



ZOO DESIGN

Creating Zoos and exhibitions:
from Big Ideas to Sustainable Venues

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aquamarine



Seek insight.
Shape
the world.

Welcome to Aquamarine.

We are specialists in developing bespoke experience destination.

Our vision is to enrich lives and places by creating ecosystems and immersive experiences that move the world forward.

We combine global market knowledge and local understanding with technical expertise and imagination, to create successful, sustainable, profitable, and engaging developments.

With our clients, we create world-leading spaces, biomes and developments designed to bring the wonder of our natural environment to people around the world in a unique and memorable way, and provide special spaces for people

to live, work and play. We bring these to life through our global network of specialist consultants offering world-leading design, architecture, specialist construction, engineering, project management and operational expertise.

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Our Philosophy.

aquamarine

Our mission is to bring love and wonder to our diverse cultural and natural environments, through creating immersive experiences that surprise, educate and enhance lives.

We adhere to strong principles and practices to ensure sustainable results and better outcomes for all parties involved.

Comprehensive research

We undertake significant research to understand the full context of every project, understanding regional specifics, studying how people live, their demands and desires, delving into social, environmental and political factors to create custom and unique solutions.

Honouring culture and nature

We are deeply passionate about the natural world and respectful to local cultures. Sustainable innovation is central to our approach. Well-being of local communities and respectful representation of local cultures is a priority for us.

Creating connection

We collaborate with local experts, communities, and governments. We design and operate venues to improve people's lives and strengthen local society development. Our aim is to create a unique asset that generates pride and ownership within the local community.

Conservation and Education

Conservation and education are at the heart of our design philosophy, shaping every project we undertake. We believe that design has the power to not only protect the environment but also to inspire and educate. Our approach prioritizes sustainable, eco-friendly practices that minimize environmental impact while creating immersive, naturalistic habitats that foster animal welfare and biodiversity.

We design spaces that engage visitors with interactive educational experiences, helping them connect with wildlife and understand the importance of conservation. Through this, we aim to create environments that not only serve as homes for animals but also as platforms for public education, fostering a deeper commitment to preserving our planet for future generations.

Our Expertise and Capabilities.

Aquamarine Projects features an expert team of designers, zoologists, architects, and researchers, equipped to support all your zoological and design needs for your next wildlife destination.

Design

Our company utilizes our associates' many decades of animal experience to influence design in a smart, user-friendly manner which puts the needs and comfort of the animal first. We work with a strong partner network of world-class, International architects and engineers to ensure cutting edge, ethical design planning which is congruent with International Standards.

Project Management

We work very closely with each of our clients to fully develop their vision, paired with project objectives and to ensure construction meets design intent. We represent the client/owner on the jobsite throughout the project to ensure construction execution meets or exceeds international animal standards and best practices. We actively manage the handover process and ensure a smooth transition from construction to Grand Opening and finally, ongoing operations.

Training & Staff Development

Our team has created fast-paced and effective zoological training modules to develop trainers and keepers to International Standards. This program has the capability to be effectively delivered to start from any experience level and in a wide variety of languages.

Our Expertise and Capabilities.

What does it take to design a zoo?

Our extensive experience spans various countries and diverse projects. Each zoo design is unique, presenting its own set of challenges. Below are some of our projects, demonstrating our ability to deliver both innovative and functional designs for zoos and exhibits.

Every successful project begins with a concept—shaped by the client’s vision. In any zoo project, there are multiple decision-makers, each focusing on different aspects to ensure a holistic and effective outcome. Key considerations include:

- **Location and Surrounding Landscaping:** The natural environment is crucial to setting the tone for the overall design.
- **Existing Buildings:** If applicable, integrating existing structures into the new design can add historical value and continuity.
- **Exhibit Themes:** These guide the visitor experience and set the stage for educational and interactive opportunities.
- **Visitor Services:** Elements like ticketing, security, and customer convenience are vital to ensure a smooth experience.
- **Additional Facilities:** Cafés, play areas, and other attractions contribute to a comprehensive visitor experience.

All zoos begin with a concept. The best modern zoos establish their concept early, ensuring that the architecture, interior layout, and even landscaping are in harmony with the core vision.



King Croc, Dubai Aquarium

Our services.

We offer turnkey specialist consulting services ranging from concept, to development, to construction, to operation, in these areas:

Architecture

Concept design and Feasibility Studies (Detailed Project Report)
Existing Facility Auditing and Revision
Architectural design
Construction supervision
Design supervision
Project coordination

Branding

Brand design and development
Name generation
Visual concept

Engineering

Electrical design
Mechanical design
Plumbing design
Structural design

Landscape architecture

Landscape design
Landscape engineering
Master planning Design

Zoological Specialist Design

Master planning Design
Exhibit design
Thematic journey
Graphics and signage
Visual communication design
Graphic display design
Design and construction of using AZA-accredited guidelines
Collection Planning
Animal Acquisition

Construction

Project Management and Construction Supervision

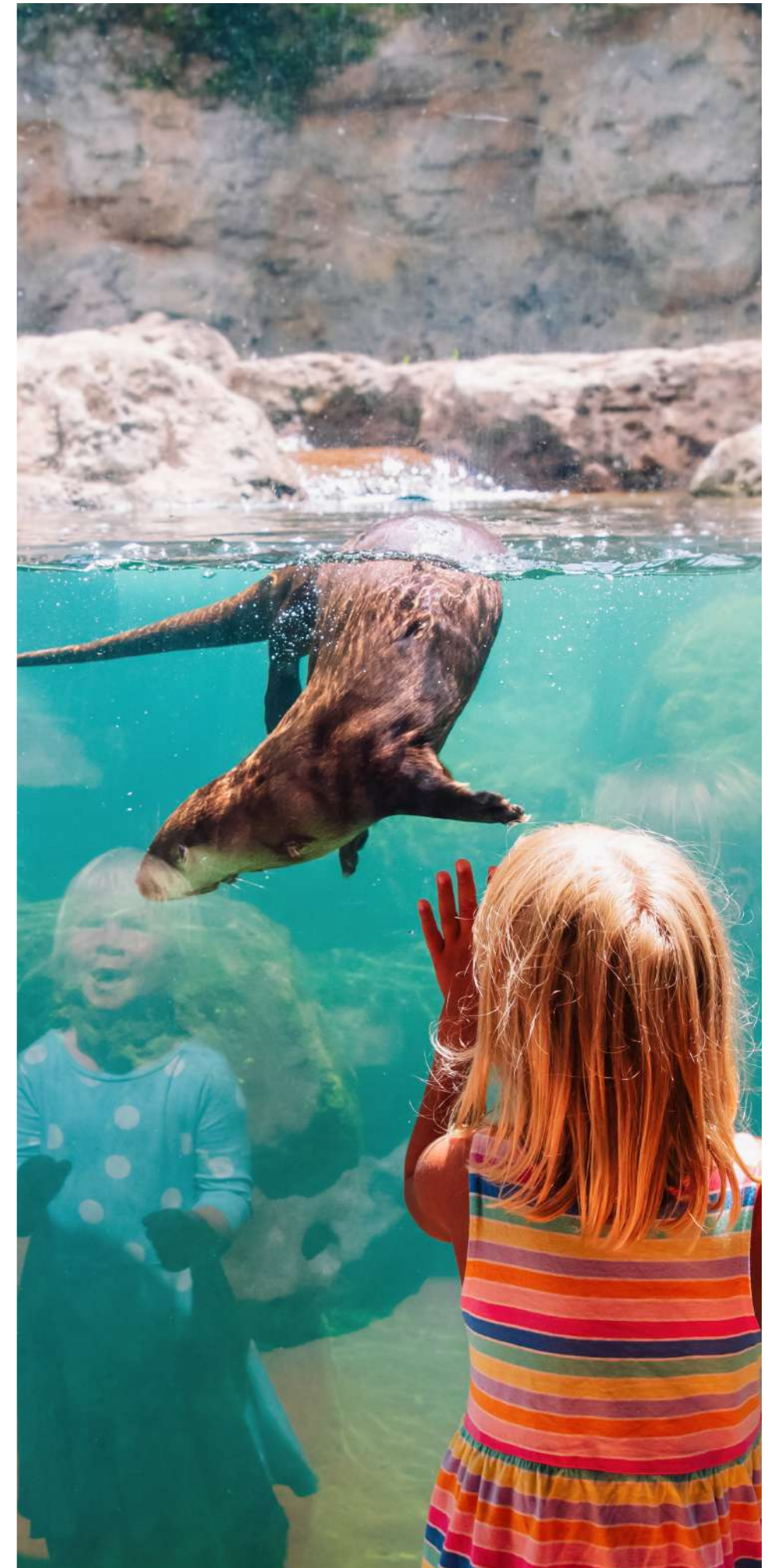
Interiors

Interior design and planning
Interior finishing and fit out procurement

Operations

General Management
Financial Management
JV Partnership
Revenue Generation
Animal Training
Animal Keeping
Staff Training
Veterinary
Ticketing / Admissions Pricing
Sustainable Practices Advisory
Security Operations
Staff Training
Carrying Capacity Management
Operational Health and Safety
Standard Operating Procedures
Operations and management consultancy

Aquamarine Projects has a diverse range of expertise and capabilities, covering all facets of architectural, interior and exhibit design and project management. From conceptualization to execution, our multidisciplinary approach ensures that every project is delivered in the best possible way, as intended by the client.



Creating Zoos and Exhibitions.

As members of the Association of Zoos and Aquariums (AZA) that accredits zoos and aquariums we ensure the design and development of zoos upholds the rigorous standards in animal care, conservation, education, and research. At Aquamarine, we integrate AZA's core requirements into every phase of our projects, ensuring the design and construction of AZA-accredited facilities that prioritize animal welfare, safety, education, and conservation. Here is how Aquamarine incorporates these standards:

Animal Welfare: Our designs prioritize animal welfare, adhering to AZA standards for care, habitat design, veterinary services, and breeding facilities.

Education and Conservation: We recognize the vital role zoos play in biodiversity education and conservation. Our designs integrate educational messages through signage, exhibit layouts, interactive displays, and educational programs.

Safety and Accessibility: We ensure a high level of safety for both animals and visitors, creating accessible environments that allow guests to experience the zoo fully and safely.

Sustainability: As leaders in conservation, we incorporate sustainable design practices such as energy-efficient systems and responsible water use.

Collaboration: We work closely with zoologists, veterinarians, and AZA experts to align our designs with all welfare and operational standards, while staying updated on new AZA guidelines.

Research Facilities: Our designs include spaces for scientific research, like laboratories and observation areas, supporting AZA's mission of conservation through research.

Ethics and Public Trust: We ensure the facility operates in line with AZA's code of ethics, fostering public trust, accountability, and the ethical treatment of animals.

This involves thoughtful presentation of the zoo's mission to the public, with an emphasis on transparency and conservation.

Future-Proofing: Our designs are adaptable, allowing for future upgrades and improvements to meet evolving AZA standards.

By incorporating these AZA requirements into the planning and design process, Aquamarine can help ensure that the zoo meets the necessary standards for accreditation and continues to support conservation, education, and animal welfare at the highest levels.



King Croc Exhibit at Dubai Aquarium and Underwater Zoo.

Case study →

The King Croc Exhibit at Dubai Aquarium and Underwater Zoo is designed to house King Croc, one of the largest captive crocodiles in the world. The goal was to create an engaging, educational experience that prioritizes animal welfare while safely showcasing this massive predator.

Objectives:

- Highlight King Croc as a star attraction.
- Ensure animal welfare and safety.
- Enhance visitor immersion and education.
- Integrate the exhibit with broader conservation themes.

Challenges and Solutions:

Housing a Giant Predator: Secure and reinforced acrylic panels provide clear visibility while ensuring safety. Deep water pools and basking areas simulate a natural habitat.

Balancing Visibility and Privacy: Transparent walls allow panoramic views, while private areas enable King Croc to retreat as needed.

Maintaining Environmental Conditions: Climate control systems maintain temperature and humidity, with UV lighting for basking.

Visitor Engagement: Interactive displays and elevated platforms offer varied perspectives, enhancing the educational experience.

Outcome:

The King Croc Exhibit has become one of the most popular attractions at the Dubai Aquarium and Underwater Zoo, attracting significant visitor interest and contributing to increased attendance. It has received praise for its innovative design, focus on animal welfare, and educational value. The exhibit not only showcases the awe-inspiring presence of King Croc but also serves as a platform for raising awareness about crocodile conservation, fostering a greater understanding of the species among visitors.

The project demonstrates how well-thought-out design can create a balance between visitor engagement, safety, and animal welfare, setting a high standard for large predator exhibits in public aquariums and zoos worldwide.



Yaranga Biome, Kogalym, Russia.

Case study →

Yaranga Gardens is an innovative natural habitat display located in Kogalym, Russia, inspired by the traditional indigenous shelter, Yaranga. This 20,000 m² biome integrates architectural design with ecological principles to create an immersive experience showcasing diverse plant and animal species while emphasizing ethical care for all living creatures. The project began with a simple sketch, evolving quickly into a dynamic, collaborative venture.

Project Objectives:

Create an Immersive Ecosystem: The goal was to develop a comprehensive habitat that supports over 400 plant species and a range of wildlife, including reptiles, amphibians, birds, insects, and mollusks.

Ensure Operational Efficiency: Early integration of operational considerations was essential, affecting everything from capacity planning to staff requirements, animal care, and long-term sustainability.

Achieve High Visitor Engagement: The design needed to offer an engaging, educational experience that reflected the cultural and natural heritage of the Arctic region, promoting conservation awareness among visitors.

Initial Concept and Collaboration: The project kicked off with a single hand-drawn sketch, which was quickly developed into a full-fledged design through an agile and collaborative approach. Regular informal exchanges, coupled with open dialogue, allowed for rapid iteration of ideas. Despite this flexibility, strict rigor was applied during concept development, ensuring that every design decision aligned with operational feasibility and ethical responsibilities for wildlife care.

Operational Planning: Operational considerations were prioritized from the outset, recognizing their impact on design feasibility and execution. This phase included:

Understanding Intended Capacity and Staffing: Estimating the number of visitors, planning staffing levels, and defining daily activities were all crucial to shaping the design.

Incorporating Expert Insights: Consultations with aquarists, biologists, and curators ensured that animal welfare was central to the design, guiding everything from enclosure layout to environmental controls.

Ethical Responsibilities: Planning for animal welfare was not only essential for the project's success but also an ethical responsibility. Ensuring proper habitat simulation, species compatibility, and climate control helped maintain the well-being of all living creatures within the biome.

Design and Engineering: The design and engineering of Yaranga Gardens had multiple facets, balancing architectural, ecological, and storytelling elements.

Visitor Journey and Storytelling: The layout was designed to offer a seamless visitor experience, guiding guests through diverse habitats while incorporating educational narratives about each ecosystem and species.

Material and Structural Considerations: Materials were selected not only for structural integrity but also for environmental sustainability, reinforcing the project's ecological message.

Environmental Requirements: The design integrated specific climate controls, lighting conditions, and humidity management to create suitable living conditions for diverse species, including reptiles, amphibians, and Arctic plants.

Services and Design Phases:

1. Developed Design:

Refining Concepts: This phase involved testing initial ideas and refining the design to align with the overarching vision. Recommendations for materials and design details were made to reinforce the project's goals.

Budget and Quality Control: Cost estimation and quality assurance were prioritized to maintain the project's balance of time, cost, and quality. A clear understanding of the scope of work and architectural outcomes was established.



Yaranga Biome, Kogalym, Russia.

Case study →

2. Detailed Design:

Working Drawings and Specifications: Detailed documents were prepared to define construction details, materials, systems, and finishes, forming the basis for tendering and contractor negotiations.

Construction Control: The comprehensive documentation will allow the project team to maintain control over construction quality, design outcomes, and costs, construction will commence in 2024.

3. Specialty Engineering:

The construction documents included detailed steps for each phase, from cost estimating to energy consumption analysis, ensuring operational efficiency and sustainability throughout the project.

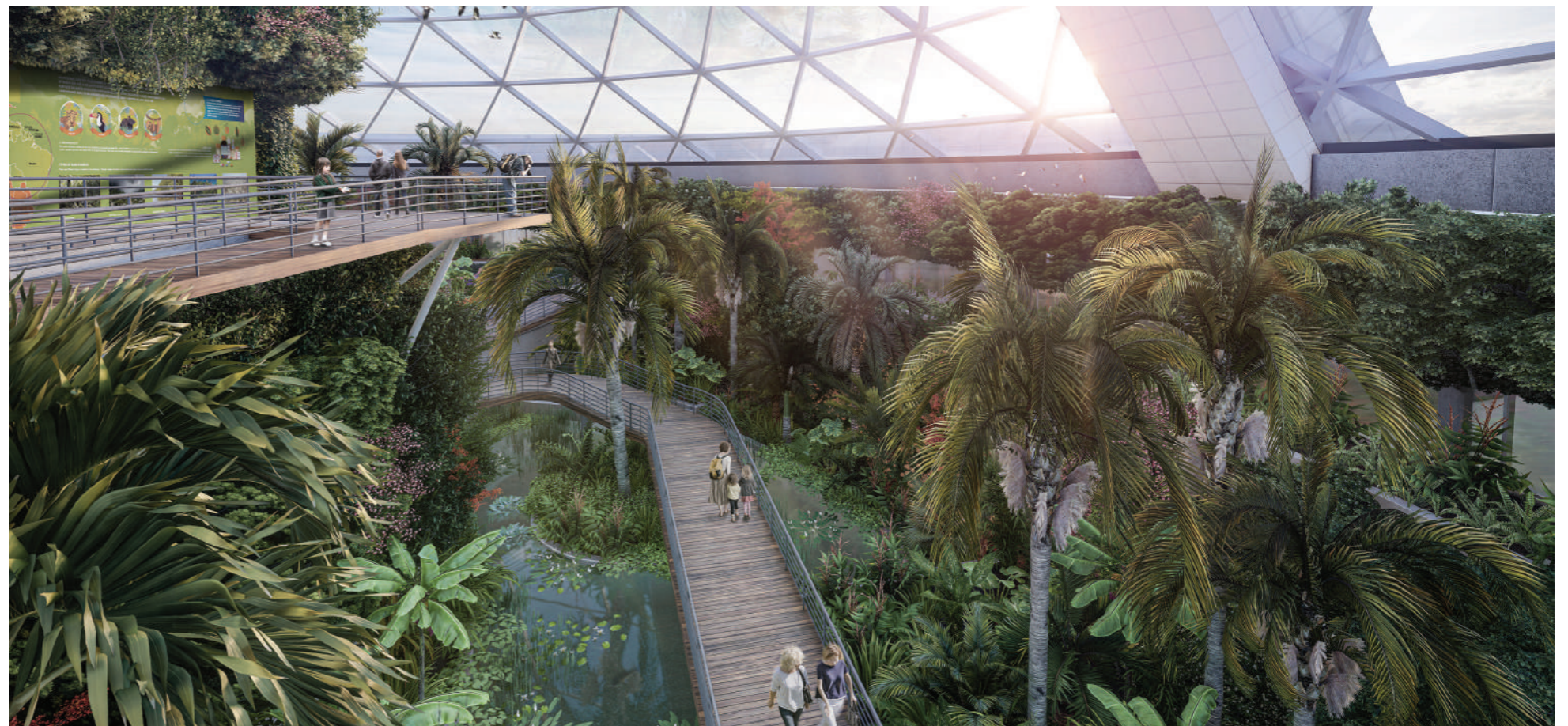
Species Highlights:

- **Plant Species:** Over 400 species, showcasing the diversity of Arctic flora, with an emphasis on native plants that support the local ecosystem.

Animal Species:

- **Reptiles:** 16 species, adapted to the controlled environment that mimics natural habitats.
- **Insects and Mollusks:** 15 species, housed in specialized enclosures that replicate microhabitats.
- **Amphibians:** 8 species, maintained in humid, temperature-regulated environments.
- **Birds:** 7 species, provided with ample space and natural elements to encourage natural behaviors.

Yaranga Gardens exemplifies how strong collaboration, operational foresight, and rigorous design can come together to create a natural habitat display that is both immersive and sustainable. It sets a benchmark for future projects by balancing ecological integrity, visitor engagement, and ethical animal care.



Zoo and Exhibit Design by Lily Vinogradova.

Staff profile case study →

Education:

Altai State Technical University, Institute of Architecture and Design, Master's Degree of Architecture (2022).

Altai State University, Faculty of Arts and Design, PhD in History of Arts (2016).

Altai State Technical University, Department of Foreign Languages, Interpreter in the field of professional communication (2015-2018).

Altai State Technical University, Faculty of Civil Engineering, Engineer (2002-2007).

Lily Vinogradova is an architect and landscape designer with expertise in the design of zoos and exhibits, particularly in the challenging climates of Siberia and continental regions. Her academic background, combined with practical experience, has allowed her to develop unique projects that prioritize animal welfare, thematic consistency, and visitor engagement.

Project Objectives:

Develop Realistic and Sustainable Habitats:

Lily's designs emphasize creating naturalistic habitats that align with animal welfare standards, using elements like native plants, water features, and temperature control to replicate species' natural environments.

Enhance Educational Experiences:

Her projects aim to create engaging spaces that not only attract visitors but also foster learning about animals and ecosystems.

Achieve Thematic Consistency and Visitor Flow:

Lily focuses on seamless integration of themes throughout exhibits, guiding visitors intuitively while ensuring accessibility and safety.

Key Design Solutions:

Adaptive Architecture for Harsh Climates:

Lily's designs include thermal management features, sheltered walkways, and landscape adjustments to adapt to extreme weather conditions, ensuring year-round visitor comfort.

Integration of Local Materials:

Her use of native materials and plants not only supports sustainability but also enhances the authenticity of the exhibits, helping animals acclimate better while reducing maintenance costs.

Engaging Layouts and Interactive Features:

Lily's projects often feature clear sightlines, safe interactive zones, and educational displays, making them popular destinations for families and educational groups.



Outcome and Impact:

Lily Vinogradova's work has set a high standard for zoo design in challenging climates, balancing animal welfare, visitor engagement, and sustainability. Her projects have received positive feedback for their innovative use of space, thematic storytelling, and ability to educate the public about wildlife conservation and biodiversity.

Zoo and Exhibit Design by Lily Vinogradova.

Staff profile case study →

Notable Projects

Pautinka Zoo, Barnaul – Forest Park Integration (2011)

The Pautinka Zoo project is a significant achievement in Lily’s career, located within a forest park zone in Barnaul. The objective was to integrate the zoo into the natural landscape, creating minimal disruption to the surrounding forest while offering immersive, spacious exhibits.

Design Highlights: The layout included winding trails that blended seamlessly with the existing terrain, using natural elements like native trees, shrubs, and waterways to mimic the animals’ habitats. The exhibits were designed with large viewing areas and raised walkways that allowed visitors to observe the animals without disrupting their natural behavior.

Impact: This project set a new standard for ecological integration in Siberian zoo design, demonstrating that natural landscapes can coexist with public attractions while maintaining environmental integrity and enhancing animal welfare.



Islands Hoofed Animal Zoo Concept (2014)

The Islands Zoo concept was developed to house a variety of hoofed animals, emphasizing their natural habitats and migratory behaviors.

Design Innovation: Inspired by the natural segregation of species in their native environments, the layout featured islands of enclosures connected by vegetative corridors. Each “island” replicated a specific biome, such as grasslands or wetlands, allowing species-specific vegetation and terrain to enhance the realism of the habitats.

Visitor Interaction: Raised platforms and observation decks were strategically placed to offer unobstructed views of the animals while maintaining a safe distance. Educational stations with interactive elements allowed visitors to learn about the unique traits of each hoofed animal, including migratory patterns, diet, and conservation efforts.

Significance: The Islands Concept was a unique approach to exhibit design, highlighting the importance of species separation and interaction in creating a natural, functional environment. It also emphasized conservation themes, resonating with the growing demand for sustainable zoo design.

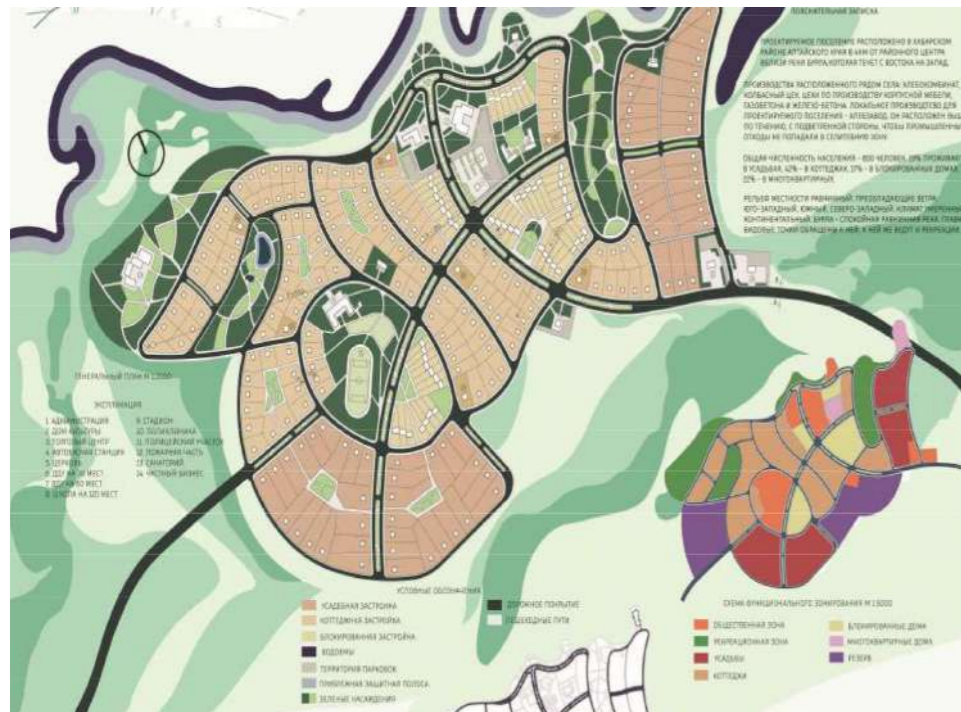
Emerald Zoo – Enclosed Habitat Design (2014)

The Emerald Zoo was designed to accommodate Siberia’s harsh winters while ensuring a suitable environment for diverse animal species.

Design Features: The enclosed habitats were climate-controlled with innovative HVAC systems that allowed for precise temperature and humidity regulation. This made it possible to house exotic animals that would typically struggle in Siberia’s cold climate. The design also included multi-level enclosures, rock features, and pools to replicate various ecosystems, from tropical rainforests to arid savannahs.

Educational Elements: Interactive displays, including digital screens and immersive soundscapes, were integrated to offer educational insights about each species’ behavior and conservation status. This made the Emerald Zoo not only a refuge for animals but also an educational hub for visitors.

Outcome: The Emerald Zoo became a model for indoor zoo design, attracting both local visitors and tourists. It demonstrated Lily’s ability to create a controlled yet naturalistic environment that prioritizes both animal well-being and visitor experience.



Zoo and Exhibit Design by Lily Vinogradova.

Staff profile case study →

Notable Projects

Feline Exhibit – Architectural Concept for Big Cats (2014)

This project focused specifically on the design and architectural concept for big cats, including tigers, lions, and leopards, within a dedicated exhibit area.

Design Approach: The enclosures featured multi-level platforms, dense vegetation, and shaded resting areas to mimic the natural hunting grounds of big cats. Water features were included to facilitate natural behaviors like swimming and cooling off. The entire exhibit was enclosed by reinforced glass walls, offering safety while ensuring clear visibility for visitors.

Interactive Zones: To enhance visitor engagement, the exhibit included observation tunnels and glass-bottom walkways, allowing visitors to have close-up views of the cats without compromising safety. Educational displays featured information about each species' behavior, conservation status, and role in the ecosystem.

Result: The feline exhibit received high praise for its innovative design and focus on both animal welfare and visitor experience. It became a highlight within the zoo, attracting both educational groups and families.



Zoo and Exhibit Design by Karina Akopian.

Staff profile case study →

Karina Akopian, a 3D artist and architect, has contributed to various zoo and aquarium projects over her career. Between 2014 and 2019, she successfully designed over 20 exhibits, showcasing her talent in both 3D visualization and architectural implementation. Her projects span from conceptual sketches to detailed drawings and final installations, ensuring that each exhibit is not only visually captivating but also functional and immersive.

Project Objectives: Create Engaging and Educational Environments: Karina’s designs aim to captivate visitors while providing educational insights about the animals and ecosystems represented.

Achieve Realistic Habitat Simulations: Her approach emphasizes realistic replication of natural habitats, using native plants, water features, and thematic elements to enrich animal welfare and visitor experience.

Ensure Seamless Integration of Design and Functionality: Her work blends artistic creativity with practical considerations, ensuring that exhibits are sustainable, maintainable, and aligned with the operational needs of zoos.

Key Design Solutions

3D Visualization for Immersive Exhibits: Karina utilizes advanced 3D software like 3DS Max and Corona Renderer to create accurate visualizations. These renderings help communicate design concepts clearly, facilitating feedback and adjustments before implementation.

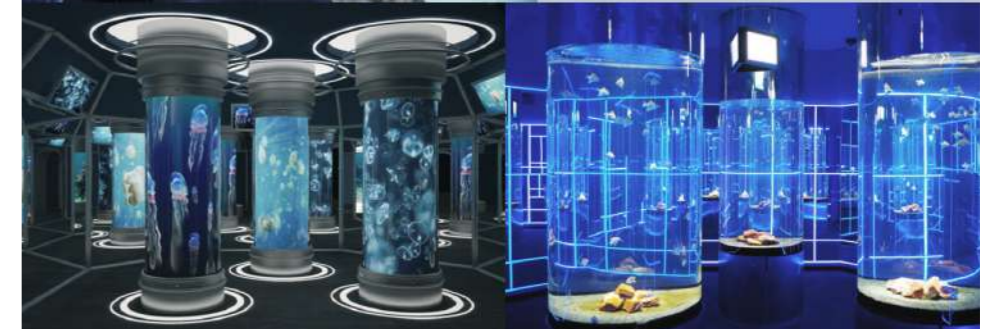
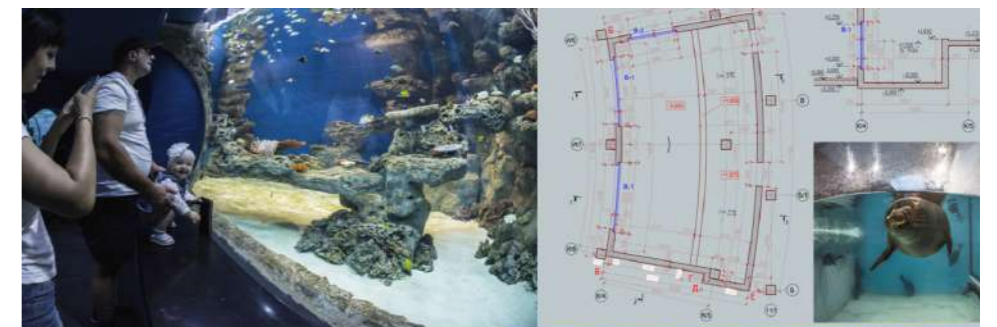
Use of Native Elements and Thematic Consistency: Karina’s designs often include native materials and plants, ensuring that each exhibit reflects the natural

habitats of its inhabitants. This approach not only enhances the animals’ environment but also creates a cohesive visitor experience.

Artistic Installations and Interactive Features: Her projects incorporate artistic elements, interactive displays, and engaging pathways to encourage visitor engagement and foster learning. From well-crafted rock formations to natural water features, her designs offer dynamic landscapes that adapt with the seasons. **Notable Projects:**

Karina has developed a range of exhibits for aquariums and zoos, each marked by unique themes and creative layouts. Her portfolio highlights the successful realization of exhibits that delight visitors while maintaining a strong focus on animal welfare.

Outcome and Impact: Karina’s contributions have elevated the aesthetic and functional standards of zoo and aquarium exhibits. Her designs not only attract and educate visitors but also promote conservation awareness. By integrating advanced visualization techniques with her architectural expertise, Karina has set a benchmark for creating immersive and sustainable zoo environments



Research and Development by Carrie Reyden.

Staff profile case study →

Carrie Reyden, Marine Biologist and Zoologist

Education:

MSc Conservation Biology (with a focus on Marine Science)

BSc Zoology

Carrie Reyden is a highly skilled Marine Biologist and Zoologist specializing in scientific research for zoo and aquarium projects. Born and educated in New Zealand, Carrie's career is shaped by a deep passion for the natural world and a commitment to environmental protection. Her academic background includes a Bachelor of Science in Zoology and a Master of Science in Conservation Biology, with a concentration in marine science. This education has equipped her with a strong foundation in biodiversity conservation, ecosystem management, and marine biology.

Professional Experience: Carrie's extensive background spans a variety of sectors, including biosecurity, ecological consulting, and guiding for eco-tourism attractions in New Zealand. Through her work in biosecurity, Carrie developed expertise in safeguarding ecosystems from invasive species and addressing the challenges of species management. Her experience as an ecological consultant provided her with the analytical skills required to assess environmental impact and offer sustainable solutions for conservation projects.

Her time as a guide at popular tourist attractions allowed her to see first-hand the vital role tourism plays in wildlife conservation and education. This exposure to the interface between tourism and environmental stewardship gave Carrie valuable insight into how to create engaging, informative, and impactful experiences for the public.

Role at Aquamarine Projects: Since joining Aquamarine Projects, Carrie has been integral to the success of numerous high-profile zoo and aquarium initiatives. Her role involves conducting biological research essential to the design and development of these attractions. She provides detailed insights into species selection, habitat replication, and sustainability strategies that ensure the health and well-being of the animals. Carrie's research also supports the educational and conservation missions of these projects, helping to create exhibits that foster learning and inspire visitors to protect the environment.

Her contributions extend beyond research; Carrie plays a key role in shaping the educational resources for zoos and aquariums, ensuring that visitors not only enjoy their experiences but also gain a deeper understanding of the ecosystems and species they are encountering. Her approach to exhibit design focuses on creating immersive and educational experiences that resonate with a broad audience, from casual visitors to dedicated conservation enthusiasts.

Passion and Advocacy: Carrie is driven by a deep passion for conservation and an unwavering dedication to raising environmental awareness. Her work is rooted in the belief that education is a crucial tool for promoting sustainability and inspiring action to protect the planet. Whether she's developing resources for a state-of-the-art aquarium or working on a biodiversity initiative, Carrie is always focused on delivering messages that highlight the importance of protecting ecosystems and endangered species.

Specializations:

- Marine biology and ecosystem management
- Biosecurity and ecological consulting
- Research for species selection and habitat design in zoos and aquariums
- Conservation education and public engagement

- Development of sustainable and ethical practices for wildlife attractions

Vision: Carrie Reyden is committed to using her expertise to create transformative zoo and aquarium experiences that not only captivate audiences but also deepen their connection to nature. She believes that through education and engagement, zoos and aquariums can be powerful platforms for inspiring a global commitment to biodiversity conservation.

Carrie continues to contribute to the global dialogue on environmental protection, working alongside scientists, conservationists, and educators to develop innovative solutions that address the challenges facing our natural world.



A modern approach to a public space

Case study →

Multimedia and digitalization

Aquamarine Projects excels in designing immersive and educational environments that engage audiences and promote a deeper understanding of our world.

A standout example is the Wadi Rum exhibit at the Aqaba Aquarium, which demonstrates our expertise in creating exhibits that seamlessly blend architectural innovation with environmental education. Inspired by Jordan's Khazali Siq Canyon, the Wadi Rum exhibit artfully integrates the region's unique geological and biological features. Through a mix of natural and digital elements, it narrates the fascinating story of life's evolution from water to land.

The exhibit replicates the iconic Wadi Rum landscape, characterized by expansive deserts, stunning sandstone formations, and diverse wildlife. Towering artificial rock structures rise to the ceiling, capturing the grandeur of this UNESCO World Heritage site's canyons and valleys.

With interactive features and digital displays, the design offers visitors a captivating journey through the geological and biological history of the region, fostering a deeper appreciation of this remarkable natural heritage.



A modern approach to a public space.

Case study →

Edutainment

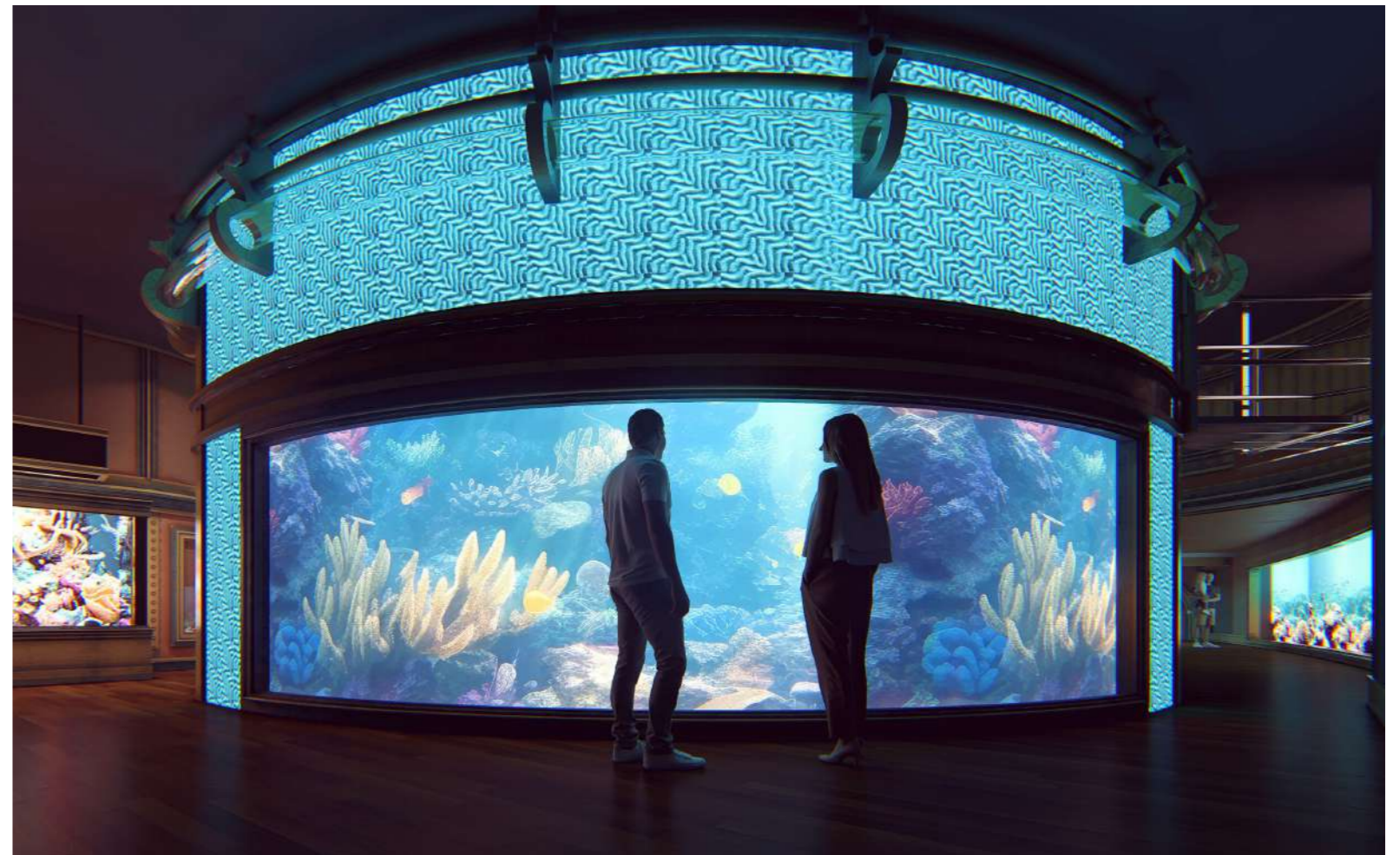
Modern society is highly influenced by technology, and modern technology is constantly running after our attention.

This paradigm affects all aspects of our behaviour; modern museums, exhibitions, schools, oceanariums and other traditional attractions are competing for visitors with mobiles and digital content.

That is why our design incorporates digital approach - to the reasonable extent, so it is not competing with actual exhibits and attractions.

Our aim is not only to entertain the visitors but also to educate them without being intrusive or boring. Educating through entertainment in a subtle and discreet way allows us to create space that is interesting for a larger audience - without creating an “emotional roller coaster”, which can be exciting but will be a distraction from the core purpose of the exhibit. We aim for a balanced and engaging experience that captivates visitors without causing sensory overload.

We ensure that visitors can absorb information and entertain themselves at their own pace, fostering a deeper and more meaningful experience.



Integral parts of a design.

Public Spaces

We believe that the exhibition starts from the moment visitors enter the surrounding area. We can design not only the exhibition itself but also the ticketing areas, public spaces, cafes and other facilities that usually are part of the building.

We ensure that every element, from the moment a visitor steps into the venue, is in line with the coming and anticipated experience.

Landscaping Master Planning

Effective zoo design extends beyond the enclosures; it integrates landscaping as a core element of the master plan. Landscaping in zoos plays a vital role in creating immersive experiences, supporting animal well-being, and guiding visitor journeys. It connects exhibits, facilities, and open spaces into a cohesive, natural environment.

Creating Natural Habitats

Landscaping is crucial for replicating natural habitats within zoo enclosures. It enriches animal welfare by incorporating native plants, terrain variations, water features, and shade elements. These naturalistic designs not only support animal behavior but also enhance visitor understanding of diverse ecosystems.

Enhancing Visitor Experience

Thoughtful landscaping shapes pathways, rest areas, and viewing points, offering a seamless flow through the zoo. It guides visitors intuitively, with plants, trees, and water bodies framing the views and marking transitions between different exhibit zones. Landscaping can also provide sheltered areas for comfort, making the zoo experience more pleasant in varying weather conditions.

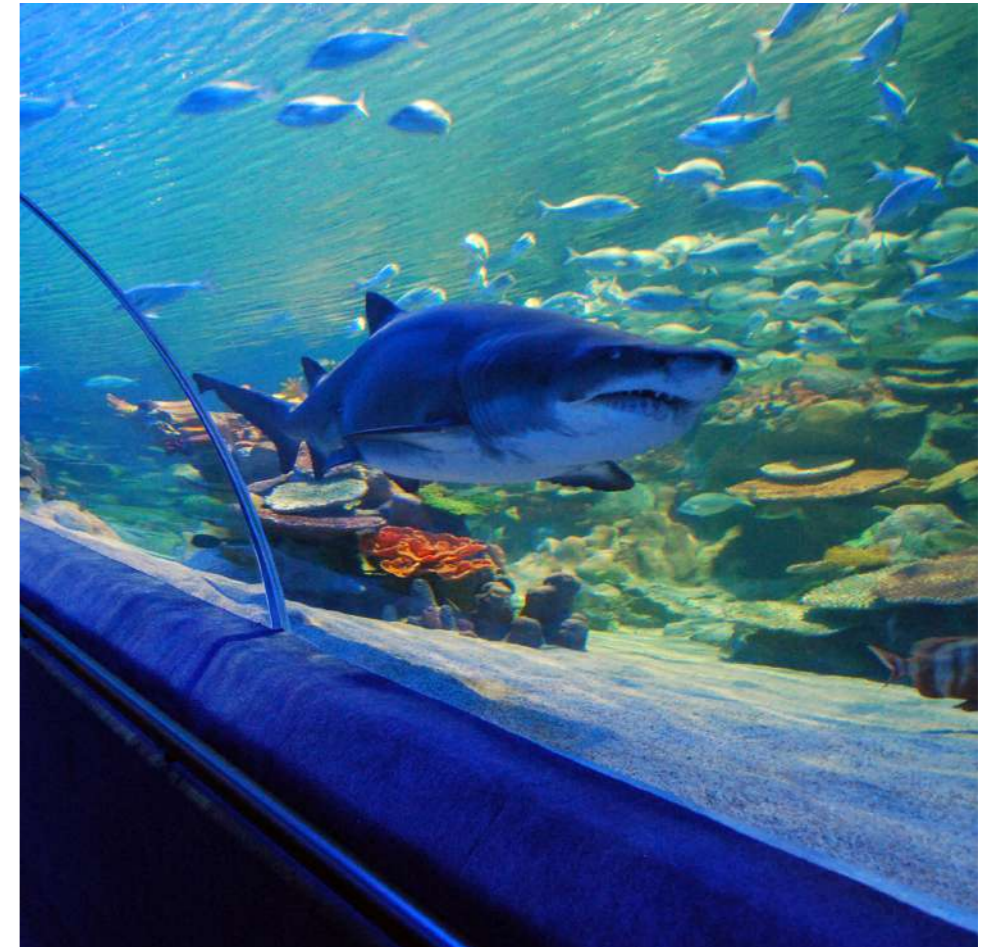
Integrating with Infrastructure

In master planning, landscaping must align with infrastructure and facilities. This includes aligning with entry zones, service routes, and other support areas, ensuring accessibility while maintaining aesthetic appeal. Sustainable design approaches, like water-efficient gardens and local plant species, are integrated to promote eco-friendly operations.

Conveying the Zoo's Concept

From initial planning, landscaping should reflect the zoo's overall concept. Whether it's a focus on a specific region or a general theme of biodiversity, landscaping becomes a visual language that brings the narrative to life, ensuring consistency from entry to exit.

A well-executed landscaping master plan transforms the zoo into more than just a collection of exhibits—it becomes a living, breathing environment that engages visitors, educates about nature, and promotes conservation.



Integral parts of a design

Project Economics and Feasibility

The economic foundation of a zoo project is a critical aspect of the overall design process. A feasibility study is often our initial step, setting the context for understanding how, and if, the desired outcomes can be achieved. It provides a structured framework from which the project's design is developed.

A comprehensive feasibility assessment can significantly influence the project's direction, determining its potential for success. It goes beyond simple number-crunching, employing a multi-faceted approach that includes intuitive, observational, and analytical elements to gain a complete perspective.

Key considerations such as staffing levels, visitor capacity, and planned activities are all interdependent. These factors affect not only the initial concept but also the architectural design and operational strategy. Addressing these variables early ensures that the project's design aligns with practical realities, optimizing the chances of long-term success.

Implementing the Customer's Vision

At the core of every successful project is a well-defined and comprehensive design process that brings the client's vision to life. Our approach ensures that each detail is thoughtfully considered, evolving from the initial concept to detailed design, construction, and ongoing operation.

We focus on a collaborative process that allows your ideas and goals to shape the project. By closely aligning with your vision, we ensure that the architectural design, landscaping, and overall experience are tailored to meet your expectations while staying practical and sustainable.



About us.

Nicholas Traviss

↳ **Aquamarine**
Owner/Director

No stranger to change, Nicholas has transformed Aquamarine several times over since taking on the company his father Bobby started in 1972. In fact, he sees adaptability as the heart of the business itself, evolving to meet diverse markets, and new horizons.

In Aquamarine's home base of New Zealand, we are the first country to see the new dawn each day, and this special spot in the world helps to shape our unique viewpoint. We're lucky to have many incredible natural environments on our doorstep and the natural world is hugely important to us. Perhaps this is what drives us to create projects that help others across the globe share in nature's wonders too.

We don't shy away from a challenge. We work with clients and communities in unique regions all over the world to help them build legacies and landmarks.



Two Generations of Innovation, 47 years in business, 1100+ projects.

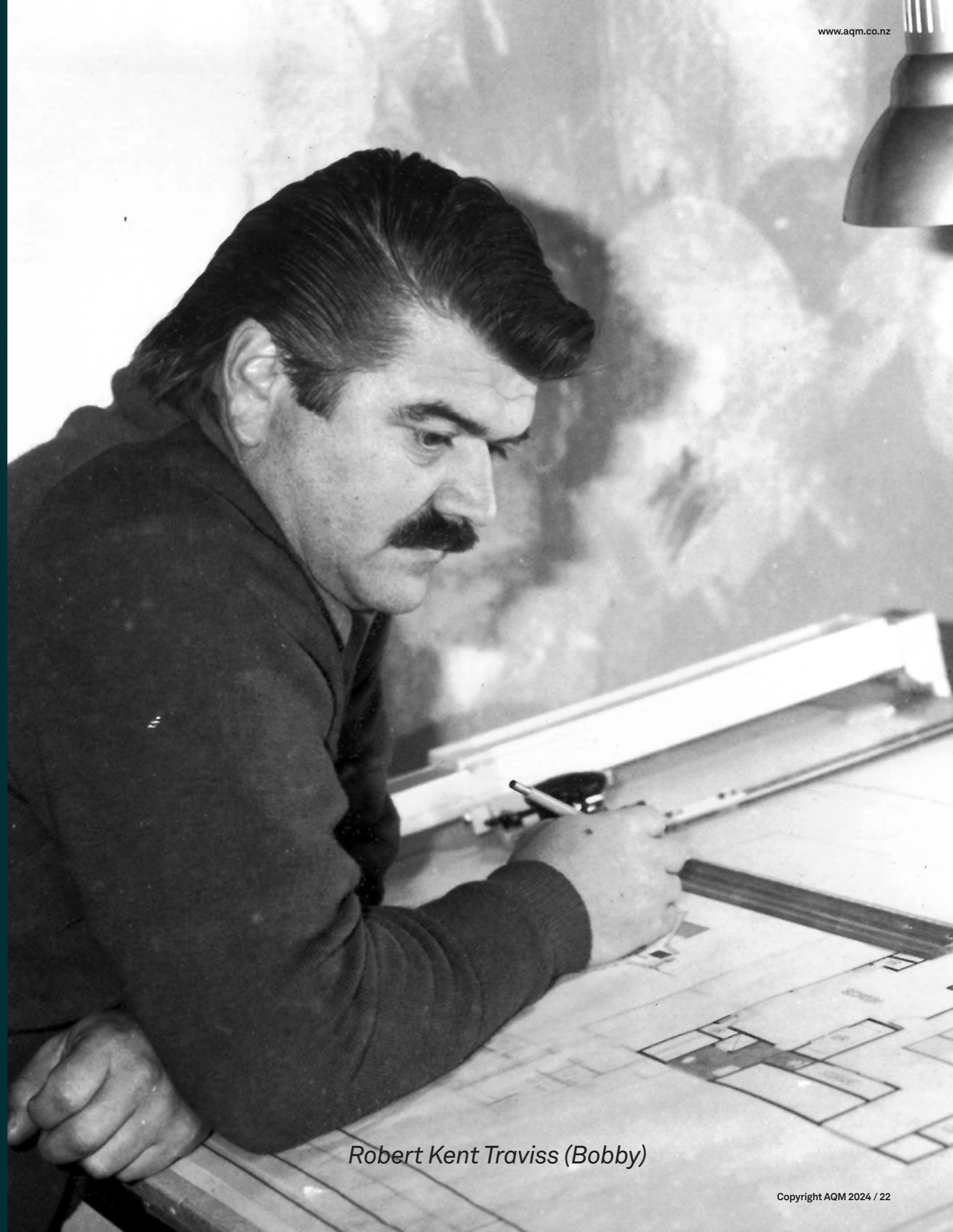
Bobby Traviss started R.K. Traviss Design in 1972, in the Bay of Islands, New Zealand. Since our inception, Aquamarine has evolved into an international design and project consultancy.

From our early focus on architecture, to our specialization in aquariums, to our current focus on multi-feature bespoke developments and integrated biomes – we have always been passionate about enhancing human experience within built environments.

Throughout our evolution, we have stayed true to our roots – holding onto a respect for our natural environment, a commitment to outstanding delivery in true partnership with our clients, and a sensitivity to how our work can impact and improve lives.

Today with clients spanning almost every continent, Aquamarine consistently emphasises building a group of like-minded professionals across the globe to support their vision.

With the combined knowledge and technical expertise this approach enables, Aquamarine has displayed an unprecedented ability to interpret the needs, contexts and business cases of their international clients, and in turn, produce sustainable, inspiring and change-provoking solutions.



Robert Kent Traviss (Bobby)

History.

1972

Bobby Traviss founds R.K. Traviss Design in Bay of Islands New Zealand.

2002

Our second era begins, as Nicholas joins his father in the business, and R.K. Traviss Design becomes Traviss Design.

2006

Bobby passes, and leaves his legacy to Nicholas, as the business continues to grow and diversify.

2012

Aquamarine Projects embarks on a number of diverse nature-based entertainment projects including nature parks, water parks, botanic gardens and discovery centres.

2024

Aquamarine Projects diversifies into Tourism Masterplan and Environmental planning projects, Wellness Centers and also creates 'Worldtree', a new world-first concept.

Aquamarine acquires Marinescape Intellectual Property over its 40 year history as one of the Aquarium Industries founding members.

1972 - 2002

30 years marks 977 individual projects completed in New Zealand's Northland Region

2002 - 2012

Traviss Design builds an international reputation as an expert consultancy in aquarium design, partnering with other leading Aquarium industry experts on over 150 projects over this time.

2012 - 2019

Traviss Design expands into Aquamarine Projects – extending beyond aquariums into diverse entertainment and experience precinct projects

2010 - Present

Aquamarine pioneers the new commercial Eco-Aquarium and champions Biome development as the sustainable future of entertainment design.

2019 - 2024

Aquamarine develops Tourism Masterplans with governments in the Asian Region with special emphasis on the preservation of indigenous cultures.

Our team.



Suzanne Burger

Senior Interior Designer

Qualifications: Diploma at the Cape Peninsula University of Technology

Nicolas Burger

Senior Graphic Designer

Qualifications: Bachelor of Arts in Visual Communication – University of Stellenbosch



Chante Betham

General Manager

Qualifications: BMS, Bachelor of Management Studies with a diploma in Marketing & International Business Management, University of Waikato; Certified and Accredited Life Coach.



Alston Koch

Regional Executive and Manager



Carrie Reyden

Marine Biologist and Zoologist

MSc Conservation Biology



Liliya Vinogradova

Zoologist Design Specialist

Qualifications: Altai State Technical University, Institute of Architecture and Design, Master's Degree of Architecture (2022).

Altai State University, Faculty of Arts and Design, PhD in History of Arts (2016).

Altai State Technical University, Department of Foreign Languages, Interpreter in the field of professional communication (2015-2018).

Altai State Technical University, Faculty of Civil Engineering, Engineer (2002-2007).



Frederick James Koch

Koch

Project Manager



Maxim Belyanin

Administrator and Regional Representative

Qualifications: Applied Mathematics and IT (Moscow State University), Negotiations and cross-cultural communications (Open European Academy of Economics & Politics, Prague), E-MBA in Management (Tallinn School of Management),



Tina Borodulina

Social Anthropologist and Cultural Heritage Consultant

A social anthropologist and author of museum and exhibition projects with a strong scientific approach.

Created several edutainment and exhibition concepts for developers, museums and theme parks.

A number of her projects have achieved national and global recognition, including the European Museum of the Year Award special commendation and Golden Mask award.



Craig Worthington

Senior Aquarist and Marine Capture Specialist

Our team.



Karina Akopian
Senior 3D Architectural and
Environmental Designer



**Cecilia van der
Merwe & Amoré
Strauss**

Senior BIM Lead & Senior Draughting
Team Leader



Vladimir Glizer
Engineer and Director and General
Manager for 'BIOMe'



Eugene Kushenko
Engineer and Director of Operations
for 'BIOMe'



Adrian Tolliday
Aquarium Operations Director
Qualifications:
BSc(Hons) Aquatic Biology, University
College of Wales Aberystwyth, 1993-
1996.
Fellow, Royal Society of Biology UK
Project Management Professional,
Project Management Institute.

Our other team members include the following engineering disciplines; Mechanical Engineer, HVAC Project Engineer, Plumbing Project Engineer, Electrical Project Engineer, Low Current Systems Project Engineer, Fire Systems Engineer, Construction and special systems, LSS Engineering systems and Building engineering systems.

Our Specialist team members include the following disciplines; Multifield specialist in plants of different climatic areas, Specialist Aquarist and Curator, Specialist in tropical and subtropical plants, open ground plants, Specialist in aquatic plants, Decorator-artist Artificial landscapes, Specialist in large fish farming systems and exhibit aquariums, Specialist in desert species, turtles, lizards and crocodiles, Reptiles, Specialists in snakes and lizards: Ornithologist and practicing veterinarian, Aquarist Specialist in amphibians, chameleons and lizards, Butterfly and Insect Specialist, Insect and snail specialist.

Central members of the BIOMe team

Sergey Ivanov

Chief engineer technologist. Design and construction of animal, fish and plants life support systems.

Andrey Berdnikov

Engineer. documentation, technical drawings Ekaterina Svetashova: Documentation, technical drawings.

Sergey Grishchenko

Chief Agronomist, specialist in outdoor and indoor plants of different regions.

Irina Kozlova

Agronomist, leading specialist on tropical and subtropical plants

Sergey Chubarov

Agronomist, leading specialist on aquatic plants

Andrey Oppolitov

Specialist in fish farming and creation of aquarium exhibits

Alexander Plyushchev

Senior aquarist, specialist in keeping and breeding of hydrobionts

Yuri Menshikov

Reptile specialist

Mikhail Khalturin

Hydrochemist, biologist.

Irina Bruy

Etymologist, insect specialist

Ekaterina Alekseeva

Veterinarian, ornithologist

Yulia Sozinova

Artist sculptor, decorator. Creation of thematic decorations

Dmitry Gorbatovsky

Technician decorator. Specialist in thematic decorations

Our work.

Since 1973 Aquamarine has been involved in many major developments across the world. Pioneers in the field, we have conceptualised, designed, constructed and managed over a 1000 projects. Here is a summary of our most recent projects.



2023-2025 | Aqaba Aquarium and Marine Science Hub
Aqaba, Jordan



2022 | Daejeon Expo Aquarium
Daejeon, South Korea



2018-2025 | Yaranga Botanical Garden
Kogalym, Russia



2013-2016 | Galactika Entertainment Center
Kogalym, Russia



2022-2025 | Museum of Russia
Kogalym, Russia



2006 | Primorsky Oceanarium
Vladivostok, Russia



2024 | Mambong Tourism Masterplan
Sarawak, Malaysia



2013 | National Aquarium of Malta
Malta



2023-2025 | NRG Residences
Kogalym, Russia



2014 | EMAAR Aquarium & Underwater Zoo
Istanbul, Turkey



2009 | Turkauzoo Aquarium (Sealife Istanbul)
Istanbul, Turkey



2018-2024 | Northern Peoples Museum
Siberia, Russia

Our work.



2020-2024 | Philosophers Stone Residences
Kogalym, Russia



2018 | VGP Marine Kingdom
Chennai, India



2007 | Chiang Mai Zoo Aquarium
Chiang Mai, Thailand



2012 | Sindok Aquarium
Wonson, North Korea



2018-2024 | Galactika Park
Kogalym, Russia



2006 | Neptune Aquarium
St Petersburg, Russia



2007 | Vinpearl Aquarium
Nga Trang, Vietnam



2012 | Eleven Times Square Aquarium
New York, U.S.A.



2013-2016 | Dubai Aquarium & Underwater Zoo
Dubai, U.A.E.



2013-2016 | Galactika Waterpark
Kogalym, Russia



2011 | Greater Cleveland Aquarium
Cleveland, U.S.A.



2016 | Galactika Aquarium
Western Siberia, Russia

Projects under construction (September 2024)

- 2024 Philosophers Stone Residences, Kogalym, Russia
- 2024 Museum of Russia, Kogalym, Russia
- 2024 NRG Residences, Kogalym, Russia

Current projects in development

- 2024 Mambong Tourism Masterplan, Sarawak, Malaysia
- 2024 Astrakhan Ice Center Russia
- 2024 Bangalore Zoo Aquarium Bangalore, India
- 2021–2026 Cartagena Aquarium Colombia
- 2023–2025 Cayman Islands Aquarium, Caribbean

Past projects Conceptualized

- 2015 Blue Hotel Aquarium Incheon, South Korea
- 2018 Tauranga Aquarium Tauranga, New Zealand
- 2017 Stonefields Aquarium Auckland, New Zealand
- 2017 National Aquarium Napier, New Zealand
- 2020 Jesse's Jungle Childcare Monaco
- 2016 Itaipu Aquarium Itaipu, Paraguay
- 2020 Los Cabos Aquarium Los Cabos, Mexico
- 2020 Cancun Oceanarium Cancun, Mexico

- 2023 Tarapolewala Aquarium Mumbai, India
- 2017 Panama Aquarium Panama City, Panama
- 2017 Phuket Aquarium Phuket, Thailand
- 2012 Jomtien Aquarium Jomtien Beach, Thailand
- 2019 Bidong Island Park Kuala Terengganu, Malaysia
- 2015 Elephant Wildlife Park Kuala Lumpur, Malaysia
- 2014 Tiaf Childrens Center Tiaf, Saudi Arabia
- 2012 Port Huron Aquarium Port Huron, U.S.A.
- 2012 TAT Mall Aquarium Tehran

Associations.



American Institute of Architects

The largest, most influential network of architects and design professionals with over 98,000 members who share a passion for design, a desire to change the world and a commitment to the highest standards of practice.



IAAPA

International Association of Amusement Parks and Attractions (IAAPA) is the largest international trade association for permanently situated amusement facilities worldwide, and represents more than 6,000 specialty members from more than 100 countries.



AZA

The Association of Zoos and Aquariums (AZA) is a non-profit organization dedicated to the advancement of zoos and aquariums in the areas of conservation, education, science, and recreation. They are leaders in animal care and welfare; conservation; conversation education and professional excellence.



PATA

The Pacific Asia Travel Association (PATA) is a not for profit membership based association that acts as the catalyst for the responsible development of travel and tourism and facilitates meaningful partnerships to enhance the value, quality and sustainable growth of travel and tourism to, from and within the Asia Pacific region.



AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS (ASLA)

ASLA, founded in 1899, is the professional association for landscape architects in the United States, representing more than 15,000 members. Landscape architects lead the planning, design, and stewardship of healthy, equitable, safe, and resilient environments.



U.S. GREEN BUILDING COUNCIL

The U.S. Green Building Council (USGBC) is a non-profit organization dedicated to supporting prosperous, healthy and resilient communities. They are the global leader in green building with a focus on transforming buildings and communities to advance human and environmental wellbeing.

Accolades.



Kogalym Aquarium

Eurasian Regional Association of Zoos and Aquariums Membership

Member since 2018.

The purpose of the Association is to coordinate efforts to improve zoo and aquarium activities and support conservation and breeding of wild animals.



Dubai Aquarium & Underwater Zoo

Tripadvisor Certificate of Excellence 2012

Certificate of excellence following traveler reviews and ratings

World Travel Awards

Middle East Responsible Tourism Award Nominee 2020-2023

World Travel Awards reward and celebrate excellence across all key sectors of travel, tourism and hospitality industries and are recognised globally as the ultimate hallmark of industry excellence



Malta National Aquarium

Quality Assured (QA) Mark by the Malta Tourism Authority

Certification that is testament to the Aquariums exceptional quality and commitment to providing an outstanding customer experience

European Business Award

(EWWR) European Week for Waste Reduction 2023

Dedication to environmental sustainability



Greater Cleveland Aquarium

3rd Annual Parent Choice Award Nominee 2018

Best Rainy Day Out by the readers of Northeast Ohio Parent



Sealife Istanbul

Sea Life Trust Partner

Member of this registered charity working globally to protect the world's oceans and the amazing marine life that lives within them. Inspiring conservation campaigns and funding projects and education programmes that champion the need for plastic-free oceans, sustainable fishing, effective Marine Protected Areas and an end to over-exploitation of marine life.



Galactika Sports and Cultural Complex

Union of Zoos and Aquariums of Russia membership

Member since 2018.

The Union of Zoos and Aquariums of Russia was established to unite all zoological organizations of the country, to create a space for exchange of experience between specialists, as well as for the implementation of large-scale educational and conservation programs that serve one purpose - to preserve the fauna of Russia in all its unique beauty and diversity.

'Golden site' award in 2016

Award for the best Website in the region. Website made by AQM partners.

"Tourism, sport, hunting and fishing" Exhibition diploma

Diploma for high professionalism in presenting itself

aquamarine

THANK YOU

AQM.NZ

Contact

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