

10 LANDSCAPE AND VISUAL

10.1 INTRODUCTION

This chapter considers the landscape and visual effects of the proposals. It describes the existing landscape of the road corridor, considers the sensitivity of the area to development and defines the extent to which the proposals would be visible both in the short and the long term.

Proposals to mitigate the potential impacts of the proposed scheme were developed as the landscape and visual assessments were carried out. The mitigation includes landform and planting proposals and, where appropriate, controls on the design development of the road geometry by a future design and build contractor. The assessments are based on the complete outline scheme design including the mitigation proposals.

The landscape assessment considers the changes to the fabric and character of the landscape likely to result from the proposed scheme, whilst the visual assessment is concerned with the views that are actually available to the people affected, their perception and responses to changes in these views.

Landscape and visual impacts can be beneficial or adverse, and how they are considered can depend on the attitude of the observer or assessor. The impact of introducing a new road is normally considered to be of an adverse nature. Beneficial effects may arise in some areas where the introduction of a new road allows the removal of substantial amounts of traffic from the existing road. The methodology used in the assessment is set out in Section 10.5.

10.2 SOURCES OF INFORMATION

Information has been gathered primarily from a structured site survey but also by desk study and from consultations with relevant consultees.

Preliminary assessment was undertaken, and initial mitigation proposals developed, in site visits over the summer of 2006. Detailed landscape and visual site survey work was carried out in the winter of 2007/8, as far as practical choosing days when visibility was good. A further landuse check was undertaken in July 2009. The field survey was designed to collect data for both the landscape and visual impact assessments, and therefore covered:

- landscape character;
- topography;
- vegetation of landscape value;
- areas of important features of cultural heritage or local importance;
- visual receptors; and
- identification of possible mitigation measures for discussion with the team.

Relevant publications that have been taken into consideration include:

- Loch Lomond and the Trossachs National Park Plan (adopted 2007);
- Loch Lomond and Trossachs National Park Landscape Character Assessment.¹⁵⁰

¹⁵⁰ Loch Lomond and the Trossachs National Park Landscape Character Assessment, ERM, 2005, SNH commissioned report No 93

10.3 CONSULTATIONS

Consultations about the landscape and visual impacts of the scheme have been undertaken with LLTNP and SNH. The main points arising from these consultations were:

- the site is within an Area of Great Landscape Value and the National Park. An assessment of impacts on landscape character should be included (LLTNP, 2006);
- visualisations should be undertaken to show:
 - actual visual impacts from significant visual receptors;
 - design principles (LLTNP, 2006); and
- the West Highland Way runs close by and a spur descends down Creag Bheannain into Crianlarich which is used by walkers to access hotel and transport. This will therefore be important in terms of general access provision and landscape considerations (SNH, 2006).

10.4 BASELINE CONDITIONS

10.4.1 Study area

The study area for visual assessment is defined by the extent to which the new road and traffic on it may be visible (see 10.5.2, below). This is shown on the visual envelope maps¹⁵¹ (VEM, Figures 10.1 and 10.2).

The study area for the landscape assessment is also based on this VEM but widened out to put the proposed road corridor in context.

10.4.2 Landscape Designations and Policies

The site lies within the Loch Lomond and Trossachs National Park. The National Park Authority inherited the local landscape designations from its predecessor authorities and the Crianlarich area is designated as an Area of Great Landscape Value (AGLV), a regional (as opposed to national) landscape designation (see Figure 10.3).

The first listed of the four aims of the National Park¹⁵² is: *‘To conserve and enhance the natural and built heritage of the area’*.

Similarly, the first guiding principle of the National Park Plan is:

Guiding Principle 1 Conserving and Enhancing the Special Qualities

All policies, actions and initiatives promoted in the Plan must be compatible with the long-term conservation and enhancement of the Park’s special qualities, with decisions based wherever possible on sound knowledge and science and an understanding of the impacts on the special qualities. Where there is uncertainty or a lack of knowledge over the nature of potentially damaging impacts, the Precautionary Principle¹⁵³ will be applied, reflecting the Sandford Principle¹⁵⁴.

¹⁵¹ Visual Envelope Map (VEM): Map showing the area of land within which there is a view of any part of the proposed development

¹⁵² Defined by the National Parks (Scotland) Act 2000

¹⁵³ The Park Authority and its partners will apply the Precautionary Principle wherever necessary. The Park Authority will apply it a cross its full range of powers, including planning and access functions. New information or other data suggesting scientific certainty may lead to a review of decisions made using the Precautionary Principle

¹⁵⁴ The principle, set out in Section 9(6) of the National Parks Scotland Act (2000), states that if it appears there is a conflict between the four Park aims, the Park Authority must give greater weight to the conservation and enhancement of the natural and cultural heritage

Policy LS2 Landscape Character of the Loch Lomond and the Trossachs National Park Plan states:

The character of the Park's landscapes, particularly in relation to uplands, open landscapes, forests, woodlands and trees, lochs, sea lochs and rivers, farmed and historic landscapes, will be conserved and enhanced in accordance with the objectives and guidelines set out in Schedule 1, and alongside other relevant Park Plan policies relating to biodiversity, land and water management and built heritage.

Policy LS3 Landscape Experience of the Loch Lomond and the Trossachs National Park Plan states:

The landscape experiences of the Park will be conserved and enhanced through:

- *Safeguarding the visual and scenic qualities of the landscape from inappropriate or insensitive development or land use change.*
- *Safeguarding important views, viewpoints and landmarks from development or land use change that would detract from their visual integrity, contribution to the identity of the place and scenic quality and, where appropriate, encouraging access to and opening up of new views.*
- *Enhancing the experience of travelling the Park's routes, particularly the views from road, rail and long distance routes.*
- *Safeguarding the unspoilt, wild and tranquil qualities of the Park's landscapes by resisting development or land use activities that have adverse effects on these qualities.*
- *Conserving the experience of the night sky in less developed areas of the Park through design solutions with low light impact.*

Neither the National Park nor the AGLV designation prohibit development but both require high standards of design and most particularly respect for the character, environment and amenity of the surrounding area.

10.4.3 Landscape Description

Crianlarich lies at the intersection of the broad glaciated valleys of Strath Fillan and Glen Dochart, and the narrower valley of Glen Falloch. Glen Dochart and Glen Falloch appear once to have been a single valley but glaciation favoured Strath Fillan, carving this out broader and deeper such that it and Glen Dochart form a continuous whole whilst Glen Falloch hangs some 20m above the Strath, sloping down from a shallow col about a kilometre to the south.

The village occupies a triangular site on the south side of the Strath Fillan / Glen Dochart valley on the gentler slopes above flood level and below the start of the mountainsides, and extending a short way south up Glen Falloch.

The broad valley floor of Glen Dochart / Strath Fillan (some 500m across) contains the meandering channel of the River Fillan, flowing towards Loch Tay and the east coast, part of the River Tay catchment. The short section of Glen Falloch that slopes towards the village contains only minor burns, with the bulk of the flow off the hillsides to the south running into the River Falloch and hence south and west to Loch Lomond and the Clyde catchment.

The valley floor sits just below the 160m contour. To the north, on the inside of the bend in the Strath, the land rises steadily but comparatively gently for some 2km to rounded summits around the 500m level. Overall these slopes and summits to the

north look relatively smooth and rounded, although in close-up they are hummocky and include a few rocky outcrops.

To the south, either side of Glen Falloch, the land rises more abruptly and more ruggedly to a series of mountain ridges and peaks. These culminate at about 650m to the west of the village but over 900m to the south and over 1000m to the southeast.

These summits include a number of Munros¹⁵⁵, most notably the dramatic and shapely peaks south and southeast of the village, Cruach Adrain, Stob Binnien and Ben More.



Figure 10.4 Crianlarich occupies a small triangular site on the south side of the Strath Fillan / Glen Dochart valley, enclosed to the south by forestry plantations.

There are two large conifer plantations dominating and more locally enclosing the village to the south: Inverardran Forest to the southeast, and Ewich Forest to the southwest. Both are predominantly monocultures of Sitka spruce with some Norway spruce and larch.

To the southeast of the village, on land which rises above the settlement and is bounded by the start of the commercial plantation, there is a small community woodland which has been planted with a mixture of native woodland and moorland species (see Section 6.4.4). This has a small but well-used network of short walks and sitting spots which give good views over the village and across the valley.

Strath Fillan contains sporadic groups of deciduous trees and Glen Falloch contains some remnant Caledonian Pine (Scots pine) woodland. More locally, and generally throughout the area there are scrubby clumps and belts of birch and willow woodland on locally steeper or less grazed land. These are particularly noticeable on the railway embankments and close around the village.

¹⁵⁵ Scottish hills over 3000 feet on a list maintained by the Scottish Mountaineering Club, all regularly walked and important outdoor recreation destinations

Outside the wooded areas, the vegetation is mostly the usual Scottish hillside mosaic of rough grass, sedge and heather, with rushes and mosses in wetter areas. Grass predominates on the lower and more grazed slopes whilst heather predominates on the higher and less grazed slopes. There are some areas of improved pasture in the valley bottom.

The village, which appears to have grown up here as the intersection between two important transport corridors, occupies a constrained site. It is limited to a small triangle of moderately sloping land between the flood level of the River Fillan to the north and the steeper slopes of the mountains to the south.

It is a large scale landscape in which the village of Crianlarich forms a small feature. The impact of man is clearly evident in the form of the village itself, the roads and railways, as well as farming and associated field boundaries and other features. It is also present, but less obvious to the lay observer, in the substantial conifer plantations to the south and the open grazed moorland nature of the mountainsides to the north. Overall however it is a landscape in which nature, in the form of the mountains and the mountain weather, predominates.

The road corridor forms a small part of this landscape, a narrow band of rough moorland and a small area of conifers on the edge of the village. To the west it is bounded by the conifer plantation of Ewich Forest, the corner of which is cut into by the road. To the east it is bounded by the village and particularly by the houses on Tyndrum Terrace, Willow Brae and Glen Falloch Road.

10.4.4 Landscape Character Areas

The study area is covered by the Loch Lomond and the Trossachs: Landscape Character Assessment (LCA) carried out on behalf of SNH in 2005.

This study distinguishes four local landscape character areas in the study area: 'Farmed Strath Floor' at the bottom of the Strath Fillan / Glen Dochart valley; 'Open Glen Sides' and 'Forested Upland Glens' above this, merging into 'Open Upland Hills' on the higher slopes.

Figure 10.5 is an extract from the LCA Figure 6.1 showing the local landscape character types.

The following paragraphs highlight the key characteristics of these four local landscape character types, using the description phrases from the LCA.

10.4.4.1 Farmed Strath Floors

- Marginal farmland used predominantly for sheep grazing.
- Flat land, often wet as it forms part of floodplain, enclosed by steep hillsides.
- Field boundaries tend to be a mixture of post and wire fences, some hedgerows, degraded dykes and ditches.
- Settlement occupies higher mounds and hillocks above the wetter areas.
- Transport corridors (road and rail) often follow the edges of strath floors, on the dryer land, forming strong man-made edges, above which the hills rise.
- Historic features can be highly visible, for example St Fillan's Priory, but other features can be less obvious, such as cropmarks within farmed fields.
- Features such as pylons frequently follow strath floors as these are easy routes through the hills.



Figure 10.6 Farmed Strath Floor: the Strath Fillan / Glen Dochart valley.

10.4.4.2 Open Glen Sides

- Steep open glen/strath-sides, often craggy with rock outcrops, rising from the glen floor to the hilltops.
- Scattered trees and shrubs punctuate vegetation comprising moorland grasses and herbs, often with bracken on the lower, drier grazed slopes.
- Glen sides are better drained than glen bottoms. Spring lines are a common feature, and are often associated with flushes of bright green vegetation.
- Settlement and infrastructure is sparse. Some roads and railway lines are aligned high on glen sides for example above Strath Fillan.



Figure 10.7 Open Glen Sides: there is a narrow strip of this landscape character type between the village and the surrounding forest.

10.4.4.3 Forested Upland Glens

- Upland glens and glen sides planted with dense commercial plantations. The better examples exhibit a mosaic of forests and open space.
- Native woodland (if present) follows the watercourses, with plantation species on the higher glen sides.
- Underlying landform is diverse, with steeply falling burns, rock outcrops and screes, but forests can give a uniform appearance.
- Forests are shaded and damp, with woodland herbs thriving in glades and openings where the light penetrates, and a bare forest floor where shade is too

deep to allow colonisation. Forests provide shelter and useful habitats, having a damper, warmer, more sheltered micro-climate than open areas beyond.

- Forest edges are sometimes straight. Recently ameliorated edges grade more naturally into open landscapes, with the density of tree planting becoming lower towards the edges.
- Where forestry is present on both sides of the glen and trees reach roadsides the glens can feel dark and enclosed to travellers.
- Forest tracks are often intrusive in the landscape, with erosion scars and over-deepened drainage ditches. Recolonisation of vegetation is difficult on cut faces.
- Forest areas are often open to public access, and are popular with walkers and mountain bikers. Car parks and trails are provided by the Forestry Commission.
- Archaeological features and abandoned buildings are often hidden within forests. Features are likely to include former field systems as these are seen on open glen-sides.



Figure 10.8 In the foreground, a narrow strip of 'Open Glen Side'; in the background, 'Forested Upland Glen' and 'Open Upland Hills'

10.4.4.4 Open Upland Hills

- Open upland hills rising to 1174m AOD at Ben More, but typically lower in the west.
- The majority of the open upland hills are underlain by Dalradian age metamorphic rocks.
- A diverse landform of peaks, smooth moorland, rocky outcrops, gullies and screes.
- A branched system of fast flowing burns, waterfalls and lochans drains the uplands. Much of the land is wet, with peat soils.
- Vegetation comprises heather, typical moorland herbs, grasses, sedges and mosses. There are small areas of native woodland and scattered trees on lower slopes. Typical species include birch and oak.
- Harsh climatic conditions prevail. Exposed, often windy, wet, with winter snows.
- Land is open and largely unenclosed, the few fences and dykes confined to the lower slopes. It is used for sheep grazing, deer stalking and grouse shooting.
- Infrastructure such as roads and railways, is rare, the uplands are largely inaccessible except by foot, mountain bike and ATV, via paths and stalking

tracks.

- Footpaths follow ridgelines and are most evident on the Munros and popular accessible peaks that receive most recreational pressure.

The level of detail at which the landscape can be subdivided is dependent on the scale at which it is studied. In the LCA, which is addressing the whole National Park, 'Open Glen Sides' are identified as separate landscape character types when they are of a substantial scale and the 'Forested Upland Glens' landscape appears to directly abut the village. At the scale of Crianlarich village there is a narrow strip of 'Open Glen Side' landscape between the edge of the village and the edge of the adjacent forestry. This strip of land would be substantially taken up by the proposed road and the associated mitigation landform. The road would also clip a corner and an edge of the 'Forested Upland Glens' landscape.

10.4.5 Potential for Landscape Change

The LLTNP landscape character assessment considers the various forces for change which apply to the National Park as a whole as well as those which apply to local landscape character types.

It specifically recognises the pressure for upgrading of the A82 north of Tarbert and highlights that serious work would be required here to avoid major landscape impacts.

It notes *'Improvements to sections of the A82 that have already been implemented have created a standard 'roadscape' which arguably detracts from the landscape experience.'*

Under the heading **'key issues'** it states, inter alia:

'Forces for change include ... insensitive upgrading or maintenance of works to existing roads including intrusive new roundabouts, road widening, detention features, signage, lighting etc. to meet engineering and safety requirements for increased traffic flows on roads in the study area.'

Observation of the Crianlarich area suggests that the other major potential for landscape change is in the long-term restructuring of the commercial forestry plantations that dominate the village to the south. Smaller but potentially significant potential for landscape change also arises from the pressure for housing development in the village.

Schedule 1 of the National Park Plan lists objectives and guidelines for landscape character by landscape components within the various landscape character types. The site of the proposed road lies partly within 'open landscape spaces' and partly within 'commercial plantations'. The objectives for these are respectively:

'Safeguard important open landscape components of the glens and lowland areas such as fields and meadows, parkland, deltas and clearings'

'Enhance the contribution that commercial forests and woodlands make to the quality of the Park's landscapes.'

10.4.6 Landscape Guidelines

The LLTNP: LCA gives general guidelines for the key issues that it identifies. For road upgrading it states¹⁵⁶:

'5.4.1 Road upgrading

It is important to respect the existing landscape setting to major roads and ensure that upgrades do not detract from the landscapes through which they pass. The A82 north of Tarbet is an example where future upgrading may have significant landscape and visual impacts unless carefully designed. National policy provides guidance for integrating roads within the landscape.

Development of new roads and widening of existing roads to be avoided in the remoter, wilder areas, such as the open upland hills and upland glens LCTs.

Within small scale lowland landscapes, road improvements should be sympathetic to the existing, small scale landscape and be visually anchored into the landscape through the planting of trees and hedgerows, using species such as beech, ash and oak which are present in existing hedgerows.

Lighting, signage, road lining and concrete kerbs etc. to be kept to a minimum as these are urban features in rural landscapes.

Routes to keep to lower elevations and follow breaks of slope as far as possible avoiding straight alignments against the natural grain of the land.

Any new roads and improvements to existing roads should integrate with the surrounding landscape, responding to the landform where the new works are proposed and avoiding the use of inappropriate elements, such as pre-split rock cuttings where an unnaturally smooth and even angled rock face with regularly cut grooves is created.

Engineering solutions such as reinforced earth structures that can be vegetated should be considered in preference to the use of concrete or gabions in retaining structures in appropriate situations. Irregularly pitched stone slopes may be an acceptable solution for smaller structures if carefully detailed to reflect the local use of drystone dyke construction techniques. Consistency of design throughout is desirable.

Special consideration to be given to the design of the landscape of roads at the entrance to settlements.

The use of characteristic elements such as drystone dykes, hedgerows and tree planting on verges can help to announce arrival and partially screen developments such as petrol stations. Gateway features enhance local distinctiveness and should be encouraged.

New planting is desirable to emphasise existing landscape patterns, strengthen and tie into field boundaries and extend areas of woodland. Avoid creating linear corridors of new planting that would over emphasise infrastructure development.'

¹⁵⁶ This text has been edited to remove a small number of guidelines not relevant to a trunk road

10.5 METHODOLOGY

10.5.1 Introduction

This chapter has been prepared with reference to Volume 11 of the Design Manual for Roads and Bridges (DMRB), supplementary guidance published by the Scottish Government in February 2002¹⁵⁷, and to the Guidelines for Landscape and Visual Impact Assessment published by the Landscape Institute and IEMA (2nd edition, 2002).

It assesses two distinct but closely related areas of impacts: landscape and visual.

10.5.1.1 Landscape

The character of the landscape derives from a combination of physical factors, natural processes and human intervention.

The landscape assessment considers the changes to the character of the landscape likely to result from the proposed scheme. It synthesises the effect of the scheme on the landscape as a whole, effects on significant individual elements of the landscape, and effects on characteristic combinations or patterns of elements.

Landscape character is generally considered to be a resource in its own right, which exists whether or not there are people present to experience it.

10.5.1.2 Visual

Visual impact assessment is concerned with the views that are available to people affected by the proposed road, and their perception and responses to changes in these views.

Visual impacts can arise from new elements in the landscape that viewers may find intrusive, from new features that obstruct views, or from the removal of existing elements in the view. The assessment considers the response of the people who experience these effects, and it considers the overall consequence of these effects on the visual amenity - the pleasantness, or otherwise, of the view or outlook – that they enjoy.

For the purposes of assessment, whilst it is the people living, working and recreating in the area who actually see the views and enjoy the visual amenity, it is the places they may occupy that are mapped and described as the 'receptors' of the views.

Where mitigation proposals include planting, this would take time to develop. The impact is therefore assessed both for a notional winter day in the year of opening, when the planting would have little effect, and for a summer day fifteen years later when vegetation growth would have made a difference to the degree of visual impact experienced.

10.5.2 Limits to Visibility

The area of study for visual impact assessment is the area from which the proposed road, including side-roads, or the traffic on them may be seen (by definition, visual effects can only occur where at least some part of the

¹⁵⁷ Supplementary Guidance to DMRB Vol 11 S.3 Pt. 5 Landscape & Visual Assessment, issued by the Scottish Executive Development Department, National Roads Directorate, 11th February 2002

development is visible). The first step in the assessment is therefore to establish this area, the 'visual envelope'.

The visual envelope was produced by computer modelling. A three dimensional model of the road was overlain on to the Ordnance Survey's digital terrain model.

Computer generated 'lines of sight' were then generated from points at frequent intervals along the road to show where can be seen from the road and thus where can see the road.

The exercise was then repeated with a notional line 4m above the road centreline to allow for the height of typical lorry.

The end result is two Visual Envelope Maps (Figures 10.1 and 10.2), which show both where the road may be visible from and where a 4m high vehicle on the road may be seen although the road itself is screened.

Figure 10.1 shows the potential visibility over the wider area. No allowance was made for any local screening such as woodland or buildings, so this shows not only where the road could be seen from now but also where it may be visible when the forestry plantations are eventually felled.

Figure 10.2 shows the potential visibility in the vicinity of the village. For this figure, key items that might block the view such as areas of plantation woodland, buildings and the railway embankment were factored in to improve accuracy. Smaller screening factors such as individual or small groups of trees were ignored.

In all the modelling, the small area of plantation between the new road and the village was ignored on the assumption that this could be susceptible to windthrow and felled for safety reasons.

10.5.3 Significance

Both for the landscape and visual assessments significance of the various effects of the proposed road derives from the combination of the **magnitude** of change and the **sensitivity** of the site or of those human receptors who benefit from a given view.

10.5.3.1 Landscape

The **magnitude** of change to the landscape can be categorised as follows:

- **High:** a noticeable change to the landscape over a wide area or an intensive change over a limited area.
- **Medium:** small changes to the landscape over a wide area or noticeable change over a limited area.
- **Low:** very minor changes to the landscape over a wide area or minor changes over a limited area.

The sensitivity to change of a landscape varies with the type of change being considered and how it affects the landscape. Sensitivity is a function of how much the landscape is able to accommodate the changes caused by the new road and the value ascribed to the landscape by the public and by public authorities.

Landscape **sensitivity** can be broadly categorised as:

- **Highly sensitive:** areas of landscape that are highly valued, particularly rare or distinctive, or considered susceptible to small changes.
- **Moderately sensitive:** areas of landscape that are valued more locally and/or are tolerant of moderate levels of change.
- **Slightly sensitive:** areas of landscape that are generally more commonplace, considered potentially tolerant of noticeable change, or undergoing substantial development such that their character is one of change.

There is no precise link between landscape sensitivity and landscape quality but in general, areas that are considered of higher quality tend to be more highly valued.

10.5.3.2 Visual

The **magnitude** of change is a function of the scale and type of change to the landscape in the view under consideration. This includes the distance to the changed parts of the view, the type of change to the landscape (whether the changes are well integrated or stand out in contrast or above the horizon), the location of the proposals in relation to the direction of the view (i.e. central to the view, or off to one side) and the extent of the view affected by the change.

Magnitude can be broadly categorised as follows:

High: the proposed development dominates the view and substantially changes its character and quality. Examples of this might be:

- a road junction in full view; or
- a high embankment cutting across a currently open view.

Medium: the proposed development is clearly noticeable in the view and affects its character or quality. Examples of this might be:

- the new road extensively visible in the middle-ground of a rural view;
- lighting from a partially screened junction in a rural landscape where there was previously no road lighting.

Low: the proposed development does not affect the character and quality of the view, or it is a minor element likely to be overlooked by the casual observer. Examples of this might be:

- the new road visible in the background of a wide view;
- a new cutting is visible but does not form an obviously intrusive notch in the skyline; and
- temporary loss of vegetation which is only partially visible.

The **sensitivity** of the receptors of visual effects is a function of their expectations and reasons for being there, the importance and value of the landscape viewed, and the nature and context of the viewpoint and the importance of the view.

Visual **sensitivity** can be broadly categorised as follows:

Highly sensitive: receptors for whom or from which the view is important and where changes would be particularly noticed. For example:

- residential properties where the road is seen in the main outlook;
- regularly used or locally valued public open spaces or outdoor recreation sites; and
- well used or locally valued footpaths or public viewpoints.

Moderately sensitive: receptors for whom or from which the change in the view is a small element in the overall view, not critical to the visual amenity, or where the nature of the view is of secondary importance to the user. For example:

- residential properties where the road is seen from a side window;
- hotels and restaurants;
- lightly used public open spaces or outdoor recreation sites;
- lightly used footpaths or public viewpoints; and
- people travelling on roads and railways.

Slightly sensitive: receptors for whom or from which the change is unimportant or irrelevant, or where their attention can reasonably be expected to be focussed on their work or activity, for example:

- workplaces;
- indoor recreation centres.

10.5.3.3 Significance Categories

The significance of the visual and landscape impacts has been categorised as set out below, on the basis of the professional judgement of skilled observers, working in the field. It must be emphasised, however, that there is a continuum of impacts and that the steps in the categories are guideline thresholds. Assessments of magnitude and sensitivity, as well as the choice of the significance category into which a given effect should be placed, are all matters of professional judgement (see also Section 1.6.4).

Table 10.1: Guideline Landscape Impact Significance Categories

Significance	Definition	Guideline Thresholds
None	No detectable change to the environment	No discernible change to the landscape
Minor	A detectable but non-material change to the environment	Minor changes to a landscape considered tolerant of change
Moderate	A material but non-fundamental change to the environment	Noticeable change to a landscape tolerant of moderate levels of change
Major	A fundamental change to the environment	Noticeable change to a sensitive or nationally valued landscape, or intensive change to less sensitive or regionally valued landscape

Table 10.2: Guideline Visual Impact Significance Categories

Significance	Definition	Guideline Examples
None	No detectable change to the environment	Neither the road and its structures nor traffic on it can normally be perceived.
Minor	A detectable but non-material change to the environment	The changes caused by the development are a minor element in a view and/or the view is of minor importance to the viewer

Significance	Definition	Guideline Examples
Moderate	A material but non-fundamental change to the environment	The changes caused by the development are clearly noticeable and affect the quality of a view and/or the view is incidental or of secondary importance to the viewer
Major	A fundamental change to the environment	The changes caused by the development dominate and substantially alter the character of the view, and/or the view is considered important to the viewer

10.5.3.4 Assumptions and Technical Deficiencies

For the landscape assessment, the significance assessed is that of the effect of the proposed road on the landscape character zone as a whole. This can tend to under-record the significance perceived within a localised area. For example an embankment across a small valley may have a major adverse impact on the landscape of that valley, whilst the road as a whole may result in only a moderate effect on the landscape character zone as a whole.

For the visual assessment, all places from which it was considered there could be a significant impact were considered. However, in order to keep this assessment comprehensible, groups of receptors with similar impacts, particularly groups of houses with similar views, have been treated as one receptor.

The expected changes to views from buildings were assessed from outside the buildings in question. The views assessed are therefore not exactly those which are experienced by the receptor, although every effort was made to envisage what the view would be.

The VEM was used as a working tool for the purposes of selecting the receptors to be assessed and as so it was deliberately designed to err on the side of caution. There may be receptors outwith the VEM which have not been assessed but if there are, it is unlikely that they would be subject to any significant impacts.

The views of the professional carrying out the assessment may not necessarily be those of other professionals or of people using the area; however the nature of the assessment has been made as objective as possible in order to reduce inconsistencies and anomalies.

The assessment is based upon the views of the professional carrying out the field survey work and is consistent over the study area.

10.6 POTENTIAL IMPACTS

10.6.1 Introduction

The proposals are described in full in Chapter 3. This section highlights the aspects of the development that may have landscape or visual impacts.

10.6.2 Potential Landscape Impacts

The new road may affect the landscape in a number of ways, including:

10.6.2.1 Permanent Impacts

- Introducing a large linear feature into a rural area;
- direct loss of landscape features such as trees, woodlands and knolls;
- altering an individual landform with a cutting or an embankment;

- altering the pattern of the landscape by introducing a strong line that cuts across the 'grain' of the landscape;
- altering the pattern of field boundaries; and
- altering features of natural or cultural heritage interest.

10.6.2.2 Construction Impacts

There may be localised landscape impacts from the presence of construction compounds and temporary spoil heaps. Overall however, the impacts on the landscape during the construction period would be the same as the permanent impacts, although generally of slightly greater significance because of the presence of these construction compounds and spoil heaps, together with large machinery moving about. The landscape impacts would also be somewhat greater immediately after construction, before the raw scars of new cuttings and embankments have had a chance to 'green up' from the landscape works.

Changes to the landscape are also likely to be more noticed by local residents or regular passers-by during the construction period because of the short time-scale over which they take place. On the other hand, construction impacts may be considered to be less significant due to their temporary, short term nature.

10.6.2.3 Operational Impacts

- Introducing the movement and noise of vehicles into a comparatively tranquil landscape;
- the introduction of vehicle lights and road lighting at night into previously dark areas.

10.6.3 Potential Visual Impacts

The likely visual effects of building the new road include the following.

10.6.3.1 Permanent Impacts

- The intrusion of the road into a comparatively undisturbed landscape;
- new embankments which intrude into people's views, such the view from Glenfalloch Road;
- cuttings which create notches on the skyline or scars on the hillside, such as behind Tyndrum Terrace;
- structures that stand out in the landscape, such as roundabout approach signs;
- the increased visual presence of the road in addition to the existing built-up area, such that development forms a larger part of the view ; and
- felling of trees that leads to the opening of new views.

10.6.3.2 Construction Impacts

- The installation of a large construction compound;
- the movement and activity of large construction machinery, usually with flashing hazard lights;
- views of cranes;
- new embankments and cuttings, particularly noticeable because of changes over a short time-scale, and the extent of bare earth visible;
- temporary spoil heaps and potentially borrow pits and disposal areas;
- temporary traffic management; and

- floodlighting of areas for evening and morning working during the winter.

10.6.3.3 Operational Impacts

- The introduction of movement (of traffic) into the quiet side of the village; and
- new road lighting changing the night-time view.

10.7 MITIGATION

10.7.1 Introduction

A scheme for a Crianlarich was first considered in 1985. In 1993 six options were considered with three taken forward to Stage 2 in 1994. From this work a western bypass was taken through the DMRB process to Stage 3, detailed environmental assessment. When the scheme was revived in 2006, the process was re-started at Stage 2, with the three 1994 options re-considered, concluding with the proposal for the western bypass which is here being assessed (see Section 2.4).

This section outlines the design strategy for the road which was developed through the Stage 2 Addendum and the Stage 3 design process and sets out the general and specific mitigation commitments arising from this assessment.

10.7.2 Stage 2 Addendum Report (2007)

The Stage 2 Addendum report identified the western alignment as the preferred alignment for the bypass (see Section 2.4).

Consideration of mitigation was an integral part of the design strategy developed during the Stage 2 Addendum process.

10.7.3 Design Strategy

Once a final route corridor was selected, the design was worked up and adjustments to line and level were made to improve its detailed 'fit' to the landform and to optimise the cut and fill balance. An example of this is in the realignment of the West Highland Way spur, where this footpath has been diverted to pass under the road at the lowest point in the landscape in order to reduce the embankment height required (see Figure 10.9a).

The road landscape design and mitigation strategy which flows out of this ES, and which forms part of the environmental commitments, aims to reduce the effects on the landscape caused by the construction of the new road, and to create where appropriate new landscape features to help integrate the road into the landscape. Through the whole length of the road, the key part of the design strategy would consist of shaping and grading the cutting and embankment slopes to help integrate the shape of the new landform into the existing.

The visual mitigation strategy includes where possible and appropriate the creation of landform and planted screening to reduce the visibility of the road and of traffic from sensitive visual receptors.

The experience of the road user was taken into account during the development of the landscape mitigation strategy (see Chapter 16), however given the proximity of houses to the new road, the mitigation of visual or other impacts on existing residents or receptors was given priority over the views from the road.

The fundamental aims of the design throughout have been:

- to sit the road as low as reasonably practical and to generally follow the lie of the land;
- to create the screening necessary to protect the existing residential receptors;
- to minimise the loss of woodland;
- to set back the new road from the existing houses as much as reasonably possible; and
- to create a roadside landscape that merges with the existing landscape of the area.

The following paragraphs set out a general description of the landscape mitigation adopted in the road design. This is illustrated in Figures 10.9 (a to c) and 10.10 (a to c).

Southern Roundabout

The southern roundabout cuts into a hummocky area of moorland with birch and willow scrub. The cutting slopes would be shaped in a naturalistically irregular manner to help integrate new and existing landforms, then planted with clumps of birch and willow scrub. A bund or knoll would be created to the northeast of the roundabout to reduce the visibility of traffic and lighting from the houses at the southern end of the village.

Immediately east of the existing road, a mature conifer forms a distinct feature at the entrance to the village. The position of the roundabout was adjusted slightly to ensure that this would be retained. However, since the design was developed this tree has started to show signs of die-back.

Ch 200 to 500

This section of road runs mainly on embankment above the level of the existing road and houses.

The road embankments would be kept as low as reasonably practical to minimise the impact on the landscape and on views.

A bund would be created on the southbound side of the road to, as far as possible, block views of the road and traffic from the existing houses and to visually 'lose' the road into a new landscape. This bund would be irregular in both long and cross section, effectively a line of linked knolls to reflect the existing landscape character and to help visually integrate the new road.

Irregular clumps of birch and willow scrub would be planted to replace that lost to the road, positioned to maximise their screening value to the existing houses. The areas of planting considered most important for screening would be protected by deer fencing,

Additional clumps of birch and willow scrub would also be planted outwith the fenced enclosures although it is accepted that these would be likely to be subject to a degree of browsing loss.

A SUDS detention basin would be created by hollowing out the existing marshy ground at an existing low spot in the landscape roughly opposite 'Northumbria' B&B.

This section ends at a short rock cut through the spur of hill that is currently followed by the West Highland Way spur to Crianlarich.

Chainage 500 to 1050

This section of road would run across the slope of the hill, mainly in cut and, from ch730 onwards, close to the rear of existing houses.

The first 80m or so of this section is on embankment. This would be eased substantially to help visually integrate the landform with the existing hillside, but it would be left unplanted to allow views out from the new road.

Beyond ch580, the road is in cutting and beyond ch680 a landform would be created on the southbound side of the road to help screen the road and traffic from the existing houses.

This landform would be steep on the side towards the road but comparatively wide to allow the creation of irregular landform on the side towards the houses, in order to integrate the new landform into the existing by mimicking the existing landscape character of knolls and hollows.

This landform also acts as a noise bund and for this reason it would rise slightly higher than required for purely visual mitigation in a few locations such as at the rear of Tyndrum Terrace in order to achieve significant noise reduction.

Irregular clumps of birch and willow scrub would be planted to replace that lost to the road, positioned to maximise its screening value to the existing houses. The areas of planting considered most important in providing screening would be enclosed by deer fencing to protect them from browsing damage. Other areas outwith the fencing would also be planted but it is accepted that these might be subject to damage and have a lower success rate.

On the northbound side of the road the cuttings would be made irregular in a manner that suits the nature of the ground as found, which is anticipated to be in the order of 1/3rd rock cut to 2/3rd soft slopes. The aim would be to create a cut that looks natural and which has opportunities for soiling, seeding and scattered planting.

The forestry above the road would be cut back to a wind-firm line, generally varying from about 15m to about 50m from the edge of the road corridor. In agreement with the Forestry Commission it is proposed that this area would be planted with scattered clumps of birch and rowan, covering some 25% of the area.

Northern Roundabout

At the northern roundabout, the design strategy would consist of shaping and grading the cutting and embankment slopes to help integrate the shape of the new landform into the existing, replacing the birch and willow scrub lost to the road and adding new planting to reduce the visibility of traffic and lighting.

A short avenue of trees would be planted along the slip road into Crianlarich to give a semi-formal entrance to the village.

The area between Tyndrum Terrace and the roundabout would be reshaped to form a SUDS basin. This would be partially screened from the village side by a palisade fence in the style used throughout the village, reinforced by scrub birch and willow around the basin.

10.7.4 General Mitigation

The landscape mitigation is shown in plan form on Figures 10.9a-c.

The mitigation commitments in this section apply generally to the entire scheme.

- LV1. Soft cut and embankment slopes would be rounded off both top and bottom to the largest radius practical and generally shaped to create as naturalistic landform as possible within the constraints of the land made available.
- LV2. Rock cuts would be cut to the natural grain of the rock (no pre-splitting) to create an aesthetically pleasing naturalistic landform – within the constraints of geotechnical safety requirements.
- LV3. Peat or topsoil would be loose-tipped over the cutting to provide pockets into which plants could establish.
- LV4. Bunds and false cuttings would be tapered out at a gradient of not more than 15% along the road line in order to avoid sharp and un-natural transitions between landforms.
- LV5. Bunds and false cuttings would be substantially widened on the side away from the road to allow the creation of a 'knolls and hollows' landform to mimic the existing and ensure the long-term landscape integration of the new road. (generally 1:2 slopes to the road side, 9m radius crest rounding, average 1:4 slope away from road, minimum 1:7 slopes parallel to the road).
- LV6. The relationship between bund height, viewpoints at receptors, and road heights would be taken into account in any design development that amends road levels, so that the screening effect described in this assessment is not reduced to a significant degree.
- LV7. All planting would be carried out using plant material of local provenance (the closest provenance that is available in commercial quantities) in order to ensure maximum benefit for local biodiversity.
- LV8. Turfs from the areas stripped for the works would be safeguarded for use in restoration wherever practical.
- LV9. All areas of land disturbed by the works would be lightly cultivated or graded to allow natural recolonisation by local species. Where there are questions of slope stability and anywhere where a good sward fails to develop within a few months would be sown with a low-vigour grass-seed mix (70% *Festuca* spp., 30% *Agrostis capillaris*). Bunds in proximity to houses would be seeded if natural recolonisation was slow.
- LV10. New woodland would consist primarily of birch and willow planted in loose irregular clumps to mimic that found naturally. Small quantities of rowan, oak, elm and gean would be introduced locally where ground conditions are suitable in order to increase biodiversity or add local interest. The slopes facing the gardens at the rear of Tyndrum Terrace would be planted with a wider range of species to reflect the more domestic situation, including a percentage of evergreens and semi-evergreens to improve screening in winter. Species used would be selected from the following:

Table 10.3: Species used in New Woodland Mitigation Planting

Birch and willow scrub ¹⁵⁸	
Downy Birch	<i>Betula pubescens</i>
Goat Willow	<i>Salix caprea</i> agg.
Grey Willow	<i>Salix cinerea</i> agg.
Additional species that may be used to the rear of Tyndrum Terrace	
Blackthorn	<i>Prunus spinosa</i>
Dog-rose agg.	<i>Rosa canina</i> agg.
Guelder-rose	<i>Viburnum opulus</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Raspberry	<i>Rubus idaeus</i>
Scots Pine	<i>Pinus sylvestris</i>
Wild Privet	<i>Ligustrum vulgare</i>
Tree species that may be used selectively	
Pedunculate Oak	<i>Quercus robur</i>
Sessile oak	<i>Quercus petraea</i>
Rowan	<i>Sorbus aucuparia</i>
Wild Cherry	<i>Prunus avium</i>
Wych Elm	<i>Ulmus glabra</i>

- LV11. In agreement with the Forestry Commission the area between the new road and the edge of the forest outwith the road corridor would be planted with scattered clumps of birch and rowan, covering some 25% of the area.
- LV12. Deer fencing would be used to protect those areas of new planting considered most important for visual mitigation screening (to the rear of Tyndrum Terrace; between Willow Brae / Square and the new road; between Gleann Fiadh Lodge and the new road; east of the road between chainages 600 and 650 approximately and; between the south roundabout and the West Highland Way underpass on the side towards the houses). It may also be used to protect some other areas of planting and to control deer movement (see Section 3.4.2). Lines of deer fencing are shown on the outline landscape proposals drawings, although these would be subject to review once the final landform was complete.
- LV13. Any engineering structures would be faced with materials or with patterns sympathetic to the rural environment. This would include avoiding the use of plain facing to wing-walls, unsympathetic geometric patterns such as hexagonal reinforced earth panels and gabions.
- LV14. Culvert headwalls would be faced with local stone and designed to resemble dry-stone walls in random rubble brought to courses.

10.7.5 Mitigation during Construction

The mitigation commitments in this section apply generally to the entire scheme.

- LV15. Construction compounds would be located away from residential areas as far as practical.
- LV16. Lighting of compounds and construction areas would be restricted to the minimum necessary for safe working and site security.

¹⁵⁸ Additional species of willow found locally may be added to this list

- LV17. Materials and machinery would be stored tidily during the works. Tall machinery including cranes would not be left in place for longer than required for construction purposes, in order to minimise its impact in views.
- LV18. Roads providing access to site compounds and works areas would be maintained free of dust and mud.
- LV19. On completion of construction, all remaining construction materials would be removed from the site.

10.7.6 Specific Mitigation

The sections following contain more specific local mitigation commitments, but the general commitments above (such as the wildflower seeding, or the rounding off of earthworks) are not repeated. These commitments are shown in plan form in Figures 10.9a-c and in cross section in Figures 10.10a-c.

Southern Roundabout

- LV20. Road and junction alignments would be designed to retain the existing prominent conifers at the entrance to the village, providing that these are in good health immediately prior to construction.
- LV21. Mounding would be formed northeast of the junction to screen the road and reduce the visibility of traffic on the roundabout from the houses on Glenfalloch Road north of the junction.
- LV22. Clumps and groups of scrub woodland would be planted around the junction and on the new landforms to enhance the screening and to help visually integrate the new road in the landscape.

Ch200 to 490

- LV23. From Ch200 to 415, mounding would be formed on the east side of the road to reduce the visibility of the road and traffic from the houses on Glenfalloch Road.
- LV24. A SUDS area would be formed at an existing low spot approximately opposite 'Northumbria' B&B. This would be designed to look like a large depression in the existing marshy ground, with natural slopes and an irregular form. The extent of marginal planting around this SUDS basin would be defined after construction. If it holds water, it would be planted with native marginal and aquatic species. If it remains as boggy ground it would be allowed to recolonise naturally.
- LV25. From ch250 to 415 and from 420 to 440, the slopes on the west side of the road would be eased out substantially to help merge the new slopes into the existing form of the land.
- LV26. The mounding and slope easing would taper out at about ch 415 and recommence at about ch420 in order to minimise the length of the West Highland Way spur underpass.
- LV27. From ch420 to 450, the slopes on the east side of the road would be eased out substantially to help merge the new slopes into the existing form of the land.
- LV28. The line of the West Highland Way spur would continue in the line of the underpass for a short distance either side of the underpass so that the route on was clearly visible through the underpass.
- LV29. West of the road, the realigned West Highland Way spur climbs a steep and rugged slope to rejoin its existing alignment. The design of this section would be carefully developed at the detailed design stage by a mountain path specialist. It would be designed and constructed as a

mountain path, with finishes and gradients that match the adjacent existing path or suit the existing terrain to ensure that it visually integrates into the landscape and that the mountain experience is maintained for users of the West Highland Way spur. Timber edgings and timber step risers would be avoided.

- LV30. East of the road the realigned West Highland Way spur would take advantage of an old track bed to create a visually sympathetic and virtually level route to the car park and existing path start.
- LV31. Throughout this section, clumps and groups of scrub woodland would be planted on the new embankments and mounding to enhance the screening and to help visually integrate the new road in the landscape. On average, planting would cover between 15% and 20% of the land available. Clumps and groups would be sized and distributed in a manner similar to the existing scattered scrub woodland in the area, and positioned where appropriate to maximise its screening benefit whilst retaining a naturalistic distribution.
- LV32. The detailed design of this area might lead to changes in the road levels. In any design development, the relationship between the screen mounding, the road levels and the view from the houses on Glenfalloch Road would be maintained to ensure that the eventual screening effect is not substantially different from that shown in the mitigation design.

Ch490 to 700

- LV33. From ch490 to 570 on the west side and from ch510 to 560 on the east side, embankments would be eased out substantially to help merge the new slopes into the existing form of the land.
- LV34. Clumps and groups of scrub woodland would be planted on the new landforms to enhance the screening and to help visually integrate the new road in the landscape.
- LV35. From ch530 to 700 on the west side and ch560 to 680 on the east side, the road would cut through existing plantation woodland. This would be felled back to the nearest wind-firm edge and the area between the road corridor and the new forest edge planted with clumps of birch and rowan in agreement with the Forestry Commission. The areas within the road corridor would be planted with birch and willow scrub as LV31, above.
- LV36. Clumps and groups of scrub woodland would be planted on cutting slopes in soft material (as LV31) to help visually integrate the new road in the landscape.

Ch700 to 1050

- LV37. From ch700 to 1040 mounding would be formed on the east side of the road to reduce the visibility of the road and traffic from the adjacent houses. This mounding would also serve as a noise barrier.
- LV38. The detailed design of this area might lead to changes in the road levels. In any design development, the relationship between the screen mounding, the road levels, the view from the adjacent houses and the predicted noise attenuation would be maintained to ensure that the eventual screening is not substantially different, and the noise reduction effect is not significantly different, from that shown in the mitigation design.
- LV39. Throughout this section, clumps and groups of scrub woodland would be planted on cutting slopes in soft material and on landscape and noise bunding (as LV31, but with the proportion of woodland cover

increased between the road and houses to an average of 40% of the area affected) to help visually integrate the new road in the landscape and reinforce screening.

- LV40. Throughout this section the plantation woodland would be at risk from windthrow so it would be felled back to the nearest wind-firm edge. The area between the road corridor and the new forest edge would be planted with clumps of birch and rowan in agreement with the Forestry Commission. The areas within the road corridor would be planted with birch and willow scrub as described above.

Northern Roundabout

- LV41. Redundant parts of the existing road in front of The Shielling would be grubbed up and integrated into the adjacent landform, then planted with birch and willow scrub (subject to visibility requirements for road safety).
- LV42. Wherever the top of the road cutting affects the edge of the existing plantation woodland it would be felled as necessary and replanted as a continuation of LV40.
- LV43. Cutting slopes in soft material would be planted as a continuation of LV41.
- LV44. A short avenue would be created along the spur to Crianlarich to provide an informal gateway to the village and reinforce the urban structure. These would be planted as advanced extra-heavy standard trees to ensure that they had sufficient clear stem height to avoid the visibility envelope for the junction.
- LV45. A SUDS area would be formed at approximately ch1050. This would be designed to look like a large depression with natural slopes and an irregular form. The extent of marginal planting around this SUDS basin would be defined after construction. If it holds water, it would be planted with native marginal and aquatic species. If it remains as boggy ground it would be allowed to recolonise naturally.
- LV46. To reinforce local character, where fencing is required at the SUDS basin this would be, at least in part, a timber vertical board fence in the style used throughout the village as part of previous environmental improvement works.

10.8 LANDSCAPE IMPACT ASSESSMENT

10.8.1 Existing Character

Crianlarich is a small village at the intersection of three valleys, surrounded by mountains. The village is seen in a setting of the broad valley of Glen Dochart / Strath Fillan and the ring of mountains around the village, higher and closer to the south and lower and more distant to the north. It is a large scale landscape in which the village forms a small feature. The hand of man is clearly evident but nature, in the form of the mountains and weather dominates the character.

The strip of land directly affected by the road is the lower mountain slopes of an outlier of the Ben Lui/Beinn Dubhraig massif. Overall this hillside is moderately¹⁵⁹ sloping and at first glance appears quite evenly graded with few crags or outcrops. Looked at more closely however it is rugged and covered in small knolls and hollows.

Most of the area on this side of the village is covered by Ewich Forest. This coniferous plantation, which is poorly designed and out of character with the wider

¹⁵⁹ Moderate in a Scottish mountain context

landscape, blankets the small scale irregularities of landform to produce a large patch of somewhat bland and boring landscape within the dramatic mountain scenery of the district as a whole.

The forest edge lies between 50m and 150m of the village, closer on the Strath Fillan side, slightly further on the Glen Falloch side. This leaves a narrow strip of a more natural landscape where the small scale ruggedness – knolls and hollows with small outcrops and boulders – is apparent. This area is mainly covered in a typical mountainside mosaic of wet heath and bog, according to aspect and drainage, with a substantial scatter of birch and willow scrub. The area is traversed by a deer fence and a low voltage overhead line.

In terms of the local landscape character types distinguished by the Loch Lomond LCA (see Section 10.4.4), the Ewich Forest is 'Forested Upland Glen' and the narrow strip between this and the village is 'Open Glen Side'.

10.8.2 Nature of Change

The new road cuts across the toe of the mountainside just above the village. It introduces a strong smoothly curving linear feature, reinforcing the linear edge to the forestry, and it evens out the small-scale irregularities of landform. The line of the road may be emphasised by a line of rock cutting from approximately ch550 to ch 1050.

The road and its associated mitigation landform primarily occupies the strip of 'Open Glen Side' but it also cuts through the corner of the forest closest to the village and affects the edge of the forest behind Tyndrum Terrace and at the northern roundabout.

Landscape Sensitivity

By definition, the landscape of a National Park is considered highly sensitive because it is highly valued. The area is also designated as an AGLV, emphasising the landscape aspect of its value. However, within this context it could be argued that the blanket of the Ewich Forest and the small scale changes from village development render the area affected by the road somewhat less sensitive than many parts of the Park.

Magnitude of Change

The construction of the new road would involve intensive change to the landscape, albeit over a limited area. It is therefore a high magnitude of change locally. However, in the context of the two landscape character areas as a whole, and in the context of the landscape setting of Crianlarich, contained as it is by the surrounding mountains, the degree of change is moderate.

Effect during Construction

During the construction period the activity of large earth-moving and construction machinery, the obvious changing shape of the landscape and the bare earth of the developing road would combine to create an effect on the landscape character that was **adverse** in nature and of **moderate** significance.

Effect during the Winter in the Year the New Road is Opened

Cessation of construction activity and the final grading out and reshaping of the new cuttings and embankments would reduce the landscape impact more than the introduction of moving traffic would increase it. The effect on the character of the in the immediate vicinity of the road, the area overlooked by the local residents

would be **major adverse**, but in the context of the landscape setting of Crianlarich, it would be **minor adverse**.

Effect in the Summer 15 Years after Opening

It is anticipated that the new planting would have developed sufficiently to soften and blend the new road into the landscape. Overall, whilst a moderate adverse effect on the very local landscape there would be a **minor adverse** effect on the landscape character areas as a whole or on the landscape setting of Crianlarich.

10.9 VISUAL IMPACT ASSESSMENT

10.9.1 Introduction

The visual effects anticipated at the identified receptors are set out in the form of a long table, the Visual Effect Schedule, in Appendix 10.1 and as series of drawings (Figures 10.18 and 10.19, the Visual Impact Drawings). Photomontages from selected viewpoints (Figure 10.20) are shown in Figures 10.21 – 10.24.

The Visual Effect Schedule is a table giving the location, distance from the road, current view and visual effect, for every receptor or group of receptors likely to receive a visual impact.

The following paragraphs give an overview of the impacts, assessed both ‘as new’ – in the winter of the year of opening, and ‘when mitigation planting has established’ – in the summer fifteen years after opening.

10.9.2 Permanent Effects

The construction of the new road and junctions would have visual effects which can be grouped into three types:

- effects on the village;
- effects from local recreational receptors: the Community Woodland and the West Highland Way spur; and
- effects from more remote recreational receptors: the West Highland Way and the surrounding hills, which include several popular Munros and their approach routes.

The southern junction would be visible partially or in the distance from the few scattered houses to the south of the village, giving rise to a slight adverse effect in the short term, becoming negligible over time as screen planting develops.



Figure 10.11 View from the A82 approaching the village from the south. The new road would sweep to the left in this view, to a new roundabout slightly cut in to the rising ground. The existing road would be grubbed up and the land gently mounded, seeded and planted with birch/willow scrub similar to that visible in the left of the photo. Once established, the road would be on a new line, and slightly wider because of the 1m hard-strip either side beyond the white line, but the roadside landscape would be similar to that shown. The conifer in the centre the photo is a strong feature at this entrance to the village but is showing signs of die-back. It would be retained if it is healthy at the time of construction

Between the southern junction and ch450, the road would be visible on embankment from some half dozen houses on Glenfalloch Road, however, as these houses already have the existing road and traffic in their immediate foreground, the net effect of the new road would be moderate adverse in the short term, falling to minor adverse as planting matures and the 'rawness' of the road construction recedes. In some places the degree of screening provided by the new road landscape would give a minor beneficial effect as it matures.

Between about ch450 and 600 the road and traffic would be visible in the middle distance from Crianlarich Station (where the heavily touristed West Highland Line trains lay over for about ten minutes) and from Station House and Dunvegan Block. The new A82 and traffic would be visible, further away than the existing but at a higher elevation, giving rise to a moderate adverse effect in the short term, falling to minor negligible as new planting develops to obscure views of traffic.



Figure 10.12 View from Glenfalloch Road, looking south. The new roundabout would be cut into the rising ground to the right of the prominent conifer. The new A82 would run parallel to the existing about 60m to the right in this view. The new road and roundabout would be screened by mounding shaped and planted up as larger versions of the hummocky ground in the right of this view. Cars on the new road would be out of sight. The marshy ground in the foreground would be excavated slightly to form a SUDS basin



Figure 10.13 View from Crianlarich Station, looking west. The existing A82 is behind the picket fence across the middle of the view. The new road would run across the view, cutting into the edge of the conifer plantation on slight embankment. To the right, new planting would eventually reduce the visibility of the road but in the centre of the view a section of embankment would be left unplanted to allow drivers a glimpse of the village

The same section of road would be clearly visible from the footpaths in the Community Woodland to the east of the village (see Section 6.4.5). Little development is visible from much of these paths, so the effect if the above-mentioned corner of forestry is lost would be major adverse, falling to moderate in the longer term.

From ch670 to the western roundabout the road would run mainly in cut close behind the houses on Willow Brae, Willow Square and Tyndrum Terrace. The mitigation design creates a series of bunds which would screen the road from view. The visual impact from the ground floor and gardens would therefore be primarily that of the mitigation landform which would foreshorten views. The existing overhead power line across the area would be undergrounded, removing a degree of visual clutter. The visual impact from the ground floor and gardens would therefore be primarily that of the mitigation landform. This would foreshorten views, giving a moderate adverse effect in the short term on Willow Square, but major on Willow Brae, Tyndrum Terrace and on Gleann Fiadh Lodge.



Figure 10.14 View of the rear of Tyndrum Terrace, looking north west. The existing A82 is on the far side of the houses. The new road would run in a deep cutting through the centre of the view, parallel to the line of houses. The conifer plantation on the left would be cut back and a new deciduous woodland edge planted. A substantial mound would be formed between the houses and the road for visual and noise screening, seeded and planted in a naturalistic manner

In the longer term planting and seeding would develop to give these landforms a more natural appearance. This would reduce the permanent effect to minor at Willow Square and moderate elsewhere.

The western roundabout would be visible through open woodland from The Shielling and obliquely from Ardlea. In both cases the existing road sits in their existing view, so the net effect would be moderate adverse in the short term when the cutting scars are fresh, falling to minor adverse or minor neutral over time.

The West Highland Way runs approximately parallel to the A82, passing through Ewich Forest higher on the hillside. Topography and the forestry effectively screen all potential views of the new road, so there would be no visual effect.

A spur path runs from the West Highland Way to Crianlarich village, emerging from the plantation some 150m west of the village. This last section of the spur path is currently a pleasant walk through open birch woodland. This path would be diverted to pass under the road in a box culvert at approximately ch420. The diversion would have a major adverse effect, reducing to moderate over time as the mitigation planting matures but the underpass would have a permanent major adverse visual effect on a short section of this footpath.



Figure 10.15 View from the West Highland Way spur where it emerges from the conifer plantations. The new road would run parallel to the existing, diagonally across the middle ground of this view. The footpath would be diverted down the slope in front, to a culverted underpass

The road as a whole would be visible from a distance from the flanks of the hills to the north of the village (including the usual approach to Ben Challum) and from large parts of the hills to the east and south-east of the village, including Ben More, Cruach Adrain and An Caisteal. There would be views of the road from the summits or approaches to five Munros¹⁶⁰ and three Corbetts¹⁶¹.

In all of these mountain views, the road would be a small addition to a large scene, immediately adjacent to the existing developed area: it would be visible but would not stand out in the view. Depending on the distance from the viewpoint and the elevation of the viewpoint, the visual effect would be minor adverse or negligible.

¹⁶⁰ A Munro is a Scottish mountain with a height over 3,000 feet (914.4 metres)

¹⁶¹ The Corbetts are peaks in Scotland between 2,500 and 3,000 feet (762 and 914.4 m)



Figure 10.16. View from the summit of Ben More



Figure 10.17. View from the normal route to Ben Challum. The new road would be clearly visible in both these views but would be a negligible addition in such a large-scale landscape

10.9.3 Construction Period Effects

As a general rule, the visual impacts during the construction period would be similar in nature and slightly greater in magnitude to those at the date of opening. The greater magnitude of impact is caused partly by the ‘shock of the new’ – where the viewer perceives the actual change in progress. It is also caused by the nature of the construction process: cutting and embankment sides raw earth scars before they are properly shaped up and grassed over or planted; temporary road diversions and materials heaps visible; large machinery moving, with orange flashing lights; and a site compound (or compounds), where there would be a concentration of activity, and the physical presence of Portacabin style temporary buildings, working areas, car parking and security fencing and lighting.

10.9.4 Operational Effects

The visual operational impacts of the proposed road are caused by the presence of moving traffic, and headlights and road lighting at night.

The only road lighting proposed is associated with the two roundabouts. As the existing road is lit, this would only have a visual effect at the rear of Tyndrum

Terrace where there would be two lighting columns in an area currently unlit. The impact of this would be minor, particularly in comparison with the overall visual effect of the scheme.

Those receptors which experience permanent visual effects from the proposed road are likely to experience additional visual impacts from both views of moving traffic during the day and of headlights at night.

False cuttings have been created along much of the route in order to reduce as far as possible the view of moving traffic or headlights from properties along the line of the road. Similarly, much of the mitigation planting is designed to screen or filter views of traffic from specific properties. At the rear of Tyndrum Terrace, there would be views of moving vehicles from the upper floor. At Willow Square, the tops of high sided vehicles would be visible. In both cases, the net result is to increase the overall visual effect of the road.

On Glenfalloch Road, the existing traffic passes directly in front of the houses. The proposed road would take most of this traffic further from the houses, onto a road with a substantial degree of visual mitigation designed in. The result would be a moderately beneficial visual effect. The net result of the permanent and operational impacts here would be moderately adverse when the road was newly opened and the earthworks still fresh, improving to a slight beneficial effect in the long term as the landscape matures and viewers habituate to the change.

In some situations, particularly in mountainside views, the main impact of the road is the operational impact – the view of moving traffic– where the view of the empty road would only be a slight line or break in the landscape.

10.10 SUMMARY

10.10.1 Findings of the Assessment

- The proposed road runs through the woodland fringe and narrow open landscape along the south-western edge of Crianlarich. At the larger scale the line of the road respects the topography, curving round the toe of the hillside, although it smoothes out the small-scale irregularities, introduces a smooth line in a generally irregular scene and reinforces the artificial nature of the current forestry edge.
- Visual effects occur particularly at either end of the village, where the road runs close to houses. There are lesser effects around the station area but none from the centre of village.
- More widely, there are slight, almost negligible visual effects in views from surrounding hill slopes and tops, including five Munros and three Corbetts.

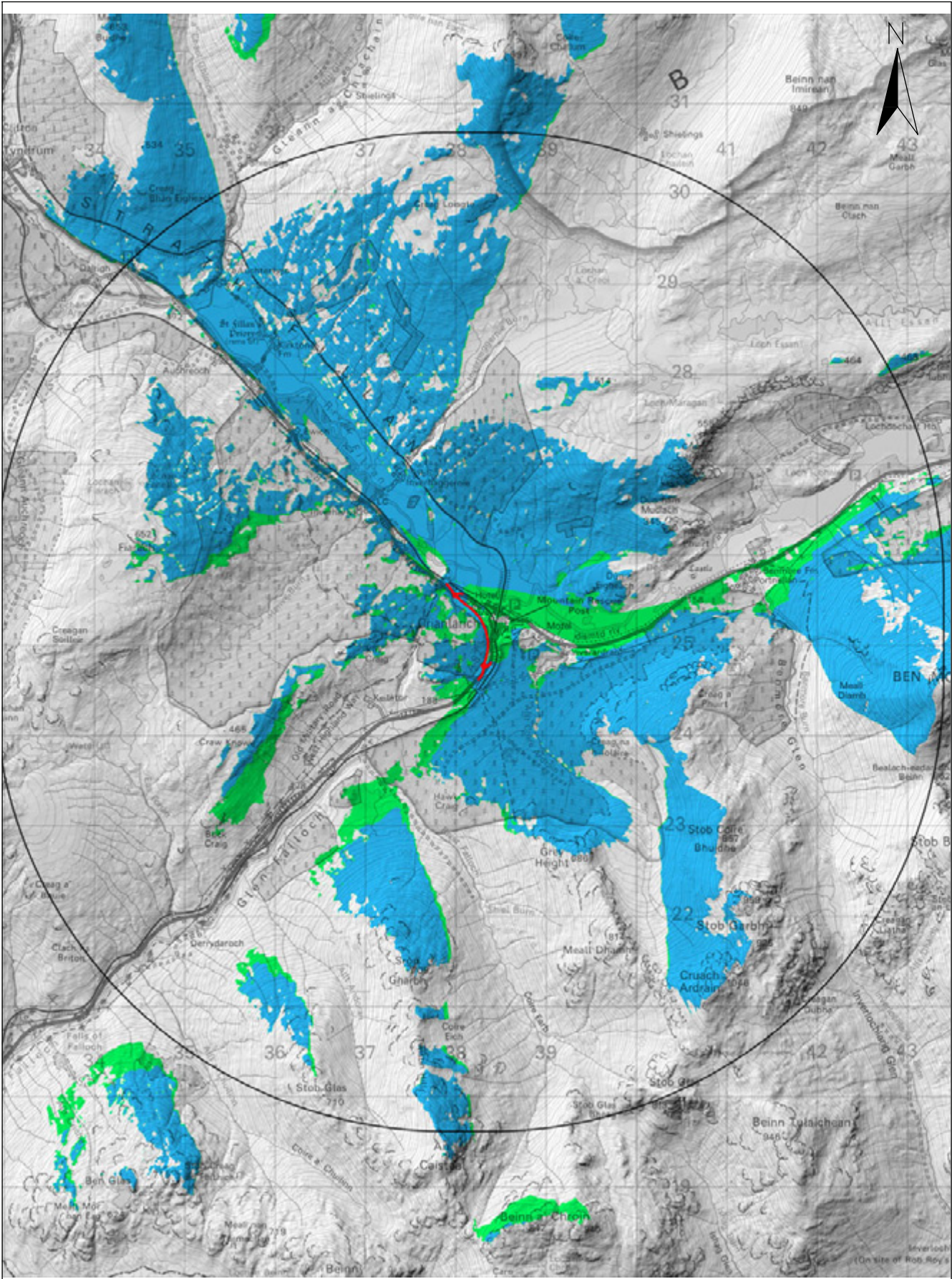
10.10.2 Significant Effects

- At the scale of the landscape character areas as a whole, the new road would have a moderate adverse effect on the landscape during the construction period.
- At a more local scale, there would be a major adverse effect on the landscape of the narrow strip open glen side traversed by the road.
- These effects would all reduce over time as the mitigation matures, such that the eventual overall landscape effect would be minor, although locally they would remain moderate.
- The road and traffic together would have a major adverse visual effect at the time of opening on the group of houses at Tyndrum Terrace, on Willow Brae

and Willow Square and Gleann Fiadh Lodge. They would also have a major adverse effect on parts of the Community Woodland and on part of the West Highland Way spur to the village.

- Over time these effects would be reduced by the development of the mitigation planting and the general roadside landscape. The effects on Tyndrum Terrace would remain major because of the views of traffic from the upstairs rear, and at Gleann Fiadh Lodge the effect would remain major because of views of the road and traffic to the south of the house. They would also remain major at the West Highland Way spur where this crosses under the new road. Elsewhere major adverse visual effects would fall to moderate adverse or, for Willow Square, from moderate adverse to minor adverse.
- There would be moderate adverse visual effects at the time of road opening from The Shielling and Ardlea, from Carna Cottage, from Station House and from the two groups of houses on Glenfalloch Road. Mitigation planting would generally reduce this effect over time to minor adverse and, at the southern group of houses on Glenfalloch Road to minor beneficial.


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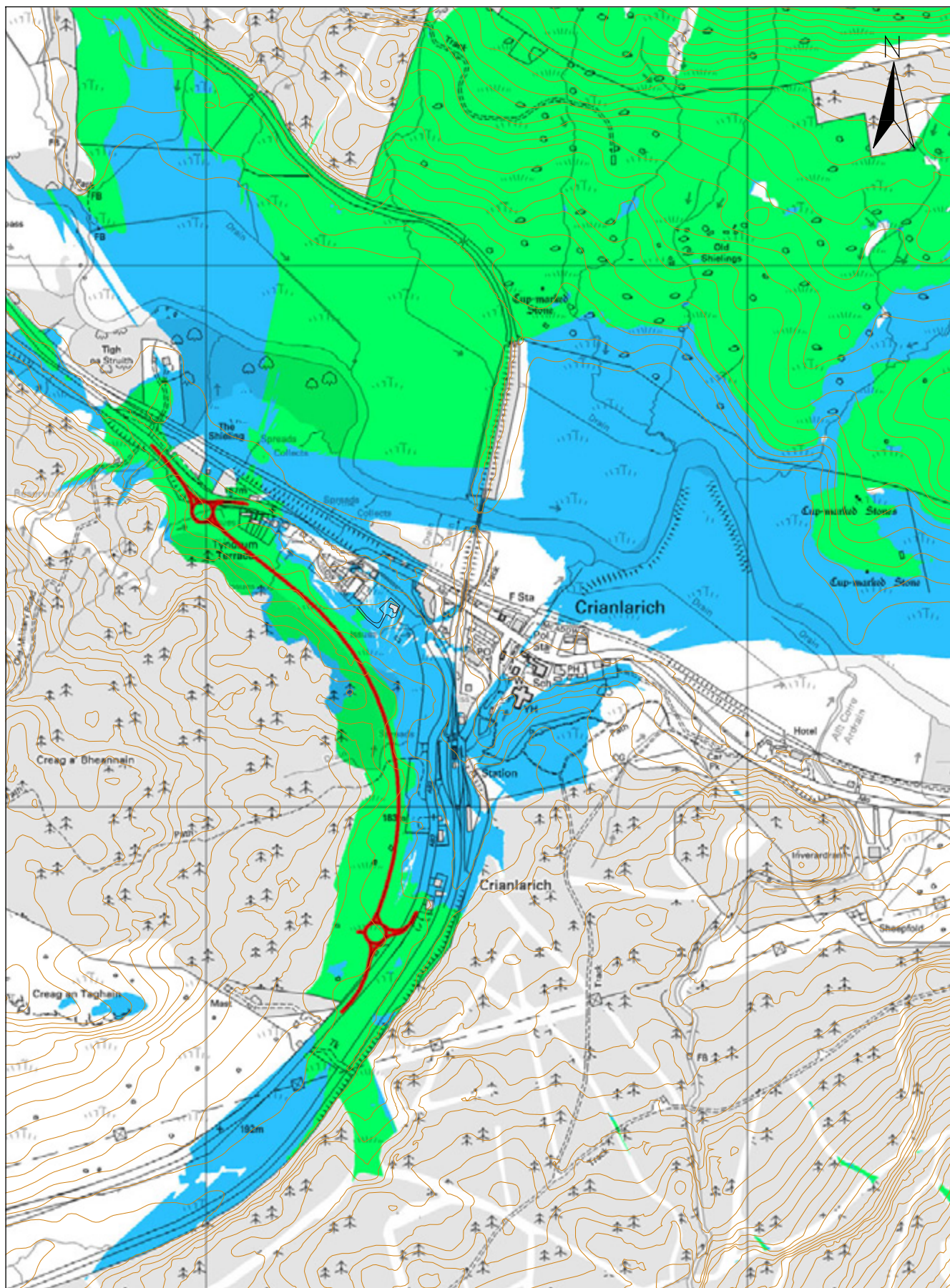


Key:

- On this map, no allowance has been made for the effect of woodlands or buildings in screening views of the road.
- Area from which the road may be visible
 - Area from which lorries may be visible but not the road
 - New road
 - 5km radius from the road

Drawn by: KM	Checked by: AJF	Date: 12/08
<p style="text-align: center;">A82(T) Crianlarich Bypass</p> <p style="text-align: center;">Visual Envelope Map</p> <p style="text-align: center;">Bare ground</p> <p style="text-align: center;">Figure 10.1</p> <p style="text-align: center;">Scale 1 : 60 000 at A4</p>		





Key:

On this map, allowance has been made for the effect of woodlands or buildings in screening views of the road.

- Area from which the road may be visible
- Area from which lorries may be visible but not the road
- New road

Drawn by: KM Checked by: AJF Date: 12/08

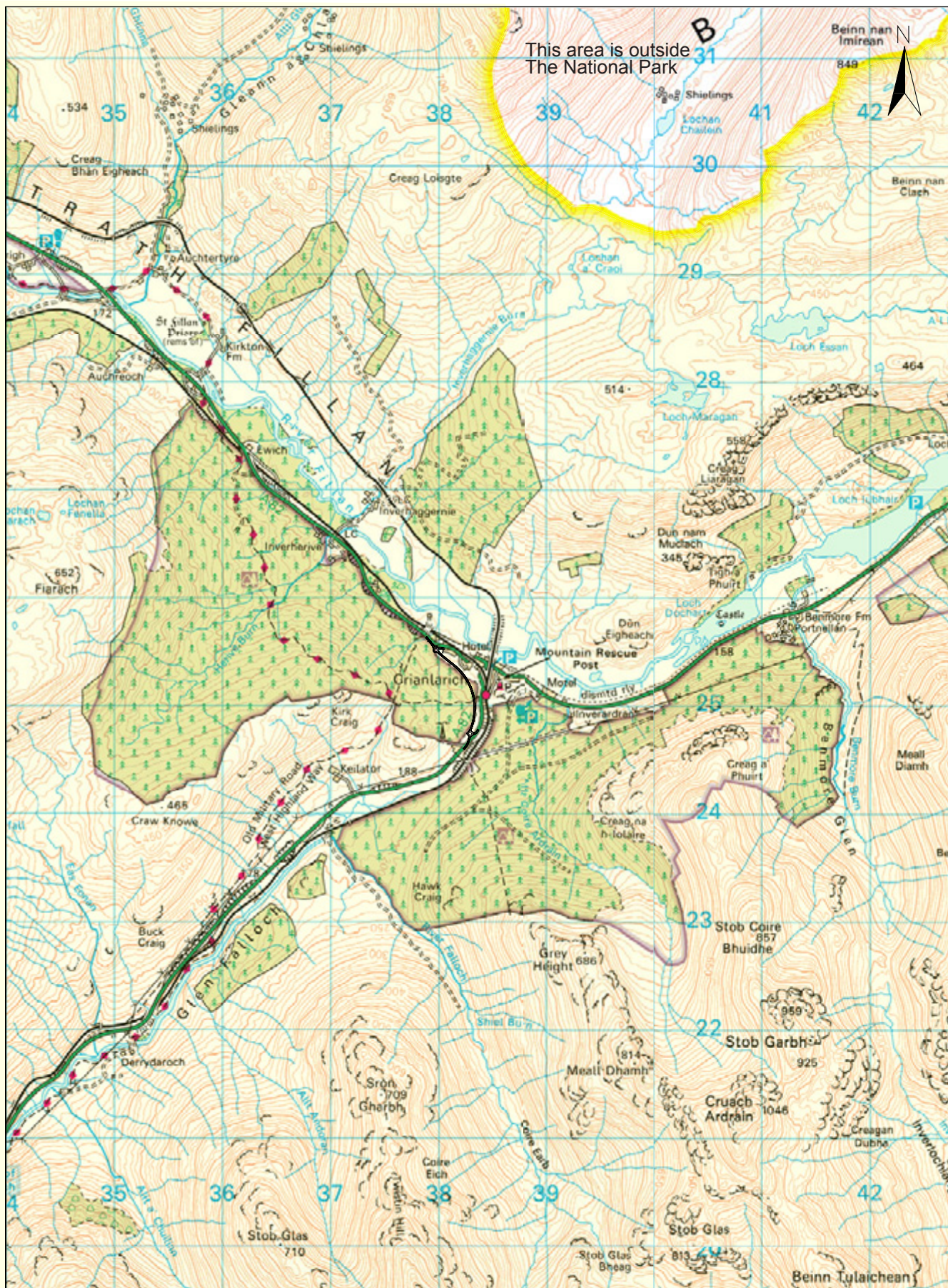
A82(T) Crianlarich Bypass

Visual Envelope Map
With screening

Figure 10.2

Scale 1 : 10 000 at A4





Key:

 Loch Lomond & The Trossachs National Park

The entire area shown is designated an Area of Great Landscape Value

Drawn by: AM Checked by: AJF Date: 12/08

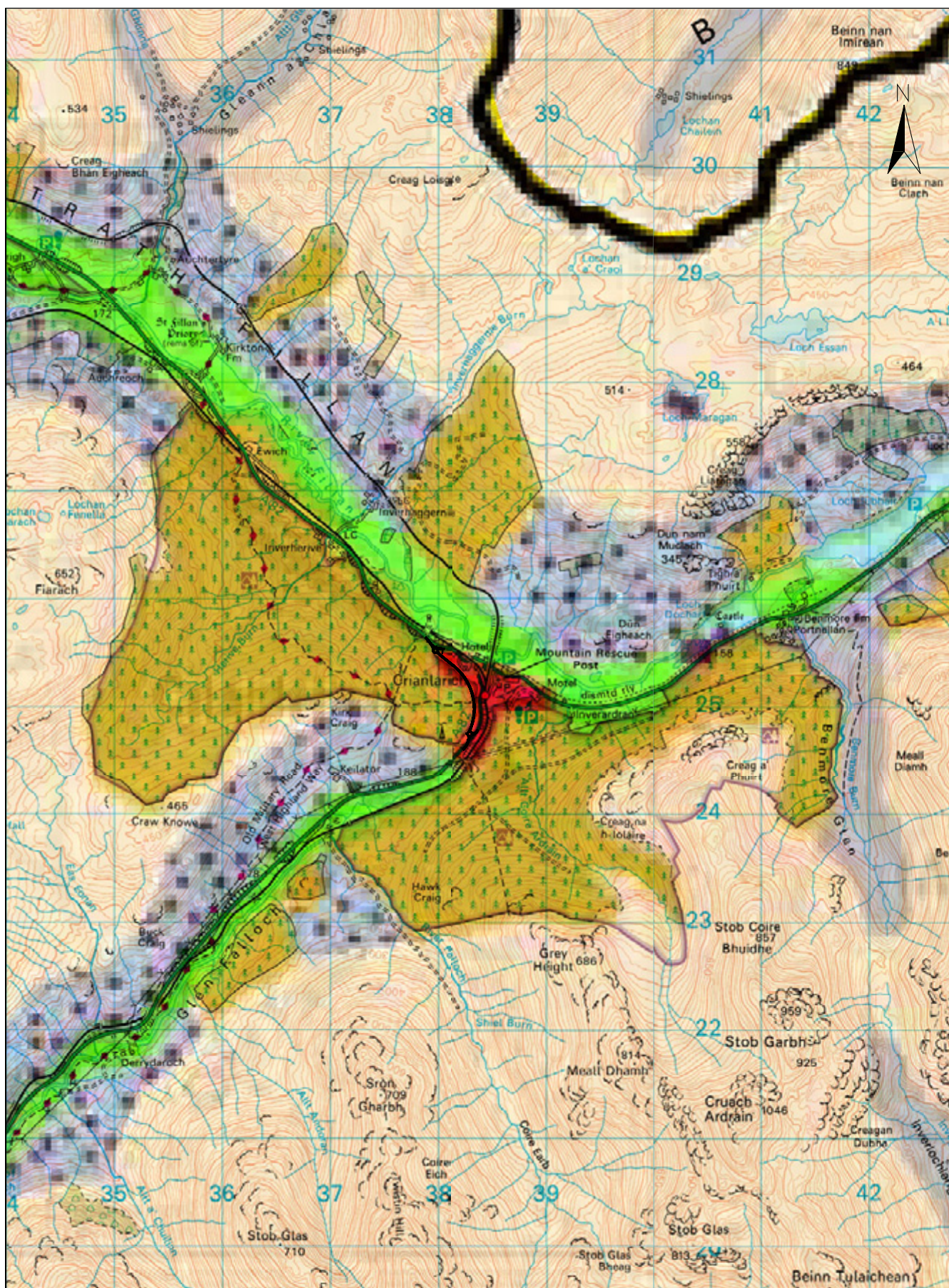
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Landscape Designations

Figure 10.3

Scale 1 : 50 000 at A4





Key:

- Farmed Strath Floor
- Forested Glen
- Open Glen Side
- Open Upland Glen
- Open Upland Hills
- Settled Strath Floor

Source: Figure 6.1 LLT Landscape Character Types from Scottish Natural Heritage's Commissioned Report No. 93, Loch Lomond and the Trossachs Landscape Character Assessment, 2005 overlaid on an Ordnance Survey 50 000 scale map.

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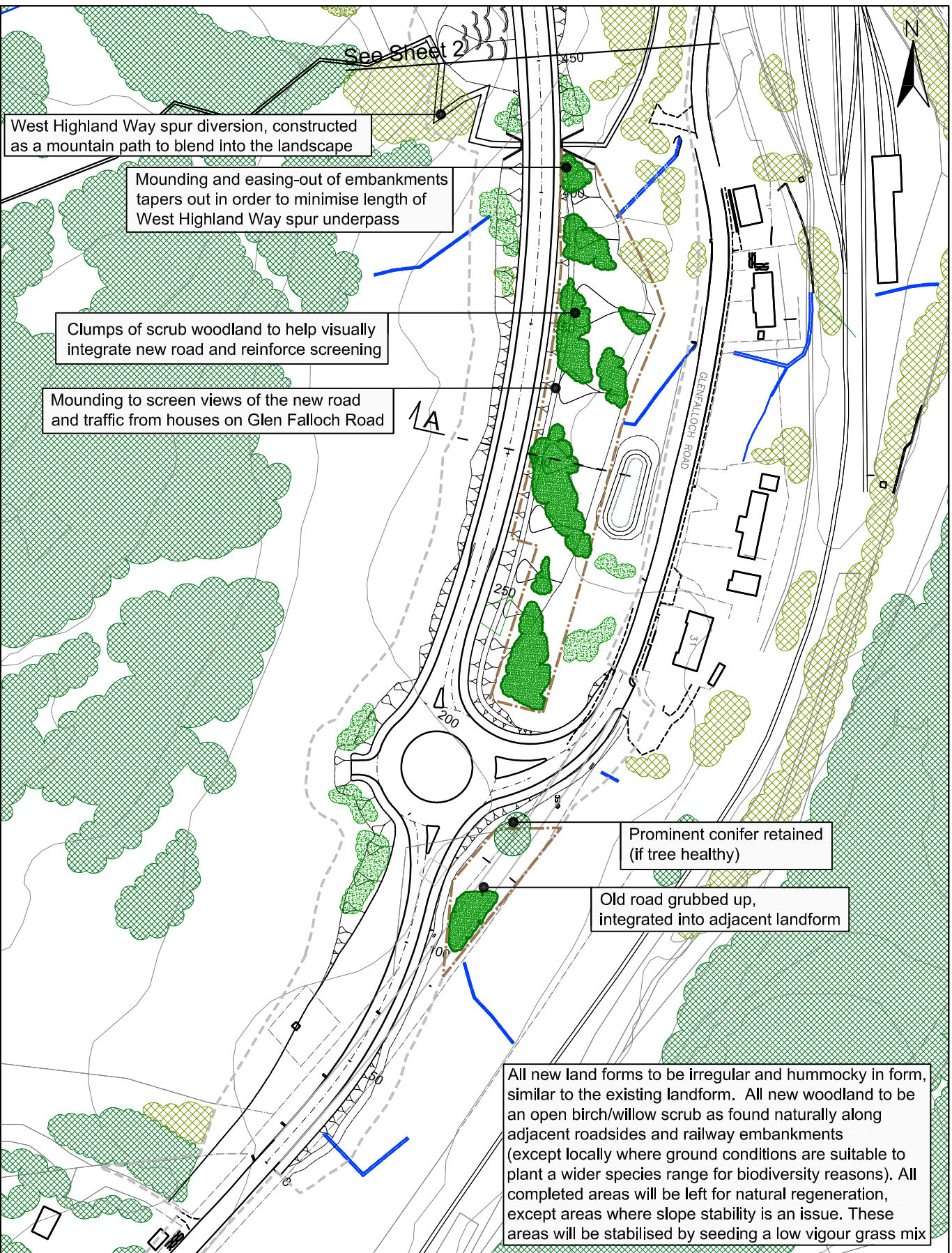
Landscape Character Zones

Figure 10.5

Scale 1 : 50 000 at A4



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- Key:**
- | | |
|-----------------------------|---|
| Existing deciduous woodland | New woodland planting |
| Existing conifer plantation | New woodland planting (outwith deer fencing) |
| Watercourse | New woodland planting (for Forestry Commission) |
| Noise barrier | Proposed CPO line |
| Rock cuts | Deer fencing (indicative) |
| Avenue tree planting | |

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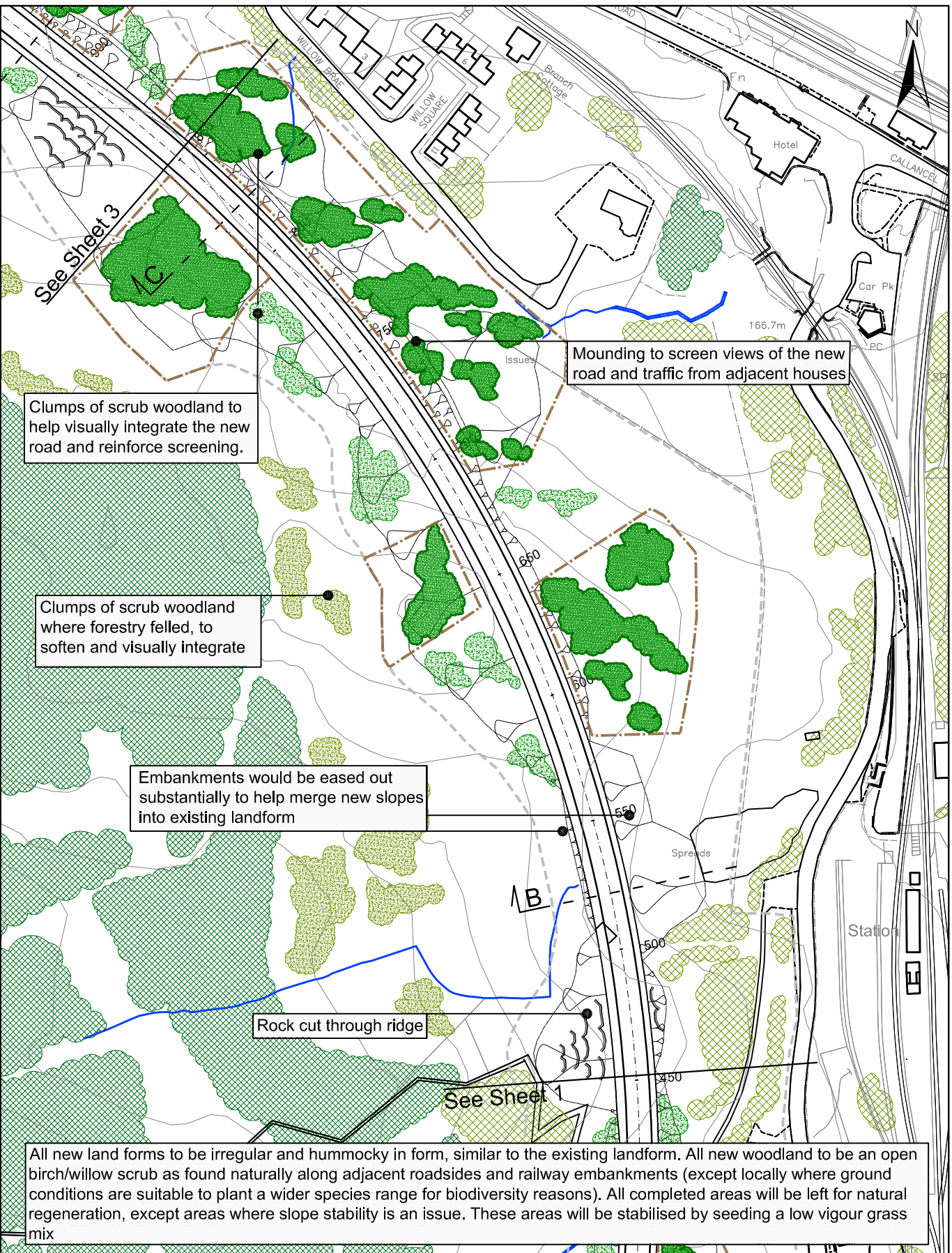
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Outline Landscape Proposals

Sheet 1 of 3

Figure 10.9a
scale 1:2000 at A4

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All new land forms to be irregular and hummocky in form, similar to the existing landform. All new woodland to be an open birch/willow scrub as found naturally along adjacent roadsides and railway embankments (except locally where ground conditions are suitable to plant a wider species range for biodiversity reasons). All completed areas will be left for natural regeneration, except areas where slope stability is an issue. These areas will be stabilised by seeding a low vigour grass mix

Key:	
Existing deciduous woodland	New woodland planting
Existing conifer plantation	New woodland planting (outwith deer fencing)
Watercourse	New woodland planting (for Forestry Commission)
Noise barrier	Proposed CPO line
Rock cuts	Deer fencing (indicative)
Avenue tree planting	


Drawn by: KM	Checked by: AJF	Date: 09/09
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A82(T) Crianlarich Bypass

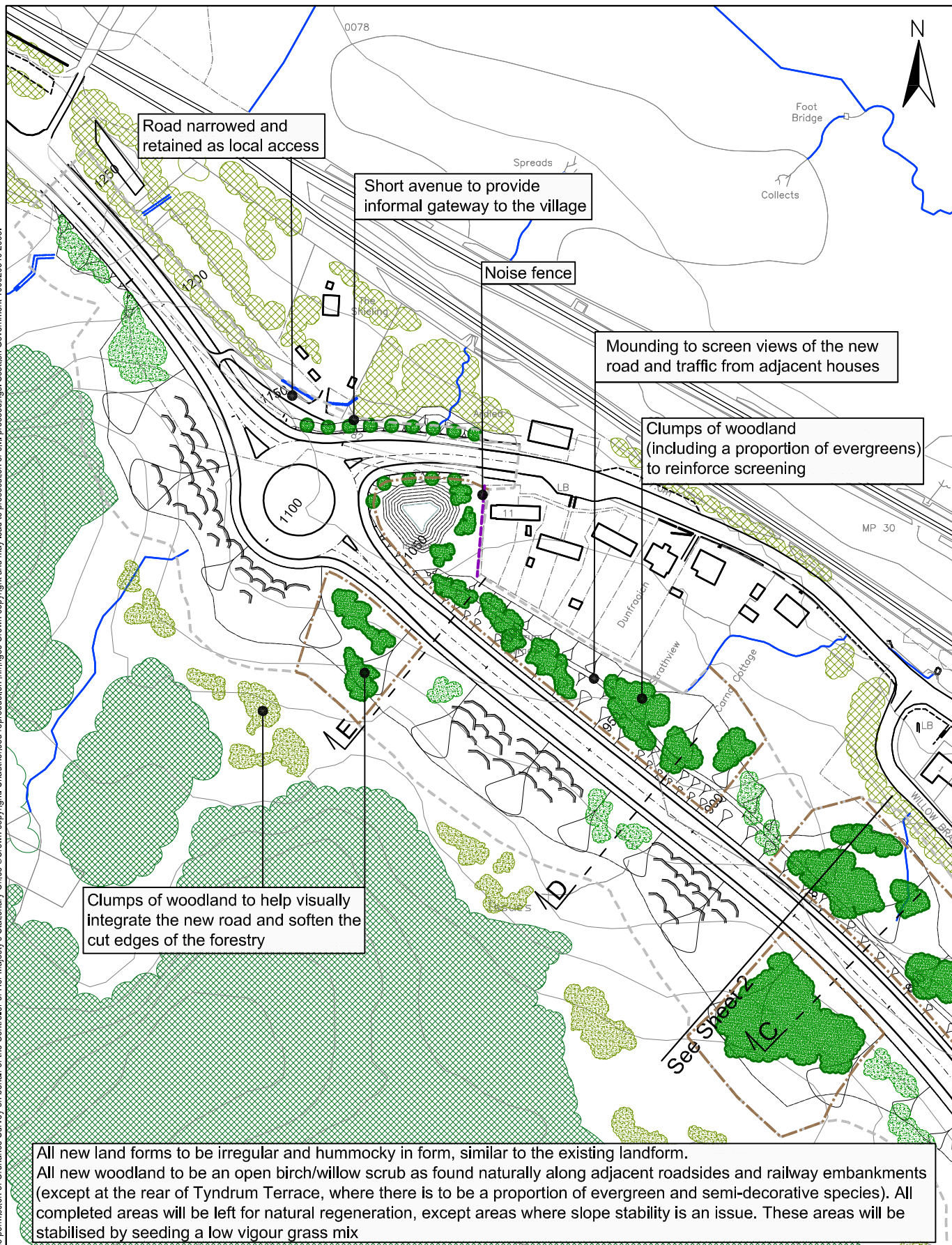
Outline Landscape Proposals

Sheet 2 of 3

Figure 10.9b
scale 1:2000 at A4



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All new land forms to be irregular and hummocky in form, similar to the existing landform.
All new woodland to be an open birch/willow scrub as found naturally along adjacent roadsides and railway embankments (except at the rear of Tyndrum Terrace, where there is to be a proportion of evergreen and semi-decorative species). All completed areas will be left for natural regeneration, except areas where slope stability is an issue. These areas will be stabilised by seeding a low vigour grass mix

Key:	
Existing deciduous woodland	New woodland planting
Existing conifer plantation	New woodland planting (outwith deer fencing)
Watercourse	New woodland planting (for Forestry Commission)
Noise barrier	Proposed CPO line
Rock cuts	Deer fencing (indicative)
Avenue tree planting	

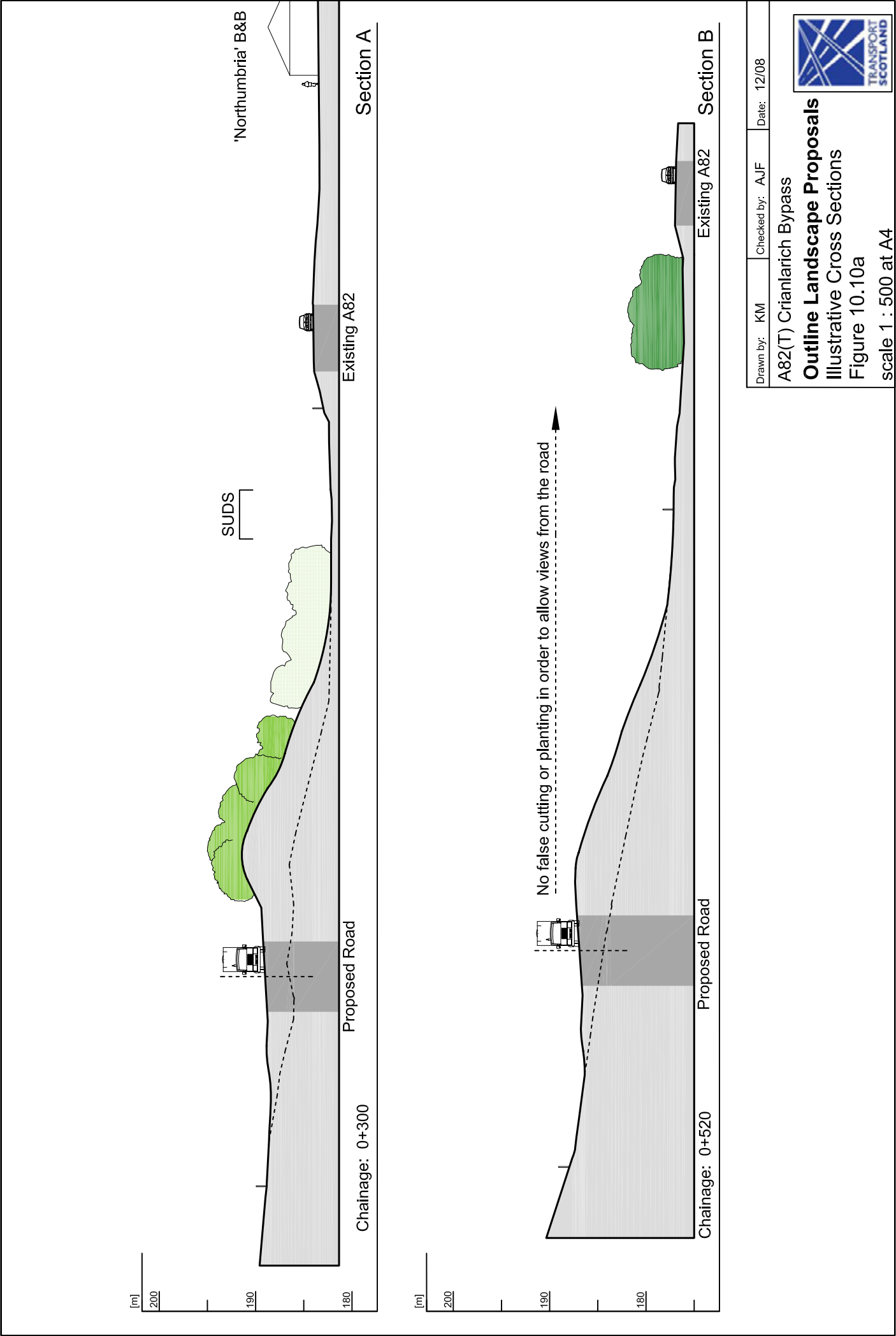
Drawn by: KM	Checked by: AJF	Date: 09/09
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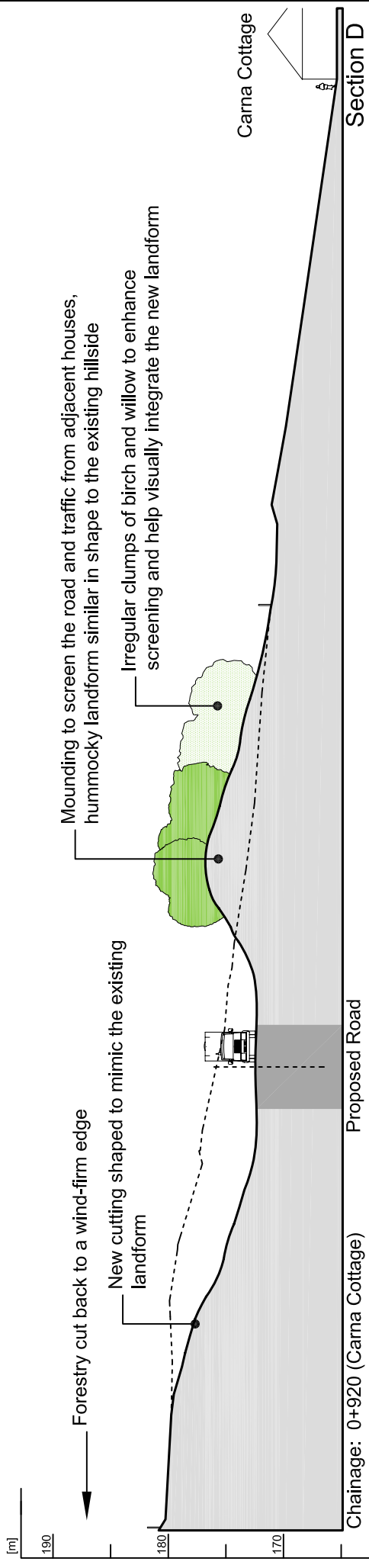
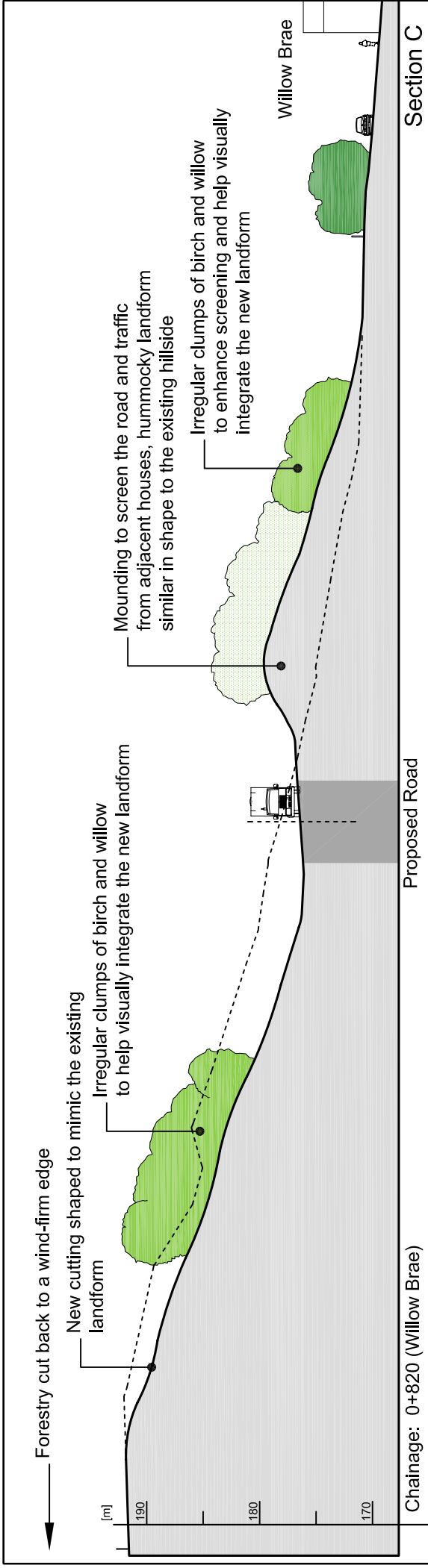
A82(T) Crianlarich Bypass

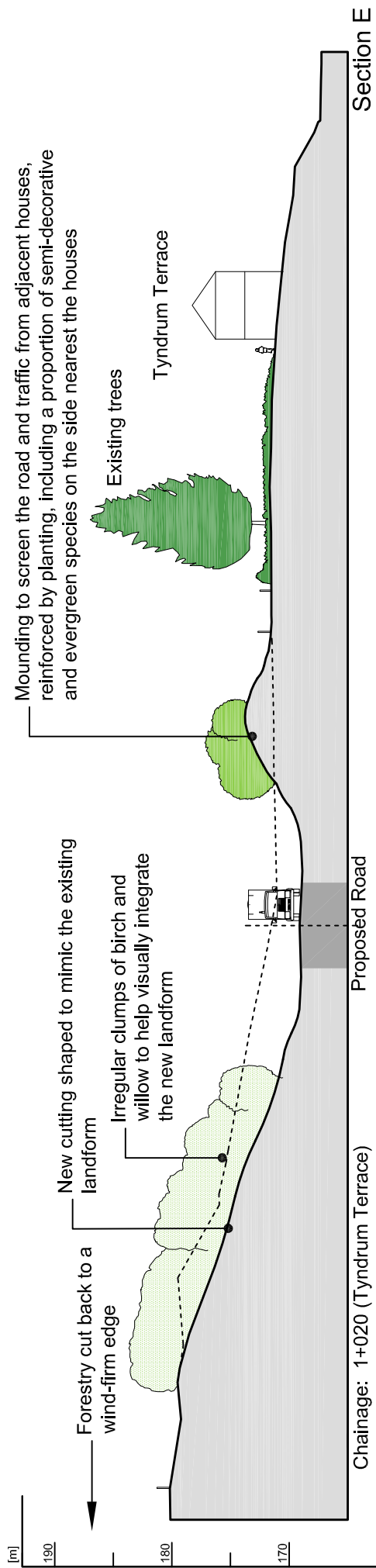
Outline Landscape Proposals

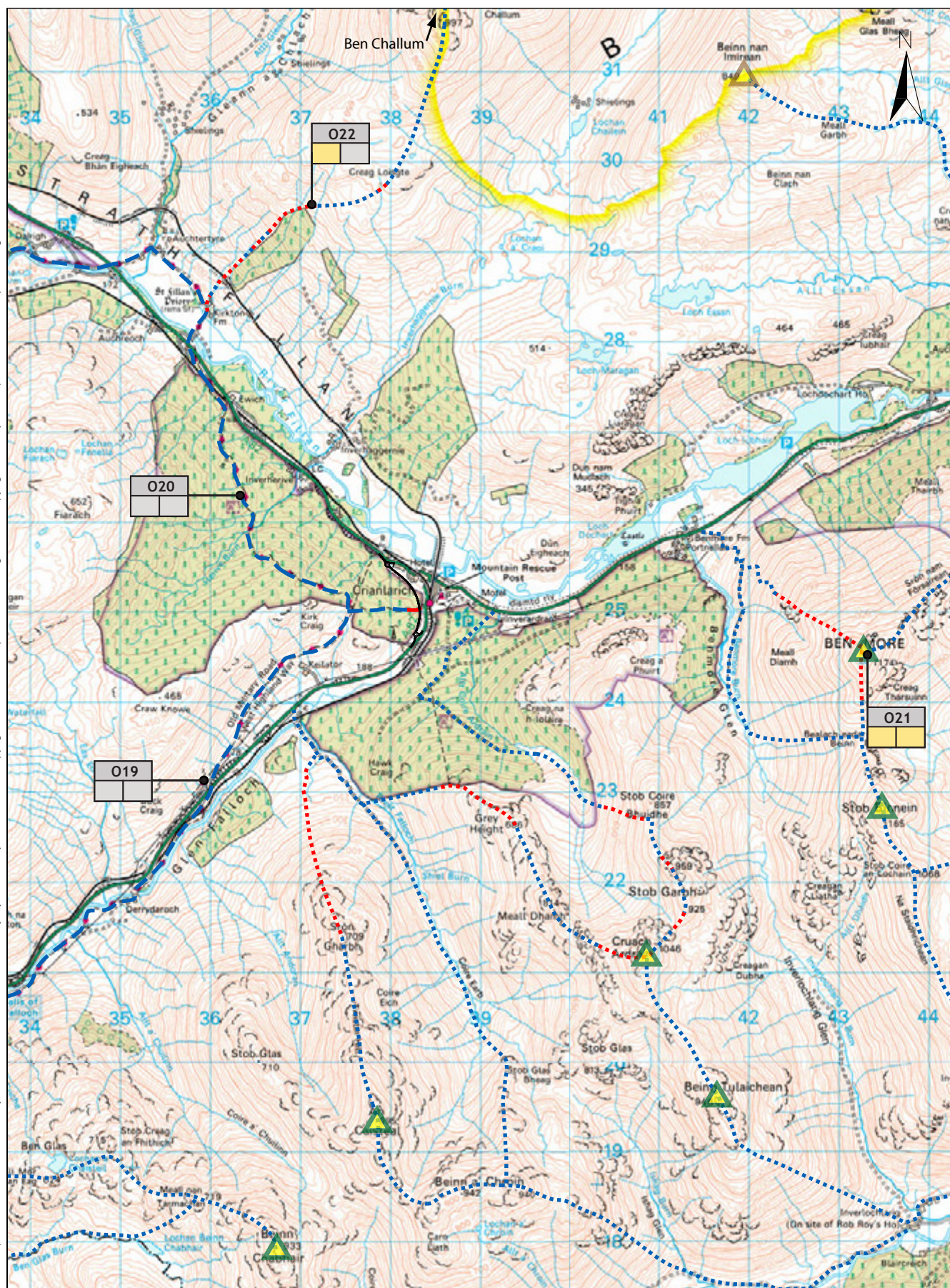
Sheet 3 of 3

Figure 10.9c
scale 1:2000 at A4









Key:

- | | | | |
|--|----------------------------------|--|---------|
| | Main routes to Munros & Corbetts | | Munros |
| | West Highland Way | | Corbett |

Visual Effects from main hill routes :

- | | | | |
|--|---------------|--|-----------------------------|
| | Minor adverse | | Neutral or road not visible |
|--|---------------|--|-----------------------------|

Visual Effects from remote viewpoints :

- | | | | |
|--|---------------|--|------------------------------|
| | Minor adverse | | No change or minor (neutral) |
|--|---------------|--|------------------------------|

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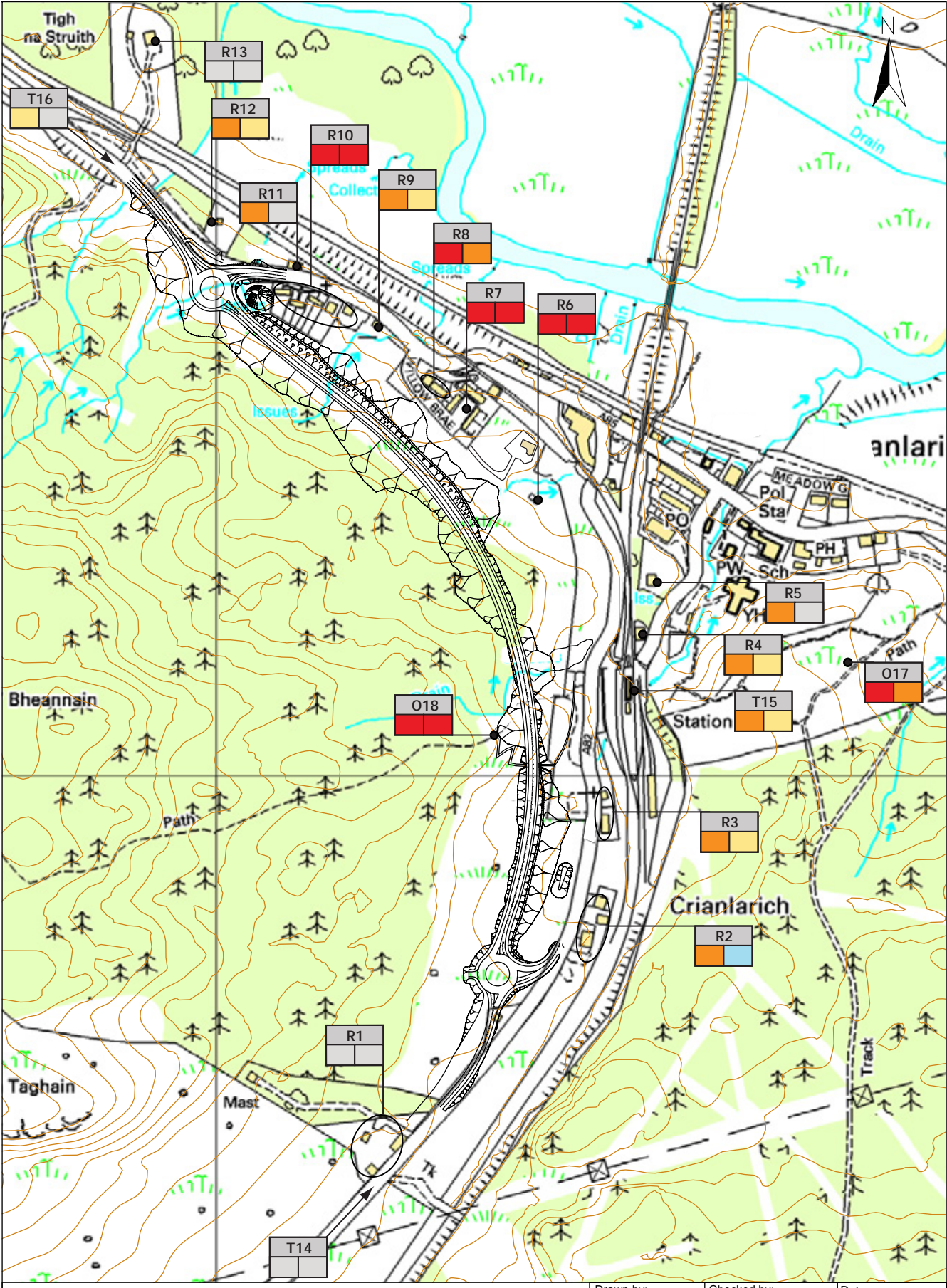
Visual Impact Summary Remote Viewpoints

Figure 10.18

Scale 1 : 60 000 at A4



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Key:

Flags :

a
b
c

a - Type of receptor / reference number
b - Visual effect in the year of construction (winter)
c - Visual effect 15 years after construction (summer)

Visual Effect :

Major adverse	Moderate adverse	Minor adverse
No change or minor (neutral)	Minor beneficial	Moderate beneficial

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Visual Impact Summary

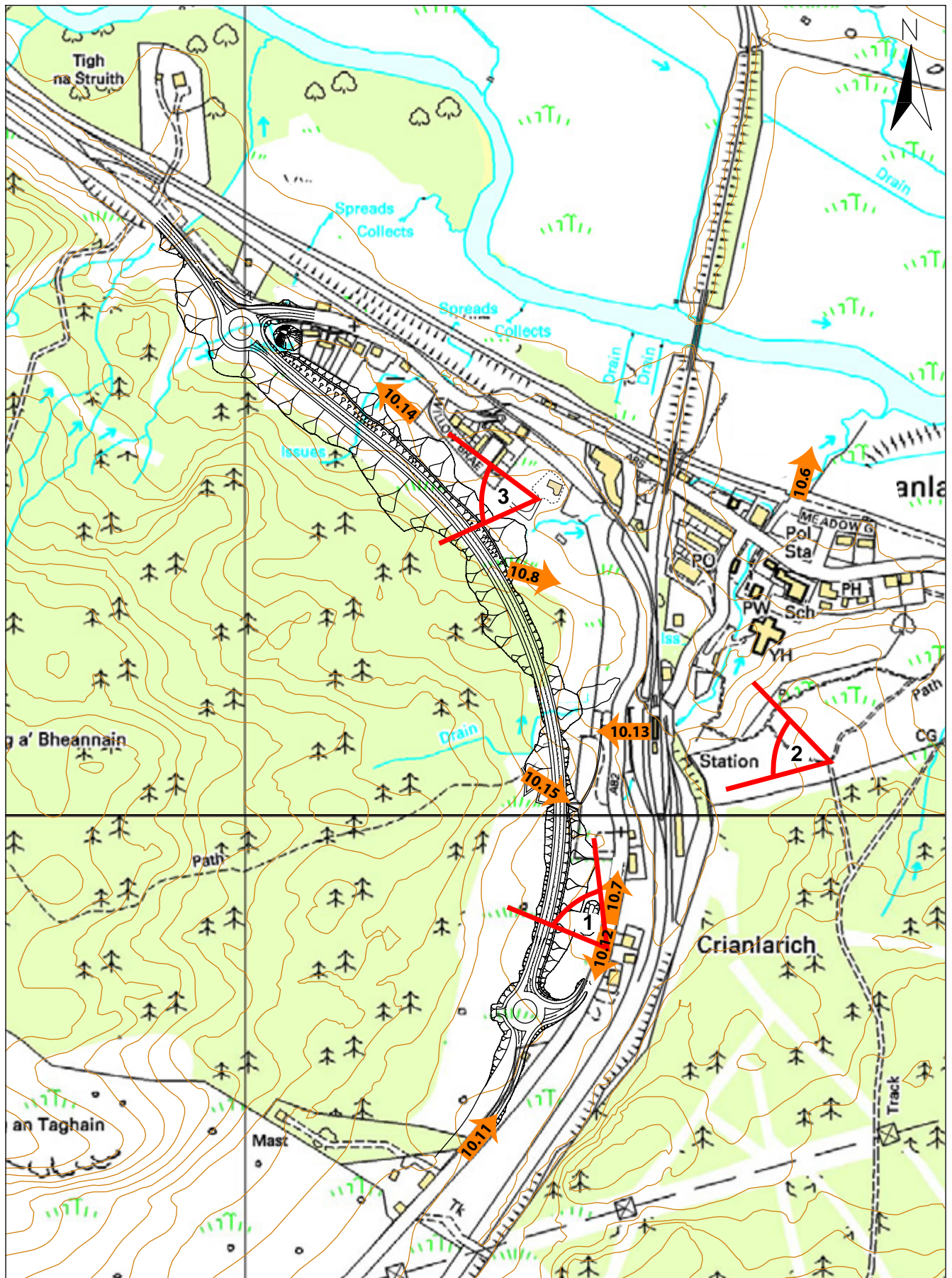
Local Receptors

Figure 10.19

Scale 1 : 6 000 at A4



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Key:



Visualisations



Photos (reference to figure number in the text)

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Visualisation & Photo Locations

Figure 10.20

Scale 1 : 6 000 at A4





Note: this photo pre-dates the construction of Gleann Fiadh Lodge

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Visualisations
Oblique view



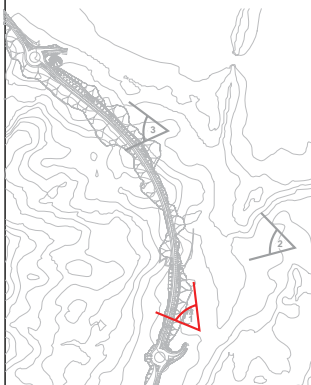
Figure 10.21



Before



After



The new road and traffic are screened by mounding and planting. The rear of a road sign is visible. The roadside fence in the foreground might be replaced with a deer fence. Some of the foreground would be slightly over-excavated to form a detention pond

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A82(T) Crianlarich Bypass

Visualisations

Viewpoint 1

Looking north from
Glenfalloch Road

Figure 10.22

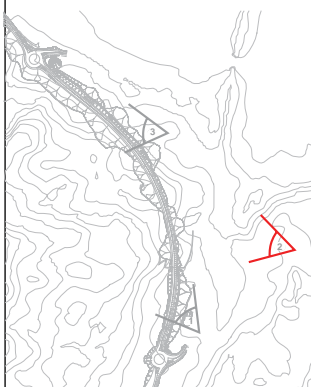




Before



After



The road embankment is visible in the centre of the view where screening is reduced to allow drivers a view. Left and right of this traffic is hidden by embankments and planting

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A82(T) Crianlarich Bypass

Visualisations

Viewpoint 2
Looking west from the
Community Woodland

Figure 10.23

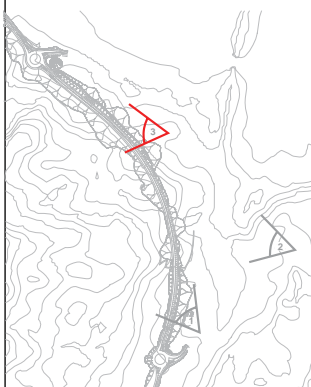




Before



After



The road and traffic are screened by embankments and planting. The edge of the forestry has been cut back and replaced with open birch and willow scrub woodland

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A82(T) Crianlarich Bypass

Visualisations

Viewpoint 3

Looking west from above
Willow Brae

Figure 10.24

