LAND ADJACENT TO 47 BRYANSTON ROAD, SOUTHAMPTON

BIODIVERSITY ENHANCEMENT STRATEGY



A Report to: Abri

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CONTENTS

1. IN	ITRODUCTION	2
1.1 1.2	BACKGROUND	
2. ME	ETHODOLOGIES	4
2.1 2.2 2.3	DESK STUDYUKHAB SURVEYBIODIVERSITY ENHANCEMENT STRATEGY	4
4. RE	ESULTS	
4.1 4.3		7
REFER APPEN	ANAGEMENT AND TIMING OF WORKS	14 15
	NDIX 2NDIX 3	
APPEN	NDIX 4	20

1. INTRODUCTION

1.1 BACKGROUND

In March 2023, Abri commissioned MMEcology to prepare a Biodiversity Enhancement Strategy (BES) for a parcel of land adjacent to 47 Bryanston Road in Southampton, Hampshire. This assessment is required to inform a planning application associated with a new housing development of 8 dwellings, along with parking and landscaping. Figure 1 below shows the proposed site layout.



Figure 1. Proposed site layout

To fulfil the above brief, it was necessary to assess the existing ecological interest of the site. Therefore, a walkover survey was undertaken on 1st June 2023. This document outlines the survey findings and identifies measures for the proposal to deliver an overall net gain in biodiversity.

1.2 SITE DESCRIPTION

The application site is located at National Grid Reference SU 43900 12130, at the bottom of Bryanston Road which is located on the outskirts of Bitterne in Southampton. The site is approximately 0.38ha in size and located in a predominantly residential area, with dwellings and their gardens located to the east and south of the site. Immediately to west is an active railway track, beyond which is an industrial estate and the River Itchen. Immediately to the north is the private gardens of a row of semi-detached dwellings associated with Ashburnham Close.

The application site is dominated by areas of dense tall ruderal vegetation and bracken, likely to have developed as a result of the previous management of the site (i.e. clearance of scrub on site). A small, wooded area is located on an embankment in the eastern corner

of the site. There are a small number of trees scattered on site and a small patch of amenity grassland and some bindweed and bramble scrub. It is understood that the site has been vacant for a number of years.

The site is situated within an urban setting with residential and industrial developments to all sides. Figure 2 shows the location of the site in the wider landscape.



Figure 2. Location of the proposed site (Source: Google maps)

2. METHODOLOGIES

2.1 DESK STUDY

An ecological desk study was conducted in April 2023 to determine the presence of any designated nature conservation sites and protected species within a 1km radius of the site. This involved obtaining information from statutory and non-statutory organisations which hold ecological data relating to the survey area, including:

- Natural England Multi Agency Geographic Information for the Countryside (MAGIC) online database (http://magic.defra.gov.uk)
- Hampshire Biological Information Centre (HBIC)

The desk study included a search for European and UK statutory nature conservation sites and non-statutory local designations.

2.2 UKHAB SURVEY

The walkover survey was conducted following the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee (JNCC, 2010) and the Institute of Environmental Assessment (IEA, 1995). Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are present on site. During the survey, the presence, or potential presence, of protected species was noted.

Whilst Phase 1 Habitat Survey is the most widely used habitat classification system, UKHAB has been designed to build on this existing system. It is a fully translatable, hierarchical system that integrates with all major classifications in use in the UK. The system includes translation tables that allow legacy datasets to be translated into UKHAB and for habitat data collected using other systems to be seamlessly integrated. The combination of primary habitats and secondary codes is a major strength of the system, allowing habitat mosaics, habitat management, origins and other environmental and species features to be added directly to each coded primary habitat. This removes the need for complex target notes and substantially increases consistency and spatial accuracy of recording important features by attaching secondary codes directly to habitat polygons or linear features. Therefore, for each habitat type recorded on site, the equivalent UKHAB category was also added. The habitat map provided in Appendix 1 is based on UKHAB classification. Proposed habitats were also mapped using the available CAD drawings for the site (topo survey and indicative Masterplan) and presented based on UKHAB classification.

2.3 BIODIVERSITY ENHANCEMENT STRATEGY

The enhancement strategy is designed to maximise the ecological value of the retained habitats on site. This could be achieved through management, additional planting/seeding, etc. Newly created habitats have been especially chosen to ensure the presence of higher

quality habitats, in comparison to those lost as a result of the proposals. Any retained, enhanced and newly created habitats have also been designed to provide shelter, foraging and breeding habitats for a wide range of protected and notable species including bats, birds and reptiles. The built realm is also enhanced with breeding sites for bats and birds and access for hedgehogs.

4. RESULTS

4.1 PRE-DEVELOPMENT HABITAT

The current baseline habitats on site as classified according to the UKHAB classification and their approximate size are shown in Table 1 below:

A. Broad Habitat	B. Habitat type	Approximate size (square meters)
Grassland	Modified grassland	36
Woodland and forest	Other woodland; broadleaved	1072
Heathland and shrub	Bramble scrub	260
Heathland and shrub Mixed scrub		236
Sparsely vegetated land Ruderal/Ephemeral		833
Urban Developed land; sealed surface		100
Grassland Bracken		1282

Furthermore, outside the woodland on site, there are a total of 10no. trees present, including 3no. small (DBH \leq 30cm), 4no. medium (DBH > 30 to \leq 90cm) and 3no. large (DBH > 90cm) trees.

Of the above habitats, the majority will be lost to facilitate the development or to enable the creation of higher quality habitats on site, with the exception of the woodland on site which will be mainly retained and enhanced, with approximately $153m^2$ lost, mainly for safety works, to address risks to adjoining properties and car parking areas from potential stem collapses. The scattered trees in the western part of the site will also be mainly retained and protected, with the exception of a semi-mature sycamore *Acer pseudoplatanus* (medium sized tree) in fair condition, a mature wild cherry *Prunus avium* (medium sized tree) in poor condition and a young sycamore (small sized trees) in fair condition.

4.3 Post-development Habitats

Post-development habitats as classified according to the UKHAB classification and their approximate size are shown in Table 2 below:

A. Broad Habitat	B. Habitat type	Approximate size (square meters)		
Urban	Vegetated garden	512		
Heathland and shrub	Mixed scrub	478		
Grassland	Other neutral grassland	394		
Grassland	Modified grassland	99		
Urban	Developed land, sealed surface	1462		

Post-development, the new habitats include:

- Developed land; sealed surface areas of hardstanding in the form of new dwellings, access roads and car parking areas.
- Vegetated garden forming the front and rear private gardens.
- Modified grassland There will be areas of amenity grassland created along the access road and in between some car parking areas using a species-rich lawn mixture such as Emorsgate EL1 or equivalent. This seed mix will contain species such as lady's bedstraw Galium verum, rough hawkbit Leontodon hispidus, oxeye daisy Leucanthemum vulgare, birds foot trefoil Lotus corniculatus, cowslip Primula veris, selfheal Prunella vulgaris, meadow buttercup Ranunculus acris and red clover Trifolium pratense. The mixture will contain slow growing grasses with a selection of wildflowers that respond well to regular short mowing, which is essential for such areas.
- Trees There will be 23no. native or flower bearing trees (extra heavy standard)
 planted within areas of soft landscaping on site. The list of species to be planted
 has been included within the Soft Landscaping Scheme with species including field
 maple Acer campestre, black birch Betula nigra, wild cherry Prunus avium,
 whitebeam Sorbus aria and rowan Sorbus aucuparia.
- Mixed scrub There will be large areas of native scrub planting. Scrub planting will
 be associated with three areas, including the additional parking areas in the southwestern corner of the site and along the eastern and western boundaries of the
 existing woodland, which is currently covered by dense bindweed, some bramble

scrub and discarded garden waste and materials. Scrub species to be planted include field maple, dogwood *Cornus sanguinea*, elder *Sambucus nigra*, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, field maple *Acer campestre*, guelder rose *Viburnum opulus*, hazel *Corylus avellana*, dog rose *Rosa canina* and holly *Ilex aquifolium*.

Other neutral grassland - The north-western and western boundaries of the site will be converted to 'other neutral grassland', seeded with a tussock mixture such as Emorsgate EM10. The tussock forming grasses are combined with wildflowers like knapweeds and vetches which can cope with competition from taller vegetation. This mixture has been devised to create areas of tussocky grassland that, once established, require little or no maintenance. This grassland type forms a good habitat for insects, small mammals, amphibians and reptiles. The mixture includes 20% wildflowers and 80% grass mixture such as Yarrow Achillea millefolium, Agrimony Agrimonia eupatoria, Lesser Burdock Arctium minus, Common Knapweed Centaurea nigra, Greater Knapweed Centaurea scabiosa, Rough Chervil Chaerophyllum temulum, Woolly Thistle Cirsium eriophorum, Wild Carrot Daucus carota, Wild Teasel Dipsacus fullonum, Meadowsweet Filipendula ulmaria, Hedge Bedstraw Galium album, Field Scabious Knautia arvensis, Meadow Vetchling Lathyrus pratensis, Birdsfoot Trefoil Lotus corniculatus, Musk Mallow Malva moschata, Salad Burnet Poterium sanguisorba, Ribwort Plantain Plantago lanceolata, Meadow Buttercup Ranunculus acris, Yellow Rattle Rhinanthus minor, Red Campion Silene dioica, Tufted Vetch Vicia Cracca, Crested Dogstail Cynosurus cristatus, Tall Fescue Festuca arundinacea, Tufted Hair-grass Deschampsia cespitosa, Cocksfoot Dactylis glomerata, Red Fescue Festuca rubra and Meadow Fescue Schedonorus pratensis.

In addition to creation of new habitats on site, the woodland on site will be enhanced through the following measures:

- Where necessary, removal of poor-quality trees to reduce competition and enable light penetration and natural regeneration.
- Removal of discarded waste from the woodland to allow the woodland flora to flourish, as well as seedlings and saplings developing.
- Removal of non-native and invasive species such as cherry laurel *Prunus laurocerasus*, Spanish bluebell *Hyacinthoides hispanica* and buddleia *Buddleja davidii*.
- Supplementary native planting such as hazel, hawthorn, blackthorn and field maple.

 Any bare areas of woodland floor, due to presence of waste or shading, will be seeded with a shade tolerant woodland seed mix such as Emorsgate Woodland Mixture EW1, which contains species such as wood avens *Geum urbanum*, native bluebell *Hyacinthoides non-scripta* and ragged robin *Silene flos-cuculi*, with grasses such as sweet vernal grass *Anthoxanthum odoratum*, soft brome *Bromus hordeaceus* and crested dog's-tail *Cynosurus cristatus*.

A five-year management plan as per Section 5 will be implemented to ensure the successful establishment of the newly created habitats. The management plan will also ensure the delivery of appropriate ecological enhancements to ensure increased suitability for protected and priority species.

In addition, a number of wildlife features such as bat and bird boxes, reptile log piles and hibernacula will also be incorporated with newly created and enhanced habitats. These include:

- A minimum of 2 integrated bird features will be incorporated into the design of the new dwellings. These could include a mixture of Schwegler 1SP Sparrow terraces and swift bricks.
- A minimum of 2 bat features such as bat bricks (e.g. Ibstock bat brick) will also incorporated into the external walls of the new dwellings.
- Inclusion of 'Hedgehog Highways' within the garden fence panels (i.e. a 13cm x 13cm hole to be cut at the bottom of the fence if there are no other gaps).
- A single log pile and a hibernacula within the reptile receptor site, located in the west and north-west of the application site.

5. MANAGEMENT AND TIMING OF WORKS

Detailed management is found in Table 3 for all habitat types and ecological features. The timing of works attempts to avoid direct impacts on protected species.

Item	Timing for habitat creation	Timing for management
Modified grassland	Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand.	Anytime
Other neutral grassland Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand.		Late summer/early autumn (after flowers and grasses have set seed)
Other woodland, broad-leaved	N/A	Autumn/Winter (outside bird nesting season)
Mixed scrub	Shrubs are best planted from autumn to spring, avoiding periods when the ground is too wet or frozen.	Autumn/Winter (outside bird nesting season)
Trees	Planting is best carried out between October and April, avoiding periods of frost. Planting can be carried out at other times of year; however, this may require more frequent watering and is therefore not recommended.	Autumn/Winter (outside bird nesting season)
Bat boxes	During the completion of the construction phase	N/A
Bird boxes	During the completion of the construction phase	N/A
Hibernacula/logpile	Prior to commencement of the reptile capture and relocation programme	March – October (during reptile active season)
Hedgehog highways	On completion of the construction phase and erection of boundary fencing	Anytime

Item	Management prescription - Year 1	Management prescription - Year 2	Management prescription - Year 3	Management prescription - Year 4	Management prescription - Year 5
Modified grassland	Mow newly sown flowering lawns regularly (every 7 -10 days during growing season) throughout the first year of establishment. Cut to a height of 40-60mm, removing cuttings if dense. This will gradually develop a good sward structure, help maintain balance between faster growing grasses and slower developing wildflowers, and control annual weeds. Dig out any residual perennial weeds such as docks.	Mow regularly as a lawn but not too short (25-40mm). To permit flowering, mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks). Heavy quantities of cuttings should be collected and removed from site.	Mow regularly as a lawn but not too short (25-40mm). To permit flowering, mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks). Heavy quantities of cuttings should be collected and removed from site.	Mow regularly as a lawn but not too short (25-40mm). To permit flowering, mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks). Heavy quantities of cuttings should be collected and removed from site.	Mow regularly as a lawn but not too short (25-40mm). To permit flowering, mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks). Heavy quantities of cuttings should be collected and removed from site.
Other neutral grassland	Cut mid to late summer (e.g. August), especially as the mixture contains Yellow Rattle. Remove arisings. Carefully dig out any residual perennial weeds such as docks.	Once established, tussocky grassland requires minimal maintenance. Unwanted perennial weeds (docks, thistles) may need control by selective scything before seeding. To control scrub and bramble development, cut once a year between October and February. Cutting should be done on a rotational basis, so	Once established, tussocky grassland requires minimal maintenance. Unwanted perennial weeds (docks, thistles) may need control by selective scything before seeding. To control scrub and bramble development, cut once a year between October and February. Cutting should be done on a rotational basis, so	Once established, tussocky grassland requires minimal maintenance. Unwanted perennial weeds (docks, thistles) may need control by selective scything before seeding. To control scrub and bramble development, cut once a year between October and February. Cutting should be done on a rotational basis, so	Once established, tussocky grassland requires minimal maintenance. Unwanted perennial weeds (docks, thistles) may need control by selective scything before seeding. To control scrub and bramble development, cut once a year between October and February. Cutting should be done on a rotational basis, so

		that no more than half	that no more than half	that no more than half	that no more than half
		the area is cut in any one	the area is cut in any one	the area is cut in any one	the area is cut in any one
		year leaving part as an	year leaving part as an	year leaving part as an	year leaving part as an
		undisturbed refuge.	undisturbed refuge.	undisturbed refuge.	undisturbed refuge.
	Inspect for presence of	Inspect for presence of	Inspect for presence of	Inspect for presence of	Inspect for presence of
	invasive species and	invasive species and	invasive species and	invasive species and	invasive species and
	remove as necessary	remove as necessary	remove as necessary	remove as necessary	remove as necessary
	(September to February	(September to February	(September to February	(September to February	(September to February
	only).	only).	only).	only).	only).
	Undertake any thinning	Undertake any thinning	Undertake any thinning	Undertake any thinning	Undertake any thinning
	required to allow more	required to allow more	required to allow more	required to allow more	required to allow more
	light penetration	light penetration	light penetration	light penetration	light penetration
Other woodland,	(September to February	(September to February	(September to February	(September to February	(September to February
broad-leaved	only).	only).	only).	only).	only).
	Inspect annually and	Inspect annually and	Inspect annually and	Inspect annually and Inspect annually and	
	take any remedial action	take any remedial action	take any remedial action	take any remedial action	take any remedial action
	as required to ensure	as required to ensure	as required to ensure	as required to ensure	as required to ensure
	successful establishment	successful establishment	successful establishment	successful establishment	successful establishment
	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of
	dead or diseased	dead or diseased	dead or diseased	dead or diseased	dead or diseased
	specimens, pruning,	specimens, pruning,	specimens, pruning,	specimens, pruning,	specimens, pruning,
	watering, weeding, etc.)	watering, weeding, etc.)	watering, weeding, etc.)	watering, weeding, etc.)	watering, weeding, etc.)
	Inspect annually and	Inspect annually and	Inspect annually and	Inspect annually and	Inspect annually and
	take any remedial action	take any remedial action	take any remedial action	take any remedial action	take any remedial action
	as required to ensure	as required to ensure	as required to ensure	as required to ensure	as required to ensure
Mixed scrub	successful establishment	successful establishment	successful establishment	successful establishment	successful establishment
IVIIACU SCI UD	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of
	dead or diseased	dead or diseased	dead or diseased	dead or diseased	dead or diseased
	specimens, pruning,	specimens, pruning,	specimens, pruning,	specimens, pruning,	specimens, pruning,
	watering, weeding, etc.)	watering, weeding, etc.)	watering, weeding, etc.)	watering, weeding, etc.)	watering, weeding, etc.)
	Inspect annually and	Inspect annually and	Inspect annually and	Inspect annually and	Inspect annually and
	take any remedial action	take any remedial action	take any remedial action	take any remedial action	take any remedial action
Trees	as required to ensure	as required to ensure	as required to ensure	as required to ensure	as required to ensure
	successful establishment	successful establishment	successful establishment	successful establishment	successful establishment
	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of	(e.g. replacement of

	dead or diseased				
	specimens, pruning,				
	watering, weeding, etc.)				
	Boxes are self-				
Bat boxes	maintaining and require				
Dat Doxes	no further maintenance				
	thereafter.	thereafter.	thereafter.	thereafter.	thereafter.
	Boxes are self-				
Dird haves	maintaining and require				
Bird boxes	no further maintenance				
	thereafter.	thereafter.	thereafter.	thereafter.	thereafter.
	Annual inspection. Add				
Hibernacula/logpile	further materials if				
	required.	required.	required.	required.	required.
Hadaabaa	Annual inspection to				
Hedgehog	ensure the gap is open				
highways	and fit for purpose.				

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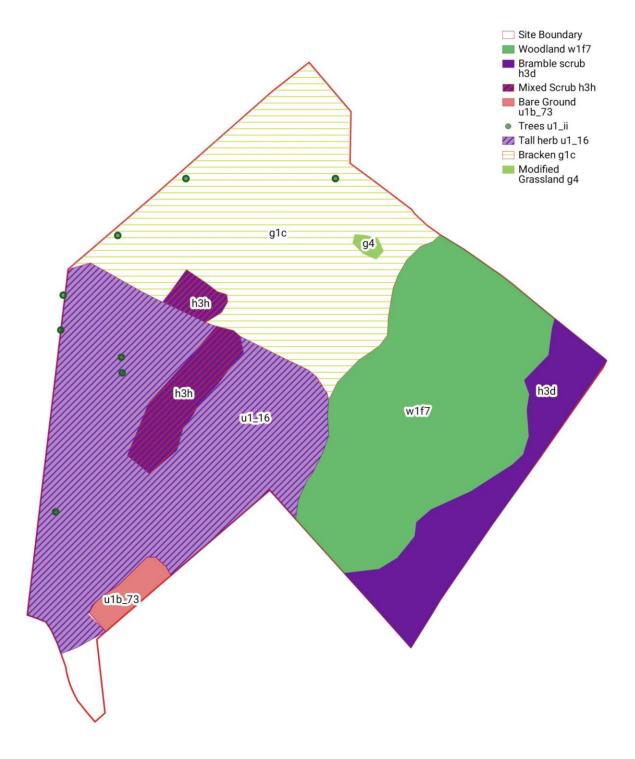
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APPENDIX 1

Pre-development Plan

UKHab Habitat Map - April 2023

Site: Bryanston Road, Southampton Client: ABRI



APPENDIX 2

Post-development Plan

Proposed Site Plan

Site: Bryanston Road, Southampton Client: ABRI



APPENDIX 3

General Arrangement Plan



APPENDIX 4

Planting Schedule

Planting Schedule

Trees					
Number	Abbreviation	Species	Height	Girth	Specification
8	Ac	Acer campestre	350-400cm	14-16cm	Extra Heavy Standard :Clear Stem min. 200 :RB
3	Bn	Betula nigra	425-600cm	14-16cm	Extra Heavy Standard :Clear Stem min. 200 :RB
4	Pav	Prunus avium	425-600cm	14-16cm	Extra Heavy Standard :Clear Stem min. 200 :RB
5	Sar	Sorbus aria	425-600cm	14-16cm	Extra Heavy Standard :Clear Stem min. 200 :RB
3	Sau	Sorbus aucuparia	425-600cm	14-16cm	Extra Heavy Standard: Clear Stem min. 200 :RB
Total -23					

Chrube

Shrubs						
Number	Abbreviation	Species	Specification	Height	Pot Size	Density
17	AxGC	Abelia grandiflora 'Compacta'	Bushy :C	30-40cm	5L	3/m ²
13	CAP	Choisya 'Aztec Pearl'	Bushy:C	40-60cm	5L	2/m ²
21	Ср	Cistus purpureus	Bushy :C	30-40cm	5L	3/m ²
15	LaM	Lavandula angustifolia 'Munstead'	Bushy:C	40-60cm	5L	4/m²
Н	PBE	Philadelphus 'Belle Etoile'	Bushy:C	40-60cm	5L	2/m ²
9	Sol	Salvia officinalis 'Icterina'	Bushy:C	30-40cm	5L	3/m²

Total :86

Single species hed	gerow plantin	g				
Number of Plants	Abbreviation	Species	Specification	Height	Pot Size	Density
177	Lo	Ligustrum ovalifolium	Bushy :BR	80-100cm	5L	4/m
Total:177						

Native Scru	Native Scrub mix							
Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	
103	Ac	Acer campestre	Whip :4 brks :BR	60-80cm		2/m ²	10%	
103	Csa	Cornus sanguinea	Several shoots :BR	40-60cm		2/m ²	10%	
103	Cav	Corylus avellana	Bushy :BR	60-80cm		2/m ²	10%	
103	Cmo	Crataegus monogyna	Whip :4 brks :BR	60-80cm		2/m ²	10%	
103	la	llex aquifolium	Bushy :C	30-40cm	2L	2/m ²	10%	
103	Lv	Ligustrum vulgare	Bushy :BR	60-80cm		2/m ²	10%	
103	Psp	Prunus spinosa	Bushy :BR	60-80cm		2/m ²	10%	
103	Rca	Rosa canina	Bushy :BR	40-60cm		2/m ²	10%	
103	Sn	Sambucus nigra	Bushy :BR	40-60cm		2/m ²	10%	
103	Vo	Viburnum opulus	Bushy :BR	40-60cm		2/m ²	10%	

Total : 1030