



Title	Botany assessment of the RWE Power Station Buffer Strip
Date	01 September 2021
Client	Executors of the Alington Estate
Site	Alington Estate
Author	[REDACTED]
Review	[REDACTED]

Introduction

This advice note was requested to provide the following:

The potential to remove and develop area immediately to the south of RWE (northern most extent of survey area 2).

The advice note sets out the results of the botany survey of the scrub and grassland buffer habitats located immediately to the south of the RWE Power Station within the Alington Site as shown in the plan provided in **Annex 1**. A phase 1 habitat plan is also provided within **Appendix 1**.

Methods

Survey Methods

A botany survey of the RWE buffer area habitats was carried out by experienced botanist, Sven Wair on 19 June 2021. The survey identified all higher plants within the two survey areas by eye and hand lens and with reference to Stace (2010). Where necessary, specimens were collected and later identified at home using a microscope and with reference to other literature.

For one rare species *Galium parisiense* (Wall Bedstraw) contact was also made with the Bedfordshire County Recorder to confirm the status and identification of the species.

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CWS Criteria

The criteria for neutral grasslands taken from Bedfordshire and Luton Local Sites Partnership (2020) are as follows:

c) *Neutral grassland sites supporting good populations of either:*

- *three or more strong neutral grassland indicator species;*
- *eight or more neutral grassland indicator species in total.*

Also, a separate criterion for grassland assemblages:

e) *Sites supporting good populations of more than 50 grassland species.*

Results

The results of the botany survey provided in **Annex 2** demonstrate that the buffer strip supports an area of planted, mixed scrub species and rabbit-grazed, semi-improved neutral grassland. The site photographs provided in **Annex 3** illustrate the mosaic habitat, the herb-rich grassland and presence of a badger sett.

The presence of a population of *Galium parisiense* (Wall Bedstraw) was notable as this is a declining and rare lowland species of walls and bare ground that is intolerant of nutrient enrichment according to the online atlas of the British flora (<https://www.brc.ac.uk/plantatlas/plant/galium-parisiense>) and its presence has not been confirmed within Bedfordshire previously (Bedfordshire County Recorder *pers. comm.*).

The total number of grassland species (72) exceeded the 50 species CWS selection threshold for neutral grassland noting that many species were tall ruderals and possibly may be excluded. If ruderals are excluded then the total is 60 and hence remains still well above the threshold.

The buffer area supported 6 (possibly 7 if *Galium parisiense* is included) neutral grassland indicator species, and hence less than the CWS section criteria for indicator species threshold of 8 species. There were no 'strong' neutral grassland indicator species present.

Mitigation Strategy

The botany survey of the grassland within the RWE buffer area suggests that the grassland habitat supports a rare species (*Galium parisiense*) and also meets the CWS selection criteria for neutral grassland assemblage. Given that the area may not be maintained, there will be a requirement to mitigate the loss of habitats.

Mitigation would be achieved by reproducing the topological and geological conditions of the current site which appears to be an artificial mound of sandy and gravel substrates and to establish a similar bank nearby. For translocation, there are two options:

- 1) Translocate the seedbank in the substrate; or
- 2) Harvest the seeds at fruiting time and spread them on the receptor site.

Given that *G. parisiense* is a colonising, ruderal species, this is not considered a difficult translocation and both methods would likely provide a positive result. The sand and gravel substrate that is then

managed under a management plan would also provide a habitat for a range of other ruderal and perhaps heathland species as well as an associated rich invertebrate community.

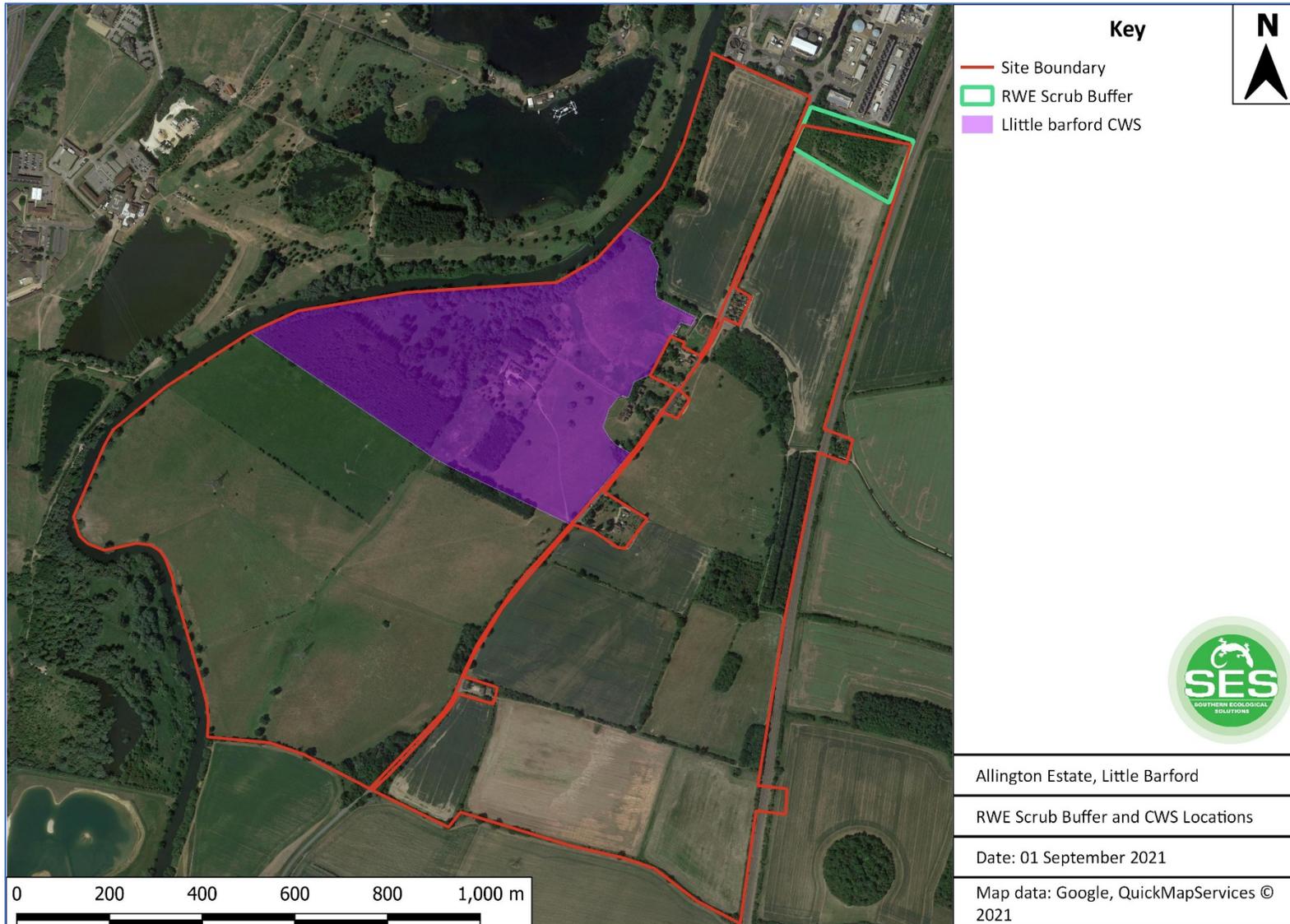
A management plan would maintain the rabbit-grazed grassland and the mosaic of taller grassland and scrub habitats through a programme of periodic scrub clearance and grassland management.

References

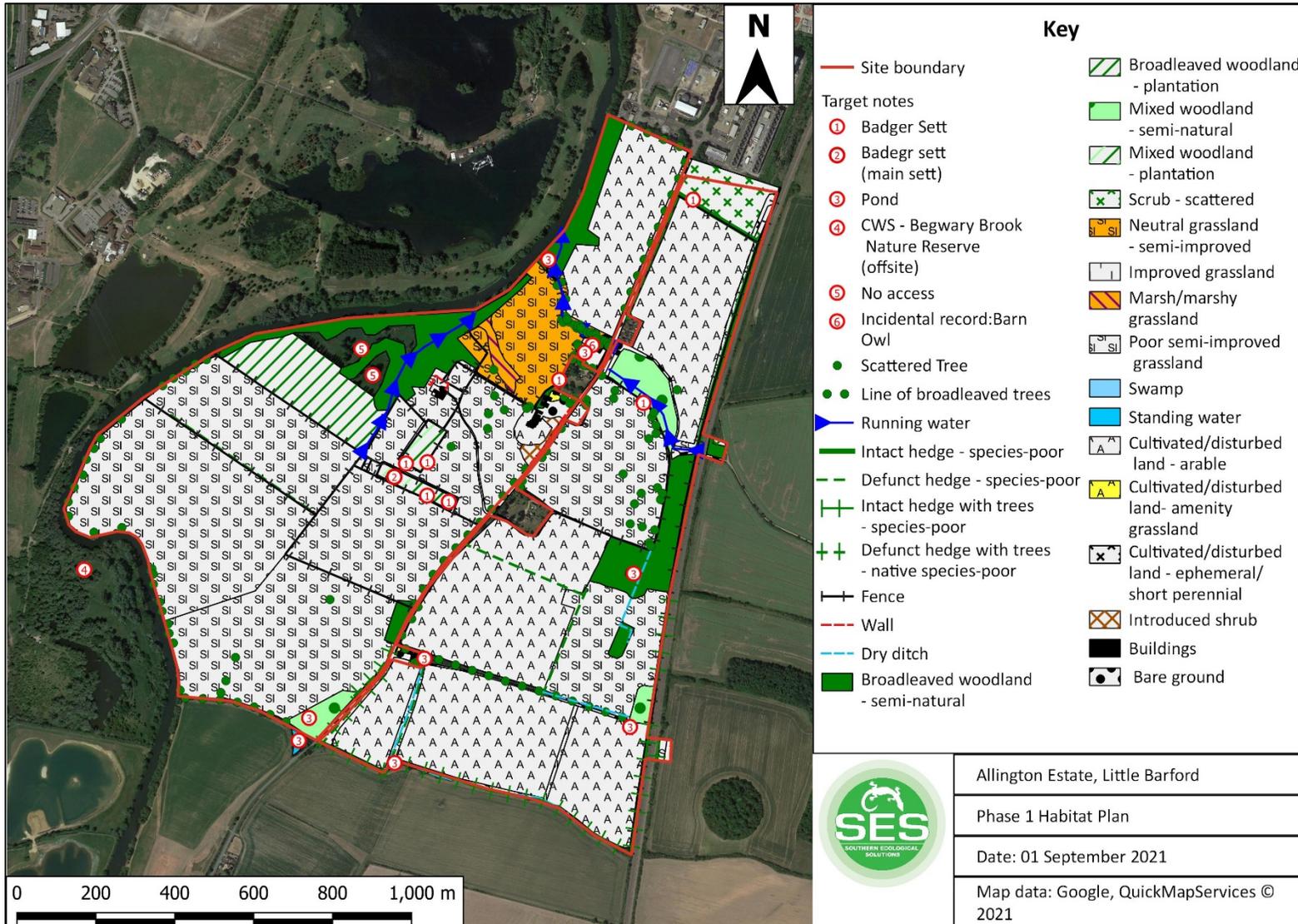
Bedford Borough Local Plan 2030. Online at: <https://www.bedford.gov.uk/planning-and-building/planning-policy-its-purpose/local-plan/>

Bedfordshire and Luton Local Sites Partnership (2020). *Bedfordshire and Luton County Wildlife Sites Selection Guidelines, Version 14, December 2020*. Accessed online at: https://www.bedscape.org.uk/BRMC/newsite/index.php?c=sites_cws

Annex 1: Location of RWE Scrub buffer



Phase 1 habitat Plan



Annex 2: Botany Survey RWE Buffer June 2021 Results

Taxon	Vernacular	Status	RWE Buffer	CWS Indicator*	CWS Grassland Assemblage
<i>Centaurium erythraea</i>	Common Centaury	Native	A	1	1
<i>Galium parisiense</i>	Wall Bedstraw	Native	A	1	1
<i>Achillea millefolium</i>	Yarrow	Native	F		1
<i>Agrostis capillaris</i>	Common Bent	Native	F		1
<i>Anisantha sterilis</i>	Barren Brome	Native	F		1
<i>Arrhenatherum elatius</i>	False Oat-Grass	Native	F		1
<i>Brachypodium sylvaticum</i>	False-brome	Native	F		1
<i>Bromus hordeaceus subsp. hordeaceus</i>	Common Soft-brome	Native	F		1
<i>Cerastium glomeratum</i>	Sticky Mouse-ear	Native	F		1
<i>Cirsium arvense</i>	Creeping Thistle	Native	F		1
<i>Clinopodium vulgare</i>	Wild Basil	Native	F		1
<i>Corylus avellana</i>	Hazel	Native	F		
<i>Dactylis glomerata</i>	Cock's-foot	Native	F		1
<i>Epilobium tetragonum</i>	Square-stalked Willowherb	Native	F		1
<i>Festuca rubra subsp. rubra</i>	Red Fescue	Native	F		1
<i>Filago vulgaris</i>	Common Cudweed	Native	F		1
<i>Galium aparine</i>	Cleavers	Native	F		1
<i>Geum urbanum</i>	Wood Avens	Native	F		1
<i>Glechoma hederacea</i>	Ground-ivy	Native	F		1
<i>Holcus lanatus</i>	Yorkshire-fog	Native	F		1
<i>Hypochaeris radicata</i>	Cat's-ear	Native	F		1
<i>Linum catharticum</i>	Fairy Flax	Native	F	1	1
<i>Medicago lupulina</i>	Black Medick	Native	F		1
<i>Poa trivialis</i>	Rough Meadow-grass	Native	F		1
<i>Potentilla reptans</i>	Creeping Cinquefoil	Native	F		1
<i>Prunella vulgaris</i>	Selfheal	Native	F		1

Taxon	Vernacular	Status	RWE Buffer	CWS Indicator*	CWS Grassland Assemblage
<i>Ranunculus repens</i>	Creeping Buttercup	Native	F		1
<i>Reseda luteola</i>	Weld	Native	F		1
<i>Rubus fruticosus agg.</i>	Bramble	Native	F		
<i>Sagina procumbens</i>	Procumbent Pearlwort	Native	F		1
<i>Scorzoneroides autumnalis</i>	Autumn Hawkbit	Native	F		1
<i>Senecio erucifolius</i>	Hoary Ragwort	Native	F	1	1
<i>Trifolium campestre</i>	Hop Trefoil	Native	F		1
<i>Urtica dioica</i>	Common Nettle	Native	F		
<i>Veronica arvensis</i>	Wall Speedwell	Native	F		1
<i>Veronica chamaedrys</i>	Germander Speedwell	Native	F		1
<i>Vicia tetrasperma</i>	Smooth Tare	Native	F		1
<i>Vulpia bromoides</i>	Squirreltail Fescue	Native	F		1
<i>Vulpia myuros</i>	Rat's-tail Fescue	Native	F		1
<i>Acer campestre</i>	Field Maple	Native	O		
<i>Acer pseudoplatanus</i>	Sycamore	Established	O		
<i>Agrimonia eupatoria</i>	Agrimony	Native	O	1	1
<i>Anagallis arvensis subsp. arvensis</i>	Scarlet Pimpernel	Native	O		1
<i>Aphanes arvensis</i>	Parsley-piert	Native	O		1
<i>Bellis perennis</i>	Daisy	Native	O		1
<i>Betula pendula</i>	Silver Birch	Native	O		
<i>Blackstonia perfoliata</i>	Yellow-wort	Native	O		1
<i>Carduus crispus</i>	Wetted Thistle	Native	O		1
<i>Carduus nutans</i>	Musk Thistle	Native	O		1
<i>Cerastium fontanum subsp. vulgare</i>	Common Mouse-ear	Native	O		1
<i>Chamerion angustifolium</i>	Rosebay Willowherb	Established	O		1
<i>Cirsium vulgare</i>	Spear Thistle	Native	O		1
<i>Cornus sanguinea subsp. australis</i>	Dogwood	Established	O		
<i>Crataegus monogyna</i>	Hawthorn	Native	O		

Taxon	Vernacular	Status	RWE Buffer	CWS Indicator*	CWS Grassland Assemblage
<i>Crepis capillaris</i>	Smooth Hawk's-beard	Native	0		1
<i>Daucus carota</i>	Carrot	Native	0		1
<i>Epilobium parviflorum</i>	Hoary Willowherb	Native	0		1
<i>Fraxinus excelsior</i>	Ash	Native	0		
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	Native	0		1
<i>Geranium molle</i>	Dove's-foot Crane's-bill	Native	0		1
<i>Helminthotheca echioides</i>	Bristly Oxtongue	Native	0		1
<i>Ilex aquifolium</i>	Holly	Native	0		
<i>Ligustrum ovalifolium</i>	Garden Privet	Established	0		
<i>Matricaria chamomilla</i>	Scented Mayweed	Native	0		1
<i>Myosotis discolor</i>	Changing Forget-me-not	Native	0		1
<i>Myosotis ramosissima</i>	Early Forget-me-not	Native	0		1
<i>Pastinaca sativa subsp. sylvestris</i>	Wild Parsnip	Native	0		1
<i>Plantago lanceolata</i>	Ribwort Plantain	Native	0		1
<i>Poa humilis</i>	Spreading Meadow-grass	Native	0		1
<i>Populus alba</i>	White Poplar	Native	0		
<i>Prunus lusitanica</i>	Portugal Laurel	Established	0		
<i>Prunus spinosa</i>	Blackthorn	Native	0		
<i>Quercus robur</i>	Pedunculate Oak	Native	0		
<i>Rosa arvensis</i>	Field-rose	Native	0		
<i>Rosa canina</i> agg.	Dog-rose	Native	0		
<i>Rumex crispus</i>	Curled Dock	Native	0		1
<i>Rumex sanguineus</i>	Wood Dock	Native	0		1
<i>Sambucus nigra</i>	Elder	Native	0		
<i>Senecio jacobaea</i>	Common Ragwort	Native	0		1
<i>Silene latifolia</i>	White Campion	Native	0		1
<i>Sonchus asper</i>	Prickly Sow-thistle	Native	0		1
<i>Sorbus aucuparia</i>	Rowan	Native	0		

Taxon	Vernacular	Status	RWE Buffer	CWS Indicator*	CWS Grassland Assemblage
<i>Taraxacum agg.</i>	Dandelion	Native	O		1
<i>Taxus baccata</i>	Yew	Native	O		
<i>Trifolium repens</i>	White Clover	Native	O		1
<i>Veronica serpyllifolia subsp. serpyllifolia</i>	Thyme-leaved Speedwell	Native	O		1
<i>Vicia sativa subsp. segetalis</i>	Common Vetch	Established	O		1
<i>Viola arvensis</i>	Field Pansy	Native	O		1
<i>Cerastium semidecandrum</i>	Little Mouse-ear	Native	R		1
<i>Crataegus heterophylla</i>	Various-leaved Hawthorn	Established	R		
<i>Dipsacus fullonum</i>	Wild Teasel	Native	R		1
<i>Fagus sylvatica</i>	Beech	Planted	R		
<i>Lathyrus nissolia</i>	Grass Vetchling	Native	R	1	1
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	Native	R	1	1
Total				7	72

*as listed in the Bedfordshire and Luton County Wildlife Sites Selection Guidelines, Version 14, December 2020.

Annex 3: Site Photographs

1. Scrub and rabbit-grazed grassland	2. Scrub and rabbit-grazed grassland	3. Planted scrub and trees
		
4. Rabbit grazed, herb rich grassland	5. Scrub and rabbit-grazed grassland	6. Subsidiary occupied badger sett
		