

Ecological Management Plan

Llanwern Village, Cot Hill, Llanwern, Newport

Hollies 5 & 6 – Ecology

TG Report No. 11395_R34_AH_RR_June 2024



Section 1: Introduction

- 1.1. This Ecological Management Plan (EMP) has been prepared by Tyler Grange on behalf of Redrow Homes, in respect of Hollies 5 & 6, Cot Hill, Llanwern, Newport, herein referred to as the 'site'.
- 1.2. The EMP details the measures that will be implemented at the site to provide ecological benefits and biodiversity enhancements post-development. This EMP has been produced to discharge Conditions 18: Ecological Management Plan and 24: Landscaping, of the Variation of Conditions application which was granted in June 2017 (planning ref: 16/0864).

Condition 18 states: *The proposal shall be carried out in accordance with the Ecological Management Plan agreed under approval 13/1223 or in accordance with any other Ecological Management Plan that may have been submitted to and agreed in writing by the Local Planning Authority prior to the commencement of any works to any phase of development as defined by Condition 02 (Phasing) to which that plan relates or to any other area as may be agreed. Any other submitted plan shall cover the construction, operation and management stages for each phase and include or specify:*

- a) *details of a comprehensive pre-construction schedule of wildlife/protected species survey work to be carried out in each phase;*
- b) *the features to be protected;*
- c) *the means of ensuring their protection, including the appointment of an ecological clerk of works and environmental liaison officer and a method statement detailing measures to be taken to ensure that the features are not damaged during construction.*
- d) *mitigation measures where appropriate and specific provisions for protected species including: details of mitigation measures for badgers (including commitment to yearly monitoring and pre-construction surveys), bats and birds to be submitted to and approved in writing by the Local Planning Authority;*
- e) *details of habitat enhancement;*
- f) *details of measures for protection/enhancement of locally notable plant species;*
- g) *a detailed planting plan for new woodland buffer areas;*
- h) *detailed planting plans for new hedgerows, hedgerow buffers and measures to maintain connectivity with other hedgerows and features of ecological value;*
- i) *methodologies for the incorporation of biodiversity features/objectives into the design and management of new open and landscaped areas;*
- j) *details of measures to limit public access into the adjacent Hartridge Wood, Coed Rhedyn/Scotch Wood and Dockwell Wood;*
- k) *details of public lighting schemes;*

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- l) implementation and monitoring provisions for a 10-year period to include a clear feedback mechanism for evaluation of the management plan.
- m) details of long-term conservation management measures.

The development within each phase of development shall be implemented in accordance with the approved details contained within the ecological management plan relevant to that phase.

Reason: In the interests of preserving the ecological integrity of the site.

Condition 24 states: Each landscaping scheme (which in the case of incidental areas of open space not covered by Public Open Space Areas referred to in the accompanying Section 106 Agreement shall be accompanied by a management plan detailing future maintenance) submitted in pursuance of Condition 01 (which in relation to tree/shrub planting shall include inter alia grass mixtures and the number, species, heights on planting and positions of all trees and shrubs as well as details of trees to be retained and measures to protect them during construction) shall be carried out in its entirety by a date not later than the end of the full planting season immediately following the completion of the associated development. Thereafter, the trees and shrubs within incidental areas of open space (defined as those areas not covered by Public Open Space Areas referred to in the accompanying Section 106 Agreement) shall be adequately maintained for a period of 5 years (or as agreed in the management plan) from the date of planting and any which die or are damaged shall be replaced and maintained until satisfactorily established.

For the purposes of this condition a full planting season shall mean the period from October to April inclusive.

Reason: To safeguard the rights of control of the Local Planning Authority in these respects and to ensure that the site is landscaped in a satisfactory manner.

- 1.3. In accordance with Condition 18, the measures set out in this plan expand upon those detailed in the Ecological Management Plan produced by Wardell Armstrong¹ and submitted to discharge Condition 21 (planning ref: 13/1223) of the wider Llanwern development outline permission (planning ref: 06/0845).
- 1.4. This management plan should be read in conjunction with the submitted soft landscape proposals produced by Pegasus Group.
- 1.5. Details on public lighting scheme is provided in associated relevant documents.
- 1.6. An extensive amount of ecological survey work has been undertaken at the site, including all Phases, between 2004 and 2024. The results of these surveys have informed the design of the scheme and the management measures detailed. Further details of these surveys are provided in reports submitted for each phase of the development. These reports also detail any necessary

¹ Wardell Armstrong. November 2013. Ecological Management Plan. Llanwern Village





mitigation measures required to prevent impacts to retained habitats, designated sites and any protected or notable species.

- 1.7. The scheme has been designed following the principles agreed at the outline stage, with the habitats of most ecological importance (hedgerows) retained, protected and buffered where possible. In addition, adjacent woodland is also buffered from the proposals in line with the measures agreed at the outline stage.
- 1.8. To mitigate any impacts and provide ecological enhancements and biodiversity gains post-development, new native wildflower grassland, wet wildflower grassland, native shrub, native hedgerow and tree planting will be created along with ornamental tree, hedgerow and shrub planting, and the provision of amenity grassland and rain gardens/bioretention areas, as shown on the supporting landscape proposals.
- 1.9. New planting has been positioned within the site to maintain connectivity and to also create buffers to adjacent and offsite habitats, such as woodland, with native shrub planting comprising thorn producing species. This planting will not only provide buffers to the woodland and prevent access, but will also assist with increasing biodiversity and woodland edge habitat for the benefit of wildlife, including birds and bats.
- 1.10. Management and maintenance of SuDS infrastructure and all drainage elements are provided to enable approval by the SuDS Approval Body (SAB).
- 1.11. The rain gardens/bioretention areas conform with the requirements of the Statutory Standards for Sustainable Drainage Systems as published by the Welsh Government, as well as the CIRIA SuDS Manual. Once established these features will link with and support other habitats at the site, creating ecological corridors that will provide pathways to wildlife movement and contribute to increased resilience to changes in environmental conditions.

Section 2: Management Strategy

Wildflower Meadow Grassland

- 2.1. The proposals include the provision of wildflower meadow grassland (Emorsgate EM2 or similar) to incorporate biodiversity features into new open space and landscaped areas. This new wildflower rich habitat will be more botanically diverse than those currently present, benefiting a range of wildlife, such as invertebrates, birds and bats. This habitat will comprise an appropriate wildflower grassland mixture and will be established in accordance with the suppliers recommendations as detailed on the supporting landscaping proposals.
- 2.2. Management of the grassland will thereafter follow the recommendations of the supplier and the landscape proposals, which include the following measures:
- 2.3. During first 12 months sward to be regularly cut to minimise competition and weed seed production. Cutting should be frequent enough to disperse the cuttings, or if less frequent remove





the cuttings. Cutting to be suspended between April and July to allow flowering of the cornfield annuals.

- 2.4. When newly seeded wildflower areas reach 50mm they should be cut to a height of 25mm. All arising's shall be removed. Any bare patches shall be made good at this time. Meadow grass shall be regularly maintained between 25 and 50mm during the first season after sowing. The meadow will then be maintained at a height of approx. 100-150mm.

Rain Gardens

- 2.5. Rain Gardens/bioretention areas will be created at the site as part of the drainage strategy. In accordance with items S4 and S5 of Statutory Standards for Sustainable Drainage Systems², these features will contribute to both the amenity and biodiversity value of the site post-development with the rain gardens/bioretention areas providing habitat for invertebrates including pollinators, potential refuge and dispersal features for amphibians and foraging opportunities for birds and bats.
- 2.6. Rain gardens will be seeded with a flowering lawn mix (Emosrgate EL1 or similar) or wetland grass mix (Emosrgate EM8 or similar), with additional areas planted with a range of herbaceous perennials and grasses, as shown on the submitted landscape planting plan.
- 2.7. The maintenance needs of the rain gardens will be monitored on an initial three-monthly basis and maintenance intervals adjusted if required to maintain the proper function of the rain gardens.
- 2.8. Once established these features will be managed for an initial five-year period then reviewed and updated as necessary and implemented for the long-term. Management measures are detailed in the tables below.
- 2.9. Health, quality and functionality of rain garden planting shall be inspected and monitored on an annual basis past the initial 5-year replacement period and replaced as and if required.
- 2.10. The rain gardens will also be managed in accordance with item S6 of the Statutory Standards for Sustainable Drainage Systems², with inspections and maintenance undertaken to ensure these features function as designed. Such measures will include monitoring checks for litter, debris, invasive species and excess sediment, with remedial measures undertaken as required. Any invasive species and excess silt will be removed from the site and disposed of following standard guidance as appropriate.

Attenuation Basin – Wet Meadow Grassland

- 2.11. In accordance with items S4 and S5 of Statutory Standards for Sustainable Drainage Systems², the attenuation features to be provided will also contribute to both the amenity and biodiversity value of the site post-development with the wildflower grassland that will be present providing

² Welsh Government. 2019. Sustainable Drainage (SUDS) Statutory Guidance





additional habitat for invertebrates, including pollinators, and new foraging opportunities for birds and bats.

- 2.12. The attenuation basins will be sown with a wet wildflower grass mix (Emosrgate EM8 or similar) and will be established in accordance with the suppliers recommendations as detailed on the submitted Landscape Planting Plan. Once established the wet wildflower grassland will be subject to the same management regime as detailed for the grassland above.
- 2.13. In addition to the management outlined above, the attenuation basins will be subject to at least monthly checks for debris and litter, which will be removed as appropriate, to ensure these features do not become blocked and thereby avoiding any potential drainage issues.

Hedgerows, Shrub and Trees

- 2.14. Retained and newly created hedgerows, shrub and trees, will maintain connectivity with other off-site hedgerows and features of ecological importance, as well as creating buffers to adjacent and offsite habitats. The positioning of this planting will assist with increasing biodiversity and also will prevent access to adjacent woodland.
- 2.15. These habitats will be managed in accordance with the management specification within the EMP produced to discharge Condition 21 of the outline permission³. These measures have been designed to maximise biodiversity value and opportunities for wildlife, with such measures including:
- Existing hedgerows infill planted with native species to enhance species diversity;
 - The trimming of hedgerows and shrubs will be completed ideally between September – November, to maintain foraging opportunities and avoid the bird nesting season (March – August inclusive) and dormouse breeding season (June – August), on a three-year rotational basis; and
 - Trees managed annually as necessary and outside of the breeding bird season to maximise foraging opportunities and prevent impacts to nesting birds.
- 2.16. Although the retained existing hedgerows will be managed as detailed above in order to create high and dense hedgerows, some new hedgerows within the development itself will need to be more regularly managed in order to ensure no encroachment onto paths and roads. Where this more regular management is required, it will still take place outside the bird breeding season (March to August inclusive) or checked by a suitably qualified ecologist for breeding birds immediately prior to management.
- 2.17. Proposed trees, whips, shrubs and hedges are to be maintained by:
- Fertilising for continued healthy growth (for shrubs and hedges only);

³ Wardell Armstrong. November 2013. Ecological Management Plan. Llanwern Village.





- Pruning to maintain correct shape of plants and prevent plants encroaching on paths or roads;
- Weed control (All planting areas to be kept weed free by hand weeding or herbicide treatment);
- Watering (All planted areas are to be watered for the first two years from May to September following any dry periods of 7 days.);
- Check and adjust ties; and
- Firming up of stakes.

2.18. As required by Condition 24 (see above), all new planting will be monitored for at least 5 years after planting with and plants that fail, replaced in the next planting season with the same species as originally specified.

2.19. Hygiene works associated with trees will be avoided, for example fungal fruiting bodies should not be removed nor trees felled because they have bracket fungi on the unless classified as dangerous by an arboriculturalist. Where possible, trees will be allowed to age naturally and dying trees will be allowed to decay in-situ. Where a tree poses a health and safety hazard, advice will be sought from an arboriculturalist.

Specimen Shrubs and Ornamental Planting

2.20. The specimen shrubs and ornamental planting will be managed as necessary according to good horticultural practices to provide amenity value. These will be low growing and unlikely to support breeding birds. Nonetheless, should any management be required during the breeding bird season (March to August inclusive) checks for breeding birds should be completed prior to management and if any nesting birds are present, no work should take place in that location until the young have fledged, as advised by an ecologist.

Amenity Grassland

2.21. Amenity grassland will comprise grass which has been specifically chosen for its hard-wearing characteristics and low maintenance requirements.

2.22. This habitat will be created via seeding or installation of turf as detailed on the submitted Landscape Planting Plan

2.23. Once established the amenity grassland will be subject to regular management in order to maintain its visual and amenity value.





Section 3: Work Schedule

- 3.1. The prescribed management actions specific to the site, including implementation timetable and responsibilities, are set out in table form over the page.
- 3.2. As required by Condition 24 (see above), all new planting will be monitored for at least 5 years after planting with and plants that fail replaced in the next planting season with the same species as originally specified.
- 3.3. The management plan will run for an initial 10-year period, will be subject to continual review and updated as necessary. Following the initial 10 year period, new and retained habitats will be evaluated and a survey undertaken by a professional ecologist to establish the condition of these habitats. A summary report will then be produced and submitted to the local authority along with any remedial measures and changes needed to this management plan to ensure that the aims and objectives are being met.





Ecology Management Prescriptions and Timetable				
Prescription	Rationale for Habitat Creation/ Management	Management Tasks	Timing	Responsibility
Wildflower meadow grassland creation	Creation of wildflower meadow grassland will provide a new habitat on site which will increase biodiversity, compensate for the loss of grassland and increase foraging opportunities for wildlife such as birds, bats, reptiles and invertebrates.	<u>Sowing</u> Sow as per the suppliers recommendations (see above) <u>Cutting (First Year)</u> Cut to 25-50mm if there is sufficient material. <u>Maintenance thereafter:</u> Cut to 100-150mm to remove excess grass. Leave the hay to dry for 1-7 days then remove.	April/May or September /October Regularly throughout the first year July-August	Landscape Contractor to sow seed – thereafter Landscape Contractor – advised as necessary by Ecologist.
Rain Gardens	Creation of rain gardens will provide additional opportunities for biodiversity.	Inspect infiltration surfaces for silting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) to determine if maintenance is necessary Check operation of underdrains by inspection of flows after rain Assess plants for disease, infection, poor growth, invasive species etc. and replace as necessary	Quarterly Annually Quarterly	Landscape Contractor to undertake works for the first year until Site hand over – advised as necessary by Ecologist or Landscape Architect. Thereafter, the appointed landscape



		Inspect inlets and outlets for blockage Remove litter and surface debris and weeds Replace any plants, to maintain planting density. Should any species not thrive - replace with an agreed alternative species. Remove sediment, litter and debris build-up from around inlets or from forebays Infill any holes or scour in the filter medium, improve erosion protection if required Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and replacing mulch or matting	Quarterly Monthly As Required (confirm any replacements with landscape architect within first two years of establishment) Quarterly to biannually As Required As Required	management contractor.
Attenuation Features	Creation of attenuation features which will be sown with wet wildflower grassland will provide additional opportunities for biodiversity.	<u>Sowing</u> Sow as per the suppliers recommendations (see above) <u>Cutting</u> (First Year) Cut to 40-60mm if there is sufficient material. <u>Maintenance thereafter:</u> Cut to 40-75mm to remove excess grass. Leave the hay to dry for 1-7 days then remove.	April/May or September /October Regularly throughout the first year June-August	Landscape Contractor to undertake works for the first year until Site hand over – advised as necessary by Ecologist or Landscape Architect.



		Cut again in Autumn if required. Inspect infiltration surfaces for silting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) to determine if maintenance is necessary Check operation of underdrains by inspection of flows after rain Inspect inlets and outlets for blockage Remove litter and surface debris and weeds Remove sediment, litter and debris build-up from around inlets or from forebays Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and replacing mulch or matting.	September – November Quarterly Annually Quarterly Monthly Quarterly to biannually As Required	Thereafter, the appointed landscape management contractor.
Hedgerow, shrub and Trees	To increase biodiversity and opportunities for wildlife	Existing hedgerows infill planted with native species to enhance species diversity.	October - March (not when the ground is waterlogged, frost bound or during periods of cold drying winds)	Landscape Contractor



		New hedgerow, trees and shrub to be planted as per the landscape proposals. The trimming of hedgerows and trees managed as necessary and outside of the breeding bird season to maximise foraging opportunities and prevent impacts to nesting birds. Fertilising, pruning to maintain correct shape of plant and prevent plants encroaching on paths or roads; weed control; watering; check and adjust ties; and firming up of stakes.	September to November, to maintain foraging opportunities and avoid the bird nesting season (March – August inclusive) and dormouse breeding season (June – August), on a three year rotational basis As necessary	Management Company
Specimen Shrubs and Ornamental Planting	To provide year-round interest for residents and to soften and complement built form	To be established and managed in accordance with specifications provided on the submitted landscape planting plan. General pruning and weeding as required in accordance with good horticultural practice.	As required.	Landscape Contractor and Management Company
Amenity Grassland	To create grassland habitat of amenity value.	<u>Sowing</u> Sow as per the supplier recommendations (see above) or implemented as turf To be managed as required to maintain visual and amenity benefits.	Sown - April/May or September /October Turfs – As required As required.	Landscape Contractor and Management Company



		All edges of grass areas against buildings, footpaths, roadways, trees, posts and any other obstruction are to be kept neat and tidy, removing debris and litter. Cut to within the limits of 20mm-40mm during April to August inclusive and 30mm-50mm the rest of the year. Remove all arisings. Remove loose moss by scarification Watering of lawns	April to October - Fortnightly, or as often as required during growing season April / May Annually May to September and as necessary following any dry periods of 7 days.	
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