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Biodiversity net gain. Good practice principles for development

Case studies

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21 Bioreceptive built environments, Isle of Wight

Details

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21.1 PROJECT SUMMARY

Artecology has worked with clients on the Isle of Wight, using different mixes of 'anthropic stone' construction and render, to create naturalistic and ecologically-designed surfaces in the public realm. These small interventions have created a cluster of novel built environments. Work was undertaken for Ventnor Botanic Gardens, Isle of Wight Council and the Highways Public Finance Initiative (PFI), to extend some of these installations between 2016 and 2017, prompted by the success of these features as both sculpture/ornament, and biologically 'activated' urban spaces. The combination of structural and hard landscape functionality with increased ecological value and enriched public experience (including educational use) has made the concept of high-performance, biologically-favourable textured renders, for repairs and for new construction alike, which is an attractive alternative to conventional approaches.

The aim in both these cases are the ongoing need for structural repairs to build public infrastructure combined with an interest in trialling methods for ecological gain for public policy compliance and organisational commitments to sustainability. The sculpted renders are made from natural cement (Vicat Prompt) with high paper content. This offers cost-savings in rapid cure times and minimal pre-fabrication. It also adds ecological value because of the responsiveness of the material to sculpted and constructed habitat features, including breeding, basking, foraging and overwintering niches for invertebrates, small mammals and reptiles, and surfaces favouring colonisation by plants.

Figure 21.1 Outcome of the works

21.2 ISSUES

The simple and low-cost nature of the small habitat works makes them practically appealing, causing minimal disruption to the sites or delay to wider operations. However, the need to overcome objections (administrative, contractual, legal, reputation) to using unconventional techniques has been more challenging. Using opportunities to deploy these methods as demonstrations in small retrofits and repairs has been important in building a platform from which to be more persuasive and convincing.

21.3 OUTCOMES

Small urban habitats, delivered through textured renders and anthropic stone, provide simple and effective interventions in urban built environments, suitable for new construction and ideal for retrofits and repairs. The public realm work on the Isle of Wight has delivered increased wildlife activity (reptiles, ground and wall-nesting invertebrates, pollinators). The 'patchwork' approach to repairing built environments with biologically-receptive surfaces, textures and designed renders, increases the possibility of planning for cumulative ecological gains on sites via their maintenance schedules and budgets.