

WHITE PAPER

Designed to Stay

Biophilic Hospitality and the Science of Guest Experience

How Biophilic Design Influences Guest Well-Being, Perceived Value, and Patronage Intentions

Executive Summary

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THE ART OF PRESERVED NATURE

Executive Summary

The Shift: Hospitality Is Now Judged by How It Makes People Feel

Hospitality has always been in the business of human experience. What has changed is that guests now evaluate the built environment as part of that experience - not as a backdrop. A property is no longer judged only by service, amenities, or location. It is judged by how quickly it helps people settle, how restorative it feels, and how vividly it stays in memory after they leave.

This shift has elevated the lobby, lounge, spa corridor, and restaurant threshold from secondary spaces to revenue-generating assets. Common areas where guests linger, decompress, and form first impressions are now among the most commercially consequential square footage in any property. The question facing designers and operators is no longer whether to invest in experiential environments - it is how to do so with documented outcomes.

36%

Higher lobby dwell in biophilic hotels vs. conventional ⁵

18%

ADR premium for rooms with meaningful nature views ⁵

5-20%

WTP premium for sustainability designed hotels ¹³

11

Verified peer-reviewed hospitality studies cited

The Evidence: What Nature Does to Guests

Research now confirms that biophilic environments - those incorporating authentic greenery, natural materials, daylight, and organic form - influence how guests feel, how long they stay in shared spaces, and how positively they evaluate the property. The effects are not aesthetic. They are neurological.

- Emotional response and service perception:** Lee (2019) found that biophilic design elements in lodging settings enhanced guests' emotional responses, improved perceived service quality, and strengthened positive behavioral intentions including revisit and recommend intentions. ¹

Restoration and mental renewal: Suess, Legendre & Hanks (2024) found that combinations of indoor plants, green walls, natural light, and nature-themed decor significantly enhanced perceived relaxation, re-energization, and mental clearing in urban hotel settings - explicitly framing biophilic hotels as restorative experiencescapes. ³

Delight and perceived value: Elshaer and colleagues (2025) found that high-quality biophilic design significantly improved guest well-being and perceived value, contributing to patronage intention and willingness to pay a premium - with quality of integration mattering more than botanical presence alone. ⁴

The feel of place: Research on architectural neuroaesthetics identifies three dimensions through which guests evaluate spaces: coherence, fascination, and hominess. ^{6,7} Biophilic design addresses all three simultaneously - making spaces feel legible, interesting, and welcoming in ways that generic interiors cannot reliably deliver.

Documented Outcomes

Peer-reviewed research from hospitality-specific studies documents measurable results:

36% higher guest dwell in biophilic lobbies ⁵	18% ADR premium for nature-view rooms ⁵
+revisit intentions strengthened by biophilic design ¹	+value perception improved with quality biophilic integration ⁴
5-20% sustainability premium guests will pay for certified hotels ¹³	10-20yr preserved garden lifecycle - lowest cost of ownership

The Commercial Case

Biophilic design should be understood as a layered commercial effect, not a single ROI metric. Nature-rich environments influence how long guests stay in shared spaces, how positively they evaluate the property, how strongly they remember it, and how likely they are to return. Each of those effects has a revenue implication. Extended lobby dwell increases ancillary F&B and retail capture. Stronger revisit intention drives repeat occupancy. Higher perceived value supports premium positioning. For operators modeling capital allocation, the correct comparison is biophilic design against the next best investment in guest experience - measured across the full revenue and retention lifecycle of the asset.

Specification: Living, Faux, or Preserved - What Actually Works

Every designer and operator must resolve one practical question: which botanical system delivers authentic biophilic benefit in their specific environment? The three available options have fundamentally different performance profiles. Understanding the distinction is the difference between investment and expenditure.

	Living Walls	Faux / Artificial	Preserved Gardens
Biophilic Benefit	Authentic - activates neurological pathways	Limited - synthetic materials do not reliably replicate authentic responses ¹²	Authentic - real botanical material retains organic structure
Maintenance	High - weekly visits, irrigation, grow lights	Minimal - periodic dusting only	Zero - no water, light, soil, or care required
IEQ Impact	HVAC moisture burden; allergen risk	Possible VOC off-gassing from plastic/PVC	No impact - CDPH VOC compliant, zero emissions
Lifecycle	Variable - ongoing care required	6-8 years; degrades visually	20+ years - lowest total cost of ownership
Hospitality Suitability	Optimal where full infrastructure exists	Not recommended for authentic biophilic goals	Optimal for lobbies, spa, F&B, low-daylight zones
Certifications	None published in category	None published in category	ASTM E84 Class A · CDPH VOC · HPD v2.3 · Red List Free · EPD

The Preserved Advantage in Hospitality

Preserved botanical systems are composed of authentic plant material that has been treated to maintain its natural texture, structure, and appearance while eliminating the biological processes that require ongoing maintenance. The result is a biophilic solution that delivers the sensory qualities of real nature without the water, lighting, irrigation, drainage, or specialized care required by living plant systems.

Research demonstrates that authentic botanical materials produce measurable neurological benefits that artificial plants do not replicate, making material authenticity critical to biophilic performance. Preserved systems also meet the growing demand for documented material transparency and performance, with certifications including ASTM E84 Class A fire ratings, CDPH VOC compliance, HPD v2.3, Red List Free status, and published Environmental Product Declarations - credentials increasingly required for LEED, WELL, and commercial specification.

The Strategic Implication

Hospitality markets are crowded with competent spaces. What distinguishes one property from another is often not that it met expectations, but that it stayed with the guest afterward. Environments shaped by authentic greenery, natural materiality, and coherent sensory composition create that residual impression - and the commercial outcomes that follow from it.

Nature should no longer be treated as an optional layer applied after the main design work is complete. It is part of the conceptual and experiential core of hospitality design. The question for designers and operators is not whether biophilic environments perform. The research answers that. The question is which implementation strategy delivers those outcomes reliably, within the operational reality of the property.

The guest experience begins before service is delivered. It begins the moment someone walks in.

Garden on the Wall® - The Only Fully Verified Option

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7-year Warranty
Industry-leading coverage

20+ year Lifecycle
Lowest total cost of ownership

Zero Maintenance
No Water, light, or care required

Complete Verification
EPD · HPD · VOC · Red List Free · ASTM E84

Download the full white paper with complete research citations, detailed ROI calculations, and implementation guidance at gardenonthewall.com. Request samples through Material Bank · CEU available through Architectural Record's Continuing Education Center (AIA/IDCEC/GBCI accredited)