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# A96 Threapland Junction Improvements Environmental Statement Addendum



January 2009

## **A96 Threapland Junction Improvements**

### **Environmental Impact Assessment**

#### **Environmental Statement Addendum**

January 2009

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# 1 Introduction

The A96 Inverness to Aberdeen trunk road is an important strategic link in the National Trunk Road network and the efficient operation of the road is essential for the economic development of northeast Scotland. In addition to its essential strategic role, the A96 within the study area serves as part of the local road network, providing access to the local centres of Elgin, Keith, Fochabers and Mosstodloch for employment, shopping and recreational activities.

Transport Scotland, an agency of the Scottish Government, is developing a Scheme to reduce accidents on the A96 at Threapland by rationalising the existing junctions, upgrading the A96 carriageway and improving driver visibility throughout the area. This is to address the safety concerns on this section of the A96 where there have been a number of accidents, including a fatality, in recent years. Scott Wilson has been appointed as Transport Scotland's Engineering Consultants to manage the development and assessment of the improvement proposals and to progress these towards construction with a view to the works starting in 2009.

As part of the assessment process, an Environmental Impact Assessment was conducted in accordance with the Environmental Impact Assessment (Scotland) Regulations 1999. An Environmental Statement (ES) was published in October 2008 and is referred to as the "A96 Threapland Junction Improvements Environmental Statement, October 2008".

## 1.1 Purpose of the Environmental Statement Addendum

The purpose of the ES is to provide supporting information for the publication of Statutory Orders to comply with Transport Scotland's determination that the proposed scheme should be the subject of an Environmental Impact Assessment (EIA). This is outlined in Transport Scotland's Record of Determination. Throughout the ES and hereafter in this ES Addendum document, the A96 Threapland Junction Improvement proposals are referred to as the Scheme. It should be noted that the improvement layout shown in the original ES and in this ES Addendum will be subject to further detailed design prior to construction on site. The main aims of the EIA process and the associated ES are:

- To systematically draw together an assessment of the Scheme's likely significant environmental effects; and
- To help ensure that the importance of the predicted effects, and the scope for reducing any adverse effects, are properly understood by the public, statutory agencies and other relevant bodies and the relevant competent authority (i.e. Scottish Ministers) before a decision is made about whether or not the Scheme should proceed.

Following the publication of the ES, it was noted that the boundary of the Loch Oire Site of Special Scientific Interest (SSSI) was incorrectly depicted within the ES figures and subsequently a section of the proposed Loch Oire Road vehicle turning area encroached into the SSSI. In order to address this issue, the SSSI boundary has been corrected and the turning area has been relocated so as not to impinge upon the SSSI.

This ES Addendum has been prepared to update a number of ES chapters in light of the correction to the SSSI boundary and the associated design changes. The boundaries of the Ancient Woodland Inventory sites have also been corrected in the relevant drawings. In both these cases the corrections have no bearing on the findings of the original environmental statement.

A residential receptor has been added and some tree removal from within the grounds of Tilhill was unnecessary therefore appropriate revisions have been undertaken within this document

## 2 Scheme Description

### 2.1 Background to the Scheme

In 1999 Scott Wilson were commissioned by The Scottish Executive (now Transport Scotland) to carry out a Corridor Study of the A96 Trunk Road from Inverness to Fochabers. During this study Scott Wilson identified the area at Threapland junction as an accident black spot. Initial reviews demonstrated that the positioning of side road accesses combined with fast speeds and substandard visibility all contribute to the poor accident record in the area. The study identified a need to realign approximately 750 metres of the existing A96 carriageway, including the junction immediately west of Lhanbryde at Threapland. Subsequent to the Strategic Scheme Assessment, a review of Route Action Plans was commissioned by the Scottish Executive (now Transport Scotland). This formed part of the latest Strategic Roads Review in order to bring together and assess all the work undertaken to date. The review, published in November 2002, identified ten small schemes to be included in the Trunk Roads Programme, with the A96 Threapland Junction Improvements Scheme being one of them.

In October 2005, Transport Scotland commissioned Scott Wilson to take forward the A96 Threapland Junction Improvement Scheme. The study objectives were set out in the scheme brief provided to Scott Wilson and stated that the Design of the Scheme shall be in accordance with the Government's appraisal criteria for the assessment of trunk road schemes that take account of integration, economy, safety, environment and accessibility. The Objectives are as follows:

- Reduce accidents on the A96 at Threapland by improving the standard of the junction and its approaches at a reasonable cost without incurring undue delay to road users.
- Wherever practicable, incorporate measures for non-motorised users. In particular, cycling proposals shall be designed in accordance with 'Trunk Road Cycling Initiative' that supports the Sustrans Millennium National Cycle Network.
- Maintain the asset value of the A96 route and achieve good value for money for both taxpayers and transport users.
- Mitigate the environmental impact of the new works where practicable.
- To take cognisance of local objectives for the Scheme, determined through review of the Moray Council (as Local Authority) Structure Plan, Local Plan and Local Transport Strategy.

In addition, effects of potential development opportunities within the corridor were reviewed.

At the Inception Workshop held in January 2006, it was agreed that the primary aim of the Scheme is to improve the poor accident record and reduce the accidents at Threapland, by improving the standard of the junction and approaches to the junction. It is anticipated that all other scheme objectives will be achieved following successful attainment of the primary aim; the scheme objectives are described further in Chapter 2 of the ES.

Two options, an 'online' and an 'offline' option, were identified to be taken forward for further investigation during a 'DMRB Stage 2 Assessment', including an environmental assessment. The results of this appraisal were presented in the A96 Threapland Junction Improvement Stage 2 Scheme Options Assessment Report (S100630/REP/16).

In August 2007 Scott Wilson reported their conclusions to Transport Scotland, recommending that the 'online' option be developed as the preferred scheme layout. This recommendation was based on the overall layout, the economic benefits along with the good safety and environmental advantages in comparison with the 'offline' option. The offline option would have a significantly greater environmental impact due to its closer proximity to Loch Oire and local residences, landtake would also increase involving the need to remove a significant number of mature trees in the area. Transport Scotland accepted this recommendation and Scott Wilson was instructed to manage and develop the scheme, through Stage 3 Assessment and subsequently through the Statutory Order Publication stages. It is this preferred scheme that is the subject of the ES published in October 2008 and this ES Addendum.

## 2.2 Scheme Description

The Scheme incorporates improvements to the vertical geometry of approximately 1.2km of the A96 carriageway at Threapland with no alteration to the current horizontal alignment. The junction at Threapland will be upgraded, with the realignment of the south leg providing a more favourable right-left staggered junction. On the A96 ghost island markings will be introduced at Threapland junction to provide an element of shelter to right-turning vehicles. One junction on the A96, at Loch Oire Road, will be stopped up with the remaining existing accesses being rationalised. Driver visibility will be significantly improved in the area with the existing carriageway cross-section being amended to meet the appropriate standards including the widening of verges and the cutting back of side slopes. This will lead to improved visibility throughout the junction approaches and hence increase driver safety.

A cycleway is provided on both sides of the carriageway towards the western end of the Scheme. This will connect directly to Loch Oire Road, which is to be promoted for cycle use due to the relatively small amount of traffic using this road. This will provide an alternative route for cyclists heading towards Mosstodloch and Fochabers.

### 3 Scheme Changes

The Scheme has been slightly modified to ensure that no construction activity takes place within the SSSI and in such a way that no additional landtake will be required from that identified in the drawings presented in the ES and the associated Orders.

The specific changes are detailed below and the nature and significance of their associated environmental impacts are described in the remainder of this document. Although the changes are minor in nature, each Chapter of the original ES has been reviewed in order to identify whether the proposed changes raise any new issues or result in impacts that require more detailed investigation and/or additional mitigation measures.

The changes to the original Scheme are described below.

The vehicle turning area situated at the west end of Loch Oire Road is to be relocated so as to avoid any encroachment into the Loch Oire SSSI. It will remain in compliance with Moray Council Development Control Guidelines. The turning area will be kerbed with all run-off from this area draining back towards Loch Oire Road which will subsequently outlet into Loch Oire Outfall Drain north of Loch Oire Road. This will prevent any run-off from entering the SSSI. The proposed cycleway alignment will subsequently alter slightly to accommodate this design change. The relocated turning area will result in the construction of an additional 50m<sup>2</sup> of carriageway compared to the original layout. However, this will also remove the need for approximately 140m<sup>2</sup> of cycletrack. The connectivity of the cycletrack will be unimpaired.

The southern section of the turning area will be approximately 1m above existing ground level which may require the construction of a small retaining structure. Should this be necessary, this will be provided in such a way so as not to adversely affect the appearance of the existing surroundings. Strengthened embankments will be constructed over a length of approximately 27m along the south side of the A96 in order to provide adequate area for construction of the Loch Oire Road vehicle turning area. The steepened embankments will not give rise to any significant geotechnical issues.



## 4 Additional Assessment

The text below explains how each of the chapters has been revised as a result of the Scheme changes and where these changes can be found within this document. Where no changes were required, the text in the original ES applies and the reader is referred to the relevant chapter.

**Chapter 1: Introduction** – Original text is still relevant and is reported in Chapter 1 of the Environmental Statement, October 2008. Figure 1.2 has been revised to show the new location of the Loch Oire Road vehicle turning area and Figure 1.3 has been amended to show the correct SSSI boundary and a more accurate representation of the Ancient Woodland Inventory sites. These amendments are included in Appendix A of this Addendum.

**Chapter 2: Scheme Description** – Minor changes to the text to indicate changes to the minimum verge width. Figure 2.1 has been updated to show the new position of the turning area. These amendments are included in Appendix B of this Addendum.

**Chapter 3: Cultural Heritage** – No changes required. Original text is still relevant and is reported in Chapter 3 of the A96 Threapland Junction Environmental Improvements Environmental Statement, October 2008.

**Chapter 4: Disruption due to Construction** – No additional works are required and therefore there are no substantial changes to this chapter. There have been some minor alterations to the text with respect to the proximity of Loch Oire to the proposed works and also to identify the residential property of Cambria (located within 100m of the Scheme) as a main receptor during the construction period. Figure 4.1 has been updated to show the new position of Loch Oire Road vehicle turning area. These amendments are included in Appendix C of this Addendum.

**Chapter 5: Ecology and Nature Conservation** – The amendments to this Chapter relate primarily to the significance of effects on Loch Oire SSSI as a result of changes to the location and layout of Loch Oire Road vehicle turning area. Figure 5.1 has been amended to show the correct SSSI boundary and a more accurate representation of the Ancient Woodland Inventory sites. These amendments are included in Appendix D of this Addendum.

**Chapter 6: Landscape and Visual** – No changes required. Original text is still relevant and is reported in Chapter 6 of the A96 Threapland Junction Improvements Environmental Statement, October 2008. Figure 6.3 has been updated to reflect the new position of the Loch Oire Road vehicle turning area and to eliminate tree removal from within the grounds of the property at Tilhill. These amendments are included in Appendix E of this Addendum.

**Chapter 7: Land Use** – The new location and layout of the Loch Oire Road vehicle turning area involves a reduction in landtake as it is now situated outwith the SSSI. The text of Chapter 7 has been updated to reflect these changes and also to include Cambria, Sleepieshill and Loch Oire Cottage as residential properties in close proximity to the Scheme and to identify Cambria as a main receptor. Figure 7.1 has been updated to show Cambria as a residential receptor. These amendments are included in Appendix F of this Addendum.

**Chapter 8: Water Resources** – The Water Resources chapter has been updated to reflect revised proposals for the drainage design of Loch Oire Road vehicle turning area which seek to avoid the risk of surface water run-off into Loch Oire. These amendments are included in Appendix G of this Addendum.

**Chapter 9: Summary of Effects and Mitigation** – The ES Addendum replaces text and table 9.1 in the ES to reflect the changes in the nature and/or significance of environmental effects as a result of the changes to the Scheme design. These amendments are included in Appendix H of this Addendum.

**Chapter 10: Summary** – Minor changes to the text to confirm that no landtake or direct impacts will affect the SSSI as detailed mitigation measures are proposed to minimise the risk of any impacts upon the notified features of this site. These amendments are included in Appendix I of this Addendum.

## 5 Cumulative Impact

The total works have been reviewed in respect of whether together the cumulative effect of the activities will have any additional environmental impact. After review, the following has been concluded in respect of the design changes:

- There will be no change to the programme and general scope of works and therefore no additional disruption due to noise, vibration and dust.
- There is no additional impact on landscape and visual, ecology, water resources, land use or cultural heritage, and impacts on air quality and noise during and after construction are considered negligible in nature and no worse than would have occurred during construction of the original Loch Oire Road vehicle turning area.
- The total area of landtake has been reduced compared with the original ES, with landtake from within the SSSI being eliminated entirely.

The mitigation table has been updated in respect of the works proposed and added as Appendix H in this document.

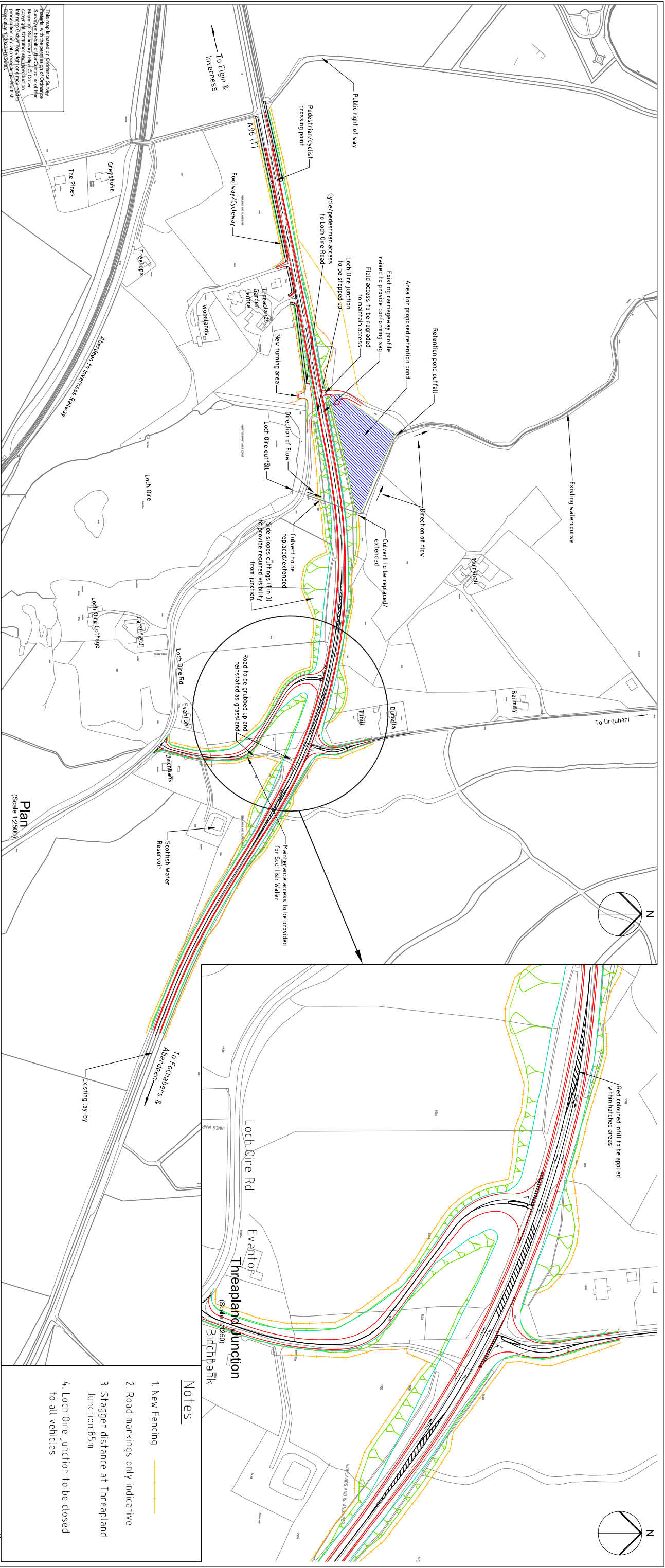
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## Appendices

<b>Appendix A</b>	<b>Introduction (Revised Figures 1.2 and 1.3)</b>
<b>Appendix B</b>	<b>Scheme Description (Amendments and Updated Figure 2.1)</b>
<b>Appendix C</b>	<b>Disruption Due to Construction (Amendments and Updated Figure 4.1)</b>
<b>Appendix D</b>	<b>Ecology and Nature Conservation (Amendments and Updated Figure 5.1)</b>
<b>Appendix E</b>	<b>Landscape and Visual (Updated Figure 6.3)</b>
<b>Appendix F</b>	<b>Land Use (Amendments and Updated Figure 7.1)</b>
<b>Appendix G</b>	<b>Water Resources (Amendments)</b>
<b>Appendix H</b>	<b>Summary of Effects and Mitigation (Amendments)</b>
<b>Appendix I</b>	<b>Summary</b>

## Appendix A: Introduction (Updated Figures 1.2 and 1.3)

Replace Figures 1.2 (Preferred Scheme) and 1.3 (Baseline Environmental Constraints) with those that follow.



- Notes:**
- 1. New Fencing
  - 2. Road markings only indicative
  - 3. Stagger distance at Threapland Junction: 85m
  - 4. Loch Oire junction to be closed to all vehicles

DATUM = 36.000

VERTICAL IPS	VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	PROPOSED LEVELS	EXISTING LEVELS	CHAINAGE
0.000	43.206	0.000	44.138	44.138	0.000
207.095	46.057	270.956	44.256	44.138	100.000
508.906	37.431	345.982	44.000	44.001	200.000
603.823	41.489	401.138	42.760	42.333	300.000
797.743	41.825	491.573	40.534	39.107	400.000
998.634	50.202	607.739	39.102	37.831	500.000
1199.924	58.115	716.085	41.467	41.480	600.000
1383.731	60.453	793.016	45.892	45.927	700.000
1444.598	60.453	854.833	50.319	50.280	800.000
1525.280	61.882	916.650	54.220	54.196	900.000
1710.176	64.116	978.467	57.122	57.445	1000.000
	64.116	1040.284	59.023	59.121	1100.000
	60.453	1102.101	59.924	59.952	1200.000
	60.453	1163.918	60.326	60.288	1300.000
	60.453	1225.735	60.760	60.807	1400.000
	61.882	1287.552	61.592	61.594	1500.000
	64.116	1349.369	62.785	62.756	1600.000
	64.116	1411.186	63.946	63.946	1700.000

**Profile**  
(Scale 1:2500 H, 1:500V @A3)

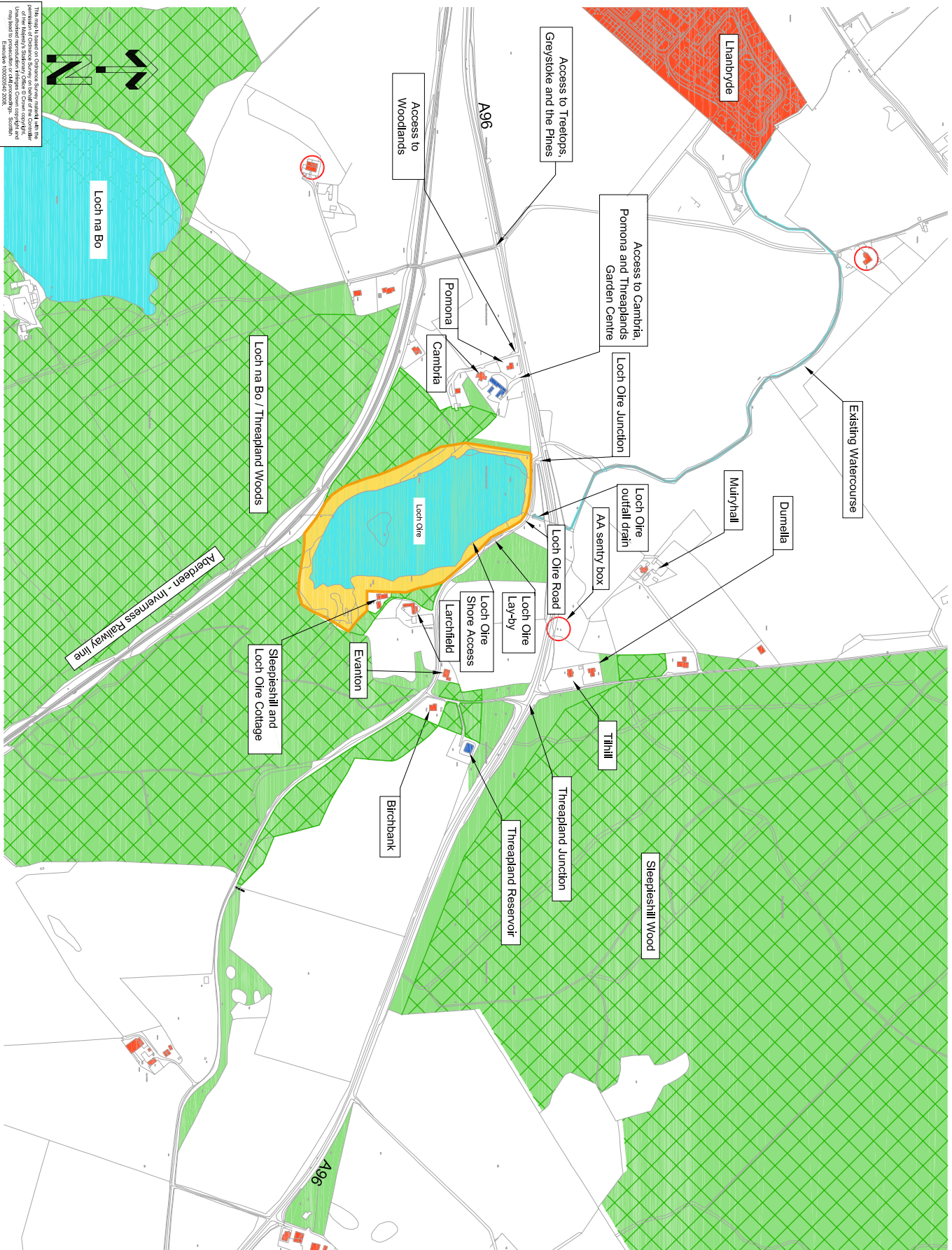
**A96 THREAPLAND JUNCTION IMPROVEMENTS ENVIRONMENTAL STATEMENT ADDENDUM**

**PREFERRED SCHEME**



**FIGURE 1.2**

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- LEGEND**
- Residential/Receptor
  - Commercial / Business
  - Waterways
  - Woodland / Forest
  - Ancient Woodland Inventory site
  - Listed Buildings
  - SSSI site and boundary



## Appendix B: Scheme Description (Amendments and Updated Figure 2.1)

Paragraph 2.4.1 is deleted and replaced with:

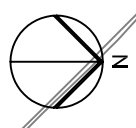
*The existing A96 will be widened to accommodate 1m hardstrips on both sides; along with a minimum verge width of 2.5m which will provide a DMRB standard S2 carriageway over a distance of approximately 1.2km. The carriageway will be further widened, locally at Threapland junction, in order to provide ghost island markings enabling the provision of right turning lanes for vehicles travelling in both directions. The substandard sag to the east of the garden centre will be brought up to standard by raising the carriageway with driver visibility being further increased with the removal of vegetation and the cutting back of slopes where necessary. The horizontal alignment of the road will be unaffected. A substandard crest to the east of Threapland junction will be upgraded to provide a crest conforming to current standards. This will lead to improved stopping sight distances throughout the junction approaches and hence further increase driver safety.*

The fourth paragraph (Earthworks) under section 2.4.6 (Construction) is deleted and replaced with:

*Topsoil stripping and bulk earthworks are required. The main earthworks required are the cutting back of existing ground to provide a minimum of 2.5m verges, provision of sufficient visibility at Threapland junction and also for the construction of embankments, particularly where the carriageway is to be raised. Cuttings will be profiled at 1 in 3 to minimise the need for soil stabilisation. Where possible material excavated on site will be reused on site in areas of fill.*

Replace Figure 2.1 (Preliminary Drainage Layout) with that which follows.





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A96 THREAPLAND JUNCTION IMPROVEMENTS  
ENVIRONMENTAL STATEMENT ADDENDUM

PRELIMINARY DRAINAGE LAYOUT  
SCALE 1:5000 @A3



FIGURE 2.1

## Appendix C: Disruption Due to Construction (Amendments and Updated Figure 4.1)

The first paragraph under Section 4.5 (Baseline) of the ES is deleted and replaced with:

*The proposed construction works will cover an area centred on the existing A96 carriageway in the vicinity of Threapland and approximately 1.5km to the east of Lhanbryde. It is a predominantly rural area, with the dominant land uses being areas of agricultural land and plantation woodland, and with Loch Oire located approximately 28m to the south of the A96 carriageway.*

The first and second paragraphs under Section 4.5.1 (Residential and Commercial) of the ES is deleted and replaced with:

*However, there are a number of residential properties that are in close proximity to the Scheme which would be impacted during the construction period. The potential receptors that could be disrupted during the construction period are shown in Figure 4.1. These include the properties of Pomona and Cambria at Threaplands Garden Centre, and the Woodlands property set further back from the A96 carriageway behind the Garden Centre. Tilhill and Dumella are both immediately north of the existing Threapland junction and the A96 carriageway. The residential properties at Birchbank and Evanton are located where the southern leg of Threapland junction joins Loch Oire Road. Larchfield is a residential property located between Loch Oire and Loch Oire Road, slightly further south and away from the A96 carriageway than Birchbank and Evanton.*

*The only commercial organisation within the study area is Threaplands Garden Centre, immediately adjacent to the A96 carriageway at the western end of the Scheme, in close proximity to the Pomona, Cambria and Woodlands residential properties. Access to the Garden Centre is gained directly from the A96 carriageway.*

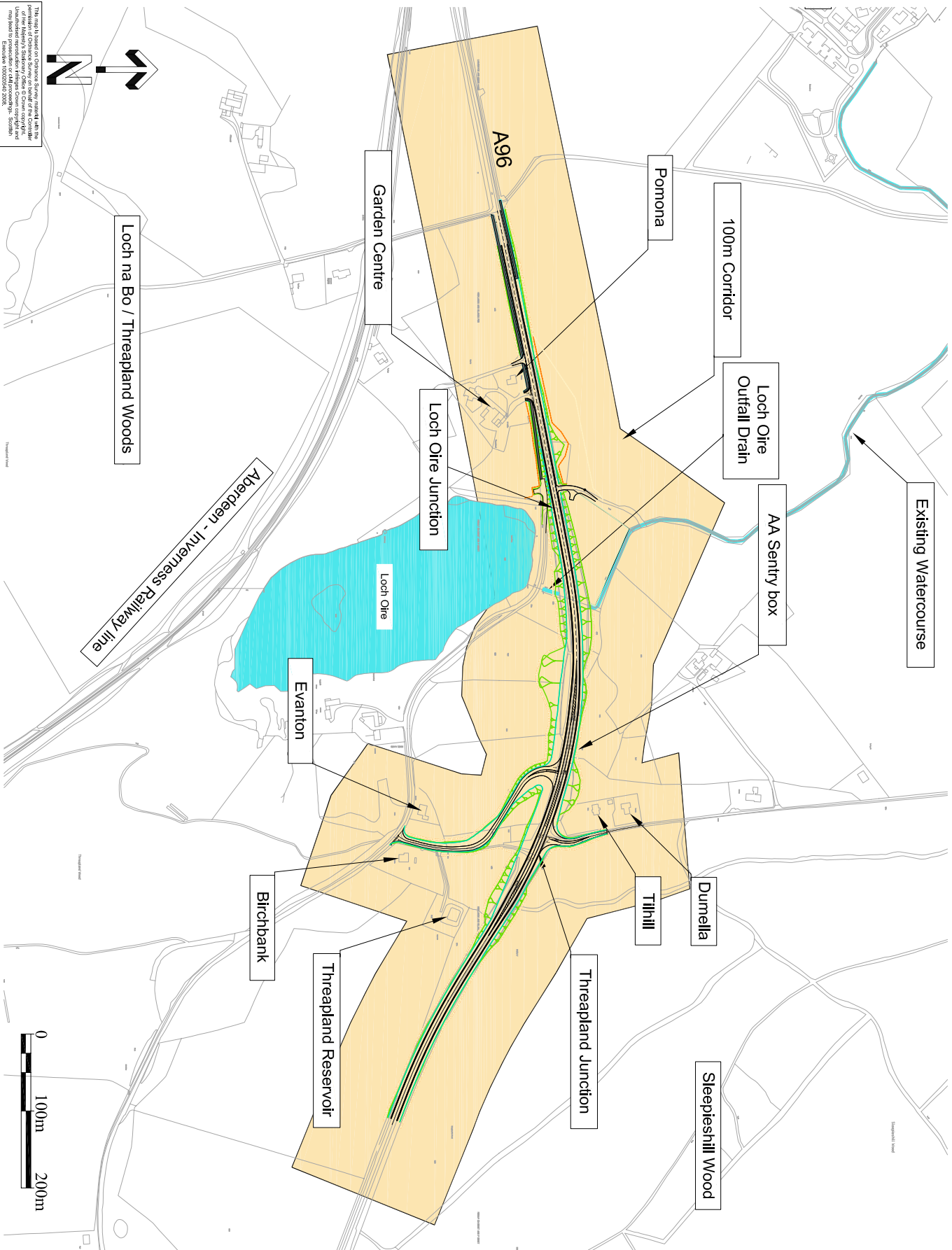
Table 4.1 is deleted and replaced with the following:

**Table 4.1 - Main receptors located within 150m of the Scheme**

<b>Receptor</b>	<b>Issues</b>
<b>Residential properties</b> (and distance from the A96 carriageway, which is the main focus of construction activity) <b>Tilhill</b> (40m) <b>Dumella</b> (80m) <b>Pomona</b> (10m) <b>Cambria</b> (60m) <b>Woodlands</b> (120m) <b>Larchfield</b> (220m) <b>Evanton</b> (140m) <b>Birchbank</b> (140m)	Impacts relating to localised air quality, noise and vibration, mud on roads, and dust intrusion during construction.  Potential impacts relating to property access diversions, the number of construction vehicles on local side-roads, both leading to temporary increase in journey times.

<i>Receptor</i>	<i>Issues</i>
<b>Commercial properties</b>	Potential disruption / disturbance to Threapland Garden Centre
<b>Vehicle travellers</b>	Disruptions to journey times for vehicle travellers using the A96 and side roads affected by the scheme.
<b>Pedestrians, cyclists, and equestrians</b>	Potential impacts on movements and activities along the A96 and within the wider Threapland area.

Replace Figure 4.1 (Disruption Due to Construction) with that which follows.



**LEGEND**  
 Zone of potential construction impacts

## Appendix D: Ecology and Nature Conservation (Amendments and Updated Figure 5.1)

The first paragraph under Section 5.6.1 (Statutory Designated Sites) of the ES is deleted and replaced with:

*Loch Oire SSSI, located at grid reference NJ 289609, is designated for its biological value. The location of the Loch is shown in Figure 5.1, and at the nearest point it is approximately 28m from the existing A96 carriageway. Loch Oire is one of the very few lochans remaining in the hummocky glacial deposits of lowland Moray. It supports an undisturbed aquatic plant community associated with mesotrophic conditions including diverse submerged and emergent vegetation, sedge fen and marginal carr woodland (SNH citation, [www.snh.gov.uk](http://www.snh.gov.uk)).*

The three paragraphs under Statutory designated sites (Section 5.7.3 Effects of site construction) of the ES are deleted and replaced with:

*Loch Oire is located within close proximity to the existing A96 carriageway and the existing Loch Oire junction and side road. The undisturbed aquatic plant communities of Loch Oire will not be directly impacted during construction of the scheme, as there will be no direct landtake, due to the separation distance of approximately 10m between the loch shore and the nearest construction activity. A post and rail fence also acts as a boundary between Loch Oire Road and the shoreline of the Loch, which will help prevent direct incursion into the aquatic habitats.*

*However, construction activity will be significant in this area due to the closing up of the Loch Oire Road junction, the construction of the vehicle turning area and the raising of the A96 carriageway at this point, involving construction work to the embankment between the A96 and the Loch. There is the potential for the release of soils and sediment during construction work on the embankment and turning area, which if not managed satisfactorily, could lead to these falling or being washed in to the Loch e.g. during heavy rainfall. The loch is also described as mesotrophic in the SSSI citation, which would suggest that further input of soils or sediment, would make the Loch vulnerable to eutrophication. Similarly, without any management measures there is also the potential for the release of oils, fuels and other chemicals from construction machinery, stockpiles and other construction apparatus. Pollution would impact on the 'Good to Excellent' water quality of the site.*

*The potential indirect impacts of sediment or pollution release would impact upon the water quality of the whole Loch; however this will be prevented through the implementation of suitable mitigation measures. Therefore, the impacts upon the open water habitats of Loch Oire are considered not significant.*

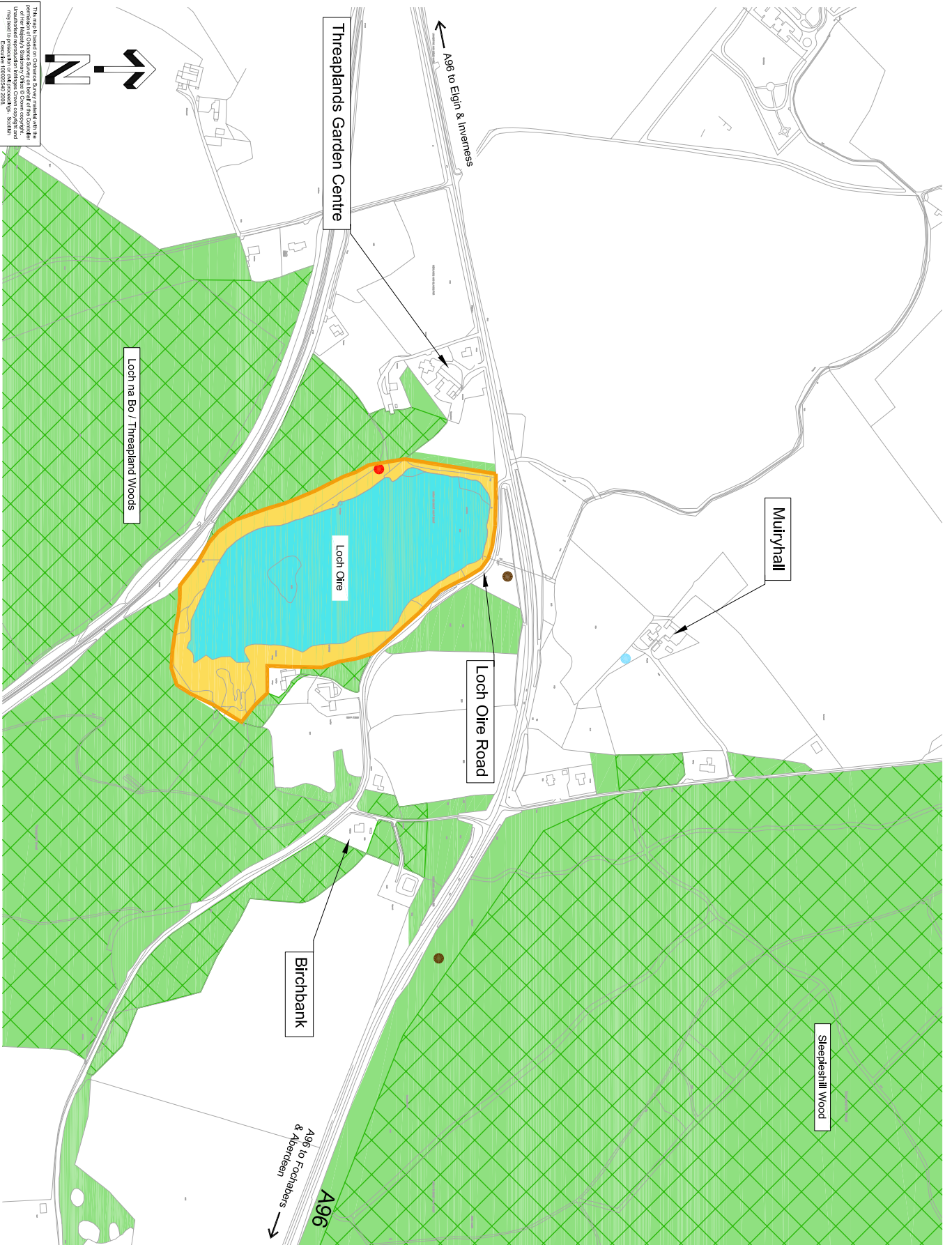
The first bullet point under Habitats (Section 5.7.3 Effects of site construction) of the ES is deleted and replaced with:

- *Woodland and trees: A direct impact on a body of woodland can cause fragmentation and affect the wildlife corridor function. It may also have negative impacts on European Protected Species such as bats that are using the woodlands for foraging and potentially for roosting. There will be direct and permanent landtake from the edges of a number of discrete woodland areas in close proximity to the existing A96 carriageway, including semi-natural broadleaved woodland, mixed plantation, and coniferous plantation. The total loss of woodland and tree habitat, not including the areas on the SNH AWI totals approximately 1.30ha. However, as the landtake will only impact upon the fringes of these woodland areas they will not suffer fragmentation or loss of the wildlife corridor function, and they should all remain viable areas of woodland habitat. The landtake also represents just a small proportion of the woodland resource within the wider area.*

The second paragraph under Section 5.10 (Summary) of the ES is deleted and replaced with:

*Loch Oire SSSI is the key ecological receptor within close proximity to the Scheme. The SSSI boundary is approximately 1.5m from the Scheme at the nearest point. No landtake or direct impacts will occur. During construction measures will be taken to prevent the release of soils, sediment or construction chemicals into the Loch. During the operational phase, safeguards will be in place to prevent potentially pollutant-laden runoff from entering the Loch. It is proposed that surface water run-off from the A96 carriageway will enter an attenuation pond that will outlet downstream of the Loch outfall. With mitigation measures applied as outlined above, for both the construction and operational stages there will be no significant impacts upon Loch Oire SSSI.*

Replace Figure 5.1 (Statutory and Non-Statutory Designations Sites, Signs of Protected Species, and Invasive Plant Species) with that which follows:



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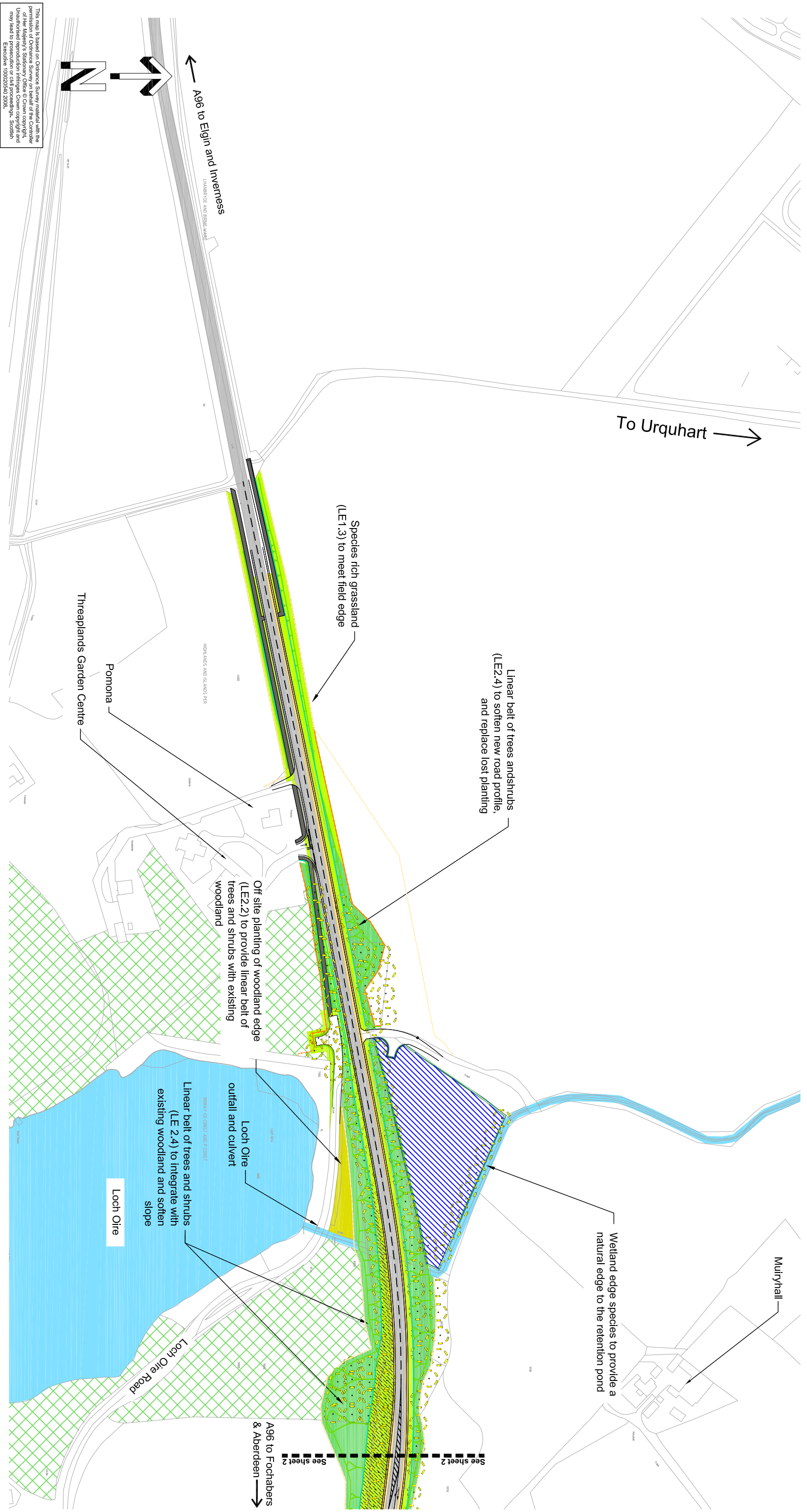
- LEGEND**
- SSSI site and boundary
  - Ancient Woodland Inventory Site
  - Location of other sprangis
  - Location of Himalayan Balsam
  - Squirrel dreys



## Appendix E: Landscape and Visual (Updated Figure 6.3)

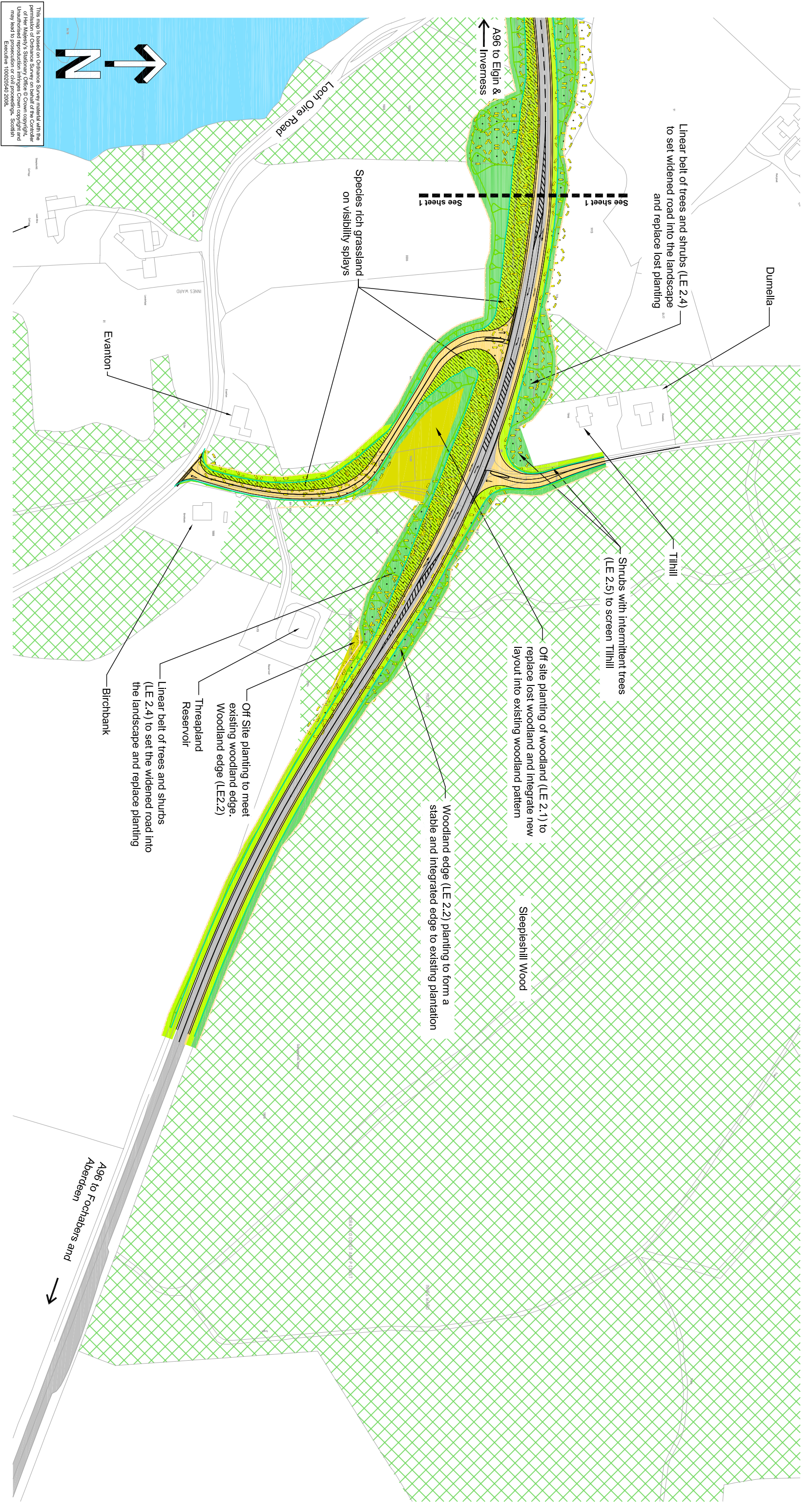
Replace Figure 6.3 (Landscape Design) with that which follows.





**LEGEND**

	Existing main carriageway		Existing trees to be removed
	Proposed new carriageway		Existing woodland / scrub to be retained
	Existing watercourses		Visibility splay
	Proposed retention pond		Fence line
	New planting - Species rich grassland (LE 1.3)		
	New planting - Native trees and shrubs		
	Off site planting		
	Wetland edge planting		



**LEGEND**

	Existing main carriageway		Existing trees to be removed
	Proposed new carriageway		Existing woodland / scrub to be retained
	Existing watercourses		Visibility splay
	Proposed retention pond		Fence line
	New planting - Species rich grassland (LE 1.3)		New planting - Native trees and shrubs
	Off site planting		Wetland edge planting

## Appendix F: Land Use (Amendments and Updated Figure 7.1)

The second paragraph under Section 7.4.1 (Existing Situation – No Proposal) of the ES is deleted and replaced with:

*There are a number of residential properties that are in close proximity to the Scheme. These include the properties of Pomona, Cambria, Tilhill, Dumella, Birchbank, Evanton, Sleepieshill, Larchfield, Loch Oire Cottage and Woodlands. The village of Lhanbryde is located to the west of the study area corridor. There is no conservation area within this settlement.*

The second paragraph under Section 7.5.2 (Effects of Operation) of the ES is deleted and replaced with:

*There will be impacts to agricultural land as the proposed alignment of the south leg of Threapland Junction will cross part of an existing agricultural grazing field, resulting in permanent landtake. The location and construction of the proposed retention pond will also result in the permanent loss of arable agricultural land. The implementation of the Scheme is predicted to have a negligible impact on the future viability of the farm units affected by the Scheme through land take, and in total results in a permanent landtake of 2.17ha from agricultural land. A number of trees and some areas of scrub will also require felling on either side of the A96 in order to improve the sightlines from the upgraded junctions. A limited number of trees will be removed to accommodate the realigned south leg of Threapland junction. The total permanent landtake from the forestry and woodland areas is approximately 1ha.*

The fourth paragraph under Section 7.5.2 (Effects of Operation) of the ES is deleted and replaced with:

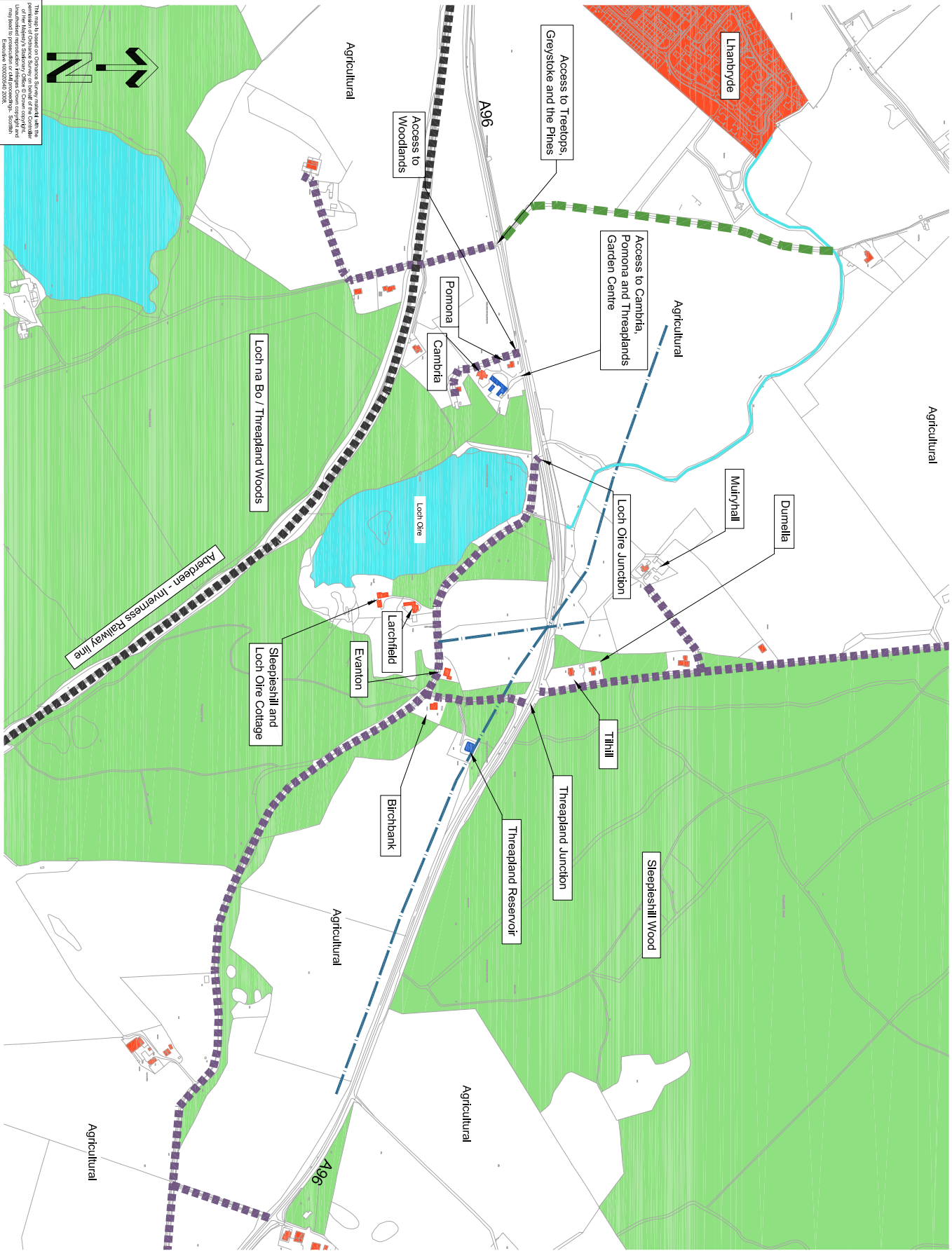
*Some parts (gardens) of residential properties will be in close proximity to areas of permanent landtake as a result of the Scheme. Residential receptors include properties at Tilhill, Dumella, Pomona, Cambria, Evanton and Birchbank. However, only the very south-west corner of the Tilhill garden will be directly affected, with approximately 79m<sup>2</sup> of landtake to allow for the increased size of the road embankment. There will also be 105m<sup>2</sup> of landtake from the car parking or hardstanding area at the front of the Garden Centre to allow for the construction of the pathway for cyclists and pedestrians.*

Table 7.5 is deleted and replaced with:

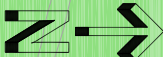
**Table 7.5: Permanent Landtake**

<i>Land Use</i>	<i>Area (approx)</i>	<i>Purpose</i>
<b>Residential</b>	79m <sup>2</sup> (Tilhill, south west corner of garden)	Junction improvement / road realignment
<b>Agricultural</b>	2.17ha (with a further 0.51ha required for permanent servitude rights)	Junction improvement / road realignment
<b>Forestry/Woodland</b>	1ha	Junction improvement / road realignment
<b>Commercial</b>	105m <sup>2</sup> (Garden Centre car parking / hardstanding)	Road realignment / cycle or pedestrian access

Replace Figure 7.1 (Land Use) with that which follows:



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A96 THREAPLAND JUNCTION IMPROVEMENTS  
ENVIRONMENTAL STATEMENT ADDENDUM

LAND USE  
SCALE 1:7000 @A3



**LEGEND**

	Residential
	Commercial / Business
	Waterways
	Woodland / Forest
	Rights of Way
	Minor / Local access roads
	Railway line
	Overhead Line

FIGURE 7.1

## Appendix G: Water Resources (Amendments)

The second and third sub sections of Section 8.1.4 of the ES are deleted and replaced with:

### *Existing Road Drainage & Outfalls*

*To put the new proposals into context, it is necessary to understand the existing road drainage in the vicinity of the proposed junction. No formal drainage plans exist for this section of the A96, and the following information has been collected from site visits and discussions with the design team. The only formal road drainage (i.e. gullies, kerb drains, etc.) on this section of the A96 is understood to be on the southern side of the road in the section between the Loch Oire Junction and the Threapland Junction. The road drainage is in the form of a number of gullies at 30 – 40m intervals along the length of the road. No records or site evidence could be found to confirm where these gullies drain to, but given that the only watercourse nearby is the outfall drain from Loch Oire it is suspected that there is some form of connection to this feature. It is also noted that there are no formal plans of the road drainage infrastructure along the Loch Oire Road.*

### *Proposed Road Drainage & Outfalls*

*As is standard for all new roads schemes, SEPA has requested that SUDS (Sustainable Drainage Systems) principles are applied. The format of the drainage scheme will be in accordance with the technical guidance set out in CIRIA Report C697 “The SUDS Manual”. In response to this the proposed road drainage design incorporates two levels of treatment, the first being via filter drains running along the revised section of the A96 and the second being the provision of a retention pond which all new road drainage will pass through. It is noted that both of these features will also offer attenuation of the surface water run off, allowing the rate of discharge from the new sections of road to be controlled. After passing through the retention pond the treated road run off will drain into the Loch Oire Outfall Drain on the northern side of the A96 i.e. approximately 200m downstream of the Loch. Figure 2.1 in the Appendices shows the drainage proposals. In regard to the road drainage for the new turning area extension to the existing Loch Oire Road (approx. 50m total length) it is proposed to link this into the existing drainage infrastructure along Loch Oire Road (arrangement TBC), assuming this drains to the Outfall Drain and not directly to the Loch. If the existing Loch Oire Road drainage infrastructure is found to be unsuitable new drainage measures will be provided to ensure that run-off from the turning area outlets north of Loch Oire Road into Loch Oire outfall drain and not into the Loch itself.*

The following text is added to the SEPA Consultation Response Summary in Section 8.3.6: -

*SEPA have agreed in principal to the surface water run off from the small extension to the existing Loch Oire Road to form the new turning area being drained back into the existing Loch Oire Road drainage infrastructure.*

The table in Section 8.4.1 Effects of Construction – Surface Water Quality is deleted and replaced with: -

<b>Receptor(s)</b>	Loch Oire & Loch Oire Outfall Drain
<b>Relevant Scheme Information</b>	<p>Given the nature of the project there will be significant earth / rock moving activities during construction. This presents a significant risk of surface water run off eroding bare slopes or material stockpiles, which can lead to increased suspended solids in watercourses.</p> <p>The construction phase also presents the potential for fuels, oils, and other chemicals to be spilled via an accident, improper usage, or poor storage. These could reach the receptors directly via discharge of polluted run off or via seepage into the shallow groundwater.</p> <p>Construction workforce sewage and washing effluent would be contained and taken offsite. The risk of spillage to watercourses is considered to be negligible and this potential impact is therefore not considered further.</p>
<b>Sensitivity of Receptor(s)</b>	<b>High</b> (Loch Oire) & <b>Medium</b> (Loch Oire Outfall Drain)(see “Baseline” section)
<b>Magnitude (and Type) of Effect</b>	<b>Slight Adverse</b> (localised, temporary) – the proposals do not include works within Loch Oire itself, and the only work within close proximity to the Loch is a relatively minor extension to Loch Oire Road to accommodate a vehicle turning area. The works to the Outfall Drain involve an extension of around 4m on either side of the existing culvert under the A96. Therefore the main potential source of polluting substances is likely to be through uncontrolled run-off from areas of earthworks and spillage of pollutants directly or indirectly (e.g. via the existing road drains) into the surface water resources features. Based on the adoption of the primary mitigation measures noted below, the risk of a significant discharge of polluting substances into the Loch or its Outfall Drain should be able to be reduced to a low level. The effects of any residual construction stage pollution should be temporary in nature, and therefore no long-term impact on the water quality classification should be experienced.
<b>Primary Mitigation Included</b>	<p>The Contractor should implement best practice guidance as detailed in PPG’s published by SEPA and CIRIA Report C532, as a minimum. The Contractor should produce a site management plan covering the areas noted above, which should be discussed and agreed with SEPA, and all staff on site should be trained in the relevant best practice techniques. In particular, construction materials should be stored away from the surface water features, plant should be stored and maintained away from surface water features, silt fences or similar should be considered around exposed ground and stockpiles, and early re-vegetation of the completed elements of the Scheme should be undertaken to reduce silt laden run off. Part of the site management plan should identify a monitoring routine to check that the mitigation measures are in place and working.</p> <p>The drainage outfall/s for the existing A96 &amp; Loch Oire Road drainage infrastructure should be located prior to commencing construction work. It is recommended that the control of surface water run off to</p>

	<p>these road drains be given consideration in the site management plan, so as to prevent a shortcut for potential construction pollutants to reach the surface water resources features.</p> <p>Consideration should be given to creating the retention pond infrastructure at the outset of construction work, and this could then be used to treat at least some of the construction stage site run off prior to discharge.</p>
<b>Overall Significance</b>	<b>Minor Adverse</b> (for both Loch Oire & the Loch Oire Outfall Drain)

The second table in Section 8.4.1 Effects of Construction – Groundwater is deleted and replaced with:

<b>Receptor(s)</b>	Ground Water
<b>Relevant Scheme Information</b>	The construction works will involve earth moving plant and other machinery, and this presents a risk of spillage of fuels, oils, and other chemicals, which can seep into the shallow groundwater. The project will also require at least one major construction compound, providing welfare facilities for the Contractor, and these are likely to retain a store of fuels, oils, and other chemicals.
<b>Sensitivity of Receptor(s)</b>	<b>Medium</b> (see “Baseline” section)
<b>Magnitude (and Type) of Effect</b>	<b>Negligible</b> (localised, temporary) – with the primary mitigation measures in place (see below) and continually monitored, the likelihood of significant quantities of contaminants being released should be low. Therefore, it is considered that, although there may be a residual risk of some small spills of oil or fuel from plant, the effects of these will be highly localised and may not reach the groundwater surface.
<b>Primary Mitigation Included</b>	<p>The Contractor should manage the works in accordance with the best practice guidance provided in the SEPA Pollution Prevention Guidelines, CIRIA Report C532 “Control of water pollution from construction sites”, and CIRIA Report C638 “Control of water pollution from linear construction projects”. In particular the Contractor should provide bunds around all fuel, oil, and other chemical stores; centralise and minimise the number of these stores; complete all servicing, fuelling, and storage of vehicles at construction compounds; provide dedicated wash down areas for concrete and other delivery vehicles.</p> <p>The Contractor should implement drainage control measures at the site to prevent areas of standing surface water that could become contaminated and leach into the shallow groundwater. Where collection of water at the site is unavoidable (e.g. excavations), provision should be made for this water to be collected and passed through some form of treatment before discharge. The Contractor should liaise with SEPA regarding any proposed discharge from excavations in respect to the new Controlled Activities Regulations</p>



	(2005).  In both of the above cases the Contractor should make provision for the implementation of the recommended mitigation measures to be monitored as part of the method statement for the works. In practice this may mean a daily inspection of the site.
<b>Overall Significance</b>	<b>Negligible Adverse</b>

The following text is added to Section 8.4.2 Effects of Operation – Surface Water Quality – Discharge of Road Run Off: -

Note – the Method A & B calculations and the Spillage Risk Calculations have not been carried out for the small extension to the Loch Oire Road to form the turning area, as this will not be a heavily trafficked section of road. Therefore, it is anticipated that there will be no significant pollution from vehicles contained within the run off from this area.

The second table under Geomorphology & Hydrology (Section 8.4.2 Effects of Operation) is deleted and replaced with:

<b>Receptor(s)</b>	Loch Oire and the Loch Oire Outfall Drain
<b>Relevant Scheme Information</b>	The existing A96 and the side roads within the study area already influence the natural drainage patterns. The A96 is being raised along a short section, but this section is already on an embankment above the existing ground level. The only sections of new hard standing created will be the revised access road from the north across a small area of relatively flat agricultural land near to Evanton and the new turning area which extends to the west of the current Loch Oire junction to the south of the A96. The new access road will be at grade or in a shallow cutting and will create a linear feature across a short length (approx. 150m) of open ground. The new vehicle turning area will be locally raised compared to the existing ground, and forms a short extension (approx. 50m) to the existing Loch Oire Road.
<b>Sensitivity of Receptor(s)</b>	<b>High</b> (Loch Oire) & <b>Medium</b> (Loch Oire Outfall Drain)(see “Baseline” section)
<b>Magnitude (and Type) of Effect</b>	<b>Negligible Adverse</b> (localised, permanent) – the presence of the new access road and turning area may reduce overland flow over a small area within the Loch Oire catchment. However, given the highly permeable nature of the deposits and the presence of the existing access road along the side of the Loch, these new sections of road are not anticipated to have a measurable effect on the movement of overland flow within the catchment.
<b>Primary Mitigation Included</b>	None included at this stage for the new access road.
<b>Overall Significance</b>	<b>Negligible Adverse</b>

The third table under Geomorphology & Hydrology (Section 8.4.2 Effects of Operation) is deleted and replaced with:

<b>Receptor(s)</b>	Loch Oire Outfall Drain
<b>Relevant Scheme Information</b>	The proposed Scheme is likely to decrease the time taken for surface water to enter the drainage system due to the increase in impermeable areas and construction of an improved drainage regime. The surface water drainage proposals for the scheme include roadside filter drains and a retention pond for the A96. Both of these features will provide attenuation of the run off before discharge to a new outfall downstream of the A96 into the Outfall Drain. The small extension to Loch Oire Road for the vehicle turning area will drain into the existing Loch Oire Road drainage infrastructure.
<b>Sensitivity of Receptor(s)</b>	<b>Medium</b> (see "Baseline" section)
<b>Magnitude (and Type) of Effect</b>	<b>Negligible Adverse</b> (localised, temporal) - on the basis that the primary mitigation measures already included (i.e. the filter drains and the retention pond) are adopted for the A96, as it should be possible to control the rate of the surface water drainage discharge to an acceptable percentage of the concurrent flow in the Outfall Drain using such attenuation provisions. Once the arrangements of the Loch Oire Road drainage infrastructure are confirmed, it may be necessary to allow for some attenuation provisions for these additional flows from the new turning area to ensure the capacity of the existing network is not exceeded. However, these are considered to be insignificant.
<b>Primary Mitigation Included</b>	The designers should ensure that the rates of release of the surface water run off from the retention pond is in accordance with the guidance provided in CIRIA Report C697 for allowable rates of run off. Allow for some minor flow attenuation provisions for the new turning area.
<b>Overall Significance</b>	<b>Negligible Adverse</b> (temporal i.e. during and immediately after rainfall)

## Appendix H: Summary of Effects and Mitigation (Amendments)

Table 9.1 of the ES is deleted and replaced with:

*(Please see over)*

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
<b>Cultural Heritage</b>				
Site 2 (Category B Listed AA Sentry Box)	Neutral direct effect	Relocation approximately 1km to the east.	Relocation of AA Sentry Box will place it in an appropriate roadside setting, similar to its current setting.	Not significant.
Hitherto undiscovered archaeological remains	The archaeological potential is considered to be moderate. Any hitherto undiscovered archaeological remains that lie within the landtake for the scheme would be removed during construction.	Trial trenching evaluation followed by an appropriate scheme of full excavation, post-excavation analyses and publication. Scale of work to be agreed with Council Archaeology Advisor.	Recovery of archaeological information and presentation of results in appropriate forum.	Not significant.
<b>Disruption Due to Construction</b>				
Residential properties	Increased noise and vibration, possible dust from earthworks, litter and disruption caused by construction traffic	Appropriate location for site construction compound and best construction site practice e.g. to limit noise and vibration, dust, mud on roads, site EMP	Would reduce level of noise experienced at residential receptors, but still limited exposure to dust, noise, litter and mud on roads.	Minor adverse

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
Commercial properties	Increased noise and vibration, possible dust from earthworks, litter and disruption caused by construction traffic. Disturbance to access and property frontage	Appropriate location for site construction compound and best construction site practice e.g. to limit noise and vibration, dust, mud on roads, site EMP. Access maintained at all times	Would reduce level of noise and disturbance experienced at Garden Centre, and opening hours to remain as per normal conditions	Minor adverse.
Vehicle travellers	Additional construction traffic, delays on main A96 carriageway, and temporary diversion to property accesses	Access to remain open to all properties at all times, minimise disruption to A96 e.g. one lane to remain open at all times, detailed Traffic Management Plan	Would alleviate and reduce traffic congestion, although there would inevitably be small periods of delay for some vehicle travellers.	Minor adverse
Pedestrians, cyclists and equestrians	Temporary journey disruption for cyclists using the A96 and side roads	Prevent temporary severance of cycling on the A96 and Loch Oire road	Limited delays, but A96 and side roads to remain open at all times	Negligible

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
<b>Ecology and Nature Conservation</b>				
Loch Oire SSSI	No direct landtake, but potential for release of soils, sediment and construction chemicals into the Loch. Non-significant impact at national level and unlikely to happen though the impacts may be significant at the local level.	Ecological Clerk of Works, implementation of SEPA PPG's and CIRIA Report SP156, sensitive habitats clearly marked, detailed Construction Environmental Management Plan, attenuation pond etc.	Lowered risk of the impacts occurring, now extremely unlikely to occur.	Any construction impacts upon Loch Oire SSSI are extremely unlikely to occur, and will be non-significant if mitigation measures are implemented.
Long-established woodland of plantation origin	Direct landtake (<1ha) from small proportion of Sleepieshill Wood. Non-significant impact at the regional level and certain to occur though the impacts may be significant at the site level.	Minimise landtake as far as possible, landscape planting to be undertaken as part of the Scheme, and mitigation also as above for Loch Oire SSSI.	Minimal landtake, resulting in less than 0.2% loss of Sleepieshill Wood (681ha in total at current time).	The construction impacts upon the long-established woodland of plantation origin are certain to occur, though the residual impact is considered non-significant
Habitats	Direct landtake (1.6ha) from dense scrub, woodland and semi-improved grassland, and indirect impact from dust. Non-significant impact at the local level and certain to happen.	Minimise landtake as far as possible, landscape planting to be undertaken as part of the Scheme, and mitigation also as above for Loch Oire SSSI.	Some habitats will still be lost due to the Scheme, but over time the landscape design will compensate for this loss, and such habitats are common in the wider area.	Direct impacts upon terrestrial habitats are certain to occur, but the impacts are considered to be non-significant.

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
Otter	No direct impacts, though potential for some indirect construction disturbance. Non-significant at the local level and extremely unlikely to happen.	Surveys will continue throughout the construction period. Licence may be required if otter shelters found to be in use, within 100m of construction activity.	Risk of disturbance to otter shelters greatly reduced. Less traffic on the Loch Oire road in close proximity to the Loch, which will reduce possible disturbance and potential road kill incidents.	Direct construction impacts are extremely unlikely to happen, and indirect impacts unlikely. With mitigation in place neither of these impacts is considered significant.
Water vole	No impacts predicted. Non-significant at the local level and extremely unlikely to occur.	Pre-construction checks required on watercourses.	No impacts are expected, but if signs of activity were found, then further detailed mitigation measures would be agreed with SNH.	Any construction impacts upon water voles are extremely unlikely and residual impacts are non-significant.
Bats	Possible bat roosts in trees to be removed. Significant negative at the local level and probable to happen.	Trees with bat roost potential should be checked immediately prior to, and during felling, by a bat specialist.	Impacts upon potential bat roosts will be minimised, and felling can be halted if a roost is found.	The construction impacts upon potential bat roosts will only be non-significant if mitigation measures are enforced.
Red squirrel	Disturbance from construction activity. Non-significant at the local level and extremely unlikely to happen.	Pre-construction surveys for squirrel dreys in trees to be felled. Felling avoided between February and July if at all possible.	No direct or indirect impacts upon red squirrel dreys and activity are expected.	The construction impacts upon red squirrels are considered extremely unlikely, and are non-significant

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
Breeding birds	Removal of breeding bird habitat during breeding bird season. Significant negative impact at local and site level and probable.	All tree and scrub removal should be undertaken outwith the breeding bird season, which is regarded as being between March and August.	Although breeding bird habitat would be lost to the scheme, the birds and nests would not be disturbed during the breeding bird season, partial mitigation of anticipated impacts.	The residual impacts will only be non-significant if the prescribed mitigation measures are implemented.
<b>Landscape Effects</b>				
Landscape character	There will be a slight adverse effect on the landscape character resulting from the introduction of the new embankments and access road and loss of vegetation.	Replacement planting	Negligible adverse	Negligible adverse
Visual effects	A small number of residential receptors located adjacent to the scheme will experience substantial effects during construction but moderate changes to their views when the scheme is completed. The remaining receptors will experience less significant effects.	Replacement planting	Moderate adverse	Minor adverse



**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
<b>Land Use</b>				
Agricultural Land	Permanent loss of land (low grade arable and grazing), temporary landtake during construction and diversion of accesses (2.17ha)	Keep land take to minimum, creation of new accesses, and compensation	The mitigation measures would lessen the impact of any agricultural land take	Minor adverse
Forest / Woodland	Permanent loss of land at Sleepieshill Wood and other scattered areas of trees, including felling of young, semi-mature and mature trees (1ha)	Planting of new trees as part of landscaping, and minimising landtake	The planting of new trees will partially offset the felling of existing trees	Minor adverse
Residential Properties	Permanent landtake of small area of one residential garden (79m <sup>2</sup> at Tilhill)	Compensation, landscaping, and minimise land take	Residential land will be permanently removed from private garden use.	Minor adverse
Commercial property	Permanent loss of land from area of Threapland Garden Centre hardstanding (105m <sup>2</sup> )	Compensation, landscaping, and minimise land take	Permanent loss of land from area of hardstanding	Minor adverse

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
<b>Water Quality and Drainage</b>				
Loch Oire & Loch Oire Outfall Drain	Sediment mobilisation and spillage or discharge of other pollutants in watercourses (Construction Phase)	The Contractor should implement best practice guidance as detailed in PPG's published by SEPA and CIRIA Report C532. The Contractor should produce a site management plan, and this should include control of surface water run off to existing road drains. Consideration should be given to creating the retention pond infrastructure at the outset of construction work, and this could then be used to treat some of the construction stage site run off prior to discharge.	Potential effects will be minimised	Minor Adverse

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
Infrastructure surrounding watercourse crossings	Flood risk to surrounding land from development (Construction Phase)	The Contractor should ensure that provisions are made to keep a flow passing from the Loch to the downstream portions of the Outfall Drain during the works to replace the existing culvert.	Potential effects will be minimised	Negligible Adverse
Loch Oire Outfall Drain	Alteration of watercourse crossing (Construction Phase)	Set up working areas around the Outfall Drain to control the amount of disturbance caused. Complete a survey to record the pre construction condition and inform reinstatement design. It is also recommended that as the new formalised surface water drainage system is installed the retention pond should be available to enable the flows into the Outfall Drain to be controlled.	Potential effects will be minimised	Minor Adverse
Groundwater under the proposed scheme	Potential disturbance of groundwater movement (Construction Phase)	None required at this stage.	None	Neutral

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
Groundwater under the proposed scheme	Potential contamination to shallow groundwater (Construction Phase)	The Contractor should manage the works in accordance with the best practice guidance provided in the SEPA Pollution Prevention Guidelines, CIRIA Report C532 "Control of water pollution from construction sites", and CIRIA Report C638 "Control of water pollution from linear construction projects".	Potential effects will be minimised	Negligible adverse
Loch Oire Outfall Drain	Discharge of road run off to watercourses (Operational Phase)	The new sections of the A96 are to incorporate SUDS principles, by providing filter drains and an attenuation pond for the road run off. The proposed road alignment and profile has been designed to improve safety and hence reduce the risk of serious accidents and attendant spillages.	Potential effects will be minimised	Minor adverse

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
Loch Oire Outfall Drain	Discharge of pollutants from other road and infrastructure maintenance (Operational Phase)	Works to road infrastructure should be completed under an approved method statement and should include best practice measures (including the SEPA Pollution Prevention Guidelines) to reduce the risk of significant or major spillages to the surrounding water resources features.	Potential effects will be minimised	Negligible Adverse
Infrastructure surrounding watercourse crossings	Flood Risk to surrounding land from development (Operational Phase)	The replacement culvert should be sized to accept a defined return period storm, based on storm flows calculated for the Outfall Drain using FEH or similar accepted methods. The designers should ensure that the rates of release of the surface water run off from the retention pond is in accordance with the guidance provided in CIRIA Report C697 for acceptable rates of run off.	Potential effects will be minimised	Negligible to Minor Adverse

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
Loch Oire Outfall Drain	Alteration / addition of watercourse crossings (Operation Phase)	The design of a possible replacement culvert shall be such as to avoid changing the alignment of the channel. Design of the culvert works for the scheme should be in accordance with the Scottish Executive's "River Crossings and Migratory Fish: Design Guidance (April 2002)".	Potential effects will be minimised	Minor Adverse
Loch Oire Outfall Drain	Run off from the scheme into watercourses (Operation Phase)	The designers should ensure that the rates of release of the surface water run off from the retention pond is in accordance with the guidance provided in CIRIA Report C697 for allowable rates of run off. Allow for some minor attenuation of flows from the new turning area.	Potential effects will be minimised	Negligible Adverse
Loch Oire & Loch Oire Outfall Drain	Alteration to land drainage patterns (Construction and Operation Phase)	None included at this stage.	Potential effects will be minimised	Negligible Adverse

**Table 9.1 - Summary of Effects and Mitigation**

<b>Receptor / Source Of Impact</b>	<b>Summary Of Effects Before Mitigation</b>	<b>Mitigation</b>	<b>Summary Of Effects After Mitigation</b>	<b>Significance Of Residual Effects</b>
Groundwater under the proposed scheme	Potential disturbance of groundwater movement from the new road construction (Operational Phase)	None included at this stage.	Potential effects will be minimised	Neutral
Groundwater under the proposed scheme	Potential contamination to shallow groundwater (Operational Phase)	The scheme already includes for filter drains and an attenuation pond to provide treatment and storage of the road run off, and therefore primary mitigation is already built into the proposed scheme. No further mitigation has been considered at this stage.	Potential effects will be minimised	Minor Adverse

## Appendix I: Summary (Amendments)

The second paragraph on page 10-2 is deleted and replaced with:

*Loch Oire SSSI is the key ecological receptor within close proximity to the Scheme. No landtake or direct impacts will occur. During construction safeguards will be in place to prevent the release of soils, sediment or construction chemicals into the Loch. During the operational phase, measures will be in place to prevent potentially pollutant-laden runoff from entering the Loch. A limited area of long-established woodland of plantation origin at Sleepieshill Wood will be directly affected by the Threapland Junction improvements on the north side of the A96. Other habitats will also be directly impacted during construction, as limited areas of semi-improved grassland, dense gorse scrub and other woodland / scattered trees areas will be removed to allow the improvements. Significant impacts are not anticipated for otters, bats, water voles, red squirrels or breeding birds, or any other features of ecological interest, subject to the implementation of specific mitigation measures such as pre-construction checks and methods to avoid disturbance during construction and operation.*

The fourth paragraph on page 10-2 is deleted and replaced with:

*The permanent acquisition and use of land required for the Scheme will have isolated effects on the environment and some small areas of agricultural land (2.17ha) and plantation woodland (1.30ha). There will be impacts to agricultural land as the proposed route alignment of the A96–Loch Oire connector road will cross part of an existing field causing potential diversion of access and resulting in permanent landtake. The location and construction of the proposed retention pond would also result in the permanent loss of arable agricultural land. A number of trees would also require felling on either side of the A96 in order to improve the sightlines from the upgraded junctions and accommodate the new section of the Loch Oire connector road. This landtake would impact upon an area of Sleepieshill Wood, due to the work on the north leg of Threapland Junction. There would be limited permanent landtake from two other areas, with 79m<sup>2</sup> of land acquired from the garden of the Tilhill residential property, and 105m<sup>2</sup> of land acquired from the area of hardstanding within the Threapland Garden Centre.*