



Preliminary Ecological Appraisal

Sandgate Nursery, Henfield, West Sussex

Contents

1.0 INTRODUCTION.....	4
BACKGROUND	4
SITE CONTEXT AND STATUS	4
2.0 METHODOLOGY	7
DESKTOP STUDY	7
PRELIMINARY ECOLOGICAL APPRAISAL.....	7
PROTECTED SPECIES ASSESSMENTS	7
LIMITATIONS.....	7
3.0 RESULTS.....	8
DESKTOP STUDY	8
PHASE 1 HABITAT SURVEY.....	12
PROTECTED SPECIES.....	13
<i>DORMOUSE</i>	14
<i>GREAT CRESTED NEWT</i>	14
	
<i>REPTILES</i>	15
<i>BREEDING BIRDS</i>	15
<i>OTHER SPECIES</i>	15
4.0 DISCUSSION.....	16
PROTECTED SPECIES.....	17
ECOLOGICAL ENHANCEMENTS.....	20
5.0 IMPACT ASSESSMENT	20
6.0 CONCLUSIONS.....	21
7.0 REFERENCES	23
APPENDIX 1: PHOTOS	25
APPENDIX 2: HABITAT MAP	30
APPENDIX 3: SPECIES LIST	32

LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species maybe recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

Background

- 1.1 The Ecology Partnership was commissioned by Solve Planning to undertake a preliminary ecological appraisal (PEA) of land at Sandgate Nursery, Henfield. This is in support of a planning application for the site.
- 1.2 The key objectives of a PEA (CIEEM 2017) are to:
- Identify the likely ecological constraints associated with a project;
 - Identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy' (CIEEM 2016; BSI 2013, Clause 5.2);
 - Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and
 - Identify the opportunities offered by a project to deliver ecological enhancement.
- 1.3 This report comprises the:
- Legislative and planning context (Section 1);
 - Assessment methodologies (Section 2);
 - Results (Section 3);
 - Implications for development (Section 4);
 - An impact assessment (Section 5); and
 - Conclusions (Section 6).

Site Context and Status

- 1.4 The site comprises a disused and overgrown nursery, and is approximately 3.7ha and located on the western edge of Henfield, bound by West End Lane to the north, residential gardens to the east, Hollands Lane to the south, and farmland to the west (TQ 20454 15995). The wider surrounding area comprises residential areas to the north and east and green open space to the south and west, largely comprising horse pasture.
- 1.5 The extent of the site is shown in Figure 1 below in wider context and in Figure 2, a closer view of the site boundary and survey area.



Figure 1: Approximate location of the red line boundary showing the wider landscape
Satellite imagery obtained from Google Earth Pro on 16/11/2022



Figure 2: Approximate location of the red line boundary
Satellite imagery obtained from Google Earth Pro on 16/11/2022

Description of the Proposed Development

1.6 The full proposals for the scheme are as follows:

“Outline application for erection of a continuing care retirement community of up to 72 units of accommodation (Use Class C2) and up to 10 starter homes (Use Class C3) with associated community facilities including medical centre and onsite laundry and catering facilities, with

access, infrastructure, open space, landscaping and associated works (all matters reserved except for access)."

Planning Policies

- 1.7 The outline application was assessed against policy guidance provided by the National Planning Policy Framework, as well as relevant planning policies from the Horsham District Local Plan 2021-2038. The following policies were considered relevant to ecology, biodiversity and nature conservation:
- Policy 26: The Natural Environment and Landscape Character
 - Policy 30: Green Infrastructure and Biodiversity
- 1.8 This report addresses the site in relation to nature conservation and wildlife and indeed to the local planning requirements as well as national planning and nature conservation legislation.
- 1.9 The Environment Bill received Royal Assent on 9th November 2021 and is now enacted as the Environment Act 2021. Part 6 (Nature and Biodiversity) and Schedule 14 of the Environment Act 2021 inset a new section 90A and Schedule 7A into the Town and Country Planning Act 1990 (TCPA), which contain the provisions requiring mandatory biodiversity net gain for development granted planning permission pursuant to the TCPA. These provisions are not yet in force, but, once they are brought into effect through implementing legislation, will require developments to provide a biodiversity value post-development that exceeds the predevelopment biodiversity value of the onsite habitats by at least 10%. These provisions are not expected to come into force until November 2023 for new planning applications.
- 1.10 The site was surveyed to assess its ecological value and to ensure compliance with national and local plan policies. The report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM 2017) and in accordance with BS 42020:2013 Biodiversity – Code of Practice for Planning and Development.

2.0 Methodology

Desktop Study

- 2.1 A desktop study search was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites and an internet-based aerial mapping service (maps.google.co.uk) was used to understand the habitats present in and around the survey area and habitat linkages and features (ponds, woodlands etc.) within the wider landscape. Data for non-statutory sites, and local protected and notable species within 2km of the site was obtained from Sussex Biodiversity Records Centre (SxBRC).

Preliminary Ecological Appraisal

- 2.2 An extended preliminary ecological appraisal was undertaken on 13th July 2022 by Principal ecologist Matt Pendry BSc (Hons). The surveyors identified the habitats present, following the standard 'UK Hab' auditing method. The site was surveyed on foot and the existing habitats and land uses were recorded on an appropriately scaled map (JNCC 2010). Repeat visits to the site were made as part of reptile surveys across the year, as well as additional checks for [REDACTED] potential roost features on trees in the winter period when foliage was more sparse.

Protected Species Assessments

- 2.3 Any evidence of protected species was recorded. Standard methods of search and measures of presence, or likely presence based on habitat suitability were used for bats in trees and buildings (Collins 2016), breeding birds¹, dormouse (Bright *et al.* 2006), great crested newt (ARG 2010), reptiles (Froglife 2015), [REDACTED] (Creswell *et al.* 1990) and water vole (Strachan *et al.* 2011).

Limitations

- 2.4 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment.

¹<https://www.bto.org/our-science/projects/birdatlas/methods/breeding-evidence>

- 2.5 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on-site, based on the suitability of the habitat and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group. The assessment is only valid for the time when the survey was carried out. Additional surveys may be recommended if, on the basis of this assessment it is considered reasonably likely that protected species may be present.

3.0 Results

Desktop Study

- 3.1 The site does not fall within or adjacent to any nationally or internationally designated sites, however, three international statutory designations are located within 15km:
- Arun Valley Special Protection Area (SPA) located 14.3km to the west, designated for supporting nationally significant population of Berwick's sawn *Cygnus columbianus bewickii*, as well as being used regularly by over 20,000 waterfowl.
 - Arun Valley Special Area of Conservation (SAC) located 14.3km to the west; and designated for supporting Annex II Species Ramshorn snail *Anisus vorticulus*; and,
 - Arun Valley Ramsar site, located 14.3km to the west, and designated under Criterion 2 for supporting seven threatened wetland invertebrate species, under criterion 3 for its rich ditch flora, and under criterion 5 for its internationally important waterfowl assemblage.
- 3.2 No national statutory designations are located within 2km of the site.
- 3.3 In terms of non-statutory designations, there are three Local Wildlife Site (LWS) and a single Designated Road Verge (DRV), within 2km of the site:
- Barrow Hill Road DRV, 1km east.
 - Broadmare Common LWS: 1.3km south-east; designated for its fen, willow carr, and woodland habitat featuring numerous ephemeral and permanent ponds.
 - Henfield Common LWS, 1km east, designated for mosaic of neutral and acid grassland and species-rich rush pasture, reedbeds, and woodland.

- River Adur Water Meadows & Wyckham Wood LWS 1.5km south-west; designated for its floodplain grazing marsh and woodland of value to birds.

3.4 The site is surrounded by a number of priority habitats (Figure 3), including:

- Scattered small areas of priority **deciduous woodland** parcels, including an area adjacent to the south-west site boundary.
- Small areas of **traditional orchards** priority habitat, the closest being c.400m north-west of the site.
- An extensive area **floodplain grazing marsh** is located c.190m south of the site.

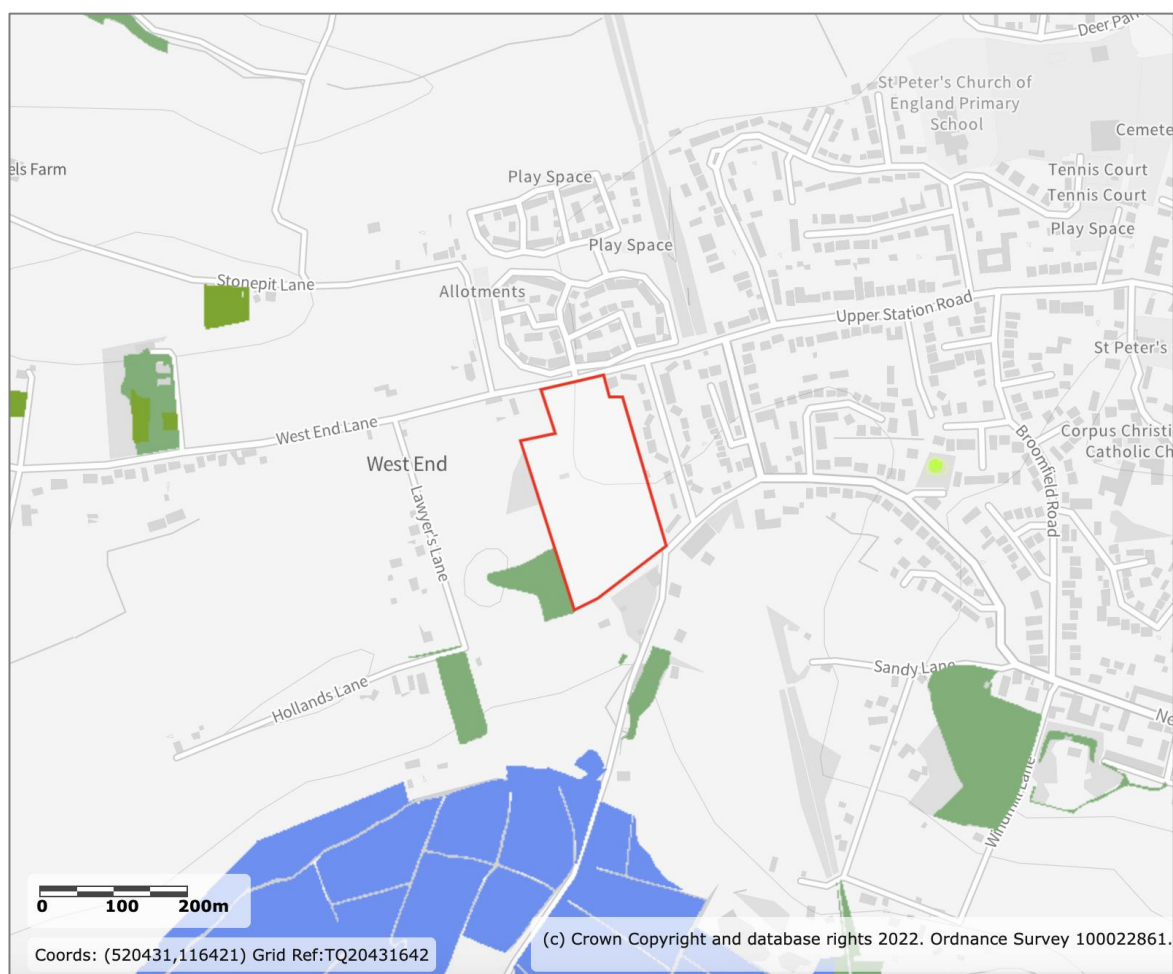


Figure 3: Priority habitats within local area: Deciduous Woodland (dull green), traditional orchard (lime green) and floodplain grazing marsh (blue), priority pond (bright green).

- 3.5 OS mapping found no waterbodies on site. There are three waterbodies within 250m of the site (Figure 4).



Figure 4: Waterbodies within 250m of the red line boundary.

- 3.6 A search revealed three European Protected Species Mitigation (EPSM) licences within 2km of the site. These are summarised in Table 1 below:

Table 1: ESPM licences within 2km of the site

Species	Distance from site	Date	Type	Case reference
GCN	80m north	01/01/2016 – 01/08/2019	Damage & destruction of a resting place	2015-17216-EPS-MIT
Common & soprano pipistrelle	1.86km east	26/05/2017 – 30/09/2017	Destruction of a resting place	2017-29484-EPS-MIT
GCN	1.9km south-east	30/04/2010 – 29/04/2012	Destruction of a resting place & breeding site	EPSM2009-1258

- 3.7 A 2km records search was requested from SxBRC. The records closest to site, recorded within the last 10 years and relevant to the habitats on site have been included in Table 1.

Table 2: Notable species records within 2km of the site in the last 10 years

Species	Status	Distance from site	Date of record
Small heath <i>Coenonympha pamphilus</i> (Four records)	NERC Act (2006) Section 41	1km south	17/07/2021
Wall <i>Lasiommata megera</i> (Seven records)	NERC Act (2006) Section 41	775m east	20/08/2021
Cinnabar <i>Tyria jacobaeae</i> (8 records)	NERC Act (2006) Section 41	580m east	02/07/2019
Common toad <i>Bufo bufo</i> (2 records)	NERC Act (2006) Section 41	425m east	27/08/2018
Great crested newt <i>Triturus cristatus</i> (2 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	1.3km south	02/08/2021
Slow worm (20 records)	Wildlife and Countryside Act (1981 as amended) Schedule 5	On site	04/04/2014
Grass snake (6 records)	Wildlife and Countryside Act (1981 as amended) Schedule 5	250m east	13/09/2017
Western European Hedgehog <i>Erinaceus europaeus</i> (19 records)	NERC Act (2006)	425m south	30/01/2021
Natterer's Bat <i>Myotis nattereri</i> (1 record)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	1.5km south	12/09/2020
Daubenton's Bat <i>Myotis daubentonii</i> (2 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	1.5km south	29/07/2020
Brown long-eared bat <i>Plecotus auratus</i> (4 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	1.5km south	12/09/2017
Common pipistrelle <i>Pipistrellus pipistrellus</i> (5 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	500m north-east	29/09/2021
Soprano pipistrelle <i>Pipistrellus pygmaeus</i> (3 records)	Conservation of Habitats and Species Regulations (2017) Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	500m north-east	19/06/2020

Phase 1 Habitat Survey

- 3.8 The site comprises an old plant nursery, which has remained unused for over 20 years. Historic satellite imagery indicates that in 2001 the site was not in use, with most of the polytunnels removed, however, short sward grassland was present across the site. Over a 10 year period goat willows began to establish themselves in the north and south-east, however the majority of the grassland continued to be managed other than that within the footprint of the old polytunnels, which subsequently appears to have become rank. All management appears to have ceased on site around five years ago, and consequently the old polytunnels have now become overrun with brambles, the groups of goat willows have developed into small pockets of woodland, and the grassland across the whole site has become rank with extensive areas of encroaching brambles across the site.

Other neutral grassland (g3c)

- 3.9 Much of the site comprised unmanaged species-poor neutral grassland. In the north of the site the grassland was generally a taller sward with frequent low-lying bramble and occasional small rabbit grazed clearings. In comparison, the grassland in the south of the site was almost entirely short-sward, likely owing to intensive grazing by rabbits. The dominant grass was false oat-grass, with abundant Yorkshire fog, and frequent creeping bent, and cock's-foot. Flowering species included frequent common ragwort, with occasional creeping buttercup, common nettle, common selfheal, creeping cinquefoil, creeping thistle and white clover.

Other lowland mixed deciduous woodland (w1f7)

- 3.10 Small groups of goat willow in the north-east, south-east and south-west of the site had reached a height of over 5m and had a interlinking canopy, and as such were now considered to be woodland, albeit not a typical woodland community. The canopy was not high enough to support a separate understorey layer, and the dense foliage had resulted in a very dark ground layer, largely devoid of vegetation at the time of the survey other than occasional patches of common nettle or bramble, where sufficient light penetrated.

Mixed scrub (h3h)

- 3.11 There were bands of mixed scrub along the northern, western, and southern boundaries of the site. This featured abundant hazel, with frequent goat willow, and bramble, and rare occurrences of field maple, damsons, and elder.

Bramble scrub (h3d)

- 3.12 Large extents of the site, particularly in the north-east, centre and south-west were dominated by bramble at a height of 2-3m, with abundant common nettle.

Buildings (u1b5)

- 3.13 Most traces of the original polytunnels were no longer present other than the occasional metal frame. The main greenhouse in the west of the site had become completely overgrown with bramble. The only true building on site was a small single-storey structure constructed of breezeblocks with a timber frame roof and corrugated asbestos cement panelling on the roof and walls. The western wall and most of the roof had collapsed with bramble encroaching into the building.

Protected Species***Bats***

- 3.14 The site has good connectivity to suitable bat habitat within the surrounding area including extensive floodplain grazing marsh habitat to the south. The scrub/grassland mosaic within the site itself also provides suitable foraging habitat. However, a lack of woodland in the surrounding area may reduce the abundance of suitable roost sites for some species. As such, the site is considered to have moderate potential for commuting and foraging bats.
- 3.15 A single mature ash tree in the south-west of the site was found to support two small potential roost features in the form of small rot holes that may lead into small cavities within the tree. However, these features are surrounded by dense foliage and scrub, creating a lot of clutter in the area around these features, this may deter some bats from finding and making use of these features. As such, this tree is considered to be of low potential to support bats.
- 3.16 The remaining trees throughout the main body of the site and along the northern boundary, were largely younger specimens, in good health and did not present any

potential roost features. As such they were assessed as having negligible potential to support roosting bats.

- 3.17 The building in the centre of the site was unsuitable to support roosting bats, as the corrugated asbestos roof had partially collapsed, exposing to the interior to the elements. Furthermore, no voids or suitable crevices were identified within the building. As such, it was determined to have negligible potential to support roosting bats.

Dormouse

- 3.18 The site contains suitable woodland and scrub habitat for dormice. However, the site is largely isolated from any woodland within the wider landscape, and the woodland that is present only comprises small areas, unlikely to support a dormouse population long-term. The nearest area of ancient woodland is located at Parsons Farm 1.1km to the north-east. This was extensively surveyed for dormouse in 2018 and found no presence (The Ecology Partnership, 2018). Another application site located 250m to the south-east of the site, was also extensively surveyed for dormouse in 2017, and again no evidence of dormouse was found (The Ecology Co-op, 2017). No records of dormouse were returned in the data search, with the nearest Dormouse EPSM licence located over 7km to the west in Ashington on the opposite side of the A24. As such, it is considered that potential for dormouse to be present on site is negligible.

Great crested newt

- 3.19 The habitat on site is considered suitable to support GCN in their terrestrial phase. The data search identified three water bodies within 250m of the red-line boundary, however one of these was confirmed to be a swimming pool. Of the other two ponds, one is a newly created attenuation basin within the housing estate to the north of the site, and the other is located 100m to the west in Dear's Farm. A review of ecological reports for the recent development to the north of the site, found that an unmapped pond was also present in the gardens of Dear's Farm (Aspect Ecology, 2013). This pond was confirmed to support GCN, with a peak count of 1 female and one egg, and is located 55m to the north-west. An attempt was made by The Ecology Partnership to access these ponds and capture water samples for eDNA testing for great crested newts, however at the time the ponds were too dry. As such, the site is considered to have high potential to support GCN.



Reptiles

- 3.21 The longer sward grassland, woodland, tree line edges, and scrub edge habitats on site are suitable to support common reptile species such as slow worm, common lizard. Overall, the site was considered to have good potential to support reptiles, a subsequent reptiles surveys have now concluded a low population of slow worm and grass snake is present on site (The Ecology Partnership, 2022a).

Breeding birds

- 3.22 Woodland and scrub on site provide suitable nesting habitat for breeding birds. As such, the site is considered to have high potential to support breeding birds.

Other Species

- 3.23 Owing to a lack of suitable habitat on site and within the surrounding area, no potential for any other protected species, such as otters and water voles, was identified within the site.
- 3.24 Due to the suitable tree lines, scrub and woodland habitat on site in addition to records in the local area, the site is considered to have moderate potential to support hedgehog.

4.0 Discussion

- 4.1 The following paragraphs consider the effects of the development on designated sites, priority habitats and protected and priority species. Where the desk study and Phase 1 survey provide sufficient evidence for an assessment of effects on any of these groups to be taken through planning, these are detailed below, the need for additional surveys and when and how these should be completed are summarised, if required.

Effects on designated sites

- 4.2 The site does not fall within any statutory or non-statutory designated sites. However, it does fall within the Sussex North Water Resource Zone and as such, is subject to water neutrality requirements associated with Arun Valley SPA, SAC & Ramsar site 14.3km to the west. As such, in order to avoid contributing to the cumulative impact of water extraction from the Arun Valley, the development will need to demonstrate that it will not result in a net-increase in water extraction. In the likely event this cannot be achieved on site, offsetting may be required, however, at the time of writing, no council-led offsetting scheme has been finalised. No other impacts on statutory designated sites are anticipated as a result of the development.
- 4.3 The site is located within 2km of three LWS and a single DRV. However, none of these sites are located within walking distance of the site. As such, in conjunction with the relatively small scale of the proposals, this development is not expected to have any significant negative direct or indirect effects on any non-statutory designated sites.

Effects on Priority Habitats

- 4.4 The woodland on site was not considered priority woodland habitat as it only comprised goat willow established in the last 20 years. Priority woodland habitat is located adjacent to the south-western boundary. As such, it is recommended that proposals seek to not impact the root protection areas of trees associated with this offsite woodland.

Effect on other habitats

- 4.5 The linear bands of scrub and treelines around the edge of the site provide wildlife corridors, allowing animals to safely traverse the site. These habitat corridors are

considered to be of local value to wildlife and the masterplan should seek to retain this green corridor function of the site. The mosaic of scrub, grassland and woodland onsite, provides a wildlife resource of local value, as similar habitat is not present within the local area. Loss of this habitat should be compensated for through creation of new like for like habitat to be managed to a higher condition. However, in order to achieve a biodiversity net-gain, it is likely off-setting through ecological enhancement of offsite land would be required.

Protected Species

Bats

Buildings

- 4.6 No buildings with potential to support roosting bat were recorded on site and as such no further survey is required.

Trees

- 4.7 A mature ash in the south-west of the site, was determined to have low potential for roosting bats owing to the presence of two small potential roost features. As such, it is recommended that prior to removal it is subject to an endoscopic inspection for bats. This will involve a suitably qualified ecologist inserting an endoscope into the small hole in the tree and inspecting the cavity. If no bats are found and they are confident that their survey of the cavity was comprehensive, then the tree can be taken down without any further constraint. If the cavity extends further than the endoscope can reach, then a soft-fell technique must be used as a precaution. This involves cut limbs and section being left on the ground over night before being chipped or cut into smaller bits. This give bats an opportunity to escape in the unlikely event that they are in the tree. If a bat is found then all works to the tree must be halted until further surveys are conducted and a licence to remove the tree obtained from Natural England.

Bat foraging and commuting potential

- 4.9 The linear habitats and woodlands onsite provide suitable habitat for commuting/foraging bats. Separate bat activity surveys have been conducted between July and October 2023, and the results and recommendations are presented in the accompanying report (The Ecology Partnership, 2022b).

GCN

- 4.10 The scrub, woodland and tall-sward grassland onsite provides suitable terrestrial habitat for GCN, and three ponds are located within 250m of the site. A single pond located 55m to the north-west of the site was confirmed to support a single female GCN and a GCN egg during surveys undertaken in 2013 (Aspect Ecology, 2013). All three ponds were visited on 21 July, however, were found to be dry or only supporting a small puddle of water at this time. It is likely that GCN are unlikely to be present in large numbers in the local area, as there is not sufficient aquatic habitat throughout the year to support newts in their aquatic phase. As such, it is likely that impacts on GCN will be minimal, and easily mitigated.
- 4.11 Regardless, it is recommended that GCN presence/likely absence surveys are conducted on all three waterbodies, as this will inform an application for a European Protected Species Mitigation (EPSM) licence if they are found to still be present.
- 4.12 In line with best practice presence/likely absence surveys should be undertaken between mid-March and mid-June. Where GCN are found to be present a further two surveys are required to assess population size. At least half (2 or 3) of all surveys should be undertaken in the peak season between mid-April and mid-May. As such, it is recommended that at least three are undertaken in this period.
- 4.13 Surveys should be spaced out, with at least a week between each survey, and should be conducted in suitable weather with overnight temperatures consistently above 5°C. Each survey should comprise a mix of at least three established surveys techniques such as bottle trapping, torching, and egg searching.

Reptiles

- 4.14 The grassland along the woodland and scrub edge provides suitable habitat for common reptiles due to the longer sward providing shelter and foraging opportunities. A reptile presence/likely absence survey has since been carried out on site between July and October 2022, confirming presence of a low population of slow worm and grass snake. Detailed recommendations for mitigation and protection of reptiles is provided in the accompanying report (The Ecology Partnership, 2022a).

Nesting Birds

- 4.15 The scrub, woodland, and trees on site all have the potential to support nesting birds. If the removal of any of these features is to be carried out, this should be done outside of the breeding bird season (March-September inclusive) or immediately after a nesting bird check by a suitably qualified ecologist. If active nests are identified, works in the vicinity of the nest must cease until the birds have fledged the nest.

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Other Species

- 4.17 No potential for any other protected species, such as water voles or otters was identified within the site.
- 4.18 The site has potential to support hedgehog. Whilst receiving no specific legal protection, they are protected from certain forms of harm under the wild mammals (Protection) Act 1996. There is a risk that without mitigation, vegetation clearance on site may result in mutilation or crushing of hedgehog nesting in brash piles. As such, it is recommended that areas of dense vegetation needing clearance are cut in two stages, the first to 300mm, then then the second to ground level after the area has been searched for hedgehog. If any are found, they will be safely move to a suitable brash pile outside the clearance area.

Ecological Enhancements

- 4.19 The site is currently considered to support habitats of ecological value, it is therefore important that considerations are given in the masterplan towards maintaining and enhancing on-site habitat and connectivity with the wider landscape post-development.
- 4.20 It is recommended that a detailed mitigation and enhancement strategy is drawn up for the site based on the findings of the Phase 2 protected species surveys and through the review of the proposals. This will include but not be limited to the following:
- Creation of new high distinctiveness habitats such as traditional orchard, and ponds, and enhancement of and expansion of existing habitats of value including scrub and wildflower grasslands to be managed in the long term for biodiversity;
 - Installation of specialist bird, & bat boxes on retained mature trees within the site, and,
 - Creation of log piles and reptile hibernacula to provide safe refuge and hibernation sites for reptiles, amphibians, and hedgehog.
- 4.21 A detailed enhancement strategy will be dependent on the results of the phase 2 surveys. This is likely to include the general recommendations above, but also more details recommendations such creation of high distinctiveness habitats.

5.0 Impact Assessment

- 5.1 A separate impact assessment has been prepared for the site following completion of surveys and finalisation of the masterplan.

6.0 Conclusions

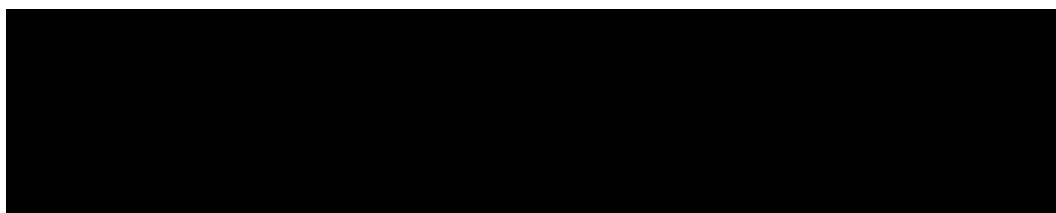
- 6.1 The site was made up of a disused plant nursery, overgrown with goat willow, bramble scrub, and rank grassland.
- 6.2 The site is not located within a designated site however does fall within the Sussex North Water Resource Zone for Arun Valley Special Protection Area & Special Area of Conservation. As such, in order to avoid contributing to the cumulative impact of water extraction from the Arun Valley, the development will need to demonstrate that it will not result in a net-increase in water extraction. No other international or national statutory sites are located within 15km of the site. Three Local Wildlife Sites and a single Designated Road Verge are located within 2mk of the site, however they are of a significant distance away to not be affected by this development, which is relatively small in scale.
- 6.3 No priority habitat is present on site. The majority of habitat on site was considered to be common and widespread throughout the UK and as such these features are of limited ecological interest. However, the mosaic of habitat they form does provide a valuable resource for local wildlife. It is recommended that habitats around the edges of the site are maintained/enhanced to ensure wildlife can safely traverse the site, and new areas of higher distinctiveness habitat such as ponds and meadows are created. However, in order to achieve a biodiversity net-gain, it is likely off-setting through ecological enhancement of offsite land would be required
- 6.4 Of the trees to be lost, a single ash tree along the western site boundary has low potential to support roosting bats, and as such, it is recommended that prior to its removal it is subjected to an endoscopic inspection and then soft felled. If bats are found, however, then an EPSM licence will be required from Natural England prior to its removal. All remaining trees and buildings on site to be lost were assessed as having negligible potential to support roosting bats.
- 6.5 The site contains habitats suitable for foraging and commuting bats. Monthly bat activity surveys are recommended to establish the use of the site by bats. *(These surveys have since been carried out and the results presented in an accompanying report.)*
- 6.6 The habitat on site provide suitable terrestrial habitat for great crested newt (GCN), and three ponds are located within 250m of the site including a pond in which a single

GCN was recorded in 2013. As such, it is recommended that GCN presence/likely absence surveys be conducted of the ponds between March and June, to assess there current use by GCN and inform any necessary mitigation.

6.7 The longer sward grassland and edge habitats on site are considered to provide suitable habitat for common reptile species so it is recommended that a presence or likely absence survey is carried out to determine the status of reptiles on site. *(These surveys have since been carried out and the results presented in an accompanying report.)*

6.8 Woodland and scrub on site have the potential to be used by birds as nesting habitat during the breeding season. The UK breeding season for most bird species takes place between March and September. Ideally, work affecting these areas should be avoided during this period. If unavoidable, it is recommended that any works affecting trees and scrub on site should be carried out under ecological watching brief.

6.9



6.10 Recommendations for enhancements have been made within this report, aimed at improving the ecological value of the site post-development.

7.0 References

ARG (2010) *UK Advice Note 5: Great crested newt habitat suitability index*. Amphibian and Reptile Groups of the United Kingdom.

Aspect Ecology (2013) *West End Land, Henfield – Ecological Appraisal*

Bright, P., Morris, P. & Mitchell-Jones, T. (2006) *The Dormouse Conservation Handbook*. 2nd edition. English Nature.

CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd Edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). Bat Conservation Trust, London.

Creswell, P., Harris, S. & Jeffries, D.J. (1990) *The history, distribution status and habitat requirements of the badger in Britain*. Nature Conservancy Council, Peterborough.

English Nature (2004) *Reptiles: guidelines for developers*. English Nature, Peterborough.

Joint Nature Conservation Committee (2010) *Handbook for Phase 1 habitat survey – a techniques for environmental audit*. JNCC, Peterborough.

Institution of Lighting Professionals (ILP – 2018) *Guidance Note 08/18 – Bats and artificial lighting in the UK*. ILP, Rugby.

Langton, T.E.S., Beckett, C.L. & Foster, J.P. (2001) *Great Crested Newt Handbook*. Froglife, Halesworth.

Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.

Natural England (2011) *Badgers and Development: A guide to best practice and licensing*. Natural England, Bristol.

Neal, E. & Cheeseman, C. (1996) *Badgers*. T & A D Poyser Ltd. London.

Stone, E.L., Jones, G., Harris, S. (2009) Street lighting disturbs commuting bats. *Current Biology*, **19**: 1123-1127.

Wilson, G.J., Harris, S. & McLaren, G. (1997) *Changes in British badger population, 1988-1997*. People's Trust for Endangered Species, London.

Internet resources:

Google Maps: www.google.co.uk/maps

Magic Interactive Map: www.magic.gov.uk

Appendix 1: Photos

Photograph 1: Neutral grassland in the west of the site



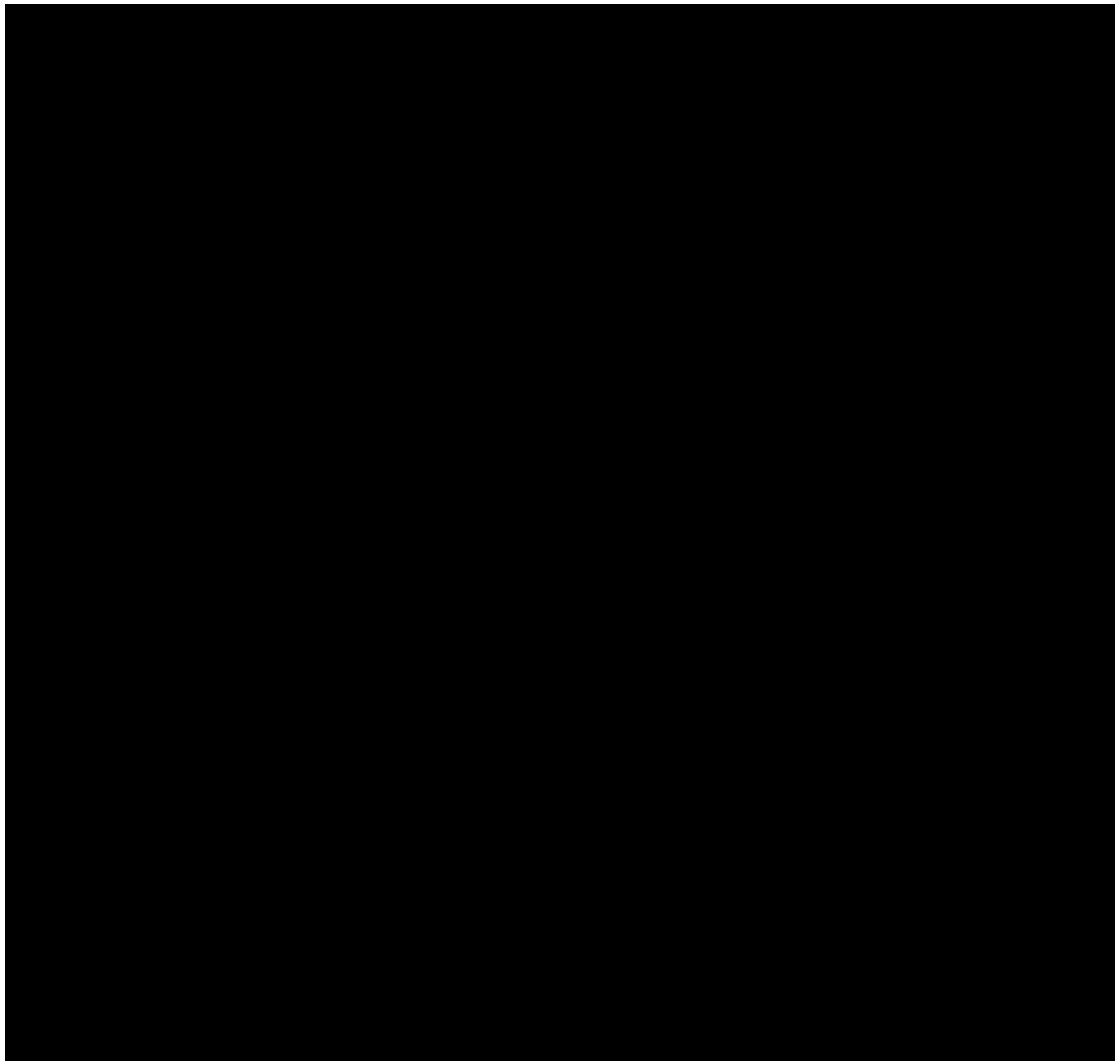
Photograph 2: Bramble scrub and old green house in the centre of the site.



Photograph 3: Short rabbit grazed grassland in the south of the site.



Photograph 4: Bramble scrub within frames of old polytunnels.	
Photograph 5: Hazel scrub along the south western site boundary.	
Photograph 6: Interior of the small building near the centre of the site.	



Photograph 9: Waterbody within new housing development to the north of the site.



Photograph 10: Pond previously found to support a single GCN in 2013, close to the north-west of the site. Not holding surface water at time of survey, but damp.



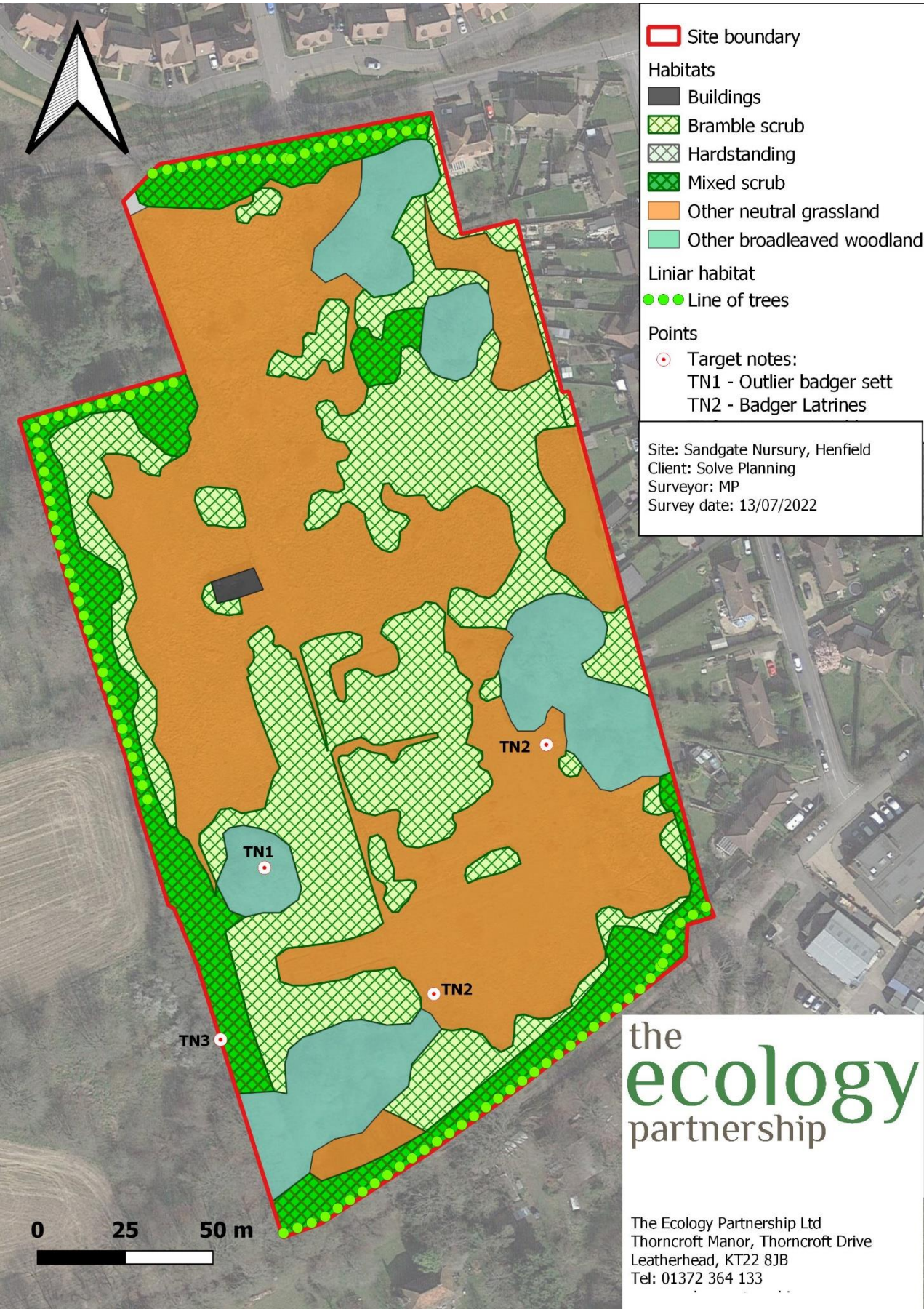
Photograph 11: Third pond within 250m, located in the north-west of Dear Farm. Completely dry at time of survey. .



Photograph 12: Ash tree with low bat potential in the south-west of the site.



Appendix 2: Habitat Map



Appendix 3: Species List

LATIN	ENGLISH	Abundance
Grassland		
<i>Arrhenatherum elatius</i>	False oatgrass	D
<i>Holcus lanatus</i>	Yorkshire fog	A
<i>Rubus fruticosus</i>	Bramble	F
<i>Jacobaea vulgaris</i>	Common ragwort	F
<i>Agrostis stolonifera</i>	Creeping bent	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Ranunculus repens</i>	Creeping buttercup	O
<i>Urtica dioica</i>	Common nettle	O
<i>Prunella vulgaris</i>	Common selfheal	O
<i>Potentilla reptans</i>	Creeping cinquefoil	O
<i>Cirsium arvense</i>	Creeping thistle	O
<i>Trifolium pratense</i>	White clover	O
<i>Medicago lupulina</i>	Black medick	R
<i>Rumex obtusifolius</i>	Broad-leaved dock	R
<i>Galium aparine</i>	Cleavers	R
<i>Centaureum erythraea</i>	Common centaury	R
<i>Pulicaria dysenterica</i>	Common fleabane	R
<i>Heracleum sphondylium</i>	Common hogweed	R
<i>Convolvulus arvensis</i>	Field bindweed	R
<i>Equisetum arvense</i>	Field horsetail	R
<i>Plantago major</i>	Greater plantain	R
<i>Cirsium palustre</i>	Marsh thistle	R
<i>Plantago lanceolata</i>	Ribwort plantain	R
<i>Juncus effusus</i>	Soft rush	R
<i>Cirsium vulgare</i>	Spear thistle	R
<i>Dipsacus fullonum</i>	Teasel	R
<i>Vicia cracca</i>	Tufted vetch	R
Woodland/scrub		
<i>Rubus fruticosus</i>	Bramble	D
<i>Salix caprea</i>	Goat willow	A
<i>Corylus avellana</i>	Hazel	A
<i>Urtica dioica</i>	Common nettle	F
<i>Calystegia</i> sp.	Bindweed	O
<i>Quercus robur</i>	Pedunculate oak	O
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Fraxinus excelsior</i>	Ash	R
<i>Prunus insititia</i>	Damsons	R
<i>Sambucus nigra</i>	Elder	R
<i>Brachypodium sylvatica</i>	False wood brome	R
<i>Acer campestre</i>	Field maple	R
<i>Aesculus hippocastanum</i>	Horse chestnut	R
<i>Quercus ilex</i>	Holm oak	R
<i>Arctium minor</i>	Lesser burdock	R
<i>Cupressus × leylandii</i>	Leyland's cypress	R
<i>Acer palmatum</i>	Norway Maple	R
<i>Primula vulgaris</i>	Primrose	R

<i>Silene dioica</i>	Red campion	R
<i>Fragaria vesca</i>	Wild strawberry	R
<i>Rumex sanguinea</i>	Wood dock	R
<i>Geum urbanum</i>	Woodavens	R

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