

Leading the Future of Sustainable Design



2025

Company Profile

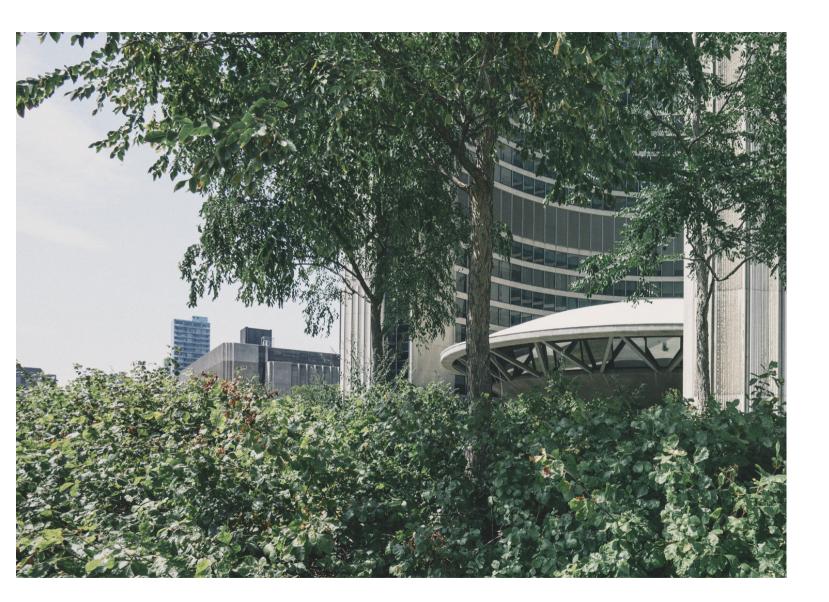


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GENERAL INFORMATION

Environas is a design consultancy that provides multiple environmental services and green building certifications. It was founded by in 2021 by Dr. Nihal Al Sabbagh with an aim to integrate the theoretical knowledge and expertise into practice through research-based design approaches that are tailored for each project.

) Environas

The company is comprised of a team of architects and engineers with a robust background in both practice and research, reflecting its vision and commitment to growth. This scientific expertise positions the company as a leader in the field of environmental design solutions and interdisciplinary scientific research.



DR. NIHAL AL SABBAGH Founder, design director

Nihal is the founder and design director of ENVIRONAS. With over 17 years of experience in teaching and practicing architecture and urban design, she has worked with various institutions and consultancies in both Egypt and the UAE. She earned her Ph.D. from the AA School of Architecture in London and holds an M.Sc. in Sustainable Design of the Built Environment. Her publications concentrate on environmental urban analysis, thermal comfort assessments, promoting walkability, passive cooling strategies for hot climates, and architectural education.

Our Hope

Sustainability in every space. A way of life for a positive future.

What We Do

We design to maximize user comfort and reduce the environmental impact.

\bigcirc

Vision

To redefine urban and architectural design with innovative, environmentally sustainable spaces that enhance user comfort and seamlessly connect interior and exterior environments.

Mission

At Environas, we create tailored, high-performance designs that prioritize sustainability and comfort. Founded by Dr. Nihal Al Sabbagh, our commitment is to transform each project with research-driven, practical solutions that meet the highest standards of environmental responsibility and aesthetic excellence.

Partner with us to make your project environmentally sustainable without compromising comfort and aesthetics.

Our Services and Solutions





OUR SERVICES & SOLUTIONS

Our range of services is adaptable and can be customized to align with both the project's and client's requirements, ensuring environmental objectives are met without sacrificing quality of life.

We foster healthy environments that positively impact users through various collaborations and our in-house expertise, with our projects spanning both local and global contexts.

We design urban spaces that are not only environmentally sound but also userfriendly, ensuring equitable, efficient, and sustainable environments for all



ENVIRONMENTAL DESIGN ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL RESEARCH

OUR URBAN DESIGNS FOCUS ON INTEGRATING GREEN SPACES, OPTIMIZING LAYOUTS, AND IMPROVING THE MICROCLIMATE FOR INHABITANTS

Environmental Design





ENVIRONMENTAL DESIGN

Our architectural designs are carefully crafted to be both visually appealing and environmentally sustainable, utilizing passive design strategies to lower energy consumption and improve comfort. **We design according to any green certification requirements.** Key Points:

- **Innovative forms:** We merge innovative shapes with passive design techniques to minimize our ecological footprint while emphasizing human comfort.
- Ventilation, Cooling, and Heating: We seamlessly incorporate passive design strategies for ventilation, cooling, and heating into the project's interior elements.
- Efficient Lighting: Our commitment to efficient lighting helps to ensure reduced energy consumption.
- Acoustic Considerations: We address acoustic considerations to enhance the quality of indoor spaces.
- **Energy Performance :** We perform comprehensive energy performance assessments to reduce the building's dependance on mechanical cooling and artificial light.
- **Sustainable Materials:** We prioritize the selection of sustainable materials and greenery, fostering a healthier ecosystem.

By focusing on these aspects, we strive to create environments that are not only aesthetically pleasing but also advantageous for the planet and its inhabitants.



ENVIRONMENTAL DESIGN



We implement passive strategies for ventilation and mechanical cooling by thoughtfully designing the components within the space. This includes:

- Efficient lighting
- Choosing acoustic materials
- Conducting energy performance calculations
- Selecting sustainable materials
- Incorporating greenery

Our interior designs harmoniously blend sustainability with functionality. By utilizing energy-efficient lighting and optimized ventilation, we make certain that each element supports the project's environmental objectives.

Our emphasis is on using sustainable materials and crafting spaces that enhance user comfort.

ENVIRONMENTAL DESIGN



URBAN DESIGN

- Urban Masterplans: We create masterplans that focus on:
 - Equity: Ensuring fair access and opportunities for all residents.
 - Efficiency: Streamlining space usage for optimal functionality.
 - Environmental Friendliness: Designing with sustainability in mind.
- **Design Goals**: Our objectives include:
 - Promoting interaction between open spaces and green areas.
 - Optimizing building layouts to improve microclimatic conditions.
- User-Friendly Environments: Our urban spaces are:
 - Environmentally Conscious: Incorporating sustainable practices.
 - Equitable and Efficient: Ensuring accessibility and functionality for all.
 - Sustainable: Designed to support long-term ecological health.
- Key Priorities in Urban Design:
 - Incorporation of Green Spaces: Enhancing aesthetics and environmental quality.
 - Optimization of Layouts: Improving usability and functionality.
 - Microclimate Enhancement: Benefiting the health and comfort of inhabitants.

ENVIRONMENTAL DESIGN LANDSCAPE DESIGN

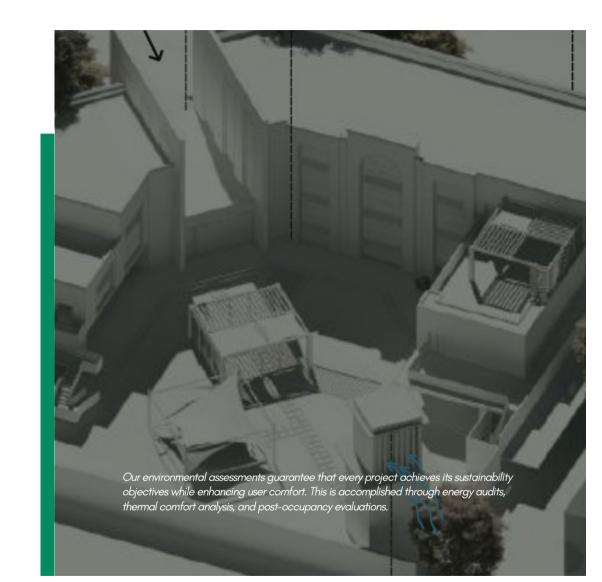
- **Beautiful Material Blends:** Our outdoor space designs combine the beauty of materials with local greenery.
- **Optimal Landscaping Solutions**: We create landscaping solutions that are mindful of water consumption for irrigation.
- Microclimate Awareness: Our designs consider the effects of the microclimate to enhance outdoor spaces.
- Elevated Aesthetic Appeal: Our landscape designs not only enhance visual beauty but also focus on environmental sustainability.
- **Prioritizing Local Flora:** We emphasize the use of local plants to support the ecosystem.
- Efficient Water Usage: Our designs promote efficient water usage to conserve resources.
- **Seamless Integration:** We ensure our landscapes blend harmoniously with the surrounding environment.

Visually Breathtaking and Sustainable: By considering irrigation and microclimatic factors, we create outdoor spaces that are both stunning and environmentally friendly.



Environmental Assessment





ENVIRONMENTAL ASSESSMENT



BUILDING ENERGY PERFORMANCE

We perform energy simulations for various green certifications, including EDGE, LEED, ESTIDAMA, MOTADAM, and WELL, among others. Our focus is on buildings and urban areas, aiming to lower operational costs related to HVAC, lighting, and electrical systems while minimizing environmental impacts.

POST OCCUPANCY EVALUATION

We analyze current urban projects and buildings by examining microclimatic factors and user comfort to identify issues like indoor air quality (IAQ), outdoor air quality (OAQ), urban hotspots, thermal stress, and discomfort. Our evaluation reports aim to enhance future project investments by ensuring optimal performance and minimal environmental impact, all while measuring the return on investment (ROI) of the proposed solutions.



MICRO CLIMATIC & THERMAL COMFORT ANALYSIS

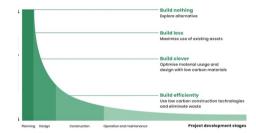


We perform CFD and thermal analysis for new urban developments, structures, and green spaces to identify high solar gains and wind flow patterns that influence both outdoor and indoor design.

Our predictions regarding thermal comfort in buildings and outdoor areas help shape design narratives tailored to optimal operational schedules and user needs. Our design recommendations encompass the thermal, visual, and/or acoustic aspects specific to each project.

LIFE CYCLE ASSESMENT

Carbon reduction potential



We assess the environmental impacts of buildings throughout their entire lifecycle, spanning from construction to demolition.

Our emphasis is on resource usage, energy consumption, emissions, and waste generation. This approach promotes sustainable design and construction practices, guiding decisions that reduce environmental footprints while improving building performance.

GREEN CERTIFICATIONS

We assist in attaining the different categories of green certifications for buildings and urban complexes at any stage in your project for the following:

- LEED BD + C (Certified, Silver, Gold, Platinum)
- LEED ID +C (Certified, Silver, Gold, Platinum)
- LEED O + M (Certified, Silver, Gold, Platinum)
- ESTIDAMA (PEARL 1, 2, 3, 4)
- EDGE (Level 1, 2, & 3)
- ACTIVE SCORE & MODE SCORE
- MOSTADAM (Green, Bronze, Silver, Gold, Platinum)
- WELL (Bronze, Silver, Gold, Platinum)













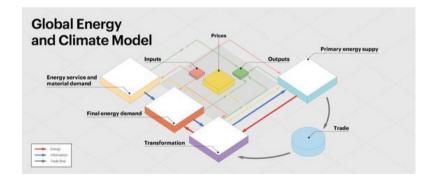
CLIMATIC ANALYSIS

SUSTAINABLE SOLUTIONS FOR URBAN AND BUILDING DESIGN

Our climatic analysis service helps identify the unique climatic strengths of your project's location. Through **analyzing heat maps** and **overlapping building dynamics**, we determine the optimal **benchmarks and green codes to enhance energy efficiency**

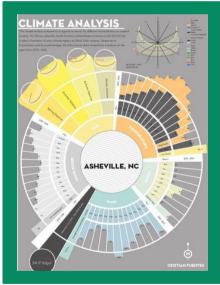
•Identify strengths of your climatic zone

•Overlapping your building dynamics to the climatic heat maps •Identify suitable benchmarks and green codes for your project •Allocation of renewable energy into your project at an early stage



Reducing heat dissipation of outdoor spaces
Microclimatic analysis for solar radiation and natural ventilation
Natural ventilation
Exterior shading on buildings high energy demand facades
Buildings layouts and master plans to reduce energy demand of buildings
Greenery

Project Stage Integration: Planning, Studies



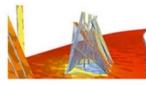
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URBAN MICROCLIMATIC ANALYSIS

WE ASSESS SOLAR RADIATION AND AIRFLOW PATTERNS TO CREATE COMFORTABLE AND SUSTAINABLE URBAN ENVIRONMENTS

Our microclimatic analysis focuses on reducing outdoor heat dissipation and optimizing natural ventilation. We design solutions such as shading for high-energy demand facades and layouts for energy-efficient buildings

Environmental Studies Radiation Analysis







RADIATION ANALYSIS:

ENSURING THE DESIGN MINIMIZES HEAT IMPACT WHILE MAXIMIZING COMFORT."

TEMPERATURE IMPACT:

EVALUATING HOW THE STRUCTURE AFFECTS MICROCLIMATES WITHIN THE URBAN SPACE.

Reducing heat dissipation of outdoor spaces
Microclimatic analysis for solar radiation and natural ventilation
Natural ventilation

•Exterior shading on buildings high energy demand facades •Buildings layouts and master plans to reduce energy demand of buildings •Greenery

Project Stage Integration: Planning, Studies

ACTIVE MICROMOBILITY

Our service promotes the integration of micromobility options like cycling and scooters, aiming to reduce vehicular dependence and enhance urban walkability. This creates accessible and environmentally friendly urban spaces.

Integrate micromobility modes into your urban areas
Encouraging walkability
Integrating cycling and scooters in urban areas

Rating system :

- Estidama
- Leed
- Mostadam
- Active score





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ENERGY MODELING

Our energy modeling service reduces energy consumption through HVAC optimization, environmental monitoring, and insulation techniques. This includes low-energy materials for building interiors and exteriors, resulting in sustainable energy use.



Project Stage Integration: Schematic Design Development Construction Occupancy



Rating System: Passive design buildings Estidama LEED Mostadam



Low energy demand from cooling consumption through:
choice of the HVAC systems,
set points and comfort,
environmental monitoring,
Façade overheating treatment
Insulation
Main building exterior materials
Main spaces finishing materials
Low energy demand from exterior and interior lighting
Low energy demand from electrical sources

We also address demand from interior and exterior lighting, minimizing reliance on non-renewable sources.





Environas

WATER SAVING

Our water-saving strategies incorporate greywater treatment, efficient landscape measures, and sustainable water management. We ensure that water resources are preserved while creating green, resilient urban spaces

•Integrate grey water treatment •Efficient water strategies •Efficient landscape measures











USER COMFORT ANALYSIS

This service focuses on analyzing thermal, visual, acoustic, and olfactory factors to enhance user comfort. We align operational scheduling, thermal comfort, and energy demand to improve the user experience in daily activities.

•Building activities

•Building operational scheduling

•Thermal comfort and energy demand

•Thermal, visual, acoustic, and olfactory analysis on human comfort to improved performance of daily activities

Project Stage Integration: Schematic Design Development Construction Occupancy Rating System: Passive design buildings Estidama LEED Mostadam WELL



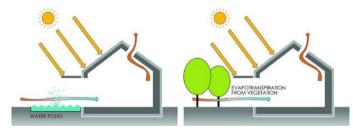
LCA & LCC

Our life cycle assessment identifies emissions at every project stage, optimizing materials to reduce carbon footprint. We balance sustainability and environment considerations to enhance long-term efficiency and incorporate renewable energy.

•Identifying emissions throughout the overall project cycle •Reducing emissions of the critical stages

•The role of materials in reducing the building carbon footprint •Balancing sustainbaility and environmentl consideration through the life cycle •Incorporating building management systems to optimize the running energy

demand •Calculating the influence of renewable energy on reducing the project carbon emissions



Project Stage Integration

Schematic Design Development Construction Occupancy

Rating system :

Passive design buildings Oneclick LCA



We calculate the economic and environmental impact to ensure sustainable and costeffective project cycles.



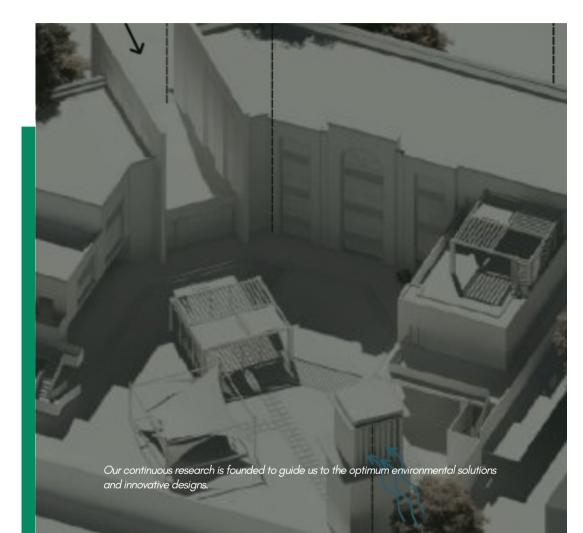




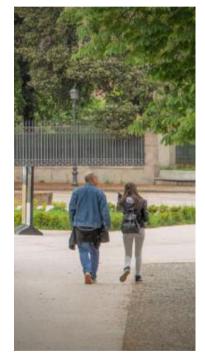


Environmental Research





ENVIRONMENTAL RESEARCH



WALKABILITY

The study explores various built environments, focusing on their climatic conditions and urban factors that influence walkability. Previous research has been conducted in hot cities like the UAE, KSA, and Egypt. Key points include:

- Emphasis on the connection between social and environmental factors.
- Identification of urban design features that promote walking.
- Exploration of three key areas:
 - Dynamic thermal sensation.
 - Impact of thermal environments on human perception.
- Commercial potential of the region.



CLIMATE CHANGE

This project seeks to address the impacts of climate change on a user and community level by examining various thermal comfort scenarios. The heat rise effect in Egypt has been studied across eight cities within different climatic zones to assess the levels of thermal stress in alignment with the SDG goals for 2030. We evaluate past and future projections of outdoor thermal comfort to emphasize the necessary mitigation and adaptation strategies to combat urban warming. The research primarily concentrates on thermal comfort and its relationship with the built environment.



ENVIRONMENTAL RESEARCH METHODOLOGIES

- The track focuses on diverse methods and techniques.
- Utilizes both digital and physical tools.
- Investigates environmental parameters of:
- Outdoor settings
- Indoor settings
- Explores the interrelationship between outdoor and indoor environments.
- Employs microclimatic simulation.
- Incorporates building performance tools.
- Utilizes environmental monitoring.

Aims to create strategies that bridge gaps between different approaches.

Our Projects





Our Projects SUSTAINABLE BUILDINGS





Our sustainable building designs focus on energy efficiency and user comfort by incorporating passive cooling systems, natural ventilation, and optimized layouts.

We prioritize the development of economically viable, comfortable, and environmentally friendly buildings using passive design strategies. This approach is designed to meet project specifications while achieving low energy performance, aesthetic appeal, and tailored solutions for thermal comfort.

By reducing heat gain and energy consumption, we help clients achieve long-term savings and create environmentally-friendly spaces.

PRIVATE RESIDENCE

Private Residence







Services include:

- Concept and preliminary design - Design assessment (micro climatic and thermal comfort)

Our services encompass:

- Energy performance simulations aimed at minimizing electrical consumption, including P.V. design, installation, and solar heating systems.

- Lighting analysis focused on reducing operational costs based on function and user requirements.

- Microclimatic assessments of the site to evaluate how greenery and landscaping affect the building and its surroundings.

- Sustainable landscape design and irrigation systems tailored to decrease water usage.



Thermal Transition Space Natural Cross ventilation provides

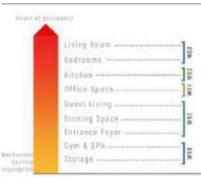
thermal comfort by reducing heat and allowing air flow

Separate Wings

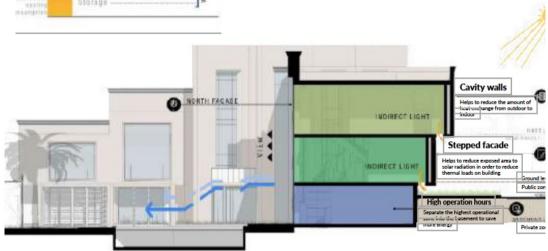
The energy efficiency approach evolves from allocating the spaces with highest operational hours in the basement level.

Heat Avoidance Solid walls on the southern facade

Spatial redistribution



POJECT **ANALYSIS**





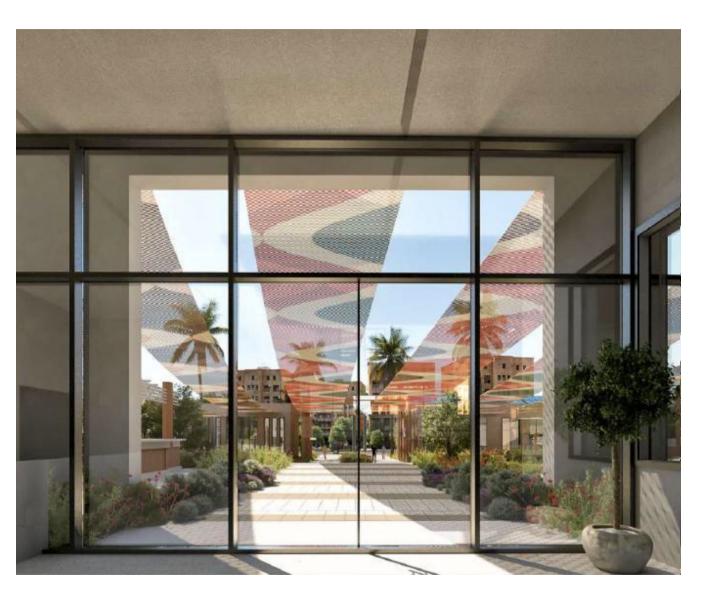
Private Residence

Wind Catcher

A passive cooling system which significantly influences the cooling loads and outdoor ventilation







COMMUNITY EDUCATIONAL CENTER

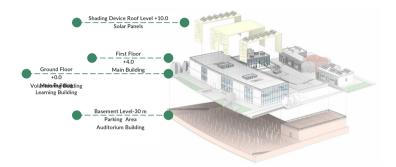
Services offered:

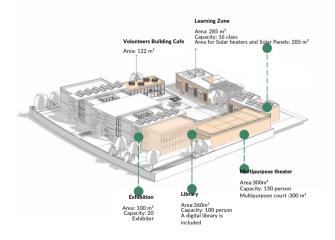
- Investment analysis
- Net-zero sustainability planning
- Architectural concept design

SUSTAINABLE BUILDINGS

- Analysis of social and environmental comfort







MARHABA SUSTAINABLE BUILDINGS

Our services encompass:

- Conceptual design for architecture
- Development of design
- Landscape design
- Analysis of microclimates Green certification

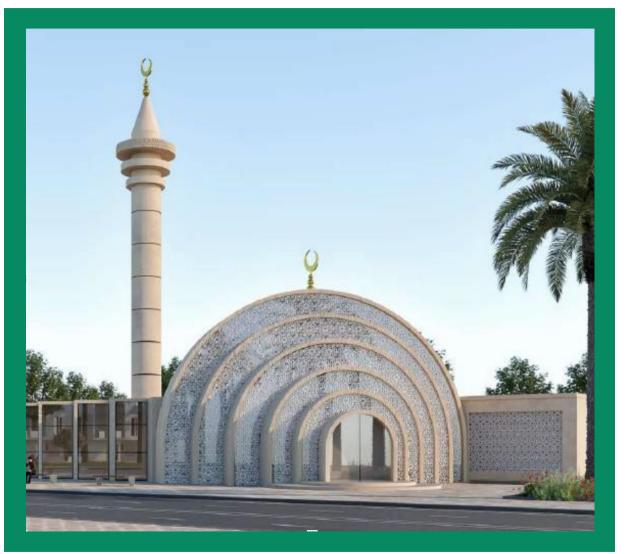




SWANY HOSPITAL

Services include:

- Facade retrofitting design - Energy performance analysis for left wing



MOSQUE

SUSTAINABLE BUILDINGS

Services Offered:

- **Mosque Design Concept:** Our mosque designs blend traditional aesthetics with contemporary sustainability practices, creating a space that is spiritually enriching and environmentally mindful.
- **Glass Detailing Concept**: We emphasize energy-efficient facades, enhanced natural light, and sustainable materials to craft a tranquil and eco-friendly environment.









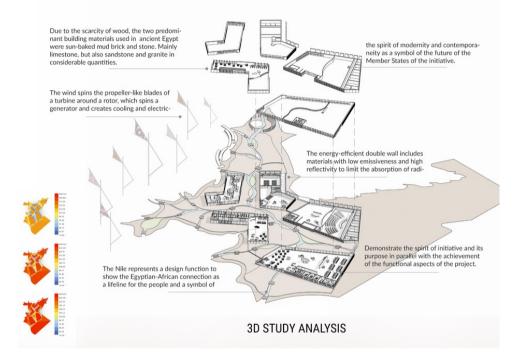
STE LOCATION The despin includes simple architectural characteristics: rise bifurcation, path trees, vertical lowers, double walls in the south true trees and the south statement is a thream price. By combining the modular architecture of the project with the fututions modules the methy state is coulded.





FORM GENERATION











MARBLE SHOWROOM

Pv integration

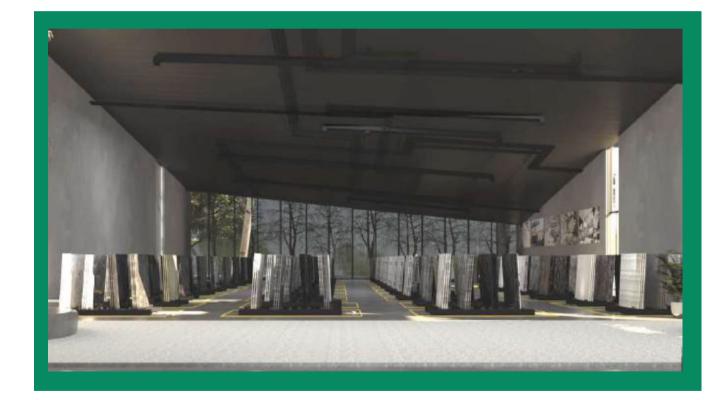
Base Case

Consumption Per Year: 491,904 kWh PV Area Needed to cover 100%: 1639.68 m2 PV Total Cost: 2,732,800 EGP (Excluding Tax and Installation) PV Payback Period: 4.83 years (Excluding Tax and Installation)

Optimized Case

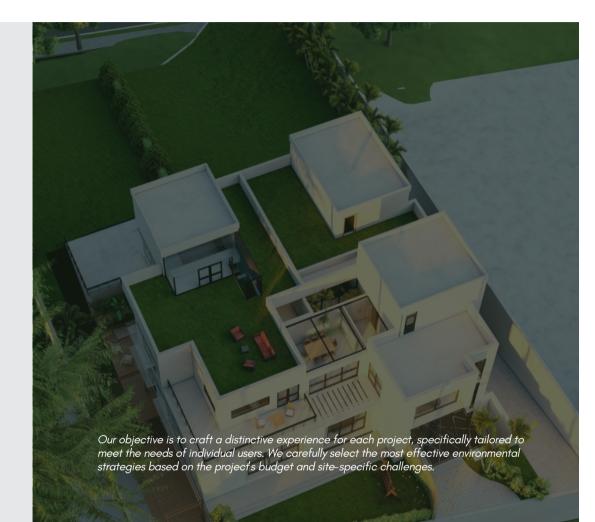
Consumption Per Year: 403,515 kWh PV Area Needed to cover 100%: 1,345 m2 PV Total Cost: 2,241,750 EGP (Excluding Tax and Installation) PV Payback Period: 4.83 years (Excluding Tax and Installation)

The proposed design interventions will help the client save around 101,647 EGP every year based on the assumption that the building operating hours are 12/5



Our Projects COMFORTABLE HOMES







Palma Pyramids

COMFORTABLE HOMES

Our services enhance your environment by providing both comfort and efficiency, focusing on sustainable solutions that surpass energy standards.

- Interior Renovation and Styling: We offer creative design services that tailor your interior spaces to reflect your unique style.
- Landscape Design and Implementation: Our team crafts plans for serene gardens or vibrant outdoor areas that complement your lifestyle.
- **Smart Home Integration:** We seamlessly integrate smart technology, enabling you to effortlessly control lighting, security, climate, and entertainment.
- **Custom Cabinetry and Woodworking:** Our skilled artisans create bespoke cabinetry and woodworking that combine sophistication with practicality in your home.

Each service is tailored to fulfill your specific requirements, ensuring a personalized experience. Contact us to start transforming your space!

The project proposes an asset division units concept to ease the sale leasing. A set of environmental strategies are integrated within the project tailored for each apartment

ENVIRONMENTAL CHALLENGES





GREEN CERTIFICATES



ROI = 10-15%

- Energy - Water - Habitat

advancing health and

well-being in buildings



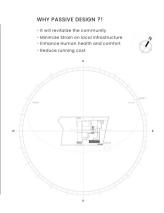
ROI = 20%



Initial Cost = 20% added

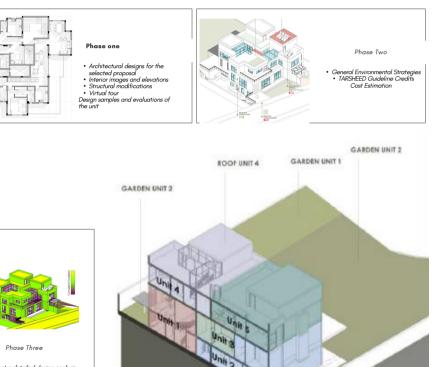


The ground floor part has a very high solar exposure and radiation as it's located in the SE and SW facades so it needs a passive strategy to enhance the indoor thermal comfort





PROJECT *PHASES*



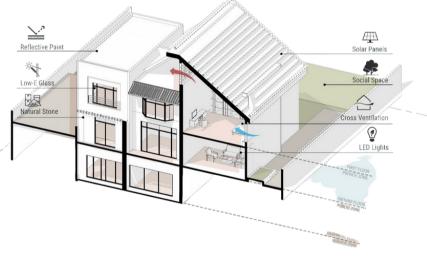
Conduct a detailed design analysis
Perform a thorough lighting analysis Evaluate energy performance







PROJECT **ANALYSIS**



The services offered include:

- Conceptual design for architectureDevelopment of design
- Summary of investment

GOLDEN GATES VILLA

COMFORTABLE HOMES



Our services encompass:

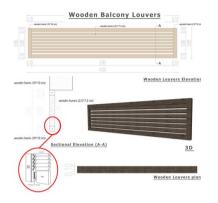
- Soothing and luxurious interior designs that seamlessly integrate natural elements.
- Utilizing architectural features and spatial design to enhance the health and wellbeing of occupants.
- Conducting thermal comfort analyses tailored to the activity levels within various spaces.
- Performing energy performance simulations aimed at reducing electrical consumption.

Executing lighting analyses to minimize operational costs based on functional requirements and user needs.









- Facade retrofitting

FACADE DESIGN





NORTH COAST VILLA



Services include:

Façade design Interior Design Site supervision



NORTH COAST VILLA



Our Projects **PRODUCTIVE OFFICES**





To create healthy work environments, we innovatively design office spaces that enhance spatial experiences by utilizing light, color, materials, and ventilation. This ensures that optimum comfort and productivity levels are achieved.

Our customized comfort solutions emphasize:

- Lighting
- Acoustics
- Efficient spatial distribution.



NOUR EL REFAI Studio

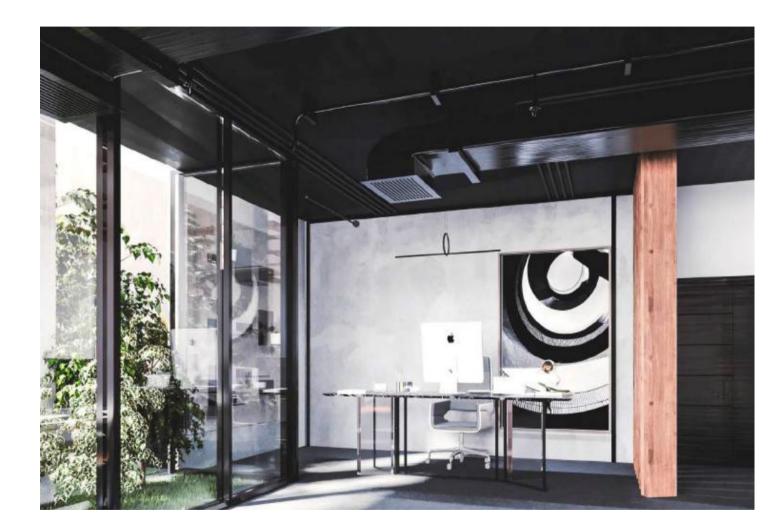
PRODUCTIVE OFFICES

Service includes

• Interior design concept

• Digital gallery design concept

As we attempt to envision how future workspaces would look like, this one is special. An immersive gallery and office for NOUR EL REFAI



Environas

We designed flexible spaces, shooting areas and lounges that integrates nature at every corner that are environmentally sound.

The lighting, acoustic, and thermal comfort analysis were conducted for an optimum performance of the spaces.





SUSTAINABLE BUILDINGS



Services include:

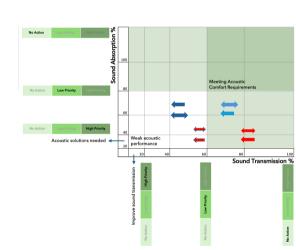
– Lighting analysis – Acoustics analysis



The role of energy efficiency and user comfort has been successfully achieved **at IlServier** through the collaboration of **Environas** and **Studioplus**.

Comprehensive lighting and acoustic analyses were performed to enhance the spatial qualities of the environment.





Services include:

- Acoustics analysis



The role of sound insulation and acoustic analysis was conducted for the BELTONE headquarters **in consideration to the** lighting and interior design installation.

Our Projects OUTDOOR SPACE DESIGN





Our outdoor space designs seamlessly integrate the beauty of materials with local greenery to create optimal landscaping solutions. We consider water consumption for irrigation, operational and maintenance requirements, and the microclimatic influences of the surrounding environment.

UPTOWN JEDDAH MASTER PLAN

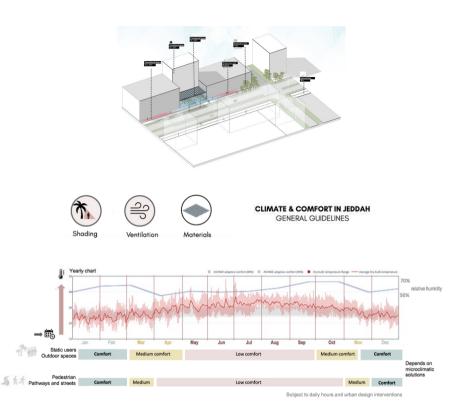
OUTDOOR SPACE DESIGN











Services offered include:

- Thermal comfort evaluation tailored to user activity levels in various spaces
- Microclimatic assessment of the urban master plan to analyze street orientation and geometry
- Analysis of walkability alongside thermal comfort

NEOM



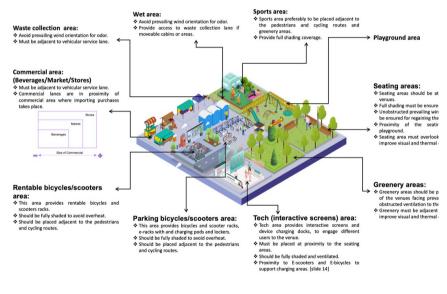
نيوم NEOM

Gulf of Aqaba Mobility Strategy

THERMAL COMFORT WALKABILITY AND CYCLING GUIDEBOOK



Venues Diagram Primary, Secondary, Transitional, Residence and Refugee



Gulf of Aqaba - Mobility Master Plan - February, 2023



COOLING STATION

OUTDOOR SPACE DESIGN







OUTDOOR SPACE DESIGN





SECONDARY ENTRANCE



Contact us



REQUEST A MEETING WITH US

\bigcirc Environas

contactus@environas.com

We'd love to hear from you. Tell us more about your upcoming project goals, how we can meet your business objectives, and guide your environmental impact.

Find us on social media

LinkedIn - Environas
 Youtube - Environas/youtube
 environas_

Our locations

Egypt

16 Badr Buildings, Ring Road, Sarayat El Maadi, Cairo, Egypt

UAE

5 Qroun At Tofouh St., Al Hisn, Building, Abu Dhabi, UAE

www.environas.com