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STRATA STERLING BARNESLEY WEST LTD

BARNESLEY WEST ROUNDABOUT - NORTH

LANDSCAPE AND BIODIVERSITY MANAGEMENT PLAN

AUGUST 2023

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AUGUST 2023

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DRAWINGS	TITLE	SCALE
LD10593.001	North Roundabout Planting Plan	1:500@A3

1 INTRODUCTION

1.1 Terms of Reference

1.1.1 Wardell Armstrong LLP (WA) was commissioned by Strata Sterling Barnsley West Ltd to undertake a Landscape Biodiversity Management Plan (LBMP) in support of a commercial and residential development project, located to the west of Barnsley, central Ordnance Survey (OS) grid reference SE 31778 07075 (hereafter known as the 'Site').

1.1.1 An application has been submitted and approved for the construction of a roundabout to the north of the Site (application no. 2020/0027). This application is distinct from the main commercial and residential application. This LBMP is required in order to discharge planning condition 11, which states:

“Upon commencement of development details of a scheme of biodiversity enhancement measures, including a timetable for their implementation, shall be submitted to and approved in writing by the Local Planning authority. The development shall be implemented in accordance with the approved details”.

1.1.2 An Ecological Appraisal, Environmental Statement and several protected species baseline reports have been produced to date (WYG 2020-2021; Tetra Tech, 2021).

1.1.3 In general terms, this report outlines the management and maintenance of habitats and ecological mitigation measures to ensure that the development proposals are in line with the National Planning Policy Framework (NPPF, 2021) and published British Standards (2013) BS 42020:2013 Biodiversity - Code of practice for planning and development.

1.1.4 Habitat and ecological recommendations and proposals are shown on Drawings prepared by Wardell Armstrong, 2022

- LD10593.001 North Roundabout Planting Plan

1.2 Objectives of the LBMP

1.2.1 This LBMP should be read in conjunction with the Preliminary Ecological Appraisal (PEA) which presents the baseline status/condition of features at the site.

1.2.2 The broad objectives are to:

- Establish and maintain newly created habitats;
- Maintain and enhance retained vegetation;
- Maintain and enhance species populations;

- Contribute to local and national objectives i.e. by enhancing the habitats and to seek gains for biodiversity in line with the NPPF.

2 HABITAT CREATION, ESTABLISHMENT AND MANAGEMENT

2.1.1 The following habitat creation and management guidelines have been prepared with regard to the development proposals.

2.2 Neutral Grassland

2.2.1 Neutral Grassland will be seeded on the roundabout embankments. The species mix will be analogous to the National Vegetation Classification MG6 *Lolium perenne* - *Cynosurus cristatus* grassland. The mix will be introduced over all areas on the embankments.

2.2.2 The location and composition of grassland creation areas, including wildflower meadow mix grassland is shown on Drawing LD10593.001 Landscape Planting Plan

2.2.3 It is recommended that the seed mix is sourced from Emorsgate EM4 Meadow Mixture for Clay Soils¹ (or similar).

2.2.4 Wildflower species comprise 20% of the mix:

- Agrimony *Agrimonia eupatoria*
- Betony *Betonica officinalis*
- Common knapweed *Centaurea nigra*
- Meadowsweet *Filipendula ulmaria*
- Oxeye daisy *Leucanthemum vulgare*
- Musk mallow *Malva moschata*
- Ribwort plantain *Plantago lanceolata*
- Meadow buttercup *Ranunculus acris*
- Pepper saxifrage *Silaum silaus*
- Cowslip *Primula veris*
- Bird's-foot trefoil *Lotus corniculatus*
- Yarrow *Achillea millefolium*
- Ragged robin *Silene flos-cuculi*
- Lady's bedstraw *Galium verum*
- Meadow vetchling *Lathyrus pratensis*
- Glaucous sedge *Carex flacca*
- Dandelion *Taraxacum officinale*
- Wild carrot *Daucus carota*

2.2.5 Grasses comprise 80% of the mix:

- Common bent *Agrostis capillaris*
- Sweet vernal-grass *Anthoxanthum odoratum*
- Quaking grass *Briza media*
- Crested dogstail *Cynosurus cristatus*
- Red fescue *Festuca rubra*

¹ <https://germinalamenity.com/re9-farmland-mixture-mg6-grassland>

- Yellow oat-grass *Trisetum flavescens*

Establishment and Management

- 2.2.6 The seed is best sown in the autumn or spring.
- 2.2.7 In the first year, cutting should not be carried out until mid to late summer, preferably in early August. The young meadow should then be kept short by grazing or mowing through to the end of March of the following year. Any residual perennial weeds should be dug out.
- 2.2.8 Any areas that fail to germinate will be reseeded in the next suitable sowing season.

Management (Year 2 Onwards)

- The management in following years can be achieved through a single late summer (late August to early September) hay cut after flowers have finished flowering, to approximately 50 mm. Following this, all arising's will be removed by hand and not left in-situ.
- Best results are when summer cut is combined with an autumn hay cut to c.50mm, and another cut in spring if needed.
- Management of invasive weeds such as docks *Rumex* spp. and thistles *Cirsium* spp., will be managed annually. Or may be controlled by aftermath grazing.
- Annual cuts of grassland will be continued for a period of 30 years.

Table 1: Summary of Maintenance and Timings

Habitat	Planting Schedule	Maintenance Schedule	Maintenance Details
Neutral Grassland	Seeding to take place autumn or spring	Initial cut will be in late summer (preferably August)	Annual late-summer (late Aug/early Sept) hay cut, with autumn/spring cut, for 30 years
		All other maintenance will take place from year 2 onwards	Management of invasive weeds will take place annually

3 PROTECTED SPECIES ENHANCEMENT MEASURES

3.1 Badger

- 3.1.1 Updated walkovers would be carried out 3 months prior, and again 2 weeks prior to construction to confirm absence of badger setts at and 30m around the site boundary.
- 3.1.2 If setts are located, a 30m buffer would be demarcated around the sett to prevent any damage or disturbance occurring during construction. If a 30m buffer cannot be accommodated, a licence to close the sett would be required and would be applied for in advance of construction occurring. To obtain a Natural England sett closure licence, a detailed method statement would be required setting out the measures to be implemented on Site. In the event that a licence is required to close an active sett, sett closure can ordinarily be undertaken between July to November inclusive to avoid the breeding and cub rearing season.
- 3.1.3 Precautionary working measures should also be adopted to mitigate against the accidental entrapment of badger in any excavations that are left open overnight. A means of escape (e.g. plank of wood enabling escape) should be provided within the excavations to prevent badger becoming entrapped.

3.2 Bats

- 3.2.1 The site contains limited foraging habitat for bats and supports no potential roosting habitats, therefore the clearance of vegetation for site works is not anticipated to have an adverse effect on local bat populations.
- 3.2.2 A sensitive lighting scheme will be used during construction works, which will maintain dark commuting corridors and foraging habitat. The sensitive lighting scheme will be designed in accordance with 'Guidance Note 08/18' (BCT, ILP, 2018) to minimise light spill into sensitive habitats. Careful design/selection of product will be undertaken with consideration of the following:
- Luminaries will not emit light from the UV spectrum;
 - Metal halide and fluorescent sources will not be used;
 - LED luminaries will be used where possible;
 - A warm white spectrum (ideally <2700 Kelvin) will be adopted;
 - Luminaries will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats; and
 - Luminaries with an upward light ration of 0% will be used.

3.2.3 The lighting scheme will be subject to review by a suitably qualified ecologist prior to finalisation.

3.3 Birds - General

3.3.1 Site clearance works will be undertaken where possible outside the active nesting season (taken to be March to August inclusive). In the event that such timescales cannot be accommodated a check for the presence of active nests will be undertaken by a suitably experienced ecologist, prior to commencement of works. Any active nests recorded would be identified and protected until the nesting attempt is complete.

3.4 GCN and Reptile

3.4.1 Precautionary Working Measures will be implemented for the clearance of vegetation over 10cm tall and associated works within 250m of any pond that has not been subject to prior eDNA surveys to confirm the absence of GCN. Precautionary measures will include:

- Prior to removal of any vegetated areas over 10 cm high, a fingertip search should be conducted by a suitably experienced ecologist. Any tall vegetation (e.g. hedgerows and tall grass etc.) will be cleared using hand tools (e.g. strimmer / chainsaw) to such a height that the area can be confidently searched by the ecologist for GCN;
- Any cut vegetation in these areas to be removed, so as not to create potential new areas of suitable refugia with the development area. Felled trees / shrubs could be used to create refugia piles within areas of retained woodland;
- Guidance for the coverage / checking of excavations, the storage of materials and water management, to reduce the potential harm to GCN and reptiles. Any pipework should also be capped, to prevent animals becoming trapped;
- A toolbox talk given to site staff to make them aware of wildlife legislation, GCN/reptile identification and in the unlikely event that a GCN or reptile is found, all works on Site should cease and advice be sought from the ecologist;
- Potential refugia (e.g. dead vegetation / brash piles) present to be cleared outside of the GCN/reptile hibernation period (i.e. avoid October – February, inclusive);
- Directional strimming of vegetation within habitat suitable for reptiles (i.e. semi-improved grassland and tall ruderal areas) to a sward height of approx. 150 mm. Vegetation is to be strimmed towards other areas of retained habitat on or directionally adjacent to Site; and

- Following directional strimming, a check of the habitat by an ecologist before stripping of the remaining habitat area (under supervision of the ecologist).

4 CONCLUSION

4.1.1 In conclusion, the management prescriptions outlined above show that the Site can be managed to benefit wildlife and provide biodiversity benefits. The Site should be managed and maintained in accordance with the above recommendations for 30 years to align with the recommendations enhancing the habitats to ensure a Biodiversity Net Gain can be achieved on Site. The establishment of species rich grassland will provide an overall benefit to wildlife. In addition, the Site can be managed to enhance and manage habitats which will benefit populations of bats and nesting birds.

5 REFERENCES

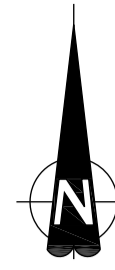
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DRAWINGS



KEY

- Meadow Mixture for Clay Soils Emmorsgate EG4
- Tarmac Paving
- Block Paving

General Planting Notes

1. Tree protection shall be in place prior to works commencing, refer to the submitted Existing Vegetation Removal and Protection Plan. Any existing trees to be retained are the responsibility of the main contractor on site who shall take all necessary protective measures set out in BS 5837:2012.
2. All groundworks and planting operations shall be in accordance with the following British Standards and guidelines unless otherwise indicated:
 - BS 4428:1989 Code of Practice for General Landscape Operations
 - Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.
3. On site soils may be used for planting subject to quality and quantity of soil resources available. Where topsoil is to be imported this should meet the criteria set out in BS3882:2015 with a clay content of no more than 30% (multipurpose). For imported subsoil the criteria set out in BS8601:2013 should be met with a clay content of no more than 30% (multipurpose). All areas of proposed planting/seeding affected by construction works to be relieved of compaction by ripping to a depth of 600mm, in two directions.
4. Effective weed control must be carried out prior to cultivation. All planting areas to be cultivated to a depth of 300mm, all proposed seeded areas to be cultivated to a depth of 150mm, except within 4.0m of any existing tree stem, unless otherwise stated in the specification.
5. Topsoil depths to be: 150mm seeded areas. Good quality on site topsoil can be used for grass areas. Pits will be dug by the landscape contractor and should be freely draining. For areas to be seeded, the soil level shall be flush with any finished paved surfaces after settlement.
6. Organic compost (PAS 100) surface mulching to be supplied to all ornamental shrub planting, individual trees in grass and hedges to a depth of 75mm.
7. Where there is possibility of damage by browsing animals, plants are to be protected with appropriate tree and shrub shelters and/or rabbit proof fencing.

REVISION	DETAILS	DATE	ISSUED BY	CHECKED BY	APPROVED BY
C	Change of Meadow Mix	26.07.23	AB	LG	LG
B	Updated following client's comments	08.02.23	YX	LG	LG
A	Updated following client's comments	07.03.23	YX	LG	LG

CLIENT
STRATA STERLING BARNSELY WEST LTD

PROJECT
BARNSELY WEST HIGHWAYS

DRAWING TITLE
NORTH ROUNDABOUT PLANTING PLAN

DRG No.	LD10593-001	REV	C	SUIT. CODE
DRG SIZE	A1	SCALE	1:500	DATE
				24.03.23
DRAWN BY	YX	CHECKED BY	LG	APPROVED BY
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