

# Synanthropic Suburbia

## Retrofitting residential neighborhoods, Markham, ON, Canada



**Main author**

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**Project data**

Project group: Architecture, building and civil engineering  
Client: Prototypical Suburban Homeowner  
Project background: Research project

**Summary and appraisal of the project by the jury**

Entitled "synanthropic suburbia", the project explores potential architectural habitats for wildlife of various kinds that live near and benefit from human habitation – thus the use of the term synanthropic, meaning living in symbiotic relation with human beings. Based on a meticulous analysis of suburban neighborhoods in the province of Ontario and the city of Markham in particular, the project's author proposes a set of small interventions for animal residents normally neglected in any design or planning process – in this case, raccoons, chimney swifts, tree swallows, blue birds, barn owls, and brown bats, all native species to the region.

Bewildering aspects of the thesis notwithstanding, the jury appreciated the design of so-called "ecological prosthetics" to be installed as micro-additions and habitats for animal users to houses across residential neighborhoods. Taking their cues from the iconography and type forms of existing houses, the interventions expand upon conventional building components to create entirely new architectural vocabularies. The "compost chimney", "extended eave", and "habitat dormer", for example, provide living opportunities for wildlife and enhance the neighborhood's ecosystem. The design promotes a discourse on the relation between human activity and the environment, offering strategies for understanding architecture in symbiotic rapport with nature, without succumbing to romantic notions of the "natural".



Image 1: Synanthropic Suburbia explores the tension between humans and synanthropic species – animals who benefit from living in close proximity to people but remain beyond their control. It re-imagines human and animal interactions through a series of Ecological Prosthetics which subvert conventional housing typologies and enable multi-species relationships. These subtle, architectural retrofits restructure the behaviors and territorial boundaries of six animal species and their human neighbors.

**Statements on the sustainability of the project by the author**

**Beyond sustainability - enhancing ecology through architectural intervention**

Suburbanization throughout Ontario has transformed vibrant agrarian and natural ecosystems into homogeneous suburban landscapes incapable of supporting a diversity of wildlife. The objective of Synanthropic Suburbia is to retrofit existing suburban neighborhoods into viable animal habitats. The project seeks to be move beyond sustainability, towards an architecture that actively improves its local ecosystem. Through the strategic addition of ecological prosthetics, the project offsets the negative impacts of suburban development and encourages homeowner engagement with local ecosystems. Each prosthetic is carefully detailed to limit its environmental impact and accommodate the biological needs of select animal species to create resilient architectural and environmental conditions.

enhanced ecosystem services. Compost chimneys improve soil quality, limiting the need for chemical fertilizers; extended eaves collect and store rainwater for irrigation, reducing water consumption; and habitat dormers encourage insect consuming animals, controlling local pest populations. The investments of individual homeowners accumulate, resulting in a suburban community with increased biodiversity and environmental performance.

**Suburban standardization - leveraging uniformity towards economic viability**

Ecological prosthetics are designed to leverage the uniformity of residential wood-frame construction in developer-built communities. Each prosthetic is standardized to typical housing models and prefabricated, reducing overall cost and enabling homeowners to affordably modify their existing home. In return, homeowners receive improved building performance and

**Innovative practice - expanding architectural thinking through ecological principles**

Synanthropic Suburbia explores new disciplinary frontiers by integrating ecological principles into architectural design. By focusing on identifiable suburban elements like the chimney, eave and dormer the project makes ideas of multi-species cohabitation and environmental stewardship accessible to a wide audience. Though formally subtle, the prosthetics radically alter the performance and function of conventional building components to embrace animal species. These design principles have broad applicability and could be adapted to local species, construction methods and homeowner desires to create a range of prosthetics. Furthermore, the project speculates on how the multiplication of small architectural interventions across a community could have wide-scale, positive environmental impact.

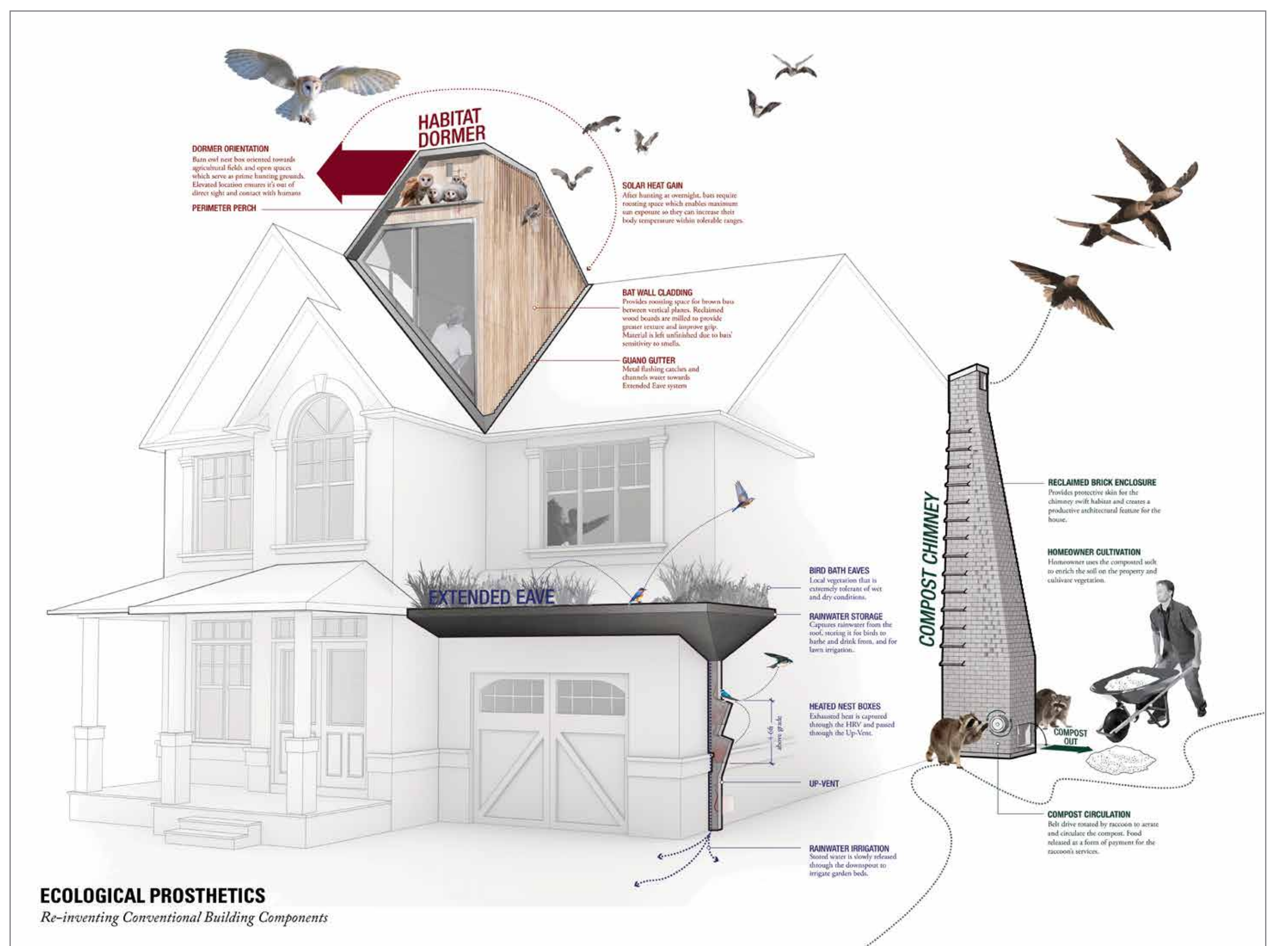


Image 2: The compost chimney, extended eave and habitat dormer manipulate banal building components to create ecological opportunities and re-vent the architectural language of the suburbs. Each prosthetic augments human spatial boundaries to invite animals to inhabit the periphery of the domestic realm. The objective is to emphasize the need for ecological thinking in design practices and shift priorities from the desires of individual homeowners towards the quality of our shared ecosystem.

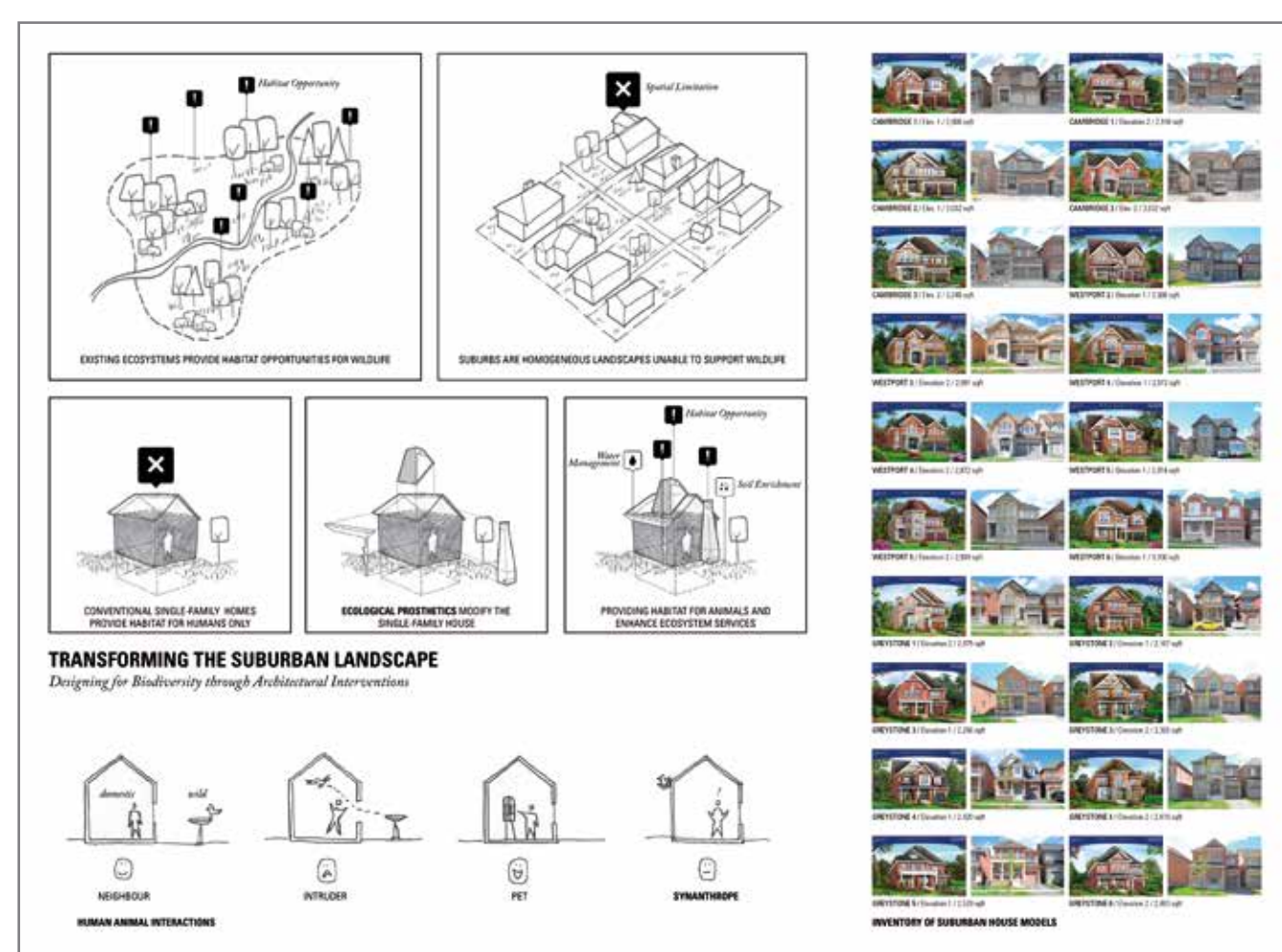


Image 3: Proposal capitalizes on systematic construction of detached houses to transform suburban landscapes.

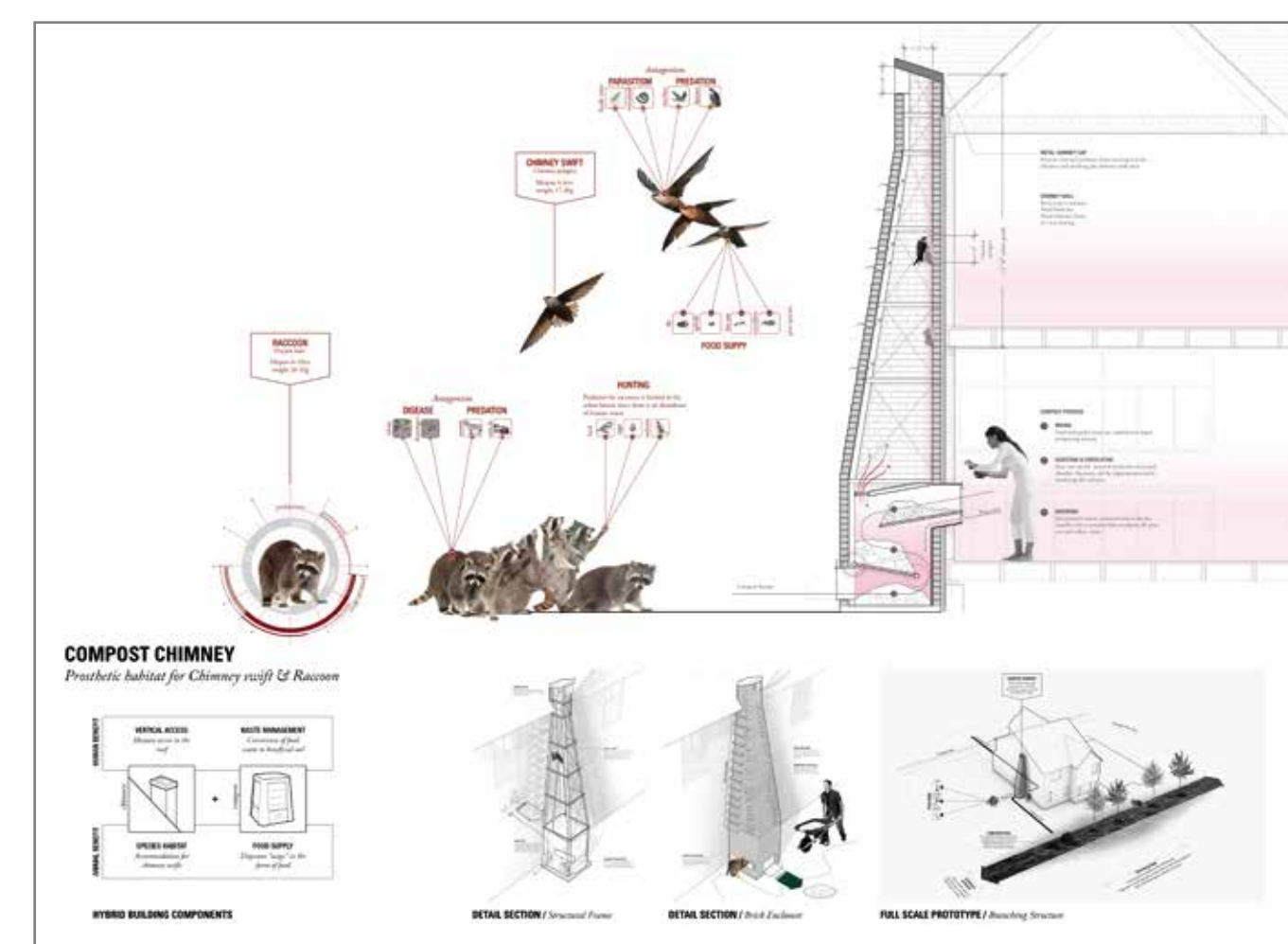


Image 4: Compost chimney employs raccoons in composting processes and provides habitat for chimney swifts.

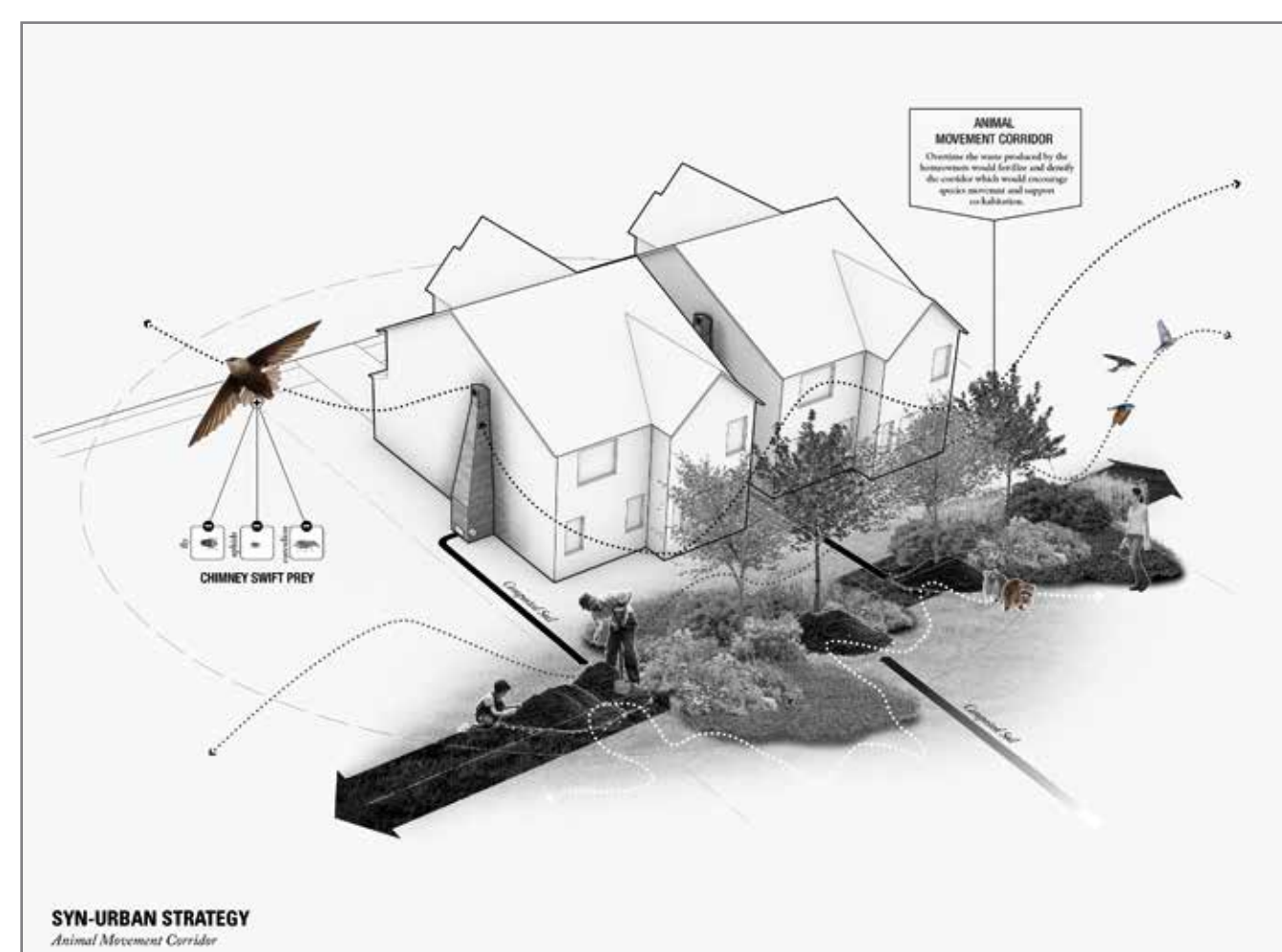


Image 5: Nutrient rich soil from the compost chimney enhances the vegetation and biodiversity of the community.

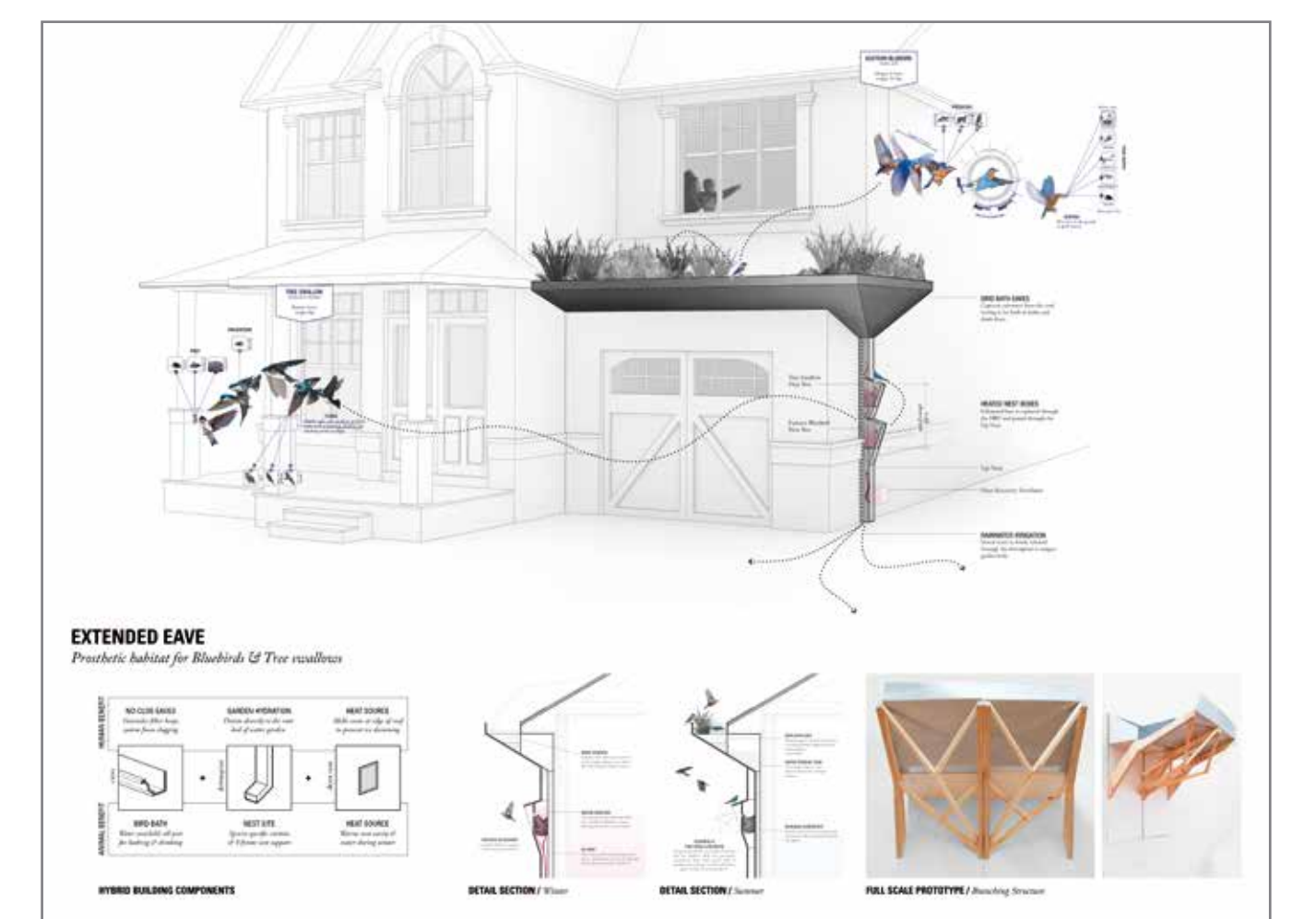


Image 6: Extended eave provides nesting sites for songbirds and stores rainwater for vegetation irrigation.



Image 7: Habitat patch communities designed to support specific species, establishing neighborhood identity.

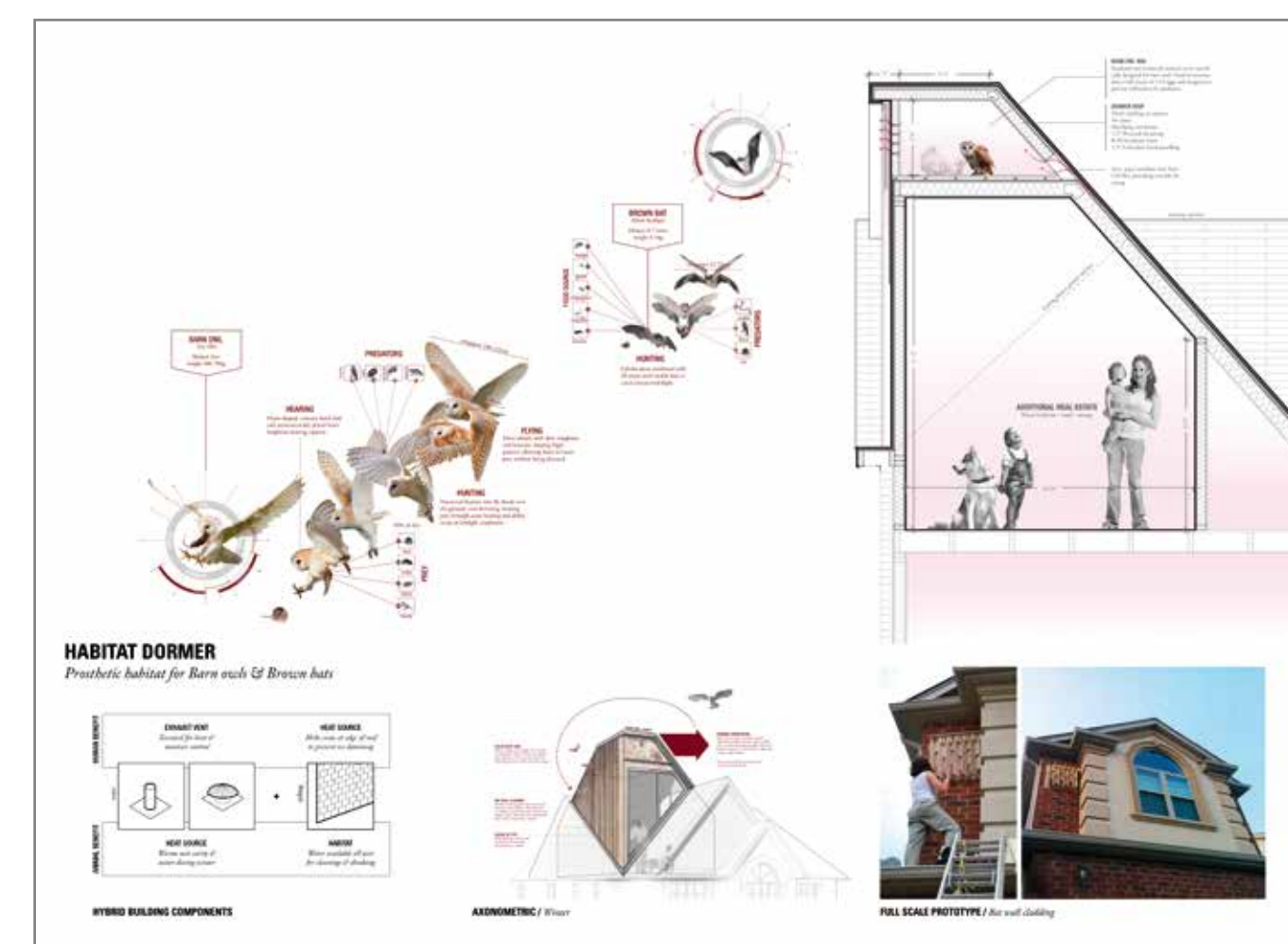


Image 8: Habitat dormer extends the building envelope to accommodate humans, barn owls and brown bats.



Image 9: The multiplication of prosthetics encourages the development of a bio-diverse habitat network.



Image 10: The project re-imagines suburbia as a vibrant, biodiverse habitat for humans and animals alike.