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BANK END ROAD, BARNSLEY
Woodland, Biodiversity and Landscape Management Plan
February 2020

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1.0 INTRODUCTION

An outline planning application for the development of the site at Bank End Road, Barnsley, is being prepared.

Urbana Town Planning have asked Weddle Landscape Design to produce a Woodland, Biodiversity and Landscape Management Plan for the site.

To inform development proposals, Weddle Landscape Design have carried out a Preliminary Ecological Appraisal (PEA) and Arboricultural assessment of the site.

This report has been prepared by Neil Northrop BA DipLD MCIHort MArborA CMLI with over 11 years ecological field surveying, scoping, protected species surveys and report writing experience. This report has been prepared in line with BS 42020:2013 Biodiversity: Code of practice for planning and development and the CIEEM Guidance for Preliminary Ecological Appraisal, Ecological Report Writing and Ecological Impact Assessment.

1.1 EXISTING SITE DESCRIPTION

The Planning Application site is approximately 0.3 hectares located approximately 3km south-east of Barnsley centre at Ordnance Survey grid reference SE 359 043.

The north, east and west boundaries adjoin residential properties. The southern boundary is Bank End Road with residential properties beyond.

The site slops steeply towards Bank End Road. The top of the site the site begins to level out towards the northern residential gardens.

The site is predominantly woodland. There are no buildings or hardstanding onsite. The site does not have public access; however, the site is not securely fenced from Bank End Road and it is evident the site is regularly trespassed, as seen by the significant fly-tipping, litter, arson and vandalism.

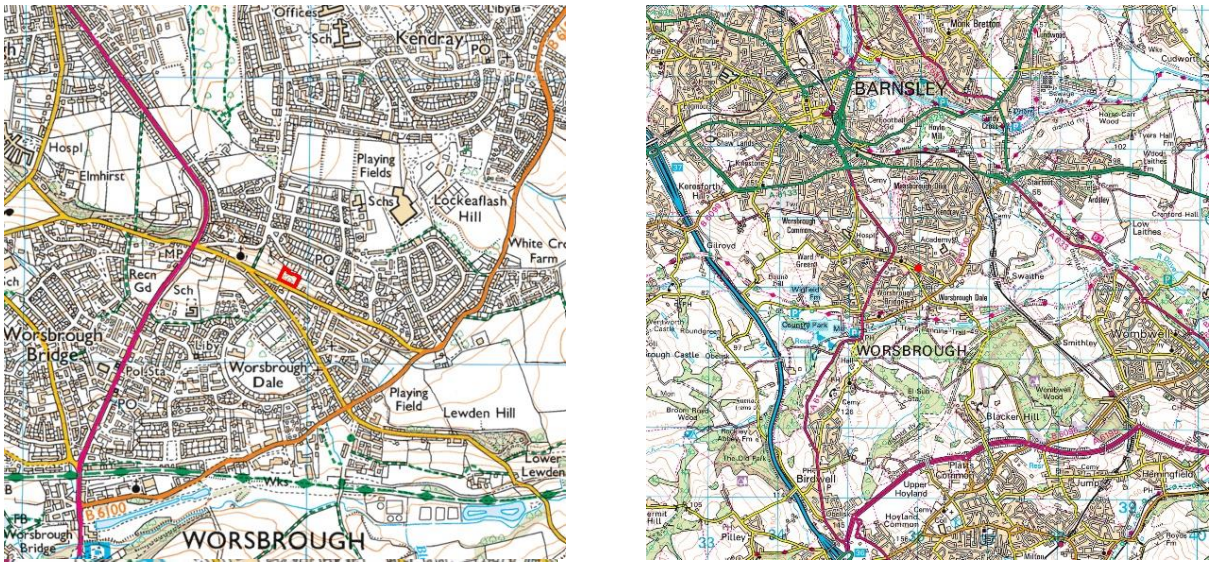


Figure 1 OS Map showing site location

Figure 2 Aerial photograph with site boundary

Landscape and Habitat Features

The site is predominantly a mature oak established secondary woodland with low biodiversity value due to the poor understory, narrow age range and presence of invasive species, fly tipping and arson. There has been little to no management in recent years.

No protected species were identified however some of the trees have low to moderate suitability potential bat roost features and will require aerial inspection or precautionary working method should they require tree work/felling.

The site is covered entirely by Barnsley Metropolitan Borough Council TPO no 13, Woodland Group W1. The site is also within an area designated as Deciduous Woodland Priority Habitat Inventory (PHI), and within the Local Plan policy areas “Bank End Road Escarpment” Greenspace and Dearne Valley Green Heart ‘Nature Improvement Area’.

A detailed habitat description of the site can be found in the PEA report prepared by Weddle Landscape Design.

1.2 THE DEVELOPMENT PROPOSALS

An outline planning application for a residential development is being prepared. Part of the woodland will need to be removed to facilitate the development.

Development of the site will enable long term management of the site and woodland which will include:

- Sustainable woodland management to enhance the retained woodland habitat in accordance with best practice.
- Shrub and tree planting which includes a diverse mix of native and non-native species in accordance with recognised good practice. Planting should offer foraging and nesting opportunities for birds.
- Any proposed new external lighting for the development should be designed to ensure that lights are angled downward and that night-time light levels remain relatively low.
- Bird Nesting Opportunities including 4No 1B Schwegler Nest Box, or similar.
- Bat Nesting Opportunities including 2No. 2FSchwegler Bat Box (General Purpose), 1No 1FF Schwegler Bat Box to woodl and 2No. 1F Schwegler Bat tubes to buildings, or similar.
- Increase deadwood habitats within woodland
- Boundaries between plots should include holes suitable for hedgehogs
- Continue to monitor and treat any invasive species.

1.3 LOCAL BIODIVERSITY ACTION PLAN

The development of the site will support aims of the Dearne Valley Green Heart Nature Improvement Area the Barnsley Biodiversity Trust Biodiversity Action Plan, including:

- Proactive woodland management will support the Mixed Deciduous Woodland Habitat Action Plan, a range of Butterfly Species Action Plans (SAPs).
- The installation of bird and bat boxes will directly support a range of Bird and Bat SAPs.

- The installation of 'dead wood piles' on the development will directly support a range of invertebrate SAPs.

1.4 RESPONSIBILITY AND REVIEW

The principle contractor will have construction stage responsibility for the site. After completion a responsibility will transfer to the landowner. A landscape maintenance contractor will be appointed to manage the site under the Facilities Management Specification, and the Landscape and Habitat Management Plan will form a supporting document.

2.0 VISION

The development of the site offers an opportunity to contribute to the Dearne Valley Green Heart Nature Improvement Area and Barnsley Biodiversity Action Plan through long-term positive management of the woodland, installation/creation of a range of habitats for bird, bat, invertebrates and mammals and tree and shrub planting within the development area.

3.0 MANAGEMENT AIMS AND STRATEGIES

3.1 AIMS

A. To provide a practical framework for landscape maintenance and management of the site.
B. Appropriate management of the development area landscape to improve biodiversity and ensure it is healthy, high quality, safe and secure.
C. Long term management of the woodland for biodiversity, amenity, and increased wildlife value.

3.2 STRATEGIES

A: To provide a practical framework for landscape maintenance and management of the site.

- Review and audit the Landscape Management Plan.
- Review efficiency and quality of work produced annually.
- Amendment and adjustments to the Management Plan based on annual review.
- Maintenance Schedule included as Section 4 of this Landscape Management Plan.
- Regular inspections to review overall appearance and maintenance.
- Review Dearne Valley Green Heart Nature Improvement Area and Barnsley Biodiversity Action Plans.
- Identify health and safety issues within the site by regular review and Maintenance Attendance Report submitted at least once monthly.
- Monitor and review Health and Safety Policy.

B: Appropriate management of the development area landscape to improve biodiversity and ensure it is healthy, high quality, safe and secure.

- Establishment and monitoring of tree and shrub planting.
- Establishment of planting providing pollen and nectar
- Prune shrubs back from pathways.
- All access routes kept clear and ensure that there is adequate access for emergency and maintenance vehicles.
- Maintain pathways by removing debris, leaf litter, moss, algae etc to prevent accidents.
- Grit pathways when required to prevent ice.
- Paving and fencing defects to be repaired as soon as possible.
- Maintain shrubs to prevent them growing too large for their locations, thin and replace as necessary, using best horticultural practices.
- Prune back shrubs from all signage, lighting and paths.
- Ensure all weeds are removed regularly by hand/approved herbicides.
- Top up of mulch annually until planting closes canopy.
- Remove dead plants and replace within following planting season.
- Repair any damage that may have occurred.
- Inspect trees annually and carry out maintenance operations as required to keep trees in safe and healthy condition.
- Remove litter and debris.

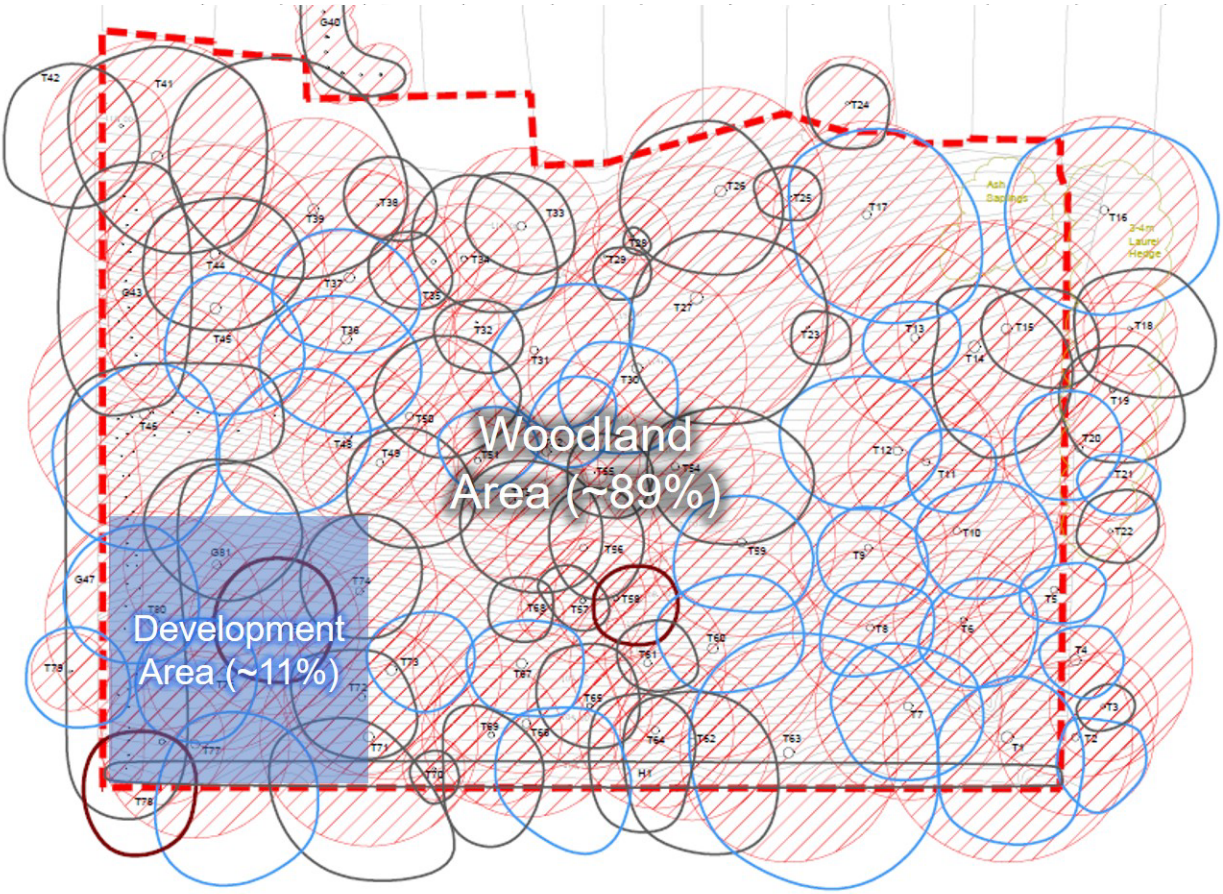
C: Long term management of the woodland for biodiversity, amenity, wildlife value and safety.

- To increase, where possible, the wildlife and conservation value by creating a more diverse age structure and species diversity, through the planned management of the woodland resource.
- Manage the TPO woodland group as an amenity feature for their contribution to the wider local landscape, particularly recognising their aesthetic value when viewing the site from adjacent land.
- Reduce the level of hazard by the planned removal and replacement or appropriate pruning of defective trees.
- Inspect trees and carry out maintenance operations as required to keep trees within fall distance of road / dwellings in safe and healthy condition.
- Retain trees of high ecological value where it is desirable and safe to do so. If appropriate implement halo thinning to benefit these trees
- Tree management work / selective felling to ensure that more light reaches the woodland floor.
- Ensure no single species becomes over dominant, including ivy.
- Any planting will be with species that will enhance both the amenity and conservation value of the woodland in the long-term.
- Replace or repair damaged fencing.
- Remove litter and debris.
- Remove any instance of Invasive or non-native plants, such as Japanese Knotweed.
- Identify health and safety issues within the site by regular review and Maintenance Attendance Report.
- Monitor and review Health and Safety Policy.
- Review strategies in the medium to long term (10 - 20 years) to determine the most effective method of managing the trees, both for the benefit of any of the younger planting, which is yet to be established and also for the benefit of the existing woodland as it continues to develop and mature. These longer-term strategies will, however, be a matter for the management company that will be formed at the time of the development of the site and will become the responsibility of landowner/s.

4.0 IMPLEMENTATION PLAN

The implementation of the strategies will be carried out over two phases. The first phase will be implemented during the construction program by the contractor. The second phase will be implemented once the development has been completed and the site handed over to the landscape maintenance contractor.

The management plan spans 5 years for the domestic landscape and 20 years for the woodland. After which times it will be necessary to review the objectives based on this document.



The following is a list of both short-term and long-term management objectives that have been identified for the site. This is not an exhaustive list but sets out the general management parameters and objectives to be agreed with Barnsley Metropolitan Borough Council's Planning Department.

4.1 PHASE 1: CONSTRUCTION WORKS

4.1.1 Development Area

- Erect Tree Protection Fencing and maintain.
- Erect construction site fencing and maintain.
- Implement Landscape Masterplan. This must be done by the first planting and seeding seasons following the occupation of the buildings or the completion of the development, whichever is the sooner.
- Install bat boxes.
- Remove construction site fencing on completion of all building and hard landscape works.
- Remove Tree Protection Fencing on completion of all building and hard landscape works.

4.1.2 Woodland Area

- Implement Landscape Masterplan.
- Install bird and bat boxes.
- Removal non-native and invasive species identified.
- Creation of deadwood piles.
- Planting of woodland edge planting mix
- Tree work as identified in Tree Protection Plan drawing including remove lower branches from all the trees at the roadside just to ensure that the trees are not damaged by vehicles, and vice versa.
- In addition to ensuring that duty of care responsibilities is fully met, it is important that the ecological, wildlife and conservation value of the tree resource is recognised and accommodated on the site wherever possible.

4.2 PHASE 2: POST CONSTRUCTION WORKS

4.2.1 Development Area (5-year maintenance period)

Maintenance Operation	Frequency	Seasonal
HARDSCAPE / GENERAL SITE		
1. Remove litter and tidy up all planting areas and hard surfaces.	Monthly	
2. Written Maintenance Attendance Report and recommendations for necessary remedial works (include Health and Safety reports/issues).	Monthly	
3. Rake-up / sweep fallen leaf litter; remove from site, as required.	Monthly	Sept-Dec
4. Clear snow from access and emergency routes and grit as necessary during winter.	Monthly	Nov-Apr
5. Inspect security fencing and gates and repair as necessary.	Annual	
6. Inspect other fencing and gates and repair as necessary.	Annual	
7. inspect pathways / hard surfaces for patch / worn areas; make good.	Annual	
8. Check for graffiti; remove or remediate.	Annual	
9. Inspect external lighting and repair/replace as necessary.	Biannual	
10. Apply folia acting / residual herbicide to hard surfaces to prevent ingress of weed and algae growth.	Annual	Sept-Oct
11. Inspect all site furniture and repair/ adjust any loose fittings as necessary.	Annual	
12. Inspect security fencing and gates and repair as necessary.	Annual	
13. Inspect other fencing and gates and repair as necessary.	Annual	
14. inspect pathways / hard surfaces for patch / worn areas; make good.	Annual	
15. Power washing of all paved surfaces.	Biennial (year 2,4)	
PLANTING / HEDGES		
16. Remove arisings from maintenance operations.	Each Visit	
17. Ensure all planted areas are kept weed free; no weed cover to exceed greater than 5% in area or 300mm in height.	Each Visit	
18. Trim vegetation back from paths, signage and vehicle sightlines.	As required	May-Sept
19. Monitor site for invasive species such as Japanese Knotweed, Himalayan balsam, Bramble and control as necessary.	As required	May-Sept
20. Dead head flowering shrubs following flowering period.	As required	July-Sept

Maintenance Operation	Frequency	Seasonal
21. Edge up planting beds to maintain soil level below adjacent hard surfaces.	Quarterly	
22. Undertake watering to ensure healthy establishment of all plant stock.	As required	Mar-Nov
23. Re-cultivate around base of shrubs/ hedge transplants by light hoe to relieve soil compaction.	4 times, (year 1-3)	Apr-Oct
24. Replace any dead, seriously damaged or diseased plants with of a similar size and species in following planting season, until canopies close	As required	Nov-Mar
25. Top up mulch layer to all planting beds; depth 75mm.	Annual	Mar
26. Supply & apply slow release fertiliser to planting areas; 60g/m2.	Annual (year 1-3 only)	Mar/Apr
27. Remove any dead, seriously damaged or diseased plants.	Annual	Sept-Oct
28. Undertake pruning of hedges, to encourage growth, promote good form and achieve desired height/width.	Annual (year 1-lateral growth only)	Sept-Oct
29. Undertake formative pruning of shrubs, to encourage growth and promote good form, as required.	Annual	Sept-Oct
30. Management of dense shrub and hedgerow must be outside of bird nesting season	As required	Sept-Feb
AMENITY GRASS		
31. Apply slow release lawn fertiliser: - Spring: 35g/m2 Autumn: 50g/m2.	Bi-annual	Mar-Apr & Oct- Nov
32. Maintain amenity grass at height of 25mm and trim / re-form edges.	As required	May-Sept
33. Spiking to all amenity grassed areas; to a depth of 75mm.	Bi-annual	Mar-Apr & Oct- Nov
34. Over-seed patchy grass areas.	Annual	Sept-Oct
35. Supply & apply selective herbicide to manufactures recommendations; to all grassed areas.	Annual	Sept-Oct
36. Carry out autumn scarification of all amenity grassed areas; depth 15mm.	Annual	Oct/Nov
TREES		
37. Inspect trees for health and hazards, and implement any recommended works	Quarterly	
38. Management of trees must be outside of bird nesting season	As required	Sept-Feb
39. Inspect tree stakes / ties / guards and replace/remove as required.	Quarterly	

Maintenance Operation	Frequency	Seasonal
40. Following strong winds, re-firm base and check tree stakes for stability.	As required	
41. Top of mulch layer at base of tree; 1.2m diam. x 75mm depth.	Annual	Mar
42. Supply & apply slow release fertiliser to base of each tree; 50g per new tree.	Annual	Mar-Apr
43. Undertake formative pruning of young trees to encourage good growth and shape, if required.	Biennial (year 1,3,5 only)	Oct-Nov
ECOLOGY		
44. Lost / damaged bird / boxes should be replaced as necessary (by a suitably qualified individual)	Annual	Sept-Feb
45. Inspect bird boxes installed onto trees to ensure vegetation has not grown over box. Clean of old nesting material and remove un-hatched eggs and throw away. (by suitably competent person)	Biennial (year 2,4 only)	1 Aug-31 January
46. Inspect bat boxes installed onto trees to ensure vegetation has not grown over box. (Bat boxes must only be opened/inspected by a licensed bat worker)	Biennial (year 2,4 only)	Sept-Feb
47. Top up of log piles and hibernacula (by suitably competent person)	As required	Sept-Feb

4.2.2 Woodland Area (20-year maintenance period)

Maintenance Operation	Frequency	Seasonal
WOODLAND		
1. Inspect trees in a walkover survey of the woodland to identify remedial tree works / felling to moderate/high risk trees within falling distance of the new houses, road or site boundaries requiring action. Mark trees and add to tree works schedule.	Annual	
2. Inspect roadside trees and identify any lower branches which may damage vehicles, and vice versa. Mark trees and add to tree works schedule.	Annual	
3. Inspect and identify emerging veteran trees which would benefit from halo thinning of surrounding vegetation / trees. If appropriate mark trees and add to tree works schedule for phased work.	Biennial	
4. Inspect and identify low quality/over suppressed trees whose removal or thinning would support creation of a more uneven, diverse woodland structure. Mark trees and add to tree works schedule for phased work.	Biennial	

Maintenance Operation	Frequency	Seasonal
5. Inspect and determine whether new felling coups should be created to increase woodland understory diversity. Mark trees and add to tree works schedule for phased work.	Biennial	
6. Carry out tree work / felling as per the tree works schedule phases. Timber to remain within woodland if possible. Seek TPO permission and felling license if required.	Annual, or as required if urgent.	Sept-Feb
7. Replacement native tree planting, if required to be predominantly English Oak (Quercus robur), with occasional Beech (Fagus sylvatica) and Wild cherry (Prunus avium).	Annual	
8. Planting local provenance woodland wildflowers if newly opened understory does not lead to dormant seed being revealed.	Biennial	
9. Coppice cutting to woodland edge planting. Staggered scalloping in sections.	Biennial	Sept-Feb
10. Brush cutting of ivy to maintain woodland ground cover below 20%.	Annual	Sept-Feb
11. Ivy removal from trees vulnerable to wind rocking.	Annual	Sept-Feb
12. Manage roadside hedge to 1.5-2m height, infill planting as required.	Biennial	Sept-Feb
13. Remove litter and fly-tipping, including dumped organic plant matter.	As required	
14. Monitor site for invasive species such as Japanese Knotweed, Himalayan balsam, Bramble and control as necessary.	As required	
15. Remove non-native plants such as Cherry Laurel or Spanish Bluebells	Annual	
16. Leaf litter to remain in situ.	Always	
17. Fallen deadwood to be left in situ or moved into a habitat pile in shady part of the site	Always	
18. Inspect fencing and gates and repair as necessary.	Annual	
19. Inspect bird boxes installed onto trees to ensure vegetation has not grown over box. Clean of old nesting material and remove un-hatched eggs and throw away. (by suitably competent person)	Biennial	1 Aug-31 January
20. Inspect bat boxes installed onto trees to ensure vegetation has not grown over box. (Bat boxes must only be opened/inspected by a licensed bat worker)	Biennial	Sept-Feb
21. Review these strategies/operations to determine the most effective method of managing the trees, both for the benefit of any of the younger planting, which is yet to be established and also for the benefit of the existing woodland as it continues to develop and mature.	Medium to long term (10 - 20 years)	