ANDIUM HOMES

Environmental Good Practice Guidance

Nurture ecology

Introduction

Andium Homes

Andium Homes is a wholly States owned but independent company with our own Board of Directors.

Our vision is "changing lives with great homes and services"

We are proud to be a Level 2 member of the 'Eco-Active Business' environmental accreditation scheme and will strive to achieve our objectives by following this Environmental Good Practice Guidance as we carry out our significant programme of refurbishment, regeneration and redevelopment schemes across the Island.

Through careful planning and design, Andium Homes is able to achieve its vision whilst also protecting and enhancing Jersey's biodiversity.

Jersey's Biodiversity

The Island's varied landscape supports a wide variety of plants, animals and habitats, which contribute to Jersey's biodiversity. Jersey has a responsibility to protect and promote its unique flora and fauna as a requirement of its commitment to the International Convention on Biological Diversity agreed at the Rio Earth Summit, in addition to other international conventions extended to the Island.

There is also a legal obligation to protect species as listed within the Conservation of Wildlife Law (Jersey) 2000.

Biodiversity and Development

We are aware that some developments can put pressure on the natural environment, but quality homes that meet biodiversity objectives can be achieved by adhering to relevant legislation, planning policies and biodiversity guidance, early on in the planning process.

Aims of the Environmental Good Practice Guidance

This document demonstrates the issues that Andium Homes takes into account when designing our developments and highlights the importance of incorporating wildlife measures into these schemes.

This guidance is intended to assist developers in making planning applications that meet the relevant States of Jersey legislation and we hope that it will encourage developers to integrate biodiversity conservation into their schemes.

Legislation, Policy & Guidance

Local legislation, policy and guidance relating to biodiversity and development must be considered during the planning process. Key legislation, policies and guidance documents to review include:

Conservation of Wildlife (Jersey) Law 2000, the main legislation that covers protected plants, animals and birds.

States of Jersey Revised Island Plan 2011, which contains policies for nature conservation within Section 2, the Natural Environment.

Biodiversity – a Strategy for Jersey, a document outlining habitats in Jersey and how they can be protected.

An ecologist will be able to advise on the extent of legislation applicable to the protected species and habitats on the development site.

As per the Conservation of Wildlife (Jersey) Law 2000, without an appropriate licence, it is an offence for any person to knowingly:

- Kill, injure or take any protected wild animal or protected wild bird or destroy or take the egg of a protected wild bird.
- Damage or destroy the den of any protected wild animal while that den is in use
- Take, damage or destroy the nest of any protected wild bird while that nest is in use or being built.
- Obstruct access to the den of any protected wild animal or the nest of any protected wild bird while that den or nest is in use or to disturb any protected wild animal occupying a den or any protected wild bird occupying a nest.
- Pick, uproot, collect the seed of or destroy any protected plant.

The full version of the Wildlife Law is available at the following website link:
http://www.jerseylaw.je/law/lawsinforce/consolidated/superseded/22/22.450_ConservationofWildlifeLaw2000_RevisedEdition_31August2004.pdf

CASE STUDY: Providing Homes for Birds at Belle Vue



Belle Vue, St Brelade
Andium Homes
Bird Boxes

What?

Andium Homes have incorporated nest boxes, swallow bowls, house martin cups and sparrow terraces into this housing development.

Why?

Numbers of house sparrows and house martins have declined in recent years. Installing these wildlife features will provide new or replacement sites for birds to nest.

How?

Brick nest boxes and sparrow terraces are discreetly integrated within the property. Terraces provide ideal nesting opportunities for three families of sparrows, which like to nest in company. Nest bowls and cups have been placed underneath the eaves on exterior walls and provide a great alternative for nesting sites for swallows and swifts.

The Development Process

Developers are often under the impression that incorporating measures for biodiversity will lead to further constraints on their projects. Andium Homes, however, see this as an opportunity to improve our developments and we hope that this document will help other developers recognise the benefits of incorporating such measures into their plans too.

By following a series of easy steps, developers can ensure that they comply with relevant legislation and achieve best practice. By doing so, it is possible for developments to occur with minimal ecological impact, and could even result in enhancement for wildlife.

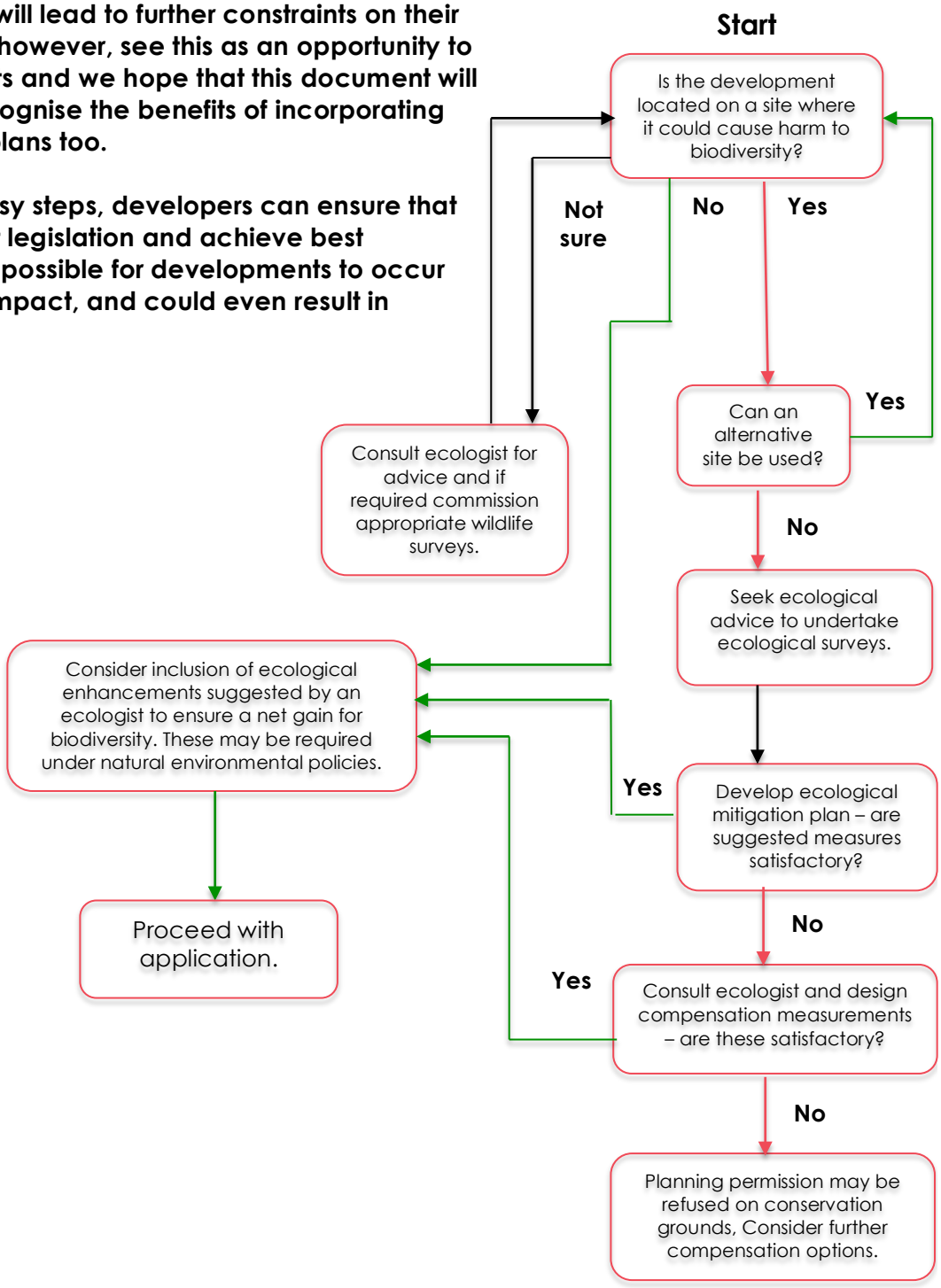


Figure 1. Decision making flowchart.

Step 1. Consulation & Scoping

An Initial Site Audit, which is a relatively quick and simple process, should be carried out to highlight any possible ecological issues at the potential development site. If the site supports a range of environmental features, habitats and/or species, then it is best if this audit is undertaken by a qualified ecologist.

The purpose of the initial audit is to:

- Assist in the selection of an appropriate site;
- Highlight any potential biodiversity issues;
- Establish baseline conditions and determine the importance of ecological features onsite;
- Identify where further ecological surveys are required;
- Identify key project constraints to make recommendations for design options;
- Identify mitigation and enhancements to assist ecological design.

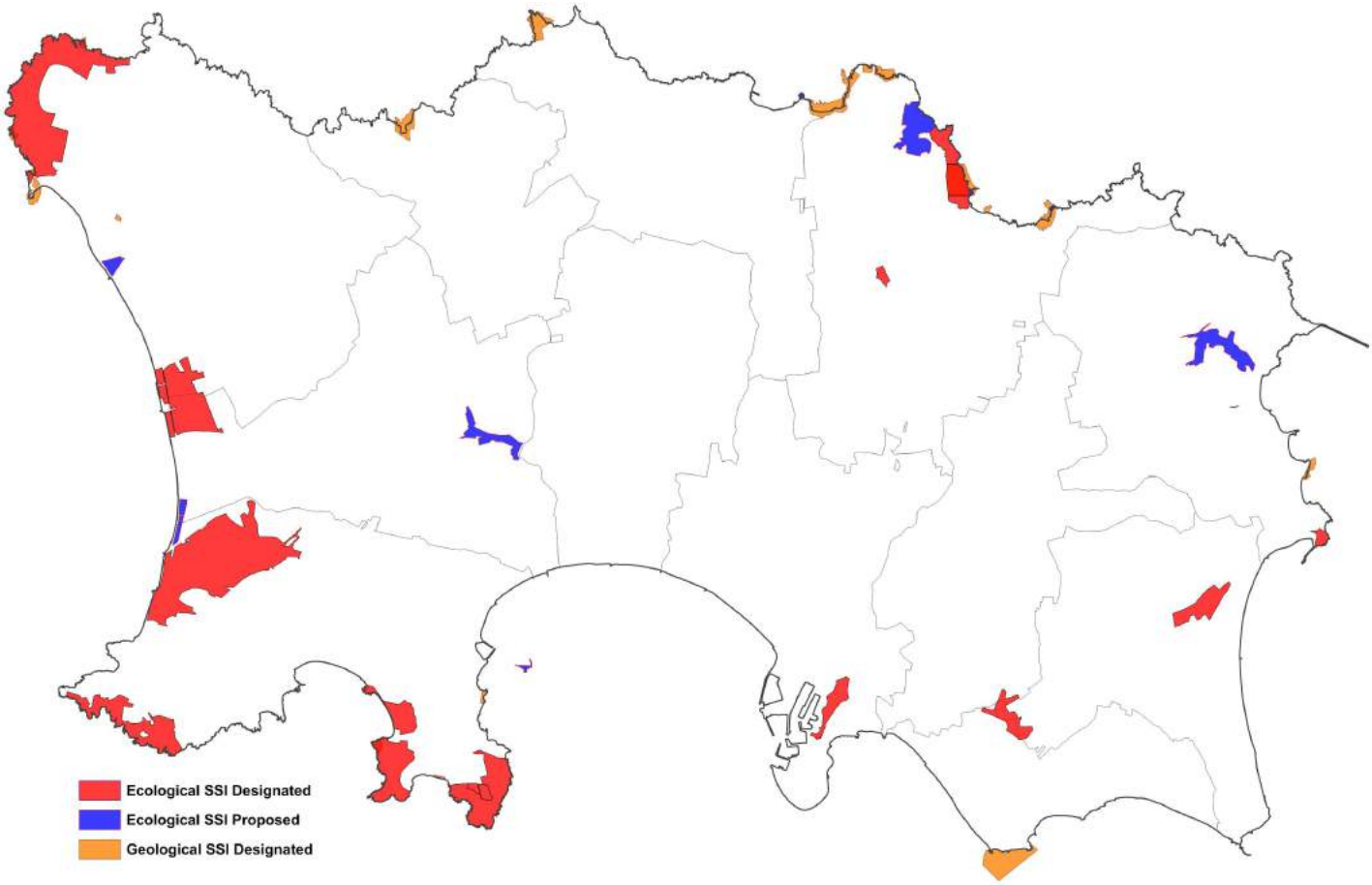


Figure 2. Existing and proposed Sites of Special Interest (SSIs) (taken from 'Biodiversity, a strategy for Jersey'). Developments located in close proximity to SSIs and other sensitive areas are likely to require an ecological survey.

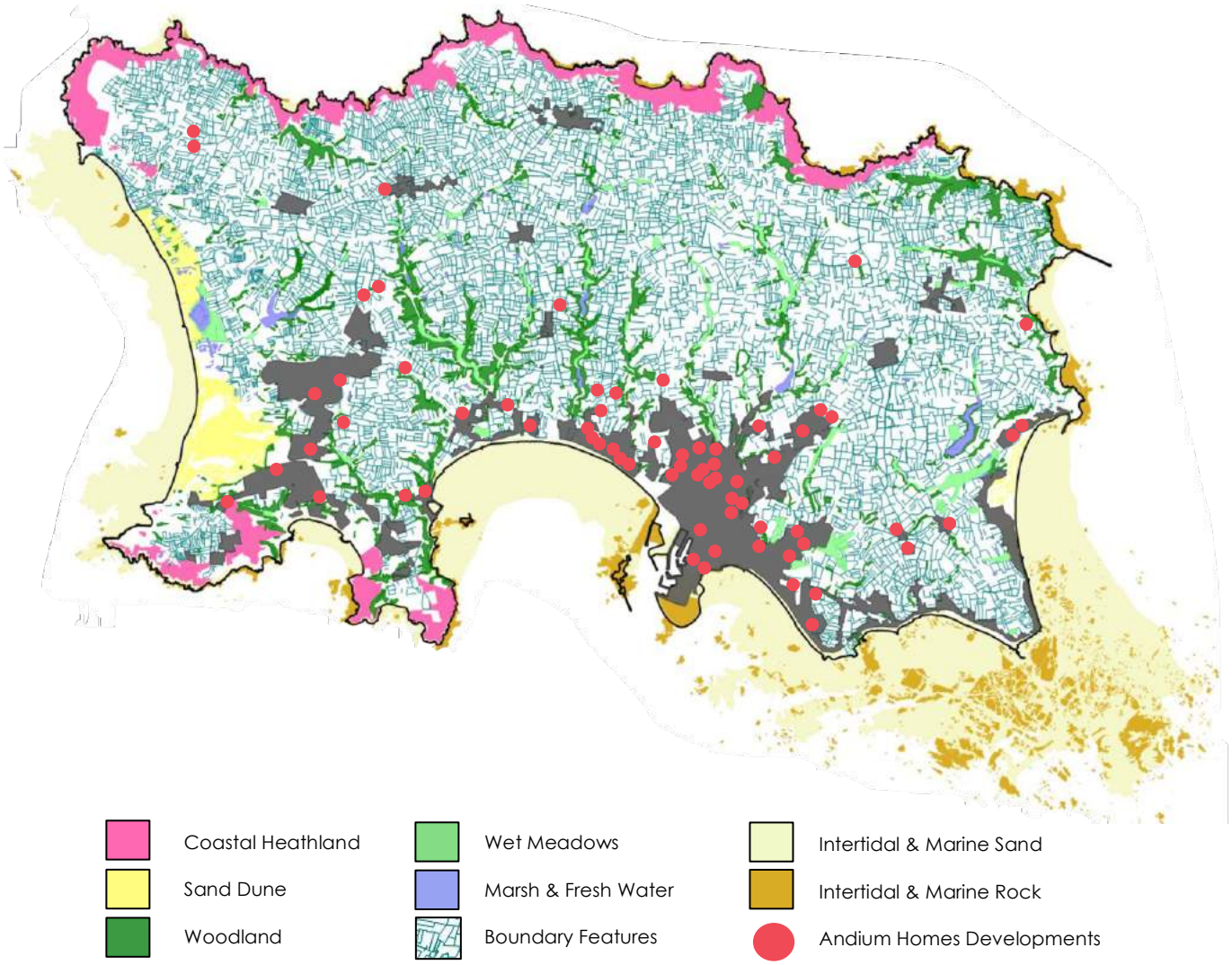


Figure 3. Key habitats in Jersey (taken from 'Biodiversity, a strategy for Jersey'). Developments located in close proximity to important habitats are likely to require surveying.

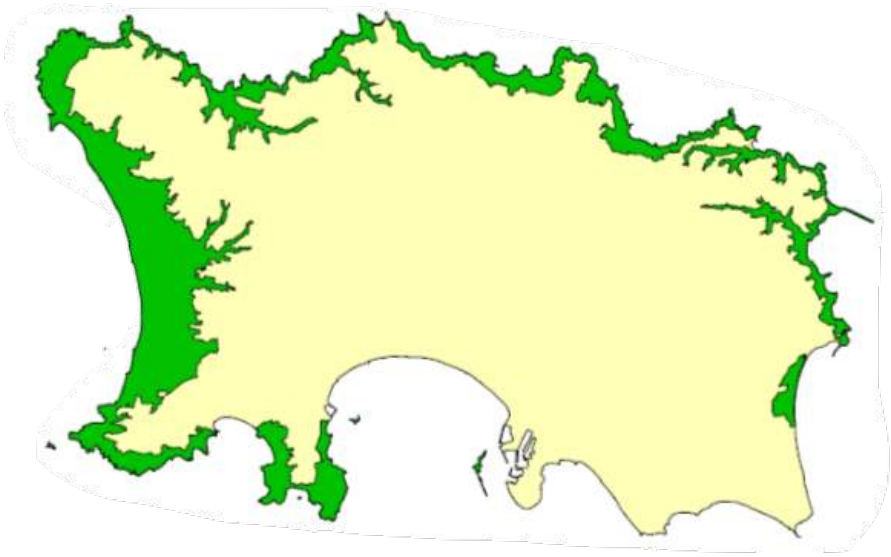


Figure 4. Coastal National Park Areas (taken from the 'States of Jersey Island Plan 2011'). These areas are given the highest level of protection in the Countryside Character Appraisal.

Step 2. Further Surveys

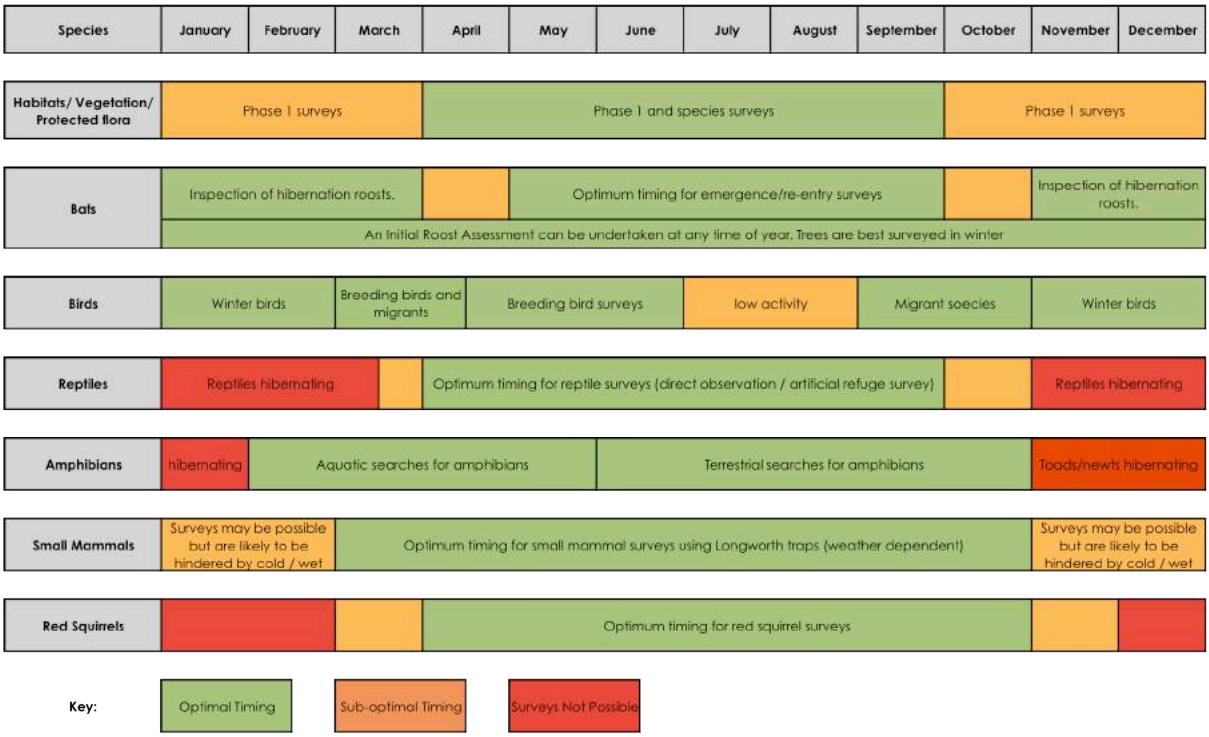
Targeted surveys or assessments should be carried out if the Initial Site Audit indicates the presence or potential for species, habitats or features of biodiversity interest on site.

The purpose of these surveys/assessments is to:

- Provide sufficient data to determine the presence/absence of legally protected species.
- If present, determine the distribution and population sizes of species.
- Determine the likely impacts of the proposed works.
- Provide mitigation and enhancement measures for the proposed works.

Surveys should be carried out by a suitably qualified ecologist during an appropriate time of year (see below). Surveys undertaken outside of the optimum time period may be deemed inadequate by the Planning Department and, on these grounds, the proposal may be refused until further surveys are completed. Multiple surveys may also be required over a longer period of time, such as several months. For example, certain large historic buildings may support hibernating bats in the winter and breeding bats during the summer. Therefore ecological information as to how bats use the building at different times of year may need to be established, so that the potential impact of the proposed works can be fully understood. This information will enable the ecologist to design a suitable mitigation/compensation package to ensure that the bats are protected from the potential impact of the scheme, thus meeting the requirements of the Wildlife Law.

It is therefore imperative that developers should seek advice at the earliest possible stage to avoid delays later in the planning process.





Reptile, Amphibian & Small Mammal Refuges

What?

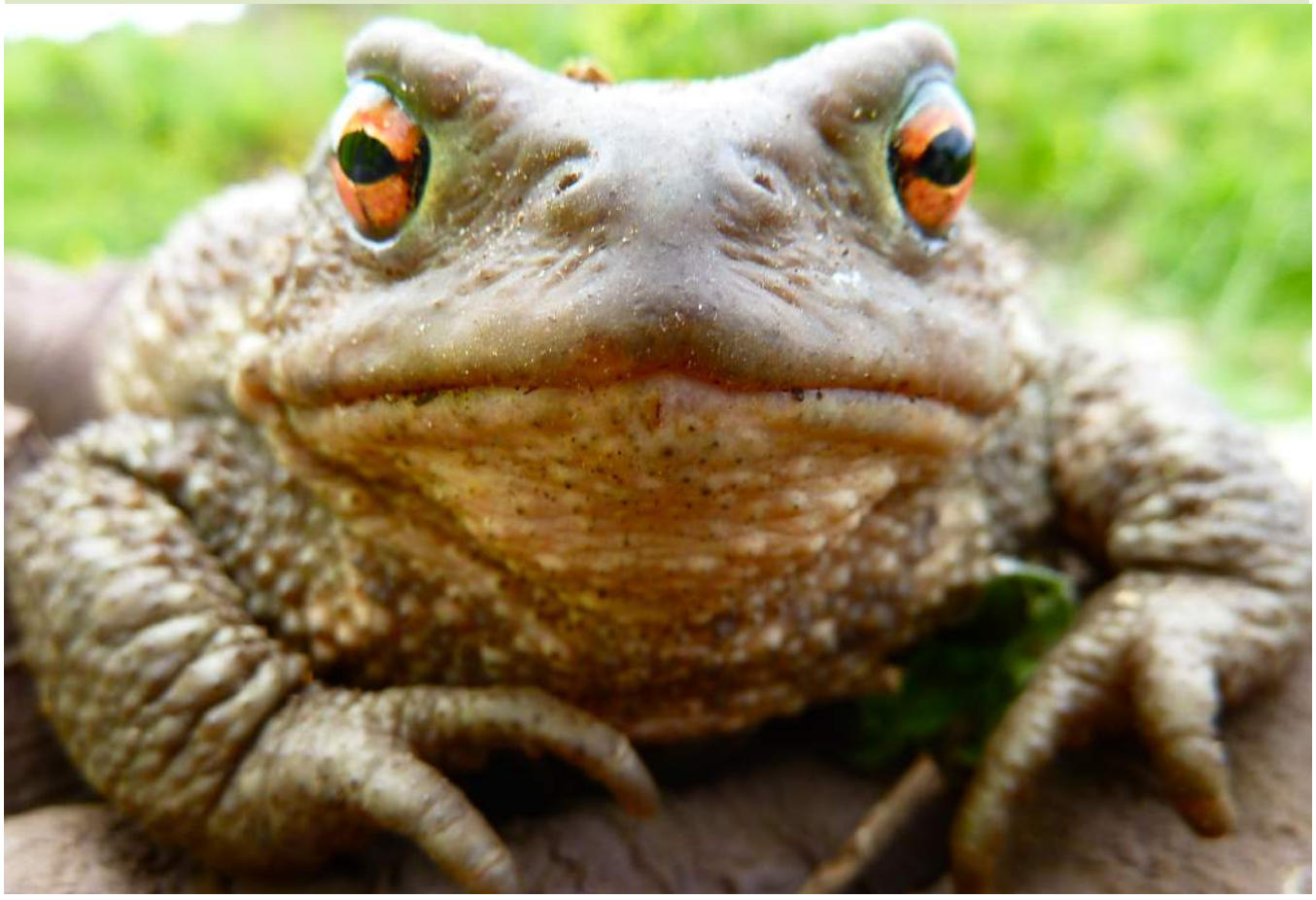
Reptile, amphibian and small mammal refuges include earth banks, mounds and log piles which all consist of various rocks, logs, leaf litter and soil.

Why?

These features provide habitat, cover, basking locations and food for a variety of wildlife.

How?

Refuges can be constructed above ground, as a mound or as a bank and can often be incorporated into boundary features. They can also be disguised into the landscape by being built below ground, making them largely unseen. These features can be built at various scales depending on the size of the development.



Step 3. Incorporating Biodiversity Objectives

The previous steps should identify a range of biodiversity constraints and opportunities for a development. The habitats and species present within or around the site are good starting points to help create biodiversity objectives that should be incorporated into the final development. In creating these objectives and designing a development that demonstrates good practice in biodiversity conservation, a hierarchy of themes should be addressed:

Protect features of nature conservation on site.
Enhance or create features of nature conservation value.
Mitigate for impacts on features of nature conservation value.
Compensate for the loss of features of nature conservation value.

The purpose of biodiversity objectives is to:

- Incorporate features of existing ecological value on or adjacent to the development.
- Enhance existing features of ecological value.
- Lessen the impacts of the development by mitigation, if it is impossible to avoid all impacts.
- Compensate for habitat loss if there is no viable alternative.

A development may be permitted on the basis that:

- Proposed mitigation is carried out to make the overall impact on biodiversity acceptable.
- An Ecological Clerk of Works oversees certain areas of work.
- Site staff are trained to ensure adequate awareness of on-site biodiversity issues.
- Key biodiversity features are monitored to ensure continued adherence to relevant legislation, policy and planning conditions.

Where the above points are a condition of planning consent, they must be carried out.

Step 4. Monitoring, Management & Maintenance

Where biodiversity objectives have been successfully incorporated into the development, appropriate on-going monitoring, management and maintenance must be undertaken.

A management plan may be required as part of a detailed planning application and sufficient funds must be put in place to implement this plan. The extent of management is dependent on the size and type of the biodiversity feature.

On-going monitoring of biodiversity features on site are recommended and should be undertaken by a suitably qualified ecologist. This will assess the success of the strategies and determine whether further mitigation or enhancement might be required. To ensure that the full potential of the biodiversity conservation of an area is achieved, it is suggested that maintenance works also be undertaken by a qualified ecologist.

Protect

The Initial Site Audit and any subsequent surveys will highlight potential important species, habitats and sites. Developers should aim to protect these, ensuring that those under legal protection in particular are not harmed. If the ecological significance of an area is unknown it should not be disturbed until its ecological value has been identified. It is the developer's duty to ensure work will not impact upon legally protected species and sites.

As far as possible, existing ecological features should be retained and incorporated into the development design and layout. Andium homes endeavours to protect all species and habitats of local importance and encourages other developers to do the same.

The following measures can help to protect wildlife features within your development:

- Ensure site personnel are made aware of biodiversity features and protection requirements on site.
- Incorporate existing habitats, species and wildlife corridors into the design.
- Fence off key areas of habitat on site.
- Time works to avoid disturbance at key times of the year.
- Prevent pollution.
- Create buffer zones around features and exclude construction works within these areas.
- Create root protection zone around trees of ecological importance.

Millennium Town Park, St Helier

Green Walls & Native Planting

What?

Green walls are covered with vegetation and consist of a variety of native plants. They can even include vegetables and herbs to create edible walls!

Why?

These walls can be a great alternative if ground level space is limited. They provide habitats for invertebrates, in turn providing a food source for other animals. The climbing plants will have flowers that are attractive to pollinators and the walls also act as wildlife corridors to link other favourable habitats.

How?

Green walls can either be rooted at the base of the wall (climbing green walls) or consist of pre-planted panels or mats attached directly (living walls). Climbing green walls can be seen growing at the Millennium Town Park.

What?

A variety of plants that are local to Jersey can be planted within gardens or around development sites. Other more ornamental plants, but non-invasive, have also been planted at the Millennium Town Park to attract butterflies and bees.

Why?

A range of plants that flower and fruit at different times of year will provide food for wildlife (including bees, butterflies, moths, small mammals) all year round. It will also provide shelter and breeding habitat, particularly for birds.

How?

Hedges and areas of vegetation or wildlife spaces can be incorporated into the landscaping plan. Where possible, hedges should be used instead of fences. Although the degree of planting will depend on the size of the development, flowering plants or shrubs can provide habitat in even the smallest of spaces, such as balconies or terraces.

Enhance

At Andium Homes, we strive to enhance the quality of our sites and view developments as an opportunity to improve areas for wildlife as well as people. Enhancements can be done on any scale, from large new developments to small independent buildings, and areas that are successfully enhanced and maintained can provide healthy green spaces of all sizes for people to enjoy.

The following measures could be included to enhance a development:

- Improve or enlarge existing areas of natural habitat.
- Plant native species (e.g. instead of fences).
- Management or removal of non-native invasive species (e.g. Japanese knotweed).
- Implement buffer zones around existing habitats.
- Restore canalised culverted watercourses to more natural forms.
- Create new habitats based on the wildlife already present.
- Design SUDs, ponds or treatment beds to create wetland habitat.
- Create green roofs if open space is limited.
- Provide bird and bat boxes in mature trees or incorporate into buildings.
- Ensure that fences, walls and other boundary features have gaps beneath them, or 20 x 20cm holes throughout at ground level to allow hedgehogs and other animals to pass from garden to garden.

Further advice on enhancement measures can be sought from an ecologist.

Wildlife Ponds

What?

A wildlife pond is a haven for plants, frogs, toads, dragonflies and birds.

Why?

Ponds provide a fantastic opportunity to enhance your development both aesthetically and for wildlife. A pond is one of the most effective ways to create new habitats to help wildlife.

How?

Ponds can be constructed at any time of year and can incorporate corridors of vegetation cover to allow for the movement of amphibians in and out of the pond. Logs and stones can provide shelter, and planting a range of plant species around the edge will encourage a huge diversity of wildlife.

Mitigate

The design and construction processes at Andium Homes are influenced by how best to minimise impacts of the development on biodivesity. Through early discussions with ecologists and using collated survey data, solutions for removing or reducing impacts can be incorporated into development designs.

The following mitigation measures should be considered to minimise disturbance and damage:

- Ensure site personnel are made aware of biodiversity issues on site and the mitigation measurements in place.
- Avoid works within key areas e.g. create maximum working areas by erecting barriers.
- Fence off areas of habitat to be retained.
- Minimise impacts of pollution (dust, noise, runoff).
- Direct lighting away from wildlife areas and avoid using bright lighting during dark hours.
- Translocation of species (last resort).

Creation of new habitat can also be used to minimise impacts:

- Creation of new habitat for the translocation of protected species to mitigate for habitat loss. This requires a large total area of high quality habitat to be created well in advance of works.
- Provision of nest boxes and bat boxes or bat/swift “bricks” to mitigate against loss of nesting/roosting habitat.
- Maintain a buffer zone around habitats and create wildlife corridors or stepping-stones to link habitats for mitigation against habitat fragmentation.
- Ensure that fences, walls and other boundary features have gaps beneath them, or 20 x 20cm holes throughout at ground level to allow hedgehogs and other animals to pass from garden to garden.
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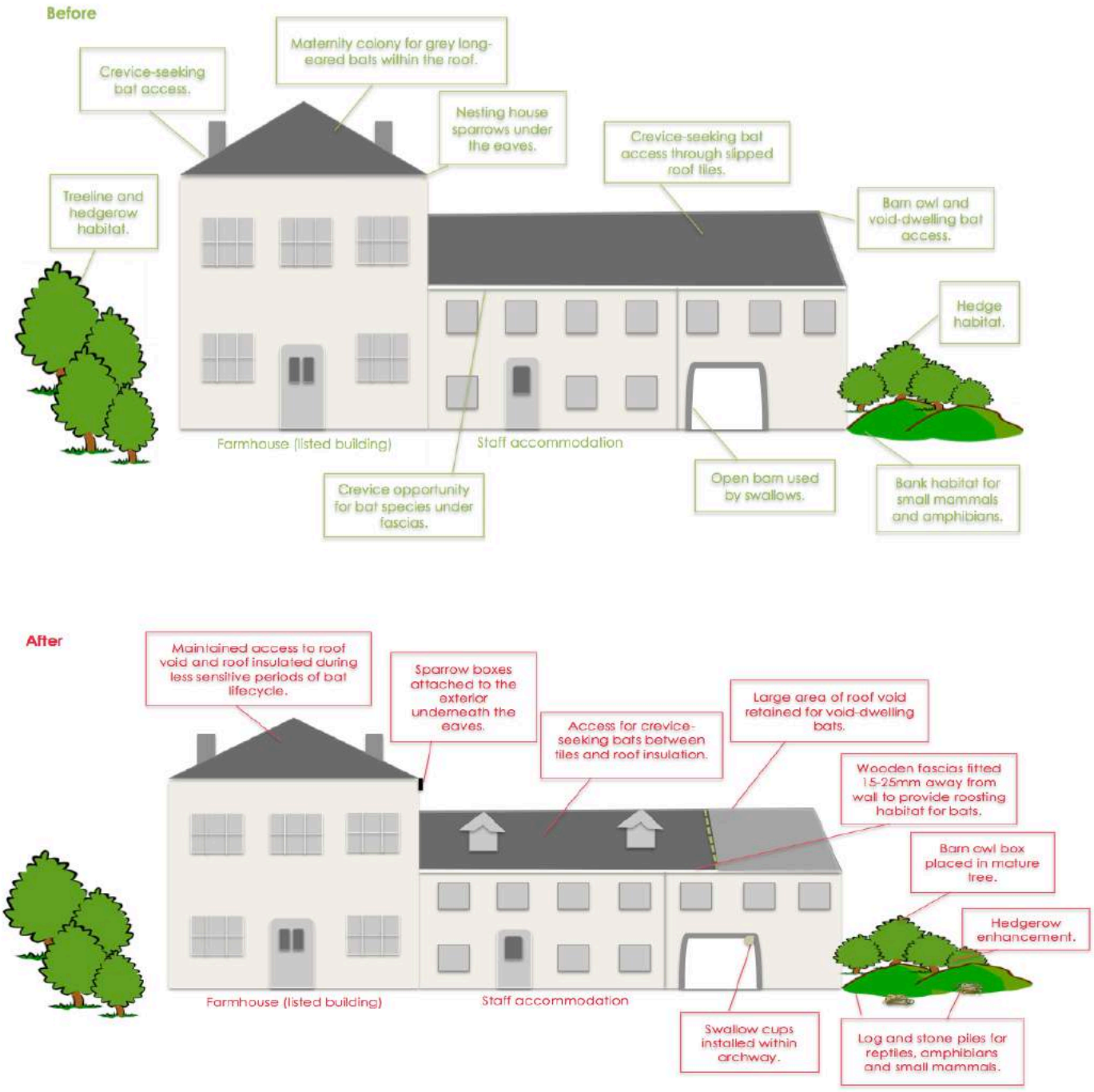


Tree lines and hedgerow habitats are important features to retain during a development as they provide sheltering, commuting and foraging habitat for a wide range of wildlife. These features also act as wildlife corridors, connecting areas of favourable habitat.

Roosting bats are often present within old Jersey farmhouses and in this example a maternity colony of grey long-eared bats is present within the main house, and the barn provides shelter for both void-dwelling and crevice-seeking bats. Accordingly, no works can be undertaken to the roof of the main house and a section of the barn roof cannot be converted to ensure that sufficient roosting habitat remains for bat species.

Bat boxes have been erected within mature trees to mitigate against the loss of roosting habitat during the conversion works and small gaps have also been left between the roof tiles to allow access for crevice-seeking bats.

House sparrows, swallows and barn owls are known to use this site, so swallow cups, sparrow boxes and barn owl boxes have been erected to enhance the development for these species. Log piles have also been constructed to provide habitat for reptiles, amphibians and small mammals.

Figure 5. A typical Jersey farmhouse before and after a roof conversion with appropriate enhancement and mitigation measures.



Bat Boxes & Lofts

What?

Purpose-built bat lofts can also be incorporated into the apex of roofs to create more roosting opportunities.

Why?

Bats are becoming increasingly rare so installing these boxes and lofts will provide important homes for bats. Boxes will often be required to mitigate against any loss of habitat from developments and to provide a safe place for bats to move to, if disturbed by building works.

How?

Bat boxes can be discreetly built into the masonry of an external wall or can be attached to the building façade, under the eaves or to suitable locations on walls and mature trees. Lofts can be enhanced for bats and access can be provided at the ridges.

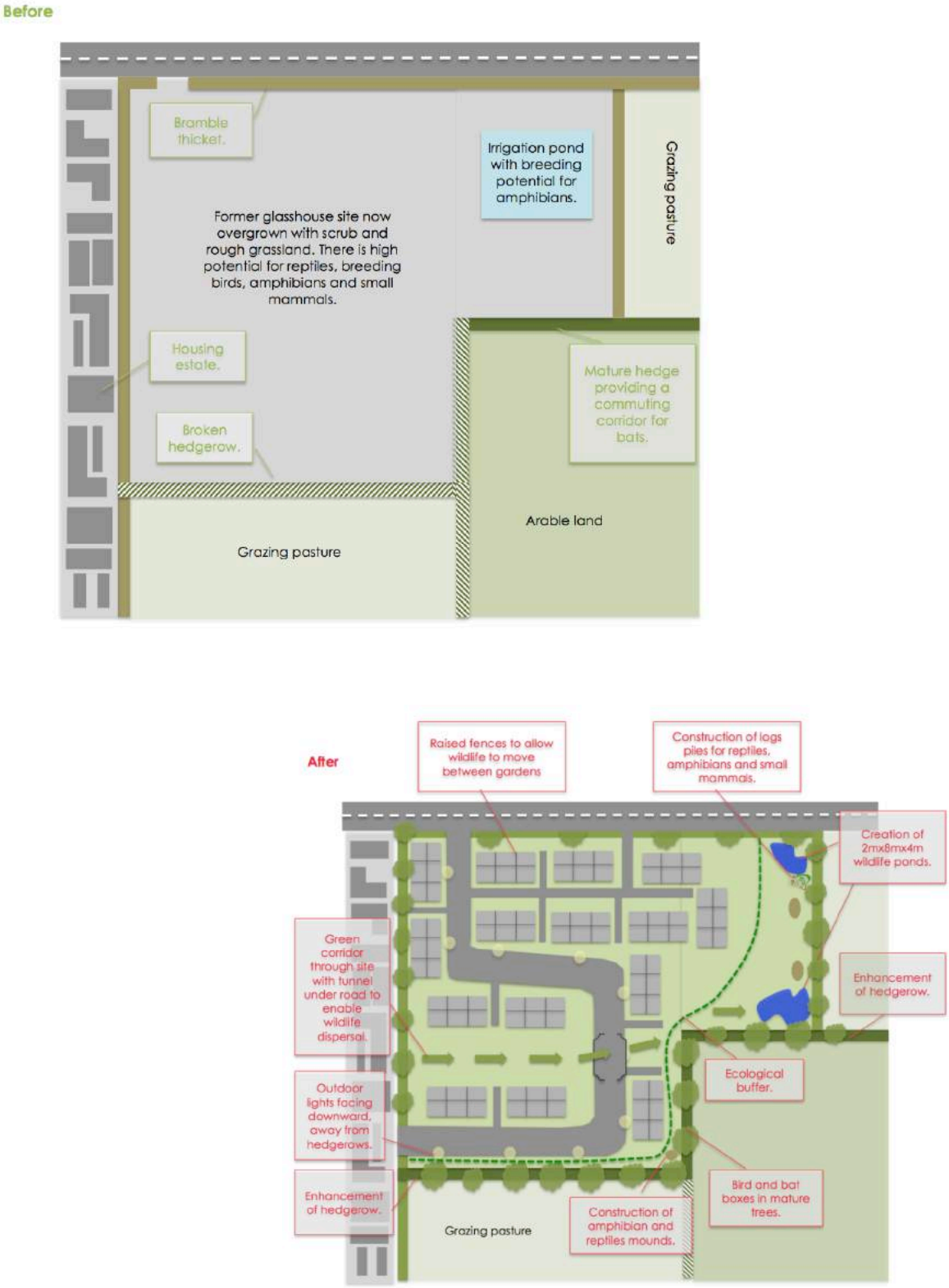


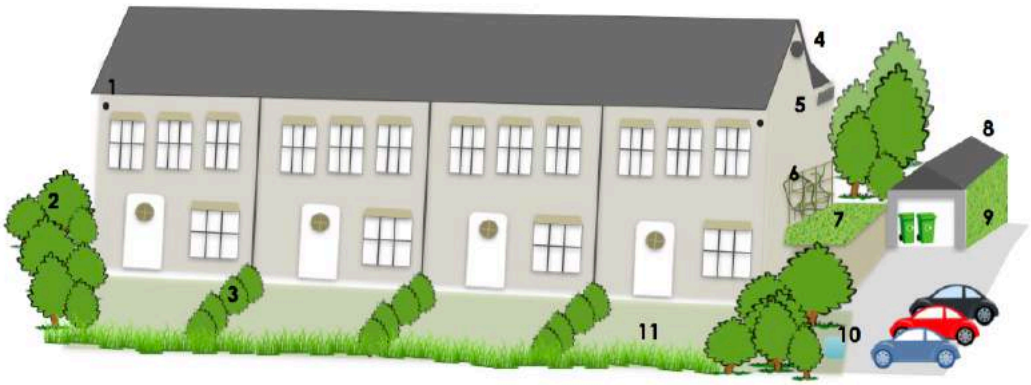
Figure 6. Example features at a whole site scale for an area that was previously overgrown with scrub and rough grassland. An Initial Audit survey highlighted the site's close proximity to grassland and surveys detected important and protected species on site. Appropriate mitigation and enhancements measures were then incorporated into the development.

Compensate

Should negative impacts from site works be unavoidable, compensation measures will be required. These are preferably carried out on site, but if this is not possible off site options may be considered.

The following compensation measures could be considered:

- Habitat creation, ideally within the development site.
- Enhancement of nearby habitat.
- Provision of bird and bat boxes and bat/swift "bricks".



1. Integrated bat boxes
2. Tree clusters
3. Hedges with hedgehog passes
4. Bird box
5. Sparrow terrace
6. Climbing plants
7. Green roof on storage shed
8. Bat loft
9. Living wall
10. SUDs system/rain garden
11. Unmown grass

Figure 7. Example wildlife features shown for individual buildings/terraces that are incorporated into a new development to mitigate and enhance an area for biodiversity.

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