



LAND ADJACENT TO 43 UPPER REDLANDS ROAD READING

BIODIVERSITY NET GAIN REPORT

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1. EXECUTIVE SUMMARY

- 1.1. In September 2024, ACD Environmental Ltd were commissioned by Mohammad Saood to conduct a Biodiversity Metric of a site referred to as Land Adjacent to 43 Upper Redlands Road, Reading; hereafter referred to as 'the Application Site'.
- 1.2. The Application Site comprises approximately 0.11 hectares of land, which is predominantly vegetated garden, individual trees and panel fencing.
- 1.3. The development proposals are for a new dwelling comprising of a detached residential building with associated hard and soft landscaping, which will form part of a forthcoming planning application with Reading Borough Council.
- 1.4. The Statutory Biodiversity Metric has been used to measure and account for biodiversity losses and gains as a result of the proposed development. The results of the Metric can be summarised as follows:

On site baseline	Habitat Units	2.3908
	Hedgerow Units	0.00
On site post intervention	Habitat Units	1.7025
	Hedgerow Units	0.6553
Total on site net unit change	Habitat Units	- 0.6882
	Hedgerow Units	0.6553
Total onsite net % change	Habitat %	-28.79%
	Hedgerow %	(% N/A)

- 1.5. We are advised that this project is a self-build scheme, for which Reading Borough Council's Policy relating to biodiversity, is that developments achieve no net loss. This development as proposed will result in a -28.79% (-0.6882 units) net loss in habitats and a gain of 0.6553 units in hedgerow units. To achieve no net loss, 0.6882 habitat units would be required and the units to be purchased should be individual trees. To meet the trading rule of individual trees, it is recommended that this type of unit is sought; however, where individual trees are not available, units of a habitat with the same distinctiveness of higher must be purchased.

- 1.6. A percentage cannot be determined for hedgerows due to none being recorded at baseline.
- 1.7. The Baseline Habitat Plan and Habitat Creation Plan are shown in **Appendix 1** and **Appendix 2** respectively.
- 1.8. Measures to address these losses have been explored within the development. These include the proposed planting of nine small trees, a shade tolerant wildflower mixes from Emorsgate Seeds such as EH1 (Hedgerow Mixture) or similar, the retention of vegetated garden and the sowing of a flowering lawn mix.
- 1.9. Additionally, 83.50m of species rich hedgerow and 28.78m of native single species hedgerow have been incorporated into the scheme. This attains a 0.6553-unit gain in hedgerows overall.
- 1.10. The trading rule for the loss in individual trees has not been met, due to the limited space available to include further trees and compensate for the loss in habitat units. It is recommended that this type of credit unit is sought; however, where individual trees are not available, units of a habitat with the same distinctiveness or higher must be purchased. Therefore, offsetting will need to be sought through Reading Borough Council and/or a third party to achieve no net loss or 10% net gain.
- 1.11. Providing the proposed habitats can be included, offsetting sought through a third party and habitat creation/management prescriptions secured through a Landscape and Ecological Management Plan (LEMP), the proposed development of Land Adjacent to 43 Upper Redlands Road, Reading will be in accordance with the National Planning Policy Framework (NPPF) and Reading Borough Local Plan 2019-2036.

2. INTRODUCTION

Introduction

- 2.1. In September 2024, ACD Environmental Ltd were commissioned to conduct a Biodiversity Metric of a site referred to as Land Adjacent To 43 Upper Redlands Road, Reading, RG1 5JE (OS Grid Reference: SU 72724 72243).
- 2.2. The Application Site is located off Upper Redlands Road, southeast from the centre of the large town of Reading. The Application Site comprises 0.11 hectares of land, which predominantly supports vegetated garden, individual trees and panel fencing. The Application Site is surrounded by residential dwellings, gardens and community facilities such as schools that form the large town of Reading, that this Application Site is a part of.
- 2.3. The Application Site is shown in **Image 1**.



Image 1: Application Site location and approximate boundary shown in red¹.

¹ Map data, Google 2024

Context

- 2.4. The development proposals are for a new single detached dwelling with associated hard and soft landscaping, which will form part of a submitted planning application to Reading Borough Council.
- 2.5. This revised scheme has been developed to address comments raised in relation to the previous reasons for refusal for the loss in biodiversity.

Purpose

- 2.6. The purpose of this assessment is to:
- Evaluate the habitats found onsite.
 - Discuss the results of the preliminary roost assessment on the trees.
 - Determine the impact of the development on biodiversity by:
 - Establishing the theoretical value of biodiversity within the Application Site before and after development.
 - Assessing how the value of biodiversity within the Application Site would change following development.
 - Make detailed design recommendations to maximise opportunities for biodiversity on-site and, where required, establish the parameters of any biodiversity offsetting.

3. METHODOLOGY

Names and qualifications of surveyors

- 3.1. This report was prepared by Dominic Lambert of ACD Environmental Ltd. Dominic is an Ecologist and has been involved in a wide range of surveys including UK Habitat Classification Surveys, protected species surveys, Preliminary Roost Assessments; and is experienced in the use of Biodiversity Metrics and Ecological Impact Assessments (EclAs). Dominic is a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM).
- 3.2. A Technical Review of this report has been undertaken in line with ACD Environmental Ltd's Quality Assurance procedures. The review was carried out by Nicholas Jones who is the Head of Ecology and oversees all work carried out by the Ecology Team. He has over 16 years' experience working for commercial consultancy and specialises in European Protected Species (EPS) legislation and mitigation, holding Natural England Class Licences for barn owl *Tyto alba*, bats (Level 2) and great crested newt *Triturus cristatus* and is one of a small number of ecologists who is a Registered Consultant under the 'low impact' Bat Mitigation Class Licence. He has significant experience of EclA and has represented ecology at a Hearing. He is a Full Member of CIEEM.

Habitat Survey

- 3.3. The Application Site was surveyed with a site walkover on 11th October 2024, completed by ACD Environmental Ltd. This survey confirmed the current state of the area was mostly bare ground due to being covered in weed suppressing matting. However, the baseline habitats within the Application Site, prior to this degradation were considered to be that of vegetated garden, thus recorded in the metric as such. Individual trees were also recorded within the Biodiversity Metric.
- 3.4. The data from the Preliminary Ecological Appraisal, completed by the Ecology CO-OP site visit in February 2024² was interpreted by ACD Environmental Ltd and classified with reference to the UK Habitat Classification System (UKHab)³ and input into the Statutory Biodiversity Metric.

² The Ecology Co-op – Environmental Consultants (2024). *Preliminary Ecological Appraisal*.

³ UKHab (2023). UK Hab V2. Available at: <https://ukhab.org/>

- 3.5. Using the above method, recent photos and data already known from the desk study using Magic maps, the Application Site was assessed for the habitat types it supports and their importance in a local context.

Limitations and Precautionary Approach

- 3.6. A walkover has been completed by an ACD Arboriculturist, providing photographs and observations to be noted within the Application Site. The site visit was undertaken during October, a sub-optimal month for vegetation surveys. However, these habitats were readily apparent/easily distinguished with the existing trees assessed by an arboriculture professional, and habitat data was cross referenced with a previous Preliminary Ecological Appraisal, completed by The Ecology Co-op in February 2024 and therefore, this is not considered to be a significant limitation.
- 3.7. Professional judgement was used by ACD Environmental Ltd and justification for the habitat's conditions will be evidenced where required.

Calculator Tool

Assessment Framework

- 3.8. For the purposes of this assessment, the Statutory Biodiversity Metric has been utilised. The Statutory Biodiversity Metric is accompanied by a 'Calculation Tool'. This was used to calculate the biodiversity units for the Application Site before and after development. The assessment was conducted using the criteria set out within the Natural England guidance document⁴.

Habitats - Linear

- 3.9. No linear features were recorded during the updated walkover.
- 3.10. A species rich hedgerow (80.92m) and a native hedgerow (16.47m) has been included within the proposed development. Measurements were entered to the nearest 0.01m, using QGIS mapping software⁵ and the soft landscape proposals created by ACD Environmental Ltd (2024).

⁴ Biodiversity Statutory Metric: *Small Statutory Biodiversity Metric - User Guide*. Natural England. Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

⁵ Quantum Geographic Information System (2024). Available at: <https://qgis.org/download/>

Habitat Measurements

- 3.11. Baseline habitat measurements were carried out in line with the results of a previous Preliminary Ecological Appraisal and the site walkover survey. Measurements were calculated using QGIS mapping software.
- 3.12. Proposed habitat measurements were calculated from the Proposed Site Plan produced by ACD Environmental Ltd (2024), which is shown in **Appendix 3**. These proposals were georeferenced using QGIS mapping software.
- 3.13. Measurements were entered to the nearest 0.01 m² in area.

Distinction Assessments

- 3.14. Habitats are assigned to distinctiveness bands automatically within the Metric. These are based on an assessment of the distinguishing features of a habitat or linear feature, including the consideration of species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats.
- 3.15. The distinctiveness band of each habitat is preassigned in the Statutory Biodiversity Metric. The bands are based upon the UK Habitat Classification system. A combination of simple rules and professional judgement have been used to assign each habitat type to the appropriate distinctiveness band. The distinctiveness categories used are tailored to habitat type.
- 3.16. Distinctiveness Assessments are assigned according to **Table 1**.

Table 1: Distinctiveness Assessment.

Category	Scores	Multiplier
Very High	8	Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities (NERC) Act that are highly threatened, internationally scarce and require conservation action e.g. blanket bog
High	6	Priority habitats as defined in Section 41 of the NERC Act requiring conservation action e.g. lowland fens
Medium	4	Semi-natural habitats not classed

Category	Scores	Multiplier
		as a Priority Habitat but with significant wildlife benefit e.g. mixed scrub
Low	2	Habitat of low biodiversity value e.g. temporary grass and clover ley
Very Low	0	Little or no biodiversity value e.g. hardstanding or sealed surface

Proposed Target Condition Assessments

3.17. Proposed habitats will have a different ecological target condition. The Metric therefore takes account of variation in habitat target conditions.

3.18. Condition Assessments are assigned according to **Table 2**. Habitat Condition was assessed using the criteria set out within the Natural England guidance document.

Table 2: Condition Assessment.

Category	Score
Good	3
Fairly Good	2.5
Moderate	2
Fairly Poor	1.5
Poor	1

Strategic significance

3.19. The spatial location of a habitat is treated as a component of the quality of a habitat parcel in the same way as distinctiveness or condition. Strategic significance is used to determine whether the habitat is of increased importance due to its location.

4. ASSESSMENT

Context

- 4.1. The Application Site is located off Upper Redlands Road, southeast from the centre of the large town of Reading. The Application Site comprises 0.11 hectares of land, which predominantly supports vegetated garden (backdated), individual trees and panel fencing.
- 4.2. Residential buildings, gardens and community facilities surround the Application Site.

Baseline Onsite Survey Results

Habitats

- 4.3. Locations of habitats can be found in the Baseline Habitats Plan at **Appendix 1**. Site photographs can be found in **Appendix 5**. All habitats are set to be lost unless stated otherwise.
- 4.4. Additionally, habitats onsite are suitable for supporting reptiles and amphibians, such as the grassland and rubble piles, therefore, precautions must be taken during their removal.

Vegetated Garden

- 4.5. The current state of the Application Site at the time of the survey shows a weed suppressing matting had been used creating areas of bare ground (as seen in **Appendix 5**). Using the latest biodiversity metric guidelines, the habitat should be recorded to be what it was prior to any degradation of habitats taking place. Therefore, the Application Site is considered to have been predominantly vegetated garden before this disturbance occurred. This equates to 1096.60m². It currently comprises of some cow parsley *Anthriscus sylvestris*; ribwort plantain *Plantago lanceolata*; common ivy *Hedera helix*; bramble *Rubus fruticosus* agg.; dandelion species *Taraxacum* sp.; creeping buttercup *Ranunculus repens*; ragwort *Senecio jacobaea*; common comfrey *Symphytum officinale*; hogweed *Heracleum sphondylium*; wild carrot *Daucus carota*; common nettle *Urtica dioica*; yarrow *Achillea millefolium*; and ivy-leaved cyclamen *Cyclamen hederifolium*.
- 4.6. It is considered 80.17m² of this habitat will be retained and 1016.43m² will be lost to facilitate the new development.

Individual Trees

- 4.7. There are 36 small trees, one medium and two large sized trees recorded within the Application Site. The species recorded onsite comprise of ash *Fraxinus excelsior*; sycamore *Acer pseudoplatanus*; holly *Ilex aquifolium*; apple *Malus domestica*; small-leaved lime *Tilia cordata*; horse chestnut *Aeculus hippocastanum*; and Douglas fir *Pseudotsuga menziesii*.
- 4.8. 28 trees will be removed. These are T1 holly (1), T2 pear *Pyrus communis* (1) and G9 sycamore *Acer pseudoplatanus* and ash *Fraxinus excelsior* (26) as per the Arboriculture report (Ref: PRI23678_ts).
- 4.9. There were no hedgerows recorded within the Application Site.

Buildings

- 4.10. There are no buildings above ground on site, however, there is a sub-surface air raid bunker which is located under the vegetated garden, equating to 30m².
- 4.11. This structure will be removed to facilitate the new development.

Proposed development - Onsite

Habitats Review

- 4.12. The following habitats are proposed as part of the redevelopment of the Application Site:
- Amenity grassland.
 - Decorative shrub beds.
 - Developed land; Sealed surface.
 - Flowering lawn mix - EL1 by Emorsgate or similar.
 - Native hedgerow - European hornbeam *Carpinus betulus*.
 - Mixed scrub.
 - Species rich native hedgerows.
 - Urban tree; newly planted.

- Wildflower seed mixture EH1 by Emorsgate or similar.

4.13. Locations of proposed habitats can be found in the Habitat Creation Plan at **Appendix 2**. A Landscape Ecological Management Plan (LEMP) should be produced detailing habitat creation, management and maintenance measures to ensure habitats reach and remain at their target condition in perpetuity.

Amenity grassland

4.14. Proposed grass area in the northern part of the site is to receive good quality turves. This is considered to achieve **Moderate Condition**.

Decorative shrub beds

4.15. Shrub planting is proposed within the front aspect of the new dwelling. The species within this will comprise of skimmia *Skimmia japonica* 'Rubella', hebe 'Red Edge', *brachyglottis* *Brachyglottis* 'Sunshine'.

4.16. Therefore, due to the lower biodiversity value, the introduced ornamental shrub is assessed as **Condition Assessment 'N/A'**.

Developed land, sealed surface

4.17. The development will result in the creation of a single residential dwelling, with associated hard and soft landscaping (339.28m²).

4.18. Developed land, sealed surface is allocated a pre-determined fixed condition score within the Metric. Therefore, due to their lack of biodiversity value, the developed land, sealed surface is assessed as **Condition Assessment 'N/A'**.

Flowering lawn mix

4.19. An area of 315.67m² will be seeded with EL1 Flowering Lawn Mixture by Emorsgate Seeds or similar. This mix will comprise of the species listed in **Table 3**.

Table 3: Species composition of flowering lawn mix.

Common Name	Scientific Name	Common Name	Scientific Name

2% kidney vetch	<i>Anthyllis vulneraria</i>	7% oxeye daisy	<i>Leucanthemum vulgare</i>
5% betony	<i>Betonica officinalis</i>	5% black medick	<i>Medicago lupulina</i>
10% common knapweed	<i>Centurea nigra</i>	12% ribwort plantain	<i>Plantago lanceolata</i>
5% hedge bedstraw	<i>Galium album</i>	10% cowslip	<i>Primula veris</i>
8% lady's bedstraw	<i>Galium verum</i>	3.5% selfheal	<i>Prunella vulgaris</i>
3.5% field scabious	<i>Knautia arvensis</i>	6% bulbous buttercup	<i>Ranunculus bulbosus</i>
1% rough hawkbit	<i>Leontodon hispidus</i>	22% white clover (ag)	<i>Trifolium repens</i>

4.20. This habitat is considered to achieve a **Moderate Condition** with the correct management.

Native hedgerow

4.21. A single species native hedgerow is proposed within the soft landscaping of the Application Site. This will be of a length of 28.78m. The species within this hedgerow will be European hornbeam and is considered to achieve a **Moderate Condition** with the appropriate management.

Mixed scrub

- 4.22. A small area sited in the south west of the Application Site will be planted with mixed native scrub, including common dogwood *Cornus sanguinea*, wild privet *Ligustrum vulgare* and wayfaring tree *Viburnum lantana*, this equates to 56.79m².
- 4.23. This habitat has been assigned a **Moderate Condition**, due to its location and appropriate management.

Species rich native hedgerow

- 4.24. 83.50m of species rich hedgerow, comprising of field maple *Acer campestre*, European hornbeam, hazel *Corylus avellana*, common hawthorn *Crataegus monogyna* and European beech *Fagus sylvatica*.
- 4.25. These hedgerows are considered to achieve a **Moderate Condition** with the correct installation and management.

Urban trees

- 4.26. Ten 'small' street trees are proposed within the development (407m²).
- 4.27. The proposed species for the tree planting will be a mix of native species and will include European crab apple *Malus sylvestris*, whitebeam *Sorbus aria*, field maple, bird cherry *Prunus padas* and sweet cherry *Prunus avium*.
- 4.28. A **Moderate Condition** is considered attainable if given the correct management and care.

Wildflower seed mix

- 4.29. An area of 272.67m² within the Application Site will be reserved for a shade tolerant wildflower seed mix, such as EH1 hedgerow mixture by Emorsgate and will include the species listed in **Table 4**.

Table 4: Species composition of wildflower seed mix.

Wildflowers 20%			
Common Name	Scientific Name	Common Name	Scientific Name

0.5% agrimony	<i>Agrimonia eupatoria</i>	0.3% meadow crane's-bill	<i>Geranium pratense</i>
1% garlic mustard	<i>Alliaria petiolata</i>	1% narrow-leaved everlasting-pea	<i>Lathyrus sylvestris</i>
0.4% cow parsley	<i>Anthriscus sylvestris</i>	1.2% moon daisy	<i>Leucanthemum vulgare</i>
1% lesser burdock	<i>Arctium minus</i>	1% musk mallow	<i>Malva moschata</i>
2% common knapweed	<i>Centaurea nigra</i>	0.3% wild majoram	<i>Origanum vulgare</i>
0.4% rough chervil	<i>Chaerophyllum temulum</i>	0.8% ribwort plantain	<i>Plantago lanceolata</i>
0.8% crosswort	<i>Cruciata laevipes</i>	0.6% cowslip	<i>Primula veris</i>
0.8% Wild Carrot	<i>Daucus carota</i>	0.4% common sorrel	<i>Rumex acetosa</i>
1.5% Wild Teasel	<i>Dipsacus fullonum</i>	2% red campion	<i>Silene dioica</i>
0.4% meadowsweet	<i>Filipendula ulmaria</i>	0.8% bladder campion	<i>Silene vulgaris</i>
01.5% hedge bedstraw	<i>Galium album</i>	0.8% tufted vetch	<i>Vicia cracca</i>

0.4% wood avens	<i>Geum urbanum</i>		
Grasses 80%			
Common Name	Scientific Name	Common Name	Scientific Name
2.4% common bent	<i>Agrostis capillaris</i>	0.8% false brome	<i>Brachypodium sylvaticum</i>
1.6% sweet vernal grass	<i>Anthoxanthum odoratum</i>	48% crested dogstail	<i>Cynosurus cristatus</i>
1.6% tufted hair-grass	<i>Deschampsia cespitosa</i>	19.2% Red Fescue	<i>Festuca rubra</i>
6.4% wood meadow-grass	<i>Poa nemoralis</i>		

4.30. There is not anticipated to be a significant amount of footfall passing through this habitat and if managed proficiently, it is considered to reach a **Moderate Condition**.

5. RESULTS AND EVALUATION

- 5.1. The established trees onsite are considered to not hold potential for roosting bats. However, due to the trees and surrounding gardens, presence cannot be ruled out for foraging or commuting bats and nesting birds. Therefore, precautionary measures during the construction and operational phases of the development, shall be followed to limit any adverse effects on bat and bird populations that may frequent the Application Site between initial survey and commencement of habitat removal and construction begins.
- 5.2. It is recommended a sensitive lighting scheme is in place to reduce the disturbance to these species, if any should occupy the retained trees. Additionally, any tree removals shall take place outside of the nesting bird season and by limiting works onsite to daylight hours.
- 5.3. It is important to note that the Biodiversity Metric does not explicitly deal with fauna. Instead, it uses habitat types as a proxy for the biodiversity 'value' of the species communities that make up those different habitats and its results must be considered in conjunction with other measures. To this end, a suite of artificial enhancements, which provide opportunities for fauna, should be incorporated into the scheme.
- 5.4. The full results of the Metric have been provided separately as an Excel document. Assessor comments have been added where they are deemed necessary to provide reasoning or justification for certain aspects of the calculation. A summary of results can be found in **Table 5**.

Table 5: Summary of Results.

On site baseline	Habitat Units	2.3908
	Hedgerow Units	0.00
On site post intervention	Habitat Units	1.7025
	Hedgerow Units	0.6553
Total on site net unit change	Habitat Units	-0.6882
	Hedgerow Units	0.6553
Total onsite net % change	Habitat Units	-28.79%
	Hedgerow Units	% N/A

5.5. We are advised that this project is a self-build scheme, for which Reading Borough Council's Policy relating to biodiversity, is that developments achieve no net loss. This development as proposed will result in a -28.79% (-0.6882 units) net loss in habitats and a gain of 0.6553 in hedgerow units. To achieve no net loss, 0.6882 habitat units would be required and the units to be purchased should be individual trees. To meet the trading rule of individual trees, it is recommended that this type of unit is sought; however, where individual trees are not available, units of a habitat with the same distinctiveness of higher must be purchased.

5.6. There are a number of policies that are appropriate to this development and are listed below.

Reading Borough Local Plan 2019-2036

5.7. Policy EN12 - Biodiversity and the Green Network states that:

"a) The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:

- Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries*

(including the River Kennet and the Kennet & Avon Canal); and

- *Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links. New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.*

b) On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should:

- *Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and*
- *Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable.*

In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.”

5.8. Policy EN14 - Trees, Hedges and Woodland states that:

“Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal where they are of importance, and Reading’s vegetation cover will be extended. The quality of waterside vegetation will be maintained or enhanced.

New development shall make provision for tree retention and planting within the application site, particularly on the street frontage, or off-site in appropriate situations, to improve the level of tree coverage within the Borough, to maintain and enhance the

character and appearance of the area in which a site is located, to provide for biodiversity and to contribute to measures to reduce carbon and adapt to climate change. Measures must be in place to ensure that these trees are adequately maintained.”

5.9. Policy EN15 - Air Quality states that:

“Development should have regard to the need to improve air quality and reduce the effects of poor air quality. Development that would detrimentally affect air quality will not be permitted unless the effect is to be mitigated. The following criteria should be taken into account:

- Whether the proposal, including when combined with the cumulative effect of other developments already permitted, would worsen air quality;*
- Whether the development is within, or accessed via, an Air Quality Management Area; and*
- Whether it can be demonstrated that a local worsening in air quality that would not detrimentally affect human health or the environment would be offset by an overall improvement in air quality, for instance through reduction in the need to travel. Where a development would introduce sensitive uses (such as residential, schools and nurseries, hospitals, care facilities) into, or intensify such uses within, an Air Quality Management Area, detrimental effects on that use will be mitigated. Mitigation measures should be detailed in any planning application. If there are significant detrimental effects that cannot be mitigated, the application should be refused. Where required, planning obligations will be used to secure contributions to measures to tackle poor air quality or for air quality monitoring.”*

5.10. Policy EN16 - Pollution and Water Resources states that:

“Development will only be permitted where it would not be damaging to the environment and sensitive receptors through land, noise or light pollution; where it would result in no deterioration in, or ideally enhance, ground and surface water quality; and where adequate water resources, sewerage and wastewater treatment infrastructure will be in place to support the proposed development prior to occupation. Proposals for development that are sensitive to the effects of noise or light pollution will only be permitted in areas where they will not be subject to high levels of such pollution, unless adequate mitigation measures are provided to minimise the impact of such pollution. Development will only be permitted on land affected by contamination where it is demonstrated that the contamination and land gas can be satisfactorily managed or

remediated so that it is suitable for the proposed end use and will not impact on the groundwater environment, human health, buildings and the wider environment, during demolition and construction phases as well as during the future use of the site."

5.11. Although there is limited available space on the new development, it is encouraged that integrated bird and bat boxes be incorporated within the new development, due to the species noted within proximity to the Application Site and habitat onsite, which may support them. Therefore, the following enhancements shall be recommended:

- 2 x Habibat Box 001 or similar - placed on a south facing elevation of the proposed dwelling at a minimum height of 3m from the ground; however as close to 7m is better.
- 2 x Vivaro Pro Barcelona nest boxes - these are suitable for small songbirds such as song thrush *Turdus philomelos*, robins *Erithacus rubecula* and wrens *Troglodytes troglodytes*. To be placed at a minimum height of 3m on retained trees in the southern part of the site, with the box facing north to avoid direct sunlight.
- A bird wall is also proposed on the new dwelling, this will consist of several triangular, open boxes to add additional refuge options for the local bird populations. These will be installed on the flank elevation of the building at a minimum height of 1.5m or where possible 3m from the ground.
- 1 x Woodstone Build In Swift Box - to be placed on north elevation of the new dwelling at a minimum height of 3m from the ground. This will encourage and support swifts to colonise the site, which have been previously recorded in the local area's data search.
- 2 x log piles - these can be created from the removed trees and situated in areas of low disturbance where they may be left in perpetuity. This will ensure there is suitable habitat available for the local birds, amphibians, invertebrates, hedgehogs *Erinaceus europaeus* and reptiles.
- 1 x 1SP Schwegler Sparrow Terrace - to be placed on a northern elevation of the building at a minimum height of 3m to discourage predation.
- 16 x bee brick - to be incorporated in the new dwelling and be placed at a minimum height of 1m from the ground away from doorways and windows. These bricks encourage solitary bees that are non-aggressive and will assist in

supporting the dwindling pollinator assemblages in the UK.

- 6 x hedgehog highways - recommended to be included within the proposed fence lines to allow hedgehogs to move between surrounding gardens. Adding signs above the passages ensures accidental obstruction is avoided. This is important to allow them plenty of foraging and breeding opportunities, as the main cause for their decline is restricted access to available food sources and other potential mating individuals in the local vicinity.

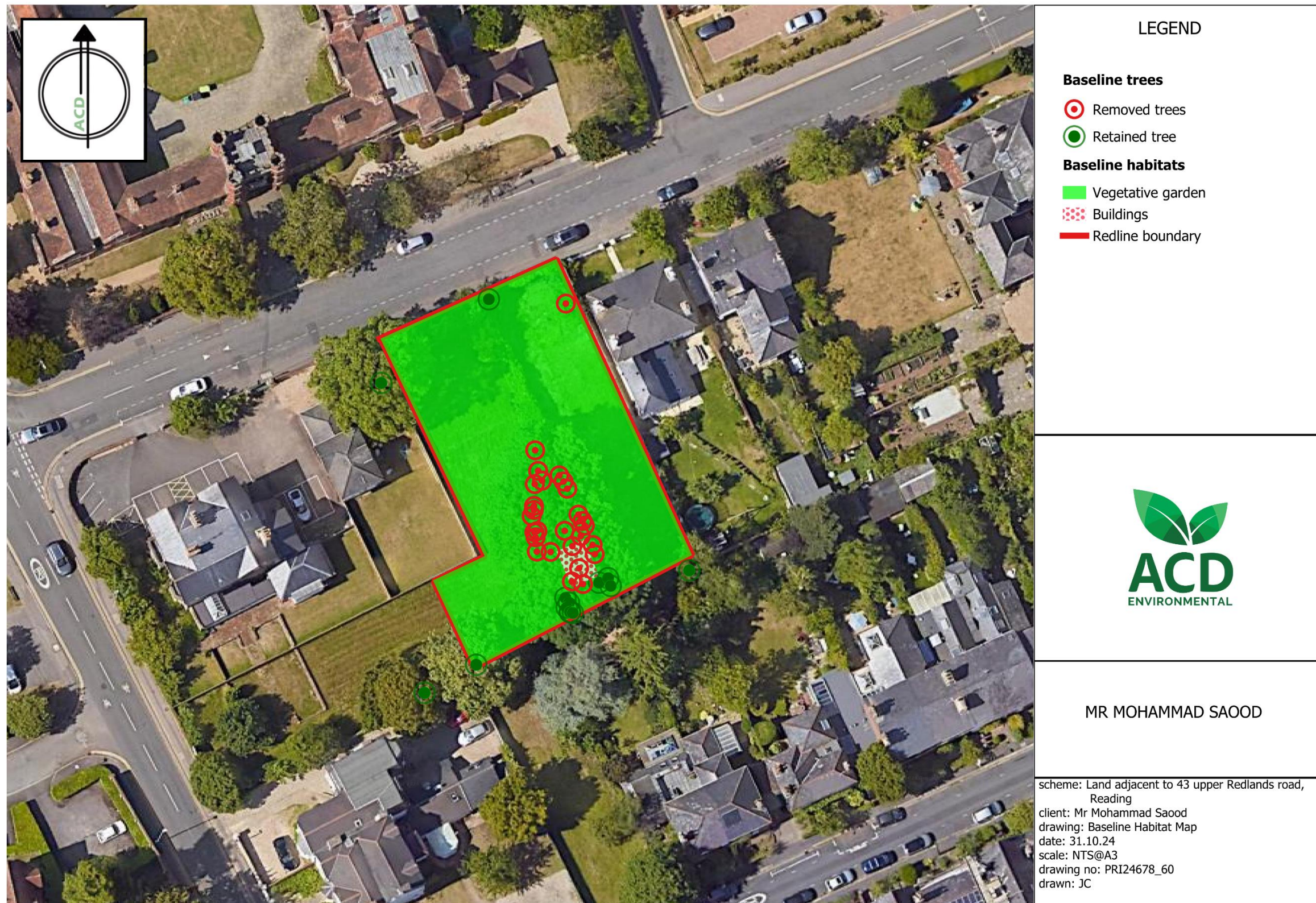
5.12. Refer to the Enhancement Plan drawing (in **Appendix 4**) for exact details and locations on the enhancements for this scheme.

6. CONCLUSION

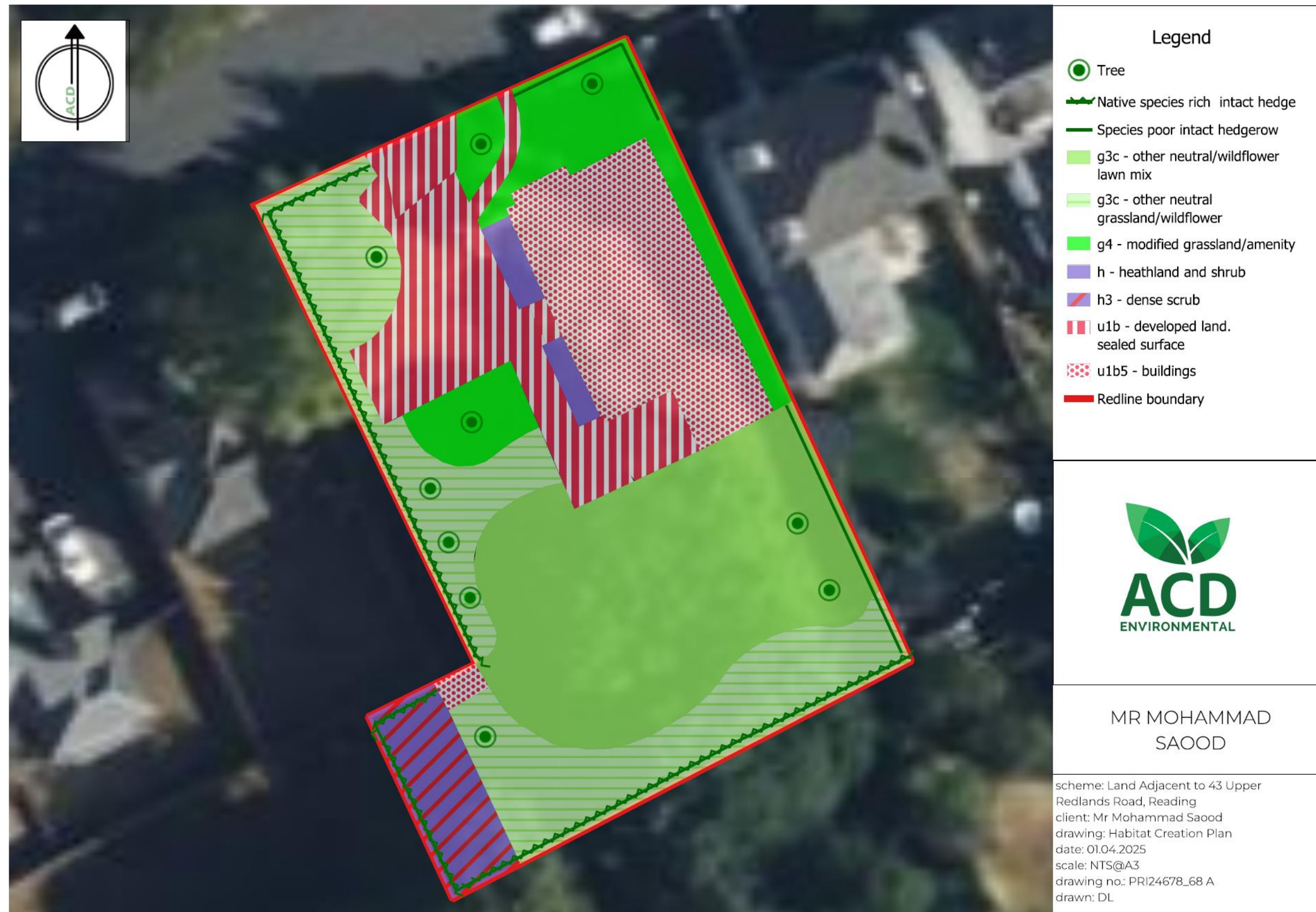
- 6.1. We are advised that this project is a self-build scheme, for which Reading Borough Council's Policy relating to biodiversity, is that developments achieve no net loss. This development as proposed will result in a -28.79% (-0.6882 units) net loss in habitats and a gain of 0.6553 units in hedgerow units. To achieve no net loss, 0.6882 units would be required and the units to be purchased should be individual trees.
- 6.2. Measures to achieve this result have been detailed within the report; these include wildflower seed mixture (201.16m²), and ornamental shrubs (13.76m²) and the inclusion of a species rich native hedgerow (80.92m) and a native single species hedgerow (16.47m).
- 6.3. This revised scheme has been developed to address comments raised in relation to the previous reasons for refusal such as, the loss in biodiversity, which this report highlights and outlines measures to assist in achieving a net gain. However, a net gain cannot be achieved with the limited space available onsite, therefore, offsetting will need to be sought as detailed below.
- 6.4. The trading rule for the loss in trees has not been met due to the limited space within the Application Site to compensate for their losses (1.0362units). To meet the trading rule of individual trees and no net loss, it is recommended that this type of unit (0.6882 units) is sought; however, where individual trees are not available, units of a habitat with the same distinctiveness of higher must be purchased. These units will need to be purchased through a Reading Borough Council and/or a third party to offset the loss seen in this scheme.
- 6.5. A net gain percentage is not calculated as a result of no baseline hedgerow data, however, a unit gain of 0.6553 hedgerow units has been achieved overall.
- 6.6. Due to the limited presence of deadwood or suitable cavities and plants for invertebrate's, 2 x small bug hotels / log piles are proposed. This will enhance the area for supporting wildlife and maintain a higher biodiversity overall.
- 6.7. 16 x bee brick is recommended to be installed within the Application Site. Along with two Habitat box 001 or similar, a 1SP Schwegler Sparrow Terrace and Woodstone swift nest box, a bird wall, Two Vivaro Pro Barcelona bird boxes to be installed on the retained trees in the southern area of the Application Site.

- 6.8. Additionally, six hedgehog highways between the Application Site and the neighbouring gardens and habitats. Further details and locations of these wildlife enhancements can be seen in **Appendix 4** (Drawing no: PRI24678_66).
- 6.9. The Application Site holds many habitats suitable for reptiles such as grassland and rubble heaps, therefore, precautions must be taken during the removal of such habitats. Any removal of trees should be carried out between 1st September and 28th February to avoid the nesting season or subject each tree to be inspected by a suitably qualified ecologist prior to their removal.
- 6.10. Providing offsetting can be obtained, and habitat management prescriptions secured through a LEMP, the proposed development located on Land Adjacent to 43 Upper Redlands Road, Reading, will be in accordance with the NPPF and policy criteria set out in the Reading Borough Local Plan 2019-2036.

APPENDIX 1: BASELINE HABITATS PLAN

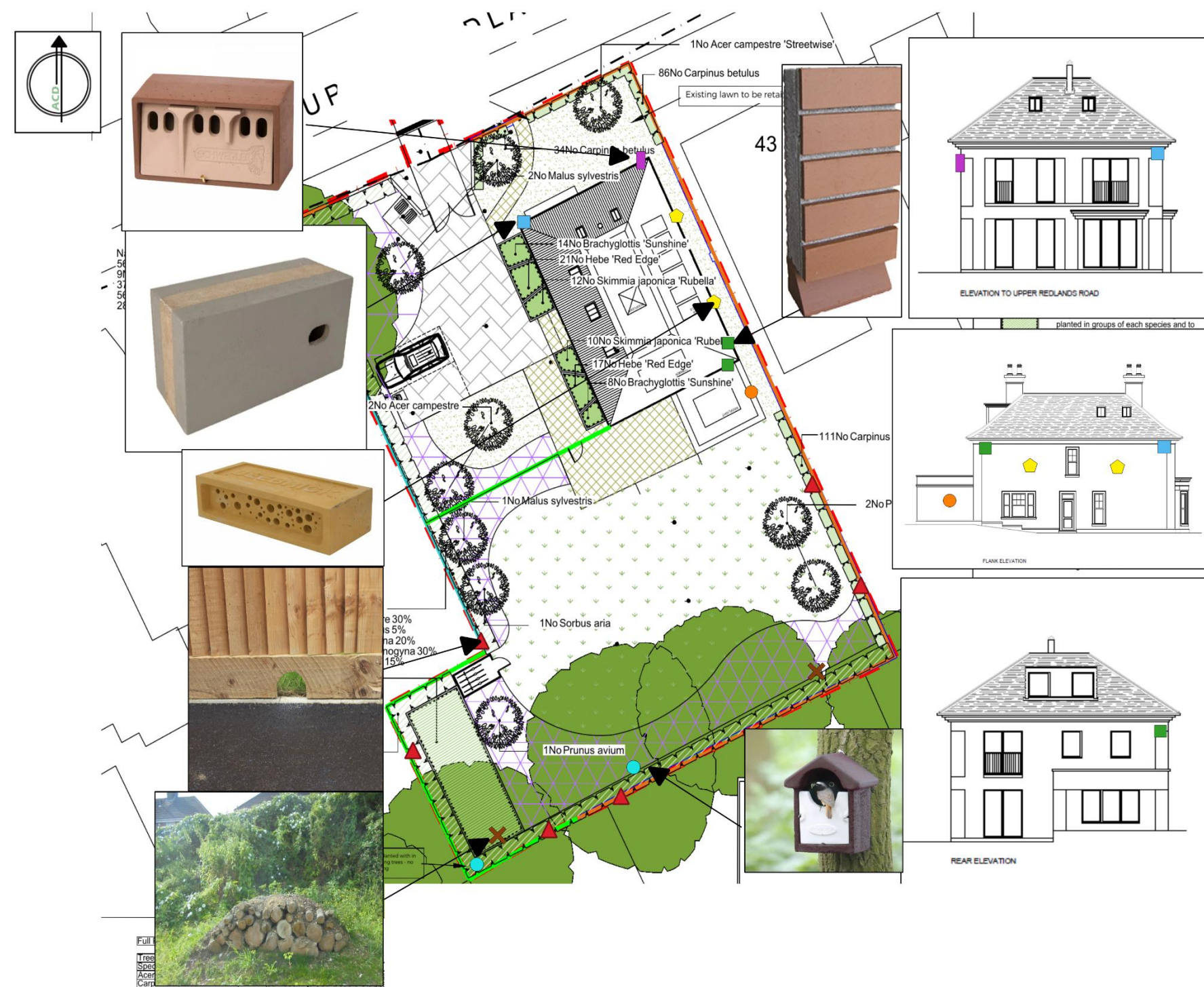


APPENDIX 2: HABITAT CREATION PLAN





APPENDIX 4: ENHANCEMENT PLAN



Legend

- ▲ Hedgehog highways - Gaps or cuts into fence to allow hedgehogs to move between Application Site and surrounding gardens. (6)
- Bird wall (as per architectural drawing)
- Vivaro Pro Barcelona bird box - Placed on the retained trees facing north at least 1.5m from the ground. (2)
- ◆ Bee Brick - Placed at least 1m from the ground and on southern elevation. These will attract solitary bees that are non aggressive. (16)
- Sparrow Terrace - Integrated into the north elevation of the building. (1)
- Woodstone swift box - Placed on north elevation. (1)
- 001 Habitat bat box or similar - Placed in southern facing position to receive the morning sun. (2)
- ✕ Log Pile (2)



MR MOHAMMAD
SAOOD

scheme: Land Adjacent to 43 Upper Redlands Road, Reading
client: Mr Mohammad Saood
drawing: Eco Enhancement Plan
date: 01.04.2025
scale: NTS@A3
drawing no.: PRI24678_66_A
drawn: DL checked: NJ

APPENDIX 5: SITE PHOTOGRAPHS



Photograph 1: East side of the Application Site facing north (October 2024).



Photograph 2: Facing south of G9 with the entrance to the bunker obscured by the trees (October 2024).



Photograph 3: West side of the Application Site facing north (October 2024).



Photograph 4: The southwest corner of the site facing south (October 2024).

