (NMU) forums and workshops and also from the public at a number of exhibitions and drop-in events.

Objective 4: To improve integration with Public Transport Facilities.

8.1.12 Improvements to the operational performance of the A9 will assist bus operators in achieving higher levels of service through reduced journey times and increased journey time reliability.

8.1.13 Replacement of the existing bus lay-bys (northbound and southbound) at Inver are proposed on the A9 carriageway between the River Braan Bridge and Inver. The grade separated Birnam Junction, and the at-grade Dunkeld Junction roundabout will allow the existing bus services through Birnam and Dunkeld to continue. Additionally, the Dunkeld & Birnam Station Replacement Car Park can facilitate bus movements, and could therefore create a link between the local bus services and train services.

8.1.14 The scheme facilitates connectivity between the local community and Dunkeld and Birnam Station. Access to Dunkeld & Birnam Station is provided from Station Road, incorporating a replacement car park and a pedestrian underpass. The new provision provides step-free access to both platforms and improves the overall accessibility and integration for all users.