PRACTICE PROFILE

BIOPHILIA ECOSPACE

We bring living water, living walls, and living ecosystems into architecture.

We are **Biophilia Ecospace** — ecological engineers, aquatic specialists, and botanical designers. We partner with architects, interior studios, and landscape masterplanners to integrate **real, self-sustaining living systems** into residences, corporate spaces, hospitality retreats, and luxury developments.

Our work spans chemical-free natural swimming pools, bespoke koi ponds, automated living walls with collector botanicals, curated **residential & commercial plantation projects**, architectural **paludariums** (a slice of rainforest inside your living space), pondless waterfalls, cascading streams, and sculptural water spheres. Everything we build is living, biologically balanced, and engineered for long-term permanence.

Natural Swimming Pools Chemical-free living water powered by beneficial bacteria and integrated regeneration wetlands. Soft, pristine, drinking-water quality.	**Koi Ponds** Bespoke koi habitats with natural stone edges, sub-surface biological filtration, and deep resting zones for pristine water clarity.
Living Walls & Rare Botanicals Automated vertical gardens featuring collector tropicals, zero-wall-contact waterproofing, and seamlessly integrated architectural grow lighting.	**Paludariums & Living Biomes** Semi-aquatic enclosures — a rainforest inside your room — uniting tropical canopy, waterfall cascades, and clear aquatic life.
Pondless Waterfalls & Streams Cascading rocky waterfalls, winding streams, and planted aquatic margins with hidden sub-surface reservoirs — dynamic moving water with zero standing open pond.	**Plantation & Botanical Projects** Curated residential and commercial plantation projects — specimen tropicals, courtyard greening, and restorative sensory landscapes.

STUDIO FOUNDERS & PRINCIPALS

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COLLABORATION & INQUIRIES

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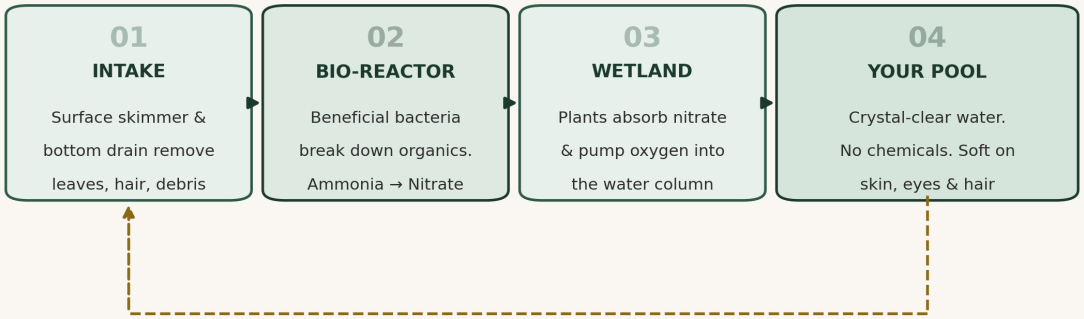
How We Build Chemical-Free Swimming Pools

Conventional swimming pools rely on harsh chemicals that irritate swimmers' eyes and skin, damage natural stone copings, degrade timber decking, and create gallons of toxic backwash. We build pools powered by **biology, not chemistry**. Water recirculates through a living biological reactor and a planted regeneration wetland, creating crystal-clear water that feels like swimming in a mountain stream.



Images taken from the Internet — for design reference only

How it works — the closed-loop biological water cycle



Water recirculates continuously — zero chemicals, zero waste, zero discharge

Beneficial Bacteria	Aerobic nitrifying bacteria seeded inside the bio-reactor continuously digest organic matter, rapidly converting swimmer ammonia into harmless nitrate around the clock.
Planted Wetland Zone	Aquatic rushes, native irises, and oxygenating plants absorb nitrates and pump dissolved oxygen back into the water column, keeping water fresh and biologically polished.
Fish-Friendly Biotopes	Calibrated biology easily accommodates ornamental koi or native fish in dedicated zones, providing an authentic living waterscape that stays completely clean.

Koi Ponds — Living Jewels in Your Landscape

There is something profoundly peaceful about watching koi glide through clear water. But keeping them thriving requires rigorous ecological engineering. We design **bespoke koi ponds** with natural boulder edges, graded depths, and advanced multi-stage biological filtration that keeps the water crystal clear — no green algae blooms, no foul odours, and no constant manual cleaning.



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Multi-Stage Bio-Filtration	High-capacity biological reactors digest heavy organic loads, converting ammonia to nitrate, while high-efficiency mechanical vortex stages trap all suspended fines.
Natural Stone Edging	Hand-selected river boulders and weathered flagstones conceal all liners and hardware, making the pond appear as though carved out by nature decades ago.
Fish Health & Deep Zones	Multi-tiered shelving provides viewing shelves alongside deep, cool thermal refuge zones, with automated bottom aerators keeping dissolved oxygen high throughout summer.
Illuminated Viewing & Human Bond	Submerged architectural LED lighting and integrated stepping stones create captivating viewing spots. Hand-conditioned Japanese koi develop an affectionate bond — eagerly greeting you at the water's edge and following alongside your footsteps like loyal aquatic companions at feeding time.

Living Walls & Botanical Plantation Projects

Most people spend over 90% of their lives indoors. Visible botanical life measurably reduces stress, absorbs ambient noise, and restores biophilic balance. We engineer automated vertical living walls and curated architectural plantation projects for luxury residences, commercial studios, and courtyards.



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Hidden Closed-Loop Irrigation Automated recirculating drip system behind root felt with zero wall contact. Your structural wall stays 100% dry — no moisture escape, no dampness.	**Integrated Architectural Grow Lighting** Full-spectrum LED fixtures seamlessly recessed into the architectural frame, delivering precise PAR light spectrums so lush plants flourish even without natural sunlight.
Rare Botanical Curation Collector-grade Anthuriums, variegated Philodendrons, staghorn ferns, micro-orchids, and living mosses — arranged into a breathtaking living vertical artwork.	**Bespoke Plantation Projects** Complete indoor and courtyard plantation design. From statement planter suites to interior micro-forests, we bring enduring nature balance to every project.

Paludariums — A Rainforest Inside Your Living Space

A paludarium combines a lush tropical canopy above with a functioning aquatic biome below. Think of it as having a **self-sustaining fragment of cloud forest right inside your room** — mist, cascading waterfalls, rare micro-orchids overhead, and crystal-clear water flowing below. Bespoke architectural installations built for living rooms, boardrooms, and luxury suites.



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Inside a Paludarium — Three Living Microclimate Zones

ZONE 01 **CANOPY LAYER — The Rainforest Above**

Rare velvet Anthuriums, trailing Peperomia, micro-orchids, and epiphytic ferns.
Automated sunrise-to-sunset full-spectrum LED lighting drives healthy photosynthesis.

ZONE 02 **CASCADE LAYER — Mist, Stone & Moisture**

Hand-carved slate waterfall faces and silent ultrasonic misting nozzles.
Maintains 75–90% relative humidity for rare mosses and weeping ferns.

ZONE 03 **AQUATIC LAYER — The Living Water Basin**

Submerged driftwood roots, aquatic mosses, and ornamental nano-fish.
Filtered by a whisper-quiet external canister keeping the water crystal clear.

Self-Cleaning Bio-Floor	A bioactive micro-fauna layer of springtails and isopods breaks down organic leaf litter, keeping the enclosure pristine, odourless, and virtually maintenance-free.
Automated Misting & Falls	Ultrasonic foggers and gravity slate waterfalls maintain 75–90% humidity for rare epiphytes, with airtight silicone glass sealing ensuring zero moisture ever escapes into the room.
Aquatic Nano-Biotope	Submerged driftwood roots, aquatic mosses, and schooling nano-fish thrive in clear, chemical-free living water powered by an external whisper-quiet canister filter.

Water Features & Sensory Landscapes

Moving water cools the air, masks harsh city sounds with natural acoustics, and infuses architecture with vitality. We engineer bespoke waterfalls, planted streams, and sculptural water features enriched with thriving aquatic marginal plants for seamless architectural integration.





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Pondless Waterfalls	Cascading waterfall streams accented with lush marginal water plants, disappearing directly into a concealed underground gravel basin. Zero standing open water, zero mosquito breeding, child-safe, and virtually zero maintenance.
Pondless Water Streams	Meandering rocky brooks flanked by water irises, rushes, and hardy aquatic plants that wind through courtyards or entry landscapes and vanish cleanly into a sub-surface reservoir — genuine stream audio with zero pond footprint.
Rocky Streams & Cascades	Hand-placed granite boulders, river stone riffles, and gravel pools calibrated for natural acoustic white-noise masking of urban traffic and street noise.
Water Spheres	Precision-turned granite spheres on pedestals of 360-degree silent laminar water film. Zero splashing, minimal evaporation, and a striking architectural focal point.
Natural Mini Ponds	Compact, biologically balanced rock mini ponds with native aquatic plants and natural stone edging — ideal for intimate courtyards, terraces, and garden nooks.

Why Choose Biophilia Ecospace

We know architects and designers need consulting partners who execute reliably, honour the architectural concept, and eliminate post-handover maintenance headaches. Here is what defines our practice:

Zero Chemicals, Ever	Our biological systems use natural microbiology — no chlorine, algaecides, or corrosive acids. Your travertine copings, imported marble, brass fixtures, and teak decking will never etch, corrode, or bleach.
Lower Long-Term Cost	Conventional chemical pools require endless sanitizers, frequent acid washing, and expensive equipment replacements. Our biological filtration harnesses nature, dramatically cutting operating overhead.
Zero Waste Discharge	No dumping of toxic chlorinated backwash into city drains. Our systems operate closed-loop; any minor overflow is pure, nutrient-rich water that can safely irrigate landscape plantation.
Material Palette Preservation	Because living water is chemically neutral and non-corrosive, the finishes you specify — flamed granite, limestone, raw timber, copper — remain pristine for decades without deterioration.
Self-Sustaining Automation	Every installation is equipped with automated biological balancing, smart fertigation, and scheduled grow lighting. Your clients experience nature's beauty with effortless ease.

Architectural Assurance: *Living biological water does not off-gas, corrode metalwork, or degrade fine architectural stone. The natural materials and details you design retain their intended beauty, colour, and integrity year after year.*

How We Work With Your Studio

We operate as specialized ecological engineering consultants, seamlessly supporting your studio from initial concept through to long-term post-handover stewardship:

01 — CONCEPT & FEASIBILITY	We collaborate early with your design team — analyzing sun exposure, structural load allowances, water hydraulics, and choosing the optimal biophilic intervention: natural pool, koi habitat, living wall, paludarium, pondless stream, or architectural plantation project.
02 — TECHNICAL CAD & SPECIFICATIONS	We provide detailed tender-ready drawing packages: CAD/BIM-coordinated sections, hydraulic flow schematics, bio-reactor sizing, pump chamber details, waterproof membrane specs, and complete botanical schedules.
03 — SPECIALIST FABRICATION & BUILD	We execute either turnkey or as specialist sub-consultants alongside your general contractor — handling underwater membranes, biological substrate beds, irrigation matrices, automated misting, and plant placement.
04 — MATURATION & STEWARDSHIP	We inoculate beneficial bacterial cultures, monitor the water maturation curve, acclimate rare botanicals, and hand over a fully self-stabilizing ecosystem. We back every project with ongoing stewardship support.

Let us collaborate on your next architectural landmark.

Whether you are conceptualizing a private estate, corporate workplace, or boutique resort, we would be delighted to share feasibility studies, CAD details, and technical references.

BIOPHILIA ECOSPACE • DIRECT CONTACT
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