

Biodiversity

Items area

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Proposed it

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y related issues associated with the Hideaway

dy installed or currently being installed

Installation of a complete 1,500 litre water harvesting plant - as it supports ecosystem resilience, restores natural water flows, and provides water for vegetation, wildlife and grey water requirements within the new build house. By reducing reliance on over-extracted groundwater and mitigating harmful stormwater runoff, Installation of Gabion baskets, the spaces between stones (interstices) offer shelter and nesting sites for insects, solitary bees, spiders, lizards, and small mammals. Over time, plants, mosses, and grasses can grow within the gaps, creating a green wall that enhances biodiversity. Studies in marine environments have Removal of invasive rhododendron plants (specifically *Rhododendron ponticum*) significantly assists in restoring and enhancing biodiversity. These plants are considered ecological disasters in many areas because they form dense, light-blocking thickets that smother native flora, alter soil chemistry, and create habitats Installation of a Bio Rock waste water treatment plant, High-Quality Effluent Discharge: The treated, clean water is suitable for discharge into the sea, preventing damage to surrounding ecosystems.

Pollution Prevention: By removing contaminants, these systems prevent the eutrophication (excessive nutrient loading) that causes oxygen depletion, which otherwise leads to dead zones where fish and other marine life cannot survive. The system is odorless and silent, minimizing disturbances to local flora and fauna.

Water Recycling for Ecosystems: The treated greywater can be safely reused for irrigation, which aids in preserving natural water levels and reducing pressure on freshwater resources.

Installation of the Air source Heat Pump indirectly provides benefit to Biodiversity: By significantly reducing carbon emissions (potentially saving over 23 tonnes of

over 10 years), ASHPs help mitigate climate change, which is crucial for protecting habitats and ecosystems.

Reduced Pollution: Unlike oil or gas boilers, ASHPs do not release harmful emissions, leading to cleaner air.

Installation of domestic solar panels can contribute to biodiversity, particularly when combined with thoughtful, nature-friendly management of the surrounding area. While the panels themselves provide renewable energy, the space around them—even in a residential setting—can be transformed into a habitat Installing batteries for domestic solar panels contributes to biodiversity primarily indirectly by advancing the transition to renewable energy and reducing the carbon emissions that drive habitat loss.

A MVHR system is being installed in the new build and the Installation of a MVHR (Mechanical Ventillation with Heat Recovery) system has an Energy Efficiency & Reduced Carbon Footprint: Modern Mechanical Ventilation with Heat Recovery (MVHR) systems are designed to be energy-efficient. By reducing the energy needed for heating, these systems lower CO2 emissions, contributing to climate change mitigation. Reduced carbon emissions help protect global biodiversity from the impacts of climate change.

Reduced Pollution Infiltration: Advanced filtration in HVAC systems can filter out pollutants, including particulate matter (PM) and some allergens.

Installation of a EV charging point, installing electric vehicle (EV) charging points can indirectly contribute to biodiversity protection by supporting the transition to cleaner transportation, which helps mitigate climate change and reduces the environmental hazards associated with fossil fuel extraction. While the physical Land drainage, Positive Contributions to Biodiversity

When designed with ecological principles, drainage features can create new, valuable habitats:

Creating New Habitats: Drainage ditches, when properly designed or re-profiled, can provide habitats for aquatic plants, invertebrates, amphibians, birds, and small mammals.

Wetland Conservation: In some landscapes, drainage canals and ditches act as "refugia" or safe havens for

The cabling system within this new build house has been carried out utilising "low smoke " LSZH cable

How Low Smoke Cabling Benefits the Environment and Biodiversity:

Reduces Toxic Contamination: Traditional PVC cables contain halogens (like chlorine). When burned, these release toxic, corrosive gases (hydrogen chloride) that pollute air, soil, and water, which can damage local flora and fauna.

Prevents Long-Term Ecological Damage: LSZH cables are halogen-free, meaning they do not release these harmful compounds during a fire. This reduces the risk of long-term environmental degradation and contamination of habitats.

Green Building Standards: The use of low smoke zero halogen wires is in line with international green building standards. The new build is based on a SIPs build, Here is how SIPs construction supports environmental goals:

Sustainable Materials: SIPs are commonly manufactured using oriented strand board (OSB) derived from young, fast-growing trees, often sourced from FSC or PEFC certified, sustainable forests.

Reduced Waste: SIPs are manufactured off-site in a controlled environment, resulting in 30–40% less on-site construction waste compared to traditional building methods.

Energy Efficiency & Reduced Emissions: The superior insulation and airtightness of SIPs reduce energy consumption for heating and cooling by up to 50–60% over the life of the home, which helps lower greenhouse gas emissions.

Lower Embodied Carbon: Timber used in SIPs requires significantly less energy to produce than materials like concrete. **Acoustic ceiling installation between the floors-** acoustic ceilings can contribute to biodiversity, primarily through the use of sustainable, bio-based materials and by supporting green building practices that reduce environmental impact. While an acoustic ceiling itself is an indoor fixture, its material composition often contributes to biodiversity. **External stone walls** significantly contribute to biodiversity by providing crucial habitats, shelter, and corridors for various species. They act as miniature ecosystems, supporting wildlife like insects, spiders, birds, and small mammals. **Triple Glazed windows** have been installed throughout the new build - Here is how triple-glazed windows contribute to biodiversity:

Reduced Carbon Emissions: By providing superior insulation (often with U-values as low as 0.8 W/m²K), they significantly lower the need for heating, reducing the carbon footprint of buildings.

Lowered Energy Demand: Lower energy consumption means less pressure on energy production, which directly reduces the environmental impact of fossil fuel extraction and power generation.

Sustainable Materials: Many manufacturers use sustainable or recyclable materials (such as uPVC or responsibly sourced wood) for frames, reducing waste.

The new build home has an open batten on batten external cladding system which provides small habitats for wildlife. Every individual electrical circuit within the new build is protected by a Residual Current Breaker and these RCDs contribute to environmental protection indirectly by preventing catastrophic electrical fires, which can cause significant damage to the environment. **Motion sensors for Lighting,** the installation of motion-controlled lighting can significantly contribute to biodiversity by mitigating the negative effects of artificial light at night (ALAN) on ecosystems. By limiting illumination to times of actual activity, these systems reduce light pollution, which otherwise disrupts the natural rhythms of many species. **Installation of an Open Wood Store Boosts Biodiversity:** **Shelter and Hibernation:** The structure provides dry, protected spaces for small mammals (like hedgehogs or mice) and insects to nest or hibernate, especially during winter. **Decaying Wood Habitat:** As the wood ages, it becomes a food source and habitat for saproxylic insects (deadwood-dependent species) and fungi. **Micro-habitat Creation:** Open wood stores allow light and rain to penetrate in a managed way, creating a mosaic of dry, damp, warm, and cool areas, which increases biodiversity. **Installation of water pressure reducing valves,** acts by preventing wasted water and reducing strain on infrastructure, a water pressure reducing valve is a practical tool for conserving natural resources, which directly supports the preservation of biodiversity.

Items involving endangered/protected species

Planting Hazel Hedge for a source of food for the red squirrel environment and to support over 70 species of insects.
Planting of Douglas Fir, Spruce and or Pine which is favoured by Red Squirrels over the invasive grey squirrel

Check and see if a Holt for Sea Otters can be installed between the Gabion baskets, as currently at the time of writing there are 12 otters undergoing rehabilitation at the National Wildlife Rescue centre in Alloa, the otters have come from across the central belt, and of course the water quality of Loch Long should be reviewed, updated to accept these magnificent creatures as mentioned in the attached letter, the water Cut access holes in fence lines to facilitate access for hedgehogs

Provide a shelter for hedgehogs often referred to as "hedgehog conservation" or habitat enhancement

Plant native wild flower and grass for the hedgehog environment

Installation of a Bat Box, is a proactive measure for wildlife conservation. It is a recognized method for supporting local ecology by providing artificial roosting sites in areas where natural, mature, or decaying

Install a Bee hive , subject to checking existing bee population with the SBA, alongside ensuring foraging plants such as Willow hedge are planted as this will support early bees with pollen for foraging early in the

losed items

Installation of a wild life pond as they provide a vital, year-round water source for birds, hedgehogs, and pollinators, they are also crucial for frogs, toads, and newts, which are often safer in garden ponds than in the wider countryside. the water harvesting plant will help maintain water level in the pond, alongside the

Installation of bird boxes, to assist and encourage smaller species of birds

Option of leaving the existing driveway as it is or Instal either a Gravel Grid or Terram type non woven fabric on the Driveway which will also allow rainwater to soak into the ground rather than creating surface runoff.

This will help maintain soil moisture levels, which supports nearby plants and microorganisms, and helps replenish groundwater supplies.

Habitat Support: Unlike solid paving, gravel grids and Terram type fabrics on existing ground conditions can provide a habitat for various, small organisms and insects, contributing to better garden biodiversity.

Reduced Pollution: The permeable nature of the grid and or Terram allows the ground to act as a natural filter, cleaning stormwater as it passes through, which improves the quality of water returning to the soil and nearby water systems.

Lower Temperature: Gravel surfaces absorb less heat than concrete or asphalt, reducing the "urban heat

Installation of external lighting based on Dark lighting specification, with warmer intensity lighting (2700k) , with Here is how Dark Sky-approved lighting supports biodiversity:

Protects Nocturnal Species: Many animals, including bats, insects, amphibians, and mammals, depend on darkness. Dark Sky lighting helps prevent population declines caused by habitat fragmentation, disorientation, and disruption of natural rhythms.

Reduces "Vacuum Effect" on Insects: Insects are highly attracted to bright, blue-rich white lights, which leads to exhaustion, death, or increased predation. Warm-colored, shielded, and dimmed, approved lighting minimizes this fatal attraction, protecting nocturnal pollinators that are essential for plant reproduction.

Benefits Migratory Birds as these birds can become disoriented by bright lights and collide with buildings.

Protects Nocturnal Habitats: By directing light only where it is needed and using lower, warmer intensities

Planting of native plants and hedges including Salix Alba which supports 266 insect species and provides nectar for early bees. Proposed layout of planting has been submitted to Argyll and Bute Planning.

Installation of an at home "In bin" glass crusher to eliviate over flowing of glass recycling bin.

Installation of a full designated recycling bin refuse area on the main link road leading up to Fueins Road that the Argyll and Bute refuse lorries can physically access. Subject to agreeement with Argyle and Bute planning, to allow better recycling of glass, metal, paper and plastics as currently and disappointingly the neighbouring

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