

The landslips on the A83 in Glen Kinglas and 20 years of government failure – why?

## Description



Photo of one of the two landslides at the junction of A815 to A83 on the Strone Estate just above the Ardkinglas estate entrance and the village of Cairndow. Note the slowly regenerating scrub, not enough make any appreciable difference. Photo credit Parkswatch reader.

According to BEAR Scotland, the consortium of private companies who manage trunk roads on behalf of Transport Scotland, around 160mm of rain fell in 36 hours around the Rest and Be Thankful two weekends ago and caused eleven landslips ([see here](#)– news release dated 11th October):

- “One small landslide at the Rest and be Thankful. Debris reached the road and was cleared.
- Two further landslides at the Rest and be Thankful. Debris was captured in the debris net and debris pit.
- Four landslides at Glen Kinglas. Debris reached the road and has been cleared.
- Two small landslides at Glen Kinglas which were captured in the debris bund.
- Two very substantial landslides on the A83 at the A815 Dunoon junction. The debris which reached the road has been cleared.”



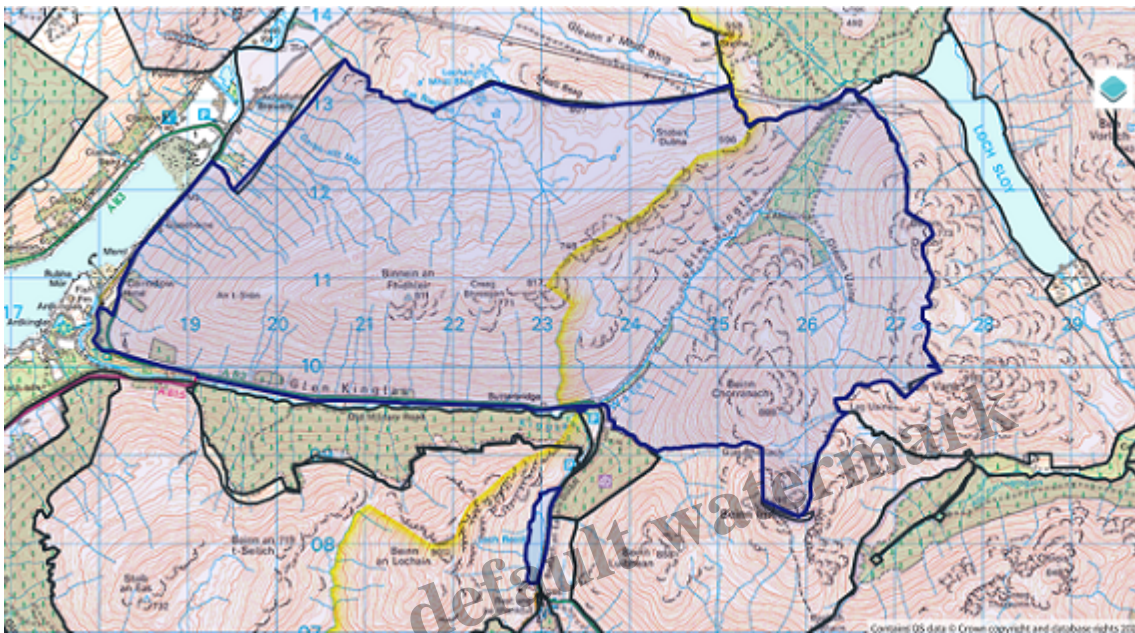
A83 Dunoon Junction before and after

Somewhat confusing the left photo is looking over the landslide towards Glen Kinglas, the right looking over the site westwards towards Loch Fyne

The rainfall figure appears to have been taken from the two SEPA rain gauges at the Rest and Be Thankful just above Glen Kinglas. It is likely to be reasonably accurate for the area most affected by the landslips. 160mm in 36 hours is significantly less than the 200mm reported in Cowal ([see here](#)) and, as I argued in my last post ([see here](#)), it is clear now government should be preparing for extreme rain events of that magnitude and more.

Eight of the eleven landslips took place on the steep south facing slopes in Glen Kinglas below Binnein an Fhidleir. These slopes are up to almost 800m in height and catch a significant amount of rainfall which then drains quickly downhill (helped by the landforms below the ridge which are hard to see from the road below). Being south facing, this land has been favoured for farming, not forestry, as on the opposite side of the glen

These eight landslips also took place within a single landholding, the Strone Estate.



To look for more Properties Click th  
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COUNTY : ARG

PROPERTY : Strone Estate

OWNER : Thomas Roy Turnbull

ADDRESS :  
Strone House  
CAIRNDOW  
PA26 8BQ

SASINES : 28680

LAND\_REGISTER : n/a

NOTES : n/a

CURRENCY : 2022-10-13

WEBSITE :

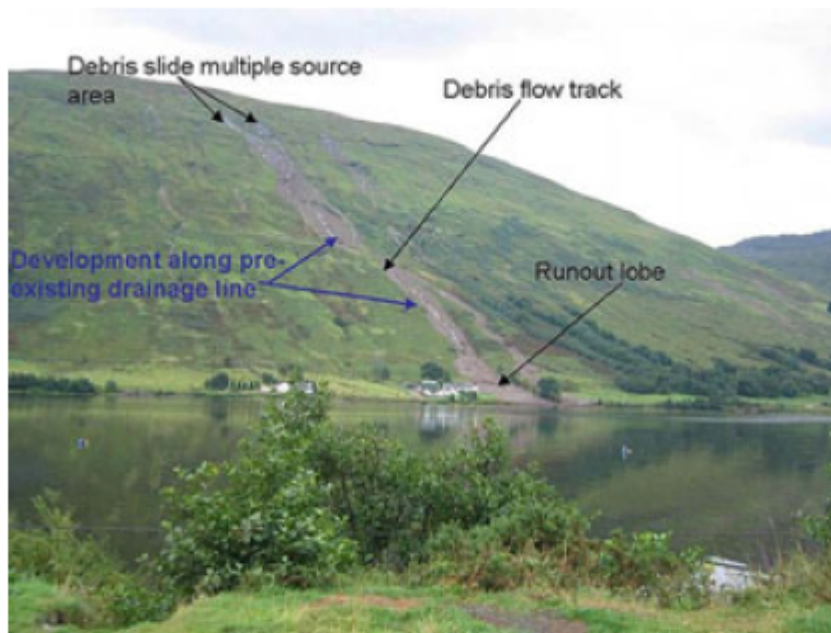
HECTARES : 3014

ACRES : 7448

Tom Turnbull, who owns and manages the estate, is also chair ([see here](#)) of the Association of Deer Management Groups, the umbrella organisation for the bodies that were set up to control deer numbers in Scotland on a voluntary basis.

## **A history of the landslips above the A83 around Glen Kinglas and government's response**

In August 2004 an extreme rain event triggered landslips which blocked roads across Scotland, including the A83 near Cairndow and Glen Kinglas:



**Figure 2.5 – Upland debris slide and flow development at Cairndow on the A83.  
(Courtesy and © copyright of Halcrow.)**

Several hundred tonnes of material are estimated to have blocked the road at the two locations in Glen Kinglas with possibly two to three times this amount at the Cairndow slide. The debris blocking the road comprised very silty sand and gravel with frequent cobbles and

Credit Scottish Road Network Landslide Study

The Cairndow and Glen Kinglas landslips in 2004 also originated on the Strone Estate but some flowed over its boundary to damage both public infrastructure and private property:



**Figure 2.4 – Debris flow above the A83 to the west of Cairndow showing the effects on a roadside cottage and the trunk road immediately downslope from the cottage.**

In response to this

landslip disaster the Scottish Government of the time set up the Scottish Road Network Landslide Study. This was tasked with looking into the causes of the landslips and what might be done to protect the transport network in future. It reported four years later in October 2008 ([see here](#)).

The Report, 268 pages with appendices, included detailed and very helpful descriptions of the various landslips that had occurred in 2004 (hence the photos above), information on other landslips that had affected the road network, data on rainfall, consideration of what type of slopes were most at risk and short case studies of landslides abroad. From all this data and analysis it produced a map of the roads most at risk from landslips in Scotland:

## HAZARD RANKINGS



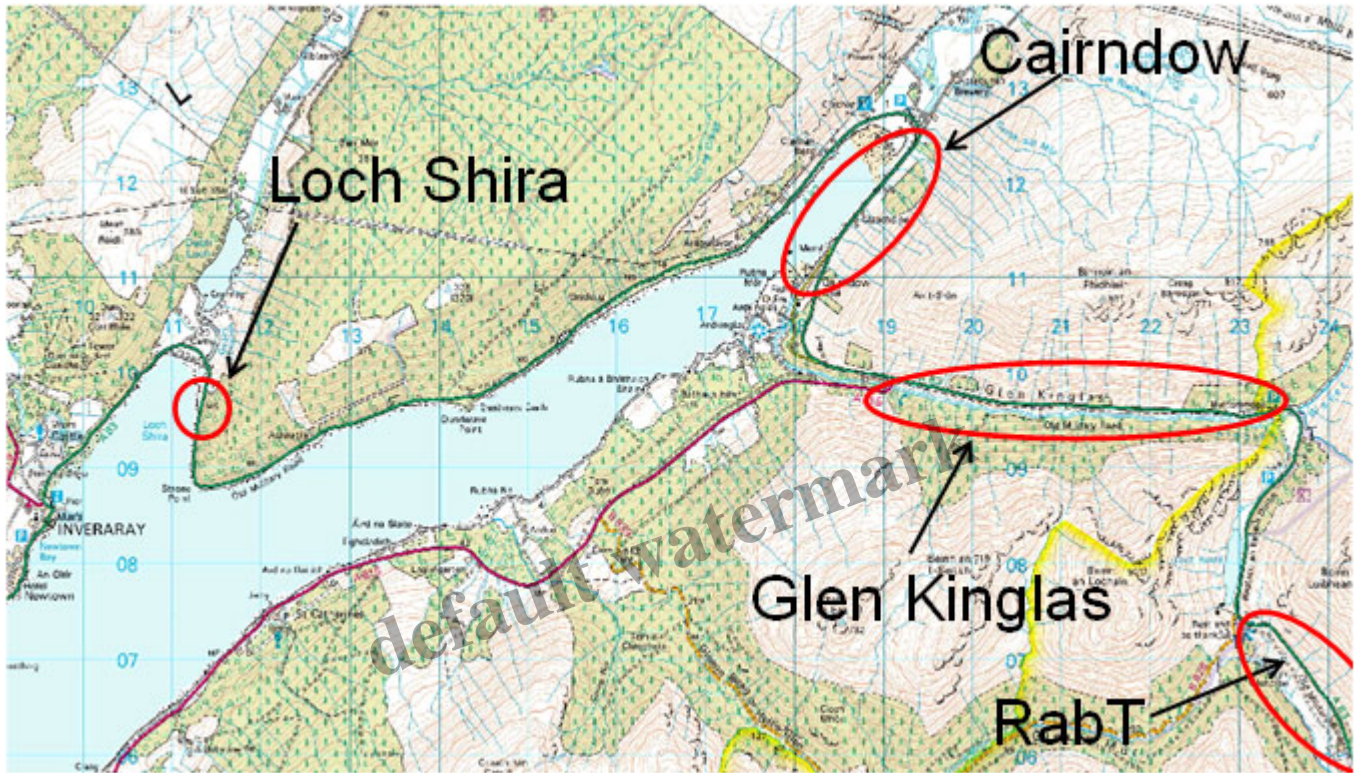
Figure 7.1 – Sites with a hazard ranking score of 100 or greater. (© Crown Copyright. All rights reserved Scottish Government 100020540, 2008.)

Arrow points to A83. A significant proportion of the roads most at risk in Scotland were in the Loch Lomond and Trossachs National Park..

While the report was trail-blazing in many ways it had three major limitations:

- it was focused on roads and did not look at landslip risk to other infrastructure such as railways, powerlines or housing (all of which have been severely damaged by landslips in the last five years;
- its consideration of how vegetation, including woodland, impacts on landslips was extremely limited; and
- the three main solutions proposed to mitigate landslip risk to the road network were all engineering based (debris flow prevention such as nets, road protection such as shelters and road re-alignment)

These limitations might not have mattered if the research programme the report recommended had been progressed. However, the 2008 financial crash and the imposition of austerity by the UK Government put more emphasis than ever before on government agencies prioritising problems and only addressing those deemed most urgent: in the case of Transport Scotland it has been digging holes for itself under Beinn Luibhean at the Rest and Be Thankful ever since.



The Road Network Landslide Study had identified three areas on the A83, apart from the Rest and Be Thankful, as being at risk and five years later, in 2013, Transport Scotland finally commissioned BEAR to look at these sites in more detail ([see here](#)). BEAR came up with a number of recommendations for Glen Kinglas:

## Glen Kinglas

The Glen Kinglas study area is located between Butterbridge in the east and the settlement of Cairndow in the west. It is approximately 5.5km long and contains 32 channels that flow perpendicular to the Trunk Road. Typically events in Glen Kinglas are less dramatic than those experienced at the Rest and Be Thankful.

A number of potential risk reduction methods were considered during the assessment process, including:

- forestry planting
- enlarging and re-aligning existing culverts and associated ditches
- flexible (steel) debris barrier
- catch pits
- linear catch ditches with associated bunds

The preferred option is a combination of linear catch ditches and bunds. This could take the form of an earthworks ditch and associated bund, which will be in the region of 1.5m to 2.5m high.

The assessment shows the blinkered focus of the transport industry on engineering solutions: it should not have been a choice between either engineering or forestry planting (land-use).

It took another five years before the announcement ([see here](#)) that bunds were to be constructed in Glen Kinglas out of material excavated from the Rest and Be Thankful.





The landslide occurred around 230m above the carriageway

Bund shown by green below, note the clearfelled plantation on the left

The first was constructed not a moment too soon. In December 2019 the first bund was reported ([see here](#)) to have stopped a landslide hitting the A83 (left). In September 2022, however, it was reported ([see here](#)) that work on a further bund in Glen Kinglas had been very slow due to a shortfall in material from the Rest and Be Thankful work.

These bunds caught two of the eight landslips in Glen Kinglas but the other six reached the road. The problem with relying on engineering solutions alone is not just the cost but that as extreme rainfall events increase Transport Scotland is always likely to be playing catch-up. The narrow focus is illustrated by the fact that BEAR Scotland did not mention this landslide at Cairndow in their news release, presumably because it did not reach the road:



Landslip above slopes of Loch Fyne at the north end of Cairndow

BEAR's detailed site visits in 2013 had concluded that "the Cairndow study area is the lowest risk of the three highlighted landslide areas". Ten years later this landslips shows it is another disaster waiting to happen!

## **Forestry and woodland in Glen Kinglas**



Impact of landslips on natural regenerated woodland at the western end of Glen Kinglas where it appears grazing levels may have reduced. Photo credit Nick Halls.

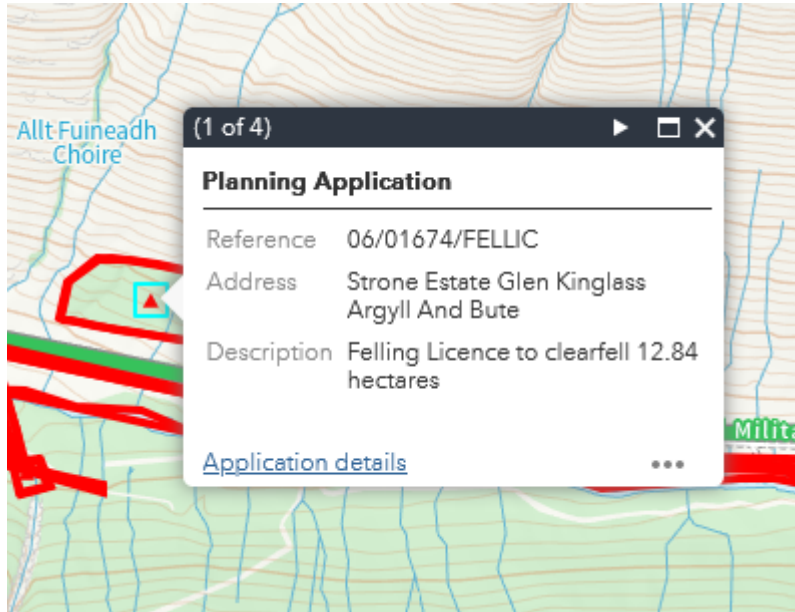
While this landslide has uprooted some trees, others on the right of the affected area have been left standing and have helped stem the debris flow. Meantime the trees in the centre may have helped keep that part of the slope intact.

As I argued in my last post ([see here](#)), while planting of trees is not a panacea for landslips, if done with care it potentially offers a cheap and effective solution. Had some trees been planted on these slopes immediately after the events of 2004 that might just have prevented some of those six landslips or stopped them reaching the road.



One of the recent landslips that crossed the A83 showing the volume of material and how mature trees can help. Photo credit Nick halls

Instead of planting trees above the A83, however, the Strone Estate has been given permission on several occasions to fell the small plantations alongside it. The Argyll and Bute planning portal shows the then Forestry Commission granted the Strone Estate permission to fell three plantations after 2004, in 2006 and 2008 (one of which you can see in the photo below):



This small plantation was close to the junction of the A83 and 815 that got blocked

While the Road Network Landslide Study did not say much about trees, it was emphatic about one point, clearfelling is not good for slope stability:

*“recs5. Although, the practice of clear-felling is not as widespread as it once was in Scotland [sadly that trend has subsequently reversed], forestry practices can have a significant impact on the stability of hillsides. Learning from international best practice, particularly that from British Columbia in Canada, in terms of forestry harvesting to maintain hillside stability should be seen as a priority; this will require dialogue with the Forestry Commission”*

While the Landslide Report was published too late to affect the original felling permissions, felling was then delayed and the Scottish Forestry Map viewer shows that clearfelling licenses were issued to two of those plantations in 2017 and 2021.



One of the Strone Estate plantations in Glen Kinglas 2021 viewed from a clearfelled area on the south side

Scottish Forestry, therefore, appear to have paid absolutely no attention to the recommendations of the Roads Network Landslide study. On the south side of Glen Kinglas, although not threatening any road, a large section of forest has also recently been clear-felled:



The corner of the Strone Plantation is just visible above the A83 on the left of the photo (taken in 2021). Note the bare slopes beyond.

Given the instability of the slope above the A83 in Kinglas was well-known, the sensible thing would have been for Scottish Forestry to refuse the felling licenses on the north side of the glen. Scandalously, even though this would be in the public interest, it appears to have no means of compensating landowners for loss of anticipated income in cases such as this. Another failure of the Forest Grants Scheme.

### **Land-use and land management on the Strone Estate – deer**

On 9th March 2023 Tom Turnbull, the owner of the Strone Estate wrote an article for the Scotsman in his capacity of chair of the ADMGs entitled “We need to challenge the assumption that less deer will mean more trees ([see here](#))”.

Whose assumption? A significant proportion of Highland Scotland is now peatbog and generally too wet for trees to grow. Moreover, the evidence now shows that natural regeneration of woodland only takes off when deer are reduced to about two per square kilometre, significantly below NatureScot's current targets. Above this, density tree regeneration is slow to non-existent. Reducing deer from 10 per km to 6 per km, for example, won't result in much appreciable difference.

The Inverary and Tyndrum Deer Management Group, which includes the Strone Estate, updated their background information and plan for 2015-25 in October 2022 ([see here](#)). In 2022 3084 deer were counted over 46,895ha, an average of 6.58 deer per kilometre (NatureScot counted 7.3 in a helicopter account in 2017). These figures are likely to a significant underestimate as deer are very hard to count in open country on foot and even more difficult to count when in woodland/forest. While most members of the DMG apparently conduct deer counts on foot each Spring there is no breakdown of numbers by estate so information about the deer population on the Strone Estate and whether it is lower or higher than the stated average is not known.

While there is a section on the public interest in the Deer Management Plan, this does not mention the relationship between grazing levels and landslips or provide any information about the number of deer that may be grazing the hillsides above the A83. Deer browsing not only prevents woodland regeneration, it also reduces the height of other vegetation increasing the rate water runs off the hill and with that the likelihood of landslips. In a saner world we would know how many deer are grazing the flanks of Glen Kinglas and act on that information.

### **Land-use and land-management on the Strone Estate – livestock**

Contrary to what Mr Turnbull was claiming in the Scotsman, there is good evidence from his own estate of how grazing impacts on native woodland. There are several blocks of planted native woodland in the upper part of Glen Kinglas (which lies within the Loch Lomond and Trossachs National Park boundary) which, when I last visited in March, were clearly being destroyed by livestock grazing before any account is taken of deer (the ITDMG plan says the objective of the Strone Estate is both deer stalking and farming):





Cattle hoof marks in the Butterbridge plantation just after where Glen Kinglas bends north east. Note the straw by the gate. Photo March 2023.

The area within this enclosure was marked green, low herbivore pressure, in the Strone Estate Habitat Impact Assessment (see below). In fact, the lack of any further tree regeneration within the enclosure and the absence of an understorey in this part of the Butterbridge plantation since the trees were planted shows grazing pressure has been high.

That has clearly been deliberate. One possible explanation for this is Mr Turnbull has decided, as described in his Scotsman article, to introduce cattle to break up purple moor grass (molinia) to help the new plantation start to regenerate naturally. If there was a need for that, however, cattle should have been introduced BEFORE the planting, not afterwards.



Sign on gate to Butterbridge plantation just off the A83. Photo 2019.

It is clear the Strone Estate's original intention was to keep grazing animals out of the Butterbridge Plantation to enable the trees to get established.

Once established, however, native woodland plantations are often deliberately opened up by landowners to provide food and/or shelter for grazing animals especially in the winter months. The straw in the top photo shows there was not enough food for the cattle here in March. As a consequence, they will have been eating the trees as well as churning up the ground.



Part of a long block of native woodland planted in Glen Kinglass, above the sitka plantations north east of Abyssinia bothy.

“simply reducing herbivore numbers, including sheep, to very low levels (or excluding them from an area) cannot guarantee woodland regeneration” (Tom Turnbull).

The destructive impact of grazing on the planted native woodland at the top of Glen Kinglas is both obvious on the ground and documented. Appendix 5 to Deer Management Plan is a map showing the Herbivore Impact Assessments conducted by some estates on native woodland ([see here](#)). It classifies the area pictured above as suffering high herbivore pressure (yellow). Tom Turnbull should know from his own estate that even where deer numbers are being reduced it will make no difference to woodland if grazing by livestock replaces this or is allowed to continue. Strangely, he made no mention of this in his Scotsman article or of how Scotland’s rural payments scheme subsidises landowners to keep the livestock which is helping to destroy woodland.

Earlier this year the Scottish Government provided this information about the Strone Estate:

Business: Strone Estate

Scheme	Year									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Single Farm Payment Scheme	£18,358.46									
Scottish Beef Scheme	£690.46									

RP	£198,315.17	£17,691.02	£17,691.02	£17,691.02	£13,521.02	£17,691.02	£3,000.00	£3,000.00	£3,000.00	£3,000.00
LFASS*	£4,777.97	£4,486.73	£4,486.73	£4,617.14	£4,617.76	£3,693.21	£1,847.10	£4,617.76	£4,617.76	
BPS		£15,477.59	£20,250.18	£25,157.20	£29,453.19	£32,942.65	£35,009.21	£35,280.70	£35,368.87	
GR		£11,039.33	£12,860.53	£13,477.61	£13,494.31	£13,540.09	£13,934.44	£13,983.04	£14,031.77	
SSBSS		£447.81	£1,997.60	£2,256.52	£1,755.48	£1,501.65	£1,410.06	£1,241.76	£912.80	
<b>Total:</b>	<b>£222,710.18</b>	<b>£49,142.48</b>	<b>£57,286.06</b>	<b>£63,199.49</b>	<b>£62,841.76</b>	<b>£69,368.62</b>	<b>£55,200.81</b>	<b>£58,123.26</b>	<b>£57,931.20</b>	<b>£3,000.00</b>

\*Note, LFASS scheme years 2019 and 2020 had a reduction to the payment rate to 80% and 40% of the 2018 payment rate respectively.

RP	Rural Priorities
LFASS	Less Favoured Area Support Scheme
BPS	Basic Payment Scheme
GR	Greening
SSBSS	Scottish Suckler Beef Support Scheme

THE RP Scheme, not discontinued, was for woodland creation. Information provided as a result of an FOI request.

To qualify for the Basic Payment Scheme, the largest recurring element of these payments, and the LFASS, landowners need to show they are farming the land – which in Strone’s case means keeping livestock. On top of this Strone has received a significant “greening” payment which, for non-cultivated areas, is paid for “permanent grassland”. Then there is the much smaller grant for supporting cattle through the SSBSS.

All these rural payments are designed to maintain grazing. While it is not clear if they cover the land where the landslips have occurred, they are clearly helping to destroy the native woodland plantations in upper Glen Kinglas.

While it does not appear the Scottish Forestry has funded these native woodland plantations, other agencies and bodies have. The ITDMG Plan helpfully records:

- Strone Estate received funding for 70 ha of native tree planting and deer fencing in 2014 (this looks like the £198,315 paid by the Rural Priorities scheme in 2014).
- Strone Estate also received funding for riparian tree planting from Loch Lomond & Trossachs National Park (how much?).
- Strone Estate plans to plant blocks of trees along the River Kinglas to improve migratory fish habitat, using funding from the Woodland Trust



Individual trees in plastic shelters – were these funded by the Woodland Trust? – with native woodland plantation behind – funded by the LLTNPA?

In upper Glen Kinglas one hand of government, aided by the voluntary sector, is dishing out money to Strone estate to plant trees, while the other is dishing out money to the estate to keep livestock and maintain grassland. These objectives are contradictory and in terms of the public interest completely crazy.

From a landowner perspective, however, none of this really matters as long as the gravy train continues. A National Park Authority worth its name would have spoken out publicly about what is happening and called for reform – instead they too have funded the Strone Estate.

All this public money – and even that of the Woodland Trust – could have been far better spent. Strone estate has received over c£700k between 2014 and 2022 which could have been used to end all livestock grazing on the slopes of Glen Kinglas, reduce deer numbers to two per square kilometre and plant some trees to help stabilise the slopes. Spending £700k for that purpose might not at present guarantee a reduction in the harm landslips are causing to the rural economy in places like

Glen Kinglas but unless government tries we will never know.

## **The elephant in the room**

This story of failure illustrates just how incapable our public authorities appear to be at present of seeing the big picture and the public interest:

- Transport Scotland won't say that we need to change land-use around the road network if we are to reduce its increasing vulnerability to landslips
- The rural payments division of the Scottish Government continues to churn out money to landowners to support livestock grazing with no consideration of the consequences;
- NatureScot prompts and supports landowners to churn out deer management plans which ignore the landslip issue;
- Scottish Forestry carries on issuing felling licenses regardless;
- The LLTNPA is incapable of raising its eyes over its boundary but, as importantly, has nothing to offer having never considered the landslip problem, not even at the Rest and Be Thankful.

The question this begs is why and how has this been allowed to continue for almost 20 years? Austerity certainly hasn't helped, it has turned public authorities inward looking and fearful of saying anything that could have budgetary implications. Nor has the convention that Public Authorities should not criticise each other, which has helped conceal how government in Scotland has been falling apart.

But underneath all this is a much bigger issue, landownership and the power of landowners. Whatever the public authority, whatever the Minister responsible, none have been prepared to criticise the way the Strone estate has been managed. And none have dared suggest that all the public money being passed its way could be much better spent. Funny that!

Mr Turnbull is now in a particularly powerful position as chair of the ADMGn one of the primary bodies who have been responsible for stopping all meaningful attempts to control deer numbers in Scotland. All the more reason that the Scottish Government should challenge him about the way his own land in Glen Kinglas has been managed and require this to change. And, should he fail to co-operate, what better place for the Scottish Government to use their compulsory purchase powers in the public interest?

## **Acknowledgement**

I would like to acknowledge the help I have received in researching and producing this piece from various people who would prefer/require to remain anonymous.

### **Category**

1. Loch Lomond and Trossachs

### **Tags**

1. climate change
2. forestry
3. Freedom of Information
4. land reform
5. landed estates
6. landslips
7. LLTNPA
8. natural environment
9. Scottish Government

**Date Created**

October 20, 2023

**Author**

nickkempe

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