APPENDIX A

Therfield Heath SSSI Citation

File ref: EM/S/456 17 WBZ

County: Hertfordshire **Site Name: Therfield Heath**

District: North Hertfordshire

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981

Local Planning Authority: North Hertfordshire District Council

National Grid Reference: TL 335400 **Area:** 143.33 (ha) 354.14 (ac)

Ordnance Survey Sheet 1: 50 000: 153, 154 **1: 10 000:** TL 33 NW, 33 NE, 34 SW, 34 SE.

Date Notified (Under 1949 Act): 1953 **Date of Last Revision:** 1969

Date Notified (Under 1981 Act): 1984 **Date of Last Revision:** -

Other Information:

The majority of the site is also a Local Nature Reserve declared under Section 21 of the National Parks and Access to the Countryside Act 1949.

Reasons for Notification:

Therfield Heath is a very good example of the East Anglian type of chalk grassland. This plant community has suffered severe losses throughout its range during the post-war period, mainly as a result of agricultural intensification or the cessation of sheep grazing, so the remaining examples are of high conservation value. The site contains some of the richest chalk grassland in England.

Since the turn of the century the traditional use of the Heath for sheep grazing has gradually given way to a variety of recreational uses, of which golfing has had the greatest impact. Parts of the site were ploughed during the Second World War but have since reverted to grassland.

The remaining unimproved pasture is dominated by upright brome *Bromus erectus* and red fescue *Festuca rubra*. There is a rich assemblage of herbs including such rarities as pasque flower *Pulsatilla vulgaris* which occurs in abundance at Church Hill, spotted cat's ear *Hypochoeris maculata*, wild candytuft *Iberis amara*, bastard toadflax *Thesium humifusum*, and lesser meadow-rue *Thalictrum minus*.

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Therfield Heath (cont...)

The plant communities of the partially improved areas have a lesser, though increasing, diversity of species, including purple milk-vetch *Astragalus danicus* and horseshoe vetch *Hippocrepis comosa*.

The site also includes mixed scrub communities at various stages of development, and two areas of mature beech woodland. The latter is best developed at Fox Covert, where the ground flora includes abundant white helleborine *Cephalanthera damasonium*.

The grassland supports a diverse insect fauna, including the chalk hill blue butterfly *Lysandra coridon*.

APPENDIX B

Royston : Overall net provision of accessible open space in Royston (in Hectares)

	Open Space Typology								Total
	Parks and Gardens	Cemeteries and Churchyards	Allotments	Outdoor sports facilities	Provision for children and teenagers	Amenity green space	Natural and semi-natural green space	Green corridors	
No. of identified sites	1	2	1	21 in total 11 of which are publicly accessible	10	11	6	4	56
Fields in Trust standards Ha^2 per 1,000 population	0.80	No standard	0.3	1.20	0.25	0.60	1.80	No standard	
Provision required using estimated population figures (Ha^2)	13.44	No standard	5.04	20.16	4.20	10.08	30.24	No standard	83.16
Royston's total provision – net area (Ha^2)	1.89	1.07	1.56	92.88 total 4.58 – publicly accessible sites	0.51	5.25	119.17	1.21	135.24
Difference (Ha^2)	-11.55	No standard	-3.48	-15.58	-3.69	-4.83	+88.93	No standard	+52.08
Standard met - / +	-		-	-			++		+

APPENDIX C

Therfield Heath SSSI Condition

Report generated on: 30 Nov 2021

Main Habitat	Responsible Officer	Unit Number	Unit Id	Area (ha)	NNR Overlap Area (ha)	Latest Assessment Date	Assessment Description	Comment	Adverse Condition Reasons
Therfield Heath SSSI - HERTFORDSHIRE (NORTH HERTFORDSHIRE)									
CALCAREOUS GRASSLAND - Lowland	SONJA KAUPE	001	1005022	26.4014	0.00	05/07/2012	Unfavourable - Recovering	Since 2005, the bulk of this unit has been grazed by sheep between late summer and early winter each year. The chalk grassland sward continues to improve under this management and favourable condition targets for sward composition and structure are met over large parts of the grazed area, though not yet across the whole unit.The SSSI?s notified invertebrates require a relatively complex habitat structure with some patches of bare ground, grassland vegetation of different heights, a component of scrub in an otherwise open habitat, many nectar sources, and suitable niches for overwintering stages. These conditions are met across the unit as a whole but there is still some scope for improvement, mainly towards the north end.The main factors preventing all favourable condition targets for the unit being met are: (a) Large areas of bare ground and a reduction in sward quality around the large rabbit warren near the	

								southwest edge. Though moderate levels of rabbit grazing can be beneficial for grassland plants and invertebrates the rabbit population in this area is too high and is causing damage. (b) Ungrazed grassland towards the northern and eastern edges of the unit beyond the current grazing compartment boundaries. This fails most targets for sward composition and structure and requires an annual hay-cut or grazing, though a strip of tall grass and scattered scrub should be left around the boundary to benefit invertebrates. (c) Invasive scrub (mainly sycamore and ash saplings) spreading onto the grassland from the southern woodland edge. Scrub has been cut back several times on this unit in the last few years but tree saplings in particular are encroaching again.	
CALCAREOUS GRASSLAND - Lowland	SONJA KAUPE	002	1005023	33.8804	0.00	05/07/2012	Unfavourable - Recovering	This unit mainly consists of areas of chalk grassland `rough? separated by golf course fairways. The larger areas are sheep grazed. Their sward continues to improve and favourable condition targets for sward quality are now met over much of the grazed area.Smaller areas of rough that can?t be grazed are cut-and-cleared in spring and autumn but	

								left uncut in summer. Their sward quality is also improving, though not as rapidly as the grazed areas.Strips of `semi-rough? (between fairways and adjacent rough) are doing less well: sward quality attributes are well below target and barely improving. Unlike the rough, this semi-rough is cut during the summer. An increase in the height of the summer cuts is probably needed to allow recovery.Fairways are of limited botanical value due to the frequent summer cutting they require, so it is important they are not widened at the expense of the rough. Since 2009 (when the amount of summer cutting was excessive) some fairways have been narrowed, returning areas to semi-rough or rough. These improvements need to be maintained and built on to achieve favourable condition.There are patches of tor grass in the grazing compartment along the unit?s northern edge. Though tor grass cover is within the target range for the whole unit the species is spreading and probably needs herbicide spot-treatment.The habitat structure for invertebrates is adequate across the unit as a whole but poor in areas dominated by	

								fairways. On the south side, scallops recently cut into the woodland edge and rotational scrub management have improved the structure, creating patches of scrub and tall herbs. There is scope for more improvement along this edge.The rabbit population on this unit is quite low and benefits the conservation interest by improving the habitat structure and providing some bare ground for nationally scarce wild candytuft.	
CALCAREOUS GRASSLAND - Lowland	SONJA KAUPE	003	1005024	26.1398	0.00	05/07/2012	Unfavourable - Recovering	Like unit 2, this unit mainly consists of areas of chalk grassland `rough? separated by golf course fairways. Points made in assessment comments for unit 2 on the improving condition of both grazed and cut-&- cleared rough, and on issues over the condition and extent of summer-cut semi-rough and fairways, apply to unit 3 also.Church Hill, in the southwest of the unit, holds the greatest concentration of interest features on the SSSI, including a nationally important population of pasque flower, the bulk of recent and historic records of other nationally scarce plant species, and the richest chalk grassland flora. Though the sward on Church Hill	

								still easily exceeds most favourable condition targets, the area is currently under threat from scrub encroachment and an increasing rabbit population. Both are now damaging the sward on the southern slope and need urgent action, namely scrub management, rabbit control and further improvements to rabbit fencing. The main scrub problem is invasive sycamore. Control of sycamore and rabbits needs to include the land beyond the SSSI boundary to the south. The SSSI?s notified invertebrates require a relatively complex habitat structure with some patches of bare ground, grassland vegetation of different heights, a component of scrub in an otherwise open habitat, many nectar sources, and suitable niches for overwintering stages. These conditions are met across the unit as a whole and the southwest area around Church and Pen Hills is particularly good. Further east, between the northeast corner of Fox Covert and the Therfield road, there is scope for improving the structure of the woodland edge by thinning trees and dense overmature scrub, cutting scallops, and relaxing the grass-cutting regime	

								near this edge.	
CALCAREOUS GRASSLAND - Lowland	SONJA KAUPE	004	1005019	56.5494	0.00	05/07/2012	Unfavourable - Recovering	Under a new HLS agreement, large parts of the central and eastern sections of this unit are now left undisturbed through the summer and are cut for hay in early autumn. The improved management has major advantages for the SSSI?s interest features, in particular the chalk grassland flora and invertebrates. It allows herbs to flower and set seed during the summer, while the removal of hay prevents the build-up of nutrients and thatch. On the hay-cut areas increases in herb cover, the frequency of positive indicators and nectar sources for insects were already noticeable in summer 2012. The new management also benefits ground-nesting birds such as skylarks and meadow pipits, which appeared to have increased on this relatively undisturbed part of the SSSI.The SSSI?s notified invertebrates require a reasonably complex habitat structure with some patches of bare ground, grassland vegetation of different heights, a component of scrub in an otherwise open habitat, many nectar sources, and suitable niches for overwintering stages. These are provided in units 1 to 3	

								but inevitably - because of its use for horse training and its less varied topography ? unit 4 has a less favourable structure for invertebrates. Nevertheless the change to a hay cut and the establishment of a hedge along the north boundary (which adds to the unit?s shrub component) are significant improvements.	
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	SONJA KAUPE	005	1005020	2.2575	0.00	11/07/2012	Favourable		
BROADLEAVED, MIXED AND YEW WOODLAND - Lowland	SONJA KAUPE	006	1005021	1.2927	0.00	11/07/2012	Unfavourable - Recovering		

APPENDIX D

Therfield Heath SSSI Management and Operations

Views About Management

ENGLISH NATURE

A statement of English Nature's views about the management of Therfield Heath Site of Special Scientific Interest (SSSI).

This statement represents English Nature's views about the management of the SSSI for nature conservation. This statement sets out, in principle, our views on how the site's special conservation interest can be conserved and enhanced. English Nature has a duty to notify the owners and occupiers of the SSSI of its views about the management of the land.

Not all of the management principles will be equally appropriate to all parts of the SSSI. Also, there may be other management activities, additional to our current views, which can be beneficial to the conservation and enhancement of the features of interest.

The management views set out below do not constitute consent for any operation. English Nature's written consent is still required before carrying out any operation likely to damage the features of special interest (see your SSSI notification papers for a list of these operations). English Nature welcomes consultation with owners, occupiers and users of the SSSI to ensure that the management of this site conserves and enhances the features of interest, and to ensure that all necessary prior consents are obtained.

Management Principles

Calcareous grassland

In order to maintain a species-rich sward and its associated insects and other invertebrates, calcareous grassland requires active management. Without management it rapidly becomes dominated by stands of rank grasses, such as Tor-grass. These grasses, together with the build up of dead plant matter, suppress less vigorous species and lower the diversity of the site. Eventually, the site will scrub over. Traditionally, management is achieved by grazing. The precise timing will vary both between and within sites, according to local conditions and requirements. These may include stock type or the needs of particular plants or animals; certain invertebrates, for example, can benefit from the presence of taller vegetation. However, grazing should generally aim to keep a relatively open sward without causing excessive poaching. Light trampling can be beneficial by breaking down leaf litter and providing bare patches for seed germination and some invertebrates. An element of managed scrub, both within and fringing calcareous grassland can be of great importance to certain birds and invertebrates, but excessive scrub should be controlled.

Scrub

Scrub habitats are low-growing communities where the main woody components are bushes or small trees, such as hawthorn, rowan and juniper. Scrub supports a wide

variety of species and ecological communities. In particular, the transitional zone between scrub and other habitats can be important for wildlife, especially invertebrates.

Often, scrub is a transitional stage that will develop into woodland if unmanaged. Maintaining structural diversity and a mosaic of age classes within areas of scrub is important for maintaining the diversity of species the scrub is able to support. For example, hawthorn scrub supports the greatest variety of bird and insect species in the early and middle stages of growth.

Scrub can be managed using rotational cutting, which should aim to maintain a mosaic of patches at different stages of growth. Scrub can also be cut in small patches to create an intimate mixture of scrub and grass and/or heath.

Grazing is another method for managing scrub and on some sites may be a more suitable management tool than cutting. By its nature, grazing can help to create a patchy mosaic of scrub and other upland habitats. As with cutting, it can also help to maintain a range of age classes. However, stock levels do need to be carefully controlled. If grazing pressure is too high the structure of the scrub vegetation may become impoverished. Also, the scrub may not be able to regenerate naturally, leading to a loss of cover over time. Where the objective is to increase the area of scrub an initial period of fencing to control grazing may be required.

Broadleaved semi-natural woodland

There are many different ways in which broadleaved woodland can be managed to conserve its value for wildlife. The following gives broad views on a range of regimes that may be appropriate on your site.

A diverse woodland structure, with open space, a dense understory, and a more mature overstory is important. A range of ages and species within and between stands is desirable. Some dead and decaying wood, such as fallen logs, can provide habitats for fungi and invertebrates. However, work may be needed to make safe dangerous trees in areas of high public access. Both temporary and permanent open spaces benefit groups of invertebrates such as butterflies. They may require cutting to keep them open, and should be of sufficient size to ensure that sunny conditions prevail for most of the day.

Felling, thinning or coppicing may be used to create or maintain variations in the structure of the wood, and non-native trees and shrubs can be removed at this time. To avoid disturbance to breeding birds the work is normally best done between the beginning of August and the end of February. Work should be avoided when the ground is soft, to prevent disturbing the soil and ground flora. Normally successive felling, thinning or coppicing operations should be spread through the wood to promote diversity, but where there is open space adjacent plots should be worked to encourage the spread of species that are only weakly mobile. Natural regeneration from seed or stump regrowth is preferred to planting because it helps maintain the local patterns of species and the inherent genetic character of the site.

Deer management and protection from rabbits or livestock are often necessary. Whilst light or intermittent grazing may increase woodland diversity, heavy browsing can damage the ground flora and prevent successful regeneration. Invasive species, such as *Rhododendron* or Himalayan balsam, should be controlled.

Parts of a wood may need to be left unmanaged to benefit species that do best under low disturbance or in response to natural processes. Within these areas some trees will eventually die naturally and dead wood accumulate.

All habitats

The habitats within this site are highly sensitive to inorganic fertilisers and pesticides, applications of which should be avoided both within the site itself and in adjacent surrounding areas. Herbicides may be useful in targeting certain invasive species, but should be used with extreme care. Access to this site, and any recreational activities within, may also need to be controlled.

Operations likely to damage the special interest

Site name: Therfield Heath

OLD1001839

Ref. No.	Type of Operation
1	Cultivation, including ploughing, rotovating, harrowing, and re-seeding.
2	Grazing, (including type of stock or intensity or seasonal pattern of grazing and cessation of grazing).
3	Stock feeding.
4	Mowing or other methods of cutting vegetation, the introduction of, or changes in the mowing or cutting regime (including hay making to silage and cessation).
5	Application of manure, fertilisers and lime.
6	Application of pesticides, including herbicides (weedkillers).
7	Dumping, spreading or discharge of any materials.
8	Burning.
9	The release into the site of any wild, feral or domestic animal*, plant or seed.
10	The killing or removal of any wild animal*, including pest control.
11	The destruction, displacement, removal or cutting of any plant or plant remains, including any tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould, turf etc.
12	Tree and/or woodland management+.
13a	Drainage (including the use of mole, tile, tunnel or other artificial drains).
14	The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
15	Infilling of ditches or pits.
20	Extraction of minerals, including topsoil, subsoil, chalk and lime.
21	Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground.
22	Storage of materials.
23	Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
26	Use of vehicles likely to damage or disturb features of interest.
27	Recreational or other activities likely to damage features of interest (eg vegetation).
28	Game and waterfowl management and hunting practices.

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* ‘animal’ includes any mammal, reptile, amphibian, bird, fish or invertebrate.

\+ including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management.