

Feasibility Study in to Reintroducing Conservation Grazing to Juniper Hill



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Introduction

One of the three main objectives of the current five-year Epsom and Walton Downs Habitat Management Plan (2023-2028) is to draw up a project plan to reintroduce grazing to Juniper Hill. This feasibility study is the first step towards fulfilling this objective. This study will outline why it is important to return this form of management to the site, what will be involved, what resources will be needed, an idea of costs, along with funding sources.

Background

The grassland of Juniper Hill bears special attention as it has been considered to be the best of its type in Surrey. It is regarded by the Epsom and Ewell Local Biodiversity Action Plan working group as a top priority to conserve and enhance. The management recommendations for this area are essential for the maintenance and restoration of this nationally scarce and important habitat. Juniper Hill contains an area of very diverse calcareous grassland, however, with current resources, the rougher grasses and scrub are becoming invasive, leading to a reduction in this diversity. In the grassland and the surrounding woodland, there are also several Juniper bushes. In Southern counties, Juniper is in a critical state of decline with evidence of habitat fragmentation, so it is a priority to protect the population we have.

The comparison of aerial photographs below, from 1949 and 2013 shows the extent of the loss of the grassland.



Since the 1980s, amazing work has been carried out by volunteers including the Lower Mole Partnership, Butterfly Conservation, the Downkeepers and in the last 10 years the Epsom & Ewell BC Countryside Team. They have been involved in pushing back the trees and scrub, creating scrapes to encourage the chalk downland plants, cutting and clearing the grassland to try and keep the diversity. The area was also grazed with support from the Downlands Partnership in the 90s and 00s, which really enhanced the site but sadly this has not continued. Managing the scrub is a struggle and currently the scrub is tending to win. More effort is needed to ensure progress. Grazing has always been and is likely to remain, the preferred management option on Juniper Hill as it has been responsible for creating and maintaining the biological interest, allowing the wildflowers to flourish and a vital aid in controlling the scrub.

Legalities and Obligations of the Conservators

There were three key documents researched to check if grazing is possible. The first is the **Epsom and Walton Downs Regulation Act of 1984**. The relevant extract is below:

8

c. ix *Epsom and Walton Downs Regulation Act 1984*

Duties and
powers of
Conservators.

10.—(1) It shall be the duty of the Conservators to preserve the Downs so far as possible in their natural state of beauty and to have regard to the rules of good forestry and the desirability of conserving flora, fauna and geological or physiographical features of special interest and subject thereto they may—

- (a) do any works necessary for preserving, restoring, planting and maintaining the turf, trees, shrubs, plants and grass and for landscaping and temporarily fence off such parts of the Downs as they may think necessary;
- (b) execute works of draining, raising or levelling for the preservation and maintenance of the Downs and fence off dangerous places;
- (c) construct and maintain, or permit the construction and maintenance of buildings, seats, fences, notice-boards and other structures for the purposes of their functions under this Act:

Provided that the Conservators shall not construct or permit the construction of any such buildings or structures upon any part of the Downs except with the consent of the Council and of the owner of that part of the Downs upon which such buildings or premises are proposed to be constructed, such consents not to be unreasonably withheld.

(2) Notwithstanding anything contained in this Act, or in any byelaws made under this Act the Conservators may, with the consent of the Council and the Company or the Owner or the Levy Board, as the case may require, permit the Downs to be used for the holding of such events other than horse races as they think fit:

Provided that in the case of such events which, in the opinion of the Conservators involve a significant degree of interference with the rights of the public of access for air and exercise under section 4 (Rights of public over Downs) or section 15 (Rights of horse riders on Downs) of this Act—

- (a) the Downs shall not be so used for such events for more than five days in any one year; and
- (b) not more than 25 hectares of the Downs shall be set apart for the holding of any such event.

Byelaws.

11.—(1) The Conservators may subject to the provisions of this Act make byelaws for the prevention of nuisances, for the preservation of order, for the prevention of damage to the land

The Downs are owned by Epsom Downs Racecourse and are not common land. However, the general public has a right of access on foot under the Epsom & Walton Downs Regulation Act 1984.

The **Epsom and Walton Downs Byelaws** are the second and state:

2. (i) A person shall not, without the consent of the Conservators, on the Downs: (a) enclose any part of the Downs or erect any building shed or other structure thereon or construct any roads or parking places (b) place any tent stall show exhibition swing roundabout or other like thing (c) play golf or organised games (d) turn out or permit any animal to graze.

Therefore, if the Conservators agree, fencing an area to graze is acceptable.

The third is the **EPSOM AND WALTON DOWNS A STRATEGY FOR THEIR MANAGEMENT AND USE Published by the Epsom and Walton Downs Conservators 2006:**

In section 4, under the Leisure Strategy it includes a statement...

Environment – “To promote environmental responsibility”. The **Conservators will contribute to the production of a biodiversity action plan for the Borough**. They will also ensure that their working methods on the Downs are environmentally friendly and sustainable through the implementation of the Habitat Management Plan.

In Section 5

5. HABITAT MANAGEMENT The powers of the Conservators to preserve the Downs in their natural state of beauty **requires more than a passive or restrictive regime of management**. In order to retain grassland with its rich variety of plant species, invasive shrubs will be removed. If woodland regeneration is threatened by exotic non-native tree species, they will be weeded out. Epsom and Walton Downs covers some 232 hectares (573 acres). This is a substantial area of open space on the edge of the urban area and represents a significant proportion of Surrey’s chalk grassland resource. The lowest point on Epsom and Walton Downs is approximately 85 metres in the south west rising to 150 metres in the north east. This gives a gentle to moderate west facing slope with a moderate to steep south east facing slope over Walton Downs. The entire area has shallow, well drained, calcareous silty soil over chalk. There are **a number of rare plant species present in some locations on the Downs, including three National scarcities** – Round-headed Rampion, Bastard-toadflax and Chalk Hill Eyebright. The variety of habitats provide breeding and feeding places for several declining bird species such as Skylarks, and important populations of Small Blue and Chalk Hill Blue butterflies are also present. Whilst much of the site is used for gallops or for golf “there is an impressive array of habitats present including unimproved calcareous grassland, rough semi-improved calcareous grassland, secondary woodland with associated scrub” (Habitat Management Plan, 2003). Juniper Hill is unimproved chalk grassland and was described in 1989 as “the most species rich stand of its type found in the County.” A comprehensive Habitat Management Plan (a copy of which is available for inspection at the Town Hall, Epsom) was prepared for the Conservators in 2003 by the Surrey Wildlife Trust. This document analyses in detail the various parts of the Downs describing their ecological importance and contains a number of management recommendations which have been agreed by the Conservators. **An Action Plan to support the Management recommendations in the Habitat Management Plan was adopted in 2003.**

In summary, for many years it has been agreed in writing that the important chalk grassland habitat found within Epsom and Walton Downs should be **actively managed** in order to preserve the Downs in their natural state of beauty and retain its rich variety of plant species.

Consultation

A number of people were consulted to establish the feasibility of reintroducing grazing and a summary of their meetings and advice is outline below.

Downlands Partnership – Sean Grufferty.

They are thoroughly supportive of the idea to graze Juniper Hill and Sean suggested that it might be a good idea to have cattle in initially to help break up the sward as they are a heavier animal. However, sheep would be the favoured grazing animal to use long-term. As it has not been grazed for some time, the area would need to be grazed hard at first. The priority will be to get the vigorous Tor grass under control, along with scrub. The wildflowers will be able to cope with this and will flower again when conditions are right. Chalk downland after all, was created by grazing.

The lack of Juniper seedlings is probably due to tightness of the sward. Once grazing is introduced it should break it up and allow for germination. Sean gave an overview of what the Downlands Partnership could offer in terms of supplying the animals, providing the welfare checks, assistance with erecting fencing and also liaising with the public. Costings are discussed in more detail below. Sean advised on available grants which are also outlined below.

The Downlands Partnership have been grazing chalk downland for years and are very experienced. Below are before and after pictures on a site they have worked on to highlight the improvements it can bring.



August 2021



Butterfly Conservation – Bill Downey

Over the last few years, Bill has organised work parties at Juniper Hill to assist with removal of scrub and improve the quality of the sward.

Butterfly Conservation are keen to see the reintroduction of grazing as this is the best way to manage chalk grassland.

A grazing regime will create a more herbaceous sward, which will in turn provide the habitat conditions for butterflies – and other pollinators – to thrive.

It will also give greater stability to the colonies of rare, red-list species – such as the Chalk Hill, Small Blue and Grizzled Skipper – which are present on the site.

Jockey Club – Jim Allen and Nigel Whybrow

Their key concern was animals escaping and causing a danger to horses and their riders on the nearby gallop. To ensure this does not happen, it was decided that robust fencing needs to be used, which would be as vandal proof as possible. They also agreed that if the animals were to be there regularly then it made sense for the fencing to be more permanent. They preferred the idea of fencing the area in two separate areas so the main path through Juniper Hill could be kept accessible without the need for gates. If there is no public access through the grazing compartments, this should also prevent accidental escapes.

Regarding funding, although it was unlikely the Jockey Club could contribute, it was agreed that they would be happy to give landowner permission for grant funding to be sought for the project and allocated directly to it. Funding opportunities are discussed more fully below.

Downskeepers – Simon Perkin

From the Downskeepers perspective, they are supportive of the project but as with the Jockey Club, it's important that the fencing is as vandal proof as possible. They would be able to help with ad hoc repairs and would visit the site as much as they could but checking them daily would not be possible with current resources. This would have to be provided by other means e.g. volunteers, the grazier or other staff. If there is only to be one route of access, thorough consultation with the local dog walkers and users of the site would have to happen to ensure there was no backlash about access being restricted.

Langley Vale Woods, Woodland Trust – Jenny Price

They currently graze a few meadows using Herdwick sheep and have two different Graziers, Michael Jelly and a farmer in Headley. They use permanent fencing and have a trough they fill up for water. Sheep do not drink very much and get most of their water needs from the grazing. The grazier manages the day-to-day requirements, checking on fencing etc. If there is a large amount of vandalism, which in their experience has hardly ever happened, Jenny will assist in fixing. They use contractors to carry out all works so can take time to action repairs. Jenny was aware of a couple of dog attacks on sheep nearby but not within their meadows.

They would be keen to cooperate and assist where they can. The far eastern end of Langley Vale is a meadow they would like to graze, which is very near Juniper Hill. There could be the potential to share cost of water supply if this did happen and they would be happy to introduce their graziers to us.

Clipex fencing was recommended as it easier to install and is very sturdy. This is metal fencing with wooden posts every so often along with wooden corner posts.

Although they don't have volunteer lookers, Jenny would be happy to advertise to their practical conservation volunteers if the opportunity to assist with the grazing project on Juniper Hill if it arises. Jenny has had experience with the Downlands Partnership providing the grazing animals and although they are more expensive, they are more hands on and you get more of a service.

Banstead Commons – Lucy Shea

Lucy has worked with the Downlands Partnership to establish grazing on Banstead Commons and has been very pleased with the results. She advised on her experience with fencing and managing public access. Key to her success has been engaging with the local users of the site to get their appreciation of what they are trying to achieve and has managed to build up a group of volunteers who are helping to manage the grazing day to day.

British Horse Society – Sarah Rayfield

Following the Epsom Downs Consultative Committee where the feasibility study was first raised, Sarah gave some useful feedback via email. In respect of fencing Juniper Hill, no gates/fences would be preferable so perhaps the no fence collars could be used. Riding through sheep would be preferable. If gates are needed agreement on the type would be appreciated to minimise accidents.

Further Consultation

If the go ahead is given to the grazing project the wider local horse community should be approached for example Wildwoods Riding Centre and further discussions with the British Horse Society. Local residents, regular walkers/users should also be engaged. This could be via – Facebook, Epsom & Ewell Borough Council's page and also the new Facebook group set up by members of the consultative committee.

Local engagement was discussed with Sean Grufferty and we discussed letter/leaflet drops to local residents and on site posters. He suggested a 'meet the sheep' as an essential engagement tool for perhaps the first Saturday the sheep are on site. The Downlands Partnership could bring one or two of their 'care' sheep (basically orphans who are now their socialising sheep). They really engage people especially children and as they are so friendly they've been a real hit at shows. Sean and Lucy would also be happy to chat to or give presentations to any stakeholders.



Meet the Sheep event

Location of Juniper Hill and proposed grazed areas

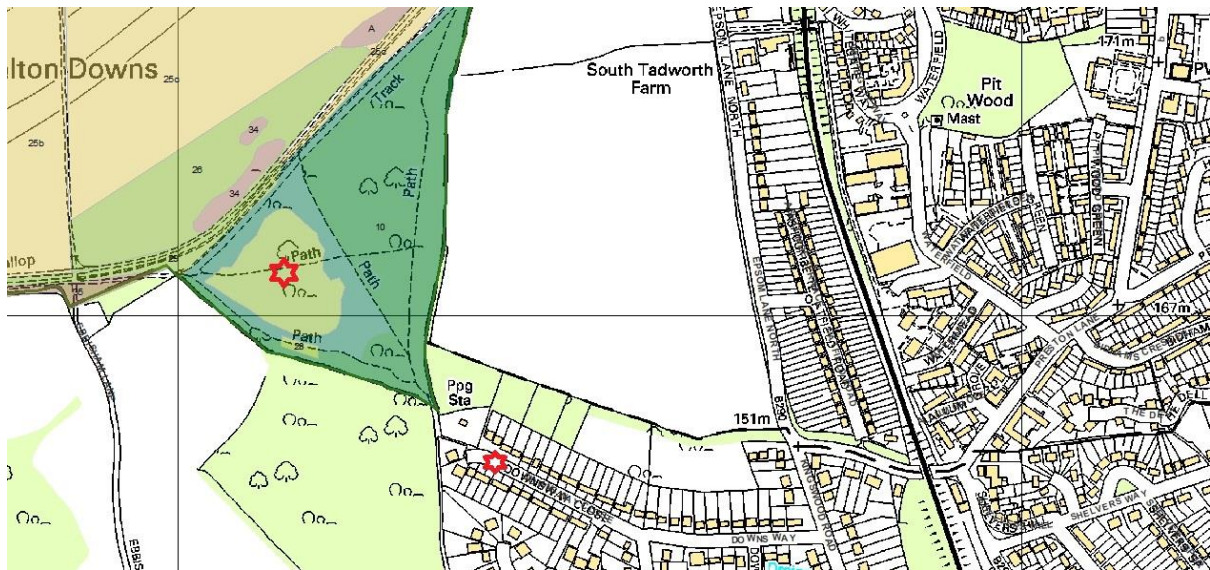
Epsom and Walton Downs Habitat Map



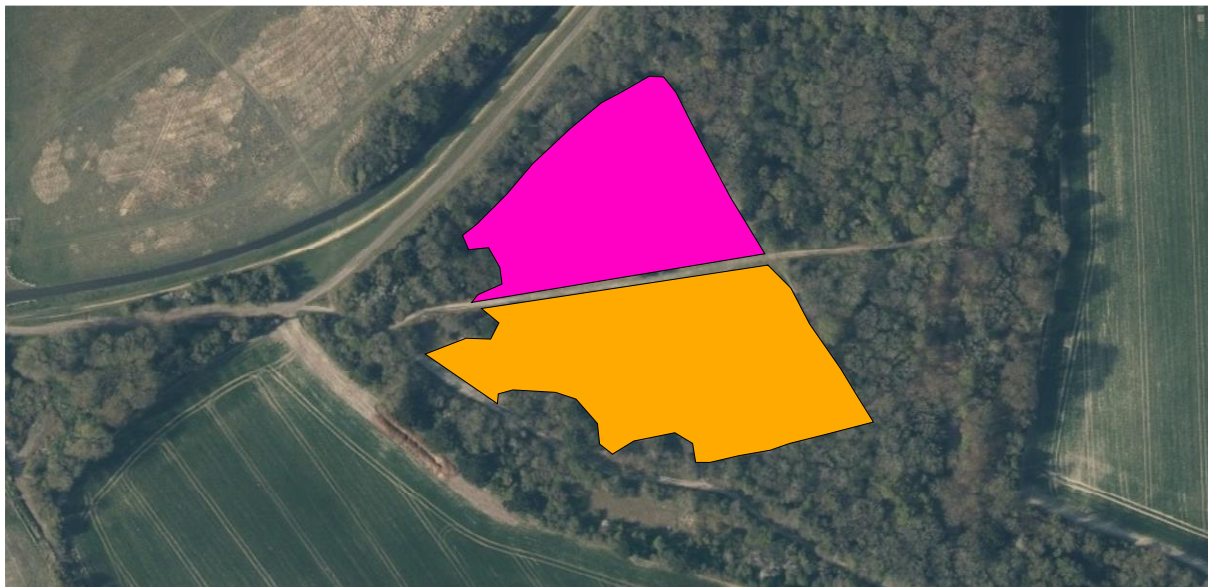
Created by: Sarah Clift

Habitat map with management compartments

Juniper Hill is in the South Eastern corner of Epsom Downs, compartment 27



Juniper Hill and local residential areas



Juniper Hill proposed grazing compartments

Juniper North has a 360m boundary

Juniper South has a 466m boundary.

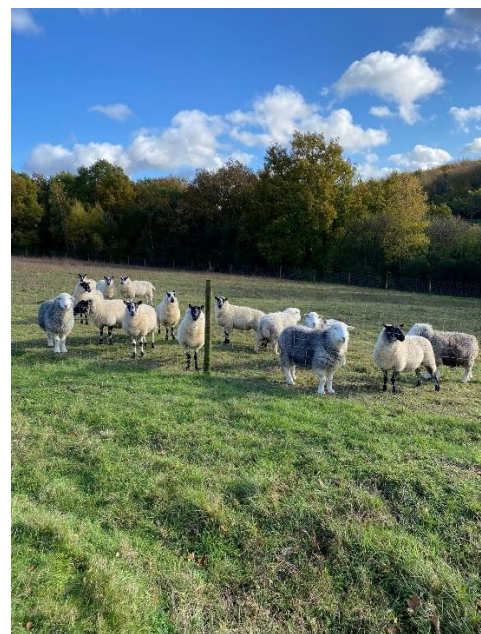
If we were to cross the main path and have just one area the boundary is 505m

Infrastructure

After consulting with Jockey Club and the Dowsnkeepers, as mentioned previously, a key concern would be the sheep getting loose and causing an accident, therefore more robust fencing would be preferred and has been costed below. This would also ensure the animals are safer from dog attacks. Advice has been taken on the best types of more permanent fencing and there are two main options available. Either the use of wooden posts or metal posts, with metal mesh stock fencing running between them or a combination of the two. Clipex fencing (metal posts) has been suggested as the best to use for ease of installation as they drive more easily in to the chalk. However, they are not as aesthetic to look at.

As an extra line of defence to ensure the animals stay within the grazing area in case of vandalism to the fences, nofence collars could be used. Due to the urban nature of the site, and vulnerability of the sheep, nofence collars on their own would not be suitable. It is possible that more temporary electric fencing could be used along with nofence collars to ensure the animals stay in the grazing areas and would be more cost effective.

It is proposed that there are two grazing compartments, allowing the main central path to have unimpeded access. No horse/pedestrian gates will be needed, which will also mean a lower likelihood of animals escaping due to gates being left open by visitors. To reduce the likelihood of dog attacks, it is proposed that there is no public access within the grazing compartments. There are a couple of desire lines currently through the proposed area but hopefully with enough consultation with local users of the site, we can encourage them to use the main central path to access the area. If there is a large backlash, small gates could be put in along the fence line. When visiting Juniper Hill, there has never been many visitors and so would be hopeful that the few people who do use it, will see the benefit of what is trying to be achieved and would respect the new access routes.



Fencing used at Park Down – Banstead Commons



Clipex metal fencing



Orange netting temporary electric fencing.

Regarding a water supply, thankfully, sheep do not drink a lot of water. They get most of what they need from the vegetation they eat, so there is less need for a mains water supply to be installed. After having consulted with Thames Water, this would cost in the region of £5000 if it was decided to try this. Perhaps if the Woodlands Trust ultimately graze their nearby meadow, this can be investigated further. Initially however, a better option would be to have a rain collecting trough, an example of which can be seen below.



To ensure the animals have access to shelter, some of the wooded areas will be included within the grazing areas.

Animals

As advised by the Downlands Partnership, sheep would be the preferred grazing animal. Goats are not really an option as if used, high fences would need to be installed and they would be more of a problem to contain.

It is unlikely that we would need to supplement their diet. If their condition started to deteriorate, they would be taken off site.

A rough quote has been provided by the Downlands Partnership and their service would include delivery of the animals, along with other services such as assistance with fencing, water supply, animal welfare checks, training of volunteers and liaising with the public.

Other potential graziers to obtain quotes from could include those who graze nearby Langely Vale and the grazier who currently supplies cattle to Epsom Common. Full costings will be sought out and the best value chosen.

Risks

The main risk to the animals would be dog attacks. The chances of this will be minimised by reducing public access. Escaping could result in harm to the animals and other users and horses. This will be minimised by using robust fencing, potentially the added security of no fence collars and daily checks of the site. There is a small possibility of disease but health checks will be carried out daily.

Costs

Fencing

Wooden Posts			
830m	Cost	505m	Cost
35no 2.4m x 150-175mm UC4 Strainers 70no 2.4m x 75-100mm UC4 Struts 275no 1.8m x 75-100mm UC4 Intermediates 1no 20kg x 40mm Barbed Staples	£3338.70 + vat	35no 2.4m x 150-175mm UC4 Strainers 70no 2.4m x 75-100mm UC4 Struts 170no 1.8m x 75-100mm UC4 Intermediates 1no 20kg x 40mm Barbed Staples	£2719.20 + vat
9no LHT13/122/15 x 100m Rolls of galvanised wire stock fencing	£1652.85 + VAT	6no LHT13/122/15 x 100m Rolls of galvanised wire stock fencing	£1101.90 + VAT
Vehicle gate x2	1000	Vehicle gate	500
		Horse/pedestrian access gate x2	300
Total plus VAT	£5991.55	Total plus VAT	£4621.10

Metal Posts and Metal Corner/Strainer Posts (Clipex)			
830m	Cost	505m	Cost
4no 2.5m Angle End Strainer Kit Metal 31no 2.5m Angle Inter Strainer kit Metal (For Corners and 2 Way)	£8181.75 + vat	4no 2.5m Angle End Strainer Kit Metal 31no 2.5m Angle Inter Strainer kit Metal (For Corners and 2 Way)	£7194.75 + vat

275no 1.8m Clipex Intermediates		170no 1.8m Clipex Intermediates	
9no R8/80/15 x 100m Rolls of galvanised wire stock fencing	£1056.60 + VAT	6no R8/80/15 x 100m Rolls of galvanised wire stock fencing	£704.40 + VAT
4no 25kg x 2.5mm HT Line Wire	£216.60 + VAT	3no 25kg x 2.5mm HT Line Wire	£162.45 + vat
Vehicle gate x2	1000	Vehicle gate	500
		Horse/pedestrian access gate x2	300
Total plus VAT	£10454.95		£8861.60

Metal intermediate posts (Clipex) with wooden (DOT) corner/strainer posts			
830m	Cost	505m	Cost
35no 2.4m x 150mm Machine Strainers	£4500.70 + VAT	35no 2.4m x 150mm Machine Strainers	£3513.70 + VAT
70no 2.4m x 100mm Machine Struts		70no 2.4m x 100mm Machine Struts	
275no 1.8m Clipex Intermediates		170no 1.8m Clipex Intermediates	
1no 5kg x 40mm Barbed Staples		1no 5kg x 40mm Barbed Staples	
9no R8/80/15 x 100m Rolls of galvanised wire stock fencing	£1056.60 + VAT	6no R8/80/15 x 100m Rolls of galvanised wire stock fencing	£704.40 + VAT
4no 25kg x 2.5mm HT Line Wire	£216.60 + VAT	3no 25kg x 2.5mm HT Line Wire	£162.45 + vat
Vehicle gate x2	1000	Vehicle gate	500
		Horse/pedestrian access gate x2	300
Total plus VAT	£6773.9		£5180.55

Extra costs:

Installation costs – This could be done using volunteers potentially, either Countryside Team, Lower Mole Partnership or Downlands Partnership. This could be completed in a day or two so no more than £300.

Maintenance of vegetation away from the fence line could be carried out by volunteers. Perhaps two tasks a year. Staff time would be needed to lead volunteers.

Electric inner fence:

Inner electric tape with low posts - £12.50 per 200m (kits)

Connectors - £2.20 per pack of 5

Fencing clamp - £0.80 each

Energiser - £120

Solar Panel - £35

Battery - £30

Earthing - £10

Total approx. £270.00

Corral/pen for removal of animals: £500

No Fence collars:

Collars – To buy they are roughly £250 each.

If hired from Downlands Monthly charge – £1.20 each per week

Animals

Downlands quote for 12 animals over two months approx. £780

Project management

Officer time to project manage and source volunteers and funding:
£100 a day approx.

Total

Looking at all the costs, to initially set up the project we are looking at around £15,000. On-going costs will be much lower of course, which would be for the hire of the animals and some maintenance tasks, which hopefully, in the main, will be carried out by volunteers.

If it was possible to use more temporary electric fencing, the costs involved would be nearer £10,000. The advantage of temporary fencing is that when the animals are not on site, the area can be opened up more easily to allow access to people across the site and any vandalism will be more easily fixed. A compromise could be for temporary fencing to be used initially for a two month trial for example and if successful, more permanent features could be installed. Of course, any fencing that is installed, can ultimately be removed.

Funding sources

There are a number of grants/organisations available to apply to including; Your Fund Surrey, Community Infrastructure Levy, Farming in Protected Landscape fund, Countryside Stewardship (Government Grant), The Lower Mole Trust, and Downlands Trust.

Once the go ahead is given in principle for the project, applications can be made.

Volunteers and staffing resources

The Countryside Team manage volunteers who carry out checks on the cattle grazing on Epsom Common. Three days a week, the Environmental Response Officers check the cattle to ensure they familiar with what to do. If any issues occur, it is likely they would be called on to help rectify the situation. Four days a week, a volunteer rota of about fifteen volunteers is used and is coordinated by one of the volunteers. Two members of staff also take part in this rota.

Having grazing animals on site is a big responsibility and enough staff need to be involved in their management. Daily checks include walking the perimeter of the fence line, checking the electric fencing is on and working, fixing any minor repairs, checking site notices are present and correct, checking the animals for health and condition. Training is provided by the Countryside Team. It would be envisaged that a similar set up would be used at Juniper Hill. Potential volunteer sources could come from:

- Epsom Common cattle checking volunteers
- Langley Vale Volunteers
- Countryside Team Volunteers
- Lower Mole Volunteers
- Downlands volunteers
- Banstead Common volunteers
- Local residents
- Local horse yards
- Regular users

The Downkeepers would need to be involved as the main members of on-site staff. However, they are currently quite stretched so this would have to be thought through carefully. Daily checks currently couldn't be guaranteed and if major work needed doing to repair fencing for example, they would need further resource to call on.

Next steps

If the general principle of grazing Juniper Hill is agreed, the next steps would be to confirm funding options and volunteer resource. Initial investigations will focus on the Your Fund Surrey pot and current volunteers.

Further consultation will also take place with local residents and regular users of the site including local horse yards.

If the decision is taken that grazing would not be a viable option, then decisions will need to be made as to how else we ensure this internationally important habitat is actively managed.



Round-headed Rampion



Common rock-rose



View northwards from Juniper Hill

Appendices

Fencing Standards to achieve Countryside Stewardship funding:

When using wooden posts, you must:

- remove all old fencing material before putting up the new fencing
- use softwood timber that's fully peeled, coated with wood preservative and pressure treated or treated with an HSE approved industrial wood preservative, so you comply with Use Class 4 that's defined in BS8417:2014 'Preservation of Wood Code of Practice' – you can use untreated durable timber as set out in the [Forestry Commission guide to forest fencing](#)
- use additional strands of galvanised steel wire (plain or barbed) if you need extra height. Use strands of galvanised 4mm mild plain steel wire or 2.5mm barbed wire or high tensile wire
- **use straining posts are at least 2.1m long, at least 100mm by 100mm square when sawn or have at least a 125mm top diameter**
- set the straining posts **no more than 150m apart** if you use mild steel wire (or 600m apart for high tensile wire)
- use a straining post at every change of direction (horizontal or vertical) and at each end of the fence – you can use suitable bracing to achieve stability
- **use struts that are at least 75mm by 75mm square or have at least a 75mm top diameter and are at least 2.1m long** – you can use a box strainer with or instead of a strut
- mortice (cut) struts into the straining post at an angle of no more than 45 degrees – do not secure by a nail alone
- set the **intermediate posts 3m or less apart for mild steel and at least 4.5m for high tensile steel** – adjust these measurements according to the ground conditions
- **use intermediate posts that are at least 75mm by 75mm square or have at least a 65mm top diameter and are at least 1.65m long**

When using metal posts, you must:

- agree using metal posts with your Natural England or Forestry Commission adviser if installing on land in a Countryside Stewardship Higher Tier agreement
- remove all old fencing material before putting up new fencing
- erect the **steel wire mesh fence to at least 1.05m high when installed**
- use additional strands of galvanised steel wire (plain or barbed) if you need extra height.
- use strands of galvanised 4mm mild plain steel wire, 2.5mm barbed wire or high tensile wire
- **use straining posts which are at least 2.4m in length**

- place a straining post at every change of direction (horizontal or vertical) and at each end of the fence – you can use suitable bracing to achieve stability
- use **intermediate posts at least 1.65m long**
- **struts should be at least 1.8m long and attached to posts using a suitable connector**

You can install the metal posts according to the manufacturer's installation recommendations. You can use any type of metal post, but they must be suitable for the site and be durable for 5 years from the start of your agreement.