Appendix 1 - Background information

Site and woodland description

Location, aspect and general composition

(see **Map 1**) Achnashellach is located at the upper eastern reaches of Strathcarron, an archetypal glaciated u-shaped wide strath with meandering river and loch, orientated roughly east-west. At its eastern end the strath narrows into Glen Carron. The northern slopes of which form a largely regular, straight-sided and steep hillside flank. The southern side of the glen has a more diverse topography: more expansive but less steep afforested slopes interspersed by a series of round-topped spurs which plunge down into three main incised and wooded valleys. These hillsides draw the eye from the strath floor to the intermediate slopes and the summits beyond. The main lines of public access and communication (road, railway, overhead power and telephone lines) run through the strath along the northern side of the river. It is around these that the majority of native and mixed broadleaved woodland and small amounts of farming are located. Beyond this flatter agricultural pasture, FLS' largely coniferous woodland plantations extend up the moderately steep slopes to open ground (upland grass- and heathland) above which there are both exposed rocky crags as well as smoother domed hills that contrast with the dark green of the conifer forest upon the mid-contour slopes.

Achnashellach is widely visited as a destination for outdoor recreation. This is comprised in the main by mountaineering, climbing, walking, wild camping and mountain biking. The main climbing and mountaineering areas are the Munros and Corbetts to the north and to the south of Achnashellach Forest. To the North there are two Munros (Beinn Liath Mhor and Sgorr Ruadh) and several Corbetts. These are mainly accessed via the Forestry Commission path leading towards open hill ground in Coire Lair, and provide a route to most of the surrounding hills. A long distance path, the Coulin Pass, links Achnashellach to Torridon and now also forms part of the Cape Wrath trail. This area of the forest is increasingly being used for mountain biking linking into the long distance path networks. The only formal facility present is the current car park and interpretation panel at Craig. To the South, the Plan area provides access to six Munros (Moruisg, Maoile Lunndaidh, Sgurr a Chaorachain, Sgurr Choinnich, Bidean a Choire Sheasgaich and Lurg Mhor) and several Corbetts to the south and east. A network of footpaths are present in the south side, taking people to features such as the Golden Valley, Sloc Mor, winter climbing areas and the Mountain Bothy Association bothy (Bearneas bothy) by Loch an Laoigh on Attadale Estate.

At the time of LTP review (2025/26) FLS are investigating and progressing a formal planning permission to site a new and alternative car parking – several hundred metres further east than the current one at Craig - on the southside of the A890.

Neighbouring land use

The Plan area is almost entirely encircled by Achnashellach estate but with the Coulin estate bordering the north and north-eastern boundaries (c. 950 m) and Glen Carron estate (c. 850 m) on the most easterly boundary (south of railway, Meall an Fliuchaird). With the exception of the Coulin estate, these are traditional sporting estates that provide red deer stalking, holiday accommodation and fishing. All three estates have undertaken new woodland creation schemes within the local area, utilising natural regeneration and new planting, to increase native woodland area and effectively link the eastern boundary of Achnashellach forest all the way to the birchwood of Collie Mhoruisge above Loch Sgamhain. The Coulin estate has a number of areas of maturing commercial woodland and a new (2026) management plan focussed primarily on native woodland restructuring post-harvesting utilising natural regeneration in many areas. Consequently deer incursion/movement across FLS' northern/north-eastern boundary (where and when the perimeter fence becomes temporarily compromised) will decline as this neighbouring estate's deer management begins to significantly reduce population density to achieve their own objectives. The land between the A890 and the River Carron is managed privately for pastoral grazing (sheep, cattle, horses) and a summer season campsite.

The small hamlets of Craig and Lair lie along the valley floor – served and inter-connected by the A890 public road – whilst Achnashellach Lodge and immediate environs also has (several) residential properties dispersed across the footprint of the old grounds and gardens of the Victorian-era working estate (ex-estate workers accommodation and re-purposed estate buildings). Most ground associated with these properties is managed for amenity and ornamental value for the benefit of the residents.

The Dingwall-Kyle of Lochalsh railway bisects the landholding and there is a small station (platforms only) and residential station house situated at close proximity to the Lodge and FLS boundaries.

These settlements fall within the Wester Ross, Strathpeffer and Lochalsh ward of the Highland Council and are served by Lochcarron Community Council.

Geology, soils, and peat

Achnashellach sits on the western edge of the Moine Thrust zone - formed during the Caledonian orogeny. The area is dominated by metamorphic rocks which are recognised (Taylor,1991) as being of low nitrogen availability. The Soil Survey of Scotland (Macaulay Institute, 1982) describes the soils as part of the Arkaig association with peat being dominant on flat and gently graded slopes and the soils of a stony, loamy and predominantly gleyed texture. The soils are inherently acidic and of medium to low phosphorus content. FLS have detailed soil survey data for the southern flank of the Plan area. The northern Plan area is covered by the JHI 1:10k classification and therefore providing only broadbrush classification (see **Map 11**).

Climate and predicted climate change

The Achnashellach region of Strathcarron has a hyper-oceanic, mild Highland climate characterised by exceptionally high rainfall and limited annual sunshine hours. Average yearly precipitation typically exceeds 2,000 mm, falling over roughly 215 days per year, combined with cool summers, mild winters, and an annual total of only 969 hours of sunshine. The LTP area has an annual average accumulated temperature range of 950 to 1,270 day-degrees above 5 ^{o}C within the glen and upto the treeline (c. 250 m). Forest Research's Ecological Site Classification (ESC) model summarises the climate as ranging from Warm, Sheltered and Moist within the glen but rising to Cool, Highly Exposed and Wet with increasing altitude up the afforested glen sides.

Future climate predictions are difficult to make accurately to a local level. The Adaptation Scotland programme provides an overview of UK climate projections extrapolated from historic Meteorological Office climate data. Currently this modelling does not provide regional discrepancy projection(s) but draws broad brush conclusions for this region for the 21st century and is expected to result in:

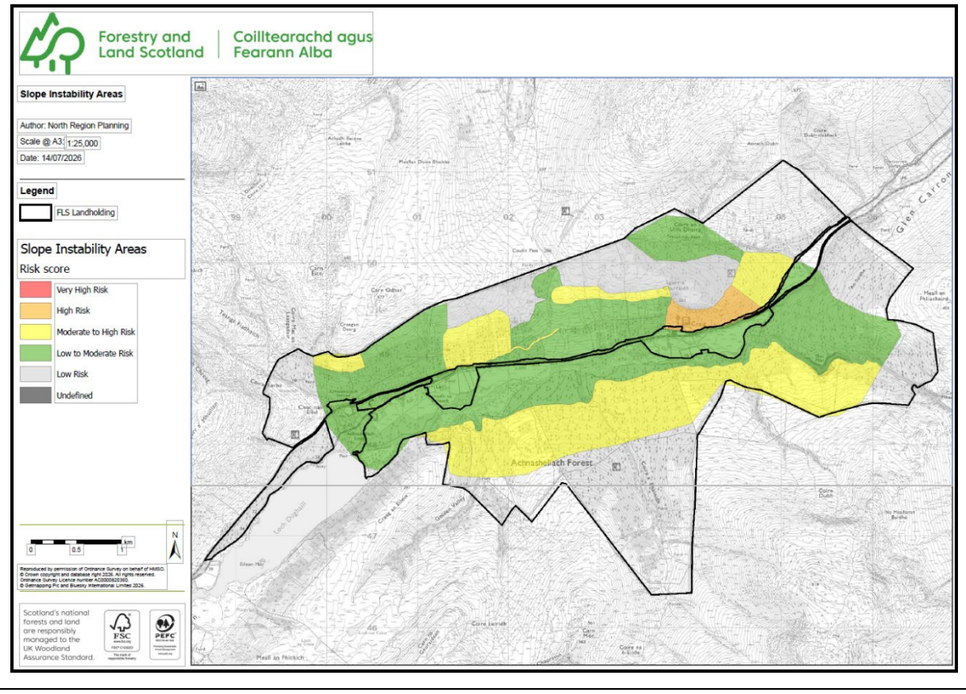
- Warmer summers and a longer growing season;
- Fewer frost days and milder (overall) winters;
- Increased instances and periods of summer drought;
- Increased and prolonged winter rainfall and increased frequency and intensity of summer rain storms;
- Increased wind – currently anticipated as an increase in *frequency of storm events* as opposed to an increase in *peak wind speeds*.

In recent years there has been an increase in occurrence of strong (and occasional storm-force) wind events from untypical directions - resulting from minor changes and unpredictability in normal jet stream behaviour through winter months. This trend suggests that the possibility of storm damage within the glen will not just be limited to woodland and woodland edges exposed to more typical/historical south-westerly winter storm direction.

Forestry has a significant role to play in mitigating (or not) the effects of climate change. Building resilience against extreme weather events underpins all FLS' proposals but is particularly relevant within the Achnashellach LTP in relation to objectives of conservation and expansion of native woodland and its objectives of tree health resilience (susceptibility to future pest/disease threat) and improving the resilience of power line networks, public road and railway infrastructure, settlements, watercourses and water quality.

Steep ground assessment

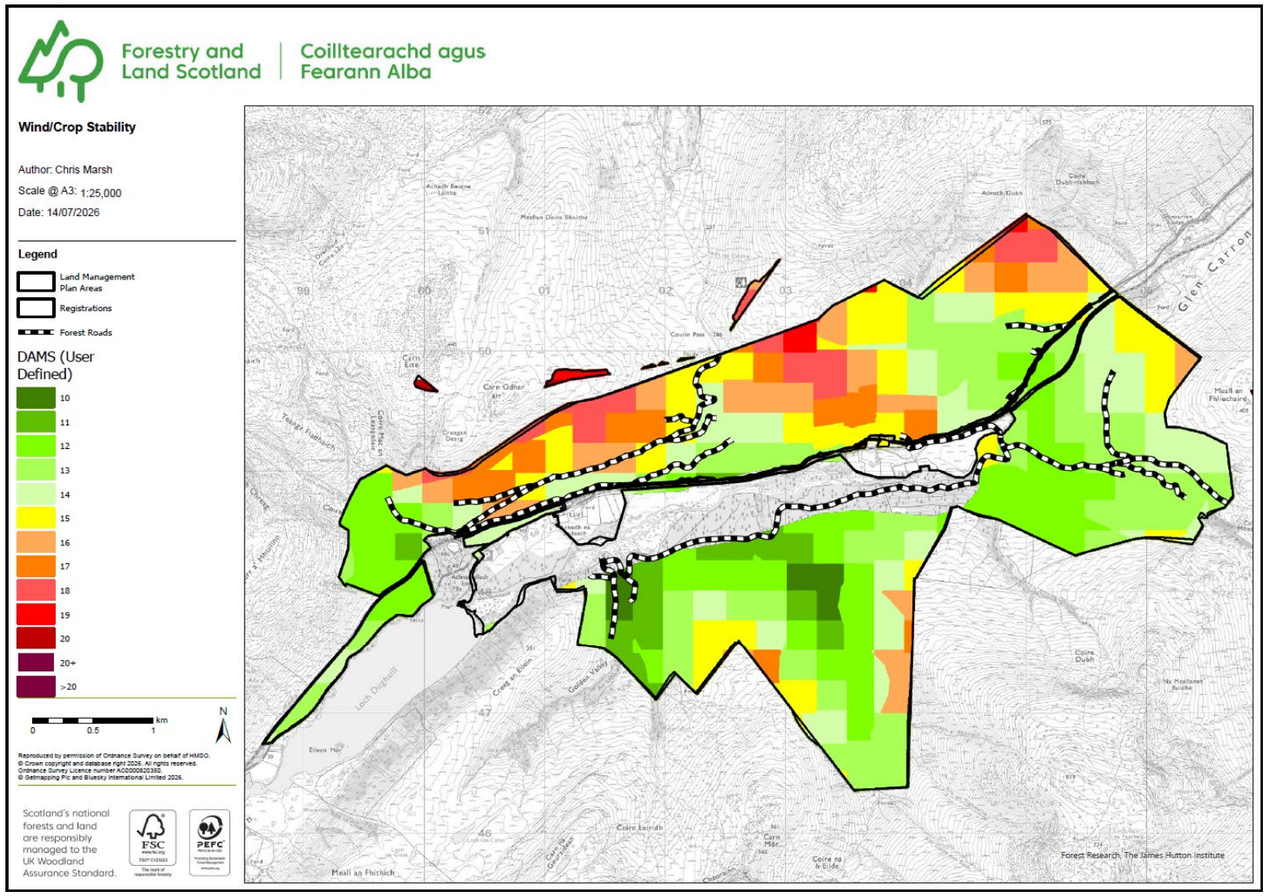
The map below shows the individual geotechnical survey areas (2012) with their derived instability risk classification. The survey report also recommends each specific felling operation be preceded by more detailed operation-focused assessment of how practical works might best be orchestrated or additional mitigation measures stipulated to ensure work is done in the safest and most effective way to achieve objectives. Key Issues **Map 3** also illustrates the highest risk instability zone within the wider overall context of objectives and priority management concepts for the LTP area.



Windthrow risk

(see map below)

Windiness - assessed using the Detailed Aspect Method of Scoring (DAMS) to model and predict the speed and frequency of strong winds – shows a significant proportion of the land within the enclosed glen floor and southern side of the Carron river in the scoring range 10 – 14. This southern flank is largely within the CPI buffer zone and/or riparian Natural Reserve and consequently is being managed for pine- and native woodland restoration (conservation & resilience objectives). No forest thinning management is therefore proposed here - where wind speeds and management access might otherwise have taken advantage (and historically did) of this shelter for some form of continuous cover pinewood timber production silviculture. On the northern flank of the glen DAMS score range in the 13 - 17 range on afforested mid-contour terrain (17 – 20 above the tree line) which – combined with moderate to steep slopes which make access for thinning machinery difficult – no thinning or continuous cover timber production is prescribed here.



Hydrology

Surface & Groundwater catchments are illustrated in **Map 12** – Key Water Features and described in **Appendix 8** – Water and Catchment Management.

Similarly significant **surface freshwater bodies** (rivers & streams) are highlighted on **Maps 12** and their current monitored condition detailed in **Appendix 8**. Other burns and all lochans within the LTP area are below the threshold for baseline SEPA monitoring (only rivers with a catchment area >10 km^2 and lochs with surface area >0.5 km^2) and are therefore not classified under the Water Framework Directive.

Flooding: there are no Potentially Vulnerable Areas (PVAs) within the Plan area or downstream of the Plan area.

Private Water Supplies (PWS) are mapped and illustrated on **Map 12** and consideration of the impact (and controls) of intended forest management is given in **Appendix 8**.

Fire risk

(see also LTP section 4.9)

Risk Source	Risk Level – High/ Moderate/ Low	Mitigation
Ignition Sources		
History of wildfire	**Low** – No 21st century instances of wilful fire raising or antisocial behaviour at public thresholds resulting in fires. One earlier instance (1990s) of a wildfire within productive coniferous woodland north of Allt Dearg.	Emphasise FLS' expectation that planned and notified muirburn be controlled at all times (i.e. adequately resourced) as per Muirburn Code. Precautionary signage at public thresholds if fire raising becomes a concern.
Public access, Visitor numbers	**Low -** Moderate visitor numbers, short duration activities/passing through (minimal camping). Existing campsite on agricultural holding (Lair) has managed and lush, grazed grassland on glen floor (low risk of fire spread)	Precautionary signage at thresholds during high fire risk periods of weather.
Fuel		
Surface fuels in young stands before canopy closure	**Moderate** – Extensive fallowing/naturally regenerating woodland terrain with establishing grasses, heathers as well as broadleaved and pine trees – particular fire risk in early Spring (last year's dead and dry foliage) and in very dry summers.	Manage clearfelled forest areas to promote woodland regeneration and establishment to canopy closure. Broadleaved woodland in riparian corridors may act as buffers to wildfire spread.
Surface fuels in open or felled woodland	**Moderate** - Mix of open or thinned woodland as well as closed-canopy stands	Combustible ground flora (early Spring & very dry summers) on both fallowing/regenerating terrain but also established semi-natural and non-native coniferous woodland
Dry understorey or ground vegetation	**Moderate-High** – predominant climax habitat is native pinewood structure and composition with characteristically open canopy and combustible ground flora (heathers) and trees (pine, juniper)	Maintain varied age structure throughout forest, restoration of peatland and establishment of riparian/ broadleaved buffers.
Tree health damage, die-back	**Low** – very few areas of standing dead/diseased trees.	Monitor tree heath and manage diseased/ damaged trees.
Tree mortality, windthrow, deadwood, or brash	**Low** – low levels of combustible deadwood and post-felling brash	Monitor tree health and morbidity extent with respect to any fuel load increase.
High-risk (flammable) species (e.g. heather, gorse, young conifers)	**Moderate-High** – Heather moorland on upland plateaus/hill summits. Some disparate tree/shrub regeneration with areas of conifers growing on open heath above treelines.	Maintain mature trees and particularly Scots pine element within forest. Control extent of gorse along roadsides when prolific and continuous..
Free draining, organic or dry peat soils	**Low** – Predominantly peaty and surface water gleyed soils on afforested ground. Wetter gleyed soils, mires and deep peats occupy much of the open ground.	Restore deep peats and keep wet flushes open.
Site Conditions & Land Use		
Slopes, gullies, south facing slopes	**Moderate** – prevalent winter weather is frequently or else persistently wet; spring & autumn: mainly cool and humid; summer: warm, showery but with occasional protracted hot/dry spells.	Restock with species appropriate to soil type and conditions to ensure healthy trees. Riparian buffers and smaller coupes to reduce risk in event of fire.
Flammable habitats or a history of wildfire nearby	**Low-Moderate –** open moorland with woodland establishment and regeneration management (Coulin & Glencarron estates) replicating similar ground conditions/vegetation on adjacent hill ground. Little likelihood of muirburn on and adjacent landholding.	Manage as a healthy mosaic of habitats and species. Establish broadleaved buffers along bisecting watercourses and bordering settlements. Maintain good neighbourly relations and be vigilant during muirburn season.
Assets and values at risk		
Proximity to people, property, utilities, or infrastructure	**Moderate-High** – There are settlements/individual properties at close proximity to mature non-native coniferous woodland. A number of low voltage (at low height) and a main high voltage line (& pylons) located within managed open ground wayleaves corridors (reduced fire susceptibility).	LTP has designed, predominantly broadleaved, woodland in future habitat proposals - acting as buffer close to private properties. Allow routine vegetation control within wayleave corridors.
Ecological, historical, or FLS business assets	**Low** - No designated habitat with respect to flora and fauna. Natural Reserve areas are Core Pine Inventory areas with scattered veteran Scots pines and (flammable) juniper bushes/understorey, however this habitat is being regenerated and restored and consequently not extensive or well developed at present..	
Response		
Remote site, no on-site staff (late detection)	**Moderate** – Neighbours/ local residents and recreation users would detect fire early.	Increase site surveillance during periods of very high or extreme fire danger.
Accessibility constraints for fire fighting	**Moderate** - Good site access, good roads and load bearing bridges, hard standings but some very extensive afforested areas, much on steep slopes.	Maintain forest roads, bridges and vehicular access to complete internal forest road network
Proximity to water sources	**Low**	Reliable and substantive freshwater sources nearby (River Carron, Loch Dughail and Loch Sgamhain)

FLS works closely with the Scottish Fire and Rescue Service (SFRS) to prevent and tackle wildfires that threaten Scotland's National Forests and Land. FLS support SFRS in their lead role for fire prevention and suppression through creating annual Fire Plans, maintaining a year-round staff duty and response rota, and providing SFRS with additional logistical support at incidences of fire on or close to FLS land. FLS' primary objective is always to protect people's health, safety and wellbeing.

Warmer summers, with increased incidences of droughty periods, will increase the periods when vegetation (standing biomass) can potentially succumb to wildfire. Areas of open vegetation – including upland heath, fallowing ground and young restocked/regenerating native woodland – have an increased capacity to burn on account of the quicker drying characteristics of these more open, shorter stature habitats and constituent plants vis-à-vis established woodland. As a consequence, instances of fire raising (e.g. unsolicited fires started in or within the vicinity of car parks and visitor thresholds/public access corridors) need to be regularly monitored for and control measures (including precautionary signage) adjusted accordingly to minimise any increased potential wildfire risk to extensive areas of vulnerable establishing woodland.

Deer/Herbivore Management

A separate appendix covers deer management (**Appendix 9**).

Landscape character and visibility

The following landscape character assessment classifications relate to different parts of the LTP area. The classifications are illustrated spatially on **Map 13** – *Landscape Context and Issues* with some explanatory text and are discussed in relation to current forest composition and proposed forest management in section 4.6 - *Landscape* of the main LTP document. Additionally, **Appendix 10** contains photographic and computer-generated visualisations – as seen from six strategic viewpoints around the LTP area - to show forest compositional change over the next twenty years.

Relevant Landscape Character Types (NatureScot, 2019)

LCT 333: Rocky Moorland and Rugged Hills — Relevant Characteristics

- Irregular, rocky moorland descending in spurs and shoulders from adjoining higher mountains, with craggy (not angular) summits down to lower moorlands
- Caledonian pine stands in sheltered locations that enhance the rugged landscape
- Exposed, windswept character
- Provides a visual setting and physical buffer between adjacent mountainous types and lower settled/transport corridors
- A strong sense of wildness over large areas, derived from ruggedness, perceived naturalness and the lack of structures

LCT 330: Rounded Hills and Moorland Slopes — Relevant Characteristics

- Broad, rounded hills and upland moorlands with smooth, gentle slopes down to broad straths, creating an undulating skyline
- Extensive, relatively uniform moorland vegetation with occasional surface detail of rivers, lochs, riparian woodland, woodland patches and regenerating trees
- Large coniferous forests on accessible lower slopes
- Occasional trunk roads curving through the lowest major straths, with minimal associated service development

LCT 340: Strath – Ross and Cromarty — Relevant Characteristics

- Sinuous or curved strath channels with steep sides cutting through upland and mountainous landscapes
- Narrowing channel inland, with a rising strath floor and a meandering central river, terminating at a narrow glen or mountain pass
- Abrupt transition in topography from strath to slope, emphasised by the change from regular field patterns to forest, woodland and moorland
- Riparian woodland and patches of native woodland on the strath floor and lower slopes
- Limited settlement
- Rural estate landscapes including policy woodlands and rhododendron
- Through-road along the strath length, typically at the edge of the strath floor

- Increasingly restricted, channelled views in the upper reaches

Public access and recreation

The Cape Wrath Trail passes through the plan area from the Coulin road forest threshold gate on the northern boundary (NH 0224 4997) to southern boundary/gate (NH 0666 4873) along Allt na Chonais. This long distance trail utilises a forest road in the south of the Plan area and a dedicated gravel unbound walking trail in the northern half of the Plan area.

There are three additional trail sections – c. 1 km Lair Trail in the NW (combined forest road and unsurfaced trail section), Creag an Eilein/Golden Valley link trail in the SW (100m unsurfaced) and the 1,050 m 'One Step' unsurfaced hill path linking from the southern forest road to the wider trail networks and destinations south of the Plan area.

There is a dedicated FLS car park (with interpretation) on the northern side of the A890 in Craig – used mainly by walkers wanting to access the southern trails. At the time of Plan revision (2025/26) FLS are applying for planning permission to create a new car park, to replace this existing one, on the southern side of the A890 (NH 0500 4975). The existing car park will then be used temporarily to support logistics and delivery of felling operations proposed in the vicinity and thereafter used solely for vehicle access for forest management purposes.

There are no Core Paths within the Plan area.

Historic Environment

FLS' approach to, and management of, historic environment features is detailed in LTP section 4.5 and all known features are recorded/mapped in FLS' GIS. There are no scheduled ancient monuments within the Plan area and the six known, notable, undesignated heritage sites recorded within FLS GIS mapping system and within the local authority's Historic Environment Record are as detailed below:-

- *Farmstead (undated) – (NH047492) A farmstead comprising two roofed buildings and one unroofed structure in the corner of an enclosure is depicted on 1st edition of OS 6-inch map.*
- *Township (Post Medieval – 1560 AD to 1900 AD) – (NH038492) Around 7 small buildings marked along track at Craig on 1st edition of OS 6-inch map. Few buildings may remain as settlement now largely rebuilt in slightly different location.*
- *Enclosure (undated) – (NH025489) An enclosure is depicted on 1st edition of OS 6-inch map.*
- *Farmstead (undated) – (NH026486) A farmstead comprising one unroofed building and two enclosures, one of which has two internal walls, and a field-system are depicted on 1st edition of OS 6-inch map.*
- *Township (Post Medieval – 1560 AD to 1900 AD) – (NH018488) A township comprising one unroofed and five roofed buildings is depicted on 1st edition of OS 6-inch map.*
- *Enclosure (undated) – (NH037467) An enclosure is depicted on the 1st edition of OS 6-inch map beside Allt Coire a' Bhainidh.*

Renewable energy developments, utilities and other infrastructure

The table below details all existing renewable energy schemes within the plan area.

Name	Grid reference	Description
Allt a'Chonais (Strathcarron)	NH 0473 4924 – NH 0653 4870	Run of river hydro scheme (Chonais Hydro Ltd.). Turbine house & 2 km undergrounded penstock within SE of LTP area with agreed third party access.
Allt Coire a'Bhainidh	NH0290 4876 – NH 0360 4727	Run of river hydro scheme (Osprey Energy Ltd.). Turbine house, undergrounded penstock (1,360 m) and underground electricity export cable (410 m) within S of LTP area with agreed third party access.
Hydro Export Cable (Coulin Estate)	NH 0245 4991 – NH 0243 4891	1,330 m undergrounded electricity cable (on northern flank of LTP) taking electricity generated on/from neighbouring (Coulin) estate to grid connection point along A890.

There are two telecommunications masts within the LTP area, both located immediately adjacent to the forest road above Lair - managed by third party telecoms operatives with an access agreement with FLS for routine access for maintenance via the forest road network linking to the A890.

A 33kV overhead supply (SSE) crosses the LTP west to east along the glen floor with distribution spur lines to settlements within the glen. All lines have corresponding agreed and managed wayleaves.