



**Bedfordshire  
Cambridgeshire  
Northamptonshire**

**2017**

# St Mary's Churchyard, Potton



Laura Downton  
BCN Wildlife Trust  
September 2017

**Grid Reference:** SP 228 494  
**Date of visit:** 8<sup>th</sup> June 2017  
**Surveyor:** Laura Downton from BCN Wildlife Trust

## 1. Site description

The churchyard is composed of 0.53 ha (1.32 acres) of semi-improved neutral and acidic grassland on Greensand with scattered trees and shrubs; a hedge and a sandstone wall.

A botanical survey was conducted in the churchyard to record the species present by dividing the churchyard up into four areas (see map in section 4b). DAFOR frequencies of the plants in each area were recorded. A species list for the churchyard is detailed in section 4a.

A description of each area is detailed below (section 1.1 to 1.4.). Section 2 describes the grass cutting recommendations for each area of the churchyard based on this survey. Section 3 shows pictures of some of the rarer species found in the churchyard.

### 1.1. Area A

The vegetation growing in this area is sparse compared to the vegetation growing in the other areas of the churchyard (see picture 1 and map 4b). This is predominantly because the vegetation is growing in the shade under a canopy of oak (*Quercus* spp.), cherry (*Prunus avium*), lime (*Tilia platyphyllos* x *cordata* = *T. x europaea*) elm (*Ulmus* spp.) and horse chestnut (*Aesculus hippocastanum*) trees. This area is located by the main entrance to the churchyard by the road and is managed by a regular two week cutting cycle during the growing season.

It is composed of frequent daisy (*Bellis perennis*) and ground ivy (*Glechoma hederacea*) with occasional common field speedwell (*Veronica persica*), cow parsley (*Anthriscus sylvestris*) and germander speedwell (*Veronica chamaedrys*) with rare occurrences of black medick (*Medicago lupulina*), cat's ear (*Hypochaeris radicata*), common chickweed (*Stellaria media*), common mallow (*Malva sylvestris*), cut leaved and dove's foot crane's bill (*Geranium dissectum* and *molle*), garlic mustard (*Alliaria petiolata*), greater plantain (*Plantago major*), groundsel (*Senecio vulgaris*) and wood avens (*Geum urbanum*). Ivy (*Hedera helix*) and wood sorrel (*Oxalis acetosella*) are locally occasional with locally frequent cleavers (*Galium aparine*), spring beauty (*Claytonia perfoliata*) and violet (*Viola* spp.). Of interest are the populations of wood sorrel and spring beauty. The former has a restrictive distribution in Bedfordshire in woodlands on acidic and calcareous soils and it is an ancient woodland indicator species. The latter is an indicator species of agriculturally unimproved acidic grasslands.



Picture 1: Area A showing sparse ground flora growing under a canopy of trees.



Grasses present include frequent cock's foot (*Dactylis glomerata*) with occasional false oat grass (*Arrhenatherum elatius*), perennial ryegrass (*Lolium perenne*) and rare occurrences of yorkshire fog (*Holcus lanatus*).

## 1.2. Area B

This area is located to the north of the main pathway leading to the church and is managed on a two week cutting cycle during the growing season. Patches of this area, along with area D, are the richest botanically across the churchyard.

This area is composed of frequent common sorrel (*Rumex acetosa*) and yarrow (*Achillea millefolium*) with occasional daisy, common mouse-ear, small fruited prickly sedge (*Carex muricata* subsp. *pairae*), ribwort plantain (*Plantago lanceolata*) and white clover (*Trifolium repens*) with rare occurrences of ground ivy, germander speedwell, black medick, bulbous buttercup (*Ranunculus bulbosus*), common ragwort (*Senecio jacobaea*), dove's foot crane's bill, wild clary (*Salvia verbenaca*), smooth hawk's beard (*Crepis capillaris*), smooth sow thistle (*Sonchus oleraceus*), thyme leaved speedwell (*Veronica serpyllifolia*), red and white dead nettle (*Lamium purpureum* and *album*), hoary plantain (*Plantago media*), greater plantain and planted daffodils (*Narcissus* spp.). In addition to the above species, this area also hosts locally frequent populations of wood sorrel, lady's bedstraw (*Galium verum*), mouse ear-hawkweed (*Pilosella officinarum*), parsley piert (*Aphanes arvensis*) and sheep's sorrel (*Rumex acetosella*) with locally occasional cat's ear (*Hypochaeris radicata*) and fairy flax (*Linum catharticum*). These species are predominantly located on a strip of south facing grassland immediately north of the path leading to the church (see picture 2 and map 4b). These localised species (excluding parsley piert and cat's ear) plus hoary plantain, small fruited prickly sedge, wild clary and bulbous buttercup are all indicators of agriculturally unimproved grasslands. Overall this area hosts eleven indicator species (see species list in section 4a for more information). Of interest is the population of wild clary, which is an uncommon perennial herb both locally and nationally, and this churchyard provides a stronghold for this species in Bedfordshire.



Picture 2: species rich grassland on south facing slope by path leading to church.

Grasses present include frequent yellow oat grass (*Trisetum flavescens*) with occasional cock's foot, meadow foxtail (*Alopecurus pratensis*), red fescue (*Festuca rubra*) and smooth meadow grass (*Poa pratensis*) and rare occurrences of crested dog's tail (*Cynosurus cristatus*). Yorkshire fog and wall

barley (*Hordeum murinum*) are locally occasional with rare occurrences of smaller cat's tail (*Phleum bertolonii*) and annual meadow grass (*Poa annua*).

### 1.3. Area C

This area is located north and north-east of the church and is managed on a monthly cutting cycle during the growing season. Previously, this area was cut annually at the end of August with the cuttings left in situ. It is composed of fewer herbs and coarser grasses compared to area's B and D and contains the highest concentration of grave stones (see picture 3 and map 4b).

This area contains occasional daisy, small fruited prickly sedge, ground ivy, germander speedwell and creeping buttercup (*Ranunculus repens*) with rare occurrences of common sorrel, yarrow, cat's ear, common mouse-ear, white clover, black medick, dandelion (*Taraxacum officinale agg.*), cow parsley, smooth hawk's beard, red dead nettle, common ragwort, common chickweed, cut leaved crane's bill, creeping cinquefoil (*Potentilla reptans*), field forget-me-not (*Myosotis arvensis*), spear thistle (*Cirsium vulgare*), violet, burnet saxifrage (*Pimpinella saxifraga*) and perforate St John's wort (*Hypericum perforatum*). Mouse ear hawkweed, parsley piert and hop trefoil (*Trifolium campestre*) are locally frequent with locally occasional lady's bedstraw, sheep sorrel, spring beauty and field bindweed (*Convolvulus arvensis*). There are small locally rare patches of wild clary and common knapweed (*Centaurea nigra*). Some areas are coarser with locally frequent common nettle (*Urtica dioica*) and cleavers (*Galium aparine*). Overall this area hosts 13 indicator species of agriculturally unimproved grassland, all of these species are uncommon components of the sward (see species list in section 4a). The presence of these indicator species shows that this area has the potential to improve botanically under suitable management.



Picture 3: low herb composition in area C with highest concentration of gravestones.

Grasses present include frequent false oat grass, occasional yorkshire fog, cock's foot, meadow foxtail, smooth meadow grass and annual meadow grass. Smaller cat's tail is rare in the sward. Wall barley and barren brome (*Anisantha sterilis*) are locally abundant with locally occasional yellow oat grass. The localised populations of barren brome indicate past disturbances to the soil. For example, the removal of a shrub or small tree.

This area contains the highest quantity and range of native and non-native deciduous and coniferous trees including elm, wild cherry, ash (*Fraxinus excelsior*), elder (*Sambucus nigra*), holly (*Ilex*



*aquifolium*), pendunculate oak (*Quercus robur*), scots pine (*Pinus sylvestris*), sycamore (*Acer pseudoplatanus*) and yew (*Taxus baccata*).

#### 1.4. Area D

This area is located to the south of the church and is managed on a monthly cutting cycle during the growing season.

This area, along with patches in area B, is the richest botanically with a greater range and quality of herbs and a wider range of finer grasses (see picture 4 and map 4b). Herbs present include frequent lady's bedstraw, lesser trefoil (*Trifolium dubium*), parsley piert, sheep's sorrel, small fruited prickly sedge and yarrow with occasional cat's ear, common field, thyme leaved and germander speedwell, field wood rush (*Luzula campestris*) and ribwort plantain with rare occurrences of daisy, dandelion, dove's foot crane's bill, white campion (*Silene latifolia*) and wild teasel (*Dipsacus fullonum*). There are localised patches of plants including locally abundant mouse-ear hawkweed on the shorter turf areas on the south facing bank. Common bird's foot trefoil (*Lotus corniculatus*), hoary plantain and wild clary (see picture 4) are locally frequent with locally occasional common knapweed and slender sandwort (*Arenaria serpyllifolia* subsp. *leptoclados*), the latter is present in the short vegetation areas. There is exposed soil in places, caused by a combination of localised scalping through mowing on an uneven ground, rabbit damage and bare soil created by mole hills and these areas host species associated with disturbances such as common poppy (*Papaver rhoeas*) (see picture 5).



Picture 4: Largest patch of wild clary on south facing slope by church (see map for location).

Overall this area hosts 10 indicator species of agriculturally improved grassland, all of these species being recorded as, at least, occasional in the sward (see species list in 4a).



Picture 5: exposed soil areas growing species associated with disturbances such as common poppy.

Grasses present include frequent red fescue with occasional annual meadow grass, smooth meadow grass and yellow oat grass with rare occurrences of barren brome, cock's foot, meadow foxtail and yorkshire fog.

## **2. Grass cutting recommendations (see map 4b for locations)**

### **2.1. Regularly mown areas (every 2 weeks)**

All of area A should be mown on a regular basis with 75% of area B managed the same way. The exception being a strip of grassland in area B along the path and railing leading up to the church, which contains a richer flora and this area would benefit from management outlined in section 2.2. If area C cannot be managed with a monthly cut with the cuttings removed (section 2.3.) then plan B should be to manage it using this method.

### **2.2. Regularly mown (every two weeks) with 8 week no cutting gap during the middle of summer (end of May until end of July)**

This management is reserved for areas which benefit from regular mowing but contain a wider range of indicator species, which ideally, should be allowed to flower and seed for an 8 week period during the summer. The no cutting period would commence around the end of May for 8 weeks until the end of July when regular cutting can re-commence until the end of the growing season. The initial cut after the 8 week no cutting period will produce a lot of arisings and it is imperative that these are raked up and removed at this point. This will prevent the vegetation underneath from being smothered and killed and prevent the build-up of soil nutrients, which will encourage the spread of weeds at the expense of the fragile and rare wildflowers. This management is recommended for areas B.1 and D.1 on map (section 4b).

### **2.3. Monthly cut with arisings removed**

This management is recommended for areas C and D (excluding D.1 on map) and consists of a monthly cut with the cuttings raked up and removed. If the raking up and removal of the arisings is not possible in area C because of the size of this area then as a backup this area should resort to being managed by a regular two week cut (section 2.1) which negates the need to remove the arisings.



### 3. Identification of some of the key wildflowers

In the areas subjected to a regular mowing cycle, if these plants are spotted, try and avoid cutting them until they have flowered and set seed.



Picture 6: Wild clary





Picture 7: Wood sorrel



Picture 8: Spring beauty

## 4. Appendix

### 4.1. Plant species list

Scientific Name	Common Name	Indicator Species?	Area			
			A	B	C	D
<i>Poa annua</i>	Annual Meadow-grass	n/a		R	O	O
<i>Fraxinus excelsior</i>	Ash	n/a			T	
<i>Anisantha sterilis</i>	Barren Brome	n/a			LA	R
<i>Sedum acre</i>	Biting Stonecrop	n/a			R	R
<i>Medicago lupulina</i>	Black Medick	n/a	R	R	R	
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	NC		R	R	
<i>Pimpinella saxifraga</i>	Burnet-saxifrage	NC			R	
<i>Hypochaeris radicata</i>	Cat's-ear	n/a	R	LO	R	O
<i>Galium aparine</i>	Cleavers	n/a	LF		LF	
<i>Dactylis glomerata</i>	Cock's-foot	n/a	F	O	O	R
<i>Lotus corniculatus</i>	Common Bird's Trefoil	NC				LF
<i>Stellaria media</i>	Common Chickweed	n/a	R		R	
<i>Veronica persica</i>	Common Field-speedwell	n/a	O			O
<i>Centaurea nigra</i>	Common Knapweed	NC			LR	LO
<i>Malva sylvestris</i>	Common Mallow	n/a	R			
<i>Cerastium fontanum subsp. vulgare</i>	Common Mouse-Ear	n/a	R	O	R	
<i>Urtica dioica</i>	Common Nettle	n/a			LF	
<i>Papaver rhoeas</i>	Common Poppy	n/a				LR
<i>Senecio jacobaea</i>	Common Ragwort	n/a	R	R	R	
<i>Rumex acetosa</i>	Common Sorrel	N		F	R	
<i>Anthriscus sylvestris</i>	Cow Parsley	n/a	O		R	
<i>Ranunculus repens</i>	Creeping Buttercup	n/a			O	
<i>Potentilla reptans</i>	Creeping Cinquefoil	n/a			R	
<i>Cynosurus cristatus</i>	Crested Dog's Tail	n/a		R		
<i>Geranium dissectum</i>	Cut Leaved Crane's Bill	n/a	R		R	
<i>Narcissus spp.</i>	Daffodil	n/a		R		
<i>Bellis perennis</i>	Daisy	n/a	F	O	O	R
<i>Taraxacum officinale agg.</i>	Dandelion	n/a		R	R	R
<i>Geranium molle</i>	Dove's-foot Crane's-bill	n/a	R	R		R
<i>Sambucus nigra</i>	Elder	n/a			T	
<i>Ulmus spp.</i>	Elm	n/a	T		T	
<i>Linum catharticum</i>	Fairy Flax	NNCC		LO		
<i>Arrhenatherum elatius</i>	False Oat-grass	n/a	O		F	
<i>Convolvulus arvensis</i>	Field Bindweed	n/a			LO	
<i>Myosotis arvensis</i>	Field Forget-me-not	n/a			R	
<i>Luzula campestris</i>	Field Wood-rush	N				O
<i>Alliaria petiolata</i>	Garlic Mustard	n/a	R		R	
<i>Veronica chamaedrys</i>	Germander Speedwell	n/a	O	R	O	O
<i>Tragopogon pratensis</i>	Goat's-beard	n/a		R		
<i>Plantago major</i>	Greater Plantain	n/a	R	R		
<i>Glechoma hederacea</i>	Ground-ivy	n/a	F	R	O	
<i>Senecio vulgaris</i>	Groundsel	n/a	R			
<i>Plantago media</i>	Hoary Plantain	NC		R		LF
<i>Ilex aquifolium</i>	Holly	n/a			T	
<i>Trifolium campestre</i>	Hop Trefoil	n/a			LF	
<i>Aesculus hippocastanum</i>	Horse-chestnut	n/a	T			
<i>Hedera helix</i>	Ivy	n/a	LA			
<i>Galium verum</i>	Lady's Bedstraw	NC		LF	LO	F
<i>Trifolium dubium</i>	Lesser Trefoil	n/a				F



Scientific Name	Common Name	Indicator Species?	Area			
			A	B	C	D
<i>Tilia platyphyllos x cordata = T. x europaea</i>	Lime	n/a	T			
<i>Alopecurus pratensis</i>	Meadow Foxtail	n/a		O	O	R
<i>Pilosella officinarum</i>	Mouse-ear-hawkweed	NNCC		LF	LF	LA
<i>Quercus spp.</i>	Oak spp.	n/a	T			
<i>Aphanes arvensis</i>	Parsley-piert	n/a		LF	LF	F
<i>Quercus robur</i>	Pedunculate Oak	n/a			T	
<i>Lolium perenne</i>	Perennial Rye-grass	n/a	O			
<i>Hypericum perforatum</i>	Perforate St John's Wort	NC			R	
<i>Lamium purpureum</i>	Red Dead-nettle	n/a		R	R	
<i>Festuca rubra</i>	Red Fescue	n/a		O	R	F
<i>Plantago lanceolata</i>	Ribwort Plantain	n/a		O	R	O
<i>Pinus sylvestris</i>	Scots Pine	n/a			T	
<i>Rumex acetosella</i>	Sheep's Sorrel	A		LF	LO	F
<i>Arenaria serpyllifolia subsp. leptoclados</i>	Slender Sandwort	n/a				LO
<i>Carex muricata subsp. pairae</i>	Small Fruited Prickly Sedge	A		O	O	F
<i>Phleum bertolonii</i>	Smaller Cat's-tail	n/a		R	R	
<i>Crepis capillaris</i>	Smooth Hawk's-beard	n/a		R	R	
<i>Poa pratensis</i>	Smooth Meadow-grass	n/a		O	O	O
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	n/a		R		
<i>Cirsium vulgare</i>	Spear Thistle	n/a			R	
<i>Claytonia perfoliata</i>	Springbeauty	A	LF		LO	
<i>Acer pseudoplatanus</i>	Sycamore	n/a			T	
<i>Veronica serpyllifolia</i>	Thyme Leaved Speedwell	n/a		R		R
<i>Vicia spp.</i>	Vetch	n/a			R	
<i>Viola spp.</i>	Violet	n/a	LF		R	
<i>Hordeum murinum</i>	Wall Barley	n/a		LO	LA	
<i>Silene latifolia</i>	White Campion	n/a				R
<i>Trifolium repens</i>	White Clover	n/a		O	R	
<i>Lamium album</i>	White Dead-nettle	n/a		R		
<i>Prunus avium</i>	Wild Cherry	n/a	T		T	
<i>Salvia verbenaca</i>	Wild Clary	NN		R	LR	LF
<i>Dipsacus fullonum</i>	Wild Teasel	n/a				R
<i>Geum urbanum</i>	Wood Avens	n/a	R			
<i>Oxalis acetosella</i>	Wood Sorrel	WW	LA	LF	LO	
<i>Achillea millefolium</i>	Yarrow	n/a		F	R	F
<i>Trisetum flavescens</i>	Yellow Oat-grass	N		F	LO	O
<i>Taxus baccata</i>	Yew	n/a			T	
<i>Holcus lanatus</i>	Yorkshire-fog	n/a	R	LO	O	R

**KEY:**

The DAFOR scale works on % cover. D = Dominant (>75%), A = Abundant (75 - 51%), F = Frequent (50 - 26%), O = Occasional (25 - 11%), R = Rare (10 - 1 %)

LR = Locally Rare; LO = Locally Occasional; LF = Locally Frequent; LA = Locally Abundant; LD = Locally Dominant.

N are neutral grassland indicator species = 3

NC are neutral and calcareous grassland indicator species = 7

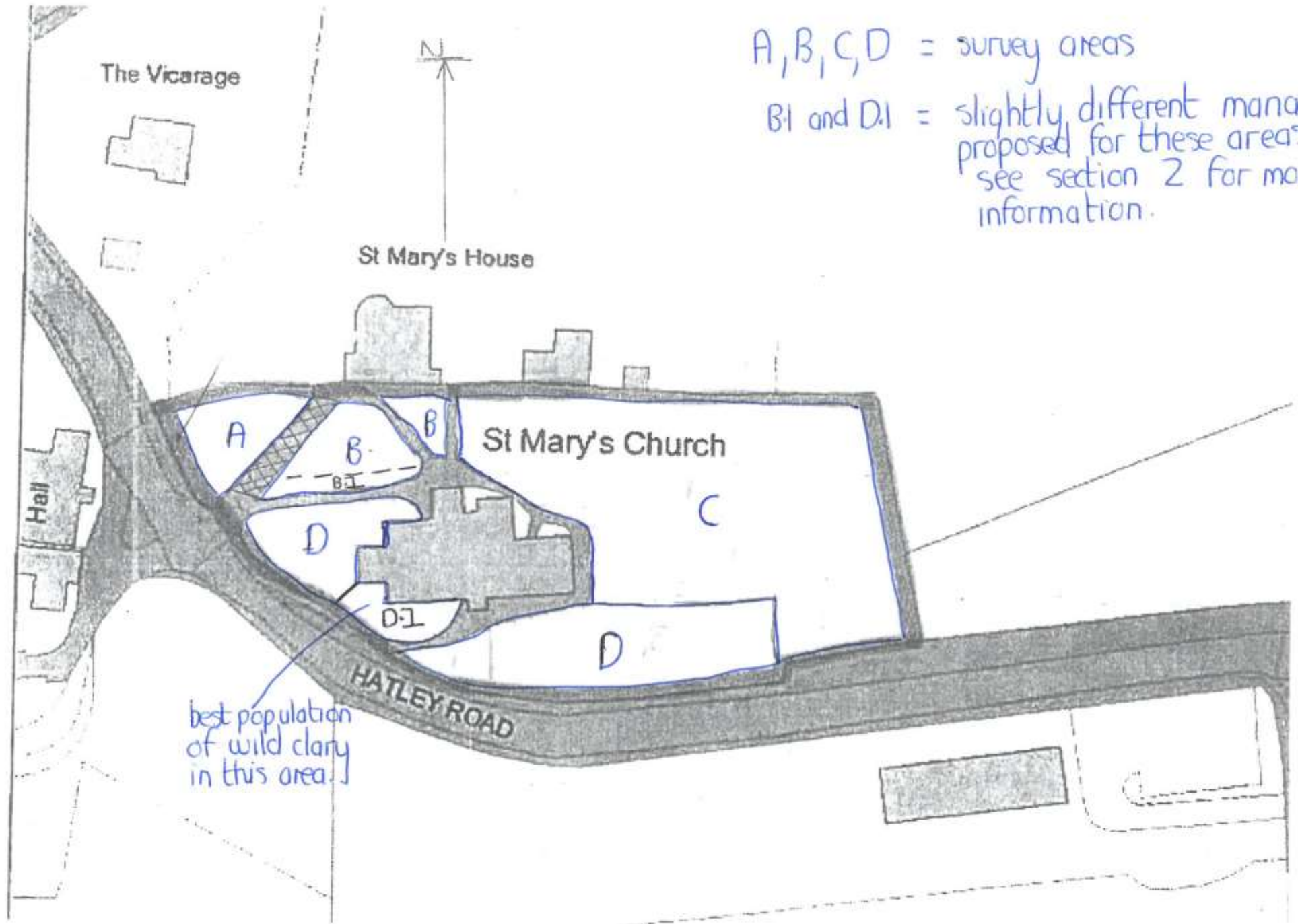
A are acidic grassland indicator species = 3

NN are *strong* neutral grassland indicator species = 1

NNCC are *strong* neutral and calcareous grassland indicator species = 2

WW are *strong* ancient woodland indicator species = 1

**TOTAL = 17**



A, B, C, D = survey areas

B.I and D.I = slightly different management proposed for these areas - see section 2 for more information.

best population of wild clary in this area.