

Committee(s):	Date(s):	Item no.
Epping Forest and Commons Committee	14 th May 2012	
Subject: A 5 year trial of ‘Invisible Fencing’ at Burnham Beeches. Expansion of the Conservation Grazing Scheme at Burnham Beeches	Public	
Report of: The Superintendent of Burnham Beeches and Stoke Common.	For Decision	

Summary

The City of London introduced conservation grazing at Burnham Beeches in 1992. Since that time the area grazed has grown from 3.5 ha to 43ha (approximately 25% of the site) and currently supports a small herd of British White Cattle and Exmoor Ponies.

The 2010 – 2020 management plan for Burnham Beeches was approved by this Committee in July 2010. Approval included the ‘keystone project’ to expand conservation grazing across as much of the site as possible (approximately 95%).

In May 2011 your Committee approved the use of cattle grids to prevent egress by livestock along the public roads that run through the site.

In November 2011 the Burnham Beeches team inspected the ‘Boviguard, Invisible Fencing’ trials at Epping Forest. At this point it became clear that the cost of cattle grids could not be justified at Burnham Beeches without first carrying out trials of this new option (as is also proposed at Epping Forest).

Although still at an early stage in its technological development the commercially available Boviguard Invisible Fencing has the potential to greatly simplify the keystone project bringing benefits in terms of reduced installation and maintenance costs, formal consultation requirements and access and environmental considerations.

Natural England’s Higher Level Stewardship Scheme at Burnham Beeches runs until January 2018. It is anticipated that it will provide up to 80% of the capital cost of the keystone project as well as £23,000 per annum in habitat improvement payments until that date.

Your Superintendent continues to work closely on this project with Buckinghamshire County Council (BCC), Natural England (NE) and

the Burnham Beeches Consultation Group (BBCG).

I recommend that:

- Approval is given for a phased and expanding trial of ‘Invisible Fencing’ and ‘Virtual Grids’ at Burnham Beeches during the HLS period.
- Your Superintendent provides this committee with regular reports on related matters as the trials progress and widen.
- The use of Invisible Fencing as the sole means of preventing livestock from straying from the site is reviewed by this Committee at the end of the second year of the trials.
- Your Superintendent continues to liaise closely with the Superintendent’s team at Epping Forest in terms of the development and implementation of the Invisible Fencing system across both sites.

Main Report

Background

1. For hundreds of years Burnham Beeches was grazed by livestock. Many of its trees were pollarded to generate a regular supply of firewood whilst the livestock formed part of the local food supply. This style of land management created the wildlife rich landscape that we enjoy today. When grazing and pollarding stopped over 100 years ago scrub woodland began to grow on much of the previously open pasture and heath and the unmanaged pollards began to die.
2. Over the last two decades the City of London has meticulously planned and undertaken a programme of works to regenerate the ancient pollards and restore the rare and valuable habitats. The project to expand the conservation grazing scheme across the Beeches is the most ambitious element of that long-term plan and one that aims to permanently reverse the once steady decline in biodiversity on the site.
3. The project will eventually provide a more open landscape for visitors to enjoy and the opportunities this affords to see livestock grazing extensively across the site will help to forge closer links between people, food and their environment. The regeneration of the ancient pollards coupled to

extensive grazing will also enable the site to provide wood fuel and food for the local community.

4. Currently around 25% of Burnham Beeches is grazed by a small herd of British White Cattle and four Exmoor ponies. Pigs are occasionally brought on to the site during the pannage season. Grazing takes place within a large enclosure and this requires extensive use of permanent fencing, internal cattle grids and access gates. The livestock are owned and managed by the City of London and fences, gates and grids are provided and maintained from local risk budgets.
5. The project to expand grazing across the site is now the ‘keystone’ project in the Burnham Beeches Management Plan 2010 – 2020 which was approved by this Committee in July 2010.
6. The project aims to use livestock as the main tool to achieve the City Corporation’s obligation to maintain Burnham Beeches in ‘favourable condition’. It is anticipated that a small proportion of the site, perhaps 5%, will be excluded from the grazing scheme e.g. the café area, car parks and potentially, the most dangerous sections of highway.
7. The principle of the wider grazing scheme continues to enjoy cross party support at a local political level and the Attorney General (and local MP) Mr Dominic Grieve has given his personal backing. BCC and TfB remain committed to the delivery of the project and continue to provide Officer time when required. South Bucks District Council and Natural England are also supportive of the project as too are the Burnham Beeches Consultation Group.
8. The project is already in the public domain having gained a good level of support during the current Management Plan’s consultation process.
9. In the longer term the project will link to a larger, landscape scale scheme to help protect the green belt around Burnham Beeches. In this respect the project plays an important part in the delivery of Buckinghamshire County Council’s Green Infrastructure Strategy and associated Local Nature Partnership, and the North West Green Arc.

Current Approval – Cattle Grids

10. In May 2011 your Committee approved the findings of a preliminary design report that recommended up to 17 cattle grids and associated bypasses and gateways be installed to contain livestock within the site’s boundary. This would prevent livestock leaving the site via the public highways.

11. The preliminary design report also suggested that all ‘internal’ stock fencing and gates be removed placing reliance instead on the fences of neighbouring properties to restrict livestock from straying from the Beeches. This is ‘normal practice’ on registered commons such as the Beeches where neighbours are legally required to prevent livestock from encroaching on their property. The number of neighbours affected is relatively small and most have sturdy fences and gates.
12. The delivery cost of this option was estimated to be £285,000 - £331,000.

A new option - ‘Boviguard Invisible fencing’

13. Since approval of the May 2011 report the ‘Boviguard Invisible Fencing System’ has been successfully trialled at Epping Forest. The system was tested both as an invisible fence and as a means of providing ‘virtual cattle grids’ on minor public roads.
14. The system consists of a simple cable loop, buried a few inches below ground through which a radio signal is transmitted. Livestock are fitted with a ‘radio receiver’ collar that picks up the signal in the loop when in close proximity. This signal is converted to audio as a first warning to the livestock that they are nearing the loop. If the livestock persist in approaching the loop the signal is then used to produce a small electric shock. Trials indicate that livestock soon learn to heed the audio signal.
15. I inspected the preliminary trials at Epping Forest and it became clear that there was cause for optimism about its long-term use for extensive grazing at Burnham Beeches. It was evident that the system has the potential to provide a viable alternative to the installation of traditional cattle grids.
16. The trials also indicated that not all situations would be suitable for its use, such as alongside busy ‘A’ roads or convoluted, indistinct woodland boundaries. In such complex situations it may be more appropriate to consider invisible fencing as part of package of solutions that also includes traditional fencing and grids.
17. However, the combination of a simple woodland boundary and the quiet, ‘C’ and ‘Unclassified’ roads that pass through the Beeches may allow the system to be used as the single solution to containing livestock on the site.
18. Under such circumstances the Boviguard system has many potential advantages when compared to traditional cattle grids and may to greatly simplify the delivery of the grazing expansion project at Burnham Beeches:

- The system is relatively quick to install with minimal disturbance to property, highways, road users and neighbours.
- Visual intrusion is limited to small ‘covered chambers’ for batteries, energisers etc.
- Noise pollution is zero – negating likely opposition to the scheme due to ‘cattle grid rumble’.
- Equipment and installation costs are low when compared to traditional fencing (at least 40% less expensive). Maintenance costs should also be low.
- Loops can be used as a cheap method of protecting boundaries to private property.
- Cattle can be excluded from dangerous sections of road reducing the risk of accident to livestock and road users.
- Additional loops can be installed to provide a back-up to reduce the risk of livestock escaping due to equipment failure.
- Expensive infrastructure associated with cattle grids such as such as additional access gateways and bypasses are not required.

19. There are however a number of technical and production issues that have been raised with the manufacturer who are now considering how best to:

- Improve the radio collars to ensure that they can withstand hard use.
- Improve the radio receivers to simplify monitoring when in use.

20. The above issues indicate that a phased approach to the use of invisible fencing at Burnham Beeches would be sensible. This would allow time to carry out further trials on the site and for the manufacture to improve the functionality of the equipment

It is proposed that:

21. Burnham Beeches adopts the ‘Boviguard system’ and develops its use in a phased manner, expanding over the Beeches during remaining 5 years of the Higher Level Stewardship Scheme.

22. This proposal replaces the cattle grid option previously agreed by this Committee in 2011. All other elements of that original proposal, such as the removal of existing internal fences and gates and reliance on neighbouring boundary fences, remain.
23. A large scale (15ha) trial of the invisible fencing system is carried out commencing September 2012. This would be achieved by the creation of an 'enclosure' at the North Eastern boundary of the site. This area has the advantage of being remote and contains a very quiet public road (fewer than 70 cars per day). The enclosure will include two virtual grids across that highway and two on Drives owned by the City. See maps 1 and 2.
24. If the trial proves successful then the 'Boviguard system' will be expanded in a phased manner at other locations (to be determined) on the Beeches during 2013.
25. The project is reviewed by this committee by November 2013 and considered for approval as the permanent method of livestock control across the whole of the site. NB. If trials are unsuccessful then it may be necessary to develop a hybrid scheme whereby the virtual grids and invisible fencing is used on areas of lowest risk with cattle grids associated furniture used elsewhere.
26. Your Superintendent continues to work closely with the Superintendent of Epping Forest and the equipment manufacturers to resolve technical and design issues as they arise.
27. Progress will be reported to this Committee at each stage of the project.

Financial and Risk Implications

28. It is estimated that the cost of designing and delivering the trials leading to 95% coverage of the site over the 5 year period will be as follows:

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|---|----------------|
| • Year 1 (2012) - creation of a single enclosure. | £5,000 |
| • Year 2 (2013) – creation of further enclosures. | £15,000 |
| • Year 3-5 2014/17) – expansion across the site. | <u>£20,000</u> |

Total	<u>£40,000</u>
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29. The above costs will be refined as the project is developed but are expected to represent excellent value for money when compared to the cost of cattle grids and associated infrastructure.

30. The Superintendent will apply for 80% capital funding from Natural England's Higher Level Stewardship (HLS) scheme to fund the cost of installing the invisible fencing and virtual grids. The remaining 20% will be provided from local risk budgets. Delivery remains possible without external funding if necessary.
31. Once the grazing scheme is delivered across the site the HLS agreement will provide additional income of £23,000 per annum until 2018. This will be used to cover project related costs such as husbandry and livestock purchases.
32. Savings are also anticipated with regard to the costs currently associated with the maintenance of existing fences and gates which will be permanently removed from the site. It is anticipated that these savings will cover the maintenance costs of the invisible fencing.
33. Legal liability and highway issues, such as the maintenance of the cables crossing the public roads, remain to be resolved. These matters are currently under detailed consideration.
34. The options and costs for acquiring suitable livestock to graze the site will be investigated as the trials progress and will form part of the reporting process to this committee in 2013/14. Purchases are likely to be phased over a 2 – 3 year period and consist of no more than 15-20 additional animals in total. A review of husbandry requirements will also be carried out to ensure that the additional livestock continue to be managed to the required standards.
35. It is important to ensure that visitors, neighbours and other stake holders are kept informed of the scheme's progress and the potential impacts that the grazing project will have. It is proposed that the Superintendent carries out further consultation with local organisations and neighbours based on the timetable attached – Appendix 1.
36. It is also proposed that a marketing campaign is devised to inform site visitors of the detail of the scheme. This will be of the style adopted successfully for the recent introduction of car park charges at the site.

Access Implications

37. Visitor access can often be hindered by physical obstructions such as cattle grids and associated bypasses and gateways; however because of the technology Boviguard utilises the City's Access Office has commented that he would positively welcome its installation. Such an improvement to the pedestrian environment would provide a safer area for all users, including

visually impaired and the less ambulant pedestrian or wheelchair user and as a result improve the usability and enjoyment of the area as a whole.

Legal Implications

38. The installation of the Boviguard system shall require the Corporation to obtain a street works licence from the local highway authority under the New Roads and Street Works Act 1991. This is a largely administrative cost with some legal costs payable to the grantor of the licence. The licence for each highway location is required to enable the laying of cable apparatus in the public highway. In addition, the trial must include consultation with the local highway authority's engineers and traffic managers to evaluate a proportionate use of 'Boviguard', in place of cattle grids.

Property Implications

39. The Superintendent will need to be responsible for ensuring that the implementation and use of the invisible fencing along with the subsequent animal grazing continues to be appropriate for the conservation of Burnham Beeches. In addition the operation of the trial should take place with minimal impact on any existing infrastructure or buildings located at the Beeches.

HR Implications

40. There are no HR implications at this stage.

Strategic Implications

41. The production of the management plan supports the 'Protect, promote and enhance the environment' and 'Support Communities' elements of the 'City Together Strategy'.
42. The plan to expand conservation grazing across Burnham Beeches is a key project within the Departmental Business plan.

Assessment of Sustainability Issues

43. The provision of conservation grazing across Burnham Beeches will assist the City to:

Economic

- Prepare for and adapt to the likely impacts of climate change.
- Support local workforces, SME's and community activities.

Environment

- Encourage best environmental practice in service delivery by the City Corporation, its stakeholders and contractors.
- Encourage walking, cycling and the use of public transport.
- Improve or create habitats for wildlife.

Social

- Enhance and encourage preventative health services, activities and education.
- Consult, inform and engage the community in decision making.
- Reduce crime and fear of crime.

44. An Equality Impact Assessment will be required on approval of this report.

Consultees

45. The Town Clerk, Chamberlain, Comptroller and City Solicitor, City Surveyor and Access Officer have been consulted in the production of this report.

Conclusion

46. The expansion of the current grazing scheme at Burnham Beeches to cover around 95% of the site is pressing in terms of ensuring that the City of London meets the requirements of Natural England to maintain the site in 'favourable condition'. Its implementation will bring long term benefits to neighbours, visitors and wildlife alike and help to ensure a sustainable future for the Beeches and the wider local landscape. The project also has the potential to further enhance the City's international reputation for excellence in open space management

47. The project has been designed in such a way as to test and develop the Boviguard system. If it proves successful then it will greatly reduce the project delivery and maintenance costs outlined in the cattle grid option presented for approval to this Committee in May 2011.

48. Consultation on the principle of expanding grazing across 95% of the Beeches was carried out in 2009 with a high level of support from visitors.

49. Funding (likely to be in the region of 80%) for the delivery of the scheme will be sought from Natural England via the higher Level Stewardship Scheme. Completion of the project will provide an additional income to the site of around £23,000 and this will be used to meet husbandry costs.

Background Papers:

Report to the EFCC. Burnham Beeches Management Plan 2010 - 2020. July 2010

Report to the EFCC. Expansion of conservation grazing at Burnham Beeches. May 2011.

Appendices

- Appendix 1. List of proposed consultees
- Map 1. Location of initial large scale trial

Contact:

Andy Barnard

0207 332 6676

andy.barnard@cityoflondon.gov.uk