Bouthwaite Drive, York

Site of Importance for Nature Conservation Assessment

Strategic Team Group

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Summary

Ecus Ltd were commissioned by Strategic Team Group in August 2015 to review the designation of a parcel of land off Bouthwaite Drive, York, as a Site of Importance to Nature Conservation (SINC) and to determine whether or not the habitats on site meet the criteria for this designation.

The criteria are set out in the document 'Sites of Importance for Nature Conservation in North Yorkshire – Guidelines for Site Selection' (North Yorkshire SINC Panel, 2002 updated 2008). The site was last formally surveyed by the SINC Panel in 2009.

B E Brookes Ecological Ltd surveyed the site in July 2010 and concluded that the habitats on site did not meet the criteria for designation of the site as a SINC.

Ecus Ltd visited site in August 2015 to review the previous B E Brookes Report and provide an updated assessment of whether the site meets the criteria for SINC designation.

The neutral and calcareous grassland habitats on site are considered to currently meet the criteria detailed in Guideline Gr4 and therefore qualify for designation as a Site of Importance for Nature Conservation.

Planning policy does not typically support the development of locally designated sites, however options for progressing a planning application for the site include provision of either onsite or offsite mitigation/compensation. Full details are provided in section 5.2.

1. Introduction

1.1.2 Ecus Ltd were commissioned by Strategic Team Group in August 2015 to review the designation of a parcel of land off Bouthwaite Drive, York, as a Site of Importance to Nature Conservation (SINC) and to determine whether or not the habitats on site meet the criteria for this designation.

1.1.3 The site was last formally surveyed by the SINC Panel in 2009 and was considered to qualify as a Site of Importance for Nature Conservation under Guideline Gr4 (neutral/calcareous grasslands in the Vale of York). The SINC is known as Severus Hill SINC.

1.1.4 The designation criteria are set out in the document 'Sites of Importance for Nature Conservation in North Yorkshire – Guidelines for Site Selection' (North Yorkshire SINC Panel, 2002 updated 2008).

1.1.5 B E Brookes Ecological Ltd surveyed the site in July 2010 and concluded that the habitats on site did not meet the criteria for designation of the site as a SINC.

1.1.6 Ecus Ltd visited site in August 2015 to review the previous B E Brookes Report and provide an updated assessment of whether the site meets the criteria for SINC designation.

1.1.7 This report details the findings of the 2015 assessment.

2. Methodology

2.1 Desk Study

2.1.1 A review of existing information and online resources was made by Ecus Ltd in September 2015, including:

- the citation for Severus Hill SINC,
- the existing report by B E Brookes Ecological Ltd,
- the criteria for SINC designation detailed in the document 'Sites of Importance for Nature Conservation in North Yorkshire – Guidelines for Site Selection' (North Yorkshire SINC Panel, 2002 updated 2008).

2.1.2 This review was used to provide a baseline to the 2015 site survey and to identify the criteria against which to assess the habitats on site.

2.2 Site Survey

2.2.1 The site was surveyed on 27th August 2015 by senior ecologist Elizabeth Richell MCIEEM and consultant ecologist Helen Lloyd MCIEEM, following extended Phase 1 habitat survey methodology (JNCC, 2010).

2.2.2 This survey method aims to characterise habitats and communities present and is not intended to provide a complete list of all species occurring across the site. However, particular attention was given to the grassland on site and species lists were compiled and checked against the criteria for SINC designation. Notable, rare or scarce plant species were highlighted if present.

2.2.3 Evidence of protected species or species of nature conservation importance was recorded where present at the time of survey.

2.2.4 Invasive plant or animal species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded, where seen.

2.3 Limitations

2.3.1 Whilst the survey was undertaken towards the end of the optimal botanical survey season, the vegetation on site was readily identifiable with much still in flower or supporting this season's seed heads/pods. In addition, the surveyors who carried out the survey are experienced ecologists with good botanical survey skills. It is considered that a full and robust assessment of the habitats on site has been made.

3. Findings

3.1 General Site Description

3.1.1 The total site, based on the red line in drawing number Sk-03 (Edward Architecture, 2014), measures approximately 1.66 ha in area. The site comprises a disused Victorian reservoir basin located on the top of an area known as Severus Hill. The SINC citation for the site states that the reservoir was drained in the interwar years when the Poppleton Road Water Tower was constructed to replace the reservoir. This water tower still exists immediately to the west of the site boundary.

3.1.2 The reservoir comprises a rectangular, stone lined basin that is now completely vegetated with grassland and scrub, which is developing into young broadleaved woodland. The inside of the basin supports an area of calcareous grassland, with scattered scrub. The scrub leads up the banks of the basin and is rapidly developing into young broadleaved woodland. This continues along the top and outer slopes of the banks.

3.1.3 Unmanaged and largely neutral grassland is present outside the basin slopes, with mown access paths providing access around the site for Yorkshire Water staff. Blocks of single and mixed species scrub are present outside the basin. An area of cleared ground is present in the south of the site, which comprises bare ground and ephemerals.

3.2 Habitats

Calcareous grassland, including reservoir banks

3.2.1 Grassland has developed within the interior of the disused reservoir basin, which supports species indicative of calcareous ground conditions. The SINC citation suggests that these conditions could result from local soil conditions within glacial moraine or from the mortar and stone used to line the basin. The grassland is unmanaged and rough in character, with scattered scrub developing.

3.2.2 The grassland is characterised by tussocks of false oat-grass (*Arrhenatherum elatius*) and upright brome (*Bromus erectus*), with yellow oat-grass (*Trisetum flavescens*) also present, along with false brome (*Brachypodium sylvaticum*), red fescue (*Festuca rubra*) and Yorkshire fog (*Holcus lanatus*).

3.2.3 Forbs present include ribwort plantain (*Plantago lanceolata*), tufted vetch (*Vicia cracca*), bush vetch (*V. sepium*), bird's-foot trefoil (*Lotus corniculatus*), meadow vetchling (*Lathyrus pratensis*), colt's foot (*Tussilago farfara*), rough hawkbit (*Leontodon hispidus*), hawkweed (*Hieraceum* agg.), common knapweed (*Centaurea nigra*), lady's mantle (*Alchemilla vulgaris* agg.), field scabious (*Knautia arvensis*), goat's beard (*Tragopogon pratensis*), burnet saxifrage (*Pimpinella major*) and white campion (*Silene latifolia*). Spiked sedge (*Carex spicata*) was also recorded.

3.2.4 The internal banks of the basin were discussed separately within the B E Brookes report in 2010, however they now support a grassy sward with similar composition to that in the base and are therefore considered within the calcareous grassland habitat. Some small areas of exposed substrate are present, which support species including mouse-eared hawkweed (*Pilosella officinarum*), perforate St John's wort (*Hypericum perforatum*) and biting

stonecrop (*Sedum acre*).

Neutral grassland

3.2.5 Outside the disused basin, the grassland composition is more consistent with neutral ground conditions. It is unmanaged and increasingly rank. Species recorded are common and include false oat grass, Yorkshire fog and cock's-foot (*Dactylis glomerata*), common sorrel (*Rumex acetosa*), creeping thistle (*Cirsium arvense*) and common nettle (*Urtica dioica*). Along the mown access paths, creeping buttercup (*Ranunculus repens*), common daisy (*Bellis perennis*) and self heal (*Prunella vulgaris*) were also recorded.

Scrub

3.2.6 Scrub habitat on site is well established and in some places has succeeded to young woodland community that is almost impenetrable. Species present include abundant hawthorn (*Crataegus monogyna*) and dog rose (*Rosa canina*) within the reservoir basin and along the sloped banks. Tree species scattered tree species throughout include sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*) and whitebeam (*Sorbus aria*), with other scrub species present occasionally including blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), bramble (*Rubus fruticosus* agg.) and honeysuckle (*Lonicera periclymenum*).

3.2.7 Non-native cotoneaster species are also frequently present on site, with at least two different species recorded, including wall cotoneaster (Cotoneaster horizontalis) and a species with characteristics consistent with either *Cotoneaster franchetti* or *Cotoneaster simonsii*.

3.2.8 Japanese knotweed (*Fallopia japonica*) was noted in the north-western corner of the site and in various locations along the edge of the narrow former access track which leads into the site from the north.

Bare ground

3.2.9 A clear area was noted in the south of the site, where ephemeral vegetation is now colonising bare ground. A variety of grass and forb species were recorded, including red fescue, sheep's fescue (*Festuca ovina*), Yorkshire fog, autumn hawkbit (*Leontodon autumnalis*), hawkweed, field scabious, bird's-foot trefoil, ribwort plantain, selfheal, creeping cinquefoil (*Potentilla reptans*) and rosebay willowherb (*Chamerion angustifolium*).

4. Assessment

4.1 SINC Assessment

4.1.1 The existing citation for the site states that it qualifies as a Site of Importance for Nature Conservation under Guideline Gr4 (neutral/calcareous grasslands in the Vale of York).

4.1.2 To qualify under this criteria the site should contain:

a) Calcareous grassland across at least 0.1 ha, supporting at least eight species in Table 7, or

b) Neutral grassland across at least 0.25 ha, supporting at least eight species in Table 6.

4.1.3 The above tables are published in the SINC Guidelines document (North Yorkshire SINC Panel, 2002 updated 2008). Gr4 states that the neutral grassland criteria are applicable to sites within the Vale of York, whilst the calcareous grassland criteria are applicable to sites within the North York Moors and Hill or Lancashire Plain and Valleys Natural Areas. Based on the existing citation for Severus Hill, it is assumed that the criteria for calcareous grasslands are also being applied to the Vale of York area.

4.1.4 It is difficult to accurately measure the area of grassland on site, however the area of both grassland types are on the borderline to meet the criteria above. Calcareous grassland is estimated to cover a maximum of 0.1 ha and neutral grassland is estimated to cover approximately 0.25 ha.

4.1.5 A total of 12 indicator species of calcareous grassland were recorded by Ecus Ltd in the 2015 survey and nine indicator species of neutral grassland. This is greater than the required number to qualify as a SINC under Guideline Gr4. These species are listed in Table 1 below.

Table 1. Indicator species recorded by Ecus Ltd in 2015

Scientific name	Common name
Indicator species of calcareous grassland recorded in 2015	
Alchemilla spp. (native)	Lady's mantle spp. (except *A. mollis*)
Bromus erecta	Upright brome
Carex spp. - *C. spicata*	Any sedge (except *C. hirta*) - Spiked sedge
Fragaria vesca	Wild strawberry
Hypericum perforatum	Perforate St John's wort
Knautia arvensis	Field scabious
Leontodon hispidus	Rough hawkbit
Lotus corniculatus	Bird's-foot trefoil
Pilosella officinarum	Mouse-eared hawkweed
Pimpinella saxifraga	Burnet saxifrage
Sedum acre	Biting stonecrop
Trisetum flavescens	Yellow oat-grass
Indicator species of neutral grassland recorded in 2015	
Alchemilla spp. (native)	Lady's mantle spp. (except *A. mollis*)
Carex spp. - *C. spicata*	Any sedge (except *C. hirta*) - Spiked sedge
Centaurea nigra	Common knapweed

Scientific name	Common name
Knautia arvensis	Field scabious
Lathyrus pratensis	Meadow vetchling
Leontodon hispidus	Rough hawkbit
Lotus corniculatus	Bird's-foot trefoil
Pimpinella saxifraga	Burnet saxifrage
Trisetum flavescens	Yellow oat-grass

4.2 Discussion

4.2.1 The neutral and calcareous grassland habitats on site meet the criteria detailed in Guideline Gr4 and therefore qualify for designation as a Site of Importance for Nature Conservation.

4.2.2 Protection for locally designated sites, such as SINCs, is non-statutory and is received *via* the planning system. These sites are recognised in the National Planning Policy Framework (NPPF) (2012) and local councils typically designate and protect SINCs through their local plan/framework. The Framework also requires the contribution that SINCs make to the wider ecological network to be recognised.

4.2.3 Should development be considered appropriate for the site during the planning process, mitigation for the loss of SINC grassland habitat would be required.

4.2.4 Options for mitigation would include:

- retention of existing areas of grassland;
- creation of grassland areas within the proposed scheme, and/or
- offsite compensation/offsetting.

4.2.5 The site is relatively limited in size, which limits the feasibility of grassland retention or creation on site. It is recommended that priority is given to the retention or creation of calcareous grassland, as this is the less common habitat in the local area.

4.2.6 If retention of the calcareous grassland in its existing location is feasible, then a management plan should be produced for the area, to prevent the encroachment of scrub and allow the development of an open and varied flowering sward. It should not be subject to intensive mowing, ideally with no cutting before August, and should ultimately comprise a wildlife/nature area on site. The retention of areas of bare ground within the sward would be beneficial.

4.2.7 If it cannot be retained in its current location, a new area of grassland could be created through harrowing and re-seeding with a calcareous grass mix and potentially some turve relocation or seed collection from the existing grassland. However, to ensure that this establishes, ground preparation will be required to create the calcareous conditions. Technical guidance is provided in 'Best Practice Note 18' produced by The Land Regeneration and Urban Greenspace Research Group (2014). A detailed management plan would be required to maintain this habitat and expert advice should be sought during creation.

4.2.8 As an alternative, offsite mitigation/offsetting could be considered, which could be discussed with the LPA and their consulting partners, as a potential way of progressing the development of the site. This may take the form of a contribution towards the maintenance and enhancement of an existing grassland site or towards creating a new grassland site.

4.2.9 This could be arranged through a 106 agreement, which could be conditioned by the LPA on any consent but would need to be shown to meet several planning tests as follows:

- necessary;
- relevant to planning;
- directly related to the proposed development;
- fairly and reasonably related in scale and kind to the proposed development, and
- reasonable in all other respects

4.2.10 It should be noted that the ecological value of the site also lies in its diverse habitat structure and replacement native scrub and tree planting should be incorporated within any landscaping schemes. Boundary treatments could comprise native hedgerow, rather than fences and walls, where practicable.

5. References

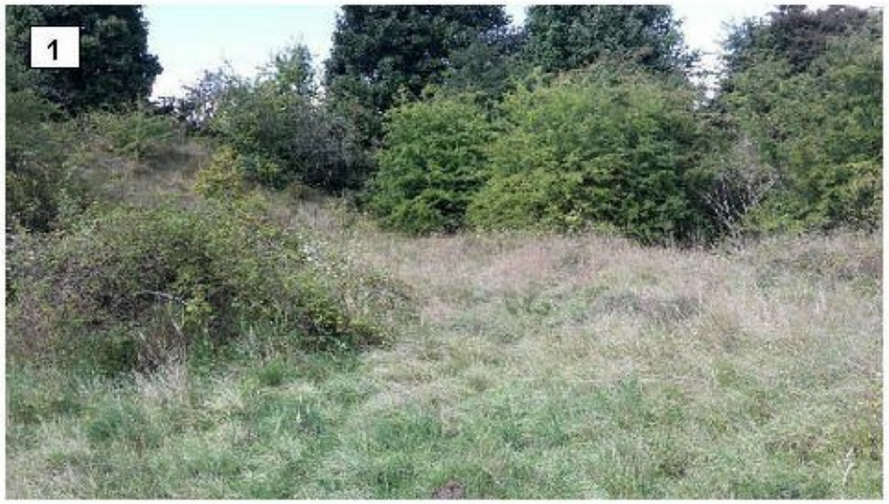
Ashwood, F. (2014) *LOWLAND CALCAREOUS GRASSLAND Creation and management in land regeneration*. The Land Regeneration and Urban Greenspace Research Group, Surrey.

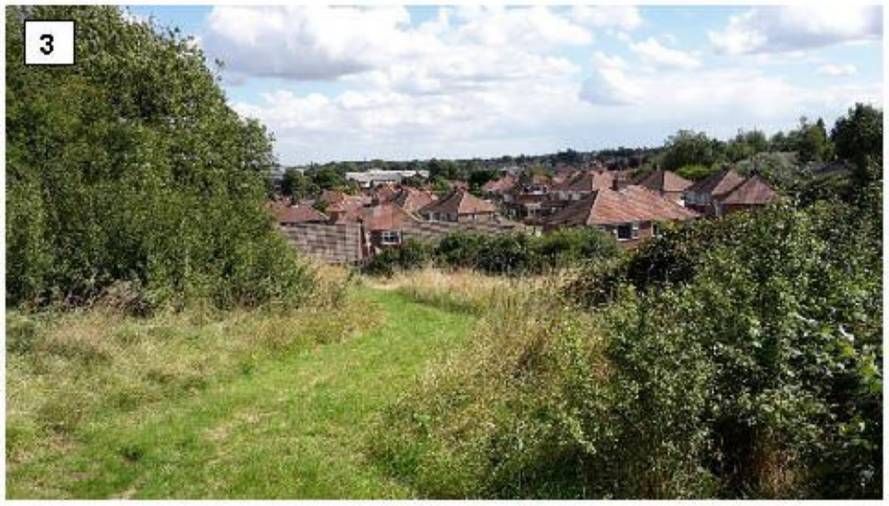
B E Brookes Ecological Ltd (2010) *Ecological Assessment Severus Hill, York.* B E Brookes, Leeds.

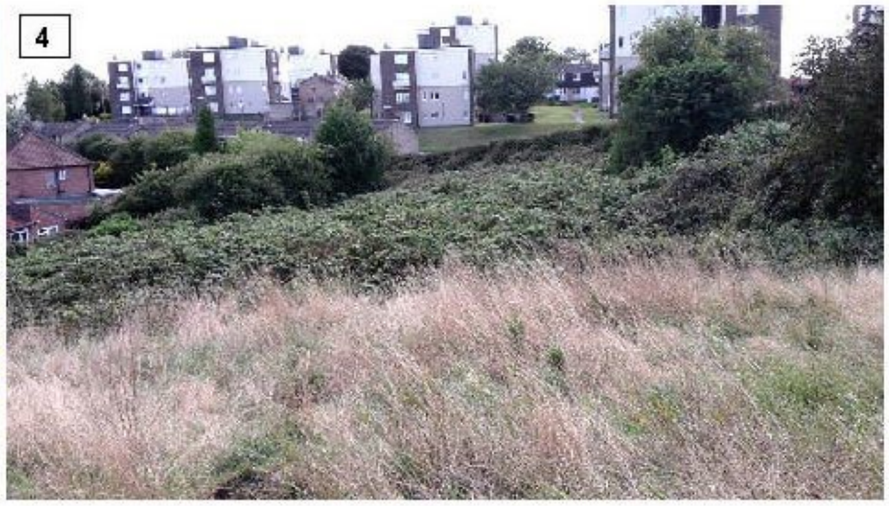
JNCC. (2010). *Handbook for Phase 1 habitat survey - a technique for environmental audit* (2010 ed.). Peterborough: Joint Nature Conservation Committee.

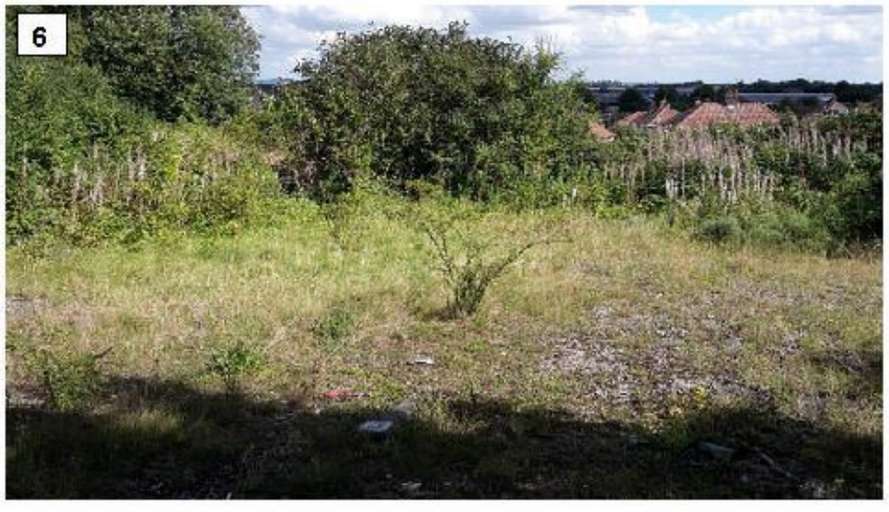
North Yorkshire SINC Panel (2002, updated 2008) *Sites of Importance for Nature Conservation in North Yorkshire*. Northallerton.

Appendix 1. Site Photographs









Legend

Plate 1.Calcareous grassland in centre of site surrounded by scrub

Plate 2. Calcareous grassland in centre of site surrounded by scrub

Plate 3. Mown grassland path

Plate 4. Rank neutral grassland with scrub beyond in south of site.

Plate 5. Cleared area with bare ground and ephemerals

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Appendix 1. Site Images

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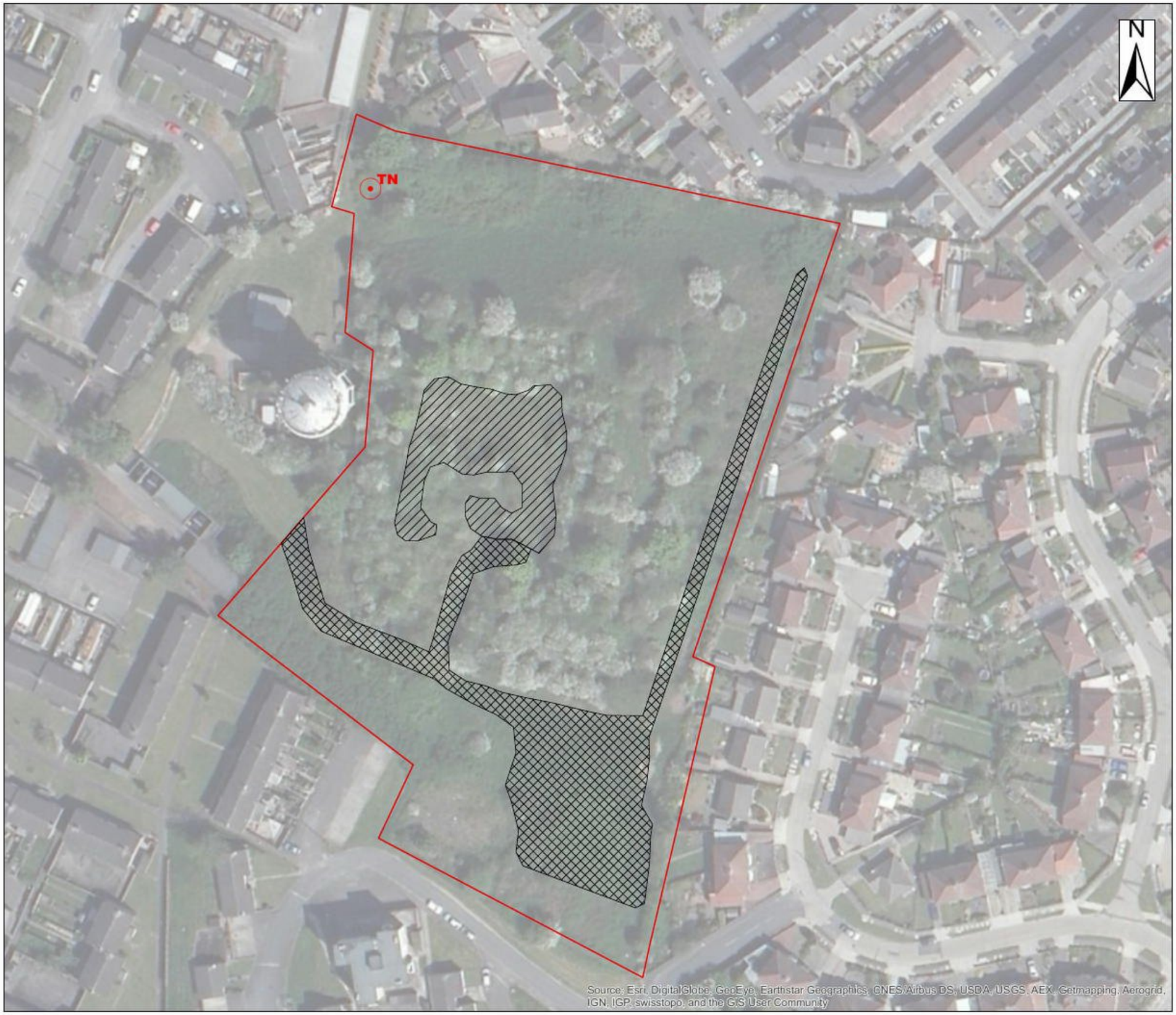
Figure 1. Schematic Grassland Plan



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Legend

- Site Boundary
- Calcareous Grassland
- Neutral Grassland
- TN Target Note (Japanese knotweed)

0 30 60
Metres

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Figure 1
SINC Habitats (indicative extents)

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