Biodiversity Net Gain Assessment

Land to the Rear of Regal House, Shripney Road, Bognor Regis
West Sussex, PO22 9NP

March 2025

Ecology Works Limited, 136 The Causeway, Petersfield, Hampshire GU31 4LL

[redacted]

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Contents

Report conditions

The methods and recommendations set out in this report are based on the following guidance:

- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing 2017 (CIEEM, 2017)
- UK Habitat Classification (UKHab) Version 2 (Butcher et al, 2023)
- Biodiversity Net Gain Report & Audit Templates Version 1 (CIEEM, July 2021)
- The report is supported by the Statutory Biodiversity Metric (DEFRA, November 2023) and supporting documentation found on the following link: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides

Site	Land to the Rear of Regal House, Shripney Road, Bognor Regis, West Sussex, PO22 9NP
Client	Manhire LLP
Report	Biodiversity Net Gain Assessment
Survey date	UKHab Survey: 18th November 2024
Author	[redacted] Chris Brown BSc (Hons) ACIEEM Independent Ecologist
Technical reviewer	[redacted] Frances King-Smith BSc (Hons) CEcol MCIEEM Principal Ecologist and Company Director
Review date	28th March 2025
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Executive summary

Ecology Works Limited was commissioned by Manhire LLP to undertake a Biodiversity Net Gain (BNG) Assessment of Land to the Rear of Regal House, Shripney Road, Bognor Regis, West Sussex, PO22 9NP. The assessment is required in support of a planning application for the construction of 7no. residential properties and an access road. This report details the findings of the UKHab survey and BNG assessment conducted by Ecology Works Limited in November 2024. Landscape plans are designed to ensure a minimum of 10% BNG.

The site comprises grassland, hardstanding and a building surrounded by hedgerows, a line of trees and scattered trees. The site is bound by residential properties to the north, south and west, with arable land to the east. The development proposal entails the construction of 7no. residential properties and an access road. Lighting proposals have not been finalised at the time of writing this report.

The site currently provides 1.03BU area-based habitats. Post-development, the site would deliver 1.23BU area-based habitats, representing an increase of 0.2BU for area-based habitats, delivering an 18.96% gain.

The site currently provides 0.33BU hedgerow habitats. Post-development, the site would deliver 0.46BU hedgerow habitats, representing an increase of 0.13BU for hedgerow habitats, delivering a 38.45% gain.

The trading rules are satisfied.

Proposed development of the site and associated landscaping will deliver an overall 18.96% gain for area-based habitats and a 38.45% gain for hedgerows. The habitat creation and management measures proposed include on-site measures which will benefit a wide range of local wildlife. With these measures in place, the proposed development at Land to the Rear of Regal House will deliver Biodiversity Net Gain in accordance with the current legal requirements of the Environment Act 2021, the NPPF and Policies ENV DM1 to ENV DM5 of the Arun Local Plan.

The local planning authority can therefore be reassured that a suitable Biodiversity Net Gain will be delivered in line with the Environment Act 2021.

1 Introduction

1.1 Background

Ecology Works Limited was commissioned by Manhire LLP to undertake a Biodiversity Net Gain (BNG) Assessment of Land to the Rear of Regal House, Shripney Road, Bognor Regis, West Sussex, PO22 9NP. The assessment is required in support of a planning application for the construction of 7no. residential properties and an access road.

This report details the findings of the UKHab survey and BNG assessment conducted by Ecology Works Limited in November 2024. Landscape plans are designed to ensure a minimum of 10% BNG.

1.2 Site description

Land to the Rear of Regal House, referred to hereafter as 'the site', is located at National Grid Reference SU 93932 10968, situated east of Shripney Road, in the village of Shripney, West Sussex. The site comprises grassland, hardstanding and a building surrounded by hedgerows, a line of trees and scattered trees. The site is bound by residential properties to the north, south and west, with arable land to the east.

The site is located approximately 2.9 kilometres (km) north of Bognor Regis town centre and 8.2km south-east of Chichester town centre. The site's surrounds are characterised by a large swathe of residential development to the south and open farmland comprising permanent pasture and arable crops to the north, east and west. The site location plan is provided in Appendix 1.

1.3 Site proposals

The development proposal entails the construction of 7no. residential properties and an access road. Lighting proposals have not been finalised at the time of writing this report.

The proposed site plan is provided in Appendix 3.

2 Policy and legislation

2.1 Planning policy

2.1.1 National planning policy

Requirements of planning decisions in respect of biodiversity in England are laid out in the National Planning Policy Framework, (NPPF) 2024[1], Paragraph 187 states that the planning system should both contribute to and enhance the natural environment by *"minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs"*.

2.1.2 Local planning policy

Local planning policy is provided by the Arun Local Plan 2011-2031 (adopted July 2018). Policies ENV DM1 to ENV DM5 relate to the Natural Environment:

- *Policy ENV DM1 Designated sites of biodiversity or geological importance*: States that developments which would have an adverse effect on European, national or local status designated sites would not normally be permitted, and sets out criteria, rationale and other details for this.

- *Policy ENV DM2 Pagham Harbour*: Sets out Zones A (within 400m of Pagham Harbour SPA) and B (0-5km), within which there are restrictions to any development which may impact the SPA.

- *Policy ENV DM3 Biodiversity Opportunity Areas*: States that development shall retain and incorporate locally valued and important habitats, including wildlife corridors and stepping stones, and be designed to minimise habitat disturbance.

- *Policy ENV DM4 Protection of Trees*: States that development shall not affect Tree Preservation Order (TPO) trees, that these and other trees will be appropriately protected during development and that developers shall provide tree surveys, tree constraints plans and arboricultural impact assessments where appropriate.

- *Policy ENV DM5 Development and Biodiversity:* Requires developments to seek net gains for biodiversity and protect existing habitats, incorporate bat and bird boxes and other enhancement measures. The policy states that where there is evidence of a protected species, planning applications shall include a detailed survey of the subject species, providing detailed measures for the preservation of the species at the site. It goes on to state that all surveys shall consider direct and indirect impacts and shall be carried out at an appropriate time of year, being undertaken by a qualified and, where appropriate, suitably licensed person.

[1] HM Government (2024) National Planning Policy Framework. Department for Communities and Local Government. HMSO

2.2 Legislation

2.2.1 Environment Act 2021

The Environment Act 2021[2] states that there is a duty on local authorities to publish biodiversity reports and secure mandatory biodiversity net gain. Part 6 (Nature and Biodiversity) sets out the following key elements relating to Biodiversity Net Gain (BNG):

- The Act amends the Town & Country Planning Act
- A minimum 10% BNG is required, calculated with the Biodiversity Metric, supported by a BNG assessment
- BNG habitat must be secured for at least 30 years via planning obligations or conservation covenants
- This can be delivered on- or off-site, or via the statutory biodiversity credits scheme
- Off-site BNG land will be recorded on a national register

The Act does not affect existing legal protection for habitats and species. It maintains the mitigation hierarchy of: avoid impacts first, then mitigate and only compensate as a last resort. The 10% BNG requirement became mandatory on 12th February 2024 for major developments of 10 units or more, and on 2nd April 2024 for small developments with less than 9 units, such as this one.

[2] https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted

3 Methods

3.1 Desk study

3.1.1 MAGIC data search

The Multi-Agency Geographic Information for the Countryside[3] (MAGIC) online resource was accessed on 20th March 2025 to search for Habitats of Principal Importance listed under the NERC Act within 1km.

3.2 UKHab habitat survey

A UKHab habitat survey was undertaken on 18th November 2024, comprising an initial habitat survey and completion of condition assessments. The field survey was carried out by Chartered Ecologist Frances King-Smith BSc (Hons) CEcol MCIEEM, who has been conducting habitat surveys for 18 years and has completed extensive botanical and technical training, including a range of formal UK Habitat Classification (UKHab) and specific BNG training.

The habitat survey was undertaken following the user manual, habitat key and definitions for UKHab Version 2.0[4], and entailed a detailed survey of on-site vegetation to identify key plant species present and to categorise the primary habitats and define them further using the UKHab secondary codes, where appropriate. Printed condition assessments were completed on-site for each habitat parcel. Guidelines for Preliminary Ecological Appraisal were also followed[5]. Where relevant, dominance was noted based on the DAFOR scale[6]. Target notes were made to identify particular features/species within the site.

Weather conditions were dry with a Beaufort Force 1 easterly breeze, 100% cloud cover and an ambient temperature of 9°C.

3.3 Biodiversity Metric

The Department for Environment, Food & Rural Affairs (DEFRA) Statutory Biodiversity Metric[7] is a tool used for comparing the existing extents and conditions of baseline habitats against those of proposed habitats. Areas were accurately measured in QGIS to inform this assessment.

The Metric takes in a range of factors to generate a value in Biodiversity Units (BU) for each habitat present and proposed.

[3] MAGIC Map Application. https://magic.defra.gov.uk/MagicMap.aspx.
[4] UK Habitat Classification User Manual V2.0 (July 2023) UKHab; UKHab Field Key V2.1 (September 2020) UKHab
[5] CIEEM Guidelines for Preliminary Ecological Appraisal, Second Edition (CIEEM, 2017)
[6] The DAFOR scale was used to note levels of dominance within habitats present for each plant species, from Dominant, Abundant, Frequent, Occasional or Rare.
[7] https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides

The Statutory Biodiversity Metric is designed to accommodate newly-created habitats via its risk multipliers, which are: difficulty of creation or enhancement, time to target condition and spatial risk. These factors are an integral part of the formulae used by the Metric to ensure created habitats reflect those lost.

3.4 Trading

The Metric and supporting guidance set out the trading rules, require avoidance of trading-down, ensuring that habitats are either replaced like-for like or like-for-better. The rules also stipulate that there cannot be a loss of the area of high distinctiveness habitats, if present. The necessary loss of medium distinctiveness habitats must be compensated with new habitat creation within the same broad habitat, or one of higher distinctiveness. It is possible to make provisions for allowing high distinctiveness habitats to be increased to offset losses of habitats of medium distinctiveness.

3.5 Limitations

The visibility of plant species varies throughout the year, and the UKHab habitat survey was undertaken in November, when most vascular plant species are in a vegetative (non-flowering) state and can be more difficult to identify. However, due to the common and widespread habitats present, the species were easily recognised and the habitats were straightforward to classify under UKHab. The timing of the survey is therefore not considered a limitation.

There were no significant limitations to the BNG assessment.

4 Baseline and proposed habitats

4.1 Baseline habitats

4.1.1 Desk Study

The desk study made the following relevant findings:

- There are two Priority Habitats within 1km of the site, including coastal floodplain and grazing marsh and deciduous woodland. None of these habitats are present within the site and therefore the site does not comprise an area formally identified in a local strategy. The nearest Priority Habitat is a deciduous woodland located 55m west of the site.

4.1.2 Habitat Survey

Baseline habitats are shown in Appendix 1. The site comprises one building, a vegetated garden and hardstanding. Scattered trees, a line of trees (TL1) and four non-native ornamental hedgerows (H1, H2, H3 & H4) are also present. The habitats are all species-poor, common and widespread, being urban in nature, are heavily managed and of low ecological value. The habitats are described in UKHab terms below.

Vegetated garden g4/108/200/828 & g4/128/828

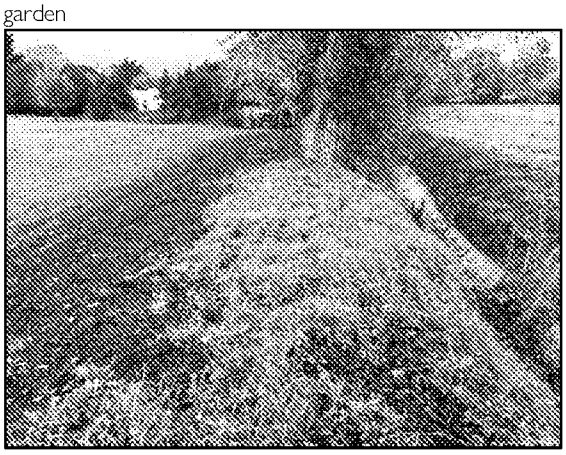
A vegetated garden comprising a frequently mown modified grassland with scattered trees (*g4/108/200/828 Modified grassland/frequently mown/tree/vegetated garden*) dominates the site (Photographs 1 and 2). This habitat has a consistent sward height of approximately 5cm and a species density of approximately four species per m^2. Species present include dominant meadow grass *Poa* species (sp.), red fescue *Festuca rubra* and white clover *Trifolium repens*, abundant creeping buttercup *Ranunculus repens*, frequent dandelion *Taraxacum officinale* aggregate (agg.) and occasional ribwort plantain *Plantago lanceolata* and broad-leaved dock *Rumex obtusifolius*. Smooth cat's-ear *Hypochaeris glabra* is also present, but rare. Tree species present within the grassland include Norway maple *Acer platanoides* and field maple *Acer campestre*.

An area of rough grassland (*g4/128/828 Modified grassland/tall or tussocky sward/vegetated garden*) is present within the vegetated garden, on the eastern boundary of the site (Photographs 3 and 4). This habitat has a varying sward height between 20 – 30cm and a species density of approximately six species per m^2. Species present include dominant meadow grass, abundant Yorkshire fog *Holcus lanatus* and cleavers *Galium aparine*, frequent bristly ox-tongue *Helminthotheca echoides*, petty spurge *Euphorbia peplus*, cut-leaved cranesbill *Geranium dissectum*, prickly sow-thistle *Sonchus asper* and common nettle *Urtica dioica*, and occasional ribwort plantain and red dead-nettle *Lamium purpureum*.

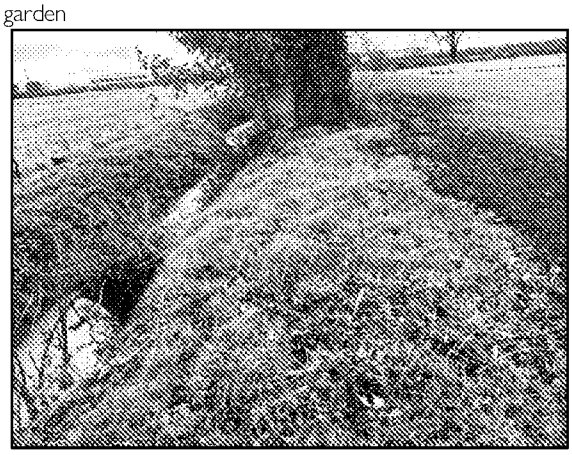
This habitat does not require a condition assessment.

Photograph 1. Modified grassland within the vegetated garden

Photograph 2. Modified grassland within the vegetated garden



Photograph 3. Rough grassland on the eastern boundary



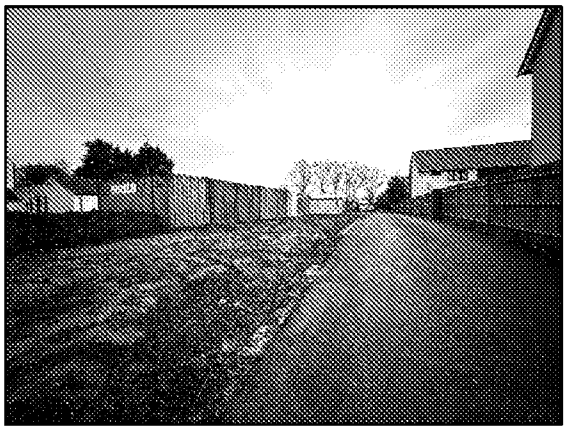
Photograph 4. Rough grassland

Bare ground (g4/200/510/828)

Five areas of bare ground (*g4/200/510/828 Modified grassland/tree/bare ground/vegetated garden*) are present within the vegetated garden and across the site (Photographs 5 and 6). There are no species growing in these areas with the exception of a sycamore *Acer pseudoplatanus*, two Monterey cypress *Cupressus macrocarpa* and a horse chestnut *Aesculus hippocastanum*.

All five areas of bare ground were assessed as being in 'poor' condition.

Photograph 5. Bare ground in the north-east corner of the site



Photograph 6. Bare ground close to the building

Line of trees w1g/33/50

A line of trees denoted TL1 (*w1g/33/50 other broadleaved woodland/line of trees/ditch*) approximately 55m in length is present on the eastern boundary of the site (Photographs 9 and 10). Species present include dominant poplar *Populus* sp. and occasional horse chestnut. The line of trees is associated with a wet ditch which runs parallel to the east. The wet ditch has significant duckweed *Lemna* sp. coverage.

TL1 was assessed as being in 'moderate' condition.

Photograph 7. Line of trees (TL1) on the eastern boundary

Photograph 8. Wet ditch to the east of TL1

Non-native and ornamental hedgerow h2b

Four non-native and ornamental hedgerows (H1, H2, H3 and H4) are present within the site (Photographs 9-12).

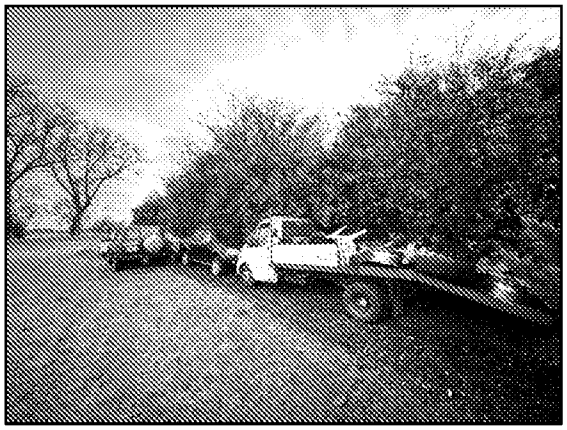
H1 is on the southern boundary of the site and is approximately 5 – 6m tall and 50m in length. The hedgerow comprises dominant garden privet *Ligustrum ovalifolium*, abundant bramble *Rubus fruticosus* agg. and occasional plum *Prunus* sp. and elder *Sambucus nigra.*

H2 is located on the northern boundary of the site and is approximately 4 – 5m tall and 20m in length (Photograph 11). Species present include locally dominant bramble and occasional holly *Ilex aquifolium*, evergreen spindle *Euonymus japonicus*, red robin *Photinia* sp. and field maple.

H3 is located on the northern boundary of the site and is approximately 5 – 6m tall and 30m in length (Photograph 12). H3 is dominated by Leyland cypress *Cupressus x leylandii.*

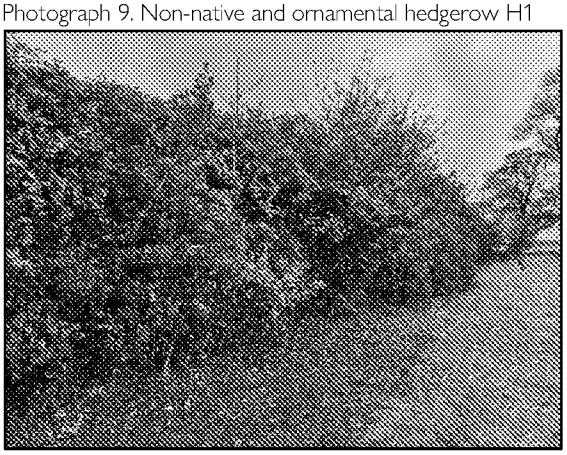
H4 is located on the western boundary of the site. H4 is approximately 4m tall, 5m in length, and is dominated by cherry laurel *Prunus laurocerasus.*

Non-native and ornamental hedgerows are automatically assigned 'poor' condition within the metric. Consequently, these habitats do not require a condition assessment.

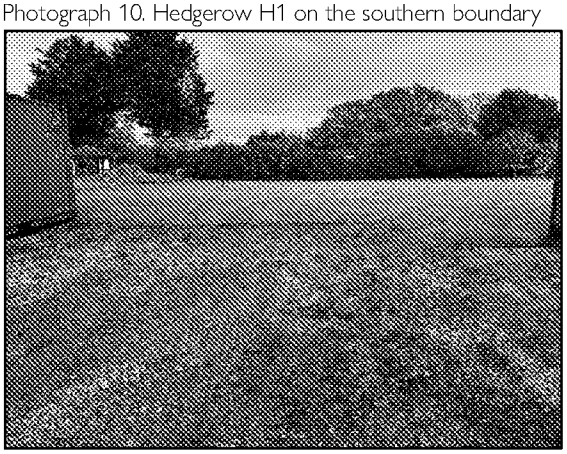


Photograph 9. Non-native and ornamental hedgerow H1

Photograph 10. Hedgerow H1 on the southern boundary



Photograph 11. Hedgerow H2 on the northern boundary of the site



Photograph 12. Hedgerows H2 and H3 on the northern boundary of the site

Urban trees

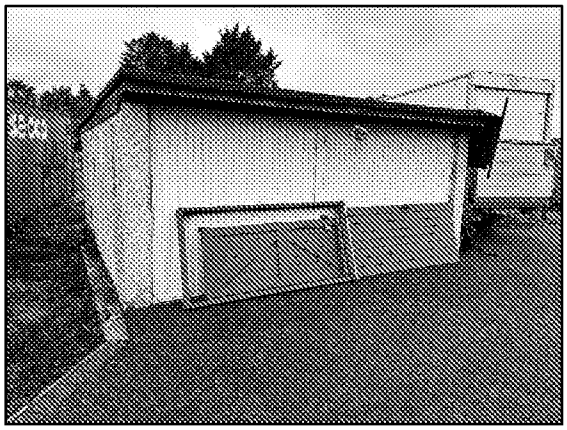
Five trees including a Monterey cypress (Photograph 13), sycamore, ash, Norway maple and field maple are present within the site. Due to their diameter at breast height (DBH), these trees are all categorised as small trees within the metric.

The trees were assessed as being in 'moderate' condition.

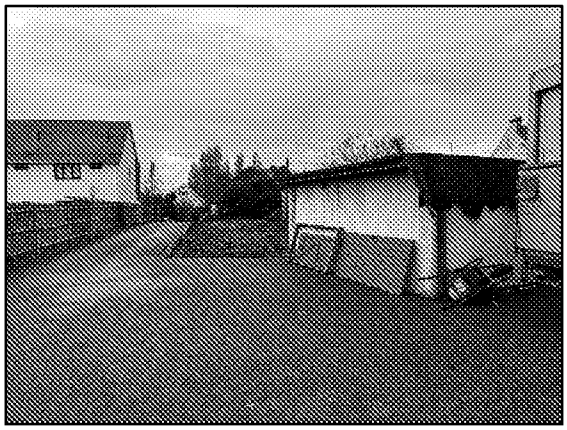
Photograph 13. Monterey cypress

Developed land; sealed surface – Building u1b5

One building is present within the site (Photographs 14 and 15). This habitat does not require a condition assessment.



Photograph 14. Double garage

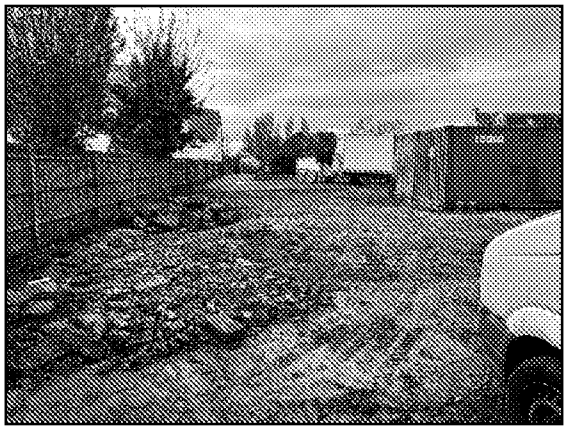


Photograph 15. Southern and eastern aspects of the building

Developed land; sealed surface – Other developed land u1b6

A paved path, gravel access track and a tarmac parking area (Photographs 16 and 17) are all present within the site. No species are present within these areas. This habitat does not require a condition assessment.

Photograph 16. Paved garden path



Photograph 17. Gravel parking area and access road

4.2 Proposed habitats

There will be loss of vegetated garden, bare ground, individual trees, hardstanding, building and hedgerow H4 to facilitate the proposed development. The developed site will see an uplift in biodiversity, via other neutral grassland creation and tree and hedgerow planting across the site.

Proposed habitats are shown in the Proposed Site Plan in Appendix 3.

4.3 BNG summary

The BNG Metric is provided under separate cover, showing the data input and calculations upon which this assessment is based.

The site currently provides 1.03BU area-based habitats. Post-development, the site would deliver 1.23BU area-based habitats, representing an increase of 0.2BU for area-based habitats, delivering an 18.96% gain.

The site currently provides 0.33BU hedgerow habitats. Post-development, the site would deliver 0.46BU hedgerow habitats, representing an increase of 0.13BU for hedgerow habitats, delivering a 38.45% gain.

The trading rules are satisfied.

5 Ecological Management Plan

5.1 Introduction

It is not anticipated that a Habitat Management and Monitoring Plan (HMMP) would be required for this development, as the created habitats would not be considered 'significant' under the description set out by Central Government. An Ecological Management Plan for the site would be secured via condition once planning permission has been obtained. The proposed measures are summarised in the sections below.

5.2 Implementation

On-site habitat creation will entail the creation of a neutral grassland in 'good' condition in the east of the site, to replace the existing vegetated garden habitat. Implementation will entail heavy depletion cropping for a full year to remove nutrients from the soil in these areas and prepare the ground for wildflower growth. A suitable seed mix will be selected for each area based upon professional advice of experienced seed producers, such as Emorsgate Seeds or another suitable provider providing wild, native, UK-grown seed. Interrogation of the LandIS® Soilscapes database suggests the soil type at the site comprises '*freely draining slightly acid loamy soils*', suggesting broad suitability of the soil to support this habitat.

Yellow rattle *Rhinanthus minor* will be included in seed mixes to increase the chances of the grassland achieving the desired condition. Seed will be sown in the second year. Seed will be suitably irrigated and monitored following guidance from the seed provider. In the second and subsequent years, this grassland will be subject to a single annual cut in late August when most wildflower species have flowered. Natural England[8] states that cutting twice a year may be necessary on fertile soils. The need for this will be guided by specialist advice from the seed provider. Arisings will be removed from the site to avoid nutrification of the soil, which would encourage the growth of vigorous weeds.

On-site habitat creation will also entail a 40m native hedgerow and six small trees being planted within the site. Native hedging and trees will be planted in Spring or Autumn and irrigated sufficiently to ensure survival. Hedge and tree species selection will avoid horticultural varieties, which can have a compromised nectar yield, providing less of a benefit to nectaring insects and the wider food chain. The new hedge will be planted in a staggered double row of 1m whips. The six small trees will be planted apart from one another to ensure they do not become crowded.

5.3 Long-term management

The grassland will be subject to long-term management comprising a single cut in late August, with arisings removed, and a possible second annual cut if deemed necessary. New trees and hedging will be irrigated sufficiently to allow successful establishment, and will be monitored for poor health, replacing if necessary under the advice of an

[8] English Nature (now Natural England) (1999) Grassland Creation. Natural England, Peterborough, Cambridgeshire

arboriculturist.

Tree and hedge management will occur from September to February (inclusive), avoiding the core bird nesting season which runs from March to August (inclusive).

5.4 Monitoring

The grassland, trees and hedgerow will be monitored at years three and six post-completion and any failed plants will be replaced. Monitoring will form an integral part of the site's management, in which the Council will periodically assess and report the successes and failures of implementation and management, recommending amendments where required. The full monitoring regime will be detailed in a 30-year management plan, which can be secured via condition.

6 Conclusion

Proposed development of the site and associated landscaping will deliver an overall 18.96% gain for area-based habitats and a 38.45% gain for hedgerows. The habitat creation and management measures proposed include on-site measures which will benefit a wide range of local wildlife. With these measures in place, the proposed development at Land to the Rear of Regal House will deliver Biodiversity Net Gain in accordance with the current legal requirements of the Environment Act 2021, the NPPF and Policies ENV DM1 to ENV DM5 of the Arun Local Plan.

The local planning authority can therefore be reassured that a suitable Biodiversity Net Gain will be delivered in line with the Environment Act 2021.

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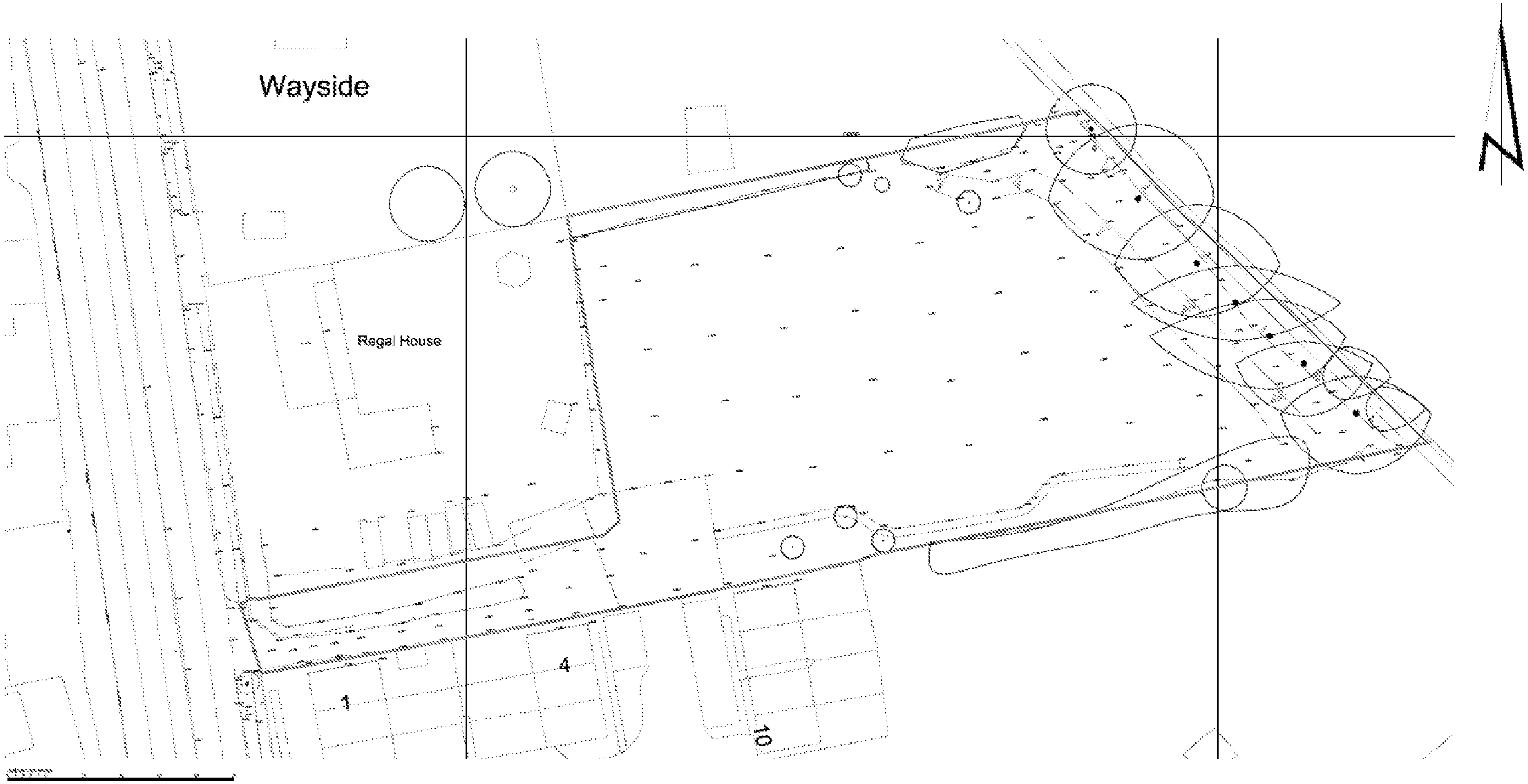
Appendix 1 Site Location Plan



Existing Site Layout Plan

August 2022 1:250 at A1

MANHIRE LLP

Land to rear of Regal House - Shripney Rd, Shripney, Bognor Regis PO22 9NPT - Proposed Site Layout Plan

Appendix 2 Baseline habitats

Key:

- Site boundary
- Target notes
- Trees

Habitats

- Vegetated garden (Modified grassland)
- Vegetated garden (Rough grassland)
- Bare ground
- Building
- Other developed land

Linear features

- Non-native hedgerow

Site	Land to the Rear of Regal House, Bognor Regis
Report	BNG Assessment
Map	UKHab Habitat Map
Date	March 2025

Ecology Works Limited
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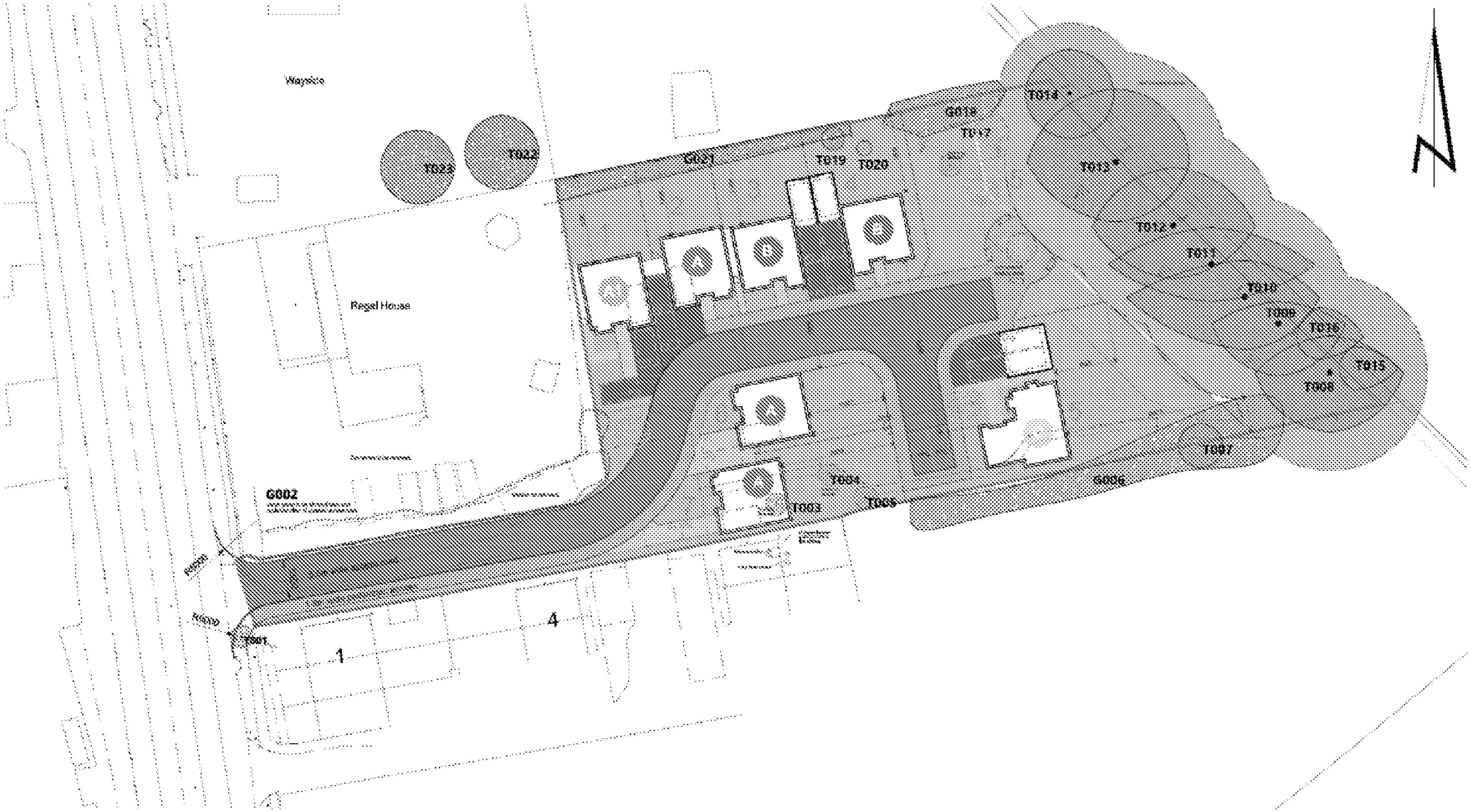
Appendix 3 Proposed Site Plan



Proposed Site Layout Plan

July 2024 1:250 at A1

MANHIRE LLP
Surveyors

Land to the East of Shripney Rd, Shripney, Bognor Regis PO22 9NPT - Proposed Site Layout Plan

ARUN DISTRICT COUNCIL BE/48/25/PL