North Wessex Downs National Landscape

SPECIES SURVIVAL FUND
Funded by UK Government Heritage Fund

toe Trust for Oxfordshire's Environment

earth trust

Regenerative Farming Projects 2025

- Biodiversity
- Soil health
- Carbon sequestration
- Productivity


Visitor Experience


Nature Recovery


Regenerative Farming


Heritage Stewardship

Regenerative Farming Projects 2025

Improved orchard
New meadow
New path
Edible classroom
Improved arboretum
Earth Trust Centre
Chalk grassland
Flower-rich in-field strips & margins
New trees
Herbal ley
New hedgerows
Lines of fruit & timber trees
Sires Hill access Road
New track/footpath linking to public footpath
New hedgerow
Circular Route

Bessie's Field

Nature Friendly Farming Route

Silvopasture

Silvoarable

Bessie's Field

Bessie's Field

A network of new habitats have been created in Bessie's Field, providing food sources and nesting habitat for a wide diversity of invertebrates, birds and mammals in what was previously an unbroken 26 hectare expanse of annually cultivated arable land.

Arable reversion: 9.5 ha chalk grassland was created with seed sourced (brush harvested) from species-rich calcareous meadows in the Cotswolds. Seed was hand sown (broadcast) by volunteers.

New hedgerow: The south-east boundary was cleared of scrub and a 380-metre hedgerow comprising 2,100 shrubs and trees was planted. A diverse mix of 15 UK-grown native species of local origin was planted.

Hedgerow trees: 12 hedgerow trees (Pedunculate Oak, Field Maple, Crab Apple, Wild Cherry, Small-leaved Lime and the disease resistant Ademuz Elms) were planted at 30 metre intervals in the new hedgerow.

Wildflower margins: 1.4 ha of new wildflower margins have been sown around the boundaries of the remaining arable area. A commercial mix of 6 uncompetitive grasses and 10 native wildflower species was direct drilled.

In-field strips: 2 x 6-metre-wide strips of the same wildflower mix as the margins have been sown in the arable area. Additional Yellow-rattle and Cowslip seed has been sown into one of the strips, enabling a comparison of the biodiversity value of the two 'treatments' to be made.

Cultivated strip: A 6-metre-wide cultivated strip between the grassland and arable areas has been created. This is to provide habitat for rare annual plants associated with disturbed arable soils. A large population of the rare Dwarf Spurge (seeds of which have been donated to Kew's Millennium Seed Bank) has been recorded in 2025.

Integrated Pest Management: The new margins and strips create an arable area that is permeable to wildlife (the widest arable area is now only 90 metres) and provide habitat for beneficial species that will predate 'pest' species such as cereal disease-spreading aphids.

Bessie's Field

Protected heritage: The newly created grassland protects Castle Hill Scheduled Monument and any buried archaeology in the area from the impacts of arable cultivation. It also helps to restore the historic landscape and setting of the Iron-age hillfort by creating an unbroken expanse of grassland around Castle Hill.

Open access green space: The 9.5 ha grassland provides an extension to the Wittenham Clumps and is open access green space.

New footpath & track: A 1.1 km path and farm track has been constructed around the field perimeter to provide public access to the whole field, as well as to link to existing and new public footpaths and permissive paths. The track will also enable vehicle extraction of timber from thinning operations in Little Wittenham Wood. A new permissive path has also been mown from the end of the track through The Butts field to link to a public footpath at North Farm.

Bespoke Earth Trust gates: To provide a consistent and quality visitor experience, 3 farm and 6 pedestrian gates of the same design as those around Wittenham Clumps have been commissioned and will be installed in January. 2 new metal field gates on non-public entrances have also been installed.

New fencing: 1,325 metres of stock fencing has been installed around the new grassland area to enable grazing. Metal fencing was chosen as this has a lower visual impact and smaller diameter posts, helping to protect any buried archaeology.

- Access
- Heritage protection
- Biodiversity
- Soil health
- Carbon sequestration
- Demonstration

Wildlife-rich chalk grassland

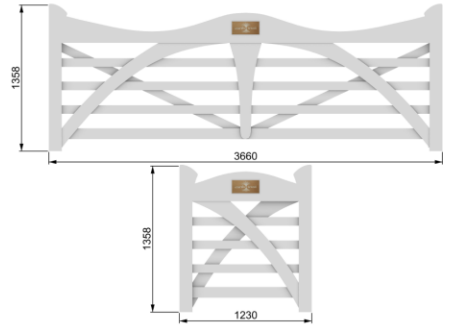
Open access area

Flower-rich in-field strips & margins

New track/footpath link to North Farm

New track/footpath linking to public footpath

- Public footpath
- New permissive path
- ET field & pedestrian gate x 4
- ET pedestrian gate x 2
- Metal field gate x 2
- Fence (1,325 m)
- Fencing to remove (555 m)
- Hedgerow
- Trackway x 5 m (1,100 m)
- Calcareous grassland (9.5 ha)
- Arable (12.8 ha)
- Field margin/plots (1.9 ha)
- Cultivated strip (0.3 ha)
- Rough grass
- Scrub/tree overhang



Earth Trust field & pedestrian gate

New trackway and path

Sowing chalk grassland

Newly planted hedgerow

Silvoarable (H6)

Silvoarable (H6)

In-field strips: 6 x 6 metre wide in-field strips have been sown at 30 metre spacings (to accommodate 5 passes of a 6 metre drill). This comprised a commercial mix of 6 uncompetitive grasses and 10 native wildflower species and was direct drilled. Additional Yellow-rattle and Cowslip seed has been sown in alternate strips, enabling a comparison of the biodiversity value of the two 'treatments' to be made.

Fruit trees: 4 of the strips have been planted with rows of fruit trees at 5 metre spacings. The 127 trees comprise 94 apple (46 varieties), 18 pear (6 varieties) and 15 plum (6 varieties). A wide range of varieties were selected so as to provide a diversity of fruit for different purposes (e.g. juicing and dessert apples), as well as providing pollen and nectar for wildlife and fruit harvesting over an extended period (i.e. earlies, mids and lates). A range of flowering and fruiting times also provides more resilience to potential issues such as frost and pests. Most of the trees are heritage varieties, including some originating in Oxon and Berks. Some more recent (20th century) and commercial varieties were also selected to provide a comparison of performance (quality, quantity and reliability). All fruit trees were planted close to compatible pollination partners.

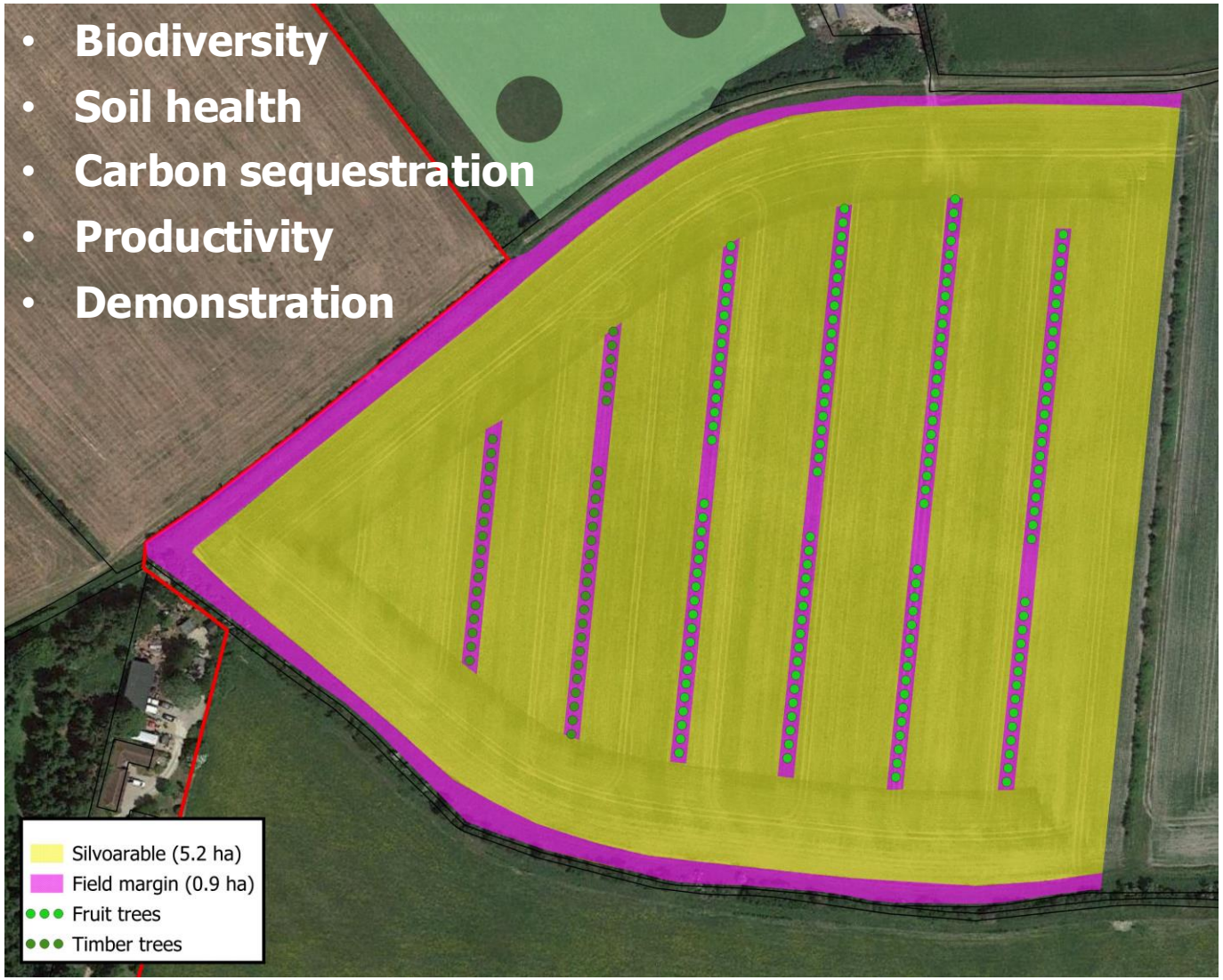
Nut trees: 2 of the strips have been planted with rows of nut trees at 3 metre spacings. These comprise one row of 35 cobnuts (hazelnuts) and one row of 22 Sweet Chestnut. These species were chosen as they can be grown both for nuts and wood products (coppice stakes and fencing materials respectively). 3 varieties of cobnut were planted to ensure each tree was close to a compatible pollination partner, as well as to provide a comparison of performance (quality, quantity and reliability).

Wildflower margins: A longstanding and diverse wildflower margin is present along the northern boundary of the field. A new wildflower margin using the same mix as the in-field strips has been sown along the southern boundary.

Integrated Pest Management: The new in-field strips and margins create an arable area that is permeable to wildlife (the widest arable area is now only 30 metres) and provide habitat for beneficial species that will predate 'pest' species such as cereal disease-spreading aphids.

Silvoarable (H6)

- Biodiversity
- Soil health
- Carbon sequestration
- Productivity
- Demonstration



Silvopasture (H5)

Silvopasture (H5)

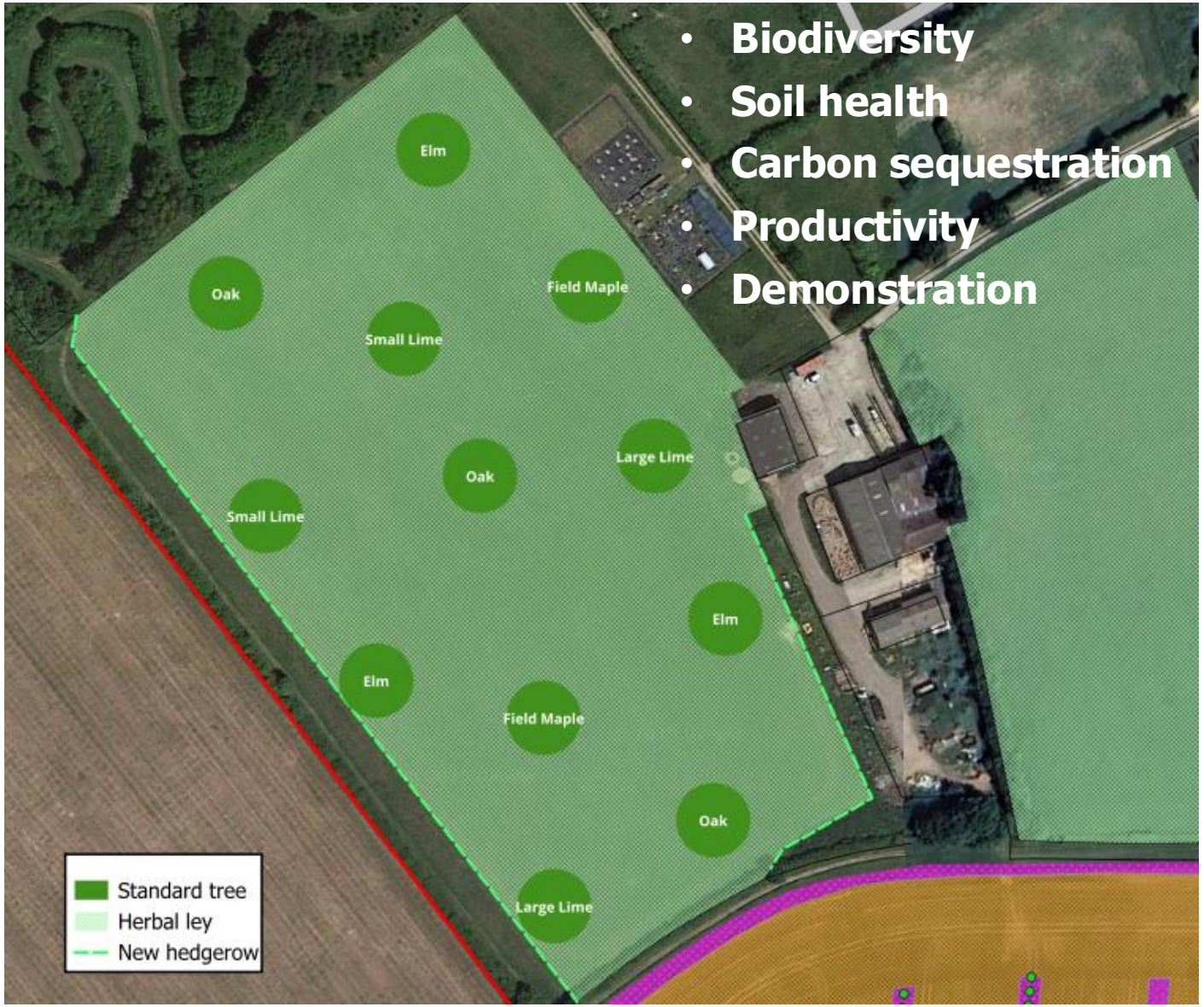
Field trees: 12 standard trees have been planted in bespoke stock-proof tree enclosures. These will be left to mature as large open-grown field trees and will provide feeding and nesting opportunities for a wide range of invertebrates, birds and mammals. Five species have been planted including Pedunculate Oak, Field Maple, Large-leaved Lime, Small-leaved Lime and the disease resistant Ademuz Elms (a Spanish variety of the native Field Elm). Disease-resistant Elm was selected both to return this species to the landscape, and to provide habitat for species including the White-letter Hairstreak butterfly (which relies on Elms as their caterpillar foodplant).

Herbal ley: The pasture has been oversown with a commercial herbal ley seed mix comprising 7 legumes, 5 herbs and 2 grasses. Once established this will provide flowers for pollinating insects and lead to improved soil health.

Livestock welfare: Once established, the field trees will benefit grazing livestock by providing shelter, whilst the diversified sward (herbal ley) will provide higher quality and more nutritious grazing.

New hedgerows: 2 new field boundary hedgerows have been planted totalling 380-metres in length and comprising 2,280 trees and shrubs. A diverse mix of 15 UK-grown native species of local origin have been planted so as to provide a wide range of pollen, nectar and fruit for foraging wildlife over an extended period during the year.

Silvopasture (H5)



- Biodiversity
- Soil health
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Regenerative Farming Walk

Regenerative Farming Walk

A new 1.5 km waymarked route from Earth Trust Centre that will engage and bring people into contact with a range of regenerative and nature friendly farming features and techniques.

Signage & interpretation: Signage will inform visitors about regenerative farming and wildlife, including features such as agroforestry, herbal leys, wildflower margins, well-managed hedgerows and species-rich meadows, whilst waymarkers will guide people around the route (by end of March 2026).

New footpath & track: A new 370 metre path has been constructed, providing open access to a field previously only accessible during events. In the future we aim to extend the surfacing through Broad Arboretum and along the edge of H5 so that the whole route is surfaced and accessible at all times of the year.

Ladygrove Greenway: The route benefits from using part of the newly established/surfaced Ladygrove Greenway (funded by Oxfordshire County Council and providing an active travel link from Didcot to Earth Trust).

Improved orchard: An orchard containing 60 fruit planted ca. 15 years ago has had unattractive plastic guards replaced by weld-mesh guards, whilst the trees will be pruned over winter and a species-rich grassland established below them in 2026.

Improved arboretum: Broad Arboretum is to be thinned and restocked, whilst paths have been cleared of scrub.

New meadow: A new 1.5 ha wildflower meadow will be established in 2026 (either by green hay strewing or via the drilling of commercially available native seed).

Improved link and waymarking to Neptune Wood and Long Wittenham

Improved orchard with public access and seating area

New species-rich meadow

Arboretum thinned & restocked

'Edible Classroom'

Silvopasture

Herbal ley

New hedgerows

Silvoarable

Flower-rich field margins

Layed hedgerows

- Earth Trust boundary
- New Circular Route 1.5 km
- New Permissive Path
- Existing Permissive Paths
- Public Footpath
- New Hedgerow 380 m
- New Meadow 1.5 ha
- Broad Arboretum
- Market Garden
- Fruit trees
- Timber trees
- Arable
- Herbal ley
- Standard Tree
- Field margin

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Regenerative Farming Walk

New path & improved orchard

New hedgerows

Draft map of self-guided routes coming early 2026

Butts (field)

New recently mown path

Waymarkers
- Self-guided Walks Fingerpost
- Self-guided Walks Marker Post
- NFF Walk Marker Post
- NFF Interpretation Panel
- Beginner - Nature Friendly Farming (1.5 km)
- Intermediate - Clumps (2.1 km)
- Advanced (5.7 km)
- Expert (8.1 km)
- PROW

- **Increased access**
- **Confidence to explore**
- **More contact with wildlife**
- **Range of activities**
- **Insights into our work**

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Self-guided walks - printed & digital

Waymarker posts

Finger posts

Wildlife

A wide range of fauna will benefit from the creation of the various species-rich habitats, however, the following species and groups are focus beneficiaries of the projects:

Farmland Birds:

- Barn Owl (small mammal habitat in margins etc.)
- Corn Bunting (margins/strips and layed hedgerows)
- Grey Partridge (margins/strips and hedgerows)
- Linnet (margins/strips and hedgerows)
- Quail (margins)
- Skylark (margins/strips and layed hedgerows)
- Yellowhammer (margins/strips and hedgerows)

Winter Migrant Birds:

- Redwing (fruit trees)
- Fieldfare (fruit trees)

Continued…

Wildlife

Mammals:

- Bats (new hedgerow corridors, future mature trees/tree corridor, increased insect prey)
- Hedgehog (general habitat improvements including hedgerows)
- Small mammals (owl food!) (general habitat improvements will benefit Field Vole, Bank Vole, Wood Mouse, Yellow-necked Mouse, Common Shrew and Pygmy Shrew)

Invertebrates:

- Pollinating insects (a range of bumblebees, solitary bees, butterflies and hoverflies)
- Liquorice Piercer Moth (a rare moth associated with Wild Liquorice, both species present at Bushey Bank and seed of the plant are to be collected and sown in the chalk grassland of Bessie's Field in 2026)
- White-letter Hairstreak (a butterfly that is reliant on Elm trees, most of which have been lost to Dutch Elm Disease)
- Beneficial insects (predators of pest species such as slugs and aphids including parasitic wasps, hoverfly larvae, ladybirds, ground beetles, rove beetles and spiders)

Data & Monitoring

A range of baseline data has been collected and a long-term volunteer-led monitoring programme put in place.

Biodiversity:

- Biodiversity Net Gain (BNG) baseline calculation and uplift calculation (increase of 27%)
- Habitat quality (Rapid Habitat Assessment)
- Breeding bird survey transects
- Butterfly transects
- Flower-Insect timed counts (FIT)
- Reptile refugia (mats), bat surveys (static detector), small mammals (footprint tunnels)

Soil health:

- 30 minute worm count
- Visual Evaluation of Soil Structure (VESS)
- Soil analysis (lab)l

Carbon sequestration:

- Organic matter %
- Soil organic carbon (SOC) %

Productivity: Analysis of yield and crop sales against the baseline (silvoarable in H6)

FAQs:

- **What is the track for?** Both to provide better public access across the farm and for farm vehicles accessing Little Wittenham Wood, including for timber extraction. The track links to another new path (currently mown only) that leads to North Farm via Butts field, and to existing Public Rights of Way both within and beyond the Earth Trust landscape (see slide 16).

- **Why is the track raised?** Due to the high potential for buried archaeology, it was agreed with Historic England and the Oxfordshire County Archaeological Service not to excavate, and to instead build up.

- **Why is the track so wide?** Due to being constructed on the surface, the width provides stability. It is also so that large vehicles can use it in future for any timber extraction.

- **Why is the new area of grassland not grassy?** The area was sown in April with a diverse mix of species harvested from meadows in the Cotswolds that is suitable for the chalky soil. These are generally uncompetitive species and will take time to establish, a process exacerbated by the drought in 2025. Many of the species that are currently growing are annual weeds of arable land and are not grassland plants. These will be outcompeted as the grassland establishes.

- **Will the grassland be grazed?** Yes, once established it will form part of the wider Wittenham Clumps grassland and will be grazed by the same livestock. In the meantime, we may periodically graze sheep or cattle on the area.

- **Will the fence between Wittenham Clumps and Bessie's Field be removed?** It is planned that this will be removed once the new grassland has established, which may take up to two years.