



Outline Habitat Management and Monitoring Plan (HMMP)

Garage Site Adjacent to 33 Empress Road, Gravesend, Kent

1. Introduction

This Habitat Management and Monitoring Plan (HMMP) has been prepared for the proposed development at the Garage Site Adjacent to 33 Empress Road, Gravesend, Kent. The plan focuses on the habitat enhancement measures designed to deliver a 33.3% Biodiversity Net Gain, well above the 10% mandatory requirement.

The primary enhancement comprises 30m² of wildflower strips, which alone deliver 4.8 biodiversity units and ensure compliance with BNG requirements. Additional enhancements have been incorporated to increase biodiversity value and habitat variety within this urban setting.

2. Habitat Enhancement Details

2.1 Primary Enhancement: Wildflower Strips

- Area: 30m² total
- Location: Perimeter areas and designated landscaping zones
- Specification: Native wildflower mix suitable for Kent's chalk grassland habitat
- Seed Mix: To include:
 - Common Knapweed (*Centaurea nigra*)
 - Field Scabious (*Knautia arvensis*)
 - Bird's-foot Trefoil (*Lotus corniculatus*)
 - Red Clover (*Trifolium pratense*)

- Oxeye Daisy (*Leucanthemum vulgare*)
- Yarrow (*Achillea millefolium*)

2.2 Additional Enhancements for Urban Setting

- Bird Boxes : 3 integral swift boxes and 2 sparrow terrace boxes
- Native Shrub Planting**: 20m² of mixed native shrub planting
 - Species to include Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), and Dog Rose (*Rosa canina*)
- Green Screens : Living wall systems on 15m² of boundary walls using climbing species
- Invertebrate Hotels : 2 purpose-built bee hotels positioned in sunny aspects

3. Management Prescriptions

3.1 Establishment Phase (Years 1-2)

Wildflower Strips

- Prepare seedbed in spring (March-April)
- Sow seed mix at 4g/m² in April-May when soil temperature exceeds 7°C
- Water during dry periods in first growing season
- First cut in autumn (September) of establishment year, removing all arisings
- Monitor for pernicious weeds (dock, thistle, ragwort) and spot-treat

Native Shrub Planting

- Plant whips at 5 plants/m² in November-March
- Install rabbit guards and biodegradable mulch mats
- Water during dry periods April-September
- Replace failures in following planting season

3.2 Ongoing Management (Years 3-30)

Wildflower Strips

- Annual cut in September, remove all arisings
- Rotational cut regime: leave 25% uncut each year for overwintering invertebrates
- No fertilisers or herbicides to be used
- Scarify if thatch build-up occurs

Native Shrub Planting

- Prune every 3 years on rotation
- Remove basal growth annually
- Replace any failed plants
- Control invasive species

Bird Boxes

- Annual inspection in autumn (September-October)
- Clean out old nesting material
- Repair or replace damaged boxes
- Monitor occupancy rates

4. Monitoring Programme

4.1 Establishment Phase Monitoring

- Monthly site inspections (April-September)
- Quarterly formal condition assessments
- Document establishment success, weed issues, and maintenance needs
- Photographic monitoring at fixed points

4.2 Long-term Monitoring

- Annual condition assessment reports for 30 years
- Botanical surveys every 5 years
- Bird box occupancy surveys annually
- Invertebrate surveys every 5 years

4.3 Key Performance Indicators

- Wildflower strip: 70% cover of target species by Year 3
- Shrub planting: 85% survival rate by Year 5
- Bird boxes: 50% occupancy rate by Year 3
- Invertebrate hotels: Evidence of use by Year 2

5. Implementation Schedule

Task	Timing	Frequency	Years 1-30
Site preparation	March-April	Once	Year 1
Wildflower seeding	April-May	Once	Year 1
Shrub planting	November-March	Once	Year 1
Install bird/bee boxes	March	Once	Year 1
Watering regime	April-September	As needed	Years 1-2
Wildflower cutting	September	Annual	Years 1-30
Shrub pruning	Winter	Triennial	Years 3-30
Condition monitoring	Various	As specified	Years 1-30

6. Responsibilities and Legal Mechanism

6.1 Responsible Parties

- Management Company: Appointed by developer to oversee implementation
- Qualified Ecologist: To conduct monitoring and provide specialist advice
- Landscape Contractor: To undertake prescribed management works

6.2 Legal Security

- This HMMP will be secured through:
 - S106 Agreement with Gravesham Borough Council
 - Planning conditions requiring implementation for 30 years
 - Management Company covenant with legal obligations

7. Adaptive Management

Annual monitoring reports will be reviewed to identify any issues with habitat establishment or condition. Adaptive management measures may include:

- Adjusting cutting regimes
- Supplementary planting or seeding
- Enhanced weed control measures
- Alternative species selection if initial choices prove unsuitable
- Additional watering during establishment

8. Conclusion

This HMMP secures the delivery of 33.3% Biodiversity Net Gain through 30m² of wildflower strips, supplemented by additional urban biodiversity enhancements. The plan ensures long-term management and monitoring for 30 years, demonstrating the development's commitment to delivering meaningful biodiversity improvements in this urban setting.

The management prescriptions are proportionate to the scale of enhancement, reflect best practice guidance from Natural England and CIEEM, and ensure the habitat features reach and maintain target condition throughout the required timeframe.