

300 BROOK DRIVE - HABITAT MANAGEMENT AND MONITORING PLAN

INTRODUCTION

This Habitat Management and Monitoring Plan (HMMP) has been produced by Greengage Environmental Limited (Greengage) to support the development of the site known as 300 Brook Drive in Reading, Berkshire (planning application number: PL/24/1520).

The development seeks *'External refurbishment of an existing office building (Use Class E) including alterations to the main entrance space, elevations, installation of solar photovoltaics (PV) panels and electric vehicle charging points, replacement plant equipment, external lighting, erection of a new cycle store with changing facilities, a new external pergola and associated landscaping works.'*

This HMMP summarises how the significant on-site enhancements being delivered by the development will be managed and monitored for at least 30 years, in-line with statutory Biodiversity Net Gain (BNG) requirements.

POST-DEVELOPMENT HABITATS

The development proposes to create new habitats and enhance existing habitats on-site to provide a net gain for biodiversity. New habitats proposed include other neutral grassland, urban trees, introduced shrub, other green roof, and rain garden. Existing areas of modified grassland will be enhanced to other neutral grassland. Existing areas of reedbed and mixed scrub will be retained. Some areas of modified grassland and introduced shrub will also be retained.

The post-development habitats to be created, enhanced or retained, and managed for 30 years, are shown in Figure 1 below.

Figure 1 Proposed Habitats Plan

300 BROOK DRIVE

 Red Line Boundary

Habitats

-  Artificial unvegetated unsealed surface
-  Developed land; sealed surface
-  Introduced shrub
-  Mixed scrub
-  Modified grassland
-  Other green roof
-  Other neutral grassland
-  Rain garden
-  Reedbeds

Hedgerows

-  Non-native and ornamental hedgerow

Individual Trees

-  Proposed small tree
-  Retained medium tree
-  Retained small tree

Title: Proposed Habitats

Drawn by: SR
Date: 13/05/2025

Reviewed by: JB
Date: 13/05/2025

Project number: 552638
Sources: Google Satellite Imagery

 Greengage



HABITAT AND CONDITION TARGETS

Target Habitat Type	Targeted Condition	Years to Targeted Condition	Condition Assessment Targets	Comments
Modified grassland	Poor	N/A	Poor condition will be retained by continuing to achieve criteria C, D, F, and G.	Approximately 464m ² of modified grassland will be retained in its current condition. Poor condition does not require the satisfaction of any condition criteria and changes to the existing management regime are not required.
Other neutral grassland	Poor	1 (enhanced) 2 (created)	Poor condition will be targeted by achieving only criteria D and E.	The majority of the other neutral grassland will be amenity grassland sown with a species-rich wildflower grassland seed mix that responds well to regular mowing, such as Emorsgate EL1 Flowering Lawn Mixture. These areas will be managed to a short height for amenity use.
Other neutral grassland	Moderate	10	Moderate condition will be targeted by achieving criteria A, B, D, and E.	Two patches of other neutral grassland in the western lawn, over the raised land of the amphitheatre and adjacent the existing Chinese silver grass, will be managed for biodiversity and allowed to grow tall with a varied sward height and will thus achieve moderate condition.
Mixed scrub (Retained)	Moderate	N/A	Moderate condition will be retained by continuing to achieve criteria B, C, and E.	This mixed scrub on site will be retained in its current condition. Some areas adjacent to the existing scrub are sparsely vegetated and a slight natural expansion of the existing scrub habitat into these areas is expected. To maintain the scrubs current condition, management should continue in-line with the pre-development regime. Natural regeneration should be allowed, invasive non-native species should be removed if present, and clearings throughout the scrub should be maintained.
Artificial unvegetated; unsealed surface	N/A	0	N/A	N/A
Developed land; sealed surface	N/A	0	N/A	N/A
Introduced shrub	N/A	1	N/A	Approximately 1041m ² of introduced shrub will be planted. Introduced shrub is not subject to a condition assessment and thus does not require satisfaction of any condition criteria.
Other green roof	N/A	1	N/A	Approximately 88m ² of other green roof will be created. Other green roof is not subject to a condition assessment and thus does not require satisfaction of any condition criteria. The green roof will be managed in-line with the Sedum Roof Maintenance Schedule produced for the site.
Rain garden	Moderate	3	Moderate condition will be targeted by achieving criteria B and C.	A rain garden will be created within the western lawn. The rain garden will be planted with marginal vegetation comprising a variety of species that benefit native wildlife (i.e. via pollinator provision).
Reedbeds (Retained)	Good	N/A	Good condition will be retained by continuing to achieve criteria A, B, C, D, E, and I.	The reedbed on site will be retained in its current condition (which, as a precaution due to insufficient data, was assigned as good for the BNG assessment). The reedbed management should continue in-line with the pre-development regime.
Urban tree (Retained)	Good	N/A	Good condition will be retained by continuing to achieve criteria B, C, D, and F. Some trees will be native species, and therefore also meet criterion A.	Five trees in good condition will be retained. These trees should continue to be managed in-line with the pre-development regime. Intensive pruning regimes should not be put in place; the trees should retain at least 75% of expected canopy for a tree of their age and height.
Urban tree	Moderate	N/A (retained) 27 (planted)	Moderate condition will be retained or targeted by achieving criteria B, D, and F. Some trees are/will be native species, and therefore also meet criterion A.	Tree planting will take place. A mix of native and non-native species will be used. 68 trees in moderate condition will be retained. These trees should continue to be managed in-line with the pre-development regime. 30 new trees will be planted. These trees should oversail vegetation. Intensive pruning regimes should not be put in place; the trees should retain at least 75% of expected canopy for a tree of their age and height.

Non-native and ornamental hedgerow	N/A	1	N/A	Approximately 47m of non-native and ornamental hedgerow will be planted. Non-native and ornamental hedgerow is not subject to a condition assessment and thus does not require satisfaction of any condition criteria.
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CREATION, ENHANCEMENT AND MANAGEMENT TARGETS AND PRESCRIPTIONS

The habitat creation and management prescriptions for the newly created habitats on site are given below. All other post-development habitats are not subject to condition assessment and require no specific management actions (i.e. introduced shrub and non-native and ornamental hedgerow) or are to be retained in their current condition with no change to existing management (i.e. mixed scrub, modified grassland and reedbeds). The other green roof does not require specific management under the HMMP for satisfaction of BNG, however, will be managed in-line with the Sedum Roof Maintenance Schedule produced for the site.

Other neutral grassland

Creation and management summary

Condition Assessment Criteria		Targeted	Creation/Enhancement Approach	Management Approach
A	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. Note – this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Yes (biodiversity) / No (amenity)	Other neutral grassland will be created through seeding. Where existing grassland is being enhanced, it should first be disturbed (e.g. scarification). Areas managed for biodiversity will be seeded with a species-rich wildflower mix and will be allowed to grow taller with a varied sward height and will represent a good example of this habitat type. Amenity grassland areas will be seeded with a species-rich grassland mix suited to regular mowing and will be managed for amenity use so will not represent a good example of this habitat type.	Supplementary sowing will be used where required to increase the species diversity of the habitat. Areas managed for wildflowers/biodiversity will be managed with cuts occurring twice per year (early Spring and late Summer/early Autumn). Amenity grassland areas are not expected to pass this criterion, though supplementary sowing will be provided if/when areas become overly bare/worn.
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 (biodiversity) / No (amenity)	The seed mix sown for the biodiverse areas should be species-rich and support a varied sward height, through the natural structural variation of the species present.	The biodiverse areas will be managed with cuts occurring twice per year (Spring and late Summer/Autumn), meaning the grassland will have ample opportunity to grow tall and varied in height. The amenity grassland will be managed regularly to a short height for amenity use.
C	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.	No	N/A	N/A
D	Cover of bracken <i>Pteridium aquilinum</i> less than 20% and cover of scrub (including bramble) less than 5%.	Yes	Grassland seed mixes will be sown and will not contain these species.	The grassland will be monitored for the establishment of undesirable species. Any found to be growing within the grassland will be removed and managed.
E	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. If any INNS (as listed on Schedule 9 of WCA) are present, this criterion is automatically failed.	Yes	Grassland seed mixes will be sown and will not contain these species. Damage due to excessive disturbance/compaction is not anticipated in these areas.	The grassland will be monitored for the establishment of undesirable species. Any found to be growing within the grassland will be removed and managed. If undesirable species continuously establish due to high nutrient levels, additional cuts with arisings removed from the grassland will be undertaken to reduce nutrient levels.
F	There are 10 or more vascular plant species per m2 present, including forbs that are characteristic of the habitat type.	No	N/A	N/A

	Note – this criterion is essential for achieving Good condition for non-acid grassland types only.			
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Creation, enhancement and management detailed methods

Action	Relevant Parcels	Timing	Prescriptions
Preparation of the soils for seeding	All	Autumn	Topsoil shall be kept weed-free prior to planting by hand weeding. Existing topsoil will be reused from the site where possible. Imported topsoil, if required, should be compatible in pH with existing soil on site and shall comply with British Standard (BS)3882: 2015 Multipurpose topsoil.
Seeding	All	Autumn	Seed to be surface sown in the Autumn, bulking up the seed with an inert carrier such as sand to make distribution easier, by machine or broadcast by hand. Rolling not usually necessary. No fertilisers shall be used. Wildflower seeding shall be undertaken in the Autumn, however an allowance for additional watering and overseeding between May-July should be made.
Onward maintenance	All	Post-planting	Maintenance visits will typically be undertaken once monthly between October and March and twice monthly between April and September. A guide minimum number of 18 visits per year shall therefore be undertaken. Overseeding wildflower areas as necessary to establish seeded areas.
Cutting	Areas managed for biodiversity	Late Summer / early Autumn and early Spring	Cutting after flowering in late July / August to 50 millimetres (mm), leaving the 'hay' to dry and shed seed for 1-7 days then remove from site. Mow the re-growth through to late Autumn Winter to c.50mm and again in Spring if needed. Do not cut from Spring through to late July / August to give sown species an opportunity to flower.

Rain garden

Creation and management summary

Condition Assessment Criteria		Targeted	Creation/Enhancement Approach	Management Approach
A	Vegetation structure is varied, providing opportunities for vertebrates and invertebrates to live, eat and breed. A single structural habitat component or vegetation type does not account for more than 80% of the total habitat area.	No	N/A	N/A
B	The habitat parcel contains different plant species that are beneficial for wildlife, for example flowering species providing nectar sources for a range of invertebrates at different times of year.	Yes	The rain garden will be planted with a variety of plant species that are beneficial for wildlife, including species on the Royal Horticultural Society’s Plants for Pollinators list.	Supplementary planting will be provided as required.
C	Invasive non-native plant species (listed on Schedule 9 of WCA) and others which are to the detriment of native wildlife (using professional judgement) cover less than 5% of total vegetated area. Note - to achieve Good condition, this criterion must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Yes	Invasive non-native species will not be planted.	The rain garden will be monitored for the establishment of undesirable species. Any found to be growing will be removed and managed.

Creation, enhancement and management detailed methods

Action	Relevant Parcels	Timing	Prescriptions
Planting	All	Autumn	Plant using native or climate-resilient wet-tolerant species suitable for rain gardens (e.g. sedges, rushes, purple loosestrife, meadowsweet, dogwood, willow). Mulch with 35mm composted woodchip without blocking inlets.
Establishment care	All	Summer (Years 1-3)	Water plants during prolonged dry spells. Keep areas around plants weed-free by hand or mulch (avoid herbicide use). Replace failures in the following planting season.
Weed & silt control	All	Spring/Summer	Regularly remove invasive or aggressive weeds (e.g. reed canary grass). Inspect inlets/outlets quarterly, removing accumulated litter and silt to maintain infiltration capacity
Replanting	All	Autumn	Replant poorly established or failed specimens.
Long-term Management	All	As needed	Selective thinning/pruning of shrubs to prevent shading of herbaceous species if necessary. Maintain surface permeability by controlling silt/litter build-up.

Urban trees

Creation and management summary

Condition Assessment Criteria		Targeted	Creation Approach	Management Approach
A	The tree is a native species (or more than 70% within the block are native species).	Yes / No	A mix of native and non-native species will be planted.	If any of the native trees fail, these must be replaced with the same species, or another native species.
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	Individual trees automatically pass this criterion	N/A
C	The tree is mature (or more than 50% within the block are mature).	No	N/A	N/A
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 regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Yes	N/A	The trees will be carefully managed to avoid damage (i.e. not heavily pruned).
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	N/A	N/A
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	Trees will be planted within, and will therefore be oversailing, vegetation.	The underlying habitats should be managed so that there is always vegetation beneath at least 20% of the tree canopy. Re-planting of understorey vegetation will be provided where needed.

Creation, enhancement and management detailed methods

Action	Timing	Prescriptions
Preparation of the soils for tree planting	October to March	Planters to be installed if required and existing subsoil to be broken up to assure adequate drainage. Any hardcore or rubble shall be fully removed. Topsoil is then to be laid over prepared subsoil as noted. Topsoil shall be kept weed-free prior to planting by hand weeding. Existing topsoil will be reused from the site where possible. In existing topsoiled areas, the depth of soil shall be checked to ensure minimum requirements noted above are achieved. Imported topsoil, if required, should be compatible in pH with existing soil on site and shall comply with BS3882: 2015 Multipurpose topsoil.
Tree planting	October to March	All tree planting to be in accordance with BS8545:2014. Tree pits to be excavated to a minimum size of 600mm larger than the root ball. Base of pit to be slightly domed; not to be broken up unless drainage problems are apparent. Tree pit backfill to reflect soil profile – i.e.: subsoil up to approx. 400mm from ground surface, topsoil above, approx. 400mm depth. Trees to be double staked, with a low cross bar, fixed with rubber tree ties and rubber pad. Trees outside planting areas to be mulched with minimum 50mm settled depth, medium graded ornamental bark mulch to 1.2m diameter. All planting shall be undertaken, at the latest, within the first planting season following substantial completion of the major construction and groundworks. The developer may, however, undertake planting prior to this, outside of the planting season, using fully containerised planting material. This is on the understanding that increased watering will be required to establish the planting successfully. All planting works will be undertaken and supervised by a competent professional landscape contractor.
Onward maintenance	Post-planting	Water trees as necessary to ensure vigorous and successful establishment during the early years after planting i.e. particularly Years 1 - 3. Keeping planting areas free from weeds. All planted / mulched areas shall be hand weeded as appropriate / required. Fertilising of tree pits annually in Spring using a suitable organic slow-release fertiliser. Checking and adjusting all tree stakes and ties at every maintenance visit during the first one to two years after planting. Removal of stakes and ties once trees are securely established (guide 12 - 18 months after planting). Replace plants that fail where required with the approved species (within five years of planting as a minimum). All planting will be inspected annually in late Summer. Any dead, dying or diseased plants shall be removed and replanted according to the approved plan in the following planting season.

MONITORING

Monitoring strategy

A site visit by a suitably qualified ecologist (SQE) will occur post-habitat creation, to ensure that all features have been installed as proposed/expected and to advise on remedial measures if applicable.

A monitoring visit by a SQE will occur annually thereafter to ensure the successful establishment of the features and provide adjustments to the monitoring and management processes as needed. The annual monitoring visit will be undertaken during the peak botanical season i.e. between May - August. Management will be an iterative process, and recommended management techniques may be altered throughout the course of the establishment to maximise the success of the features. After the first three years, and upon successful establishment, the monitoring checks will occur again on Year 5, and then in five-year intervals throughout the remainder of the 30-year period (i.e. Year 10, Year 15, Year 20, Year 25 and Year 30).

Photos to be taken at each monitoring check and a short report produced recording the species planted, current BNG condition assessment, and any remedial actions to improve the condition/succeed in reaching the proposed conditions in the expected timescale (if still feasible). Records of species lists for the grassland, mixed scrub, and reedbeds (including marginal vegetation) should be kept by the management company/Herefordshire Council.

Monitoring plan to be reviewed after five years, and frequency at which monitoring needs to be carried out thereafter until 30 years post-installation should be determined. The number of monitoring visits may be adjusted over the 30 year period, if deemed appropriate by the SQE.

Monitoring methods and intervals

Habitat Type	Monitoring Methods	Monitoring Interval and Timing
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Other neutral grassland	Undertake quadrat sampling to identify the habitat type that is establishing and the number of species per m ² . Check for the establishment of any invasive non-native or undesirable species e.g. buddleia. Estimate percentage of bare ground, bramble and bracken cover. Collect a botanical species list across grassland to check against target species list.	Annually from Years 1-3, then again in Year 5, followed by five-year intervals (i.e. Year 10, Year 15, Year 20, Year 25 and Year 30). Post Year 5, monitoring frequency will be reviewed. Surveys to be completed between May and August during peak botanical season.
Rain garden	Record species present and coverage to document whether a single species is over dominant (>75% cover). Check for the establishment of any invasive non-native or undesirable species. Check that drainage is adequate.	Annually from Years 1-3, then again in Year 5, followed by five-year intervals (i.e. Year 10, Year 15, Year 20, Year 25 and Year 30). Post Year 5, monitoring frequency will be reviewed. Surveys to be completed between May and August during peak botanical season.
Individual trees	Record number and species of trees present. Check whether all trees are establishing well. Signs of success are new growth, lack of dead limbs, no rot holes or callouses or lesions forming. Note any signs of adverse health e.g. rot, dead branches, fungal infections etc.	Annually from Years 1-3, then biennially i.e. during Year 5. Post Year 5, monitoring frequency will be reviewed. Survey to be undertaken March – September when tree foliage is in growth.

Monitoring reports

Project Year	Month Report to be Submitted	Month Management Plan to be reviewed	Comments
Year 1	October / November	October / November	Allows for surveys to be undertaken between May – August during the peak botanical season. Report on results of initial creation and management measures. As per HMMP, habitat will be monitored annually for the first 3 years.
Year 2	October / November	October / November	Report on results of initial management measures. Suggest amendments accordingly. Habitat will be monitored annually for the first 3 years.
Year 3	October / November	October / November	Report on results of initial management measures. Suggest amendments accordingly. Habitat will be monitored annually for the first 3 years.
Year 5	October / November	October / November	Report on results of management measures and of success/progress in the first 5 years post-establishment. Suggest amendments accordingly. Agree on a new monitoring schedule (suggested every 5 years) for the remainder of the HMMP commitment period (30 years total).
Year 10	October / November (on the year of monitoring)	October / November (on the year of monitoring)	Subject to review by the project ecologist as monitoring progresses. Monitoring and progress of establishment and management to be reviewed every 5 years.
Year 15	October / November (on the year of monitoring)	October / November (on the year of monitoring)	Subject to review by the project ecologist as monitoring progresses. Monitoring and progress of establishment and management to be reviewed every 5 years.

Year 20	October / November (on the year of monitoring)	October / November (on the year of monitoring)	Subject to review by the project ecologist as monitoring progresses. Monitoring and progress of establishment and management to be reviewed every 5 years.
Year 25	October / November (on the year of monitoring)	October / November (on the year of monitoring)	Subject to review by the project ecologist as monitoring progresses. Monitoring and progress of establishment and management to be reviewed every 5 years.
Year 30	October / November (on the year of monitoring)	October / November (on the year of monitoring)	Subject to review by the project ecologist as monitoring progresses. Monitoring and progress of establishment and management to be reviewed every 5 years.

Adaptive Management

Where creation/enhancement fails, in the first instance, the management company or landowner are to consult with the appointed SQE to identify the root cause of the failure of establishment of the planting.

Replacement planting, additional irrigation, or alterations to the species mix used may all be considered as remedial actions.

Where planted trees fail, these must be replaced. Either with the same species, or changes to the planting palette may be made where this can increase the success of establishment e.g. the use of hardier species.

Where grassland does not establish, oversewing of seed of the same mix may be used. Landscape architect to be consulted on choosing the appropriate seed type.

Where raingarden does not establish, new marginal vegetation must be planted after identifying the root cause for the failure of establishment and undertaking appropriate remedial actions (e.g. land reprofiling).

It is the responsibility of the landowner and any contractors/consultants hired by the council to contact the SQE and discuss and perform remedial actions in a timely manner.

