

Outline Proposals
 The outline proposal has been developed taking into consideration the key landscape and visual factors building upon the fundamental elements of the guiding principles and concept design set out in the workbook to fulfil the objective of reducing the perceptibility and visibility of the transmission lines within Glen Fruin, whilst providing an enhanced traffic free alternative route for the Three Lochs Way long distance footpath through the glen.

The proposal also includes an alternative route for the Three Lochs Way which passes through the Luss Hills to the north of Glen Fruin via Glen Douglas, avoiding the presence of the transmission lines along the route of the Three Lochs Way east of Loch Long and south-west of Arrochar.

The enhanced route through Glen Fruin, which provides reduced visibility of the transmission lines for users of Glen Fruin and the Three Lochs Way path, developing upon the concept of providing an alternative route, explored in options 2 and 3 presented during the optioneering stage and set out in the accompanying workbook.

The outline proposal includes the following mitigation measures for reducing the visual impact of the parallel transmission lines on receptors within Glen Fruin and the surrounding area:

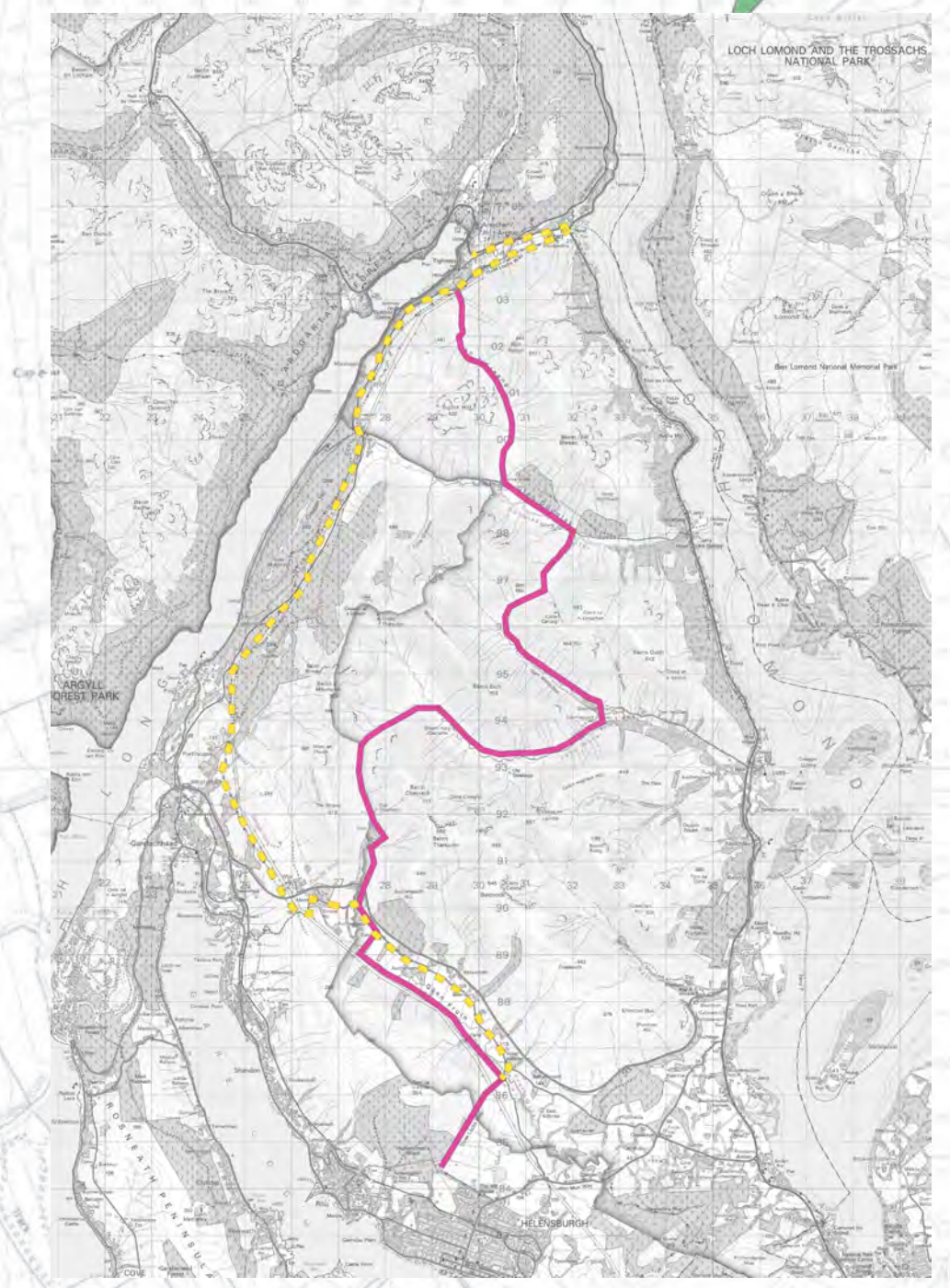
- Creation of new route for the Three Lochs Way along the existing track to the base of the southern glen side slopes providing an alternative route for people, with enhanced visual experience along Fruin Water and reduced visibility of the lines;
- Localised woodland planting to the glen floor and river corridor to screen and filter views of the transmission lines and minimise visibility from the proposed new path, whilst improving the receptor experience and setting, whilst supplementing the existing riparian habitat along Fruin Water;
- Wide scale mixed native woodland planting to the southern glen slopes of Glen Fruin to create screening and minimise visibility of the transmission lines, whilst reducing the prominence of the infrastructure within the glen through sympathetic woodland design which responds to existing topography and landscape pattern, and tie into existing woodland on upland slopes;
- Habitat and biodiversity benefits through the creation and enhancement of existing mixed native woodland and riparian planting along Fruin Water; and
- Linking paths between road and new path via existing tree lined stream corridors for enhanced connections between the existing route of the Three Lochs Way and proposed alternative route.

- Key Benefits**
- Provides oblique screening of transmission lines from alternative route of Three Lochs Way;
 - Provides traffic free route for walkers, and potentially mountain bikers/cyclists, with improved visual experience along Fruin Water for receptors;
 - Utilises, in part, existing access road along Glen Fruin, minimising the extents of new path construction required;
 - Minimises land take of productive agricultural land within the glen floor;
 - Flexible width of new native woodland and riparian planting to strike a balance between screening and land take requirements;
 - Creation of sensitively designed wide scale native woodland habitat in Glen Fruin; and
 - Creation of interpretation and seating/rest areas along alternative route, with potential to promote longer distance views towards the Luss Hills north of Glen Fruin.

- Key Challenges**
- Extensive land take required to deliver substantial areas of native woodland planting on the southern glen slopes;
 - Long-term establishment of woodland before visual impact mitigation is effective; and
 - Changes in land management practices – including removal, reduction or management of grazing to establish woodland planting from existing grassland and moorland vegetation.

The introduction of extensive native woodland will be implemented in line the Biodiversity Action Plan for the National Park (Wild Park 2020). Appropriate woodland mixes of native species of trees and lower growing vegetation will be developed sympathetically, with reference to the geographical location, elevation, topography, soil type, hydrology and biodiversity of the specific area.

Proposed Three Lochs Way Route



Luss Glens and Hills: Three Lochs Way Alternative Route
 In addition to the landscape enhancement proposals within Glen Fruin, SPEN has developed a proposal for an alternative route for the Three Lochs Way long distance footpath. The 55.5km Three Lochs Way is promoted as one of Scotland's Great Trails and runs between Balloch to Inveruglas, with a large proportion of the route located within the Loch Lomond and The Trossachs National Park. Stage 2 of the route runs from Helensburgh to Gareloch, via Glen Fruin passing beneath the 132kV transmission lines near Black Bridge before running parallel with the transmission lines north-westwards along the glen.

North-west of Glen Fruin the route exits the National Park, but continues to follow the transmission lines northwards parallel with Loch Long. South-west of Arrochar the route re-enters the National Park and parallels the existing 132kV transmission lines within the SSEN licence area (SSEN line section SHET10/11).

Stakeholder consultation and correspondence with the Luss Estates Company, a major landowner in this area, The Friends of Loch Lomond & The Trossachs and the Helensburgh and District Access Trust highlighted the significant adverse visual impact of the existing high voltage transmission infrastructure experienced by walkers along a substantial proportion of the route from Glen Fruin to Inveruglas.

A proposal has been developed which offers an alternative route for a proportion of the Three Lochs Way between Glen Fruin and Arrochar, taking users of the trail (receptors) away from the existing transmission lines which run parallel with the eastern shore of Loch Long. This alternative route will offer access to the Luss Glens and Hills, utilising existing and historic rights of way through Auchenglich Glen, Glens na Cairrim, Mollochan and Glen Douglas. The alternative route would also provide a link between the existing route and the small settlements of Luss and Inverberg, not currently served by the Three Lochs Way.

The proposed alternative route will involve the construction of approximately 17.5km of new hill paths, passing through the upland glens of the Luss Hills between Loch Long and Loch Lomond. Outline costs for the implementation of these works are provided.

- Key**
- Proposed Native Mixed Woodland Planting
 - Planting matrix to comprise of the following:
 - A. Native Pine Woodland B. Upland Birchwoods
 - C. Upland Mixed Ash Woods
 - Proposed Wet Woodland Planting
 - Proposed Fencing
 - Existing Three Lochs Way
 - Proposed Alternative Three Lochs Way Route
 - NCR40/ Three Lochs Way Route
 - Existing Three Lochs Way Route
 - Proposed Three Lochs Way Route

Indicative Sections

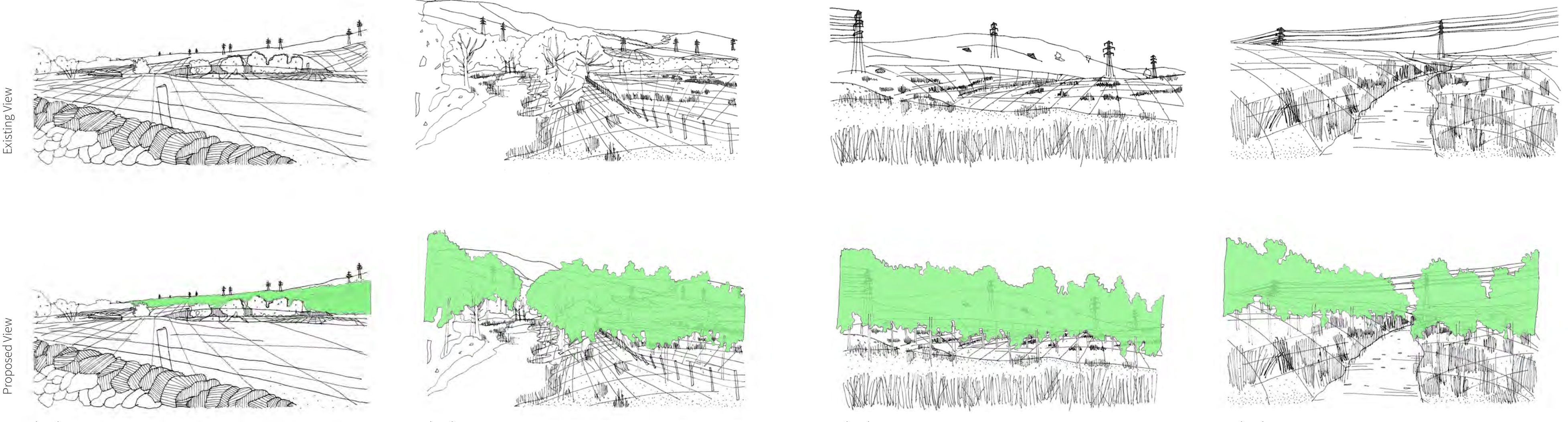


Section 1
 Illustrating the proposed extensive areas of proposed native woodland planting across the upper slopes of Glen Fruin. The section shows the proposed fence line in relation to the edge of the proposed planting. It is proposed to leave a swathe of land, of varying width and design, between the woodland edge and the fence line to encourage natural regeneration within this area and a feathering out of the woodland edge to create a more natural 'edge zone' with increased biodiversity value. The woodland edge will vary in design along the wayleave in accordance with the principles outlined below.

Section 2
 Illustrating the treatment proposed to the wayleave corridor alongside the lines as they cross the lower and mid slopes of Glen Fruin. The section shows the proposed fence line in relation to the edge of the proposed planting. It is proposed to leave a swathe of land, of varying width and design, between the woodland edge and the fence line to encourage natural regeneration within this area and a feathering out of the woodland edge to create a more natural 'edge zone' with increased biodiversity value. The woodland edge will vary in design along the wayleave in accordance with the principles outlined below.

Section 3
 Illustrating the proposed new path along the Fruin Water with associated new native woodland planting. Native woodland planting is proposed to strengthen the scrubby riparian woodland found along the river corridor, to screen and filter views of the line from users of the proposed alternative route of the Three Lochs Way footpath. Wide scale native woodland planting is proposed to the lower slopes of the glen to the south-west which will assist in screening view of the line and provide increased biodiversity value.

Indicative Sketches



Sketch 1
 Illustrating indicative view from existing route of Three Lochs Way footpath along the minor road through Glen Fruin. The proposed native woodland planting will provide a back cloth to the parallel lines, reducing the visual impact and perceptibility of the line for users.

Sketch 2
 Illustrating indicative view towards the lines from the proposed alternative Three Lochs Way footpath along Fruin Water. The proposed native woodland planting will provide intermittent screening and filtering of views towards the lines, reducing the visual impact of the line on users of the alternative path. Sensitive design of proposed woodland planting will also ensure that views across the glen and towards the Luss Hills will still be possible from this alternative path.

Sketch 3
 Illustrating indicative view from route of new alternative path along Fruin Water, where native broadleaf planting along the lower slopes of the glen will screen and filter views towards the lines, whilst avoiding land take within the more productive agricultural land in the foot of the glen.

Sketch 4
 Illustrating indicative view from the existing hill path between Helensburgh and Glen Fruin where it enters the National Park and which forms part of the Three Lochs Way long distance footpath. The proposed path upgrades will provide improved accessibility along this section of boggy open moorland/rough grazing, and native woodland planting will provide intermittent screening of the line from this section of the path before users drop down into the more settled valley of Glen Fruin. Sensitive design of proposed woodland planting will also ensure that longer distance views towards Loch Lomond, and Ben Lomond to the north-east, and the Luss Hills to the north are still possible once users have passed beneath the lines.

Native Woodland Principles

The introduction of extensive native woodland will be implemented in line the Biodiversity Action Plan for the National Park (Wild Park 2020) which notes that expanding and restoring native woodland is one of the major goals for Forestry Commission land in the National Park. Appropriate woodland mixes of native species of trees and lower growing vegetation will be developed sympathetically, with reference to the geographical location, elevation, topography, soil type, hydrology and biodiversity of the specific area. Within Glen Fruin the following woodland mixes are proposed, subject to more detailed survey and understanding of the areas to be planted.

Woodland mixes shown are for guidance purposes only with species and percentage mix of each woodland type indicative. Woodland mixes will be subject to further development during the detailed design stage.

Woodland Type	Woodland Layer (Primary)	Woodland Layer (Secondary)	Shrub/Understorey Layer
A. Native pine woodland	Pinus sylvestris (Scott's pine)	Pinus sylvestris (Scott's pine)	Juniperus communis (Juniper)
B. Upland birchwoods	Betula pubescens (Downy birch)	Betula pubescens (Downy birch)	Juniperus communis (Juniper)
C. Upland mixed ashwoods	Fraxinus excelsior (Common ash)	Ulmus glabra (Wych elm)	Juniperus communis (Juniper)
E. Wet woodland	Salix caprea (Goat willow)	Salix caprea (Goat willow)	Salix caprea (Goat willow)



Age Group	Height	Trunk Diameter	Canopy	Thinning
1 year old	0.5m-1.0m	2cm	15-20cm	Height: 5m-1.0m
5 years old	2.0m-3.5m	6-8cm	15-20cm	Age: 5 years
10 years old	6.0-7.5m	10-15cm	15-20cm	Age: 10 years
25 years old	12-15m	20-25cm	15-20cm	Age: 25 years
40 years old	20-25m	30-40cm	15-20cm	Age: 40 years

Indicative Visuals

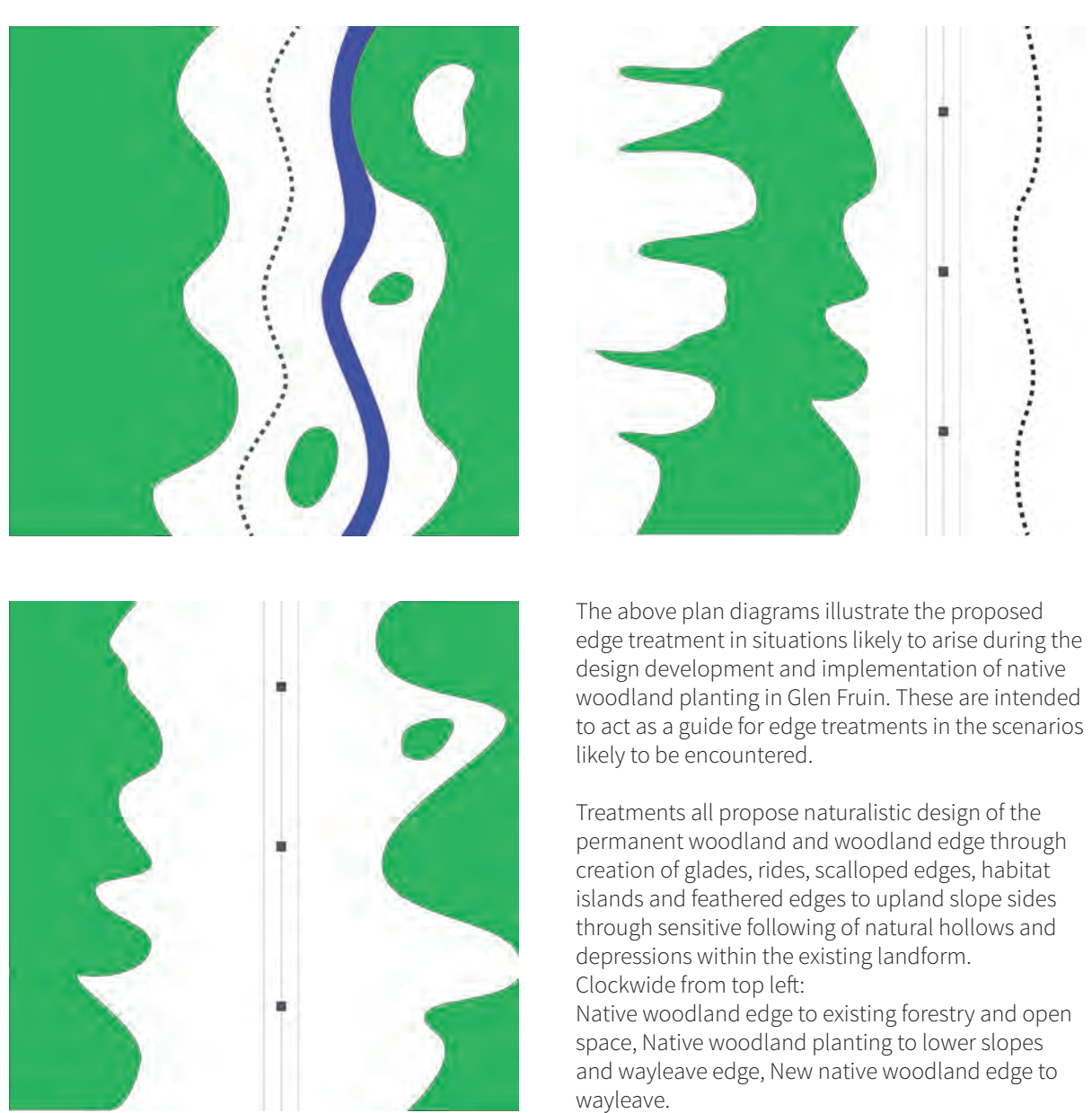


Visual 1
 Illustrating screening afforded from lower slope path. Views will be largely screened at this point, reducing visual impact of the line on users of the alternative route of the Three Lochs Way path alongside Fruin Water.

Visual 2
 Illustrating screening afforded by new native woodland planting from existing section of Three Lochs Way which passes over moorland between Glen Fruin and Helensburgh.

Visual 3
 Visualisation illustrating screening afforded by native woodland planting from lower slopes of Glen Fruin, in views towards the parallel transmission lines.

Woodland Edge Treatments Indicative Plan Diagrams



The above plan diagrams illustrate the proposed edge treatment in situations likely to arise during the design development and implementation of native woodland planting in Glen Fruin. These are intended to act as a guide for edge treatments in the scenarios likely to be encountered.

Indicative Cross Section A

