

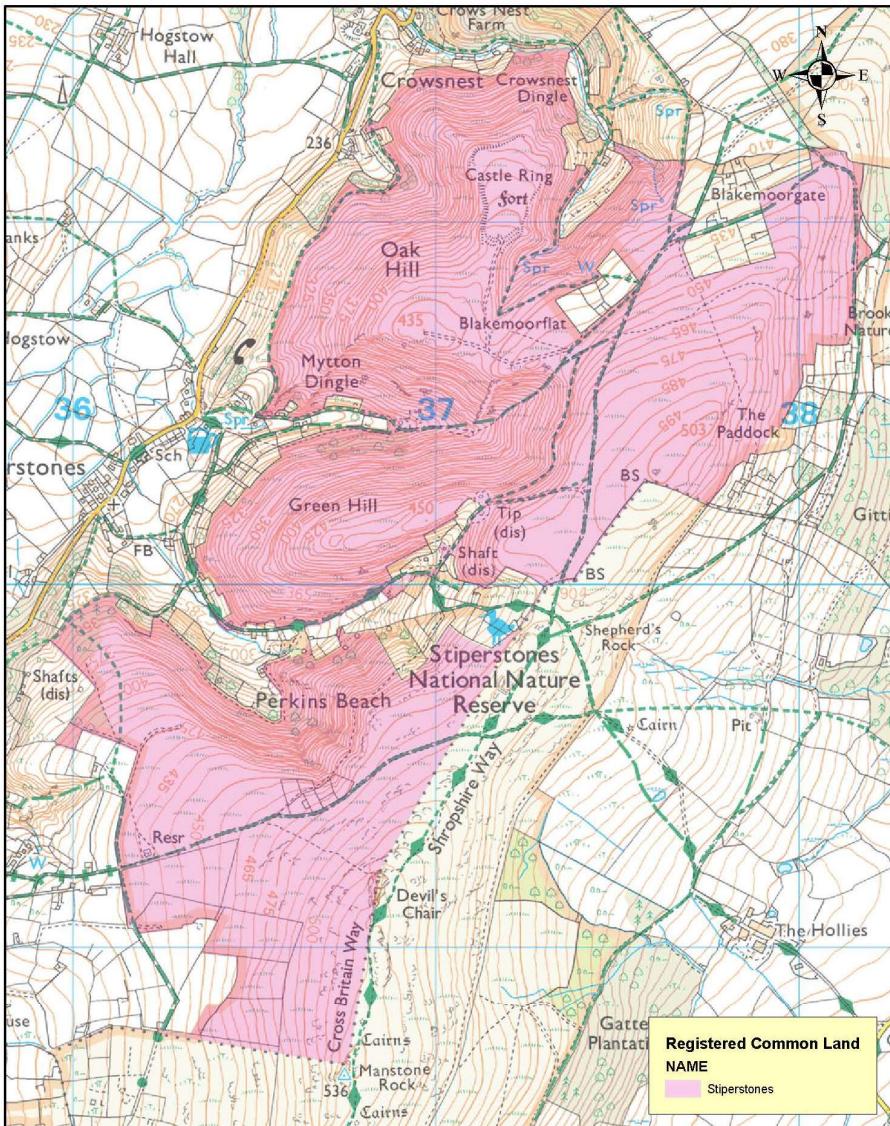
Stiperstones Shepherding Trial



Final Report


by Matthew Betton

Introduction and background



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	<h3>Stiperstones Common</h3>	Shropshire Hills AONB Partnership Unit 9, Drover's House The Auction Yard Craven Arms SY7 9BZ

The Stiperstones is a spectacular 10km ridge in south-west Shropshire which holds a variety of upland habitats and is a refuge for many upland species on the edge of their range.

Main habitats are heathland, upland oak woodland, acid grassland, hay meadow, mire and swamp.

Much of the Stiperstones is a National Nature Reserve (NNR), owned and managed by Natural England.

Stiperstones common lies wholly within the NNR and is unfenced from large parts of it, particularly in the south-east corner, so any animals grazing the common can also graze other areas of the reserve.

The common has three registered commoners of whom two are actively using their grazing rights, both turn out sheep and cattle. Whilst the commoners check and tend to, their stock on a regular basis, the flocks and herds graze mainly unsupervised and roam freely across the area.

This, in contrast to days gone by, where a shepherd might have remained on the hill to monitor and move stock. The management of common land through 'commoning', when at sustainable levels, has ensured the survival of ancient monuments and rare wildlife, plants, birds and butterflies. Careful grazing can maintain the balance of delicate upland ecosystems on huge stretches of open landscape.

The NNR is surrounded by settlements and is dissected by many walking routes, and whilst most of the terrain is challenging, is a popular destination for walkers and long-distance hikers, many bringing their dogs. The site operates a 'dogs on lead at all times' policy but some visitors feel they can control their dogs sufficiently whilst off lead (drawing by Bill Pinder).



This shepherding project set out to trial and investigate the benefits of introducing shepherding on the Stiperstones, comparing stock distribution before and after shepherding by creating a baseline of stock movement in the absence of shepherding in year 1, then in year 2 move grazing animals around the hill so as to encourage grazing on areas rarely reached and to see how effective shepherding is in distributing the grazing pressure across the hill. The shepherd, being on site regularly, would also be ideally placed to further raise awareness of the issues around off-lead dogs and challenge non complying dog owners.

The Our Upland Commons project is a three year, £3M, 25-partner project helping to secure the future of upland commons on Dartmoor, in the Lake District, the Yorkshire Dales and the Shropshire Hills. It is led by the Foundation for common Land. The project has been made possible by funding from National Lottery players through the national Lottery Heritage Fund, grants from Esmee Fairbairn and Garfield Weston Foundations and locally the Millichope Foundation, amongst others.

Through project partner Natural England, Matthew Betton, a local farmer, was appointed to the role of Shepherd in early in 2021 and the report which follows, written by Matthew comprise his findings.

Year 1 – The grazing season of 2021

As a local farmer, I was familiar with parts of the common but after my induction in early May, I was keen to familiarise myself with the hill as quickly as possible.

Having received maps from Senior Reserves Manager with Natural England, Simon Cooter, and through the use of online satellite mapping services, I soon built up a picture of the layout of the Stiperstones. I also made it a priority to speak with the two active graziers to gauge opinions on the project and how they thought it would work out. They were fully behind the project and were keen to hear my ideas.

My initial analysis of the common was that it was made up of three parts. The east were gentle slopes with little mature tree cover but with numerous tree saplings coming through the thick vegetation, mainly heather and bracken. The southern end again gentle slopes consisting of more thick vegetation but a little more tree cover and a handful of grassy areas. It was noticeable how few drinking areas there were on these two parts of the common. Along the west side the topography is quite different, here it was far steeper, consisting of deep valleys and wooded areas. There were shale areas (some remnants of old mining and quarrying works), again more heather and bracken but also far more grassy areas and naturally occurring water supplies than anywhere else.



Lush areas of grass on Perkins Beech

Initially there were no sheep present on the common as the two flocks were still lambing and the two graziers were keen to carry out any vaccinations before sending the stock onto the hill. This enabled me time to get a clearer idea of where the more favourable spots for the sheep would be. From the lush areas of grass and water supplies it was pretty evident where they would prefer.

In this period, I was able to spend time talking to the public about my role on the common. They were interested to know more about the stock and how commoning worked.

Methodology for data recording

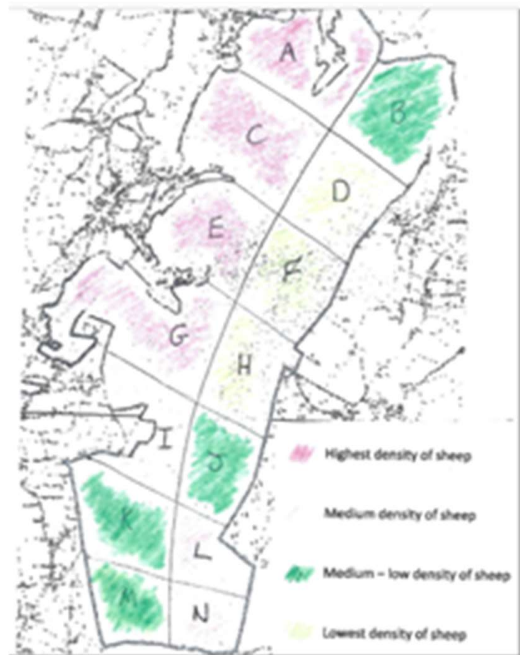
I set out to produce a heat map showing the grazing patterns of the sheep. Using a blank map of the common, I divided it into 14 sections of roughly the same size, marked from A to N. I visited the site 1 or 2 times a week on various days and at different times to try and get a sense of how the sheep behaved and their habits. As there were two flocks on the common, I knew they would more or less keep to their heft, which would make recording a little easier.

Using a combination of maps provided by Simon, my own ground truthing and a set of binoculars I set up various observation points on the common. It must be added that there were certain areas, particularly in the more wooded areas that were nearly impossible to record. Although I did check these areas on numerous occasions throughout the grazing season. Each day I would visit these observation points and note down a rough estimate of numbers to the relevant section.

Taking out most of May (because the sheep were not on the hill, some of July/August (shearing time) and some of November I had data from 24 visits. The heat map I produced, showing significant range in grazing patterns.

This shows that areas A, C, E and G were the areas which were grazed the most and areas D, F and H the least. A more detailed discussions follows after my year 2 description below but the main observations I took into year 2 were that the sheep prefer the west side of the common because:

- It is adjacent to main holdings
- There is an abundance of grass
- They have access to water there
- There is shelter on that side



Another factor in this is that there is far less footfall on the west side and therefore the sheep are less frequently disturbed, although they are quite used to walkers, in my opinion this still has an effect.

Another part of my role was to interact with the general public and advise people to keep their dogs on leads. For the most part this was straight forward and people were very understanding. Only once did I have a problem case with dogs really running wild.

Year 2 – The grazing season of 2022

Year two of the shepherding trial was all about putting my findings and ideas from year 1 into practice. The second year of the project was far more intensive and saw me on the common 3-5 times a week. Again, I chose various days including weekends and varying times of day. In year 1, I mainly travelled on foot but year 2 I used a quadbike more frequently and I also enlisted the trusted services of Pip and Gwen, my sheepdogs. I had suggested that the use of a drone would be beneficial to make searching out pockets of sheep more easy but drones are not permitted over the site.

My approach in year 2 would inevitably be dictated to by two main factors, the first being the weather and the second being turn out dates and numbers of sheep turned out by the two active graziers. Unfortunately, both of these played a significant role in hindering my plans on the common.

The work started in early May with an initial analysis of the condition of the common. It was found to be in good health, grassy areas were lush, water holes and drinking areas were plentiful. Heather and bilberry appeared in good condition with younger less woody plants providing another food source for the stock. There were signs of more saplings and some bramble growing. The latter particularly favouring areas that had previously been covered in bracken. This does seem to be a consequence of

bare ground where bracken has been sprayed off but has already smothered any other type of vegetation.

By mid-March the first of the stock had been released onto the common, this included 65 Texe l x ewes plus lambs. Also, to my surprise 20 Aberdeen Angus cows had been put on the common by the second grazier. This was a change from the previous year as no cattle had been turned out. The cattle were on the north end whilst the sheep were on the south-west part of the hill.



Cattle on the north end near Blakemoor Flat

Towards the end of May another 59 Texel X ewes and lambs had been released onto the south western side. The initial grazing patterns almost completely mirrored that of the previous year.

From my experiences in year one, best practice was to let the sheep graze down the areas of lush grass on the east side before attempting to move them.

Alongside my shepherding duties was interaction with dog walkers and the general public. I was really keen to communicate with people on how important it was to control their dogs whilst walking on the common, not just from a sheep worrying perspective but a wildlife one as well.

As we moved into June I began the process of moving the sheep around the site. My initial plan was to move larger groups of 20,30,40 sheep at any one time but it soon became apparent that this was going to be nearly impossible. There were several reasons for this including the large amount of tree cover on the east side, the sheep just would not stick together and quickly darted into the safety of the trees. Secondly there was the problem of the young lambs with their mothers. I was really conscious that the ewes and lambs did not get separated from each other and the fact that there were some twins made it even harder.



A ewe with her lamb about to disappear into the trees

I then decided to move far smaller groups of sheep at any one time. Generally speaking this was a little easier but was still difficult especially with the young lambs. I really had to take my time and unfortunately had to keep my dog on the bike. As soon as she was seen the ewes would either face her to protect the lambs or the lambs would panic and split away from the mothers.

This was a huge issue until the lambs were of a certain age or weaned off them later in the season. The problem was exacerbated by the abundance of tree cover in certain areas of the hill. Once out on the open common it was far easier to move them and they would generally stick together. The open hill was not without its own challenges though!

The end of June brought the turnout of another 18 cattle to the hill. This time from the more southerly regions. It was good to see the cattle on the common as they play a vital role in how the hill looks and vegetation is managed. This was evident from the cattle on the northern end where they had done a good job of nipping off some of the tree saplings and bruising and killing the bracken as they walked through it.

There were still no sheep on the northern end which seriously hampered how effective I could be. These were some of the areas that really needed the greatest effort, so was disappointing not to see them there until the late summer and then only a handful were turned out. I did what I could with the limited numbers.



Gathering sheep at the northern end to move easterly

As time went on through July it was apparent that we were witnessing one of the hottest and most arid summers we had seen in recent times. This brought another set of problems...

The water holes and drinking areas were drying up rapidly. The extreme heat was also causing a welfare issue for moving the stock and working the dog. In an attempt to counteract this I worked on the hill early in the mornings when possible. Even at 6am temperatures were in the high teens and made moving the sheep nearly impossible. Thankfully by this time it was clear that the work I had done up until then was working. The sheep were grazing areas that they had not been on the year before and were doing a good job.

It was around this time that the one active flock on the hill was gathered down for shearing. The hill was then clear for a short period. The cattle remained and continued to do a good job.

The flock returned to the hill a week later. They soon dispersed around the hill looking for grazing and water. Having also been weaned at this time there were no young lambs to move around which made my job easier. With no sign of the hot weather changing water was now becoming a serious issue.



The picture above was a pond with plentiful water in June, on the right is the same pond in August, almost completely dry.

The arrival of a water bowser came as a great relief and helped out the situation, providing a much needed drinking area for the stock. This was situated on the north end of the common where there are no mains water supplies.

Although the bowser was welcome, the frequency of which it had to be filled, sometimes twice per day, was an issue. I think it would have supported the sheep numbers adequately but unfortunately the cattle were drinking from it as well and their demand was far higher. This is a serious issue and going forward, especially in a drier climate, will have to be addressed.



Sheep making good use of the water bowser

Towards the end of the summer and into the early autumn the sheep were well dispersed over the common, particularly over the southern regions. I was pleased to see how my efforts had been rewarded. By now the sheep were used to me moving them and with the cooler weather were far more cooperative.



Unfortunately my ambitions for the north end were severely hampered by the lack of sheep on the hill. Having only a handful to move around a large area it was hard to see any progress being made.

The flock on the southern end were gathered in the last week of October and taken down to their winter grazing. The sheep on the northern end remained so I continued with my operations until mid November.

Last day on the hill moving sheep onto Castle Ring

Conclusions, Analysis and Recommendations

Using the notes I made each week of visiting the site, I can now reflect on things that went well and the ones that did not. There were certainly aspects of the job that I had not foreseen in the first year and so had to adapt as I went along.

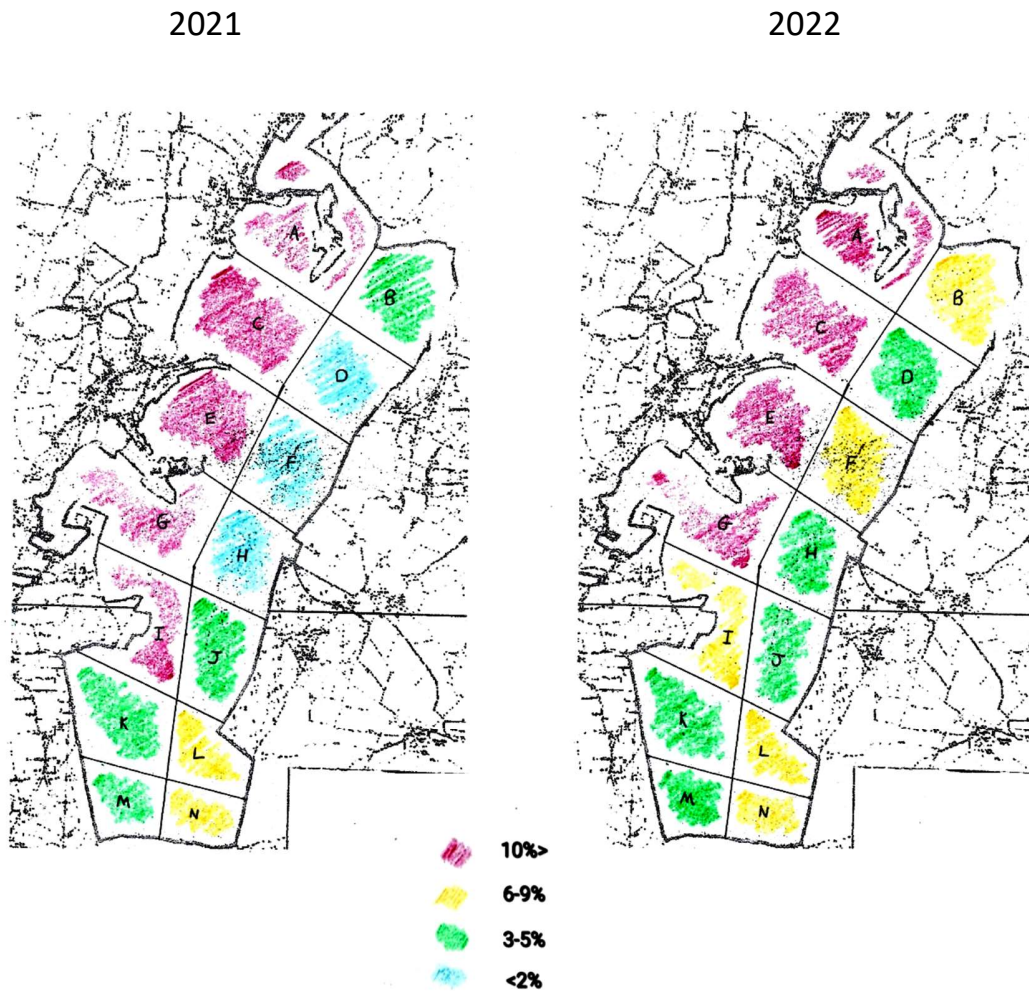
The weather played a key role and turn out dates by the graziers also affected grazing patterns. Having said that everything went relatively smoothly, and I really enjoyed working with the stock and communicating with the general public.

To convert my observations to meaningful data, I wanted to show sheep numbers in each area of the common by month. However, due to the different turn out dates this would mean slightly skewed figures as numbers were not necessarily constant throughout a month. The table below shows sheep numbers in different areas on the common (A-N), by month, as a percentage of the total number of sheep on the hill.

For example, there were 13% of the total number of sheep on the common in sector A in October 2021.

	2021							2022					
	MAY	JUN	JUL	AUG	SEP	OCT		MAY	JUN	JUL	AUG	SEP	OCT
	%	%	%	%	%	%		%	%	%	%	%	%
A	4	8	12	12	16	13		1	1	13	12	11	9
B	0	4	3	5	4	6		0	0	5	6	6	6
C	11	10	17	16	16	15		11	10	15	13	12	11
D	3	3	3	2	2	2		4	3	4	4	5	3
E	15	12	11	9	10	12		17	10	12	12	14	9
F	0	0	1	2	2	3		1	2	3	4	6	7
G	28	21	20	16	14	16		26	22	14	14	10	12
H	0	1	1	3	1	1		2	5	4	4	4	4
I	21	18	12	11	11	10		21	16	8	7	7	9
J	2	1	3	4	4	2		4	6	5	4	6	5
K	6	4	3	4	3	5		4	5	3	4	3	6
L	4	8	7	6	6	4		2	7	5	6	6	7
M	2	4	3	4	4	3		2	6	4	4	4	5
N	4	6	4	6	6	8		5	7	5	6	6	7

In 2021 I produced a heat map which represented the total number of sheep recorded in each sector that year. The two heatmaps shown below show the stocking density of the sheep in each sector for the combined months of Aug, Sept and Oct in each year respectively.



The figures throw up some interesting results. The 2021 heat map was as I expected. The highest densities of sheep were on the west side nearest to their home farms. The more favourable areas for grazing were here. That coupled with the tree cover giving shelter and a natural water supply all made for ideal sheep conditions.

The areas with the least grazing were on the east side. This was due to lack of grassy areas, thick heather and bracken, very little shelter and poor water sources. These were the areas that needed greatest attention.

The 2022 heat map shows the effect of my active shepherding (stock moving). The west side still contained the highest density of sheep, there were several factors for this which I will come to shortly. But great to see that the east side had a greater number of sheep grazing than the previous year.

Ideally the sheep would be spread evenly, at around 7% over each of the 14 sectors. The table above shows that by the October of 2022 this was far closer than the October of 2021.

It has to be said that the sectors were split in an arbitrary way, it's not a perfect science and that has to be taken into consideration. It does however provide a simple way to show the results of the project.



Sheep grazing on the east side above Gatten plantation.

There are numerous factors affecting the grazing patterns of the sheep on the Stiperstones, these include:

Turn out time, breed and numbers.

As I have already alluded to, my operations were somewhat hampered by the timing of sheep being turned out onto the hill. It was towards the end of July before any appeared at the north end by which time we were half way through the season. Not only that, but when they did arrive, they were only a quarter of what I expected. I would suggest this does not make financial sense if paying a shepherd to manage the hill. However, there were 20 cows on the north end from the start, and they certainly did a good job and maybe a reason the sheep numbers were less.

Numbers turned out by the second grazier were less than expected but were still a good amount to work with. The 18 or so cattle turned out by this grazier again may have played a part in deciding on sheep numbers to turn out.

As observed in the first few weeks of turn out sheep rarely left the areas adjacent to their home farms when first being allowed back on the hill. Closing off paddocks adjoining the hill would encourage the sheep to roam to seek out forage and not linger (and graze mainly) there.

Coming from a hill farm with grazing rights on the Longmynd Common it was interesting to see the breed type used on the Stiperstones. The Longmynd is pretty much exclusively grazed by hardy welsh ewes, they are suited to the harsh conditions and thrive on poorer grazing. To see the use of a more

lowland breed surprised me. Having worked with the sheep over 2 years, I would advise a change to a breed more suited to the uplands like a Welsh or a Cheviot. With a hardier breed there would be the option of extending the grazing season. They could be taken off the hill to tup and a certain number could be returned for the winter, especially in these milder times. I would also suggest ewes with twins are not turned out onto the hill.

There also has to be a balance between species turned out. The sheep do a good job but are limited to where they can graze by the thicker scrub and heather. The cattle did an excellent job of reaching these places. The problem they have is the limited water supply. In the height of summer, the only plentiful source was from the water bowser. Logistically this was a problem and alternative supplies may need to be put in for the good of the stock and hill. Boreholes are probably the best option although powering one may be difficult. Solar pumps taking water from the 2 or 3 water holes that did not dry up is another option.

Heather cutting and burning and bracken control

At times it was difficult for sheep to move around the hill. The areas that had been managed by cutting and burning, were far easier to work on. It was nearly impossible to move them through the older and denser heather. I found that they would just stick to an old sheep track and would not disperse over the area I had moved them to.



Above on the left, an example of sheep moving single file through the dense heather. On the right sheep being moved and grazing in an area that has recently been cut or burnt.

With some careful planning, these cut or burnt areas could be used to link up well used sheep tracks, main bridleways and footpaths.

It was good to see the bracken being managed and good progress had been made over the 2 seasons. Unfortunately, sheep have little effect on this invasive plant but cattle do help in the fight as they trample and bruise the bracken and in doing so killing it. It was noticeable in areas that they had grouped together just how effective this was.

They also helped control the brambles that have appeared in areas where thick bracken has been sprayed off. Sheep would also forage on brambles whilst they are young and not too dense. I think there is a case to be made for use of GPS collars on the cattle to hold them in certain areas to use them as a natural tool against bracken and scrub growth.



An example of the cattle treading and bruising the bracken

Summer temperatures

This made moving the stock very difficult and from a welfare point of view gave me great concern. There was no obvious answer to this and even working very early in the morning or later at night the issues still remained. The sheep were constantly looking for shade and this was in abundance on the west side. There are a couple of thickets nearest the main car park and they provided much needed shade for those on the southerly end.

The public and the natural terrain

Another problem I encountered was when moving the sheep across a path or bridleway and being met by walkers, especially if they had dogs. This would divert the sheep in a different direction. Sometimes they would split up and disappear back to where I had gathered them from. Highly frustrating and again

there is no real answer to this and is something I just had to accept. However, more information about farming, commoning and their links to the environment may help. Communication with the public is vital, not just to control dogs and protect wildlife but also to explain how this landscape is managed by grazing animals.

The steep banks and gullies provided certain challenges. The aid of a drone would make a huge difference in covering these areas. A lot of my time was spent working up and down these areas on foot as they were inaccessible with the bike, this proved very time consuming. Drones used in the correct manner can provide a great tool for farmers when checking and gathering livestock.

It's a shame that the 2 active graziers are both on the west side of the common. If there was a turn out from east side, management of the hill would be far easier. The hefted sheep are naturally drawing back to their main holdings. This is a difficult natural habit to break and unless they are shepherded to certain areas they would remain in their heft.

Final Words

Going forward I do believe there is a place for a shepherd on the Stiperstones. Having spoken with the active graziers on several occasions they appreciated the work I carried out. There were numerous times when they would contact me regarding management and welfare issues of their stock on the common. I'm sure it was piece of mind for them to know that I was keeping an eye on everything.

Although it was a very 'dog and stick' approach to the work, it would be almost impossible without the use of my quad bike. There are certain areas that are inaccessible with a quad but the benefits far outweigh the negatives and would be an essential part of the job if it was to continue.

It was fascinating and rewarding to be part of this trial. I thoroughly enjoyed it and would not hesitate to return and carry on with the work. Interacting with the general public is something that I enjoy and generally speaking they were very receptive.

I believe it was a very interesting trial which despite the challenges described, has thrown up some useful results and ideas to improve management on this hill whilst the cultural heritage of commoning and perhaps even active shepherding, can also continue.

Matthew Betton

January 2023