

**Land at Bartons Road
Havant
Portsmouth
PO9 5EY**

Habitat Management and Monitoring Plan

Report ref.: R2724_HMMP_a

Report Quality Control Information	
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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by Stonebond Properties (Guildford) Limited to prepare a Habitat Management and Monitoring Plan (HMMP) for land at Bartons Road in Havant, Portsmouth.
- 1.1.1** The HMMP was commissioned to discharge Condition 15 of the granted planning application (Planning reference: APP/25/00639) for the '*Erection of 90 dwellings with associated landscaping, parking and improved access*' which was granted consent in May 2026.
- 1.1.2** This HMMP follows the BNG assessment (R2724_BNG_c - December 2025) submitted to Havant Borough Council and uses the '*Statutory Biodiversity Metric*' (DEFRA 2024) to calculate the losses and gains in biodiversity value resulting from the proposed development on site.
- 1.1.3** The metric illustrated that a biodiversity net gain can be achieved through on-site habitat retention, habitat creation and the purchasing of off-site units. The '*Headline Results*' section taken from the metric spreadsheet shows a total net change of 10.18% in habitat units. There will be 1.51 hedgerow units created on site, however as there are no linear habitats present at the baseline, a percentage gain cannot be calculated for the proposed design of these features.
- 1.1.4** The aim of this HMMP is to outline the long-term management of the site and monitoring of proposed BNG habitats within the site boundary and to ensure the habitats are protected for a period of 30 years.

2 INTRODUCTION

2.1 Project Background

- 2.1.1** John Wenman Ecological Consultancy LLP was instructed by Stonebond Properties (Guildford) Limited to prepare a Habitat Management and Monitoring Plan (HMMP) for land at Bartons Road in Havant, Portsmouth.
- 2.1.2** The HMMP was commissioned to discharge Condition 15 of the granted planning application (Planning reference: APP/25/00639) for the '*Erection of 90 dwellings with associated landscaping, parking and improved access*' which was granted consent in May 2026.
- 2.1.3** This HMMP follows the BNG assessment (R2724_BNG_c – December 2025) and uses the '*Statutory Biodiversity Metric*' (DEFRA 2024) to calculate the losses and gains in biodiversity value resulting from the proposed development on site.
- 2.1.4** Condition 15 is worded as follows:

'15. A Biodiversity Gain Plan shall be prepared in accordance with Biodiversity Net Gain Statutory Metric (John Wenman, July 2025 amended January 2026) and must include:

(1) information about the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the on-site habitat and any other habitat;

(2) the pre-development biodiversity value of the on-site habitat;

(3) the post-development biodiversity value of the on-site habitat;

(4) any registered off-site biodiversity gain allocated to the development and the value of that gain in relation to the development;

(5) any biodiversity credits purchased for the development; and

(6) any such other matters as the Secretary of State may by regulations specify.

The development shall not commence until a Habitat Management and Monitoring Plan (HMMP), prepared in accordance with the approved Biodiversity Gain Plan, has been submitted to, and approved in writing by, the local planning authority. The HMMP shall include:

(7) a non-technical summary;

(8) the roles and responsibilities of the people or organisation(s) delivering the HMMP;

(9) the planned habitat creation and enhancement works to create or improve habitat to achieve the biodiversity net gain in accordance with the approved Biodiversity Gain Plan;

(10) the management measures to maintain habitat in accordance with the approved Biodiversity Gain Plan for a period of 30 years from the completion of development; and

(11) the monitoring methodology and frequency in respect of the created or enhanced habitat.

Notice in writing shall be given to the Council when the:

(12) HMMP has been implemented; and

(13) habitat creation and enhancement works as set out in the HMMP have been completed.

The created and/or enhanced habitat specified in the approved HMMP shall be managed and maintained in accordance with the approved HMMP.

Monitoring reports shall be submitted to local planning authority in writing in accordance with the methodology and frequency specified in the approved HMMP.

Reason: To ensure the development delivers a biodiversity net gain on site in accordance with Schedule 7A of the Town and Country Planning Act 1990.'

2.2 Site Description and Context

2.2.1 The application site comprises 1.7 hectares of land located on the southern side of Bartons Road, on the northern side of Havant (OS grid ref.: SU 72157 08028). The site was formerly occupied by a Scottish and Southern Energy office which was demolished in 2016/2017.

2.2.2 The site is bordered by Petersfield Road (B2149) to the west, Havant & Waterlooville Football Club to the east, and residential developments to the north and south. There is an area of open grassland of Front Lawn Recreation Ground 140m to the west of the site and a parcel of broadleaved woodland present approximately 185m to the south-west of the site. Great Copse - 4.9ha of ancient and semi-natural woodland – is present 470m to the north-west of the site, and connects to extended wood-pasture and

parkland situated within Staunton Country Park.

2.3 Objectives

- 2.3.1** The aim of this HMMP is to outline all habitat enhancement, creation and management for all habitats outlined within the approved Biodiversity Net Gain Assessment (JWEC, December 2025) for a minimum period of 30 years.

2.4 Relevant Planning Policy and Legislation

- 2.4.1** The National Planning Policy Framework (NPPF) (December 2024) makes reference to BNG in the following ‘*Section 15. Conserving and enhancing the natural environment*’ paragraphs:

Paragraph 187. Planning policies and decisions should contribute and enhance the natural and local environment by: [...] d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures[.]’

Paragraph 192. To protect and enhance biodiversity and geodiversity, plans should: b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.’

‘Paragraph 193. When determining planning applications, local planning authorities should apply the following principles: d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.’

2.5 Local Planning Policy

- 2.5.1** The recently Havant Borough Council’s current adopted Local Plan was accepted in 2011, with a new emerging local plan currently being discussed, and provides the local policy framework against which planning applications are assessed. The objectives for Chapter 7 ‘*Caring for our Borough*’ of the local plan are as follows;

- *‘Ensure all new development is built to a high quality sustainable design that is inspired by the character and setting of the local area*

- *Deliver the effective stewardship of the unique qualities of the borough's built and historic heritage and natural environment*
- *Adapt to, and where appropriate mitigate against the impacts of climate change.* ‘

2.5.2 Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough

2.5.3 Planning permission will be granted for development that:

1. *Ensures the key landscape and built form principles set out in the Havant Borough Townscape, Landscape and Seascape Character Assessment are protected and where possible enhanced by partnership working with developers, groups and the wider community.*
2. *Protects and where possible enhances the borough's statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland.*
3. *Has particular regard to the following hierarchy of nature conservation designations within the borough (as identified on the Proposals Map): (i) Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar [International]. (ii) Sites of Special Scientific Interest (SSSI) and National Nature Reserves [National]. (iii) Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), other Ancient Woodland not identified in (ii) above [Local].*
4. *Protects and where appropriate enhances the borough's statutory and non-statutory heritage designations by appropriately managing development in or adjacent to conservation areas, listed buildings, scheduled ancient monuments, historic parks and gardens, archaeological sites, buildings of local historic or architectural interest.*
5. *Supports an ongoing programme of survey of habitats and species and designation of Sites of Importance for Nature Conservation.*
6. *Incorporates partnership working with conservation organisations to improve public understanding of biodiversity and to manage public access to designated sites, particularly on the coast, to reduce harm to nature conservation interests.*

7. *Incorporates partnership working with landowners and developers to ensure land management practices restore, enhance and where appropriate create new valued landscapes, habitats and their soil structure, particularly the ancient woodland remnants of the Forest of Bere and coastal salt marsh.*
8. *Protects wildlife habitats and wildlife corridors to prevent the fragmentation of existing habitats and to allow species, for example Brent Geese, to respond to the impacts of climate change by making provision for habitat adaptation e.g. coastal managed realignment and species migration.*
9. *Maintains undeveloped gaps between the settlements of Emsworth/Havant; Havant/Waterlooville; Havant/Portsmouth; Emsworth/Westbourne and Leigh Park/Rowlands Castle as shown on the Proposals Map.*
10. *Protects the best and most versatile agricultural land that has the greatest potential for local food security.*
11. *Responds to the emerging evidence from the Solent Disturbance and Mitigation Project, the published recommendations, and future related research.'*

3 HABITAT MANAGEMENT PLAN AIMS AND OBJECTIVES

3.1 Aims and Objectives

3.1.1 The aim of this HMMP is to ensure the newly created onsite habitats reach their specified habitat condition and protect retained habitats in existing condition through long-term management in order to deliver the onsite biodiversity net gain of 10.04% in habitat units (refer to the metric calculation tool '*Land at Bartons Road, Havant – Biodiversity Net Gain Report (R2724_BNG_c)*'). This habitat management plan will need to be implemented as aligned within the condition of the planning consent.

3.1.2 The objectives of the habitat management and monitoring plan are as follows:

- Protect and enhance the nature conservation value of existing and new habitats within the site;
- Maximise the diversity and species richness of the habitat creation/enhancement areas through maintenance of habitats appropriate to the soils and land use;
- Incorporate avoidance and mitigation measures into the work programme to avoid harm to protected and notable species, i.e. nesting birds;
- Provide an appropriate level of management intervention to deliver the biodiversity gains; and
- Monitor the habitat condition and success of the management and intervene if the proposed outcome is not being met.

3.1.3 The objectives will be delivered through the plan set out as follows in **Section 3** (management prescriptions and operations for enhanced habitats, ongoing management of habitats and management requirements for species-specific enhancements), in **Section 4** (habitat management and monitoring work schedule for a 30-year period) and in **Section 5** (plan implementation including costs and legal responsibilities).

3.2 Proposed BNG Habitats

3.2.1 Re-creation of Open Mosaic on Previously Developed Land (OMPDL) within a residential development such as this is difficult to achieve due to a lack of sufficient open space to implement the typical characteristics of this open habitat. A combination of a mosaic of broad habitat creation (low nutrient grassland, scrub and hedgerow/trees) and smaller mosaic features within

the grassland (shallow depressions and gravel bunds) is the only feasible option within the scheme given the site constraints.

3.2.2 The Hampshire Ecologist's response to the planning application raised a common issue regarding compensation for loss of OMPDL. There is limited available off-site options for like-for-like compensation of OMPDL of which there are none within Havant Borough, and very limited options elsewhere and therefore within the BNG process there is a degree of flexibility for Local Planning Authorities in agreeing compensatory habitats. The alternative options are very much restricted by the available habitat units that can be purchased from habitat bank providers in the NCA. Based on these constraints the following bespoke compensation is being implemented and will provide the same function as the baseline habitats on site.

3.2.3 The proposed habitat units to be purchased are based on those proportions of habitats present in the OMPDL on site at baseline as follows:

- 5% pond- priority habitat (similar function to temporary pools)
- 32% scrub (similar function to ruderal vegetation on the edges)
- 63% grassland (same function as remainder of the area which has flower-rich grassland and bare ground)

3.2.4 These percentages equate to: 0.27 pond units; 2.82 mixed scrub units; 4.93 other neutral grassland units (all in moderate condition). Offsite habitat units are located at Halnaker Hill Farm (BNG site register reference number: BGS-300625001), which is within the same NCA as the site, South Coast Plain, therefore keeping the offset as local as possible. The details of this agreement have been formalised and are detailed separately.

3.2.5 There will be 2.3 habitat units created onsite which has been designed to maximise the biodiversity value within the scope of the proposals, by recreating as close as possible the existing habitats, while providing amenity value for residents, which will include, (refer to **Figures 1 & 2** Baseline and Proposed Habitats Plans below):

- g4 Modified grassland – Areas of amenity grassland will be created around the site, including below amenity tree planting, to the north and west of the proposed block of flats and beside access pathways, and is expected to reach poor condition.

- g3c Other neutral grassland – Areas of other neutral grassland will be created as part of a mosaic with proposed mixed scrub at the north-western corner surrounding the proposed block of flats, and on the eastern and southwestern boundaries, and are expected to reach moderate condition.
- h3d Mixed scrub – Areas of mixed scrub will be created to border the north-western corner of the site and areas at the south-western side of the site. The areas will be planted with native scrub species, and will be allowed to establish on low nutrient soil alongside the areas of other neutral grassland, to create a mosaic of ruderal, grassland and scrub species. The scrub is expected to achieve moderate condition.
- 41 No. individual native trees are proposed to be planted alongside the access road, pathways and communal car parking areas and are expected to reach moderate condition. The sycamore tree on the south-western boundary will be retained and the offsite trees to the north and south will be protected during the works.
- Urban habitats will be created onsite to include introduced shrubs, vegetated gardens, unvegetated gardens, buildings, footpaths and roads. These urban habitats cannot be assigned a condition and therefore no assessments are required for these habitats.

3.2.6 Hedgerows are to be planted onsite and will create 1.51 linear units, however as there were no linear habitats present at the baseline, a percentage linear feature gain cannot be calculated. The newly created hedgerows will be managed as follows:

- h2a Native hedgerow – native hedgerows will be created along the western, northern and part of the eastern boundaries of the site and are expected to reach moderate habitat condition.



Figure 1. Baseline Habitats Plan



Figure 2. Post-development Habitats Plan

4 HABITAT MANAGEMENT PRESCRIPTIONS

4.1.1 The initial management prescriptions and ongoing management prescriptions for the proposed habitats on site are detailed below using the templates from Natural England's Companion Document (**Tables 1-5**), the parcel references are shown in **Figure 3** and are marked up in a habitat and hedgerow management work schedule in **Table 6** in **Section 5**.

4.2 g4 - Modified Grassland

4.2.1 Creation, Enhancement and Management Summary (GL-T01)

Table 1. Conditions from Statutory Biodiversity Metric habitat condition assessment sheets – Sheet 5. Grassland Low

Condition Assessment Criteria		Targeted	Relevant Parcels	Creation Approach	Enhancement Approach	Management Approach
A	<p>There are 6-8 vascular plant species per m² present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition.</p> <p><i>Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m², please review the full UKHab description to assess whether the grassland should be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high or very high distinctiveness, please use the relevant condition sheet.</i></p>	No	6	The regular management required to maintain the use of the newly created grassland parcels as amenity spaces, and the expected high traffic use will reduce the ability for these parcels to meet the required species per m ² .		
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No	6	The grassland parcels will be regularly mowed as needed to maintain amenity function, therefore it would not be suitable to aim for the variation of sward height.		

C	<p>Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present).</p> <p>Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.</p>	Yes	6	Newly created parcels of amenity grassland will surround the residential plots, and therefore will be mostly bordered by urban habitats with little chance for scrub species to spread onto the land and be managed regularly.		Parcels will be regularly mowed as needed to maintain amenity function, therefore reducing the opportunity for scrub species to establish within the parcels.
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	No	6	Due to the regular use and expected high traffic by residents, excessive poaching/damage is likely to reach over 5%.		
E	Cover of bare ground between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens.)	Yes	6	Areas of newly created amenity grassland surrounding the residential plots and pathways will be created by the laying of a low-maintenance species-poor turf.		If any areas of grassland were to fail or areas of bare ground gets too high, remediation through re-seeding or re-turfing as needed will be carried out.
F	Cover of bracken <i>Pteridium aquilinum</i> less than 20%.	Yes	6	Areas of amenity grassland surrounding the residential plots and pathways will be created by the laying of a low-maintenance species-poor turf.		Regular management to maintain amenity value will reduce the opportunity for any bracken that may be present on site to establish within the parcels.

G	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA).	Yes	6	Areas of amenity grassland surrounding the residential plots and pathways will be created by the laying of a low-maintenance species-poor turf.		Regular management of the parcels will allow for the identification and removal of any non-native species that may establish within the parcels.
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Additional Management Prescriptions (GL-B01)

The parcels of modified grassland are to be functional as amenity areas for the residents and therefore provide useable green space within the development. Due to the expected high level of use and regular management that will be required to maintain these as amenity spaces, grassland condition will be not expected to reach higher than poor condition.

4.3 g3c – Other neutral grassland

4.3.1 Creation, Enhancement and Management Summary (GH-T01)

Table 2. Conditions from Statutory Biodiversity Metric habitat condition assessment sheets – Sheet 6. Grassland Med High and V. High.

Condition Assessment Criteria		Targeted	Relevant Parcels	Creation Approach	Enhancement Approach	Management Approach
A	<p>The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific habitat type.</p> <p>Note – this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.</p>	Yes	3,4,5	The main grassland areas will be seeded with a wildflower seed mix at a rate of 5g/m ² , and will be allowed to establish on top of low nutrient soil.		The grassland will be managed in a low intensity manner, to include 2-3 cuts per year, to allow for species diversity to be maintained and avoid dominance of grass species. If grass species are dominating, consideration of further wildflower seeding and/or plug plants that will reduce

						grass dominance, e.g. use of yellow rattle.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Yes	3,4,5	<p>Areas of raised bunds and shallow depressions will be created using gravel, stone and earth within the parcels to provide ecological niches for invertebrates.</p> <p>Combined with adjacent mixed scrub habitat at the north-western corner and on the eastern boundaries, this will create a mosaic habitat and provide ecological niches.</p>		The grassland will be managed in a low intensity manner, to include 2-3 cuts per year, to allow for at least 20% to reach higher than 7cm.
C	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	No	3,4,5	Areas of bare ground with loose gravel will be intentionally created to compensate for the lost open mosaic on previously developed land, and therefore will likely exceed 5% over the parcels.		
D	Cover of bracken <i>Pteridium aquilinum</i> less than 20% and cover of scrub (including bramble) less than 5%.	Yes	3,4,5	The grassland parcels are to be created adjacent to parcels of mixed scrub which will be regularly managed to maintain a		

				mosaic of habitats to compensate for the loss of open mosaic on previously developed land.		
E	<p>Combined cover of species indicative of suboptimal condition and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging activities) accounts for less than 5% of total area.</p> <p>If any invasive non-native species (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.</p>	Yes	3,4,5	<p>The creation of the grassland parcels will be on low nutrient soil, which is less suitable for sub-optimal species, and the grassland will be cut and collected to reduce the build-up of nutrients within the soil.</p> <p>Access to the grassland areas will be discouraged to residents to reduce poaching due to footfall.</p>		
F	<p>There are 10 or more vascular plant species per m² present, including forbs that are characteristic of the habitat type.</p> <p>Note – this criterion is essential for achieving Good condition for non-acid grassland types only.</p>	No	3,4,5	<p>The grassland parcels will be seeded with a species rich wildflower grass mix, suitable for a low-nutrient soil, but will be managed to create a mosaic habitat with the adjacent scrub and therefore is unlikely to meet this criteria.</p>		

Additional Management Prescriptions (GH-B01)

To compensate for the loss of open mosaic on previously developed land, these parcels will include bunds, shallow depressions and will be created on low nutrient soil, to emulate and create ecological niches for invertebrates. It is expected that the habitat parcels will reach moderate condition as there will be

aims to create higher percentage cover of bare ground within the parcel and regular management to maintain the mosaic nature with the adjoining scrub habitat.

4.4 h3d – Mixed scrub

4.4.1 Creation, Enhancement and Management Summary (SC-T01)

Table 3. Conditions from Statutory Biodiversity Metric habitat condition assessment sheets – Sheet 19. Scrub.

Condition Assessment Criteria		Targeted	Relevant Parcels	Creation approach	Enhancement Approach	Management Approach
A	<p>The parcel represents a good example of its habitat type – the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range).</p> <ul style="list-style-type: none"> - At least 80% of scrub is native, - There are at least three native woody species, - No single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i>, common juniper <i>Juniperus communis</i>, sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i>, which can be up to 100% cover). 	Yes	1,2	The proposed areas of mixed scrub will be created along the north-western corner of the site and in parcels to the west and southwest, on low nutrient soil and to include a stand mix of hawthorn (<i>Crataegus monogyna</i>), gorse (<i>Euonymus europaeus</i>), holly (<i>Ilex aquifolium</i>), dog-rose (<i>Rosa canina</i>) and hazel (<i>Corylus avellana</i>).		The management of the scrub to ensure it does not encroach into the adjacent grassland will also manage the variety of scrub species establishing to ensure no single species dominates more than 75%.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	No	1,2	As it is newly planted scrub, is it unlikely than any specimens will reach maturity within the expected time period and the areas support a range of ages		

C	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA) and species indicative of suboptimal condition make up less than 5% of ground cover.	Yes	1,2	Newly created scrub will be created on a new soil bed, which will only include native species.		If any non-native species are observed within the parcels, these will be removed immediately and by professionals.
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes	1,2	The scrub habitat will form part of a mosaic of habitats with the adjoining other neutral grassland, with an edge of grassland and scattered scrub.		A scalloped edge should be maintained to create a natural graduation/succession into the adjacent other neutral grassland at the north-western boundary of the site.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Yes	1,2	Small glades will be created within the larger scrub parcels as the mosaic of scrub and grassland habitats grow and naturally form in the scalloped edge.		A scalloped edge should be maintained to create a natural graduation/succession into the adjacent other neutral grassland at the north-western boundary of the site.

Additional Management Prescriptions (SC-B01)

To compensate for the loss of scrub on site, a scalloped scrub boundary will be created and is expected to reach moderate condition. The management will need to be dynamic as the scrub establishes and close monitoring will enable prescriptive management operations for each scrub parcel.

4.5 Individual Trees

4.5.1 Creation, Enhancement and Management Summary (UT-T01)

Table 4. Conditions from Statutory Biodiversity Metric habitat condition assessment sheets – Sheet 9. Individual Trees

Condition Assessment Criteria		Targeted	Relevant Features	Creation Approach	Enhancement Approach	Management Approach
A	The tree is a native species (or more than 70% within the block are native species).	Yes	8	The proposed individual tree planting will include native species such as, but not restricted to: alder (<i>Alnus glutinosa</i>), field maple (<i>Acer campestre</i>), silver birch (<i>Betula pendula</i>), downy birch (<i>Betula pubescens</i>), hornbeam (<i>Carpinus betulus</i>), oak (<i>Quercus robur</i>) and rowan (<i>Sorbus aucuparia</i>).		
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	8	The new trees will be individually planted and therefore automatically pass this criterion.		
C	The tree is mature (or more than 50% within the block are mature).	No	8	Newly planted trees will not be able to meet this condition within 30 years.		
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current	Yes	8	The use of herbicides will be avoided around the newly planted trees. The tree locations have been		The individual trees should not be pruned in the first 3 years. Thereafter, the new growth of the trees can be

	regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.			designed to allow for the full growth of the trees without impacting the amenity use of the site.		trimmed as needed, for example to avoid obstructing the access road. This should be done in the dormant season in late winter-early spring.
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	8	Newly planted trees will be unlikely to meet this condition within 30 years.		
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	8	The trees will be planted within amenity grassland and shrub beds, and therefore will have majority of the canopy oversailing vegetation.		

Additional Management Prescriptions (UT-B01)

No additional management prescriptions are required beyond typical tree maintenance for newly planted specimens

4.6 h2a - Native hedgerow

4.6.1 Creation, Enhancement and Management Summary (HD-T01)

Table 5. Conditions from Statutory Biodiversity Metric habitat condition assessment sheets – Sheet 8. Hedgerow

Condition Assessment Criteria		Targeted?	Relevant Features	Creation Approach	Enhancement Approach	Management Approach
A 1	Height >1.5m average along length.	No	7	Newly planted hedgerows are considered unlikely to meet this criteria within the target time.		

A 2	Width >1.5m average along length.	Yes	7	The hedgerow will be planted with native saplings at a spacing of 5 per metre, and in a staggered pattern to cover a 1 metre width.		
B 3	Gap – hedge base Gap between ground and base of canopy <0.5m for >90% of length.	Yes	7	The initial regular maintenance and care of the hedgerow saplings will encourage growth and reduce likelihood of gaps at the base of the hedgerow.		The hedgerow shrubs will be cut back two years after establishment to a half of their height to encourage the development of multiple stems and vigorous growth within 0.5m of ground level. Thereafter, the new growth of the hedgerow can be regularly trimmed to maintain the shape of the hedgerow as a boundary.
B 2	Gap – hedgerow canopy continuity Gaps make up <10% of total length; and no canopy gaps >5m.	Yes	7	The hedgerow will be planted with native saplings at a spacing of 5 per metre, and in a staggered pattern to help with establishing canopy continuity.		The hedgerow shrubs will be cut back two years after establishment to a half of their height to encourage the development of multiple stems and vigorous growth within 0.5m of ground level. As a remedial measure, any failed saplings will be replaced.
C 1	Undisturbed ground and perennial vegetation	No	7	Urban habitats will be present on at least one side of all the hedgerows		

	<p>>1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length:</p> <ul style="list-style-type: none"> measured from outer edge of hedgerow, and is present on one side of the hedge (at least) 			to be created, with managed perennial vegetation of 1m width to be present on less than 90% of the created hedgerows.		
C 2	<p>Nutrient-enriched perennial vegetation</p> <p>Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.</p>	Yes	7	Perennial vegetation will be created on low nutrient soil adjacent to the hedgerows on the eastern and western side of the site.		
D 1	<p>Invasive and neophyte species</p> <p>>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species.</p>	Yes	7	Newly created hedgerows will be planted with native, architype species only.		Long-term monitoring of the planted hedgerows will identify and remove any invasive non-native species that may establish within the site.
D 2	<p>Current damage</p> <p>>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.</p>	Yes	7	There is not considered to be significant use of machinery or significant human pressures that would cause damage to >90% of hedgerows.		In the unlikely scenario that areas of the hedgerow are damaged, remedial measures from monitoring visits will be triggered and these areas replanted.
E 1	<p>Tree class (applicable to hedgerows with trees only)</p> <p>There is more than one age-class (or morphology) of tree present (for example:</p>	No	7	No trees will be planted within the hedgerows which will be regular		

	young, mature, veteran and or ancient), and there is on average at least one mature, ancient or veteran tree present per 20 – 50m of hedgerow.			manged along the boundaries of the site.		
E 2	<p>E2. Tree health (applicable to hedgerows with trees only)</p> <p>At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.</p>	No	7	No trees will be planted within the hedgerows.		

Additional Management Prescriptions (HD-B01)

No additional management prescriptions are required beyond typical tree maintenance for newly planted specimens

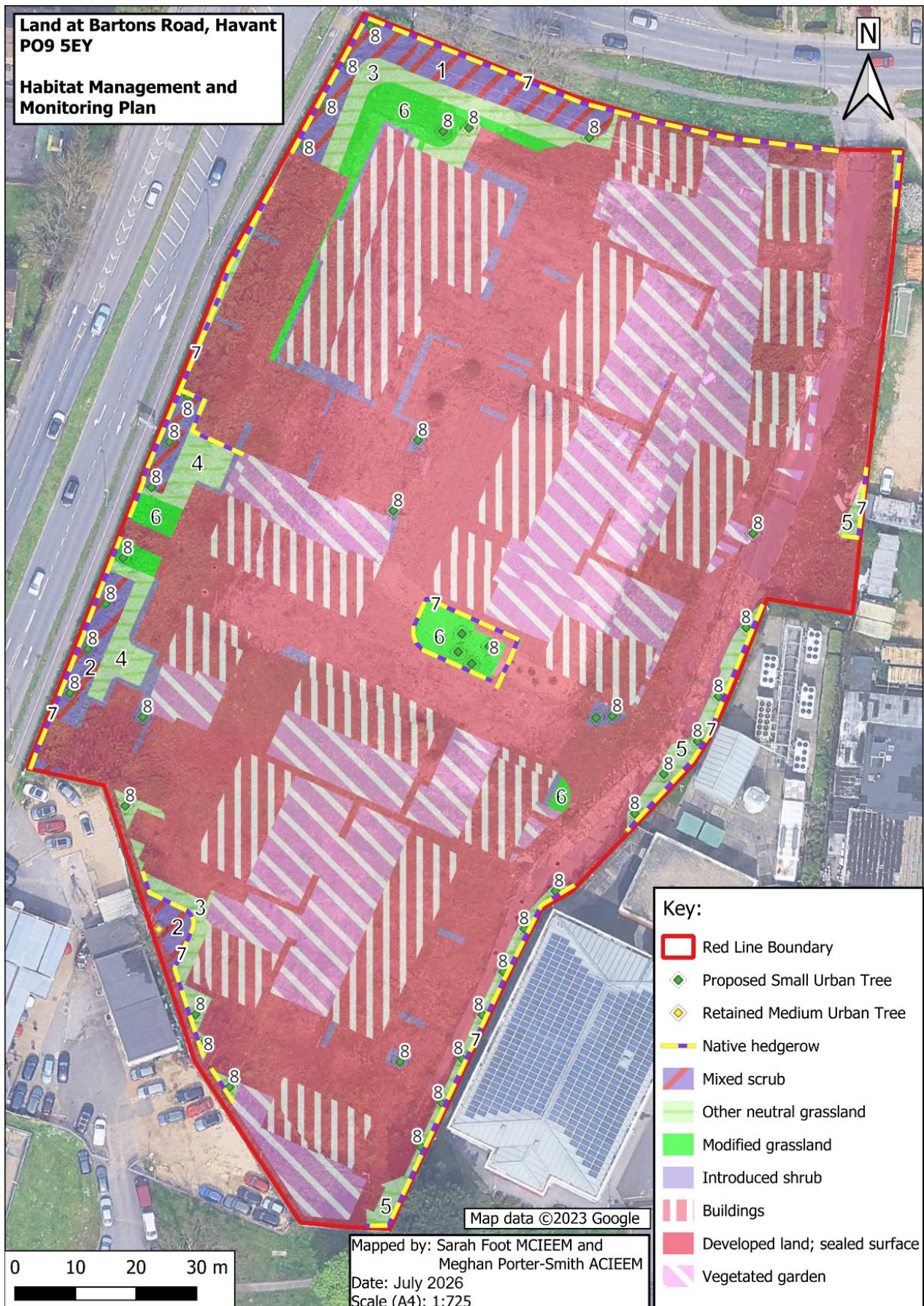


Figure 3. HMMP Parcel References Plan

5 HABITAT AND HEDGEROW MANAGEMENT WORK SCHEDULE

Table 6. Habitat Management Work Schedule for 30-year period (Year 1 = 2027)

Action	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Modified Grassland																				
Laying of low-maintenance amenity grassland turf or sowing of seed mix on low nutrient soil.	X																			
Cut grass as needed to maintain availability for amenity use; cuttings removed from site.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Other Neutral Grassland																				
Sowing of native other neutral grassland seed mix on low nutrient soil.	X																			
Spring (March-early April) cut of other neutral grassland to reduce grass growth; cuttings removed from site.		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mid-July to early September – 1 cut; cuttings removed from site.		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Additional seeding or plug planting (i.e. yellow rattle) carried out in Autumn if monitoring shows concerns over establishing grasses and a low species diversity.										X					X					X
Mixed scrub																				
Planting of native scrub saplings mix on low nutrient soil.	X																			
Annual scrub maintenance checks after planting (years 1-3); continued checks until year 5 if planted scrub survival rates drop below 80%. Replacement of dead scrub with the same species; favouring natural regeneration wherever possible.		X	X	X	X															

Removal of guards on established scrub specimens.																				
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Selective thinning and creation of small glades for enhancing structural diversity of existing and planted scrub if appropriate based on monitoring results.										X					X					X
Individual Trees																				
Planting of native amenity trees.	X																			
Annual maintenance checks after planting (years 1-3); continued checks until year 5 if planted tree survival rates drop below 80%. Replacement of dead plants with the same species. Removal of tree guards on established plants.		X	X	X	X															
Selective management on limbs to continue to allow amenity value of trees within the site.						X				X				X				X		
Native hedgerow																				
Planting of hedgerow whips, mulching and watering.	X																			
Annual plant maintenance checks after planting (years 1-3); continued checks until year 5 if planted tree survival rates drop below 80%. Replacement of dead plants with the same species; favouring natural regeneration wherever possible. Removal of guards on established plants.		X	X	X	X															
One cut in winter allowing 10cm width and height increase each successive year.						X			X			X			X				X	
Laying, coppicing or reshaping of hedgerows.																X				

Action	Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y30
Modified grassland										
Laying of low-maintenance amenity grassland turf or sowing of seed mix on low nutrient soil.										
Cut grass as needed to maintain availability for amenity use; cuttings removed from site.	X	X	X	X	X	X	X	X	X	X
Other Neutral Grassland										
Additional seeding or plug planting carried out in Autumn if monitoring shows concerns over establishing grasses and a low species diversity.					X					
Spring (March-early April) cut of other neutral grassland to reduce grass growth; cuttings removed from site.	X	X	X	X	X	X	X	X	X	X
Mid-July to early September – 1 cut; cuttings removed from site.		X	X	X	X	X	X	X	X	X
Mixed scrub										
Selective thinning and creation of small glades for enhancing structural diversity of existing and planted scrub if appropriate based on monitoring results.					X					X
Amenity trees										
Selective tree management on limbs to continue to allow amenity value of trees within the site.	X			X				X		
Hedgerows										
Aftercare, replacement of dead plants as needed, watering if required, and application of mulch.										
One cut in winter allowing 10cm width and height increase each successive year.		X			X			X		
Laying, coppicing or reshaping of hedgerow.										X

6 HABITAT MONITORING

6.1 Modified grassland (g4)

6.1.1 Monitoring of the modified grassland areas is required to check if the habitat has been successful in establishing. The modified grassland is only expected to reach poor condition and therefore will require less monitoring than the other created habitats. Monitoring of the grassland parcels will be undertaken from June -July, by a suitably qualified and experienced ecologist. The monitoring will comprise placing 1m² quadrats in the grassland (number of quadrats to be determined based on size and habitats for each unit) deployed in a grid pattern. Plant species cover, abundance and distribution will be recorded using the DOMIN scale.

6.1.2 Any deviation from the required condition score will act as the mechanism for implementing remediation i.e. re-seeding or re-turfing. The remedial measures will be implemented if:

- The grassland is clearly not establishing prior to that time; or
- The grassland has been damaged at any time in the process.

6.1.3 Monitoring will be undertaken during the following years: Y2, Y4, Y7, Y10 and then every 10 years Y20, Y30 if no remedial action is required.

6.1.4 If remedial work is deemed necessary at any point, monitoring will be undertaken the year following remedial action and then two years afterwards.

6.2 Other neutral grassland (g3c)

6.2.1 Regular monitoring of the created other neutral grassland parcels is required to check if species and structural diversity is increasing. Monitoring of the other neutral grassland parcels will be undertaken in June to July, by a suitably qualified and experienced ecologist. The monitoring will comprise placing 1m² quadrats in the grassland (number of quadrats to be determined based on size and habitats for each unit) deployed in a grid pattern. Plant species cover, abundance and distribution will be recorded using the DOMIN scale.

6.2.2 Any deviation from the required condition score will act as the mechanism for implementing remediation i.e. re-seeding or re-turfing. The remedial measures will be implemented if:

- The set target condition of 5 years (as specified in the BNG metric) is not met; or
- The grassland is clearly not establishing prior to that time; or
- The grassland has been damaged at any time in the process.

6.2.3 Monitoring will be undertaken during the following years: Y2, followed by every two years until year 10 i.e. in Y4, Y6 and Y8 and Y10 and then every 5 years Y15, Y20, Y25, Y30 if no remedial action is required.

6.2.4 If remedial work is deemed necessary at any point, monitoring will be undertaken the year following remedial action and then two years afterwards.

6.3 Mixed scrub (h3d)

6.3.1 The newly planted scrub will be monitored more frequently in the first 5 years during initial establishment and tree aftercare period, and then sequentially reduced up until the end of the 30-year period.

6.3.2 Monitoring will be undertaken by a suitably qualified ecologist in May – June and will comprise regular quadrats every 10 metres along the length of the scrub parcels. within .

6.3.3 Any deviation from the required condition scores for moderate condition for the woodland creation units will act as the mechanism for implementing remediation. The remedial measures will be implemented if:

- The set target conditions at 5 years (as specified in the BNG metric) is not met; or
- The scrub parcel is clearly not establishing prior to that time; or
- The scrub parcel has been damaged at any time in the process.

6.3.4 Monitoring of mixed scrub will be undertaken during the year following planting, i.e. Y2, then every year until Y4, unless scrub mortality is high and then it will continue until Y6, and then every 2 years i.e. in Y10, and every five years until Y20 and then finally in Y30 if no remedial action is required.

6.3.5 If remedial work is deemed necessary, the monitoring will start up again the year following remedial action and then two years afterwards and then following the monitoring pattern described above. An updated work schedule would be issued to the Council as part of the reporting process to show the remediation process.

6.4 Native Hedgerow (h2a)

6.4.1 The newly planted hedgerows will be monitored more frequently in the first 5 years and then sequentially reduced up until the end of the 30 year monitoring period.

6.4.2 Monitoring will be undertaken by a suitably qualified ecologist in June to July and will comprise inspections of the structure of the hedge with reference to the condition assessment criteria e.g. width, distance between ground and canopy etc.

and 1m x 1m quadrats will be deployed per 30m length along the hedgerow to determine the composition of the ground flora (Hedgerow Survey Handbook (DEFRA, 2017)).

6.4.3 It is expected that the hedgerows will reach moderate condition within the 30 year period with appropriate management and based on the amenity use of the site.

6.4.4 Any deviation from the required condition score of moderate condition respectively for the hedgerow creation unit will act as the mechanism for implementing remediation. The remedial measures will be implemented if:

- The set target conditions at 5 years (as specified in the BNG metric) is not met; or
- The hedgerow is clearly not establishing prior to that time; or
- The hedgerow has been damaged at any time in the process.

6.4.5 Monitoring of the newly planted hedgerows will be undertaken during the year following planting, i.e. Y2, then every year until Y4 during the initial aftercare period, unless plant survival rate is low (i.e. less than 80%) and then it will continue until Y6, and then approximately every 2 years until Y10 and every 5 years i.e. Y15, Y20, Y25 and Y30 if no remedial action is required.

6.4.6 If remedial work is deemed necessary, the monitoring will start up again the year following remedial action and then two years afterwards and then following the monitoring pattern described above. An updated work schedule would be issued to the Council as part of the reporting process to show the remediation process.

6.5 Individual Tree Planting

6.5.1 The amenity tree planting alongside the access road will be monitored more frequently in the first 5 years during initial establishment and tree aftercare period, with a sequential reduction up until the end of the 30-year monitoring period.

6.5.2 Any deviation from the required condition scores for moderate condition will act as the mechanism for implementing remediation. The remedial measures will be implemented if:

- The set target conditions at 27 years (as specified in the BNG metric) is not met; or
- The trees are clearly not establishing prior to that time; or
- The trees have been damaged at any time in the process or fails other condition assessment criteria.

6.5.3 If remedial work is deemed necessary, the monitoring will start up again the year

following remedial action and then two years afterwards and then following the monitoring pattern described above. An updated work schedule would be issued to the Council as part of the reporting process to show the remediation process.

7 HABITAT AND HEDGEROW MONITORING WORK SCHEDULE

Table 7. Habitat and Hedgerow Monitoring Work Schedule for 30-year period

Action	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Modified Grassland																				
Monitoring of grassland (Poor condition; time to target condition 1 year)		X		X			X			X										X
Other Neutral Grassland																				
Monitoring of grassland (moderate condition; time to target condition 5 years)		X		X		X		X		X					X					X
Individual trees																				
Monitoring of individual trees creation (moderate condition; time to target condition 27 years)		X		X		X		X		X					X					X
Mixed Scrub																				
Monitoring of mixed scrub creation (moderate condition; time to target condition 5 years)		X	X	X	X			X			X				X					X
Native hedgerow																				
Monitoring of hedgerow (poor condition; time to target condition 5 years)		X	X	X	X			X			X				X					X

Action	Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y30
Modified Grassland										
Monitoring of grassland (Poor condition; time to target condition 1 year)										X
Other Neutral Grassland										
Monitoring of grassland (moderate condition; time to target condition 5 years)					X					X
Individual trees										
Monitoring of individual trees creation (moderate condition; time to target condition 27 years)					X					X
Mixed Scrub										
Monitoring of mixed scrub creation (moderate condition; time to target condition 5 years)					X					X
Native hedgerow										
Monitoring of hedgerow (poor condition; time to target condition 5 years)					X					X

8 PLAN IMPLEMENTATION

8.1 Responsibilities

- 8.1.1** The landowner, Guinness, has the legal responsibility for ensuring the implementation of this Habitat Management and Monitoring Plan. All management operations, including the habitat creation, management and monitoring will be organised by the landowner to achieve the specific prescriptions. If the ownership of the land changes, responsibility for this HMMP will move to the new landowner.

8.2 Costs

- 8.2.1** The landowner, Guinness, will maintain the landscaping and management for the habitats that are outside of residential curtilages within the site. Therefore, there will be management funding required in this case to achieve this habitat management and monitoring plan.

9 REFERENCES

BSI (2013). *Biodiversity - Code of Practice for Planning and Development BS42020:2013*. BSI Standards Limited: London.

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