A9 DUALLING
PERTH TO INVERNESS
Tay Crossing to Ballinluig

A9 Dualling Programme: Tay Crossing to Ballinluig

DMRB Stage 3 Environmental Statement

Non-Technical Summary

July 2018

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Section 1: Introduction

Preface

This document is the Non-Technical Summary (NTS) of the Environmental Statement (ES) for the A9 Dualling Programme: Tay Crossing to Ballinluig project. The project is proposed by Transport Scotland, an agency of the Scottish Government. Copies of the Environmental Statement and the draft Road Orders are available to view during normal office hours at the following locations:

Transport Scotland
Major Transport Infrastructure Projects (MTRIPS)
Buchanan House
58 Port Dundas Street
Glasgow
G4 0HF

Telephone: 0141 272 7100

08.30 to 17.00 Monday to Thursday
08.30 to 16.30 Friday

Birnam Arts and Conference Centre
Station Road Birnam
Dunkeld
PH8 0DS
Telephone: 01350 727674

09:00 to 17:00 Monday to Sunday

Pitlochry Library
26 Atholl Road
Pitlochry
PH16 5BX

Telephone: 01796 474 635

Closed Monday, Tuesday and Sunday
14:00 to 16:00 and 17:00 to 19;00 Wednesday
10:00 to 12:00 and 14:00 to 19:00 Thursday
14:00 to 16:00 Friday
09:00 to 13:00 Saturday

The Environmental Statement (including NTS) and draft Road Orders may also be viewed online at: https://www.transport.gov.scot/projects/a9-dualling-perth-to-inverness/a9-tay-crossing-to-ballinluig/

A digital NTS has also been prepared and is available online at the above link. This interactive version of the NTS includes video content from the public exhibitions and interactive mapping. We recommend that this resource is opened in a Google Chrome browser, on a connection with a minimum upload/download speed of 350kbps.

A bound paper copy of the Environmental Statement may be purchased at a cost of £150 or in DVD format at a cost of £10 by writing to Transport Scotland at the address opposite. Copies of the NTS are available free of charge from the same address or by email to: info@transport.gov.scot.

Any person wishing to express an opinion on the Environmental Statement should write to Transport Scotland at the address opposite. Representations must be received within six weeks of the advertised date of the publication of the Environmental Statement and Draft Orders.

Background

The A9 Trunk Road forms a strategic link on Scotland's Transport Network, linking the Scottish Highlands and Central Scotland, and is vital to supporting the growth and development of the economy in the north of Scotland.

A Strategic Transport Projects Review (STPR) in 2008 set out the future investment programme for transport in Scotland over two decades, including the proposed upgrade of the A9. Following this review, the Scottish Government's 2011 Infrastructure Investment Plan (IIP) included the commitment to upgrade the A9 to dual carriageway standard between Perth and Inverness by 2025. The programme required to achieve this was subject to Strategic Environmental Assessment (SEA) from 2012 to 2014 to consider the overall constraints, environmental sensitivities and opportunities for enhancement. The Tay Crossing to Ballinluig section forms Project 03 of the Southern Section (from Pass of Birnam to Glen Garry) of the A9 Dualling Programme.

The Tay Crossing to Ballinluig project (referred to in this NTS and in the ES as 'the proposed scheme') comprises dualling of approximately 7.7km of the A9, with a 0.5km section of single carriageway included at the southern extents of the proposed scheme to tie in to the existing single carriageway. The proposed scheme incorporates: an interim roundabout forming the A9 southern tie-in north of the Tay Crossing and which will be replaced by the Dalguise Junction following completion of Project 02 - Pass of Birnam to Tay Crossing; three left-in left-out junctions linking side roads; the Guay South Overbridge; four at-grade local accesses; upgrades to existing road drainage and treatment; and provision of compensatory flood storage.

The proposed scheme will be submitted for authorisation through the Roads (Scotland) Act 1984. If approved, it is anticipated that construction would take approximately 2.5 to 3 years to complete.

Environmental Impact Assessment

An Environmental Impact Assessment (EIA) of the proposed scheme is required under European and UK legislation. The ES reports the findings of the EIA work carried out on the proposed scheme.

The EIA has been undertaken in line with the guidance in the Design Manual for Roads and Bridges (DMRB) Volume 11: Environmental Assessment.

The purpose of the EIA is to investigate the likely significant effects of the proposed scheme on the biological, physical and historical environment, as well as on members of the public and on current or planned future use of the environment. This NTS presents a summary of the ES, including key aspects of the proposed scheme and the associated beneficial and adverse impacts considered to be of particular importance.

Further details about the likely significant impacts of the proposed scheme can be found within the full text of the ES. The ES documents have been subdivided into four volumes for ease of use:

- NTS;
- Volume 1: Main Report;
- Volume 2: Technical Appendices – Specialist Technical Reports; and
- Volume 3: Figures.

The EIA process provides a valuable opportunity to avoid or reduce potential environmental impacts through design refinement. Environmental constraints and issues were identified through consultation, extensive environmental surveys and technical assessments. The information gathered has informed decision-making throughout the design process, providing opportunities to address potentially significant impacts where practicable, for example by refinement of route alignment or by the incorporation of measures to avoid or reduce potential adverse impacts.

Impacts have been assessed by comparing the existing situation (the baseline conditions) to the conditions that could potentially occur due to the proposed scheme.

Section 2: The Proposed Scheme

Need for the Scheme

The A9 is a vital route linking central Scotland to the north of Scotland, used by both local and long distance traffic. It is a major bus route and is used by freight traffic supporting key industries, such as food and drink, oil, waste and construction. The route is used by tourists as a means of reaching locations in Perthshire and the Highlands. It is considered that the upgrade of the A9 to dual carriageway will help assist economic growth in the north of Scotland. Dualling of the A9 will improve journey times, potentially saving costs for businesses, reducing driver stress and improving safety and potentially making the surrounding areas more attractive as a short-term tourism destination.

The need for the A9 dualling has been identified across a number of studies summarised in the table below.

Study	Purpose
The A9 Route Action Plan and Route Strategy (1995-97,1996)	Encouraged improvements such as carriageway dualling, junction improvements and overtaking lanes to improve safety and relieve driver stress.
A9 Route Improvement Strategy Study (2004)	Aimed to identify a route improvement scheme for the Perth to Blair Atholl section of the A9. Part of the emerging strategy was to undertake a programme of upgrading between Perth and Pitlochry.
The Strategic Transport Projects Review (STPR) (2008)	Undertaken to define the most appropriate strategic investments in Scotland's national transport network between 2012 and 2022. A number of targeted improvements were identified including full dualling of the A9 between Perth and Inverness to reduce accidents and improve journey time reliability.
Infrastructure Investment Plan (IIP) (2011)	Commits to upgrading the A9 between Perth and Inverness by 2025.
A9 Dualling: Case for Investment (2016)	The Case for Investment outlines strong road user, community, business and planning authority support for the A9 Dualling Programme. In particular, the commercial businesses along the A9 corridor are strongly in favour of the A9 Dualling Programme and the economic benefits it will bring. The report identifies there are five key sectors most likely to benefit from the proposed scheme; food and drink, tourism, energy, life sciences and forestry.

The Scottish Government confirms the commitment to A9 dualling in the National Planning Framework 3 (NPF3, 2014). The Framework is a long term strategy for Scotland which identifies national developments and other strategically important development opportunities to support and help deliver sustainable economic growth. In relation to the A9, it states:

> '*We will complete dualling of the trunk roads between cities, with dualling of the A9 from Perth to Inverness complete by 2025...*
>
> *The dualling of the A9 between Perth and Inverness and improvements to the Highland Mainline will provide a step change in accessibility across the rural north, increase business confidence and support investment throughout the region'.*

From a local perspective, concerns regarding safety and existing traffic conditions have contributed to the need for the proposed scheme.

In relation to safety, there is existing driver frustration, a lack of safe overtaking opportunities and a high proportion of severe accidents. The majority of accidents on the A9 occur along sections of single carriageway, and generally near to junctions. Along the extents of the existing A9 from Tay Crossing to Ballinluig, there were 19 accidents between 2008 and 2013. Two of these casualties were fatal, four were serious and 13 were slight in severity. Average speed cameras were installed on the A9 in October 2014 as a measure to improve road safety.

The area surrounding the proposed scheme also offers a wide range of tourist attractions and recreational activities, which are supported by the A9. Perth & Kinross Council's (PKC) Local Development Plan seeks to enhance tourism facilities and provision, this may partly be supported by upgrading the A9 to dual carriageway.

Scheme Objectives

The aim of dualling the A9 between Tay Crossing and Ballinluig is to improve the operational performance and level of service of this section, building on the objectives set for the A9 dualling as a whole.

The STPR assessment of issues and improvement opportunities along the existing A9 has led to the development of the A9 Dualling Programme objectives set by Transport Scotland, as follows:

1. To improve the operational performance of the A9 by:
   - reducing journey times; and
   - improving journey time reliability.
2. To improve safety for motorised and non-motorised users through:
   - reducing accident severity; and
   - reducing driver stress.
3. To facilitate active travel within the corridor.
4. To improve integration with Public Transport facilities.

The EIA process facilitates these objectives to be met whilst avoiding and/or reducing environmental impacts, enhancing the environment and improving sustainability where possible. This is done through the inclusion of appropriate environmental measures, adherence to best practice during construction and measures 'embedded' into the design such as new footways to improve existing facilities and connectivity.

Alternatives Considered

As previously mentioned, an SEA of the A9 Dualling Programme was carried out from 2012 to 2014, comprising a route-wide assessment which considered environmental constraints, issues, risks and opportunities. The SEA was completed in parallel with a similar consideration of engineering constraints, issues, risks and opportunities as part of a Preliminary Engineering Services (PES) commission.

Three high-level, strategic alternative dualling options were considered within the SEA for the Tay Crossing to Ballinluig project, comprising: online widening, online widening with offline dualling combination where constraints dictated, and dualling via alternative routes to the existing A9. The studies identified that online widening, generally following the route of the existing A9, was the most suitable option for this section.

Photograph 1: View of the existing dualled section near Ballinluig, looking south

To facilitate sifting of northbound and southbound online widening options, the review of 'simple' mainline options were produced during the DMRB Stage 1 by the PES/SEA assessment. Key sifting considerations during this assessment included potential impacts on the floodplain, proximity to the Highland Main Line railway and potential impacts on two Scheduled Monuments: Kindallachan Cairn and Kindallachan Standing Stone.

An online corridor on either northbound or southbound carriageway of the existing route was identified and development of mainline alignment and junction options for DMRB Stage 2 assessment was progressed. Four full length options were progressed for further consideration in the DMRB Stage 2 assessment. The proposed junction layout design was sited in the locality of the existing C502 Dunkeld to Rotmell road junction and applied to all of the route options.

Works to side roads and provision of replacement access to surrounding properties and premises would usually be developed as part of the DMRB Stage 3 design of the preferred route. However due to the potential complexity of connecting the existing local road network and providing access to properties, side roads/side road connections were included in the assessment at DMRB Stage 2.

Each of the four route options included a potential side road arrangement/design. Four side road layouts that were considered which could be combined with each mainline option with the potential to be taken forward to DMRB Stage 3.

During the consultation on the mainline and side road options, some members of the community raised concerns over the online mainline route options. Two offline alignments were subsequently developed with the alignment located to the east of the communities of Dowally, Guay and Kindallachan. The online mainline and side road options were presented to the public at a public exhibition on the 9th-10th June 2015 and a community engagement event on the 9th-10th February 2016.

An assessment of the offline route options was undertaken to an appropriate level to inform a comparison between online and offline route options. The assessment identified that the benefits of the Offline Route Options were outweighed by the considerable number of dis-benefits when compared to the online route options. It was concluded that an offline corridor was less preferential than an online corridor.

Finally, the assessment outcomes were analysed using the Government's appraisal criteria (economy, safety, environment and integration) for the assessment of trunk road schemes and the preferred option was identified.

On the basis of the DMRB Stage 2 assessment and the Online vs. Offline Route Option Comparative Assessment Report it was recommended that Mainline Route Option 2 Side Road Option 2 was taken forward for the DMRB Stage 3 assessment. Mainline Option 2 includes:

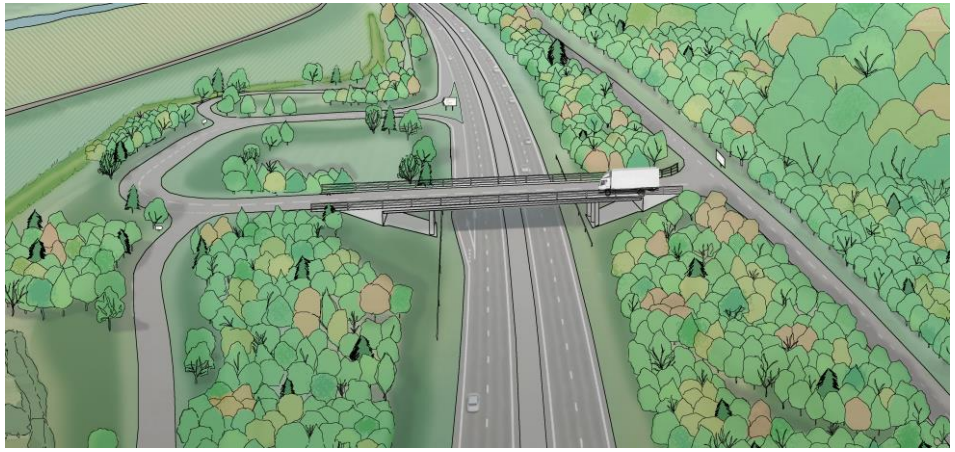
- predominantly southbound widening throughout the length of the route, before tying in to the existing dual carriageway at Ballinluig; and
- a best fit alignment through Dowally to minimise impact on properties, to accommodate access to properties on both sides of the A9 and to achieve a safe alignment for the road.

Side Road Option 2 includes:

- a southbound left-in left-out junction connecting to the C502 Dunkeld to Rotmell road; construction of a bridge over Dowally Burn to connect the two sections of the village;
- construction of side roads connecting Dowally, Guay and Kindallachan to both sides of the A9 by means of a southbound left-in/left-out junction north of Guay, and an overbridge and northbound left-in/left-out junction north of Kindallachan; and
- northbound left-in left-out junction at Westhaugh of Tulliemet.

Mainline Route Option 2 Side Road Option 2 was assessed to have the lowest interaction with the baseline flood extents and was considered simpler to construct for its entire length as it incorporated predominantly southbound widening. This option was considered to have the least intrusive environmental impacts overall.

Following this, Jacobs UK Ltd progressed with assessment of the preferred option, development of the design through DMRB Stage 3 assessment and EIA, and preparing an ES and draft Road Orders. The design of the preferred option has been subject to ongoing design refinement incorporating the exact location of the side roads and the proposed overbridge north of Kindallachan and this has been informed by a range of inputs and considerations, including landowner and other stakeholder consultation, as well as EIA.



Artist's Impression: Guay South Overbridge, south of Guay

Iterative Design Development

The DMRB Stage 3 design for the proposed scheme is the result of approximately 18 months of design development of the preferred option that was identified on completion of the DMRB Stage 2 assessment.

The project environmental team has influenced the design based on knowledge gained through the EIA process, working closely with the engineering teams, consultees, and Transport Scotland. Through this process, the design has been iteratively updated and refined to reach the final DMRB Stage 3 design assessed in the ES.

A key consideration in reaching the final DMRB Stage 3 design was the development of the side road arrangements and the exact location of the overbridge connecting settlements of Dowally, Guay and Kindallachan to the northbound and southbound carriageways. Following the Public Exhibition in February 2017 to support the preferred route announcement, some members of the local community suggested the consideration of an alternative overbridge and left-in left-out junction located between Dowally and Guay. After undertaking a comparative assessment considering engineering, environmental and traffic and economic impacts as well as seeking public feedback via Community Engagement Event on 6th-7th December 2017, the alternative overbridge option (Guay South Overbridge) was included in the DMRB Stage 3 design.

Some of the other key design considerations during DMRB Stage 3 design development that avoided or reduced the potential impacts include:

- minimising loss of designated areas (River Tay Special Area of Conservation (SAC)) for example through using retaining wall structures for local access and to protect road infrastructure;
- reducing/avoiding where practicable the loss of native and ancient woodland through design and providing compensatory planting;
- minimising impacts on the River Tay floodplain through for example road drainage design and provision of compensatory flood storage;
- drainage design to reduce impacts on the floodplain, habitats and River Tay SAC. Whether each Sustainable Drainage System (SuDS) feature should be a dry detention basin or a pond was also considered.
- reducing impacts on Kindallachan Standing Stone Scheduled Monument through the provision of a retaining wall structure and minimising verge and central reservation widths; and
- refined side road alignment at Guay Farmhouse and The Knoll. A retaining wall is proposed to the front of Guay Farmhouse to reduce the extent of alteration of the Wing of Guay Farmhouse and a fence to reduce visual disturbance and headlight glare.

Artist's Impression: Guay Side Road Option 2 (Proposed Scheme)

Other measures embedded in the proposed scheme include noise attenuation through the use of low noise road surfacing and noise barriers. The proposed scheme also includes woodland planting along the route in order to integrate the proposed scheme into the landscape and compensate for woodland loss as a result of the proposed scheme. Where planting is specified, native plant species will be used so as to re-establish or reinforce the character of the landscape.

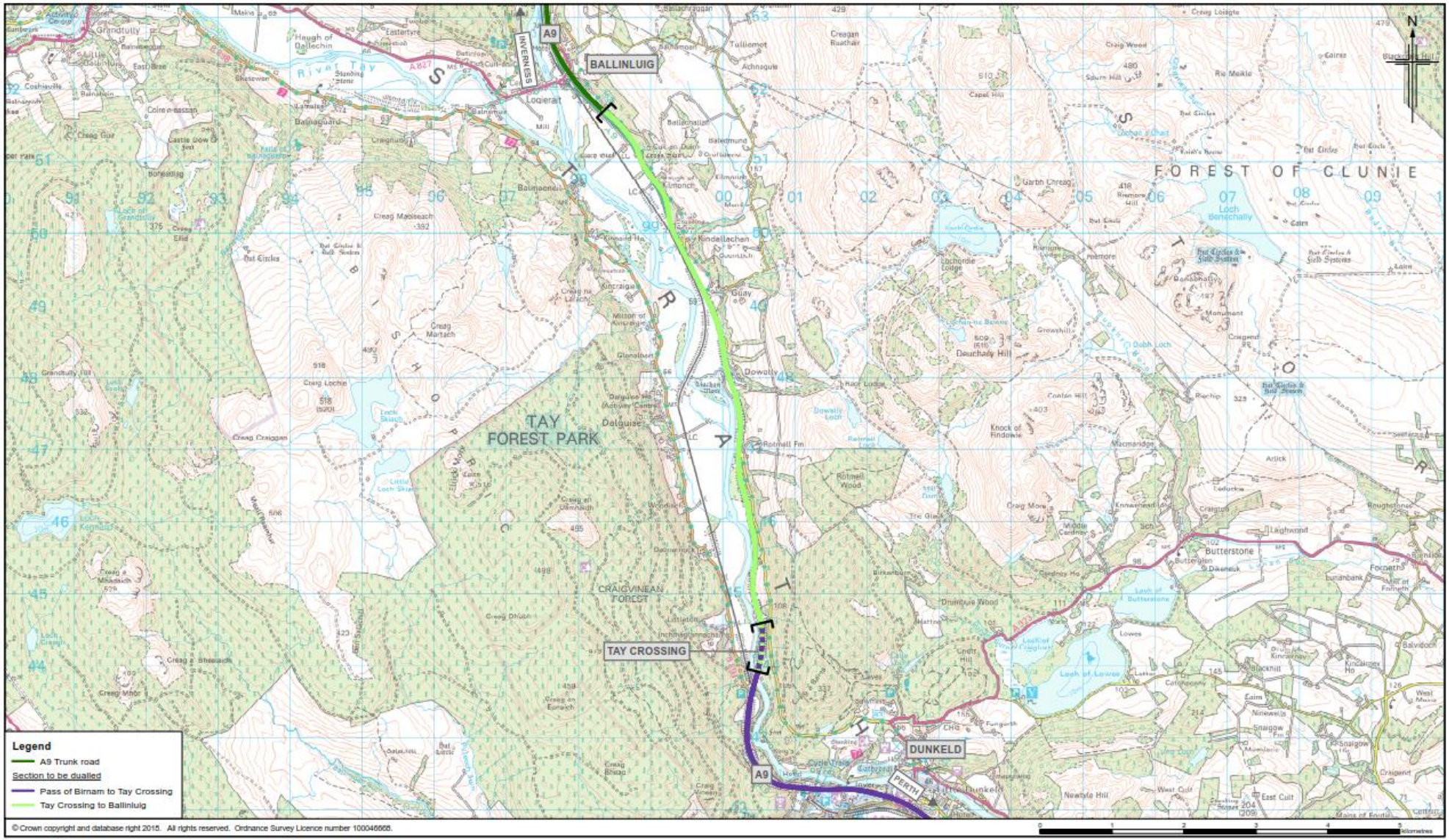


Figure 1: Proposed Scheme

The Proposed Scheme

An outline design has been developed for the proposed scheme, which is referred to as the 'Stage 3 design'. This design would be used by the appointed contractor to prepare a detailed design for construction of the proposed scheme.

The proposed scheme commences north of the existing Tay Crossing and extends northwards for approximately 8.2km, terminating at Ballinluig. This section of the A9 is located within close proximity to a number of designated environmental sites, including watercourses forming part of the River Tay SAC which are crossed by the existing A9.

The proposed scheme is illustrated in Figure 1 of this NTS. Within the ES and the NTS references are made to chainage (shortened to 'ch', for example the Guay South Overbridge at ch4700), which is a reference to the number of metres from the start of the proposed scheme, from south to north.

The proposed scheme involves widening of the existing single carriageway over two distinct sections:

- The tie-in to Pass of Birnam to Tay Crossing Section including the A9 Southern Tie-in Interim Roundabout (approximately ch0 to ch700); and
- North of A9 Southern Tie-in Interim Roundabout to the northern tie-in to the existing dual carriageway at Ballinluig (approximately ch700 to ch8200) comprising southbound widening for approximately 7.5km.

The mainline will comprise a dual carriageway with 2.5m verges and two lanes of 3.65m width in each direction, plus a 1m hardstrip to both the inside and outside lanes in each direction. The mainline will include a 2.5m wide central reservation (with widening for visibility where required) which will separate northbound and southbound traffic.

The proposed scheme incorporates the following four junctions:

- A9 Southern Tie-in Interim Roundabout (ch620) consisting of an at-grade roundabout providing a transition from single to dual carriageway pending construction of Dalguise Junction as part of Project 02 (Pass of Birnam to Tay Crossing) and providing a safe turning facility from the Dunkeld to Rotmell (C502) Road Junction travelling northbound;
- The Dunkeld to Rotmell (C502) Road Junction (ch3220) providing a left-in left-out junction on the A9 southbound carriageway;
- Left-in left-out to Guay South Junction (ch4200, northbound side) providing access onto the northbound carriageway from Dowally, Guay and Kindallachan; and
- Left-in left-out to Guay to Kindallachan Side Road Junction (ch5790, southbound side) providing access onto the southbound carriageway from Dowally, Guay and Kindallachan.

Side roads will be upgraded as necessary to provide access from the existing road network to the mainline of the proposed scheme. Upgrades may involve simple resurfacing or may require realignment and other improvements.

A number of rural properties, including farms, are located along the proposed scheme. Through consultation with residents and landowners, four at-grade left-in left-out accesses are to be provided as part of the proposed scheme.

The proposed scheme incorporates the provision of one new overbridge structure (Guay South Overbridge) and one new underbridge structure (Kindallachan Underbridge). An overbridge is the term used to describe a bridge built to allow vehicles to pass under a road, railway or watercourse. An underbridge is the term used to describe a bridge built to allow vehicles to pass over a road, railway or watercourse. The Guay South Overbridge, associated side roads and access roads/tracks allow the settlements of Dowally, Guay and Kindallachan on the east side of the proposed scheme to access the northbound carriageway. The Kindallachan Underbridge is required to carry the proposed scheme over the Kindallachan Burn.

In addition, a number of existing structures would also be replaced and/or upgraded as part of the proposed scheme. These include numerous watercourse crossings via culverts, and carriageway drainage through the implementation of new SuDS developed in consultation with Scottish Environment Protection Agency (SEPA).

Delivering the Proposals

The ES presents the results of the EIA of the proposed scheme. The design of the project may be refined further by a contractor that will be appointed by Transport Scotland. The contractor that delivers the proposed scheme must meet the requirements of the EIA documented in the ES. Should the contractor refine the design which has been assessed by this EIA, then an environmental review of those refinements will be undertaken to assess whether the residual impacts

of the refinement could be greater than those reported in the ES, and as such if additional mitigation is required.

Construction is subject to completion of the statutory process, however, for the purposes of the EIA it has been assumed that construction is completed in 2025, with the first full year of operation being 2026 and the design year being 2041. Construction is anticipated to take approximately 2.5 to 3 years.

Overview of the Environmental Impact Assessment Process

The EIA has been undertaken as an integral part of the design process, informing decisions on the proposals as they were developed. Environmental constraints and issues were identified and incorporated into the decision-making process throughout. Information gathered through the extensive surveys undertaken for the proposed scheme was used in the assessment.

The aims of the EIA are to:

- gather information about the environment of the study area and identify environmental constraints and opportunities associated with the area which may influence, or be affected by the proposed scheme;
- identify and assess potential environmental effects;
- identify and incorporate into scheme design and operation, features and measures to avoid, reduce or offset adverse impacts, or in some cases to enhance beneficial impacts; and
- assess the proposed scheme's residual impacts (those remaining after measures are implemented to avoid or reduce potential impacts).

Consultation and Scoping

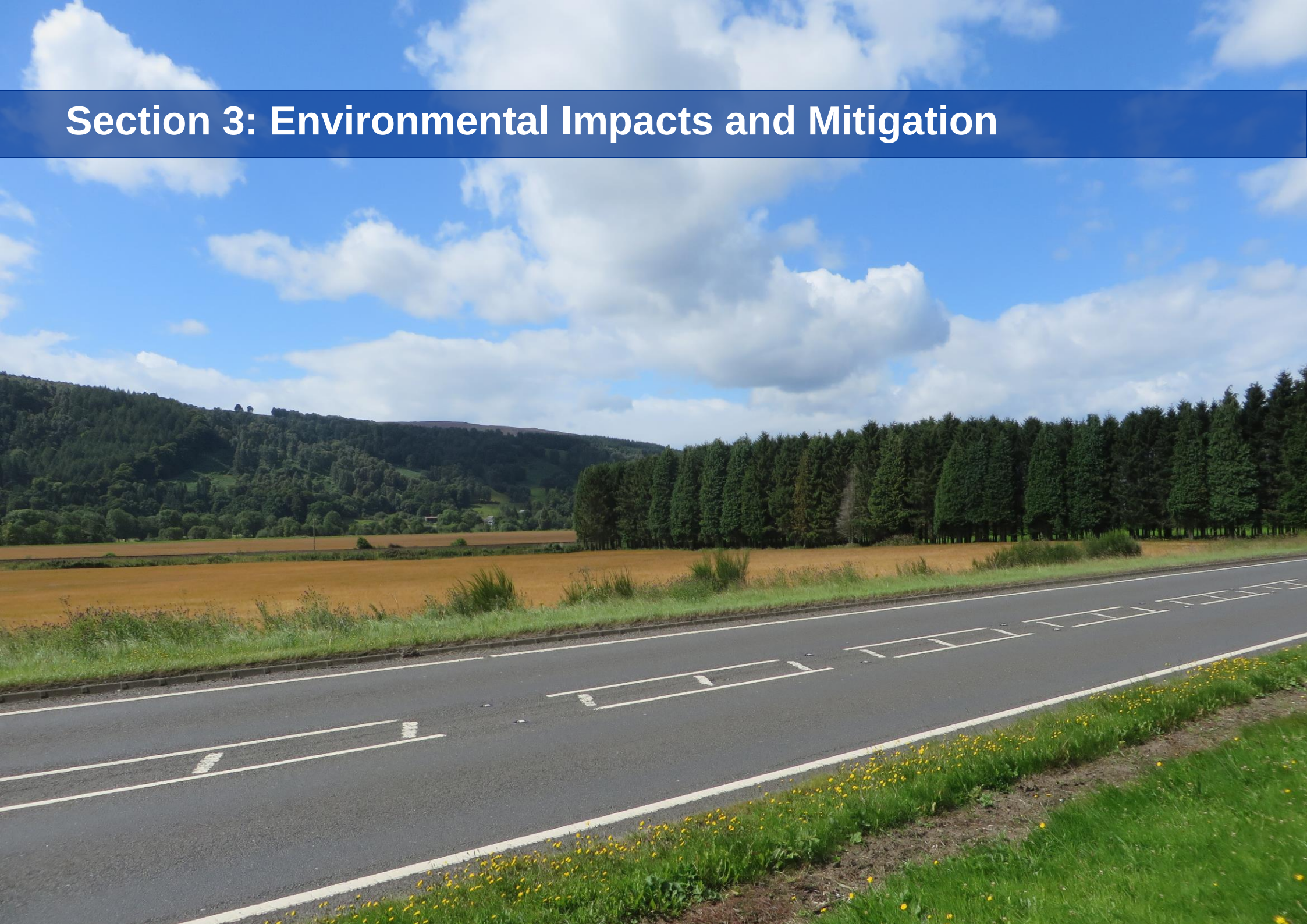
As part of the design development and assessment process, a comprehensive consultation has been carried out with numerous stakeholders including Perth & Kinross Council, Historic Environment Scotland (HES), SEPA and Scottish Natural Heritage (SNH). In addition, potentially affected landowners have also been consulted. Public exhibitions and community engagement events were held in June 2015, February 2016, February 2017 and December 2017, as part of a programme of ongoing public engagement and consultation for the proposed scheme.

The purpose of the consultation was to:

- ensure that members of the public, statutory consultees, and other bodies with a particular interest in the environment were informed of the proposals and provided with an opportunity to comment;
- collate baseline information regarding existing environmental site conditions;
- obtain input to the identification of potential impacts and the development of appropriate mitigation;
- inform the scope of the assessments being undertaken; and
- seek consultee input to the proposed scheme design.

The project team has worked closely with key stakeholders to develop a proposed scheme that aims to reduce the overall environmental impact, for example, by avoiding sensitive features and through careful design. Stakeholder feedback was reviewed by the project team and incorporated into the assessment and design process where appropriate.

Section 3: Environmental Impacts and Mitigation



Environmental Impacts and Mitigation

The following sections summarise the likely significant impacts of the proposed scheme on the environment and also provide details of relevant mitigation measures proposed. Full details of each assessment and the associated findings of the EIA are presented in the ES (Volume 1: Main Report).

People and Communities - Community and Private Assets

This chapter of the ES considers the impacts of the proposed scheme on community and private assets, including land and property. Current land uses in the study area include residential, commercial and industrial land, community land and land allocated for development and land supporting agriculture, forestry and sporting interests. The main settlements in the study area are Dowally, Guay and Kindallachan. The development of the proposed scheme design has sought to avoid impacts on community and private assets, where feasible. Additional mitigation measures to reduce construction and operational impacts have been developed.

The proposed scheme would result in the loss of:

- approximately 3 hectares (ha) of residential, commercial and industrial land;
- less than 1ha from community land;
- less than 1ha of one planning application;
- approximately 33ha of agricultural land;
- approximately 23ha of forestry; and
- approximately 10ha of other land of which 5ha is land in unknown ownership.

Significant residual impacts are anticipated as a result of land-take at one group of residential properties (Croft Croy properties), one residential property (1 Dowally Cottage) and one commercial property (Cuil-an-Duin Country House). Significant residual impacts are anticipated as a result of permanent land-take from and alteration to one residential property (Guay Farmhouse).

There is expected to be land-take from one community facility, Dowally Church Car Park, as a result of the proposed scheme, therefore a significant residual impact during construction is assessed.

Provision of replacement bus stops on the main alignment between Dowally and Guay (existing bus stops are at Kindallachan) is expected to result in increased journey distances for pedestrians travelling from Kindallachan, assessed as a significant adverse impact. Pedestrians travelling from Dowally and Guay would have reduced journey distance with significant beneficial impacts assessed for pedestrians travelling from Dowally to the northbound and southbound bus stops and from Guay to the southbound bus stop. There is a not significant beneficial impact arising from a reduction in journey distance for access to the northbound bus stop from Guay. New bus stops for local bus services are provided on the Dowally to Kindallachan Side Road at Dowally and south of Kindallachan.

Changes to the current access arrangements to and from properties will affect residential, commercial and industrial properties. Significant residual impacts in terms of vehicular access for 14 groupings of residential properties and six commercial/industrial properties have been identified. Changes to current access arrangement to properties will affect residential, commercial and industrial properties. Significant residual impacts in terms of vehicular access of five groupings of residential properties and three commercial/industrial properties have been identified. The overall impacts on commercial businesses viability have been assessed as not significant.

Photograph 2: View looking west towards existing A9

Significant residual impacts have been identified on two agricultural, forestry and sporting interests (Dalmarnock Fishing Beat and Dowally, Guay and Haugh of Tulliemet Farms) as a result of permanent land-take, severance, demolition of

cattle shed, change in property and field access arrangements, loss of boundary features, disruption to field drainage systems and water supplies and, in the case of Dalmarnock Fishing Beat, disturbance to sporting activity through change in access.

People and Communities - All Travellers

This chapter of the ES assesses the impact of the proposed scheme on pedestrians, cyclists, equestrians (referred to as Non-Motorised Users; NMUs), and also on vehicle travellers in terms of changes to views from the road, and driver stress.

The assessment identifies outdoor areas and paths including core paths, rights of way, National Cycle Routes, equestrian routes and local paths within 500m of the proposed scheme. A total of 24 paths were identified as well as three informal crossing points of the existing A9. Changes to NMU journey lengths and amenity value were assessed, and used to determine potential severance impacts on access to the outdoors. The assessment took into account mitigation embedded in the proposed scheme design, such as overbridges and new cycleways/footways.

The proposed scheme design maintains existing use while providing safer access across the A9 for NMUs. Significant adverse impacts of the proposed scheme on NMUs have largely been avoided as a result of maintaining existing NMU routes. Safer access across the A9 for NMUs within the study area is achieved by the provision of an overbridge between Dowally and Guay.

During construction, there would be significant impacts for NMUs using two crossing points (two paths) and for NMUs using nearby paths due to potential diversion lengths and impacts on amenity value. There are also temporary but significant residual impacts during construction due to diversion lengths and changes in amenity and for cyclists using a regional cycle route (RCR 83) between Rotmell and Westhaugh of Tulliemet and for NMUs accessing the River Tay.

With the proposed scheme in place, significant adverse impacts will remain for one NMU route due to increased journey length and decreased amenity value, and one NMU route due to severance of an informal crossing point, both with limited opportunities for mitigation. Generally, journey lengths are not significantly affected with the proposed scheme and no significant impacts are expected for NMU access to outdoor areas during operation.

Two bus stops are included along the proposed mainline carriageway: on the northbound carriageway north of Dowally Farm and the southbound carriageway south of Guay. The proposed scheme also includes provision of bus stops along the side road at Kindallachan and Dowally, and a hail-and-ride option will be available for boarding/alighting at Guay. The proposed scheme therefore facilitates improved public transport services, providing connections for the communities of Dowally, Guay, and Kindallachan with Ballinluig and Pitlochry.

Photograph 3: Path 63/RCR83 view at Kindallachan south towards Guay

Views from road for vehicle travellers were assessed for the existing A9 and for the proposed scheme during winter year of opening and summer 15 years after opening. The existing A9 runs through the Strath Tay: Lower Glen and Mid Glen Local Landscape Character Areas (LLCAs) within the Highland Glens Landscape Character Type. Significant residual impacts are predicted during winter year of opening on the Strath Tay: Mid Glen LLCA, due largely to proposed new and revised earthworks. By summer 15 years after opening, establishment of mitigation planting will help reduce impacts such that they would no longer be significant.

Driver stress can be caused by frustration, fear of accidents and uncertainty of the route being followed. Current levels of driver stress for the A9 between Tay Crossing and Ballinluig during peak hours are assessed as moderate to high

based on DMRB methodology. Traffic levels are forecast to increase over time, and in the absence of the proposed scheme it is anticipated that higher levels of driver stress during peak hours would be experienced. However, with the proposed scheme in place, driver stress would decrease from current levels for both northbound and southbound travellers.

Geology, Soils, Contaminated Land and Groundwater

This chapter of the ES identifies and describes the existing geology, soils, hydrogeology and contaminated land along the proposed scheme.

Baseline conditions were established through desk based assessment, consultation and site surveys. This process identified that no designated Geological Receptors or Geological Conservation Review sites are within the study area. In addition, the location and type of groundwater receptors such as private water supplies, ecological receptors with a potential groundwater dependency and surface water features were identified and documented.

The impact assessment was designed to assess the significance from both direct (within the proposed footprint) and indirect (groundwater dewatering) effects from the proposed scheme. The overall impact of the proposed scheme on geology, soils and mineral resources is expected to be not significant. Significant and not significant impacts were identified for a number of contaminated land sources and/or pathways. The impact on groundwater flow and/or quality is expected to be significant within superficial deposits and not significant within the bedrock aquifer. Potential differential settlement has not been identified as an issue on existing infrastructure and buildings. The impacts to three active groundwater fed private water supplies and/or their associated infrastructure have been identified and range from not significant to significant. No significant impacts were identified for surface water features from indirect groundwater dewatering. No ecological receptors with groundwater dependency were identified within the study area.

No significant residual impacts are anticipated for the majority of receptors after the implementation of the proposed mitigation with the exception of groundwater flow within superficial aquifers. Significant residual impacts were identified on groundwater flow within glacial till and glaciofluvial / alluvium / River Terrace deposits.

Photograph 4: View looking west from the Ballinluig to Guay Road, adjacent to Guay Lodge

Road Drainage and the Water Environment

This chapter of the ES presents the assessment of the proposed scheme on the surface water environment, specifically considering the attributes of hydrology, flood risk, fluvial geomorphology and water quality.

The proposed scheme is located within the River Tay catchment. Within the 500m study area, 32 surface water features were identified which may be affected by the proposed scheme. The majority of these are steep, entrenched, cascading low stream order watercourses characterised by step/pool sequences with cobble, pebble and/or gravel substrates, and which currently feature culverted crossings associated with the existing A9.

The largest watercourse within the study area is the River Tay (catchment area: 2,966km^2), which is a partially embanked mobile gravel-bed river. Several water features within the study area form part of the River Tay SAC: these include the River Tay; the River Tummel; the Kindallachan Burn (downstream of the Highland Main Line Railway); and the Dowally Burn (extending 1km upstream from its confluence with the River Tay).

The proposed scheme is largely located within the functional floodplain of the River Tay, and in sections within close proximity to the River Tay. This has been a key constraining factor in the design of the proposed scheme. There are no crossings of the River Tay associated with the proposed scheme.

Photograph 5: River Tay- view looking upstream from confluence with WF24

The drainage system associated with the existing A9 consists primarily of kerbs and gullies, which currently discharge untreated and un-attenuated road runoff directly to watercourses. Land uses within the River Tay catchment are primarily sheep grazing and managed moorland in the upper reaches, forestry in the middle reaches, and arable farming and built development in the lower reaches (SEPA, 2010a); therefore, potential pollution sources are generally limited to agricultural runoff, road runoff and forestry operations.

The impact assessment has been informed by consultation, desk-based assessments, site walkovers and topographic surveys. Hydraulic modelling of the five largest watercourses within the study area (River Tay, River Tummel, Kindallachan Burn, Dowally Burn and Sloggan Burn) was undertaken to assess potential impacts on flood risk.

In the absence of mitigation, the proposed scheme could increase fluvial flood risk, alter flows and sediment processes within watercourses, and affect water quality in receiving watercourses from construction and operational runoff.

Mitigation during construction would be delivered through a Construction Environmental Management Plan (CEMP), which would include measures for flood risk, fluvial geomorphology and water quality. Mitigation measures proposed include aspects such as: a sediment management plan; storage of machinery and material outside of the floodplain; adherence to guidance such as SEPA's Guidance for Pollution Prevention (GPPs), and specific management plans to manage drainage and minimise the generation of suspended sediment are included to mitigate construction impacts.

With the implementation of the proposed mitigation measures during construction, residual impacts on all receptors would be reduced to not significant.

During the operational phase, mitigation incorporated into the proposed scheme would include the drainage design (SuDS), compensatory flood storage, scour protection and erosion monitoring to protect affected watercourses.

With the proposed mitigation, the residual impacts during operation would be not significant. A significant residual impact to the River Tay is predicted due to areas within the River Tay floodplain, but away from properties, being predicted to have an increased in flood depth. As these areas are within the existing floodplain and distanced from properties, it is considered appropriate that the increased flood depth be accepted given that mitigation measures to prevent this increase would be disproportionate.

Ecology and Nature Conservation

This chapter of the ES considers the potential impacts of the proposed scheme on terrestrial and freshwater species, habitats and ecosystems. The approach to this assessment is based on the guidance provided by the DMRB and draws on the Chartered Institute for Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (2016).

Baseline conditions for ecological features were established through desk-based assessment, consultation and site surveys. This process identified ecological features that could potentially be impacted by the proposed scheme, including three statutory designated sites, Ancient Woodland Inventory (AWI) sites, and aquatic and terrestrial species and habitats. The three statutory designated sites are the River Tay Special Area of Conservation (SAC) and the Shingle Islands SAC and Site of Special Scientific Interest (SSSI). Habitats and species of

particular interest included woodland, badger, bats and freshwater pearl mussel (FWPM).

Assessment of impacts and their significance took into account the nature and magnitude of potential impacts and their consequent effects on important ecological features. Prior to the development and application of mitigation, potential significant impacts on ecological features were identified for the construction and operation phases of the proposed scheme.

The primary approach has been to use the flexibility available within the early design stages to avoid significant impacts. For example, retaining walls have been incorporated into the design to substantially reduce land-take and associated loss of AWI woodland compared to initial proposals. An iterative design process has been undertaken and design principles have been discussed with SNH, SEPA and other relevant stakeholders.

Where avoidance of impacts has not been possible, mitigation measures to reduce significant adverse impacts have been proposed. Measures include the implementation of standard mitigation commitments and best working practices during the construction phase. Mitigation to avoid or reduce impacts during operation includes compensatory planting, habitat creation, provision of artificial nest/roost structures, crossing structures and mammal fencing.

No significant residual impacts are anticipated from the construction phase of the proposed scheme, with mitigation in place. A significant residual impact from the operation phase is anticipated from the permanent loss of habitat listed on the AWI. Compensation planting is proposed, however this cannot fully mitigate for the permanent loss of the biodiversity and intrinsic importance of ancient woodland. As the habitat matures, however, woodland corridors will grow to connect currently fragmented areas and the planting will therefore mitigate for the loss of functions, and importance of the woodland in respect of habitat connectivity and carrying capacity for other species. In the long-term, significant residual impacts on AWI are therefore predicted to reduce.

The A9 dualling is expected to increase the permeability of the A9 for species including badger and otter through provision of safe crossing structures included in the design of the proposed scheme. The increased barrier effect of a widened carriageway may counteract some of the benefits of this increased permeability, however a potential beneficial impact with regards to permeability is considered likely overall. Furthermore, the provision of SuDS ponds/basins can result in potentially beneficial effects through providing potential habitat and climate resilience for wetland species, including northern damselfly.

Landscape

This chapter of the ES presents the assessment of the potential impacts on the landscape resource resulting from the proposed scheme. The assessment has been undertaken following DMRB guidance and the Guidelines for Landscape and Visual Impact Assessment 3rd Edition (GLVIA3), taking account of the results of scoping and consultation.

Baseline conditions were established through desk-based research and site surveys of the study area comprising the proposed scheme and an area extending up to a distance of 5km from it.

There are a number of designated/protected areas and areas of national importance located within the study area, including the River Tay (Dunkeld) National Scenic Area (NSA) and Strath Tay Special Landscape Area (SLA). In addition, three Landscape Character Areas (LCAs) and five Local Landscape Character Areas (LLCAs) have been identified.

Photograph 6: View looking west from General Wade's Military Road north of Warren Lodge

Potential impacts of the proposed scheme on landscape receptors would arise from construction activities such as the removal of roadside vegetation, the loss of existing natural topography, in addition to the construction of structures and associated earthworks (for example the proposed new Guay South Overbridge and several stretches of retaining wall). Potential impacts would also arise from the operation of the additional carriageways and associated route infrastructure,

in addition to the changed appearance of the landscape and the associated change in the perception of the River Tay (Dunkeld) NSA and Strath Tay SLA.

To mitigate these potential impacts, mitigation measures have been developed through an iterative design process. The proposed scheme alignment has been developed to avoid or reduce potential impacts on landscape features. This has primarily been achieved through online widening of the existing A9 where practicable, grading out of cuttings and embankments in order to reflect the local topography and planting to integrate the proposed scheme into the landscape. One of the key factors in this has been online widening of the existing A9 as opposed to the adoption of offline routes and also the use of retaining structures / slope steepening to reduce loss of woodland and natural landform, grading out of cuttings and embankments to reflect the local topography, as well as the careful siting of SuDS features.

A number of project specific measures have been developed to mitigate potential impacts on landscape receptors and facilitate the integration of the proposed scheme into the landscape. Where soil-nailing is required to stabilise cutting slopes, the soil nail heads and mesh would be covered and the slope surface vegetated to assist with integration into the landscape. Woodland planting is proposed in areas where the surrounding landscape is more wooded and where integration, replacement, restoration or screening is required to improve the fit of the proposed scheme within the surrounding landscape. Sowing of species rich grassland and wet grassland is proposed within areas that are more open in character.

The assessment of impacts on landscape receptors took into account the proposed mitigation measures and considered the proposed scheme in the winter of the year of opening (when planting has been implemented but has not established) and in the summer, 15 years after opening (when the proposed planting would be reasonably established). Impacts from the construction and operation of the proposed scheme are predicted to occur on the Strath Tay: Mid Glen LLCA and the Strath Tay: Lower Glen LLCA. These impacts would occur as a result of the widening of the carriageway in addition to the construction of earthworks and structures (particularly at the A9 Southern Tie-in Interim Roundabout, Rotmell, Dowally, Guay and Kindallachan) which would result in a change in landcover and landform in addition to the loss of woodland. The proposed scheme would also affect landscape features within the River Tay (Dunkeld) NSA, as a result of carriageway widening and construction of earthworks and structures (particularly those associated with the proposed Guay South Overbridge and associated side roads and access tracks, which would result in a change in landcover and landform in addition to the loss of woodland along the route.

In the winter of the year of opening (2026) it is predicted that significant direct impacts would occur on the Strath Tay: Mid Glen LLCA. The Strath Tay: Lower Glen LLCA would not experience significant impacts. Indirect impacts as a result of the changes in the landscape and loss of landscape features in adjoining landscape character units are predicted on the Strath Tay: Upper Glen LLCA and Strath Tummel LLCA, in addition to the Highland Summits and Plateaux LCA. These impacts are, however, not predicted to be significant.

As planting establishes and the proposed scheme becomes more integrated into the landscape, it is predicted that residual impacts would reduce. As such, in summer after 15 years for the Strath Tay: Mid Glen LLCA, residual impacts are predicted to reduce to not significant. Residual impacts in summer after 15 years on the Strath Tay: Lower Glen LLCA are predicted to reduce to not significant.

Visual

The visual assessment reported in the ES has considered the degree of likely impact resulting from the proposed scheme on the views experienced by people from buildings, outdoor public areas, local roads and routes used by pedestrians, cyclists and equestrians (collectively referred to as receptors).

In this section of the A9 (Tay Crossing to Ballinluig), built receptor locations are generally scattered throughout the study area, with more substantial clusters of residents present at the small hamlets/villages of Inchmagrannachan, Dalguise, Dowally, Guay, Kindallachan and Logierait. Outdoor locations used by receptors, including the Highland Main Line railway, other roads, and pedestrian, equestrian or cycle routes, are also spread throughout the study area. The existing A9 is already a notable feature in views across and along the valley of the River Tay as it follows the floor of the strath, although established forestry plantations and mature woodland areas on either side of the valley help to provide some screening of the road and vehicles on it. The largely wooded hills enclosing the valley generally limit more distant views towards the strath and the A9.

Artist's Impression: Guay South Overbridge at ch4700

As noted above, the design of the proposed scheme has been developed through a process involving engineering, environmental and landscape specialists in order to reduce visual impacts and integrate the new infrastructure into the surrounding landscape.

As part of the design, landscape mitigation proposals were developed to reduce visual impacts. The proposals include embedded mitigation measures developed through an iterative design process (such as the vertical and horizontal route alignment), grading out of embankment and cutting slopes to blend with existing landforms, steepening of slopes and introduction of retaining walls to minimise woodland loss, and new planting to screen the proposed scheme and help further integrate it into the surrounding landscape. The landscape design also considered opportunities to maintain or enhance open views, where these are currently a key landscape/visual characteristic. The effectiveness of the proposed planting is expected to increase over time as vegetation matures.

Visual impacts would be limited to some extent by the fact that the existing A9 is already visible from some locations and also due to the screening often provided by the existing landform and vegetation.

It is anticipated that impacts would typically occur where a receptor location is close to the proposed scheme or where open views are possible towards the A9, and these visual impacts would generally be associated with physical aspects of the proposed scheme itself or with traffic. The assessment has identified that 27 built receptors and 18 outdoor receptors are likely to experience significant visual impacts during the construction phase. During operation, in the winter of the year of opening, 27 built receptors and 17 outdoor receptors are predicted to experience significant visual impacts. These impacts would be due to the loss of existing roadside vegetation and the increased prominence of the new road infrastructure (including earthworks, Guay South Overbridge and new/revised side roads). The majority of the affected visual receptors would be located at properties in and around the Dowally, Guay, and Kindallachan areas, and from Haugh of Kilmorich to Westhaugh of Tulliemet. People on outdoor public routes, including Regional Cycle Route 83 and the paths between Dowally and Haugh of Kilmorich, would also be significantly affected, largely due to these routes running alongside the proposed scheme (with re-routing taking place).

By the summer, 15 years after the proposed scheme opening, mitigation planting (mostly in the form of new woodland, hedgerows and scattered individual trees that would have become established) is predicted to have reduced the impacts such that only 12 built receptors and 10 outdoor receptors would be affected significantly.

Cultural Heritage

This chapter of the ES assesses the potential impacts of the proposed scheme on cultural heritage assets comprising archaeological remains, historic buildings and the historic landscape.

The study area extended to 200m in all directions from the footprint of the proposed scheme. Baseline conditions for the study area were established through a desk-based survey, a walkover survey and targeted geophysical survey. Designated assets beyond the study area but located within 2km of the proposed scheme were included in the baseline to assess potential impacts on setting. In total, 92 cultural heritage assets were considered as part of the baseline comprising 47 archaeological remains, 38 historic buildings, and seven historic landscape types.

Photograph 7: The Wing of Guay Farmhouse, Category B Listed Building (Asset 216)

Consideration of alternative routes and iterative design development has sought to reduce the potential impacts of the proposed scheme on cultural heritage assets. However, significant residual impacts have been assessed.

Before mitigation, potential significant impacts during construction were identified on five archaeological remains, three of which are Scheduled Monuments, comprising Kindallachan Cairn (Asset 221), Kindallachan Standing Stone (Asset 225) and Westhaugh of Tulliemet Cross Slab (Asset 235). Mitigation proposed for Kindallachan Cairn and Kindallachan Standing Stone comprise set piece archaeological excavations to be undertaken in advance of construction. These excavations would require Scheduled Monument Consent. While the archaeological excavations would mitigate the loss of information, significant residual impacts on the assets has been assessed for Kindallachan Cairn and for Kindallachan Standing Stone. Mitigation to protect Westhaugh of Tulliemet Cross Slab would reduce the impact to not significant. Post mitigation impacts during construction on other archaeological remains are assessed as not significant.

Before mitigation, significant potential impacts during construction were identified on four historic buildings including Guay Farmhouse (Asset 216; a Category B Listed Building), where alteration of the wing of the building is required. Mitigation including historic building recording and reconstruction and repair of the remaining section of the wing would be undertaken under Listed Building Consent and the residual impact is assessed as significant. Mitigation to reduce impacts on the other three historic buildings reduces the significance of residual impacts to not significant.

Potential significant residual impacts on Kindallachan Standing Stone and Guay Farmhouse during operation have been identified.

In addition to impacts on known archaeological remains, the potential for the presence of unknown archaeological remains was assessed for the study area. Archaeological recording in advance of, or during, construction may be required to mitigate the impact on unknown archaeological remains disturbed by the construction of the proposed scheme.

Photograph 8: Kindallachan Cairn (Asset 221)

Air Quality

This chapter of the ES considers the potential impacts of the proposed scheme on air quality during construction and operation. The existing air quality throughout the area is characterised by the existing emissions from road traffic. Air quality modelling was undertaken to determine the potential for changes to air quality as a result of the proposed scheme, and any related impacts on local communities and designated ecological sites.

The assessment used air quality monitoring and modelling to consider the following pollutants emitted from vehicles; nitrogen oxides, nitrogen dioxide and fine particulate matter (PM). The potential effect of construction on PM concentrations was also considered and carbon dioxide has been considered in the regional emissions assessment.

To establish local baseline air quality conditions, a project specific air quality monitoring survey along with a review of available reports and data from Perth & Kinross Council was undertaken.

Air quality monitoring undertaken along the route of the proposed scheme shows that nitrogen dioxide concentrations currently meet the prescribed air quality objectives (AQOs). Defra background mapping also shows that PM concentrations currently meet the prescribed AQOs.

Impacts of the proposed scheme were assessed for the anticipated first full year of opening (2026) using the DMRB 'Simple Assessment' approach. The conclusion was that there are no significant local air quality impacts at either human exposure locations or ecosystems/designated sites. A regional emissions assessment was also undertaken for the first full year of opening (2026) and the design year, 15 years later (2041). The regional assessment predicted that emissions of nitrogen oxides, nitrogen dioxide, PM and carbon dioxide will increase with the proposed scheme but these are not considered to be significant.

An assessment of potential dust deposition and emissions from construction vehicles during construction of the proposed scheme predicted no significant residual impacts. A range of mitigation measures are proposed for the construction phase in relation to dust control.

Noise and Vibration

This chapter of the ES considers the potential noise and vibration impacts of the proposed scheme on noise sensitive receptors (NSRs) e.g. residential properties.

The noise assessment for the proposed scheme used noise monitoring and modelling to establish baseline conditions and identify potential noise and vibration impacts associated with the proposed scheme from both construction and operation. The study area and calculation area were determined using the guidance provided in DMRB.

Operational noise modelling was undertaken for all NSR, noise sensitive committed developments and noise sensitive amenity areas within the defined calculation area which extends 600m from the proposed scheme.

As part of the impact assessment a baseline noise survey was undertaken at 11 identified NSRs to support validation of the noise model outputs and inform understanding of the existing noise climate within the vicinity of the proposed scheme.

Measures embedded in the proposed scheme that attenuate noise include the use of low noise road surfacing and the effect of earthworks (embankments, cuttings). NSR specific mitigation includes sections of the existing A9 to the north of the proposed scheme to be resurfaced with a low noise road surface, and the installation of five noise barriers. Based on the DMRB Stage 3 design, these would be located at approximately ch1500 – ch1600 at a height of 1.8m, ch2900 – ch3000 at a height of 1.4m, ch4070 – ch4220 at a height of 1.5m, ch5200 – ch5300 at a height of 1.5m, and ch5260 – ch5300 at a height of 2.4m. An indicative assessment of potential eligibility for noise insulation for all NSR under the Noise Insulation (Scotland) Regulations was also undertaken. The results indicated that without mitigation, there are nine NSR which may meet the eligibility requirements.

Photograph 9: Baseline noise monitoring equipment

The results of the residual operational noise impact assessment in the short-term indicate that at ground floor level, no NSR would have significant impacts.

The results of the residual operational noise impact assessment indicate that in the long-term, for the daytime period, at ground floor level, no NSR would have significant impacts.

The results of the residual operational noise impact assessment indicate that in the long-term, for the night-time period, at ground floor level, no NSR would have significant impacts.

In addition to ground level impacts, results for the predicted noise impacts at first floor level for all NSR are reported in full within the Chapter 17 (Noise and Vibration). As required by DMRB, the results of the noise nuisance and vibration nuisance are also reported.

Potential impacts during the construction phase were also considered. Whilst there is potential for temporary significant impacts due to the proximity of some properties to the location of the works, with appropriate mitigation measures it is anticipated that these could be reduced and would not be considered significant.

Materials

This chapter of the ES presents a detailed assessment of the potential impacts associated with the use and consumption of material resources and the production and management of waste during construction of the proposed scheme. The assessment follows DMRB guidance.

The use and consumption of material resources during construction was estimated based on the likely requirements of the DMRB Stage 3 design of the proposed scheme. The range of materials likely to be required and wastes likely to be generated are described in the chapter. By applying key material and waste management principles, such as the waste management hierarchy, the impacts on natural resources and need for permanent disposal of wastes will be reduced. In particular, this will be achieved by re-using existing soils and infrastructure where possible, taking into consideration the environmental impacts of products during their procurement.

Proposed mitigation measures will aim to minimise materials use, maximise re-use and recycling of wastes and ensure all materials and waste are handled according to the regulatory requirements. It is proposed that these measures will be implemented through several plans addressing different aspects of construction site management, such as a Site Waste Management Plan (SWMP) and a CEMP.

The assessment utilised Transport Scotland's Carbon Management System (CMS) to estimate the total embodied carbon emissions, measured as carbon dioxide equivalent (CO2e) associated with material resources used for construction of the proposed scheme.

The overall residual impact magnitude on material resources is anticipated to be significant based on the assessment of embodied carbon.

The assessment of generation and management of waste predicted that the residual impact would be not significant.

Photograph 10: Ground investigation works for the proposed scheme

Policies and Plans

This chapter of the ES considers the proposed scheme's compliance with national, regional and local planning policy.

The principle of the proposed scheme is supported in planning policy, with the Scottish Government's commitment to the proposed scheme and wider improvements to the A9 outlined in the National Planning Framework 3 (2014) and various other national policy guidance documents.

The proposed scheme also supports regional transport policy objectives as part of a wider strategy to assist in providing enhanced connectivity to deliver prosperity and connect communities across the region. (TACTRAN Regional Transport Strategy, 2008).

The assessment has identified areas of potential non-compliance with some aspects of planning policy, largely due to the large scale and nature of the proposed scheme, as well as the wording of policies not being directly relevant to an infrastructure project.

For example, in relation to landscape policies, it is clear that the proposed scheme will result in impacts, which raises potential policy conflicts. However, these landscape impacts should be viewed in the context of the presence of the existing A9, where the principle of a major trunk road has long been established.

Additionally, in relation to cultural and natural heritage policies, it is clear that the proposed scheme will result in impacts on Scheduled Monuments and Listed Buildings and this also raises potential policy conflicts. However, these impacts should be viewed in the context of the presence of the existing A9, where the principle of a major trunk road has long been established, the need for the proposed scheme and the design refinements incorporated to reduce impacts.

Similarly, in relation to the amount of material required to construct and operate the proposed scheme, it should be noted that equivalent scale roads infrastructure projects throughout Scotland and the UK that have a similar impact have been approved on the basis of the suggested mitigation and the acceptance that essential road infrastructure schemes of this scale would normally require a significant amount of materials to construct.

On balance, it is assessed that the proposed scheme broadly complies with the aims, intent and objectives of planning policies, relevant to the proposed study area, for protecting environmental quality and delivering on the Scottish Government's commitments.

Cumulative Impacts

This chapter considers potential for cumulative impacts of the proposed scheme, and those of the proposed scheme in combination with committed developments and other major proposed development projects, including other projects forming part of the A9 Dualling Programme.

Potential for cumulative impacts due to the combined effect of a number of different environmental impacts of the proposed scheme on a single receptor/resource was assessed, based on the findings of the topic chapters in the ES. Significant cumulative impacts on nine people/property receptors are predicted to result from the combination of residual visual, access and land-take impacts. These receptors are Warren Lodge, Ledpetty Lodge, 1-4 Dowally Cottages, Dowally Farm (including R.A. Laird Contractors Ltd), Guay Farmhouse, 1 and 2 Croft Croy, Haugh of Kilmorich, Haugh Cottages and Westhaugh of Tulliemet.

The combination of projects forming the A9 Dualling Programme from Perth to Inverness was identified as having the potential to have a cumulative impact in terms of loss of woodland (including areas on the Ancient Woodland Inventory; AWI), material use and waste management, long distance NMU routes, and land-take from land holdings affected by multiple projects. There are expected to be no significant effects on any long distance NMU routes as a result of the proposed scheme however it is anticipated the proposed scheme will contribute to significant cumulative impact on the loss of AWI.

No significant cumulative impacts are expected for materials and waste from other A9 dualling projects.

No additional committed developments or proposed major development projects were identified that may contribute to a significant cumulative impact in combination with the proposed scheme.

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Section 4: Key Environmental Features

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Legend

Design


Proposed Scheme
(DMRB Stage 3 Design)


SuDS Retention Pond/
Detention Basin

Proposed Landscape and Ecological Mitigation

Deciduous/Riparian Woodland Planting

Mixed Woodland Planting

Scrub Planting

Individual Deciduous Tree Planting

Heath

Grassland

Potential Return to Agriculture

Hedge

Red Squirrel & Bat Mitigation Area
(woodland to be retained) for provision
of boxes

Dry Mammal Underpass

Mammal Resistant Fencing

Noise Mitigation

Constraints

River Tay Special Area of Conservation (SAC)

Non Motorised Users (NMU)

Embedded NMU Mitigation

Bus Stops

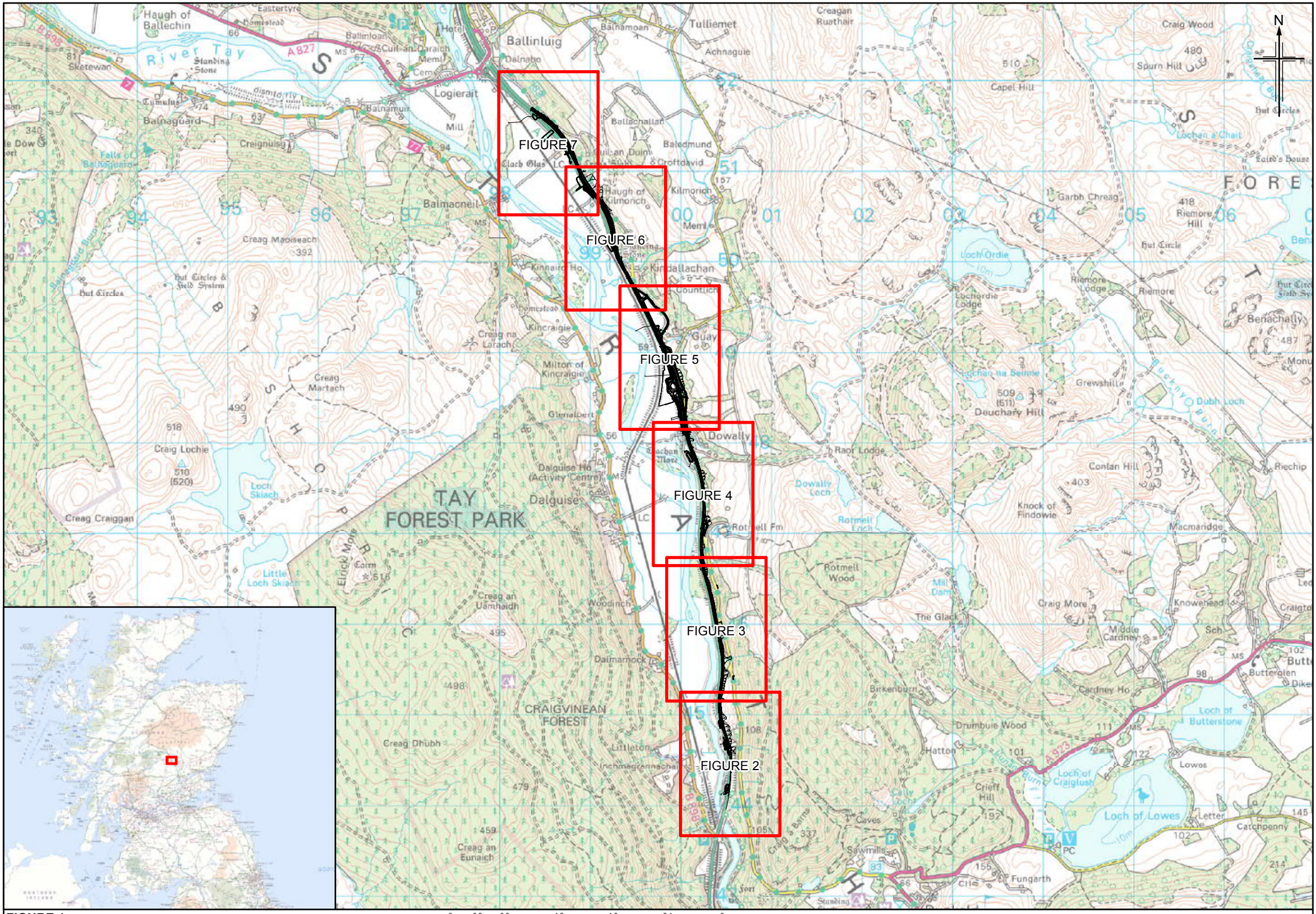

FIGURE 1

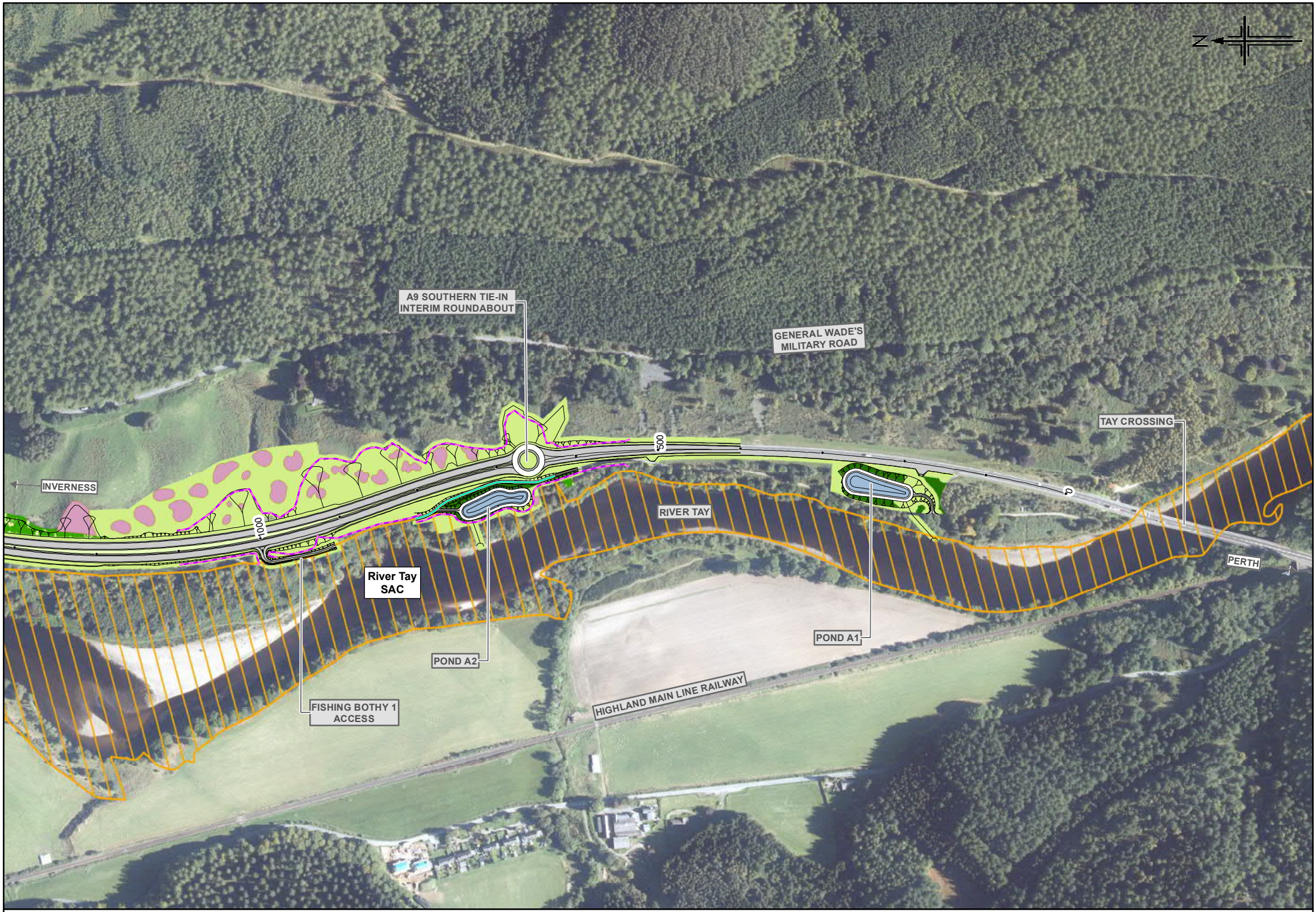

FIGURE 2

0 0.05 0.1 0.2 0.3 0.4 0.5 Kilometres

FIGURE 3

0 0.05 0.1 0.2 0.3 0.4 0.5 Kilometres

FIGURE 4

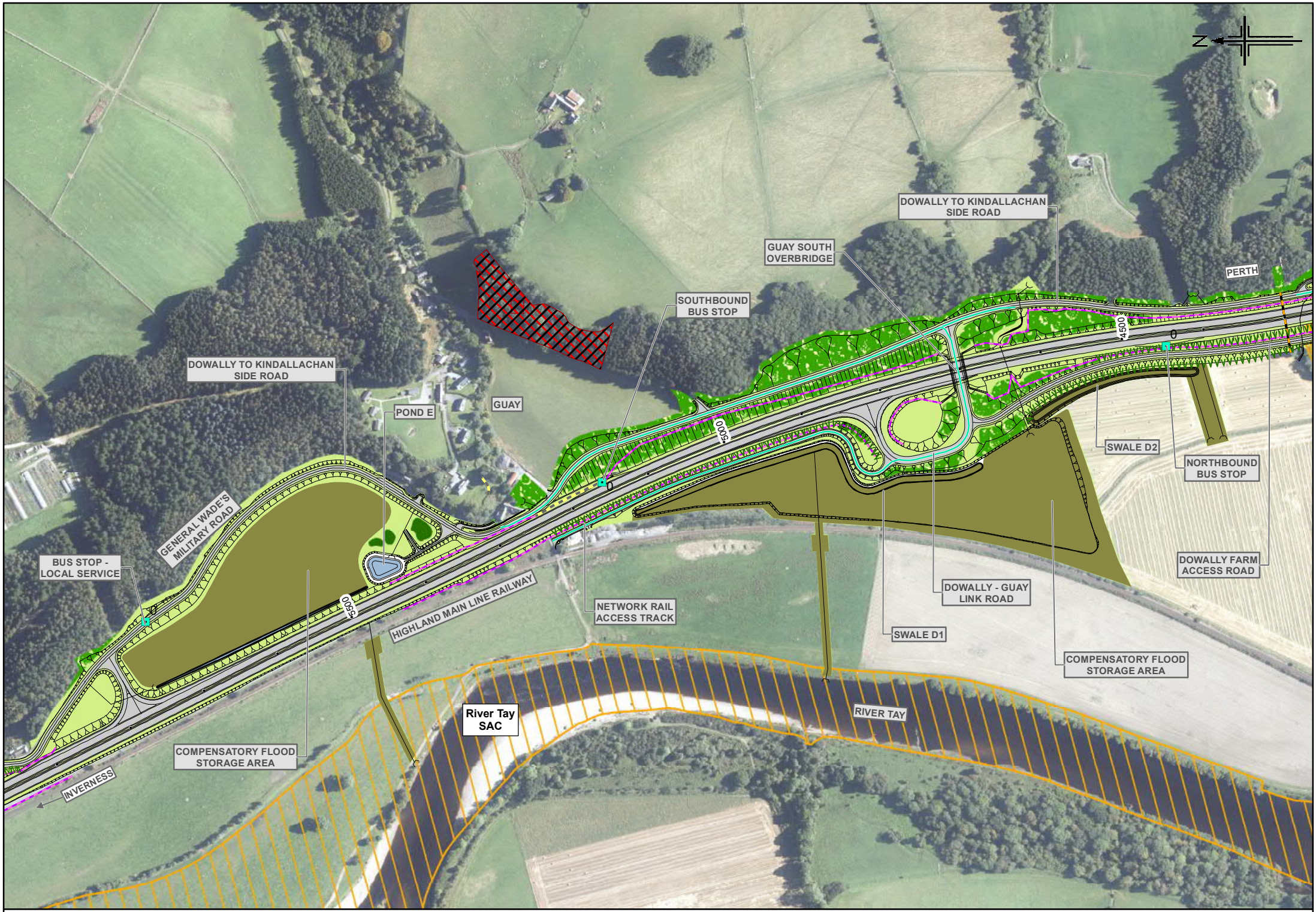

FIGURE 5

0 0.05 0.1 0.2 0.3 0.4 0.5 Kilometres

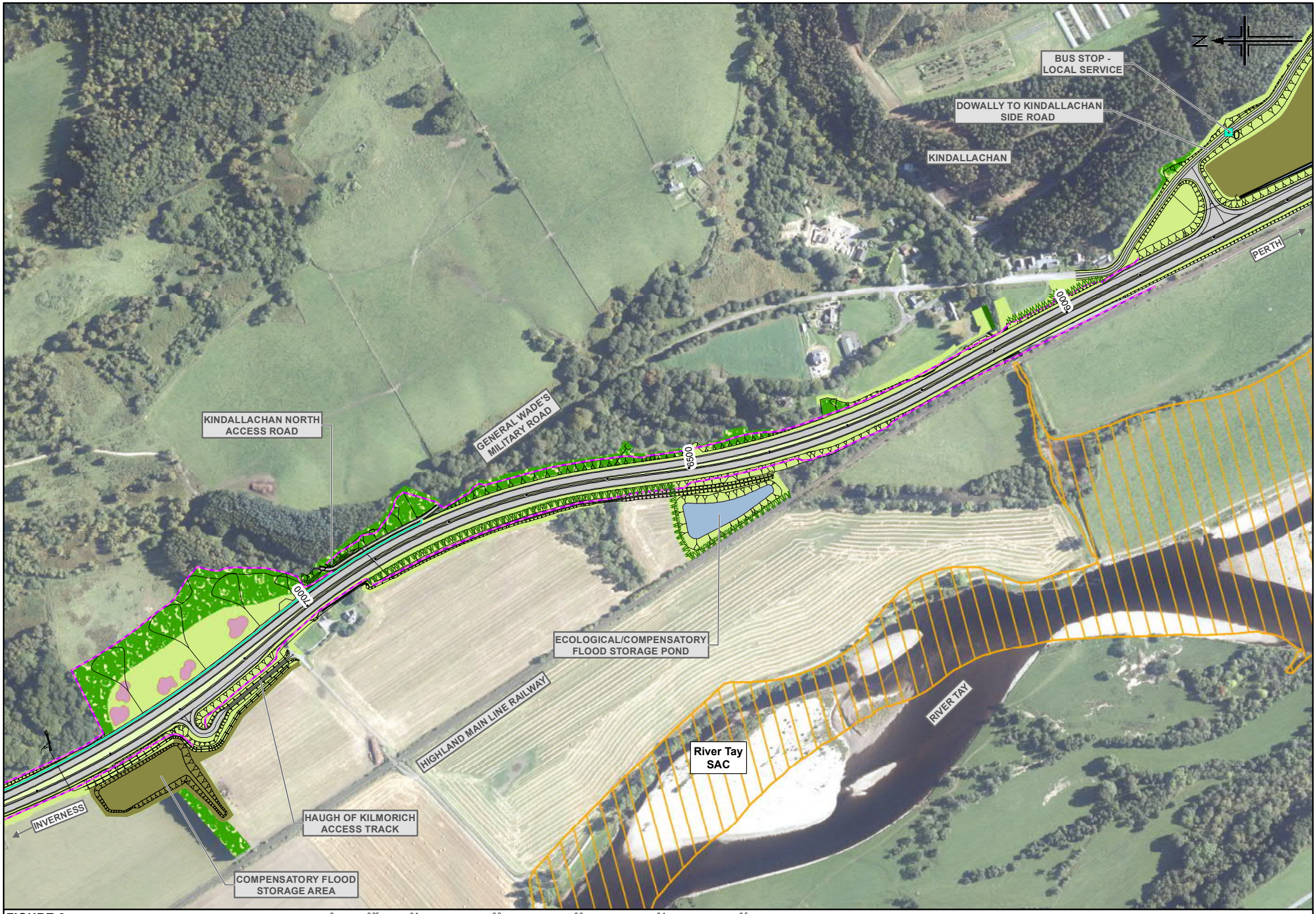

FIGURE 6

FIGURE 7

0 0.05 0.1 0.2 0.3 0.4 0.5 Kilometres

TRANSPORT SCOTLAND
CÒMHDHAIL ALBA