Golder Associates

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James Garnett
Morgan Sindall Plc
Quayside Business Park
No 2 George Mann Way
Hunslet
Leeds
LS10 1DR

EXTENDED PHASE 1 HABITAT SURVEY- GCHQ SCARBOROUGH OMEGA 2

Dear Mr Garnett

Our report on the Extended Phase 1 habitat Survey of the above site is presented below.

Introduction

Golder Associates (UK) Ltd (hereafter referred to as Golder) was commissioned by Morgan Sindall Plc. to carry out an Extended Phase 1 Habitat Survey of land to the south of the Government Communications Headquarters (GCHQ), near Scarborough, North Yorkshire (hereafter referred to as the Site). The Site is located at Ordnance Survey (OS) National Grid Reference TA012 866.

Background

An Ecological Risk Assessment has been previously carried out by Marishal Thompson Group in 2011 in relation to Project SPAW[1]. This included a desk-study and Extended Phase 1 Habitat Survey. Due to the age of the data and in order to collect accurate species records to enable a BREEAM assessment to be undertaken, an Extended Phase 1 Habitat Survey was carried out in August 2014.

Methodology

The Extended Phase 1 Habitat Survey was undertaken by a suitably qualified ecologist on 4 August 2014 to record the habitats and vegetation on the Site. This followed the standard methodology set out by the Joint Nature Conservation Committee[2]. Land within the Site boundary was surveyed and mapped, full species lists were recorded for each habitat in order to inform a BREEAM assessment. Nomenclature for plant species follows Stace (2010)[3].

In addition, the Site was assessed for its suitability to support protected species including badgers, bats, breeding birds, amphibians and reptiles. Any habitat suitable for protected species or any signs of protected species presence was recorded.

[1] Marishal Thompson Group (2011) *Ecological Risk Assessment Project SPAW*. Unpublished report ref E2709111446.

[2] Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Revised reprint 2010. Peterborough: JNCC.

[3] Stace, C.A. (2010) *New Flora of the British Isles*. 3rd Edition. Cambridge: Cambridge University Press.

Golder Associates (UK) Ltd
Golder House, Tadcaster Enterprise Park, Station Road, Tadcaster, North Yorkshire LS24 9JF, UK
Tel: [+44] (0) 1937 837800 Fax: [+44] (0) 1937 837850 www.golder.com
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Results

The results of the Extended Phase 1 Habitat Survey of the Site are mapped in Drawing 1. Species lists for each habitat are presented in Appendix A.

Habitat description

The Site is dominated by semi-improved grassland with patches of bare ground and tall ruderal vegetation such as creeping thistle *Cirsium arvense* and common ragwort *Senecio jacobaea*. Along the western boundary (adjacent to Moor Lane) is a species poor hedgerow. Adjacent to the fence line along the northern and eastern sections of the Site is a strip of improved grassland that is much shorter and more uniform then the other grassland areas. Inside the fence line the grassland is well maintained and mown on a regular basis. There are a small number of semi-mature trees within the fence line of low ecological value.

Protected/Notable Species

Badger

No evidence of badger was found on the Site and is generally unsuitable for sett building. The Site may offer some foraging opportunities to the species but as no evidence was recorded in 2011 or 2014 this species is not considered further.

Bats

There are no mature trees or structures likely to be used by roosting bats on Site. The grassland may be of some limited ecological value to foraging bats in the area. However, due to the presence of similar habitat in close proximity to the Site the grassland is not considered to be of sufficient extent or quality to provide a significant resource for bat populations.

A bat licensed ecologist has reviewed the proposed lighting plan for the Site with regards to bats. Due to the small, isolated nature of the Site; being surrounded by predominantly open farmland; it is unlikely that additional lighting of the Site will significantly affect the local bat population. The background data search found records of common pipistrelle within 2 km of the Site (Marishal Thompson 2011). However pipistrelle species are not generally adversely affected by lights. No other species of bat have been recorded within 2 km and therefore, these species are not considered further. The hedgerow along the road should not be illuminated as this could act as a dark corridor for commuting bats.

Birds

A number of red legged partridge *Alectoris rufa* were flushed from the vegetation during the site visit. Although no nests were located during the survey, it is likely that ground nesting birds will make use of the Site. The hedgerow along the western boundary and scattered trees within the GCHQ compound and along the southern boundary are also likely to be used by nesting birds. During the survey goldfinch *Carduelis carduelis*, woodpigeons *Columba palumbus*, blackbirds *Turdus merula* and wrens *Troglodytes troglodytes* were recorded in the trees.

Amphibians and Reptiles

The habitats within the Site are generally unsuitable to support populations of amphibians and reptiles. The Site is bordered by sheep/horse grazed pasture and farmland to the south east and west. To the north is the GCHQ site consisting of buildings and hard standing and close mown amenity grassland. No ponds suitable for supporting amphibians are located within 250 m of the Site boundary. It is therefore unlikely that amphibians or reptiles would be found within the Site.

Non-native Invasive Plant Species

No evidence of non-native invasive plant species were recorded on the Site.

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Evaluation

The Site is dominated by semi-improved grassland and bare ground and is of low ecological value. Many of the species are common and widespread and no species of conservation concern were recorded during the survey. The grassland and tall ruderal vegetation could potentially support ground nesting bird species.

The hedgerow and trees within the Site boundary are of low ecological value although they have the potential to support breeding birds and invertebrates.

No evidence of protected/notable species was found on Site.

Table 1: Summary Table

Species/Habitat	Result	Recommendation
Semi-improved grassland	34 species of common and widespread species. Low ecological value.	No further recommendations required.
Improved grassland	20 species but area is well mown and kept at a low sward height for security reasons. Negligible ecological value.	No further recommendations required.
Tall ruderals	Patches of tall ruderals containing 18 species of common and widespread species. Low ecological value.	No further recommendations required.
Species poor hedge	Adjacent to road the hedge is of low ecological value. An average 30 m section would only contain 2-3 woody species therefore species poor. A total of 16 species were found in this area.	Retain habitat where possible as it may support nesting birds and invertebrates.
Scattered trees	A small number of semi-mature trees are present within the perimeter fence. 2 species.	Retain habitat where possible as it may support nesting birds and invertebrates. Tree felling should be undertaken outside the bird breeding season (i.e. avoid March-August inclusive). If this is not possible it should be checked by an ecologist immediately prior to removal.
Badger	No evidence and low potential	No further recommendations required.
Bats	No evidence and low potential	No further recommendations required.
Birds	Nesting birds most likely use the grassland and the hedgerow although no evidence of nesting birds during the survey.	Vegetation removal should be undertaken outside the bird breeding season (i.e. avoid March-August inclusive). If this is not possible it should be checked by an ecologist immediately prior to removal.
Amphibians and reptiles	No evidence and low potential	No further recommendations required.

Recommendations

To enable the development to gain ecological credits for a BREEAM assessment and to enhance the habitats and wildlife on the Site the following recommendations could be implemented;

- Retention and enhancement of existing hedgerow;
- Vegetation removal should be undertaken outside the bird breeding season (i.e. avoid March-August inclusive). If this is not possible it should be checked by an ecologist immediately prior to removal;

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- Enhance biodiversity by employing a low intensity mowing regime along borders of any amenity grassland that is created; and
- Installation of bird or bat boxes on any new structures, where possible.

Yours sincerely

GOLDER ASSOCIATES (UK) LTD

Adele Antcliff
Ecologist

Angus Marrison
Project Manager

AA/AM/cr

Attachments: Drawing 1
Appendix A Species list

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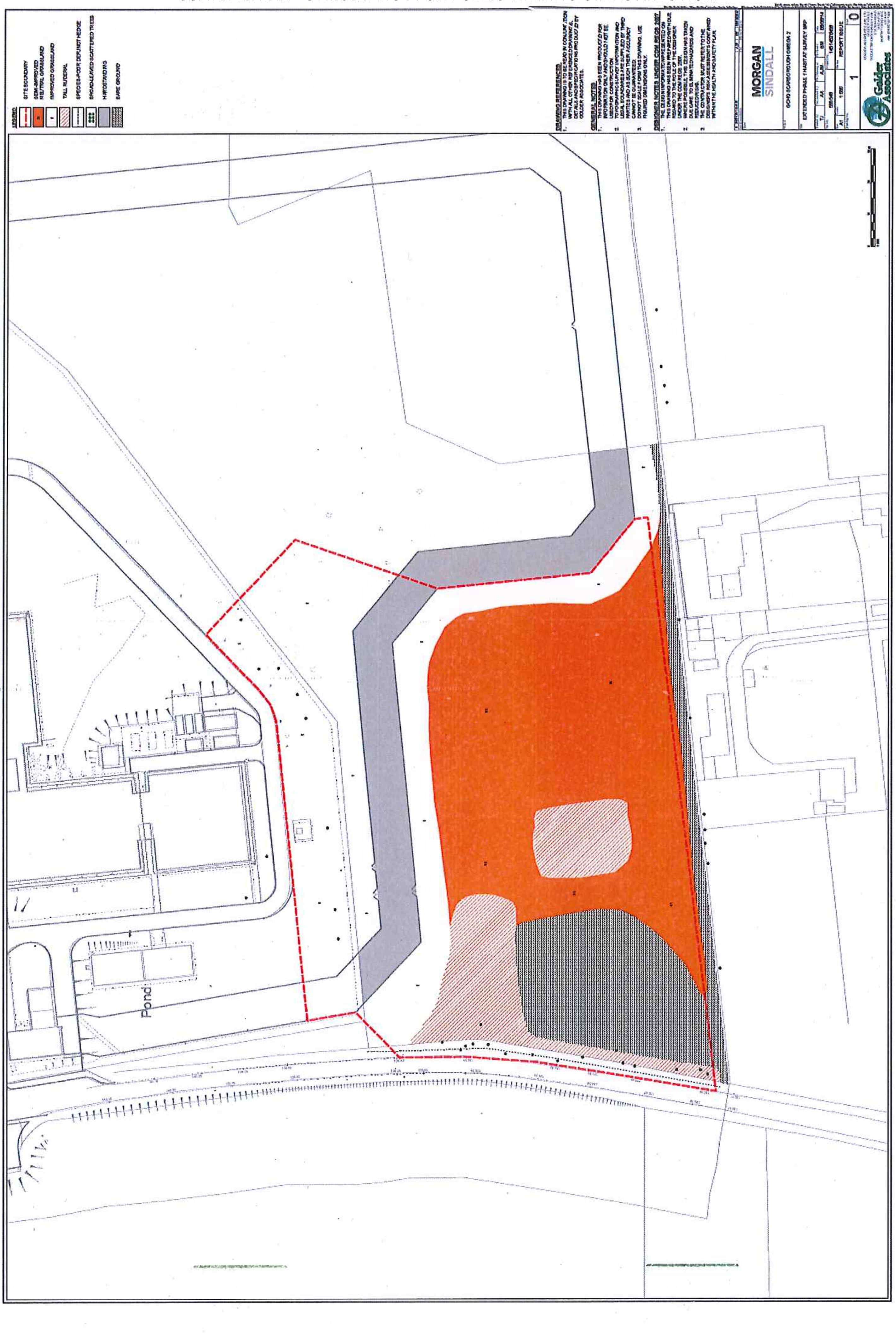

APPENDIX A
Species list

Semi-improved grassland

Common name	Scientific name
Yorkshire-fog	*Holcus lanatus*
broad-leaved dock	*Rumex obtusifolius*
white clover	*Trifolium repens*
sheep's fescue	*Festuca ovina*
sweet vernal grass	*Anthoxanthum odoratum*
common bird's-foot-trefoil	*Lotus corniculatus*
hawkweed species	*Hieracium* agg.
bramble	*Rubus fruticosus* agg.
creeping thistle	*Cirsium arvense*
tufted hair-grass	*Deschampsia cespitosa*
hoary willowherb	*Epilobium parviflorum*
common gorse	*Ilex europeaus*
common nettle	*Urtica dioica*
harebell	*Campanula rotundifolia*
greater plantain	*Plantago major*
crested dog's-tail	*Cynosurus cristatus*
yarrow	*Achillea millefolium*
common ragwort	*Senecio jacobaea*
creeping buttercup	*Ranunculus repens*
cock's-foot	*Dactylis glomerata*
soft rush	*Juncus effusus*
common bent	*Agrostis capillaris*
selfheal	*Prunella vulgaris*
creeping cinquefoil	*Potentilla reptans*
ribwort plantain	*Plantago lanceolata*
timothy	*Phleum pratense*
prickly sow-thistle	*Sonchus asper*
spear thistle	*Cirsium vulgare*
dandelion	*Taraxacum officinale* agg.
dog rose	*Rosa canina*
colt's-foot	*Tussilago farfara*
hedge woundwort	*Stachys sylvatica*
perennial ryegrass	*Lolium perenne*
common mouse ear	*Cerastium fontanum*

APPENDIX A
Species list

Tall ruderals

Common name	Scientific name
tufted hair-grass	*Deschampsia cespitosa*
crested dog's-tail	*Cynosurus cristatus*
sheep's fescue	*Festuca ovina*
common ragwort	*Senecio jacobaea*
spear thistle	*Cirsium vulgare*
creeping thistle	*Cirsium arvense*
hedge woundwort	*Stachys sylvatica*
bracken	*Pteridium aquilinum*
common bird's-foot-trefoil	*Lotus corniculatus*
yarrow	*Achillea millefolium*
rosebay willowherb	*Chamerion angustifolium*
cock's-foot	*Dactylis glomerata*
common gorse	*Ilex europeaus*
ribwort plantain	*Plantago lanceolata*
hawkweed species	*Hieracium* agg.
selfheal	*Prunella vulgaris*

Improved grassland

Common name	Scientific name
Yorkshire-fog	*Holcus lanatus*
sheep's fescue	*Festuca ovina*
sweet vernal grass	*Anthoxanthum odoratum*
creeping thistle	*Cirsium arvense*
prickly sow-thistle	*Sonchus asper*
broad-leaved dock	*Rumex obtusifolius*
hawkweed species	*Hieracium* agg.
common bird's-foot-trefoil	*Lotus corniculatus*
spear thistle	*Cirsium vulgare*
timothy	*Phleum pratense*
harebell	*Campanula rotundifolia*
ribwort plantain	*Plantago lanceolata*
common gorse	*Ilex europeaus*
perennial ryegrass	*Lolium perenne*
hoary willowherb	*Epilobium parviflorum*
dandelion	*Taraxacum officinale* agg.
yarrow	*Achillea millefolium*
creeping buttercup	*Ranunculus repens*
colt's-foot	*Tussilago farfara*
common bent	*Agrostis capillaris*

APPENDIX A
Species list

Road side verge/hedge

Common name	Scientific name
Trees	
sycamore	*Acer pseudoplatanus*
elder	*Sambucus nigra*
apple	*Malus pumila*
holly	*Ilex aquifolium*
hawthorn	*Crataegus monogyna*
ash	*Fraxinus excelsior*
Ground flora	
bramble	*Rubus fruticosus agg.*
buddleia	*Buddleja davidii*
common knapweed	*Centaurea nigra*
red campion	*Silene dioica*
hedge woundwort	*Stachys sylvatica*
common hogweed	*Heracleum sphondylium*
herb-robert	*Geranium robertianum*
cow parsley	*Anthriscus sylvestris*
bracken	*Pteridium aquilinum*
rosebay willowherb	*Chamerion angustifolium*

Scattered trees

Common name	Scientific name
Trees	
sycamore	*Acer pseudoplatanus*
whitebeam	*Sorbus aria*