



southern uplands partnership
living land, living community

Black Grouse Recovery Project

Undoing The Silence of the Uplands

This work has been funded by Scottish Borders Council and the Galloway Glens Landscape Partnership for which many thanks!

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Black grouse were once an abundant bird, their calls were once common in our soundscape, a gurgling burbling and hissing voice that it could be heard up to 2 miles away. It was common across the whole of our landscape to see strutting males gathered on mass at traditional lek sites to leap and occasionally fight, competing to catch the eye of the picky grey hens. This experience would have been enhanced by the calls of other totemic upland species such as bubbling curlew and drumming snipe. This diminishing visual and audio wildlife spectacular across the whole of Southern Scotland is emblematic of the wider biodiversity loss we have suffered over the last few centuries, a loss that has accelerated dramatically from the latter half of the 20th century onwards. The recovery of black grouse would be a strong signal for a rebounding biodiversity richness in the region.

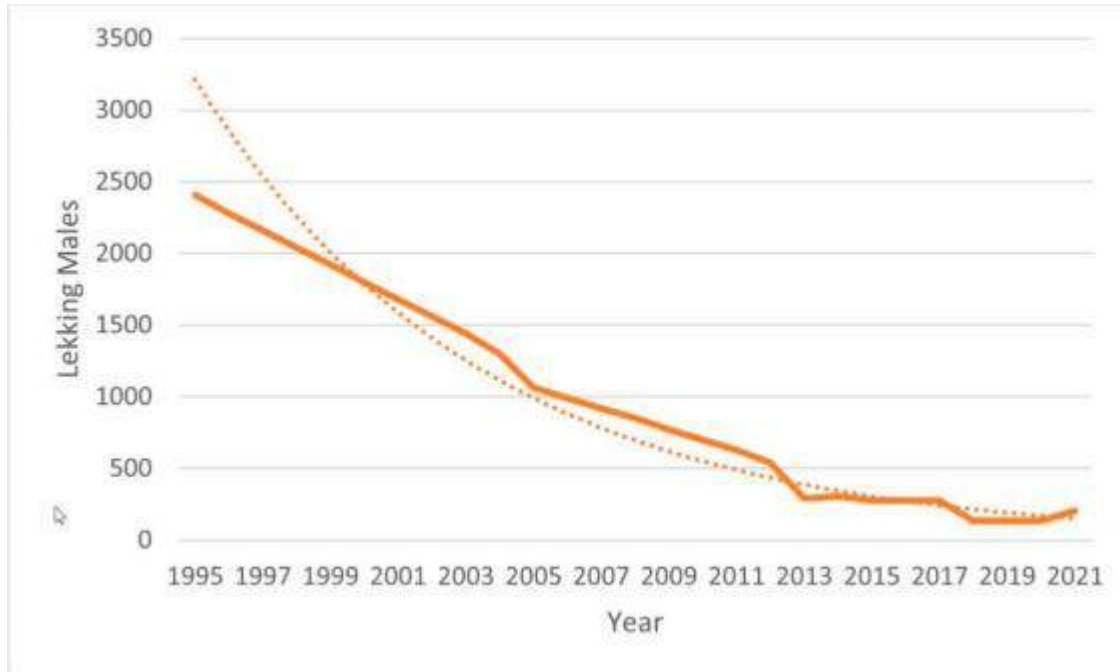
Background

Black grouse in Scotland declined by 29% between the 1990s and 2005, and in the southeast and west of Scotland by 49% and 69% respectively. The population in southern Scotland is now vulnerable to extinction with just over 200 lekking males recorded in 2021 and the population now isolated from birds to the north of Scotland and to the south in England.

Southern Scotland has been identified by the Scottish Black Grouse Biodiversity Action Plan Steering Group as a priority area for black grouse conservation action due to the ongoing decline (Graph 1) in both numbers and range of the species. In response to this concern NatureScot commissioned a desk based study in 2014 – ‘Black Grouse conservation in southern Scotland’ (GWCT 2014) which concluded that *‘... the long term viability of black grouse in southern Scotland is dependent on implementing conservation measures, which, in the short term, stop the decline of the population, whilst identifying and assessing the feasibility of establishing habitat corridors to enhance connectivity and to facilitate future range recolonisation....A landscape-scale black grouse conservation plan is required for southern Scotland to ensure that the needs of black grouse are considered in future forest design plans, other development pressures such as wind farms and the targeting of future agri-environment schemes. Currently, black grouse needs appear to be only considered at the site scale, with little consideration for landscape-scale conservation which is critical to retain connected black grouse populations through dispersal between groups and to facilitate genetic exchange’*

The 2014 report was followed up in 2016 with a southern Scotland black grouse strategic plan (SSBGSP) – ‘Black grouse conservation in southern Scotland - Phase 2 Development of a regional strategic conservation plan’ (GWCT 2016) which outlined a strategy to halt the decline of black grouse, increase numbers and recolonise lost range in southern Scotland. Conservation targets and priority actions were identified within the strategy however thus far no conservation work on the ground has been actioned in response, and black grouse have continued to decline.

Graph 1: Overall trend for black grouse in southern Scotland



The climate change emergency is directly contributing to the decline of black grouse through changes in weather patterns which are negatively affecting productivity and impacting the habitats and prey on which they depend. Corresponding impacts relating to shifts in the climatic envelope is also predicted to reduce habitat availability, with areas of moorland at lower elevation becoming less suitable and predictions are that the current range of black grouse in the UK will be reduced by one fifth by 2080 (Climate Atlas 2007). Research in Wales identified that active management for black grouse should be considered as a tool for climate change adaptation in other vulnerable populations, which is the case in southern Scotland. Their status is further threatened through the increasing isolation of the population from other populations to the north in the Scottish Highlands and from those in northern England.

Black grouse are an indicator species, requiring a mosaic of habitats that benefit a range of other upland species. Their fate is now at a crucial tipping point and it demands collective, well-coordinated action on the ground to happen now if we are to retain this iconic species and in turn the health of the uplands.

Aims of the Project

- Work in partnership with landowners/managers to stem the decline of black grouse through focused conservation action, joined up thinking and collaborative working
- Create, restore, and improve habitat including blanket bog, heathland and acid grassland at both site level and landscape scale for black grouse and other upland species across southern Scotland.
- Use black grouse as an indicator species to reflect landscape scale ambition for the health of the wider upland species and habitats across its range, particularly in the face of the climate emergency

- Improve connectivity between the east and west black grouse population in southern Scotland to retain genetic diversity and prevent further isolation of populations
- Implement a surveying and monitoring plan to discover unknown leks and to continue to monitor populations in response to the actions of the project
- Encourage, support, and provide opportunities for landowners to realise the benefits of improving their land for black grouse and other upland species
- Positively contribute to addressing the climate emergency through the protection of habitats which play a key role in carbon sequestration
- Develop and build deep and lasting relationships between both neighbouring landowners and their black grouse to build a mutual passion, energy, and drive for black grouse recovery as a legacy
- Return the sound of bubbling blackcock and curlew, drumming snipe and other totemic species to the upland landscape

To deliver the aims of the project it would be required that two project officers, one in the east and one in the west, be employed full time.

Project officer objectives:

- Ground truth and survey habitat and suitability for black grouse at lek sites within the focus areas and assess how to improve sites within the context of the wider landscape and other work that is planned on neighbouring sites
- Build relationships with landowners/managers and work with them to develop, resource and implement management plans and action work on the ground for black grouse
- Liaise with stakeholders to highlight where the high priority areas for black grouse are to enable them to build work for black grouse into their management plans and direct where to focus work on their landholdings that will give the maximum benefit for black grouse
- Provide expert advice on black grouse to stakeholders
- Liaise and provide support, advice, updates and information to landowners/managers, contractors, and other relevant stakeholders so that they are delivering the requirements of the project, within the timeframe and budget allocated. This includes the preparation and oversight of contracts for any habitat restoration work
- Ensuring all the consents and permissions are in place to deliver habitat management and any predator control within the project area
- Coordinate a monitoring plan to survey new and existing leks to inform on progress of the project and to identify other potential areas to focus work
- Use data from 2022 survey of Lowther Hills to identify focus areas within this management zone and develop relationships with landowners for partnership working
- Manage the black grouse dataset and communicate outcomes from monitoring through report writing and mapping on GIS
- Build a volunteer base to support delivery of the project, particularly lek surveys and work parties
- Organise training events, workshops and facilitate community conversations to raise the profile of black grouse and to build support
- Build relationships with local organisations and individuals to facilitate sharing of knowledge

- Bring catchment management steering groups together to understand where there are multiple benefits to delivering work, ie improve water quality and peatland, increase habitat connectivity and restore habitat for black grouse and other upland species
- Organise demonstration events for farmers/landowners/managers at example sites where work is already happening for black grouse
- Develop and hold workshops within focus areas to provide advice and guidance to landowners/managers and to create black grouse management groups to encourage joined up thinking, collaborative working, good communication and landscape scale conservation
- Where habitat management plans exist for sites within the focus areas, promote and implement actions from these plans. Where plans were drawn up for existing lek sites in the past, re-visit these for updating and visit landowners to assess success or failure of previous plans
- Identify habitat corridors and implement habitat enhancements to maintain connectivity between core lek sites
- Continue the work and pick up the legacy of Galloway Glen's HLF project
- Promote a code of conduct to bird watchers and photographers when observing black grouse to minimise disturbance

Action Plans

Action	How	Where	Who
Low impact bracken control (including on slopes)	Using local logging horses to pull bracken rollers which will crush the bracken stem in six places, weakening it knocking it back without the use of chemicals and without stimulating growth in the way cutting does. Horse drawn rollers can access areas that machinery cannot and can work on slopes. The project will look to use this as an example of low impact bracken control that can be used at other sites important for black grouse.	Glenlude	JMT (BFT?)
Montane Scrub Planting	Using the results of a survey of soils etc to identify areas to prioritise montane scrub planting, contractors and volunteers will plant montane scrub at a scale that will have a meaningful impact and in an environmental way eg without the use of plastic tree guards.	Tallas and Gameshope	BFT
Light grazing to turn over ground without the use of fences	Nofence collar technology allows control of where grazing happens without the time, cost, or risk of fences.	Glenlude (Future: Grey Mares Tail,	JMT (NTS, Wemyss and

	<p>Livestock can be tracked and located in real time and exclusion zones can easily be created on a phone app.</p> <p>There is scope to use this on a roaming herd across sites important for black grouse and the trialling of this technology at Glenlude could lead the way for this to be used at other sites important for black grouse.</p> <p>There is potential to pilot something around nofence collar grazing on Molinia sites identified by Crichton Carbon Centre if these can be matched up with sites that could be important for black grouse</p>	Wemyss and March Estate?)	March, Tweed Forum, Carbon Centre?)
Sourcing and growing black grouse friendly tree species	<p>Linking up those with tree growing needs with those with tree nursery facilities, like the JMT nursery with BFT to overcome the challenge of sourcing seeds and growing trees for native tree planting.</p> <p>Exploring volunteer groups, landowners and community woodlands that have land available to 'adopt' seeds and trees to grow for planting at black grouse sites.</p>	Glenlude, Tallas and Gameshope	JMT, BFT, Tweed Forum, Tarras Valley?

Project Focus Areas

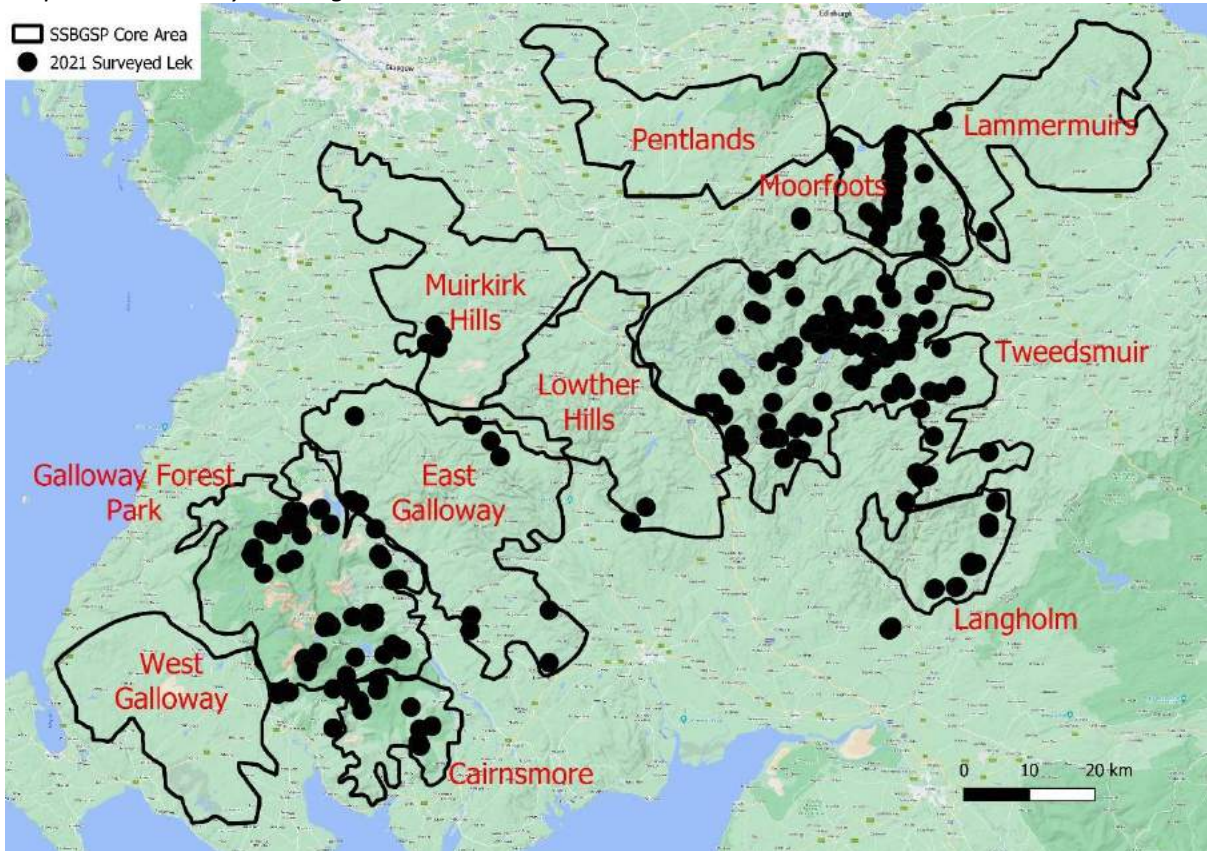
2021 Survey and rationalisation for focus area selection

The SSBGSP identified eleven black grouse management areas across southern Scotland which were organised into four zones defined as core, connectivity, satellite and recolonisation zones. This project will focus work within four core zones (Tweedsmuir Hills, Moorfoot Hills and Galloway Forest Park), one connectivity zone (Lowther Hills) and two satellite zones (Langholm and Cairnsmore).

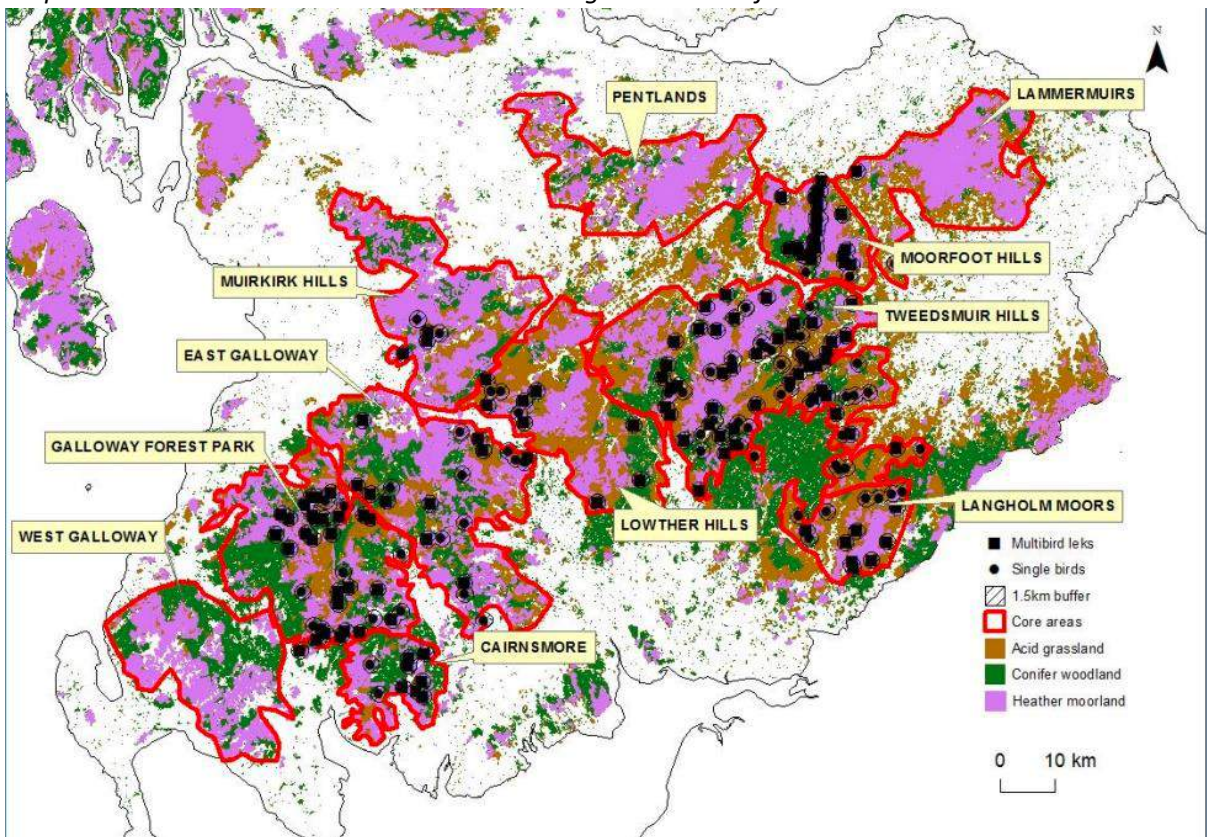
A full survey was conducted in the spring of 2021 to give an up to date picture of black grouse numbers and their distribution (Map 1) since the production of the SSBGSP in 2016 (Map 2) and to inform where best to focus the work of a project.

Leks require 200-700ha (1.5km radius) of suitable habitat with a mosaic of habitat for food. The lek sites on the maps therefore reflect this and are shown as circles with a 1.5km radius.

Map 1: 2021 survey coverage

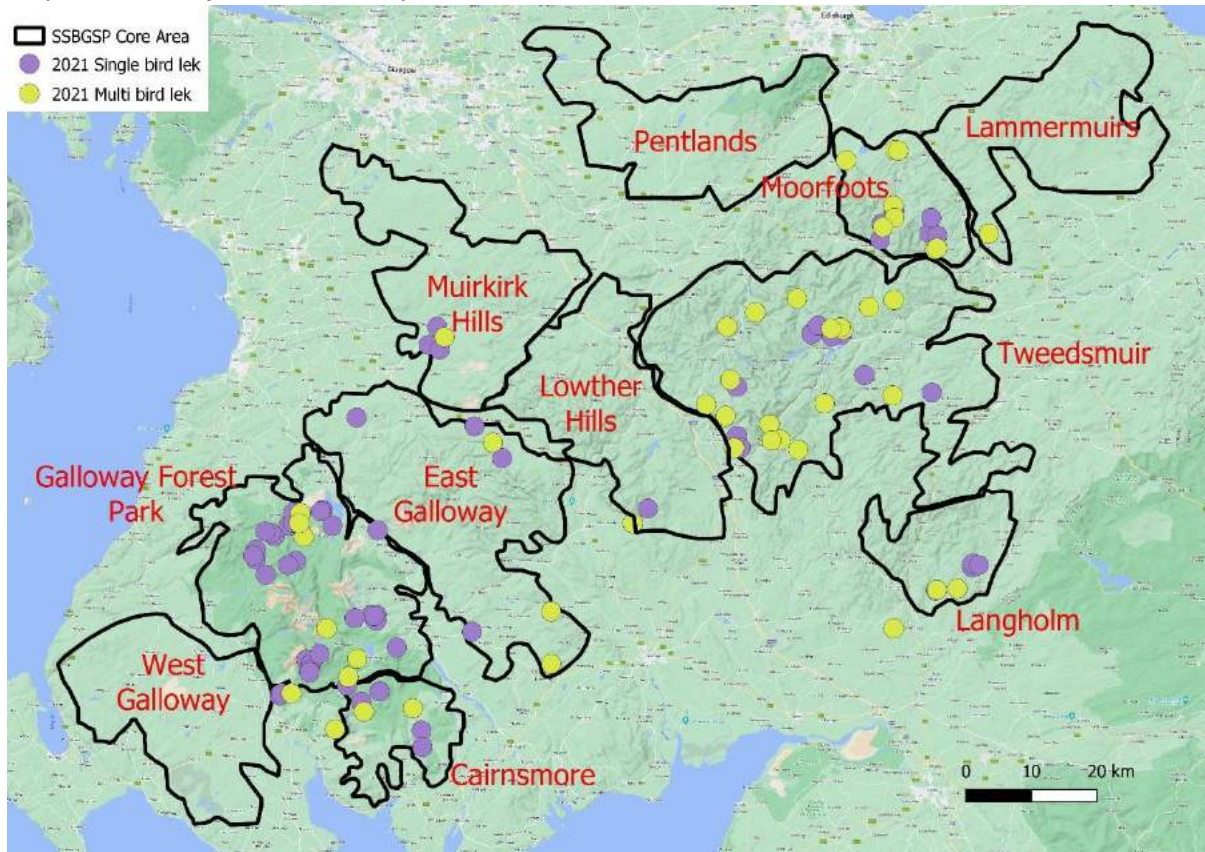


Map 2: Black Grouse distribution and core management zones from SSBGSP 2016

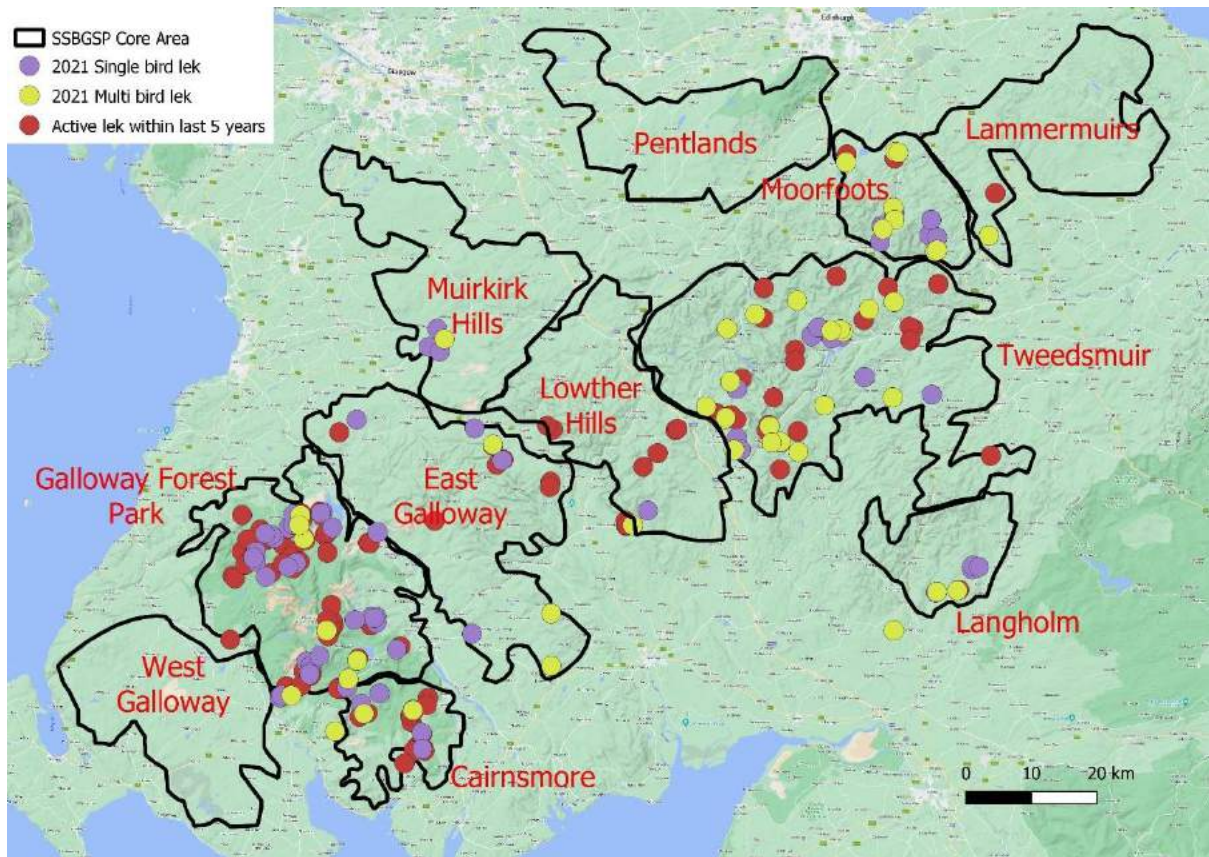


The 2021 survey revealed just over 200 lekking males (Map 3) and helped to identify which SSBGSP management zones would be a priority for the focus of the work of a project. Leks were highlighted as either multi bird lek sites or single bird lek sites to help identify the locations with the most robust lek sites. To ensure no birds were missed or overlooked, leks that were active within the last five years were also highlighted. (Map 4).

Map 3: Results of the 2021 survey

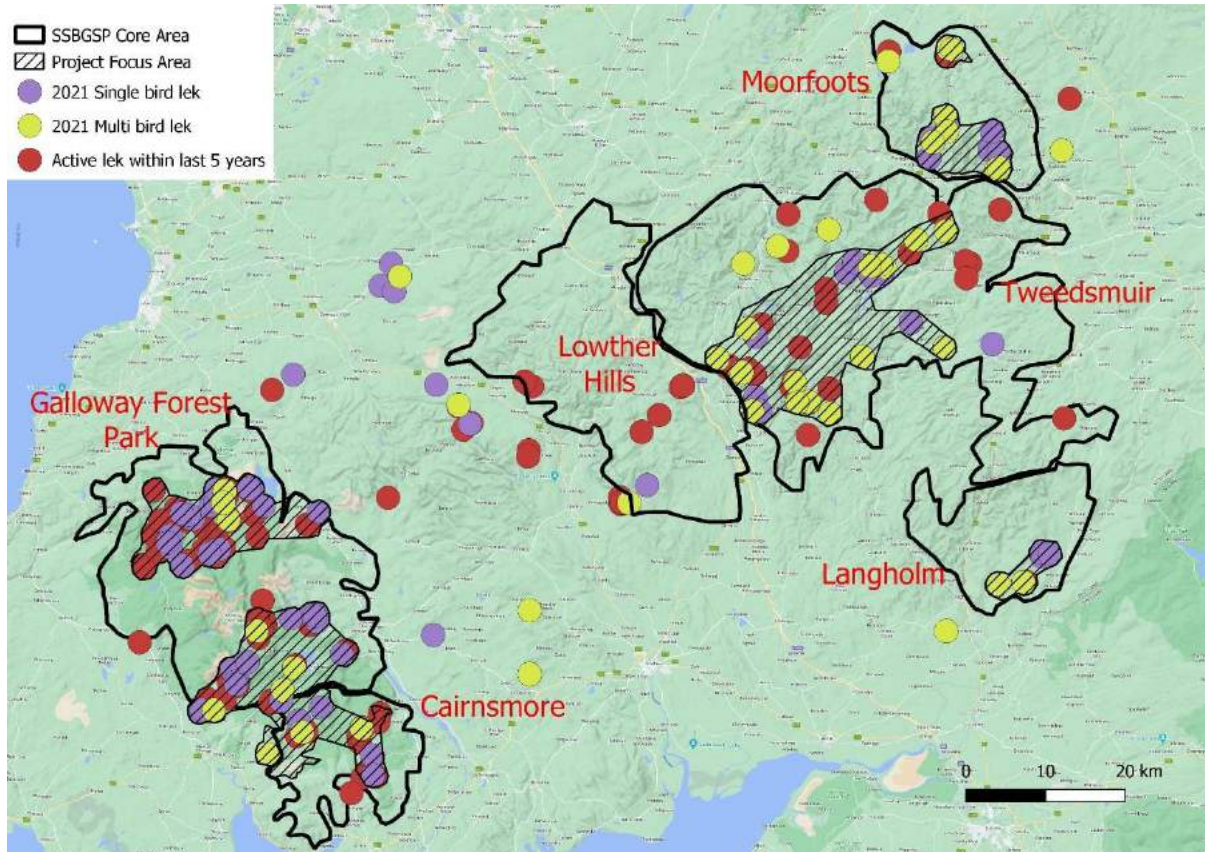


Map 4: 2021 survey results and lek sites that were active within the last five years but were not picked up in the 2021 survey



The maps revealed that distribution has declined since the SSBGSP map was produced in 2016 but the data still identified Tweedsmuir, Galloway Forest Park, Moorfoot Hills, Cairnsmore and Langholm as important sites, and the Lowther Hills as an area of connectivity. It is for this reason that these areas have been selected as priority areas for the project. The zones were when broken down into focus areas (Map 5), which were determined by clusters of multi bird leks and where single bird leks were important for connectivity, based on female dispersal range of 9km. Other factors were considered, such as areas where previous habitat management plans for black grouse had been produced, leks on land where landowners were already interested in doing work for black grouse, presence of other upland species such as curlew and areas that offered the opportunity for landscape scale conservation.

Map 5: Project focus areas within the SSBGSP core management zones



Tweedsmuir

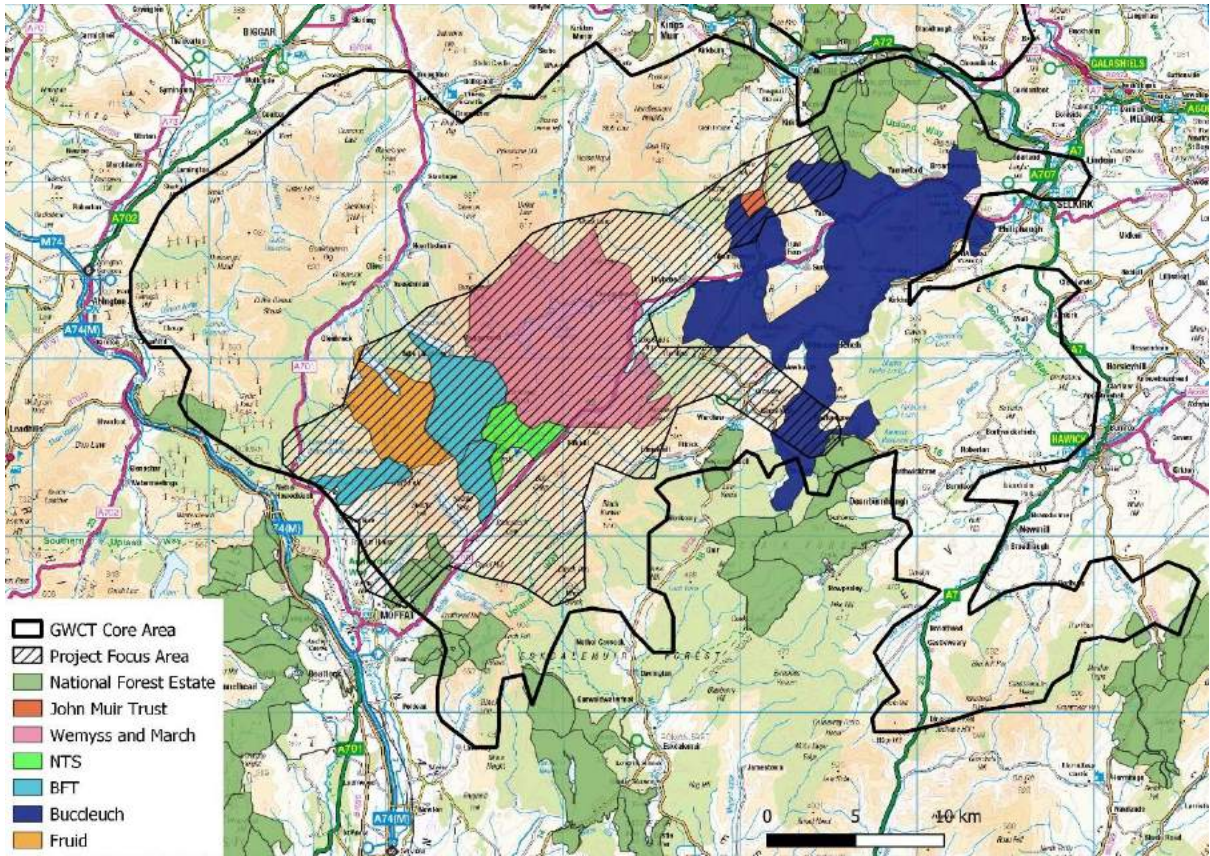
The SSBGSP recommends that black grouse management clusters are formed, made up of estates which support lekking birds, and specifically names Borders Forest Trust (Carrifran, Corehead & Devil's Beeftub and Talla & Gameshope), Scottish Water (Fruid) and Wemyss and March Estates. These landholdings will be the focus of the project and a project officer would facilitate a black grouse management group for these landowners, along with the National Trust for Scotland, John Muir Trust, Forestry Land Scotland and Buccleuch in the Tweedsmuir focus area.

Landowner/manager	Project Action	Project Provision
Borders Forest Trust	BFT own and manage 3,100ha of land within the Tweedsmuir focus area and hold at least four active	Project officer and

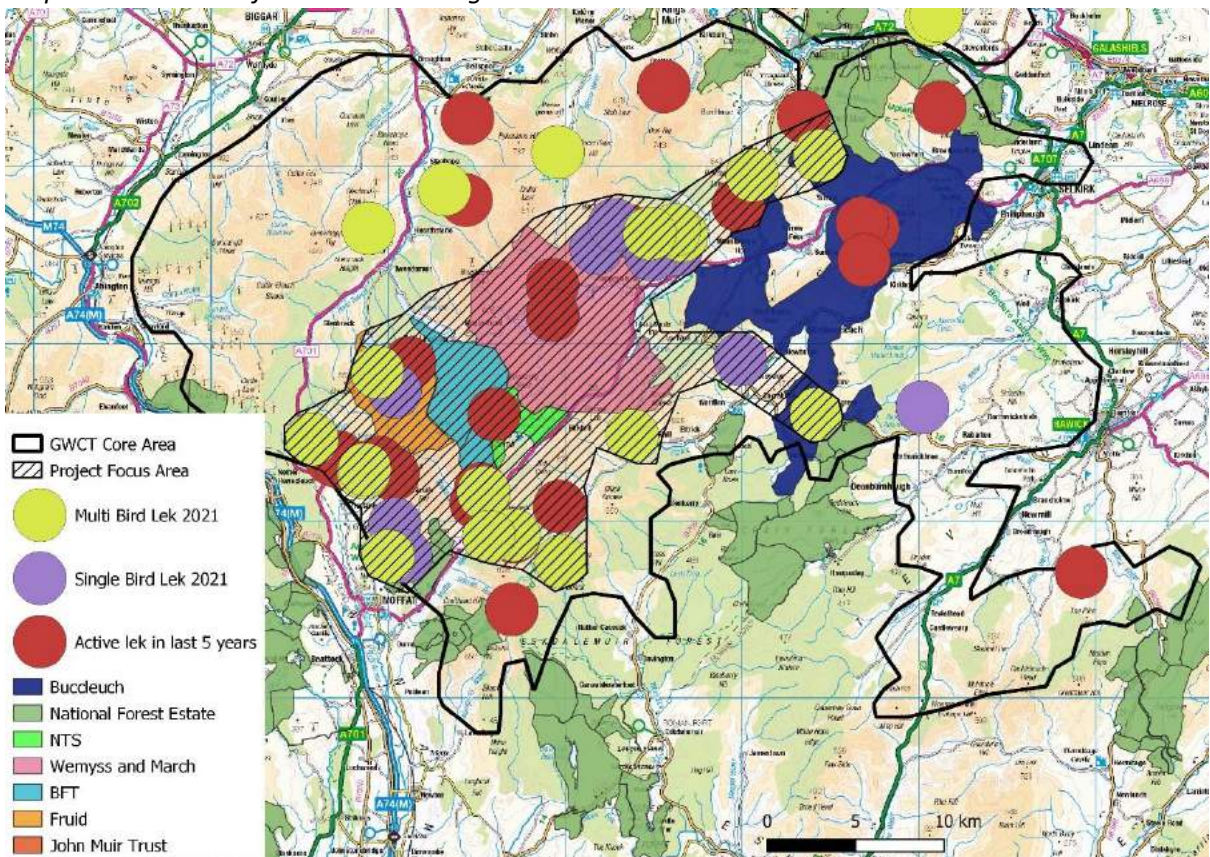
(BFT)	<p>lek sites. This summer they propose to survey identified areas for prioritisation of habitat restoration work for montane scrub and identify the correct trees to plant as part of a five-year planting programme. A slow growing plant community, it can be a challenge to plant enough trees to make a meaningful impact and sourcing seeds is difficult. This project proposes to help source and plant montane scrub in indicative areas that will be confirmed from the results of the 2022 summer survey. This project will work to partner with John Muir Trust to explore the potential to grow montane scrub and other black grouse friendly tree species at their onsite nursery, for future planting of montane scrub for black grouse at Tallas and Gameshope, and other future sites identified by the project officers.</p> <p>BFT would also like to carry out lower density higher altitude planting of birch and rowan but as this is a lower density than FGS hectare stipulation, this project would seek to facilitate this.</p>	trees for planting
John Muir Trust (JMT)	<p>JMT have a lek site on their landholding at Glenlude. They already carry out work with black grouse in mind. An area of their site requires bracken control, and this project would support low impact control of the bracken using horse drawn bracken rollers. Further management of the vegetation through light grazing would make the site more favourable for black grouse and encourage more ericaceous plants. The use of no fence collars provided by this project would offer low impact grazing option without the use of fences and would trial technology that has potential to be used on other sites for black grouse.</p> <p>JMT has a nursery that they are willing to offer for use in partnership with a project for growing trees for planting on black grouse sites</p>	Project officer, no fence collars for light grazing and horse loggers for bracken rolling
National Trust for Scotland (NTS)	<p>NTS are interested in partnering with the project and working with a project officer to develop action plans for black grouse at their site, including exploring the potential use of no fence collars on their grazing sheep. This will take time to develop as they have taken on a new grazing tenant and relationships are still being built.</p>	Project officer

Buccleuch	The project officer will advise and provide direction on where to prioritise and target work for black grouse on Buccleuch landholdings that will have the maximum benefit for grouse and the uplands and will generate a joined-up approach to their work. The project will link up with Carbon Crichton Centre and Buccleuch to overlay black grouse data with peatland restoration work that is planned on Buccleuch landholdings, to best target work on the ground.	Project officer
Wemyss and March Estate	Wemyss and March manage 25,000 acres within the Tweedsmuir focus area and the site is an important area for connectivity between the leks in the east and west of the Tweedsmuir focus area. The estate is open to and interested in doing positive work and taking on advice for black grouse and other upland species. The project officer would work with Wemyss and March to advise on works for black grouse that compliment work that is happening for black grouse on neighbouring sites, especially the two landholdings W&M are sandwiched between that hold robust lek sites. Wemyss and March expressed an interest in nofence collar technology and there may be potential for the project to explore the use of this here resulting from trialling at Glenlude.	Project officer
Fruid/Scottish Water	Fruid holds two lek sites, one which is a multi-bird lek. A full management plan was drawn up for Fruid in 2012, that supported both black grouse and other upland birds but there were no funding opportunities at the time to action it. This project would seek to re-visit this management plan with an aim to review and update it, and work with the land manager to action it.	Project officer
SEPA	<p>There are potential opportunities for naturalising the Moffat water if the areas are identified as a high focus for black grouse, by planting buffer strips.</p> <p>There may be potential for funding bids to plant trees by the river Annan to increase habitat diversity.</p> <p><i>[RAW -Rewilding Annan Water?]</i></p>	Project officer

Map 6: Tweedsmuir Focus Area and landholdings within it



Map 7: Tweedsmuir focus area showing lek sites within it

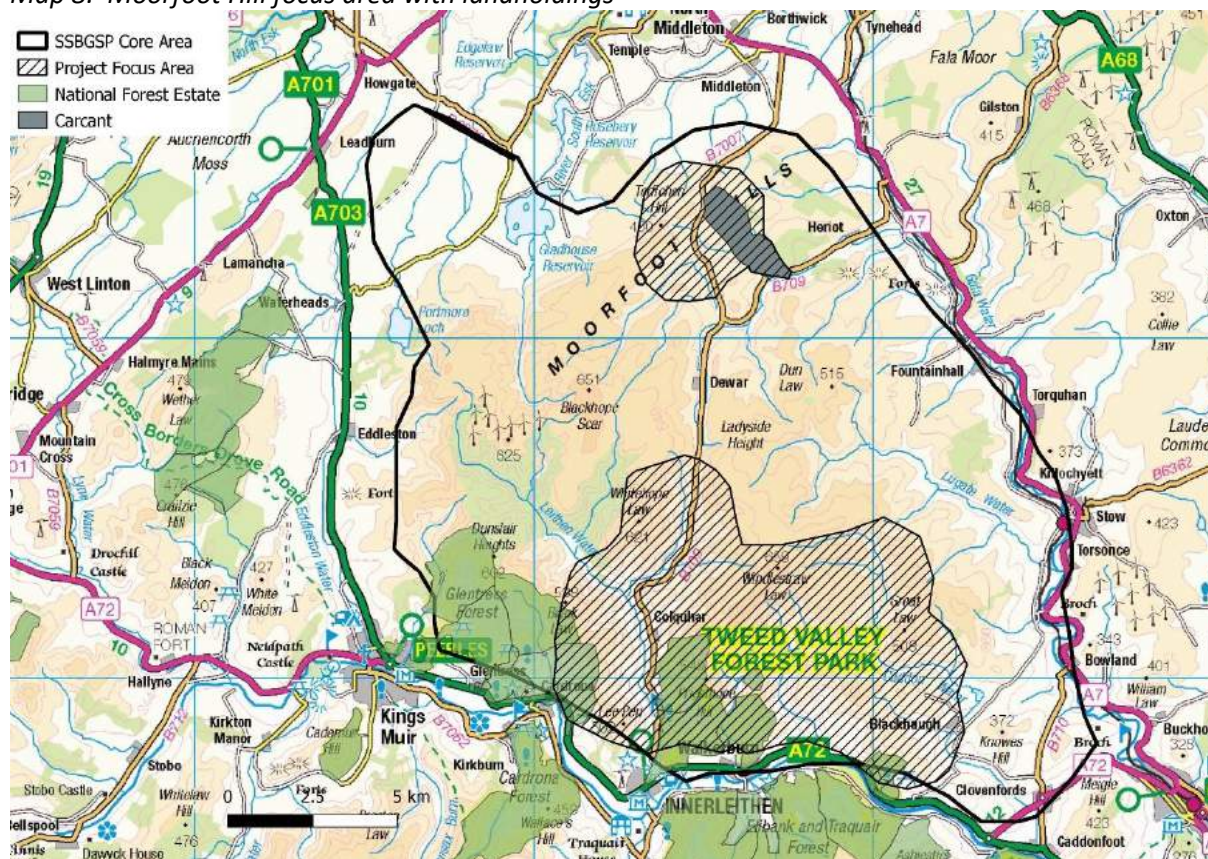


Moorfoot Hills

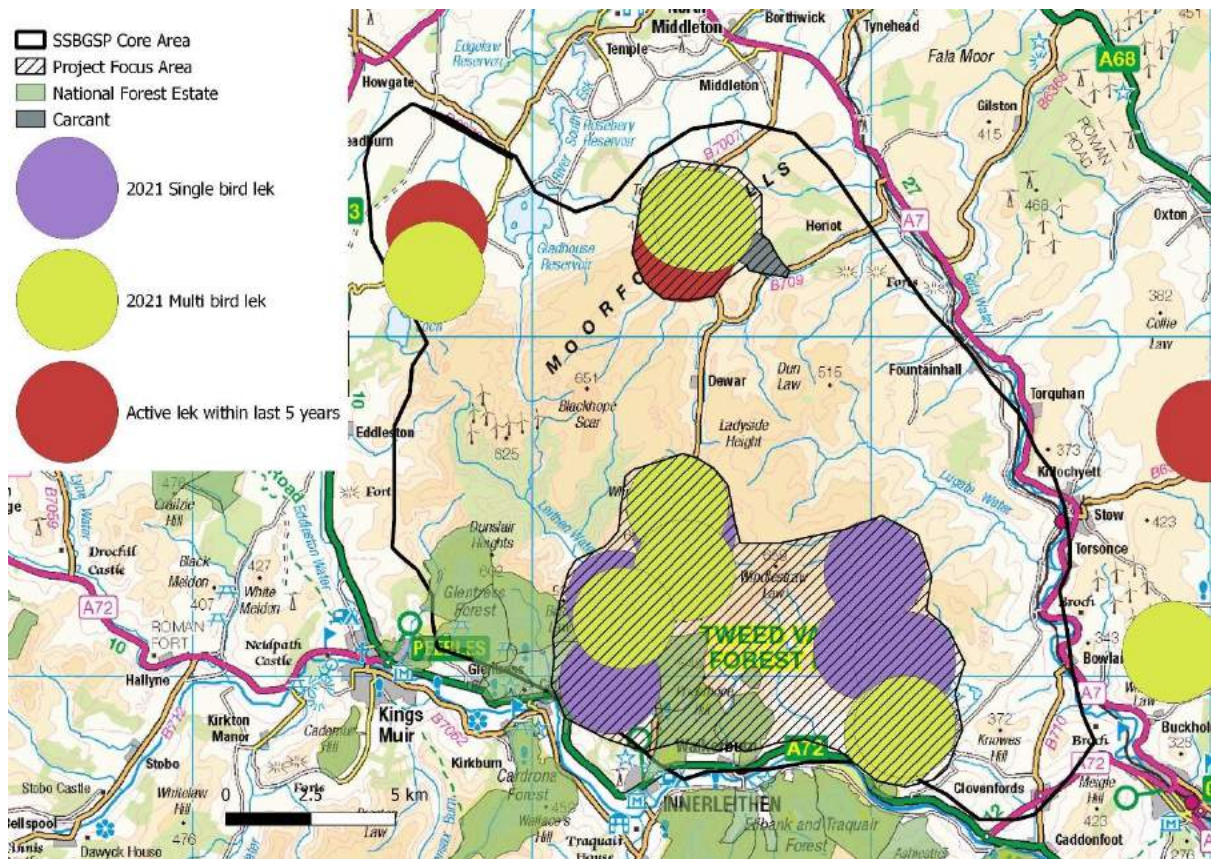
The Moorfoots have since lost the line of black grouse leks that once linked the leks in the southern Moorfoot focus area with the Carcant lek in the northern focus area (Map 8). Commercial forestry is limited to Glentress due to the SSSI for the moorland of the Moorfoots. This project would seek to use the project officer to bring together estates and tenant farms to create a management cluster as suggested in the SSBGSP to develop and implement management plans for black grouse.

Landowner/manager	Project Action	Project Provision
Carcant estate	<p>Carcant have an 800-acre hill farm going up to 1350ft in Moorfoot Hills with a robust multi bird lek. They have recently planted 3ha of mixed broadleaf woodland to suit black grouse. The estate has sitka plantation that is due to be felled and there is a desire to restock this with native broadleaf woodland, again with black grouse in mind but cannot find help under current FGS and would like advice and help.</p> <p>The project officer would support Carcant in work they can do for black grouse.</p>	Project officer
FLS	See Galloway Forest Park focus area	Project officer

Map 8: Moorfoot Hill focus area with landholdings



Map 9: Moorfoot Hill focus area with leks sites within it



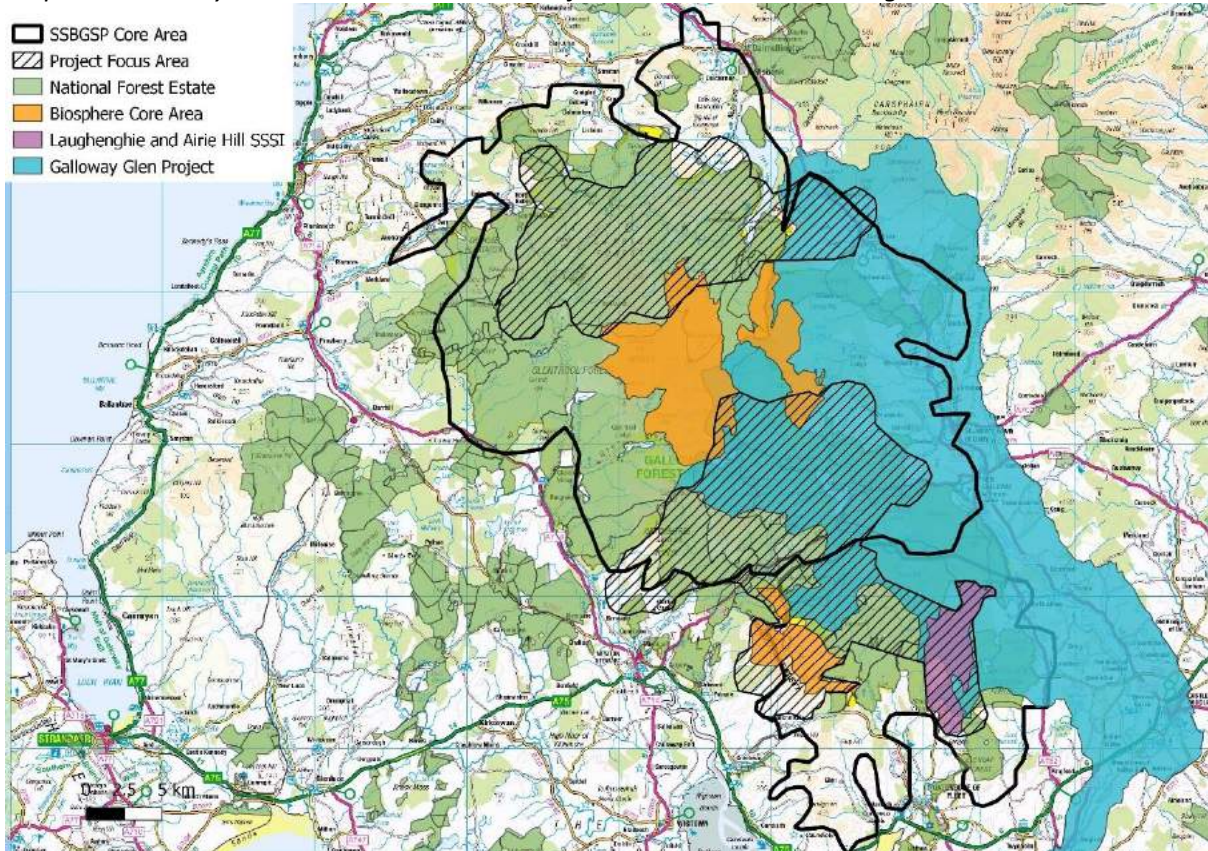
Galloway Forest Park (and Cairnsmore)

The Galloway Forest Park is mostly National Forest Estate, and the SSBGSP highlighted that it supports 16% of the remaining birds in southern Scotland. The birds in the southern focus area connect to those in Cairnsmore.

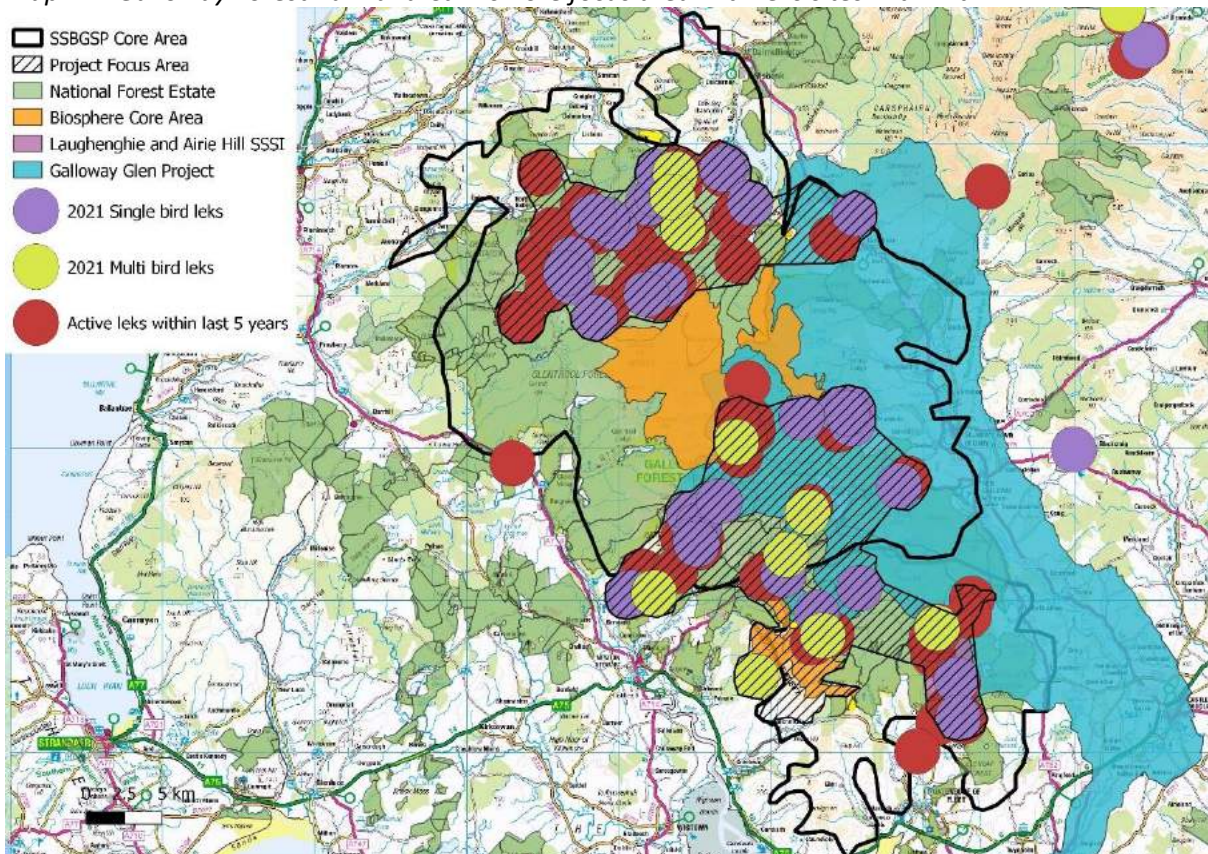
Stakeholder/Site	Project Action	Project Provision
Laughenghnie and Airie Hill SSSI	<p>The project focus areas overlap with fourteen SSSI sites (Map 14), including Laughenghnie and Airie Hill SSSI. Landowners within this SSSI have expressed an interest in working collaboratively on a project that benefits black grouse but currently lack guidance and support to do this. The project officer would work together with these landowners give expert advice and help facilitate action for black grouse on their land.</p> <p>The SSBGSP specifically mentions a need for predator control at this site which a project officer would explore.</p>	Project officer
Galloway Glen Project	<p>Management plans for active leks sites within the GGP project boundary were drawn up in 2021. This project officer would aim to continue the momentum of the GGHLF project by following</p>	Project officer

	through on management plans and continuing to review the recommendations in those plans.	
FLS	<p>The project officer will work with landowners that border FLS estate to encourage, facilitate and coordinate action for black grouse and liaise and work with FLS to ensure collaborative, joined up work for black grouse is happening on both sides of their boundary. This will help FLS to target work for black grouse on their estate where there will be maximum benefit by establishing habitat networks with neighbouring landowners.</p> <p>The project officer would work alongside FLS to follow through on management plans drawn up as part of the GGPHLF project.</p>	Project officer
Galloway and Southern Ayrshire Biosphere	<p>The project officer will provide the biosphere land use team with information on focus areas and lek sites to allow them to have fully informed discussions with landowners. The project officer will provide expert advice to the land use team when sites are identified with potential for black grouse habitat works.</p> <p>The project officer would provide mentoring to the land use team to equip them with the skills to offer black grouse advice to landowners outside of the project officer's focus areas.</p>	Project officer

Map 10: Galloway Forest Park and Cairnsmore focus area with landholdings



Map 11: Galloway Forest Park and Cairnsmore focus area with leks sites within it

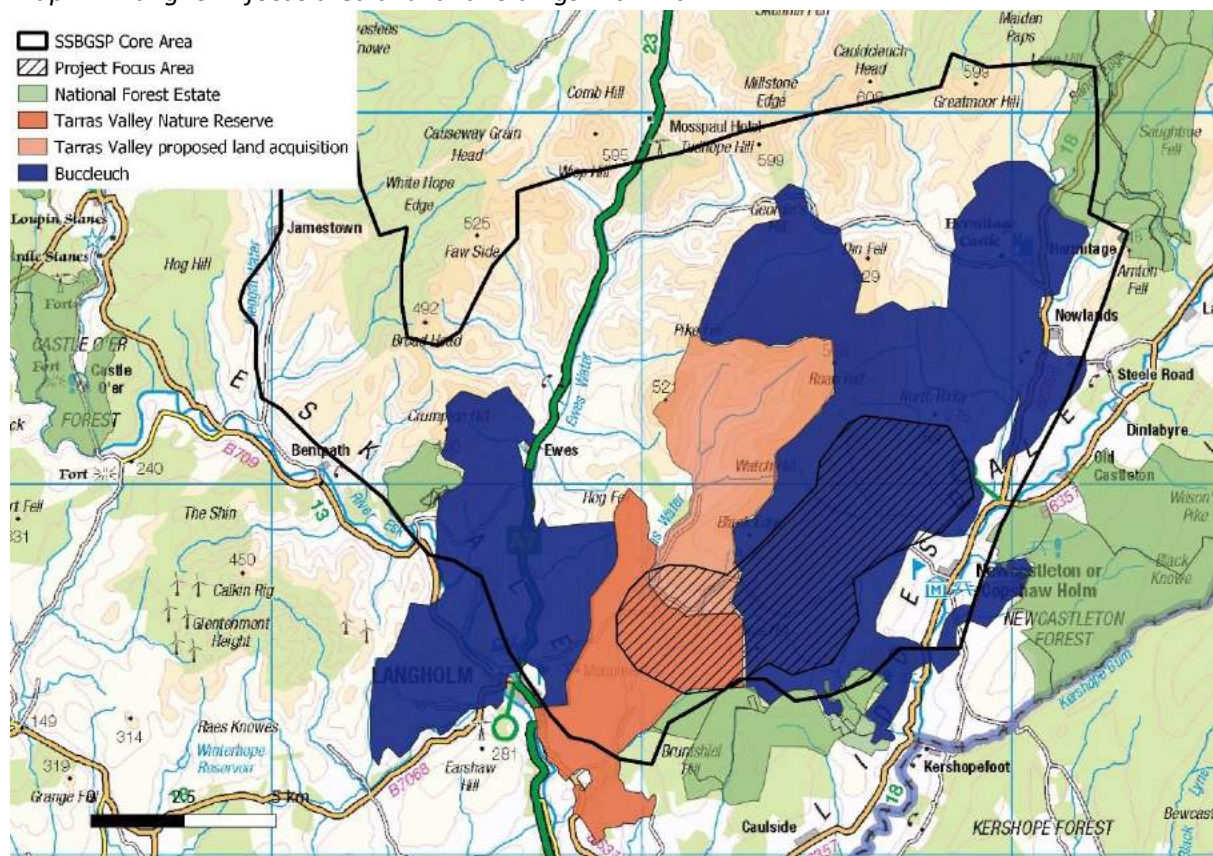


Langholm

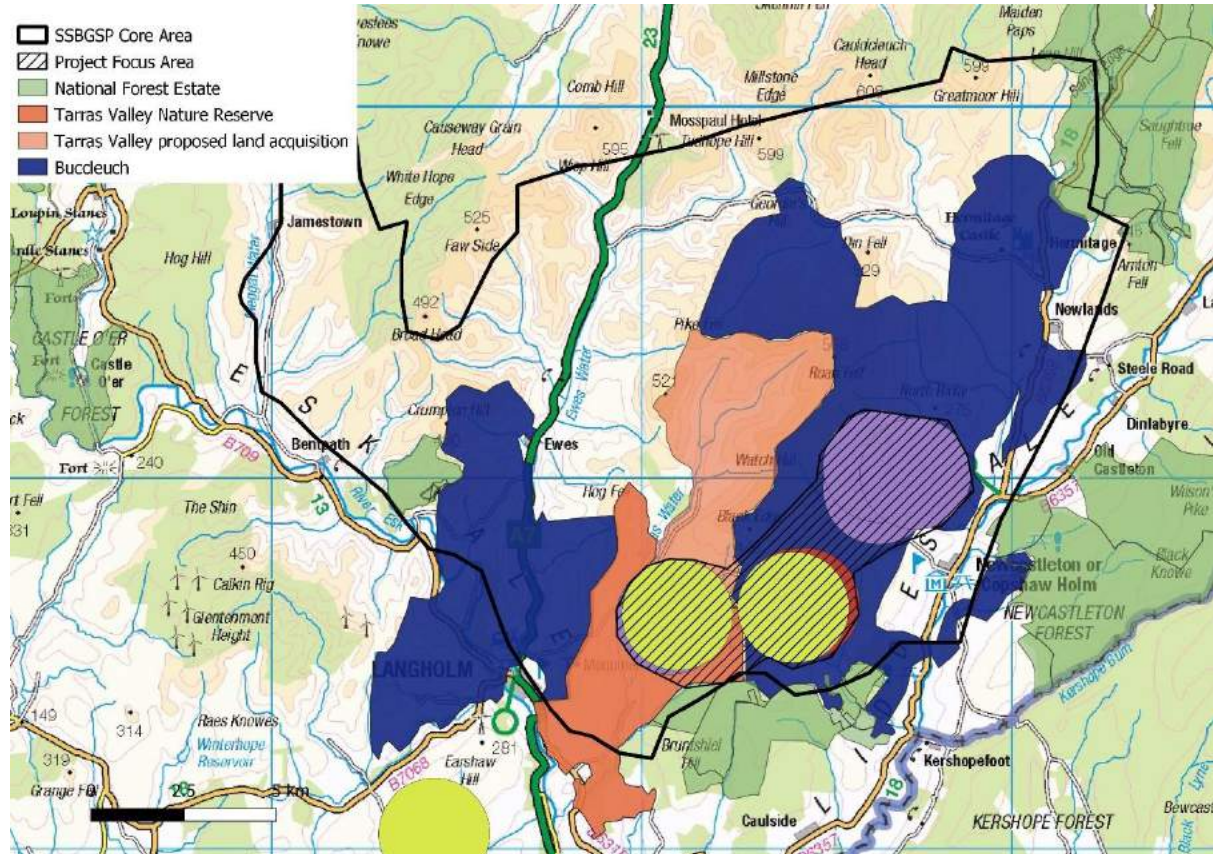
The Langholm population is at risk of isolation but it holds robust lek sites, making it important that this project supports the longevity of this area by enhancing connectivity with the populations in the Tweedsmuir focus area and targets habitat improvements for the existing population.

Landowner	Project Action	Project Provision
Tarras Valley Nature Reserve (TVNR)	TVNR are in the process of acquiring a new site to extend their current 5,200acre site in Langholm. Working in partnership with TVNR this project would seek to assist in building works on the ground for black grouse into future management plans for the new site. A project officer would coordinate surrounding landowners to provide encouragement and support to action work for black grouse that compliments the work happening on TVNR.	Project officer
Buccleuch	The project officer will provide advice and direct areas to prioritise work for black grouse on Buccleuch landholdings. See Tweedsmuir focus area.	Project officer

Map 12: Langholm focus area and landholdings within it



Map 13: Langholm focus areas and lek sites within it



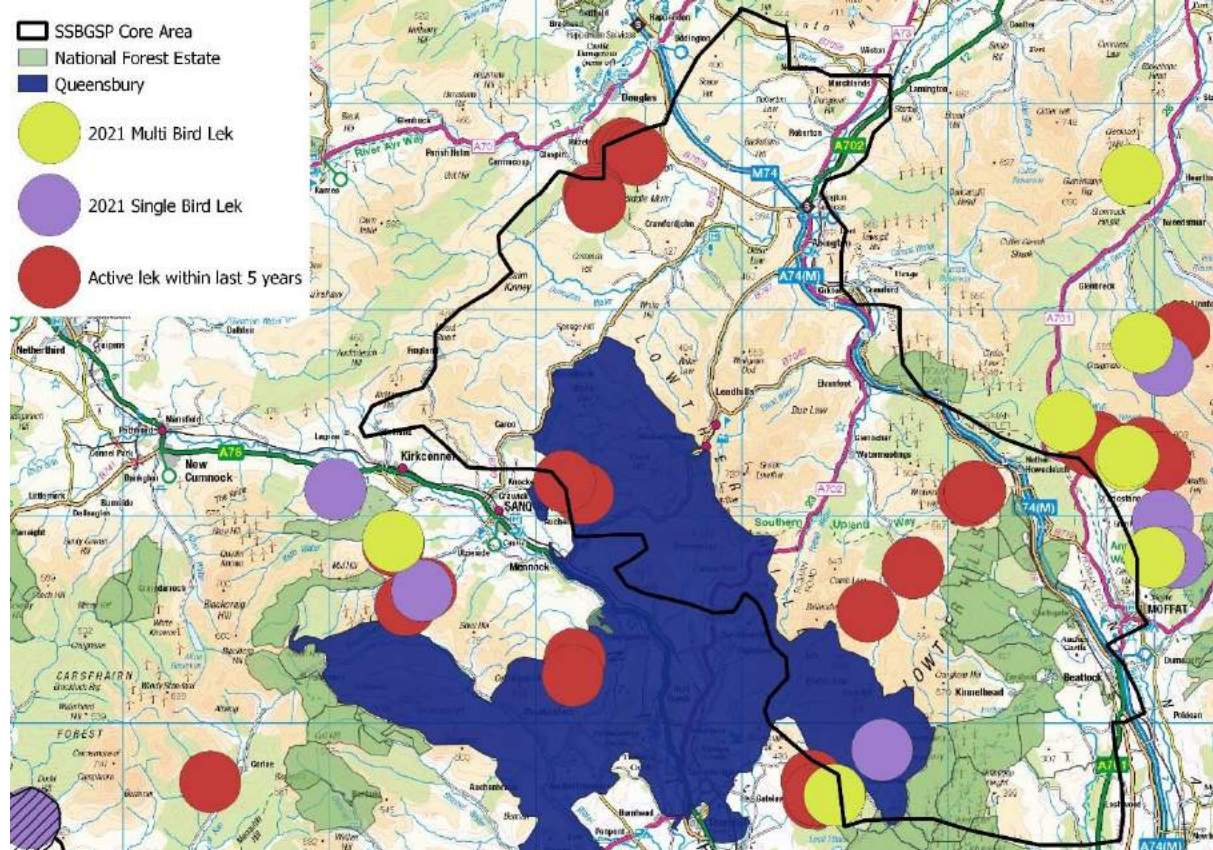
Lowther Hills

The Lowther Hills currently has no black grouse focus area as numbers and distribution is potentially underrepresented in this area due to lack of survey coverage in recent years. There are plans to survey areas of this SSBGSP management zone this spring which will help build up a more robust picture to help develop focus areas to target action. This project will look to coordinate more cold searching of this area to build up a clearer picture of black grouse here.

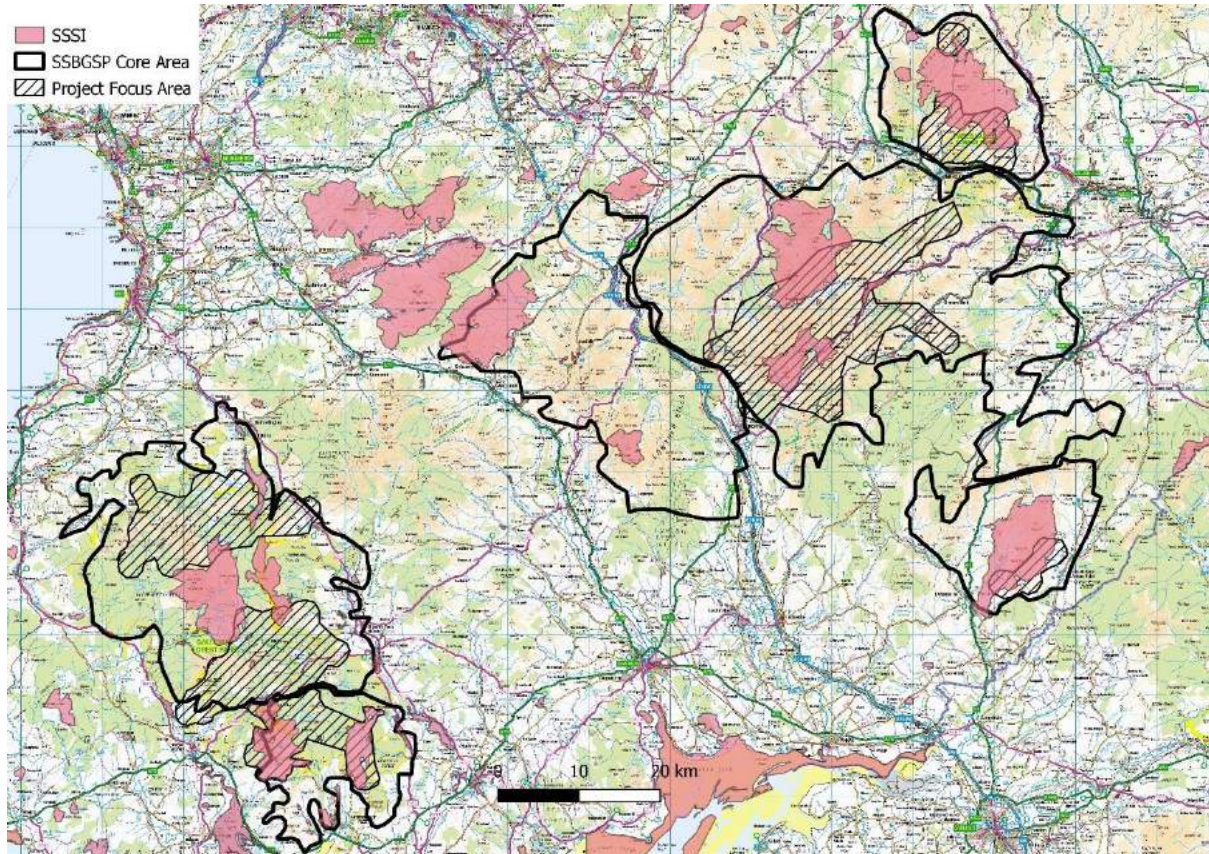
SEPA

Three lek sites that fall just outside of the management zone are on a section of the Nith and Annan where there is almost no riparian woodland. Currently there is a rural Water Environment Fund Restoration project at the top of the Nith that SEPA are partnering with Tweed Forum on.

Map 14: Lowther Hill management zone showing leks and landholdings within it



Map 14: SSSI sites that fall within the focus areas of the project



Stakeholder Feedback

A stakeholder meeting was held online on 25th February to invite feedback and input from stakeholders on a black grouse project.

In attendance were FLS, Wemyss and March, RSPB, SAC, Carcant estate, Buccleuch, SEPA, Woodland Trust, Tweed Forum, Connicks Land Use Consultancy, Galloway Glens HLF, Galloway and Southern Ayrshire Biosphere, GWCT, Scottish Forestry and NatureScot

Absent, but consulted directly and individually either after or before the meeting were JMT, NTS, Tarras Valley Nature Reserve, BFT, Crichton Carbon Centre and Patrick Laurie.

Discussions with stakeholders revealed a need for guidance and expert advice on managing their land for black grouse, with an additional need for highlighting areas that are most important for focusing black grouse work and an indication of where birds are active. There was also a call for collaborative thinking and working together, with a need for coordination of action on the ground to ensure that work happening on neighbouring land compliments and supports work on both sides of the 'fence'.

Carcant estate: "We're very enthusiastic about encouraging diverse wildlife, planting, habitat, and forestry. We really feel the need for joined up advice that is cohesive thinking. Our plea is for guidance, joined up thinking and help sourcing funding for works."

Buccleuch: ".We have been involved in various black grouse projects over the years but they have lacked cohesion with each other so we would certainly support a more joined up approach. We are

also experiencing considerable change with respect to policy and associated support drivers in the uplands. So, the timing is spot on. Making sense of where we target our effort is really what we need help with. We have done various amounts of natural capital assessment but black grouse don't get mentioned although the habitat they need is. I don't understand why but I assume this is down to the difficulty in obtaining data and how to value them in the narrow sense of money."

Tarras Valley Nature Reserve: "We really need someone to coordinate what is going on around us, we don't have the facility to do that ourselves but we to work together better"

Connicks: "I think it is great that a good group of people have come together here. Land regeneration is key, the land sustained black grouse a long time ago and has the ability to do that again very quickly. From the surveys I think the black grouse numbers are under-represented, not enough boots on the ground. Definitely need funding at 10 years minimum added onto the scale you're talking about. . From the surveys I think the black grouse numbers are under-represented, not enough boots on the ground."

Wemyss and March: "Ultimately, we earn our living from our businesses on the land. We're open minded and sympathetic to our landscape and trying hard to improve that as we go but it's hard to stack everything together. When looking at schemes to invest in certain area i.e., black grouse - we must look at the costs. We're very willing to participate in any scheme where we see improvement in biodiversity and environment but that also lets us continue to manage in a positive way the other things we're responsible for. It takes that out of the box thinking to make the very quick results that some of these areas require. I'd be very interested in any scheme that took a landscape scale approach to how we manage these areas, I think we could achieve a lot very quickly."

FLS:" All the issues discussed we've tried to incorporate into our land management plans to deliver habitat networks and looking at what neighbours are doing and try to tie it together but these projects tend to have short term funding. Our land management plans are looking at 10 years ahead, reviewed every 5 years and updated so we're keen to work with our neighbours as much as possible. Need a wider survey, more people doing cold surveys to give better baseline." "There is ongoing work across the whole estate but what we really need is to work where there are across the fence benefits and joining of landowners for maximum benefits. There needs to be someone who can look across the fence and influence the management there to benefit what we are doing or you end up with isolated populations. "

Crichton Carbon Centre: There is a need for synergy with those telling the peatland story, the water quality story and the black grouse story to be able to prioritise work and match up peatland restoration with high priority areas for black grouse for maximum benefits and value.

Community Engagement

- Volunteer participation, contributing to lek surveys or growing trees on their own land for later planting out on black grouse sites
- Interpretive black grouse lek dance performed and choreographed by local dance groups
- Music re-creating the sound of black grouse and the uplands – either by local music groups or as a composition competition and the chance for local filmmakers/film students to make a music video for the winning composition
- Volunteer work parties that pay to stay in accommodation and be away on a working conservation holiday

Costs

Montane scrub planting

Awaiting BFT estimates

Bracken control

Awaiting JMT estimates for horse pulled bracken rollers for bracken control

Nofence collar

Cattle collar including battery and neck strap = £269

20 collars = £4,780

Spare battery = £70

2 batteries = £140

Charger £65

2 chargers = £130

Postage/freight = £80

Software annual subscription per collar = £49

Annual subscription for 20 collars = £931

VAT 20%

Total for 20 nofence collars for cattle in first year = £7,273.20

Total for use of nofence collars for 20 cattle for five years = **£10,992.20**

Project Officer x 2

Project officer salary for one year = £25,000

Project officer for five years = £125,000

Travel expenses for five years = £3,000

Total for two project officers over five years = **£253,000**

Volunteer expenses

Average 50 volunteers – 25 in the east and 25 in the west.

Maximum distance they would travel = 80 miles (there and back)

0.25p per mile = £20

Two counts per lek site = £40

Total for 50 volunteers in one year = £2,000

Total for 50 volunteers in five years = £5,000

Total for volunteer expenses for five years = **£5,000**

Training and workshops

Community hall booking for training/workshops for one booking = £25 per booking.

Hall booked in the east and west twice a year = £100

Total for training and workshops for five years = **£500**

Potential funders

NRF

Esmee Fairburn Foundation

HLF

Windfarm offsetting

Social media crowd funding

Map 15: Windfarms that fall within focus areas of the project

