Retreat®

Urban *Retreat*™

Welcome to a glorious year with Interface® —one that shines with growth and renewal for all of us. This is a watershed moment for our company.

Many Interface® products have traditionally been available (if not produced) around the world from our global locations. But with the Urban Retreat™ collection, we are making every effort to locally manufacture and distribute them. This unites us further as a company and as a brand, a step our late founder Ray Anderson was guiding us toward.

At the opening of Design Week in Milan, we returned to the name first given to us by Mr. Anderson. By using Interface (rather than InterfaceFLOR), we feel we are honouring his legacy and spirit. But in the truest sense, the Anderson vision illuminates our path every day.

In this magazine you'll read interviews with two members of the Interface Eco Dream Team: Janine Benyus, founder of the global practice of Biomimicry, and Bill Browning, one of eco-infrastructure's foremost thinkers and strategists. And as always, Interface product designer David Oakey takes us behind the scenes—in this case, into the woods—to talk about his inspirations for the Urban Retreat collection.

in **TOUCH** with *nature*

As we'll see throughout this magazine, the Urban Retreat™ collection is inspired by humans' instinctive love of nature, or 'biophilia'. Growing in importance, this phenomenon is now influencing many aspects of contemporary life.

Our need to maintain
for our physical, psychological
has been understood by artists,
And most people have known
of industry began to separate us from
But it was only in the 1980s that biophilia
In 1984, American biologist, Edward O.
gradual departure from nature
for us to reconnect with the life
walking through the countryside,
or just enjoying a green

Today, the benefits to our
with nature are being understood
And this increasing awareness
of our thinking and behaviour.
and commercial environments

Urban Retreat™

a connection with nature
and emotional well-being
scientists and designers for many years.
it intuitively ever since the advances
natural surroundings.
entered our lives as a concept.
Wilson, described how our
over the centuries has made it vital
around us – whether that means
nurturing plants or animals,
and pleasant view.

bodies and minds of this contact
in more and more detail.
has brought biophilia to the forefront
It's now inspiring domestic
around the world.

is part of a major trend.

Buildings *as living forms*

As architects and structural engineers combine their skills with ecology and biology, advances in materials and renewable energy systems are helping them create buildings that imitate nature. New cladding systems and 'smart skins' can make power generation part of a structure's fabric. Roof gardens and 'living walls' provide growing environments for plant life and habitats for wildlife.

01

In Miami's design district, a new 25-storey, mixed-use condominium, known as COR, extracts power from its surroundings, using the latest advances in wind turbines, photovoltaic solar panels, and solar hot water generation. Most impressively, this collaboration between Chad Oppenheim architecture, engineering consultants Buro Happold, and structural engineer Ysreal Seinuk, integrates green technology into its architecture: its exoskeleton provides thermal mass for insulation, shade for natural cooling, and armatures for the turbines.

02

Energy efficiency was also the key part of the brief for the Btek Interpretation Centre of Technology in Derio, Biscay, Spain. Designed by ACXT Architects and promoted by developer Parque Tecnológico SA, the building comprises two apparently uninterrupted pyramid-shaped structures that connect below ground. This design minimises the building's environmental impact by reducing its energy needs and using renewable resources to meet them – such as a geothermal heat pump and photovoltaic solar panels.

01 *Btek Interpretation Centre of Technology by ACXT*
02 *COR*
03 *Urban Forest by MAD*
04 *Chair Farm by Werner Aisslinger*
05 *Hyphae Lamps by Nervous System*
06 *Logements Anglet by OFF Architecture*

Buildings are adapting to become sustainable and self-powering – even self-sufficient.

03

Urban Forest, a new architectural concept from Beijing architects MAD, is a 385-metre skyscraper where each level is an organic-shaped 'slice', rotated horizontally to create spaces for gardens and patios. Designed for Chongqing, China, the building aims to bring the benefits of nature back into a high-density city environment.

With similar aims, Paris-based OFF Architecture, in association with Duncan Lewis SCAPE Architecture, has designed social housing development, Logements Anglet. Here, a layer of lush vegetation clads the structures, and appears to be the main building material, hiding concrete and masonry.

04

05

On a smaller but no less significant scale, Chair Farm by Werner Aisslinger features a chair growing inside a greenhouse. The concept is that furniture can be cultivated rather than manufactured, and harvested locally rather than being exported around the world. The chair is a plant trained inside a metal mould, and will be freed from the mould when fully grown.

Reflecting nature in a more literal way, Hyphae Lamps by US design studio Nervous System imitate the intricate vein formations in leaves. Each lamp in the series is unique, based on algorithmically generated designs that simulate the way nature creates leaf vein structures.

06

Self-sufficiency in communities

Fast-paced cities are becoming calmer, as populations seek a more sustainable way of life. Consumers choose local food, or even grow, raise and make their own. In neighbourhoods and homes, self-sufficiency is becoming more appealing – and urban smallholdings, shared allotments, seed exchanges and rooftop beehives are part of the landscape.

01

02

03

South African wine estate and working farm, Babylonstoren, has become a luxury 'pick your own' hotel. Guests go out into the farm to gather fresh produce, which they then cook in self-catering kitchens.

In Seattle, CityLab7, a collective specialising in food and ecosystem design in urban spaces, has created Mushroom Farm. In this educational demonstration centre, mushrooms are grown from the used coffee beans from local cafés, and donated to community programmes that help feed local families.

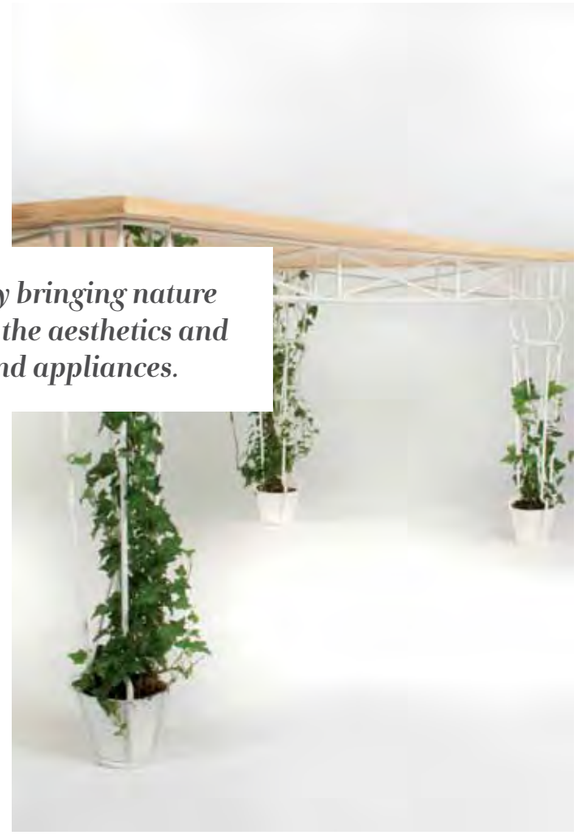
Inspired by the diversity of birds living in cities, Dutch designer Eveline Visser has created Vogelstad, or 'Bird City', a birdhouse frame that can be hung on the side of buildings. Described as 'a city for a mixed bird community', each frame features different types and sizes of houses for different bird species.

01 *Babylonstoren*
02 *Mushroom farm by CityLab7*
Photographer Kevin Scott
03 *Vogelstad or 'Bird City' by Eveline Visser*
04 *Green Wheel by Design Libero*
05 *Plantabe Table by JAILmake*
06 *Seated Garden by Caroline Prisse*

Nature in the urban home

Even in the compact living spaces of modern cities, people are striving to create a self-sufficient lifestyle that reflects rural ways. They are growing their own fruit and vegetables in window boxes, and making the most of small-scale gardens. Designers are helping by bringing nature indoors, working it into the aesthetics and materials of furniture and appliances.

05



Designers are helping by bringing nature indoors, working it into the aesthetics and materials of furniture and appliances.

04

06

Green Wheel, by Milan-based DesignLibero, is an indoor rotary garden, small enough to fit on a shelf. Based on technology developed by NASA, the wheel lets users grow herbs and leaves without soil, and control temperature and light levels from their smartphones.

With the Plantable Glass Table, London-based JAILmake explores how nature can 'claim back' a manufactured domestic object. Plants, such as herbs and tomatoes, grow in the table's four legs, bringing the processes of nurturing, picking and eating our food much closer together.

The same idea of combining farming with furniture has inspired Seated Garden, by Dutch designer Caroline Prisse. The chair's wooden structure includes 'pockets' containing plastic pots for growing a variety of plants.

Does *biophilia* work in the business world?

It's easy to see how the appeal of nature has a positive influence on the design of buildings and domestic interiors, and how it can improve our day-to-day lives. But how does it apply to the hard-nosed commercial world, where every innovation is expected to generate a financial return?

Perhaps surprisingly, biophilia is not only viable in today's business environment – some would argue that it's vital. In the white paper The Economics of Biophilia, environmental consultants Terrapin Bright Green (see page 51 refers to feature: 'Washington & New York: The Mentalists') show how biophilic design has real economic value. Much more than a luxury for employers who want to pamper their staff or show off their environmental credentials, it can actually improve profits.

Over the last 20 years, scientific studies have produced convincing evidence that integrating nature into the workplace can have a positive effect on productivity. Creating an interior environment that evokes the outside world - for example, by using patterns and textures based on organic forms - helps re-establish that vital connection between humans and nature. And even simple measures, such as installing plants, letting in more daylight or giving staff access to views of nature can have profound physical, mental and social benefits, reducing stress and increasing individuals' energy and concentration levels.

Investing for maximum impact

Until recently, the financial effects of these benefits have been difficult to quantify, and not always immediately obvious. And the traditional commercial aim to maximise efficiency and reduce costs has undervalued productivity. So, many companies have preferred to invest in technology or other capital equipment, where they can see a direct return, rather than in improving their employees' workspace.

But Terrapin Bright Green's paper points out that, across a variety of sectors, organisations spend, on average, 112 times more on salaries than on heating and lighting their workplaces. And their people costs are also significantly greater than their rents or mortgages. So the smartest economic investment is in employees, as even small improvements in their productivity can boost profits more dramatically than any savings in property costs.

Quantifying nature's influence

The case for biophilia in business is strengthened further by our increased ability to measure productivity accurately. As well as direct measures – such as numbers of customers served, calls made and products sold – some indirect measures, when studied in detail, can help build a clear picture of staff productivity. These include illness and absenteeism, punctuality, and observing safety rules. When such measures are related to the effects of encouraging employees' attraction towards – and need for – nature, they show significant gains, in which many business owners are becoming increasingly interested.

The obvious conclusion to draw from the research analysed by Terrapin Bright Green is that our connection with nature is essential to our ability to function, develop and succeed. Bringing biophilia into our workplaces is more of a 'must-do' than a 'nice-to-do', and can create long-lasting economic benefits.

And this is the rationale behind Urban Retreat™. By reflecting the living world around us in its design, materials and method of manufacture, the collection helps satisfy our fundamental desire to tune into nature – and so has a major part to play in boosting the productivity of the world's businesses.

Looking and learning

Observing, analysing and taking inspiration from how nature looks, behaves and organises itself is the main way design can meet our biophilic needs. This approach is known as biomimicry, and it's exactly how Urban Retreat™ works. In the following pages, we talk to Janine Benyus, one of the world's leading exponents of biomimicry, and find out more about what connecting with nature really means.

What *Rubbish* can Learn from the *Food Chain.*

Janine Benyus is a force of nature. Since the publication of her first book on Biomimicry 15 years ago, she has given the practice of Biomimicry global reach. She has inspired some of the world's most innovative companies, starting with Interface, to clamor for a "biologist at the design table" to re-imagine everything from organizational structure to product development. As of may 2012, She is the winner of the design mind award from the smithsonian's cooper-hewitt national design museum in New York.

Interface (IF) Let's talk about the intersection of Biomimicry and Biophilia where the Urban Retreat collection lives. Because the products are so lovely, people may have a hard time believing they are made from, in part, recovered fishing nets, old carpet and other rubbish.

Janine Benyus (JB) You've got a point.

IF *Some people may think of Biomimicry as mimicking how nature looks. How does it apply to rubbish?*

JB Life Recycles Everything. Everything is food for something else. But life Up Cycles. Think of a log. The materials in that log will wind up first in the body of a fungus. Then a mouse nibbles on fungus. Then a hawk gets the mouse. Life is always creating new products on its assembly line.

IF *David Oakey said one of the biggest stories in biomimicry today was the waste cycle. I'm paraphrasing but the example went like this. The misconception is that to build a sustainable hotel, one must build it with bamboo. We should strive for recycling synthetic materials that are already out there.*

JB We are not the first ones [on this planet] to build. Most organisms have to be creative with what is available. What has gotten us into trouble is this un-natural waste process we've created. We take compounds like oil from the earth, make something, and then just dump it. No cycles.

IF *Take-make-waste.*

JB Biomimicry studies common patterns. Ubiquity. Whenever you see that, chances are you should pay attention. One of Life's Principles—the overarching patterns found among species that survive and thrive on earth— is that Life Recycles Everything. Take a forest ecosystem. Trees there may have been in place for hundreds of years. There is unlimited energy coming into that forest. There's a lot of carbon coming in also in the form of CO_2. Other things too. Nitrogen and minerals coming into the soil. But there is only so much nitrogen and so many soil minerals. Those things have to be recycled over and over again.

IF *There's no shipping department bringing them in.*

JB Exactly, life has learned to juggle those resources right where they are. It's interesting also because when we think of recycling, we tend to think of turning pop bottles into more pop bottles. But that's not what we're talking about with Life. What life does is Up Cycle. So when Interface's supplier "turns fishing nets into new carpets," Interface is Up Cycling; following one of life Principles.

IF *Petroleum, Cars, Plastics, Chemicals, Furniture. It's a tragedy there aren't systems for up cycling synthetics. Although, Interface has done a great job reducing its dependency on oil which helps significantly.*

JB Yes, it does help. But going back to our forest example for a minute, how did all those things get to be 100% recyclable? They are all edible. They are all life friendly. Life builds from the bottom up with a small list of common safe elements. Life uses these elements to create about five different polymers (like chitin, collagen, and keratin). Why so few? Because life has figured out how to add new design functionality to common polymers. By contrast, there are about 350 different synthetic polymers commercially available in the world today. Every time we need a new function our chemists create a new, non-recyclable material.

Life builds from the bottom up with a small list of common safe elements.

IF *Although, there's another aspect to waste, isn't there? Ignoring abundance?*

JB Yes. In the human economy the things that have the most value are RARE. Think of gold and platinum. The natural world values most what is ABUNDANT and LOCAL because it requires the least expenditure of energy to obtain. The minute a leaf falls in the forest, everybody knows about it and heads out to get it. If it falls right next to me, it is the most precious thing in the universe. Nature says, "Hey—I'm going to make a mouse body out of that someday." Everything is eventually food for something else.

IF *Whereas to most people, a leaf is a thing to be burned, blown, or raked.*

JB Yes. Because "trash" is abundant, it isn't valuable.

IF *Last thoughts. Ray Anderson.*

JB (Pause) Ray was the real deal. Interface was the first company we worked with. We work with more than 200 companies today. Not just on innovations, but also on this whole idea of what kind of standards do we hold ourselves accountable to. When Ray Anderson stood up, he was alone among the captains of industry in doing that. We are not alone anymore.

Making Rubbish *Beautiful*

The people at Interface feel a personal commitment to increasing the recycled content in Interface products. David Oakey put it like this:

"My job is to make synthetics—trash—beautiful." Urban Retreat™ is certainly an example of turning "trash" into beauty.

One supplier's story has Biophilia overtones: the company takes pride in salvaging commercial fishing nets throughout Europe, America, and Asia, as well as reclaimed carpet fibre and other rubbish and transforming the nylon into raw materials for new 100% recycled content carpet fibre. Collecting these enormous nets protects marine animals in the ocean depths and on the beaches where the nets sometimes wash up.

So in this case, doing well does good all around. For people, animals, the planet, and business. This may not be a Life Principle according to nature, but it certainly was according to our founder, Ray Anderson. Think of that as you wiggle your toes in Urban Retreat. Because trash, rubbish, and happy stories will be what you are walking on.

Here's one word for you: polymer. Although the word polymer is sometimes considered interchangeable with plastics, it isn't. Polymers can be natural or synthetic. Here's a short list.

Natural
Amber
Cellulose
Chitin
Natural Rubber
Shellac
Synthetic Polymers
Bakelite
Neoprene
Nylon
Polyacrylonitrile
Polyethylene
Polypropylene
Polystyrene
PVB
PVC
Silicone
Silly Putty
Synthetic Rubber
And many more.

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The *Forest* Within:

David Oakey's schedule is busy these days. He's just returned from working with Robin Hales, Interface VP/Marketing & Product of Asia in Singapore, preparing for the company's first simultaneous product launch. Oakey's newest collection, Urban Retreat, is going global. Like all of Oakey's work, Urban Retreat is beautiful. This collection is quiet and serene.

It uses natural neutrals to summon ancient stone walls and forests bordering on a savanna. Think of the palette in an old growth forest. Bark is a texture study in itself. Lichen, moss, and sage give us green in a range of values. There's flax in pale yellow for the savanna grasses. And when colours combine, edges soften. Lichen on a stone wall. Moss in the elbow of a branch. This is Urban Retreat. But there's more to it. The history of this collection goes back decades.

A Storied Collection

Urban Retreat has an impressive pedigree that spans decades in David Oakey's career. The collection has been shaped by Oakey's dedication to Sustainability, a passion he shared with Ray Anderson. It also bears the imprint of Biomimicry, an emerging field in 1997 when Oakey first met Janine Benyus but today, a global discipline. But the real magic of Urban Retreat lays in its alchemy of Sustainability, Biomimicry, and more: Oakey's love of a dusty 1984 title called Biophilia. In that book, Harvard Professor Edward Wilson explained not only why humans responded positively to nature but also how the destiny of our species was linked with the others on earth. Since Biophilia came out 28 years ago, the consensus has become (see page 14) that because nature makes us feel good, the more we can include in our urban built environments, the better off we are. David Oakey has seen this in action in his travels around the world. In architecture, design, products, landscape, and art. And so, Urban Retreat was born. As an elegant solution to built environments everywhere wishing to bring a connection from the outside, inside.

Urban Retreat™

The science of the senses

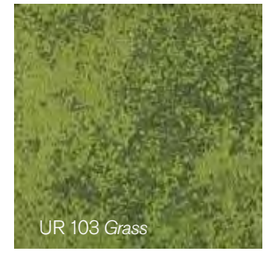
Biophilic design has deep rooted physiological responses," says Bill Browning. "When you can look at a view of nature and say, I like that, what is happening is actually a biochemical response of opiates flushing to the brain saying, like like like like." Browning is a founder and partner of Terrapin Bright Green, an environmental consultancy for corporations, governments, and large-scale real estate developments. Given the number of people around the world moving to cities for the past several years, views of nature from towering apartments or downtown commercial districts could be harder to find. How, then, to address the "Nature Gap" that people in cities still need? "In Singapore, there are brand new apartment buildings, hotels, and development complexes everywhere," says David Oakey. "You cannot find a new building that doesn't have an element of Biophilia designed into it."

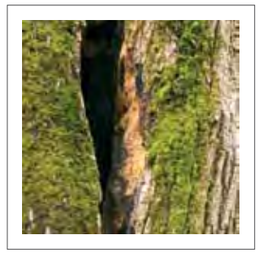
The rest of the story

Oakey designs as much for the mind as for the senses. This is a greater challenge than it would have been to make a pretty floral mashup and consider the job done. He says he answers to a higher authority: His own standards. "Look at that azalea outside," he says, pointing to an early-blooming wild variety that must stand six feet tall. It is already fading here in mid-April. "Nature is continually changing, from dawn to dusk, season to season. Evolving all the time. It is ever changing colour and design. Humans want things to change—against a foundation. That's what Urban Retreat is." The wind has kicked up outside and the pond shows tiny whitecaps heading to shore. "Besides," says Oakey, "Our messages are in our designs. They are like the leaves of a book. The story we write in those carpet tiles is what we leave behind."

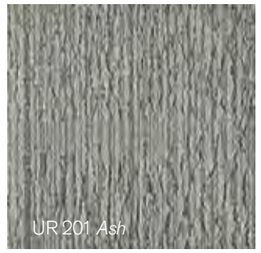
Urban*Retreat*™ *One*

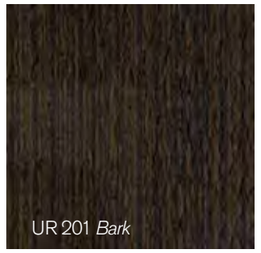
We see the city as a mash-up of sharp and blurred, classic and futurist, eclectic and austere. Right now we are most interested in that place where one idea meets the other and vibrations occur. Urban Retreat One explores that space at the edge and in between. A progressive colour story provides a few elements that can be assembled to explore ideas about colour, form and the transitions from one to the other. Urban Retreat One has three patterns. There are eight colour ways in a complex primary pattern and eight boldly mixed colours in a transitional pattern. They share four accent tiles that link and separate each pattern at your discretion. Go ahead, mash it up.

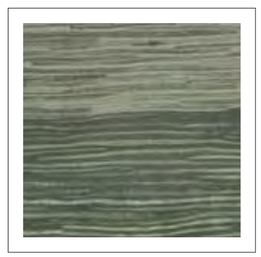


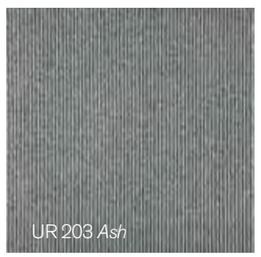


Urban*Retreat*™ *Two*





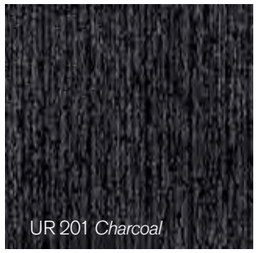


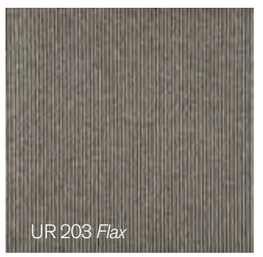


Because we are chic and smart, we admire architecture of concrete, glass and steel. Because we are curious, we crave the unexpected shifts of nature's patterns and colours. And because we are of this age, we've decided we must have it all.

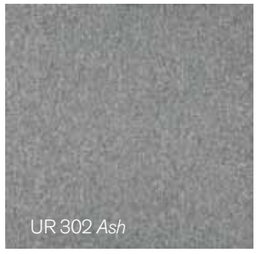
Urban Retreat Two collects the orderly and the organic in an exquisitely restrained palette. A simple grid and understated cord share space with an eccentric texture like the bark of an ancient tree. Mixing these patterns accentuates the differences in scale, volume and movement, revealing precisely what is special about each.

Urban Retreat Two presents three patterns. A shared neutral palette of eight colour ways is drawn from the familiar and encourages nuanced studies in texture.

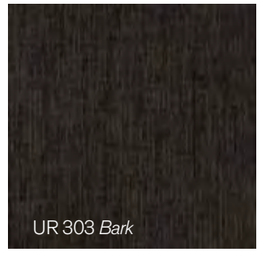


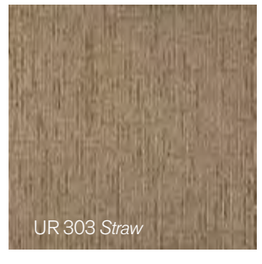


Urban*Retreat*™ *Three*

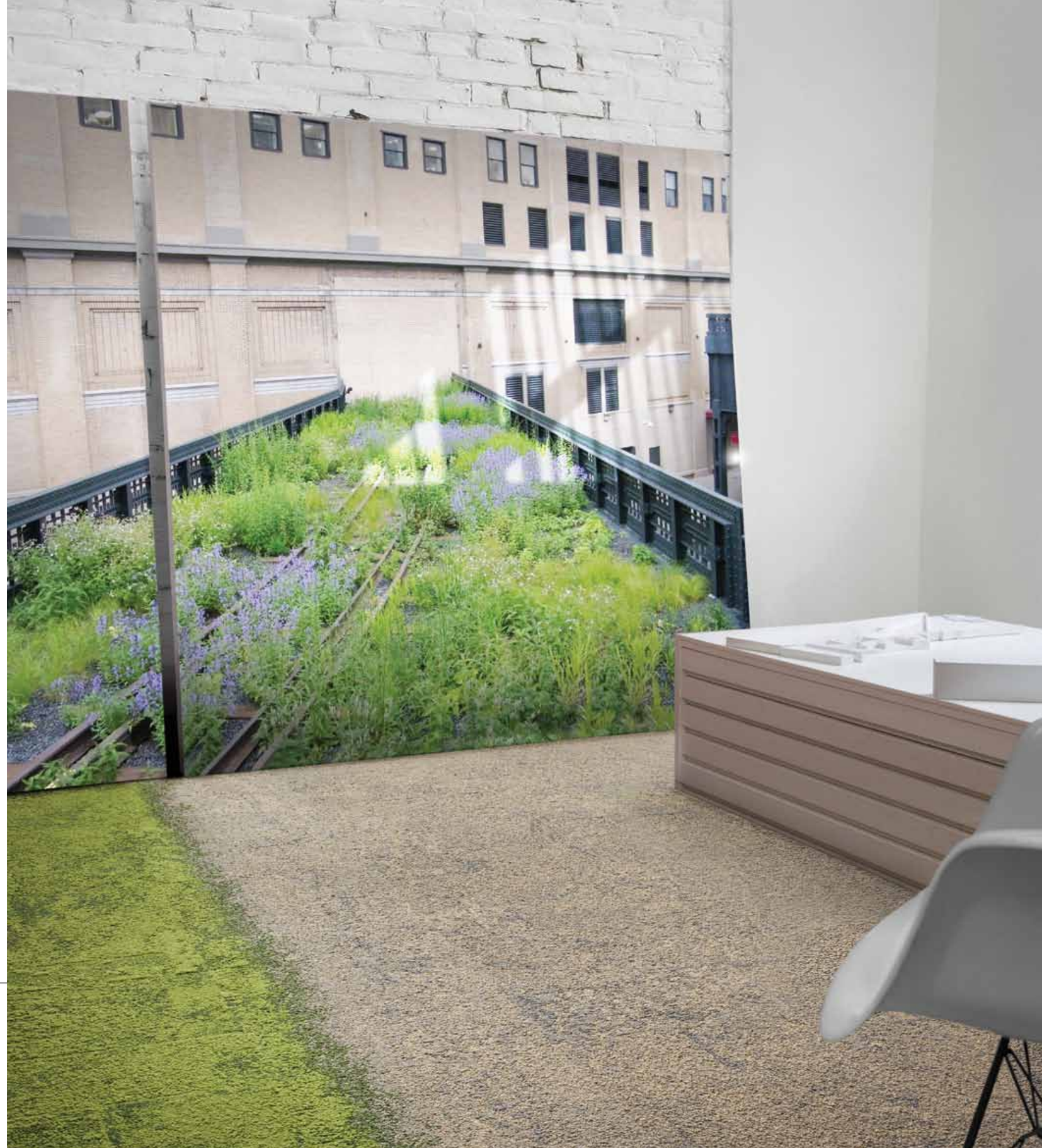


Elegance slips in quietly and confidently. At first blush, she seems modest and restrained. But as she moves slowly and deliberately through the space, her audience is beguiled by the details of her composition. Enter Urban Retreat Three, a conspiracy of refined textures that are destined to seduce. The most uncommon of the three blankets the floor in shifting shades with the finest fissures, like French Limestone that is somehow soft. A shimmering linen like textile balances the set with a graceful scale. And it is the unadorned finish of the last that conveys the essence of Urban Retreat Three. The three patterns in Urban Retreat Three share the same eight hues found in Urban Retreat Two. And both pair quite elegantly with Urban Retreat One.





UR103 *Lichen*



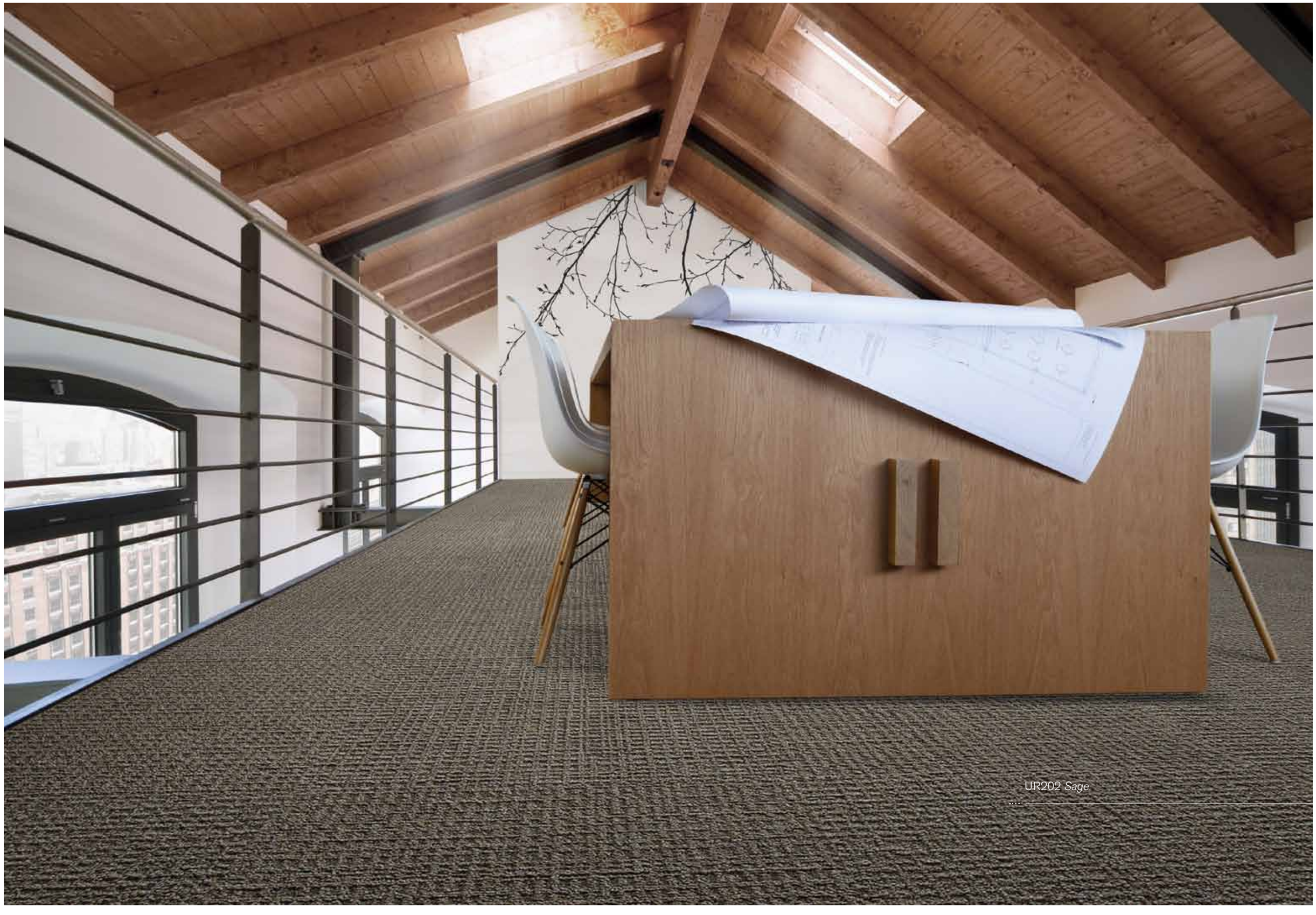
UR101 *Flax / Grass*
UR102 *Flax*
UR103 *Grass*

UR101 *Bark / Moss*
UR102 *Bark*
UR103 *Moss*

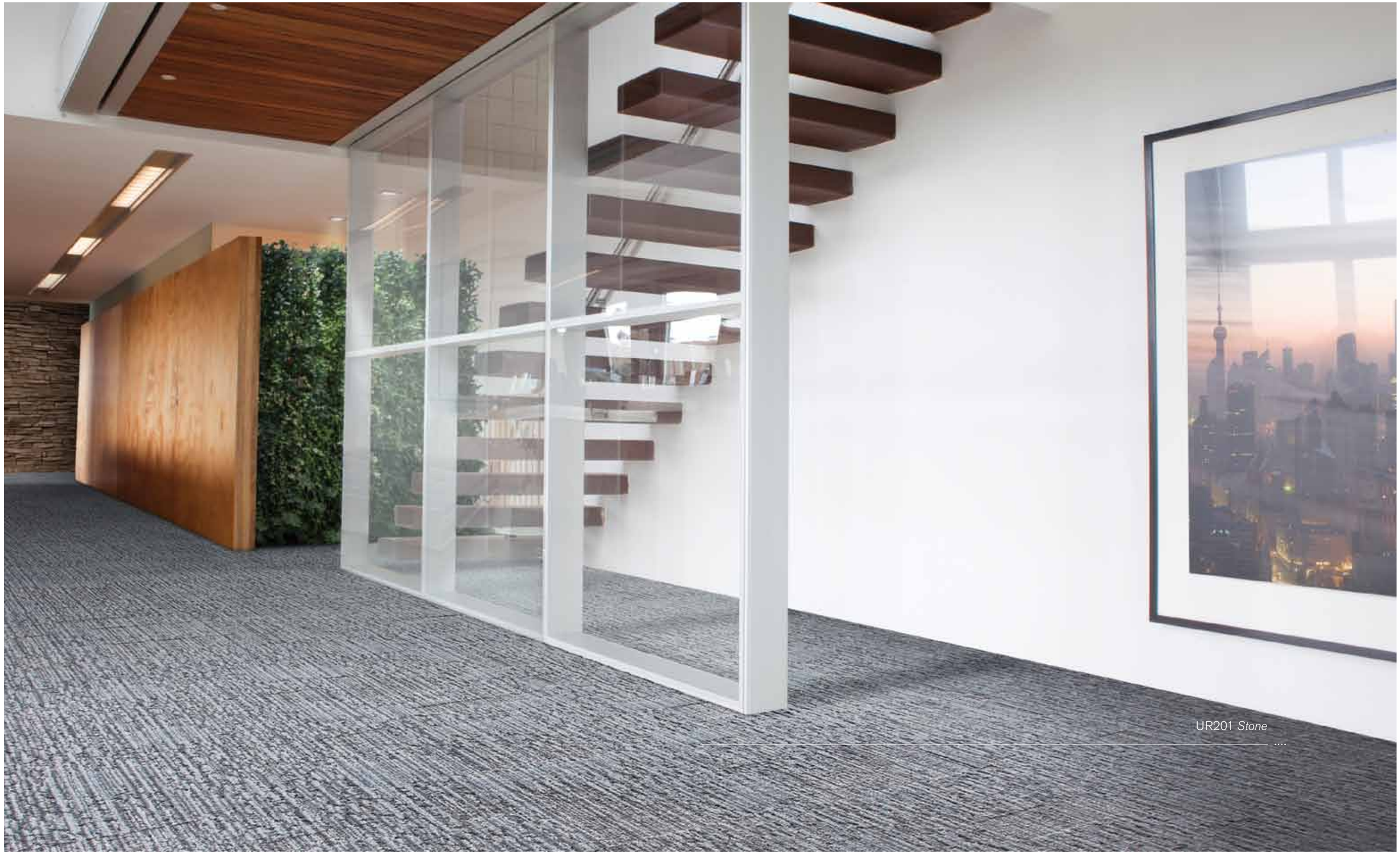
UR101 *Ash / Ivy*
UR102 *Ash*

UR201 *Straw*

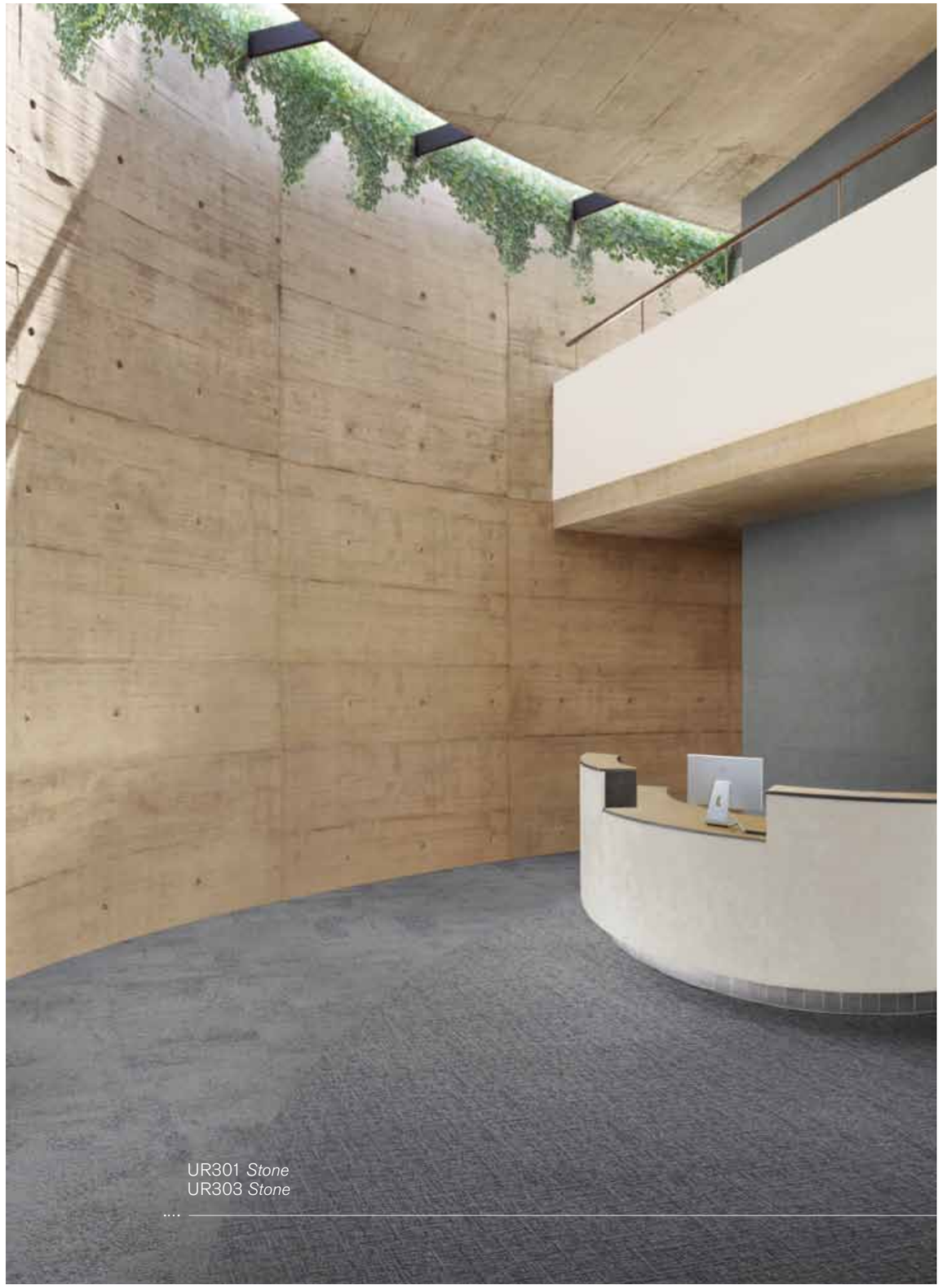
UR202 *Charcoal*
UR203 *Charcoal*



UR202 *Sage*

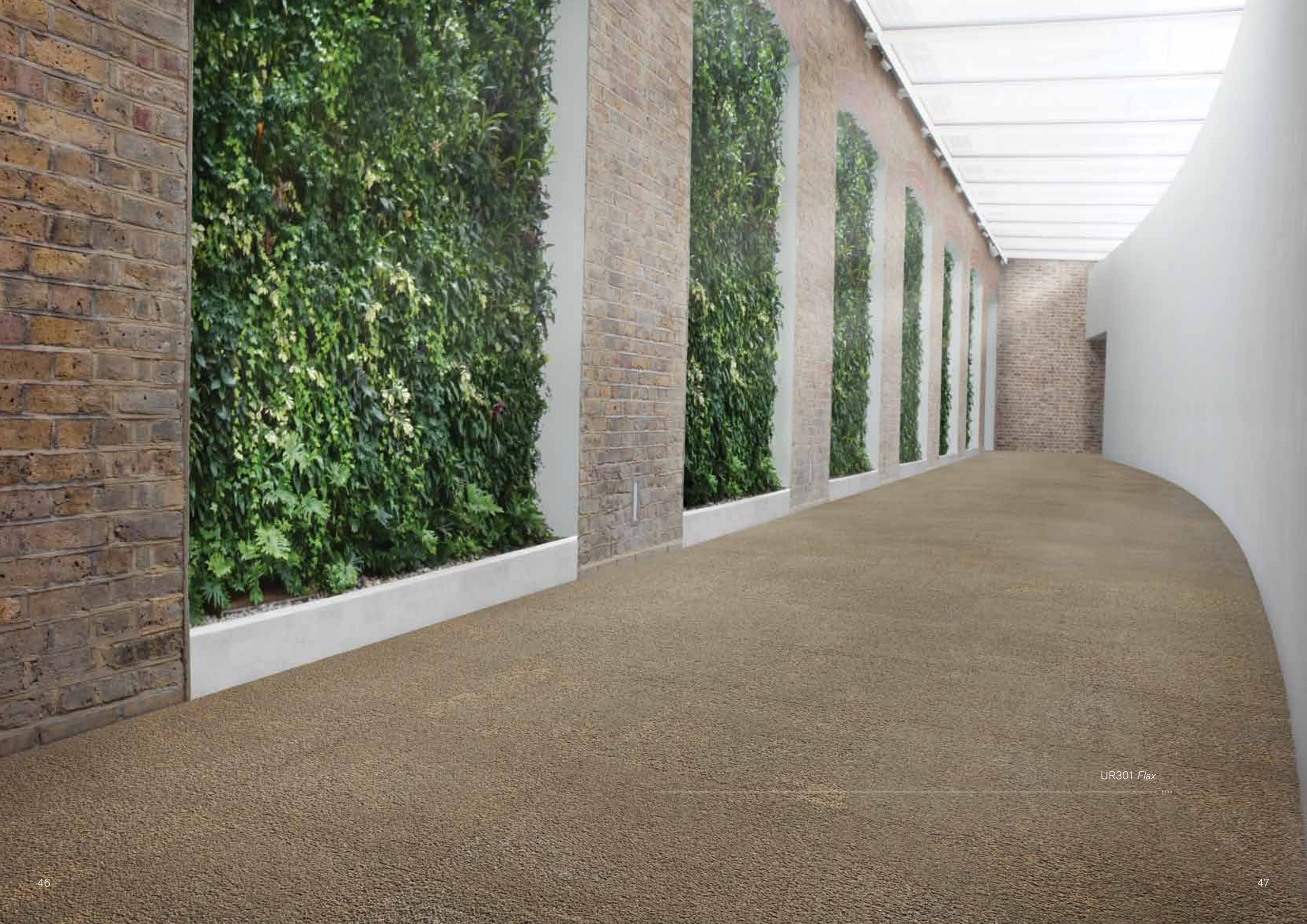


UR201 *Stone*

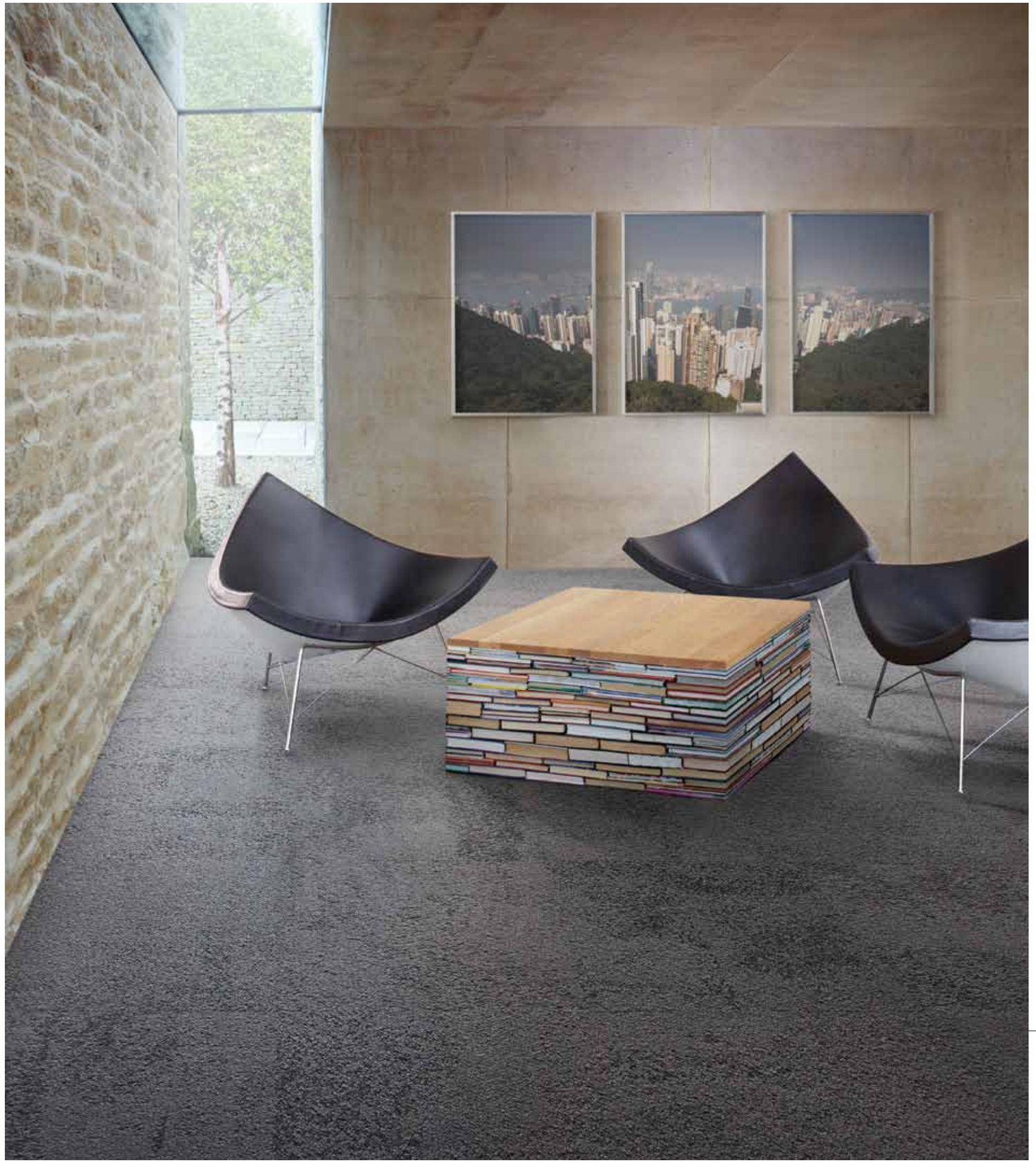


UR301 *Stone*
UR303 *Stone*

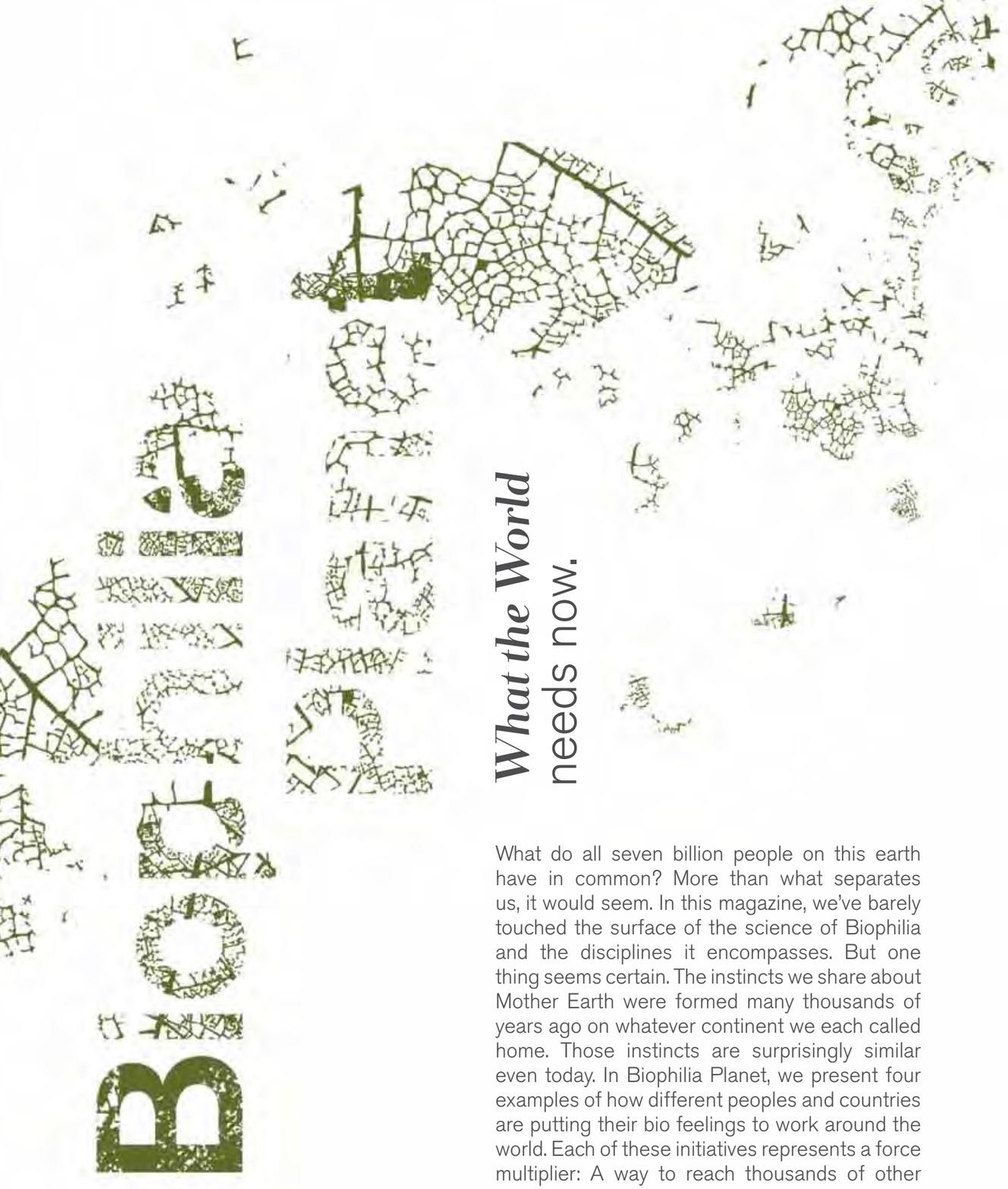
UR302 *Sage*



UR301 *Flax*



UR301 *Stone*



What the World needs now.

What do all seven billion people on this earth have in common? More than what separates us, it would seem. In this magazine, we've barely touched the surface of the science of Biophilia and the disciplines it encompasses. But one thing seems certain. The instincts we share about Mother Earth were formed many thousands of years ago on whatever continent we each called home. Those instincts are surprisingly similar even today. In Biophilia Planet, we present four examples of how different peoples and countries are putting their bio feelings to work around the world. Each of these initiatives represents a force multiplier: A way to reach thousands of other people with the message that biophilic elements have real value in the built environment. The more we each understand this, the more likely we are to protect the natural spaces we have left. Pass it on.

Washington & New York:
The Mentalists

Terrapin Bright Green is an environmental consultancy with offices in New York & Washington, D.C. They are an extreme environmental consultancy, you might say. Its founders and partners are intellectual heavyweights who are leaders in the green building and real estate movement, award-winning architects, biomimicry and sustainable design advocates , and forensic historic preservationists .

More than anything else, however, Terrapin Bright Green are thinker strategists; a brave new breed of eco-infrastructure experts with scientists and policy makers on speed dial. This company has set new precedents for 'think-do' tanks for projects of global scale and strategic impact. Members have advised, among other entities, the White House; the new World Trade Centre; Grand Canyon National Park; Algae Biofuels; Xihu Tiandi (Shangahi); Caicique (Costa Rica); and the Serengeti National Park (Africa).

Bill Browning, a founder and partner of Terrapin Bright Green, cut his teeth on out of the green box thinking. Early in his career he helped build Buckminster Fuller's last experimental structure. Browning is also a member (along with Biomimicry 3.8's Janine Benyus) of the Interface Eco Dream Team.

"We are a small consulting firm pretty heavily involved in both Biophilia and Biomimicry," says Browning. "These are two pieces that filter our world view in a really intriguing way. Both are core to our work as a practice."

One of the projects Terrapin Bright Green is undertaking has the group collaborating with Janine Benyus and The Biomimicry Guild to provide technical assistance to the businesses in New York. The New York State Energy Research and Development Authority will fund workshops open to any business wishing to consider possible biomimetic solutions to their challenges.

"The idea of Biophilia has come into the mainstream population only fairly recently," says Browning. "Although intuitively, people have been doing it forever."

The healthcare industry could save $93 million dollars each year if patients had views to nature.

To put that in simple terms, we pay more for apartments in park like settings. We buy more (and pay more) in retail environments with plants, trees, and skylights.

Terrapin Bright Green has just published a comprehensive white paper on the subject titled, The Economics of Biophilia: Why Designing with Nature Makes Good Financial Sense. One morsel: The healthcare industry could save $93 million dollars each year if patients had views to nature.

The study examines the positive business impact— usually financial— of making room for nature in sectors from the workplace to the classroom to the courtroom. Scientific calculations and thorough references are included for those not easily convinced that the Japanese practice of Shinrin-yoku might lower blood glucose levels.

Browning says one issue that concerns him now is America's election year politicizing of the environment.

"The whole green issue is being defined as a republican/ democrat issue. You don't see that so much in other countries."

It has been impossible not to speak to Interface Eco Dream Team members about the legacy of Ray Anderson. Bill Browning put it thusly: "Now there can and will be other Ray Andersons. But he was the first one. You know, it was fitting that the first major industrial company to step up to the plate was a carpet company. Because the first major industrial revolution started with fabric as well."

Singapore:
The Lion City Roars

Singapore is a small tropical island country with a big reputation. It is well known as the premier financial hub in Asia and one of the world's leading financial centres. It is called the Lion City (from its Malayan name) but also sometimes the Garden City (for its 358 parks and 4 nature reserves). But just for the record, lions never lived here.

Since the city is so appealing financially, it attracts some of the world's renowned architects—especially those with an ecological approach to building design.

Singapore is a highly urbanized nation with a population of close to five million in about 272 square miles (704km)

Singapore is a highly urbanized nation with a population of close to five million in about 272 square miles (704km). This land has been hard earned through on-going land-reclamation projects. Specifically because land comes at such a premium, most people live and work in high-rise structures. Since the city is so appealing financially, it attracts some of the world's renowned architects—especially those with an ecological approach to building design.

The Solaris project is a prime example. Conceived and designed by architect Dr. Ken Yeang (whose firm is one of Fast Company's 2011 Top 8 Most Innovative in the World), Solaris is a marvel of comprehensive ecothought.

Vertical green urbanism is the hallmark of Ken Yeang's work. Dr. Yeang, who holds a PhD in ecological design and planning from the University of Cambridge, is the author of the 1997 book, The Skyscraper, Bioclimatically Considered.

Sydney:
A Thriving Community

Far below the towering, architecturally spectacular buildings that dominate Sydney's city skyline, the very essence of Biophilia is thriving – as locals begin peppering the grey, paved sidewalks with earthy, green bursts of life. And Sydney's residents can't seem to get enough.

Drawn back to nature from their high density, inner-city dwellings, more and more Sydney-siders are looking to reconnect with the earth, as well as their communities. As a result, the concept of 'community gardens' is growing in popularity rapidly, with 16 having sprung up in recent years, with more in the planning. These picturesque, social pockets of environmental cultivation are all run by locals, who use them to grow herbs, flowers, vegetables and fruit, while fostering rare plants and seeds and reigniting village camaraderie.

Sydney's community gardens, many of which can be found in the densely populated Alexandria, Waterloo and Surry Hills areas, provide the perfect opportunity to use forgotten pockets of public land more creatively. They offer residents practical ways to reuse materials and are also a supportive environment to learn gardening and grow their own fresh, organic food – all while satisfying the irrefutable inner urge of mankind to reconnect with the natural essences of earth.

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Any green roof, no matter how primitive, is a living, breathing thermal dynamics department. To find one that is beautiful, authentic, and anchored in a country's national history like the one at M Central, is another thing entirely.

Taking Green to New heights

High above the ground, however, the notion of greening the city is taking on a different form. The idea of a 'green roof ' is thousands of years old. The Vikings, the earliest Europeans and Native Americans, and the first American western settlers all had grass and sod roofs in common. It is a brilliant architectural solution: A natural heating and cooling system that's easy to repair and (bonus) feeds livestock. Modern green roofs offer these benefits and more. Green roofs are marvels of biodiversity- enhancing, heat-alleviating, sound insulating, stormwater-reducing beauties in urban eco-systems. Since 2002, Australia has embraced green roofs in every sector. Melbourne's City Council House 2 Building set the benchmark for the rest of the country with its six-star Green Star Design certification from the Green Building Council. In Sydney, two centrally located late-1800s 'Wool Stores' were restored into a loft metropolis with an amazing 2600m^2 garden up on the roof. M Central Residential is a massive but meticulously re-imagined heritage commercial warehouse site that began life during the heyday of Sydney's wool trade. Built near the docks for ready access to clipper ships (such as the Cutty Sark), the buildings were made for storage; brick on the outside and good timber on the inside. Architect Dale Jones-Evans retained as much of the original brick and timber as possible when converting the building into apartments and sky homes grounded by six retail spaces. He conceived the roof as an 'elevated Australian parkland' of savannah grasses, succulents, and timber boardwalks. All of this, of course, is just a stone's throw from Sydney's Darling Harbour where the clipper ships (and later, the steamers) once came and left with the wool that was the country's economic lifeline in the 1800s. Any green roof, no matter how primitive, is a living, breathing thermal dynamics department. To find one that is beautiful, authentic, and anchored in a country's national history like the one at M Central, is another thing entirely.

Global:
The city buzz

All over the world, beekeeping has become increasingly popular as a way for urban dwellers to reconnect with nature. The people of London have embraced it for a whole host of reasons: the honey, the stress relief, and the connection with nature. After all, beekeeping is ideal in a city of parks and gardens. London's remarkable 25% green space is provided by private gardens of all sizes and types. Elegant garden squares, open public spaces and the famous Royal Parks, such as Hyde Park, Kensington Gardens and St James's Park. Together, these are home to a huge diversity of plant life.

The Taste of Honey

The rich variety of forage available here results in an amazingly complex tasting, and plentiful, supply of honey. It's not just urban farmers and community gardeners who are getting involved, but people from all walks of life. They do it to help the environment and — perhaps most importantly — to escape the stresses of modern life. In short, they do it to put a little natural warmth back into their cool city lives.

Where do the bees live?

From back yards to Buckingham Palace, beehives are almost anywhere in London. More surprisingly, you can now find beehives on many of London's rooftops — where bees need particularly careful handling. St Paul's Cathedral and Tate Modern have them on their roofs, looked after by expert beekeepers. Historic department store Fortnum & Mason has had particular success with its sixth-floor hives, producing its exclusive Fortnum's Bees Honey.

Beyond the UK, city beekeeping is equally popular. In Hong Kong, HK Honey (www.hkhoney.org) has installed beehives in local businesses around the city, and its network of beekeepers produces not only honey, but also soap and candles. In Melbourne, Australia, Melbourne City Rooftop Honey (www.rooftophoney.com) puts beehives on vacant rooftops and in disused gardens, and encourages businesses to sponsor or adopt them. And in the same city, Bee Sustainable (www.beesustainable.com.au) sells honey collected from urban hives, and runs beekeeping workshops.

No bees. No plants. No people.

In A World Without Bees, urban beekeeping experts Alison Benjamin and Brian McCallum discuss how, if all the world's bees disappeared, mankind would have only four years left to live. Without bees, there's no pollination, and without pollination, there are no plants — and soon no animals, and then no humans. It's a sobering thought that the western honeybee pollinates 70% of the food we eat. And it's an extremely sound reason to become a beekeeper.

The beekeeper's friend

But if the ultimate aim is to save bees (and therefore ourselves), it's important to do it properly. Keeping thousands of bees happy, healthy and productive is a complex craft. Anyone who looks into a beehive is enthralled by this mesmerising miracle of organisation. And there's plenty of help for those who want to learn. For example, The London Beekeepers Association (LBKA) (www.lbka.org.uk) offers in-depth training and a mentoring programme, which supports novice beekeepers, passing on a wealth of experience.

Bee friendly gardens

City dwellers who don't practise beekeeping can still help protect our ecology and our food chain.

"You don't have to keep bees to save them," says the LBKA. "There are many other useful things we can all do. We can plant 'pollinator-friendly' flowers, trees and plants. We can also stop using pesticides in our gardens. And we can support our local beekeepers by buying their honey."

2,500 Hives registered in London
50,000 Bees in each Hive
70 lbs of honey from each hive, each season

5991024 August 2012

mission Ø

Mission Zero:
our promise to eliminate any negative impact our company may have on the environment by the year 2020.

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