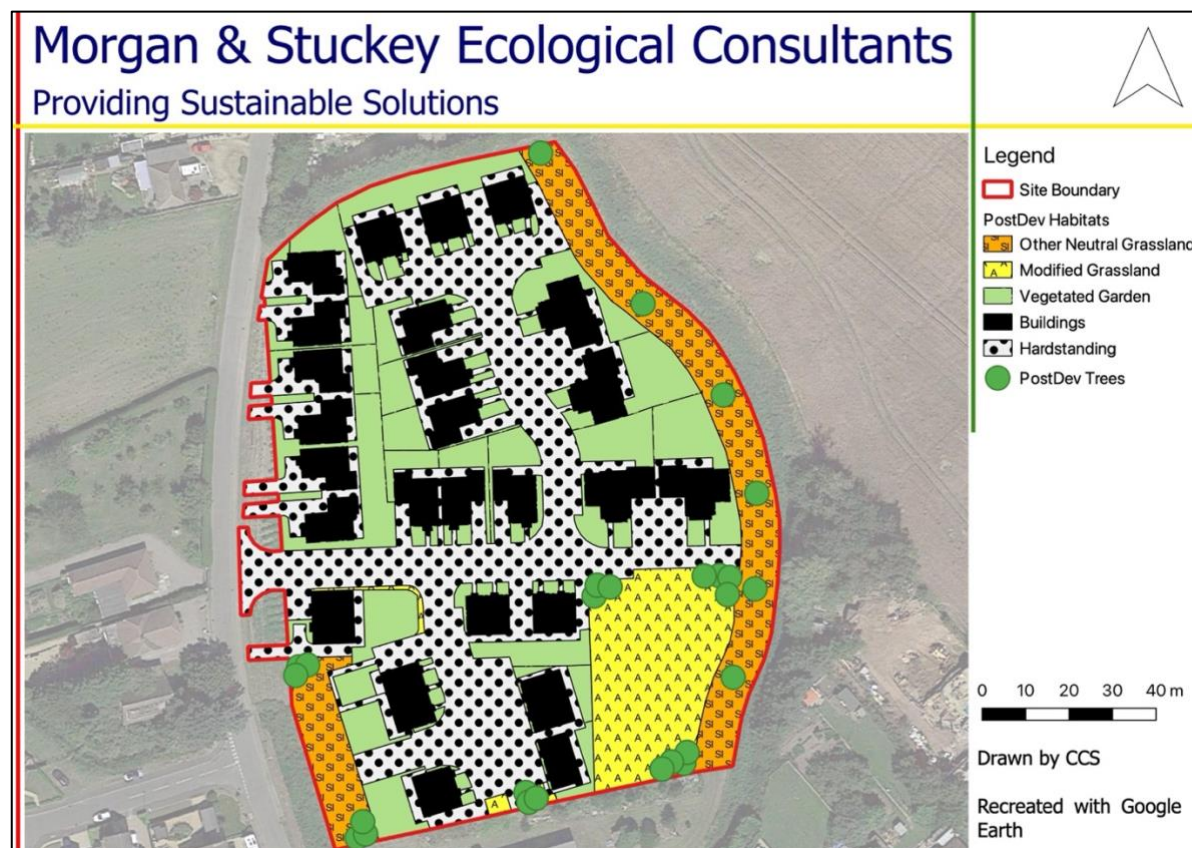


Habitat Management & Monitoring Plan



Post development habitat proposals

Report No. J3179
October 2023

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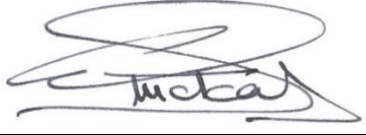
Morgan & Stuckey

Ecological Consultants – providing sustainable solutions.

DOCUMENT CONTROL

Document Title:	Habitat Management and Monitoring Plan Stockwell Gate, Whaplode
The Client:	Mr Simon Percival

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Report Number J3179	Status FINAL	Date of issue 23/10/23
Prepared by	Clifford Stuckey BSc (Hon's) PhD CEnv MCIEEM Ecologist	
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1 INTRODUCTION

1.1 BACKGROUND

Mr Welch has been granted outline approval to erect 37 dwellings including road layout, scale, appearance, and landscaping land north of First Bungalow Stockwell Gate Whaplode PE12 6UE. The Client, Mr Steve Stinders is now applying for Reserved Matters as the prospective purchaser, to develop the site.

Morgan & Stuckey have been appointed by Mr Simon Percival on behalf of the Client to write a Habitat Management and Monitoring Plan (HMMP) pursuant of Condition 16 of Outline Approval Reference H23-0827-22 relating to the Permitted Scheme.

The HMMP builds on and is inter-related to the following documents, which should be read in conjunction with the HMMP:

- PEA Report, Greenlight Environmental Consultancy, 31/05/22.
- Biodiversity Impact Assessment (BNG Assessment), Morgan & Stuckey, 21/06/23
- Drawings 4162-100 Site Block Plan and 4162-101 Landscape Plan, HA Architectural Services, 2022.
- Landscape Management Plan, HA Architectural Services, 2023.

1.2 BASELINE HABITATS

The site is comprised of arable field used for cereal crops, which at the time of the field survey in May 2022, was fallow and featured sparse ruderal/ ephemeral vegetation with field margins comprised of modified grassland.

A hedgerow is present just outside of the northern boundary of the site, which is to be retained.

1.3 POST DEVELOPMENT HABITATS

The proposed habitats consist mainly of developed land, sealed surface in the form of new residential dwellings, driveways and new access roads, with associated vegetated gardens.

No baseline habitats are to be retained; however, these are of low ecological value, consisting of cereal crop and poor modified grassland.

Boundary habitats are of a higher value, including the hedgerow along the northern boundary and the Whaplode River along the eastern boundary, both sit outside the development boundary and are to be retained unimpacted by the development.

A 9m buffer zone along the eastern and part of the western boundaries have been incorporated into the proposed plans to protect the river and the drain in these areas. This habitat will be planted with a species-rich grassland mix and will be managed to create diverse sward heights by mowing intentional pathways through the grassland to allow for human footfall and allowing the remainder to grow up.

Occasional small trees will be planted within this area and within the modified grassland communal park/ play area on site.

1.4 BIODIVERSITY NET GAIN

It is considered that with the appropriate management, detailed below, the proposed habitats on site will meet the following conditions:

UKHab Classification	Condition
Developed land; sealed surface	N/A
Vegetated gardens	N/A
Modified grassland	Good
Other Neutral Grassland	Good
Urban Tree – 26 Small	Moderate

This will result in a **10.35% BNG gain** in Habitat Area Units with the trading rules satisfied.

2 RESPONSIBLE PARTIES

All front and rear gardens of individual properties will be conveyed to house purchasers/tenants. These purchasers/tenants will then be responsible for maintaining their own property. Until private areas are conveyed, or the Management Companies take over, Stinders Homes will be responsible for maintaining all communal areas on site.

3 HABITAT MANAGEMENT AND MONITORING PLAN

3.1 MODIFIED GRASSLAND

The area of modified grassland on site will be regularly mown and used as a communal park/play area. As such it is recommended that a seed mix such as [EL1 Flowering Lawn Mixture](#) (Emorsgate Seeds) is used. The following recommendations are based on those provided by Emorsgate.

Ground Preparation

To prepare a seed bed first remove weeds using repeated cultivation. Then plough or dig to bury the surface vegetation, harrow, or rake to produce a medium tilth, and roll or tread to produce a level firm surface.

Sowing

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. To get an even distribution and avoid running out, divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good soil/seed contact.

First Year Management

The wildflower and grass species in this mix are perennial; they will be slow to germinate and grow and will not usually flower in their first growing season. There will often be a flush of annual weeds from the soil in the first growing season. This annual weed growth is easily controlled by repeated mowing.

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.

Management Once Established

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). Mowing may be suspended earlier in the year to allow cowslips to flower. Heavy quantities of cuttings should be collected and removed from site.

Table 3.1 Schedule- Modified Grassland

Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Ongoing
Initial sowing	Sep/Oct/Nov	-	-	-	-
Following seeding/turf laying provide signage for 'no entry'	For 6 weeks following seeding/turf laying or until grass is established	-	-	-	-
Mowing	Mow every 7-10 days during growing season (Approx. Mar-Oct)	Mow regularly as required	Mow regularly as required	Mow regularly as required	Mow regularly as required
Scarifying and aerating	Autumn	Autumn	Autumn	Autumn	Autumn
Re-seed / re-turf bare areas of dead grass – if required	Sep/Oct	Sep/Oct	Sep/Oct	Sep/Oct	Sep/Oct
Litter picking/clearance	Each maintenance visit as required	Each maintenance visit as required	Each maintenance visit as required	Each maintenance visit as required	Each maintenance visit as required

3.2 OTHER NEUTRAL GRASSLAND

A 9m buffer zone along the eastern and part of the western boundaries will be planted with a species-rich grassland mixture. Intentional pathways will be mown through this to create pathways and protect the remainder from heavy human footfall.

It is recommended that a seed mixture such as the [EM2 Standard General Purpose Meadow Mixture](#) (Emorsgate Seeds) is used. The following recommendations are based on those provided by Emorsgate.

Ground Preparation

To prepare a seed bed first remove weeds using repeated cultivation. Then plough or dig to bury the surface vegetation, harrow, or rake to produce a medium tilth, and roll, or tread, to produce a firm surface.

Sowing

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. To get an even distribution and avoid running out divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good soil/seed contact.

First Year Management

Most of the sown meadow species are perennial and are slow to establish. Soon after sowing there will be a flush of annual weeds, arising from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for bugs, and they will die before the year is out. Resist cutting the annual weeds until mid to late summer, especially if the mixture contains Yellow Rattle, or has been sown with a nurse of cornfield annuals. Then cut, remove, and compost. Early August is a good time. This will reveal the young meadow, which can then be kept short by mowing through to the end of March of the following year. Dig out any residual perennial weeds such as docks.

Management Once Established

Do not mow from spring through to late July/August to give the sown species an opportunity to flower. After flowering in July or August take a 'hay cut': cut back with a scythe, petrol strimmer or tractor mower to c 50mm. Leave 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.

Table 3.2 Schedule- Other Neutral Grassland

Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Ongoing
Initial sowing	Sep/Oct/Nov	-	-	-	-
Following seeding/turf laying provide signage for 'no entry'	For 6 weeks following seeding/turf laying or until grass is established	-	-	-	-
Mowing	Early August to early March of following year	Sep to Dec, again in Mar/Apr if needed.	Sep to Dec, again in Mar/Apr if needed.	Sep to Dec, again in Mar/Apr if needed.	Sep to Dec, again in Mar/Apr if needed.
Maintenance of mown footpaths	Every two months between Apr - Aug	Every two months between Apr - Aug	Every two months between Apr - Aug	Every two months between Apr - Aug	Every two months between Apr - Aug
Re-seed / re-turf bare areas of dead grass - if required	Sep/Oct	Sep/Oct	Sep/Oct	Sep/Oct	Sep/Oct
Litter picking/clearance	Each maintenance visit as required	Each maintenance visit as required	Each maintenance visit as required	Each maintenance visit as required	Each maintenance visit as required

3.3 SCATTERED TREES

Twenty-six small sized trees are proposed within the development.

These trees will be planted within the communal areas, including within the buffer zone along the boundaries of the site. The Preliminary Ecological Appraisal (Greenlight Environmental Consultancy, 2022) found evidence of water voles along the riverbank, therefore, any trees planted within the buffer zone should be a minimum of 6m from the top of the river/drain bank to avoid impacting any water vole burrows that may be present.

Recommended tree species for planting include:

- Alder *Alnus glutinosa*
- Field Maple *Acer campestre*
- Whitebeam *Sorbus aria*
- Rowan *Sorbus fruticose*
- Small-leaved Lime *Tilia cordata*
- Hornbeam *Carpinus betulus*
- Silver Birch *Betula pendula*

Once planted, the following maintenance prescriptions should be followed.

- a) Watering programme should be monitored to ensure that at times of drought sufficient water is applied to meet the conditions.
- b) An organic fertiliser should be applied annually as appropriate and incorporated into bare soil beneath canopy line between March – April; replace any mulch layer.
- c) Inspect stakes and ties to trees, twice yearly or after severe weather. Test for soundness in early and late winter and replace tight or ineffective ties. Ties should be replaced in a slightly different position. Remove stakes and ties as soon as trees are self-supporting to benefit tree establishment. Ensure that stake(s) are wholly removed from the ground and that the remaining hole is filled with clean topsoil.
- d) Re-firm trees in ground after strong winds, frost heave or other disturbances.
- e) Monitor and replace failed planting with new plants between October and March. Ensure planting is conducted into well-prepared ground.
- f) Trees should be routinely inspected for pests and diseases and any remedial action taken swiftly to prevent the spread of disease and control pests.
- g) Annually review and undertake pruning of young trees by removing dead branches and reducing selected side branches, ensuring development of a single strong leader. Pruning should be carried out in accordance with BS 7370-4.
- h) Maintain a mulch layer at the base of each tree by annual topping-up to a depth of 75mm to a diameter of 1.2m around the trunk. Ensure the mulch layer is free from weeds by hand cultivation.

Table 3.3 Schedule- Newly Planted Trees

Maintenance Operation	Year 1	Year 2	Year 3	Year 4	Ongoing
Watering programme -	Mar-Nov As req.	Mar-Nov As req.	Mar-Nov As req.	Mar-Nov As req.	Mar-Nov As req.
Apply organic fertiliser annually	Annually between Mar-Apr	Annually between Mar-Apr	Annually between Mar-Apr	Annually between Mar-Apr	Annually between Mar-Apr
Inspect stakes and supports	Twice yearly Mar & Sep	Twice yearly Mar & Sep	Twice yearly Mar & Sep		
Re-firm trees in ground after strong winds / frost heave etc.	As req.	As req.	As req.	As req.	As req.
Monitor and replace failed trees with new trees	Oct and Mar	Oct and Mar	Oct and Mar	Oct and Mar	Oct and Mar
Inspect new trees for pests and diseases and signs of defect and take appropriate action	Twice yearly and after winds >50mph or snow >10cm	Twice yearly and after winds >50mph or snow >10cm	Twice yearly and after winds >50mph or snow >10cm	Twice yearly and after winds >50mph or snow >10cm	Twice yearly and after winds >50mph or snow >10cm
Undertake formative pruning of young trees following guidance given in BS 7370-4	Annually as req. Oct-Nov	Annually as req. Oct-Nov	Annually as req. Oct-Nov	Annually as req. Oct-Nov	Annually as req. Oct-Nov
Maintain a mulch layer at the base of each tree by annual topping-up to a depth of 75mm	Annually Sep.	Annually Sep.	Annually Sep.	Annually Sep.	Annually Sep.