

# Birmingham City Council

## Report to Cabinet Member for Street Scene and Parks

12<sup>th</sup> May 2021



---

**Subject:** Introduction of Virtual Fencing at Sutton Park National Nature Reserve

**Report of:** Acting Director - Neighbourhoods

**Relevant Cabinet Member:** Councillor John O'Shea: Street Scene & Parks

**Relevant O &S Chair(s):** Councillor Penny Holbrook: Homes & Neighbourhoods.

**Report author:** Joe Hayden – Parks Services Manager  
0121 675 0936  
[joe.hayden@birmingham.gov.uk](mailto:joe.hayden@birmingham.gov.uk)

Are specific wards affected?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No – All wards affected
If yes, name(s) of ward(s): Sutton Vesey		
Is this a key decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, add Forward Plan Reference:		
Is the decision eligible for call-in?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Does the report contain confidential or exempt information?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, provide exempt information paragraph number or reason if confidential:		

### Executive Summary

- 1.1 Sutton Park National Nature Reserve (NNR) has been managed traditionally using grazing and forestry practices for centuries. The continuity of these sustainable methods of management are integral to the past, present and future condition of the site. The presence of grazing animals (cattle and ponies) adds to the diversity of landscape through their grazing patterns.

- 1.2 Grazing has shaped, and continues to be a vital part of, the heathland character of the National Nature Reserve and its continuation is essential to the condition of the Site of Special Scientific Interest (SSSI). Traditionally the grazing season is during the summer between April and October but can vary according to the weather and availability of stock.
- 1.3 Following a review of existing grazing practices on site at Sutton Park in 2017 (and a review of developments adopted elsewhere in this country and abroad) the potential for introducing virtual grazing technology was identified as a means to better manage grazing for the benefit of the cattle (animal welfare), ecology, archaeology, visitor interaction, and stakeholder interests at Sutton Park.
- 1.4 The technology is tested and capable of being deployed successfully on an NNR and SSSI site.

## **2 Recommendations**

That the Cabinet Member:

- 2.1. Notes the content and background within this report and supporting information

## **3 Background**

- 3.1 Sutton Park National Nature Reserve (NNR) has been managed traditionally using grazing and forestry practices for centuries. The continuity of these sustainable methods of management are integral to the past, present and future condition of the site. The presence of grazing animals (cattle and ponies) adds to the diversity of landscape through their grazing patterns. Their visual presence enhances the perception of the landscape, being reminiscent of landscapes of the Midlands in the 17th and 18th century where unenclosed grazing was more characteristic. It has shaped, and continues to be a vital part of, the heathland character of the Reserve and its continuation is essential to the condition of the Site of Special Scientific Interest (SSSI). Traditionally the grazing season is during the summer between April and October but can vary according to the weather and availability of stock.
- 3.2 The Sutton Park Management Plan outlines that low intensity grazing is a suitable means of managing areas of dry heath. Generally, areas of wet heath require limited management, but light grazing may also be useful. Selectively feeding in different areas and on different plants, free-roaming livestock help to maintain variation in the vegetation composition and structure and can suppress scrub encroachment. Grazing with cattle or hardy ponies is an acceptable method of management, although care must be taken to avoid damage to the heather by trampling. An appropriate stocking rate should take into account local conditions and the timing and length of grazing, but an off-take of between 30-40% of the current growth increment is desirable. Heavy grazing should be avoided on dry and wet heath. The recommended rate found in the objectives of the plan is of 1 cattle per hectare over 24-week grazing period. The actual level has fluctuated due to external issues such as foot and mouth, changes in subsidies and the commercial value of beef cattle.

- 3.3 Sutton Park NNR has had continuous grazing and staff have built a strong relationship with our graziers over the years. An agreement currently exists between Birmingham City Council and a single grazer, who supplies up to 160 cattle per year to graze the southern portion of Sutton Park below the railway line that splits the site into two unequal halves, around 600 hectares. The breed of cattle is important as is the breeding status, gender, size and health of the herd. The herd is inspected by Council officers from the local Ranger team and Birmingham City Council Animal Welfare Officers prior to arrival at the farm of origin, currently in Aldridge. A range of checks are made including checking tags against passports, valid insurance, vet details, medication records and ensuring that the cattle have been owned on the holding for at least 28 days prior to their arrival. Contact details are confirmed as correct in case of any issues that are reported during their stay in the park.
- 3.4 Across the site 6,500 Linear Metres (LM) of external boundary and over 2,100 LM of internal boundary features exist, used to control the movement of cattle. This does not include the length of wall between the park and the Four Oaks Estate and the length of railway boundary which is a further 3,300 LM accumulating to a total of nearly 13km (8miles) of physical boundary to enclose the area of cattle grazing. These features are static and prevent the animals from escaping and offer spaces for the public that are ungrazed to reduce zoonotic infection such as E.Coli. The upkeep of these structures is resource heavy in both financial and staff time. The upkeep of this infrastructure and the overall management of Sutton Park demonstrates the commitment of parks officers, staff and volunteers to the continuance of grazing.
- 3.5 In 2017 local representatives from Birmingham City Council were approached by Sutton Coldfield Golf Club to discuss the movement of cattle across the course. The Golf Club has existed in the park for over 125 years and is a tenant on the western side of the site. The Golf Club goes to great lengths to try and limit the grazing animals wandering over the course, with both physical wires and keeping grass cut short along the edge of fairways. However, each year, thousands of pounds of damage are caused by cattle on the golf course.
- 3.6 After conducting an investigation into what modern technologies were available it became apparent that virtual fencing was the only technology capable of being deployed successfully on an NNR and SSSI site. It was clear from the outset that a virtual fencing system offered many advantages to all stakeholders in the park, through visibility and control of grazing patterns throughout the park, improving the quality of the historic heathland and woodland, and improving animal welfare.
- 3.7 A meeting between the golf course, grazer, animal welfare officers and local parks management was convened in November 2017. A subsequent presentation was given to the Sutton Park Advisory Committee in December 2017. It was agreed at both meetings that it would be worthwhile to proceed as the positive benefits of the system would go far beyond just the protection of the golf course features. From the outset, the Golf Club determined that it would pay for the purchase, installation and running costs of the system.

#### **4 Options considered and Recommended Proposal**

- 4.1 There are a number of existing technologies to manage an area in which livestock are contained within.
- 4.2 Traditional fencing is costly, static, and requires upkeep and dependent upon the style and height can be bypassed by persistent animals.
- 4.3 Electric fencing is quicker and cheaper to set up, delivering a charge upon impact which deters animals from leaving an enclosure. The power required, use of large batteries on site and its indiscriminate shock result in this technology being impractical within a public park.
- 4.4 Invisible fencing has been used across the country over the last 10 years and eliminates the need for above ground structures. Instead, a buried wire provides a signal to a collar worn by the cattle. Initially the animal receives an audible cue to alert it to the presence of the invisible fence. If the animal continues to the line of the invisible fence a mild electric pulse is delivered from the collar. Cattle have been shown to quickly learn where the invisible fences are positioned and to turn back on the audio cue without the need to deliver an electric pulse. More than 35 invisible fence systems have been sold in the UK, predominantly to local authorities in conjunction with Natural England, and typically onto common land and heathland sites like Sutton Park. Over 400 cattle have been fitted with collars on these sites, and have been featured twice on the BBC Countryfile programme. There is widespread acceptance of these systems. However, this technology is static, and would result in kilometres of wire being buried underground in a Scheduled Ancient Monument (SAM). This makes invisible fencing technology a non-starter for Sutton Park.
- 4.5 Shock collars, using technology developed to control dogs, have never been applied to cattle due to animal welfare concerns.
- 4.6 Virtual fencing is a new technology that has no physical structure above or below ground, instead a GPS satellite tracks the animal from a collar worn around neck of the animal. The collar receives the positioning of a virtual fence line transmitted from a base station. As with invisible fencing, the animal receives an audible cue from the collar as it approaches a fence line, followed by an electric pulse if the animal reaches the fence line. If an animal is chased through the fence line, the virtual fence system automatically extends the fence out to encompass the animal. Provided the animal walks back, no further audio cues or pulses are given and the fence line returns to the original position. Two companies have developed virtual fencing systems and both have started extended trials in 2020.
- 4.7 The system recommended for Sutton Park is from Agersens, a privately owned business based in Melbourne Australia. Agersens have demonstrated a key lead in collar power management, which has proven the main obstacle in developing a commercial system over the last four years.

## **5 Consultation**

- 5.1 Stakeholders were introduced to the virtual grazing system through the meetings held in 2017 in particular through the Sutton Park Advisory Committee with additional updates consequently.
- 5.2 Key stakeholders include:
- 5.3 Historic England - As there is no disturbance to above or below ground archaeology Historic England as the statutory body overseeing the SAM have no concerns over the introduction of the system.
- 5.4 Natural England - Natural England have been supportive of the idea due to the potential benefits of manipulating the grazing regime to improve the condition of notified features of the SSSI and have recently confirmed that there will be no formal consent required within the SSSI.
- 5.5 Animal Welfare - Animal Welfare have responded comprehensively with the following information:
- 5.6 Benefits
- 5.7 Traditional electric fencing has been used to contain animals for years – the shock delivered by the collars is less than that from an electric fence.
- 5.8 The cows received a warning sound before receiving the shock – there is no such warning with an electric fence, therefore the system is more animal friendly.
- 5.9 The software behind the system can provide an alert if a cow does not move within 30-40 minutes – a fantastic facility to very quickly identify an animal that is in distress/ill/caught up or has died.
- 5.10 Should it be reported by a member of public that a cow is injured or diseased – then the animal can quickly be found (especially if the ear tag or unique number on the collar is taken). Currently it can take some time to find a cow after such a report is received. This will allow any necessary veterinary treatment to be administered much more quickly, or alternatively it can facilitate in the quick removal of a cow from the site if needed. This is such a huge animal welfare improvement in managing the cattle in the park that it outweighs any animal welfare concerns (though I believe these are more public perception issues and we need to provide good information to the public).
- 5.11 Traditional electric fencing poses a threat to wildlife, especially deer – this system does not affect any other wildlife and allows them to move freely without risk.
- 5.12 Safety Features
- 5.13 There is an 'auto-shutdown' facility, so in the unlikely event that an animal 'goes down' or gets stuck in some way at the fence line, the animal will not continue to be shocked.
- 5.14 The shock cannot be delivered remotely – it is completely led by animal behaviour and only occurs if they ignore the audible warning and continue to the virtual fence

line. The misuse of users/handlers administering shocks unnecessarily (as seen with the use of shock collars on dogs) is why the shock collars on dogs have a bad reputation.

- 5.15 The weight of the collars are in line with those traditionally used on cows in the Alpine regions (complete with bells).
- 5.16 These type collars and systems have been used across the country for conservation grazing and there are no animal welfare issues reported that I am aware of. I have also spoken to the vet from 608 Vet Group, who we use for the cattle in the park and also sent him a photo of the cows fitted with the collars. He did not express any particular concerns other than a slight worry that a cow could get caught up with the collar. Clearly this would be quickly identified by the alert system as detailed above.

## **6 Risk Management**

- 6.1 The short pulse delivered from the collar is much milder than that from an electric fence and is designed to be uncomfortable rather than painful. Cattle receiving the pulse do not become agitated but simply turn away from the fence. Cattle are trained beforehand in a controlled environment and have been shown to quickly learn to respond to the audible cue without the need to deliver a pulse.
- 6.2 The system has a number of animal welfare protections, including timeouts, automatic shutdowns and alert notifications to the farmer. All of these are designed to prevent an animal from receiving excessive pulses. The system only responds to animal behaviour; there are no manual over-rides and the farmer cannot deliver pulses remotely.
- 6.3 In order to better manage the welfare of the animals, in the event of sickness or becoming lame, if an animal does not move for 30 to 45 minutes, the system will send an alert to the farmer.
- 6.4 Currently when a sick or lame animal is reported to the farmer, he first has to search for and find the animal concerned. With a virtual fence system, the farmer can precisely locate the whereabouts of any animal within the herd.

## **7 Compliance Issues:**

### **7.1 How are the recommended decisions consistent with the City Council's priorities, plans and strategies?**

7.1.1 The proposed scheme will contribute to the Council's key outcomes as follows:

7.1.2 **Birmingham is a fulfilling city to age well in:** through this external investment and resulting physical ecological improvement of the site, increased numbers of residents will be encouraged to participate in healthy recreational, physical activity, and a greater appreciation of nature and heritage landscapes

- 7.1.3 **Birmingham is an aspirational city to grow up in:** through the introduction of innovative new technology Sutton Park will become an exemplar of modern grazing and conservation land management techniques
- 7.1.4 **Birmingham is a great city to live in:** the targeted improvements to landscape management will benefit the ecology of the site and encourage more healthy outdoor activity and positive social interaction, which supports increased wellbeing, and positive outcomes.
- 7.1.5 The project supports the Council's commitment to the Future Council Programme, establishing an environment in which residents, external partners and stakeholders and Council staff can effectively and visibly work together. This will aim to make best use of the resources available.

## 7.2 Legal Implications

- 7.2.1 Sites of Special Scientific Interest (SSSI) are important as they support plants and animals that find it difficult to survive elsewhere in the countryside, and they represent the country's best wildlife and geological sites. SSSI are legally protected under the ***Wildlife and Countryside Act 1981***.
- 7.2.2 This legislation gives Natural England powers to ensure better protection of SSSI and safeguard their existence into the future. If you are the owner - or occupier - of an SSSI, you have certain responsibilities that must be complied with.
- 7.2.3 Sutton Park is registered as a Scheduled Ancient Monument (SAM). The protection provided to scheduled monuments is given under the ***Ancient Monuments and Archaeological Areas Act 1979***.
- 7.2.4 Historic England monitor the condition of scheduled monuments (SAM). They encourage owners to maintain scheduled monuments in good condition by using sympathetic land uses, for example restricting stock levels or controlling undergrowth which can damage archaeology below ground

## 7.3 Financial Implications

- 7.3.1 None. Funding for this project is being provided by Sutton Coldfield Golf Club. All costs (installation, equipment, on going maintenance) are funded by the Golf Course. No financial contribution required from Birmingham City Council.

## 7.4 Procurement Implications (if required)

- 7.4.1 None. Funding for this project is being provided by Sutton Coldfield Golf Club.

## 7.5 Human Resources Implications (if required)

7.5.1 The GPS tracking capability will greatly enhance ability of the grazier and site based staff to monitor and address any animal welfare issues if they arise.

## **7.6 Public Sector Equality Duty**

7.6.1. A Public Sector Duty Statement has been produced. A Full Equalities Assessment will not be required

## **8 Background Documents**

8.1 Minutes from Sutton Park Advisory Committee

8.2 Cattle Collar Testimonials

8.3 Public Sector Duty Statement

## **9 List of appendices accompanying this report:**

Appendix 1 – Location Map