



COMPANY PROFILE

GREEN AXIS

SUSTAINABLE · SAFE · SMART

Provide for Sustainable Agriculture, Safe Water
and Climate Solutions.

Engineering-led greenhouses, water treatment plants and renewable energy
systems designed, built and maintained in Bangladesh.

OFFICE

House #11, Road #24, Sector #10,
Uttara, Dhaka-1230, Bangladesh

FACTORY

Rajapara, Barua, Khilkhet,
Dhaka-1229, Bangladesh

CONTACT

+880 1751-644640
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WHO WE ARE

About Green Axis

Green Axis is an engineering and sustainability company dedicated to building climate-resilient solutions for agriculture, water and energy. We combine engineering expertise, environmental responsibility and practical execution to deliver systems that improve productivity, conserve natural resources and create long-term value for communities, industries and institutions.

Our work begins with understanding the land, water, climate and operational requirements of every project. We believe that every successful solution starts with engineering — not with a catalogue.



INTEGRATED ENGINEERING

Three core sectors, one engineering standard.

Sustainable Agriculture

Greenhouses, poly net houses, smart irrigation, rooftop farming and landscaping.

Safe Water

WTP, RO, STP, ETP and rainwater harvesting — from intake to distribution.

Green Energy

Solar power, wind energy, biogas and smart weather monitoring.

Our mission

To deliver engineering-driven solutions that strengthen food security, water security and energy resilience through sustainable technology, responsible execution and long-term client partnerships.

Our vision

To become a trusted regional leader in integrated climate, water, agricultural and renewable energy infrastructure — creating measurable environmental and social impact through engineering excellence.

Our commitment

To build systems that are technically sound, environmentally responsible and economically sustainable — engineering that performs today and creates value for the future.



OUR APPROACH

Why Green Axis

● Engineering first

Every solution starts with site data — soil, source water, load profile and climate — not with a product catalogue.

● Proven components

Internationally sourced pumps, membranes, films, controllers and inverters with documented warranties.

● Local support

In-country service team, spare-part inventory and annual maintenance contracts.

● Turnkey delivery

Design, supply, civil works, installation, commissioning and training delivered by one accountable team.

● Compliance ready

Water and effluent systems designed to meet WHO, DoE and Bangladesh discharge standards.

● Sustainable by design

Lower water, energy and chemical consumption over the full lifecycle of every installation.

SELECTED CLIENTS

Trusted by development partners, research institutes and agencies.

CCDB · BRAC · BARI · HEKS/EPER · BADC

COMPANY INFORMATION

Company name	Green Axis
Slogan	GreenAxis Provide for Sustainable Agriculture, Safe Water and Climate Solutions
Head office	House #11, Road #24, Sector #10, Uttara, Dhaka-1230, Bangladesh
Factory	Rajapara, Barua, Khilkhet, Dhaka-1229, Bangladesh
Phone	+880 1751-644640
Email	info@greenaxis.bd
Website	https://greenaxis.bd
Sectors	Sustainable Agriculture · Safe Water · Green Energy
Services	Design, engineering, supply, installation, commissioning & maintenance
Office hours	Saturday – Thursday, 9:00 AM – 6:00 PM

SECTOR

Sustainable Agriculture

Protected cultivation, precision irrigation and productive green spaces —
engineered for yield, quality and year-round output.

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- 01 Greenhouse
 - 02 Poly Net House
 - 03 Smart Irrigation System
 - 04 Rooftop Farming
 - 05 Landscaping



AGRICULTURE

Greenhouse

Year-round controlled-environment production



Purpose-built greenhouses with polycarbonate or glass glazing, motorised ventilation and integrated climate control — enabling year-round production of vegetables, flowers and seedlings with consistent quality regardless of outside weather.

OVERVIEW

- Custom-engineered steel structure with anti-corrosion galvanised finish
- Automated climate control for temperature, humidity, CO₂ and light
- Integrated fertigation and hydroponic-ready plumbing
- Suitable for exotic vegetables, floriculture and seedling nurseries

KEY FEATURES

- Polycarbonate & glass glazing
- Auto ventilation & cooling
- Year-round crop cycles
- 30-50% higher yield
- Fertigation ready
- Pest exclusion netting

TECHNICAL SPECIFICATION

Structure	Hot-dip galvanised steel truss
Glazing	6-10 mm polycarbonate / 4 mm glass
Span	6 m – 12 m clear span, up to 6 m ridge height
Ventilation	Ridge vents + fan-pad cooling
Automation	PLC / IoT climate controller
Design life	15+ years

APPLICATIONS

Exotic vegetables

Cut flowers

Seedling nurseries

Research & academia



AGRICULTURE

Poly Net House

Cost-effective protected cultivation



Tunnel-style polynet houses with UV-stabilised film and insect netting — ideal for high-value vegetables, nurseries and off-season farming. A cost-effective step up from open-field cultivation.

OVERVIEW

- Bamboo, GI pipe or hybrid structure options
- 200 micron UV-stabilised polythene, 3-5 year lifespan
- 40/50 mesh insect netting on sidewalls
- Fast erection — a 1000 sqm unit in 2-3 weeks

KEY FEATURES

- UV-stabilised polythene
- Insect & bird protection
- Better airflow & shade
- Low capex, fast payback
- Modular & expandable

TECHNICAL SPECIFICATION

Structure	GI pipe / bamboo tunnels
Film	200 micron UV-stabilised, anti-drip
Netting	40 mesh insect proof
Span	4 m – 8 m tunnel width
Height	3 m – 4.5 m ridge
Life	3-5 years film, 10+ years structure

APPLICATIONS

Off-season vegetables

Papaya, capsicum, tomato

Floriculture nurseries

Seedling raising



AGRICULTURE

Smart Irrigation System

Precision water & fertiliser delivery



Solar-powered drip and micro-sprinkler irrigation with soil-moisture sensors and mobile controls — delivering the right dose of water and fertiliser to every plant while saving up to 60% water and labour.

OVERVIEW

- Drip, micro-sprinkler and fertigation in a single design
- Soil-moisture, EC and weather sensors integrated
- Solar-powered controller for off-grid fields
- Mobile app scheduling with zone-wise control

KEY FEATURES

- Drip, sprinkler & fertigation
- Soil-moisture sensors
- Mobile app scheduling
- Up to 60% water saving
- Auto fertigation
- Frost protection mode

TECHNICAL SPECIFICATION

Emitters	2 / 4 / 8 LPH pressure-compensated drippers
Filtration	Screen + disc / sand filter
Controller	6–48 zone Wi-Fi / GSM controller
Sensors	Soil moisture, temperature, rain
Power	AC or solar + battery
Coverage	0.5 – 100+ acre

APPLICATIONS

Field crops

Orchards & vineyards

Greenhouses

Landscape lawns



AGRICULTURE

Rooftop Farming

Turn idle rooftops into productive gardens



Lightweight, waterproof rooftop farming systems for homes, schools and offices — turning idle roofs into productive kitchen gardens with vegetables, herbs and fruit, while cooling the building below.

OVERVIEW

- Waterproof membrane + root barrier protects the slab
- Lightweight grow beds — under 150 kg/m² fully loaded
- Drip irrigation with automatic timer
- Organic soil mix with slow-release fertiliser

KEY FEATURES

- Waterproof grow beds
- Lightweight modular design
- Fresh chemical-free produce
- Cooler indoor temperature
- Rain-fed with backup drip

TECHNICAL SPECIFICATION

Load	80–150 kg/m ² saturated
Bed depth	8" / 12" / 18"
Waterproofing	APP membrane + HDPE root barrier
Irrigation	Drip + timer / smart controller
Media	Cocopeat + vermicompost + perlite

APPLICATIONS

Residential rooftops

Schools & institutes

Corporate offices

Restaurants



AGRICULTURE

Landscaping

Design, build and maintain green spaces



End-to-end landscape design and execution for residences, corporate campuses, resorts and public spaces — combining native planting, lawns, water features and smart irrigation for lasting beauty with low maintenance.

OVERVIEW

- Concept design, 3D visualisation and detailed drawings
- Native & ornamental planting palettes
- Hardscaping — walkways, pergolas, water features
- Annual maintenance contracts available

KEY FEATURES

- Concept to execution
- Native & ornamental planting
- Lawns, walkways & lighting
- Automated irrigation
- Water features
- Annual maintenance

TECHNICAL SPECIFICATION

Services	Design, build, maintain
Softscape	Trees, shrubs, lawns, groundcovers
Hardscape	Paving, decks, pergolas, lighting
Irrigation	Automatic pop-up + drip

APPLICATIONS

Residential gardens

Corporate campuses

Resorts & hotels

Public parks

SECTOR

Safe Water

Potable water, process water and wastewater systems — from raw intake to compliant discharge and reuse.

- 01 Water Treatment Plant (WTP)
- 02 RO (Reverse Osmosis) Plant
- 03 STP (Sewage Treatment Plant)
- 04 ETP (Effluent Treatment Plant)
- 05 Rainwater Harvesting



WATER

Water Treatment Plant (WTP)

Turnkey potable water production



Turnkey water treatment plants for municipalities, factories and townships — combining coagulation, multimedia filtration, activated carbon and disinfection to deliver safe, potable water that meets WHO and Bangladesh standards.

OVERVIEW

- Raw water intake, coagulation & clarification
- Multimedia + activated carbon filtration
- UV / chlorine disinfection
- SCADA monitoring with remote alarms

KEY FEATURES

- Coagulation & clarification
- Sand + carbon filtration
- UV / chlorine disinfection
- SCADA monitoring
- Automatic backwash
- Low chemical consumption

TECHNICAL SPECIFICATION

Capacity	5 m ³ /hr – 500 m ³ /hr
Filtration	Sand + anthracite + GAC
Disinfection	UV + chlorine dosing
Output quality	WHO / BD potable standard
Control	PLC + SCADA + remote HMI

APPLICATIONS

Municipal supply

Townships & campuses

Industrial process water

Hospitals & hotels



WATER

RO (Reverse Osmosis) Plant

High-purity water at any scale



High-capacity reverse osmosis systems for industries, communities and commercial buildings — delivering consistent, high-purity water with fully automated PLC controls, high-rejection membranes and remote monitoring.

OVERVIEW

- Pre-treatment: sand + carbon + softener + micron filters
- High-rejection thin-film composite RO membranes
- PLC + HMI automation with data logging
- CIP (clean-in-place) and antiscalant dosing built in

KEY FEATURES

- 1–100 m³/hr capacity
- High-rejection RO membranes
- PLC + HMI automation
- CIP & antiscalant dosing
- Energy-recovery devices
- Remote monitoring

TECHNICAL SPECIFICATION

Capacity	500 LPH – 100 m ³ /hr
Recovery	50–75% depending on feed
Rejection	97–99% TDS
Membrane	TFC BW / SW spiral-wound
Control	PLC + HMI + IoT remote
Feed TDS	Up to 40,000 ppm (SW-RO)

APPLICATIONS

Textile & dyeing

Pharmaceutical & food

Power plants

Drinking water utilities

Seawater desalination



WATER

STP (Sewage Treatment Plant)

Reuse-ready wastewater treatment



Packaged and civil STP solutions for apartments, factories and commercial buildings — using MBBR, SBR or MBR technology to treat sewage into safe, reusable water for gardening, flushing and cooling towers.

OVERVIEW

- Screening + equalisation + biological treatment
- MBBR / SBR / MBR technology options
- Tertiary filtration + disinfection for reuse
- Odour-controlled and low-noise operation

KEY FEATURES

- MBBR / SBR / MBR technology
- Odour-free operation
- Low sludge generation
- Reusable treated water
- Fully automated
- Compact packaged units

TECHNICAL SPECIFICATION

Capacity	5 KLD - 5 MLD
Technology	MBBR / SBR / MBR / FAB
BOD outlet	< 10 mg/L
COD outlet	< 50 mg/L
TSS outlet	< 10 mg/L

APPLICATIONS

Apartments & townships

Hotels & resorts

Factories

Hospitals



WATER

ETP (Effluent Treatment Plant)

Compliant industrial effluent treatment



Industrial ETPs for textile dyeing, tannery, chemical and food processing plants — combining physical, chemical and biological stages to meet DoE discharge standards and enable water recycling.

OVERVIEW

- Physical (screening, equalisation) + chemical (coagulation) stages
- Biological (aeration + clarification) treatment
- Tertiary polishing for colour & COD reduction
- Sludge dewatering with filter press

KEY FEATURES

- Physico-chemical + biological
- Colour & COD reduction
- Sludge handling & drying
- DoE compliance ready
- Zero liquid discharge option
- Online monitoring

TECHNICAL SPECIFICATION

Capacity	10 KLD – 10 MLD
Stages	Physico-chemical + biological + tertiary
Colour reduction	> 90%
COD reduction	> 92%
Compliance	DoE Bangladesh / ZDHC

APPLICATIONS

Textile & dyeing

Tannery

Chemical & pharma

Food & beverage



WATER

Rainwater Harvesting

Free, resilient rainwater supply



Rooftop rainwater harvesting systems with first-flush diverters, filtration and underground storage — reducing dependency on groundwater, cutting utility bills and recharging aquifers.

OVERVIEW

- Rooftop catchment design and gutter sizing
- First-flush diverter removes initial dirty flow
- Multi-stage filtration + storage sizing
- Groundwater recharge pit option

KEY FEATURES

- Rooftop catchment design
- First-flush & filtration
- Underground / overhead storage
- Groundwater recharge pits
- Non-potable & potable options

TECHNICAL SPECIFICATION

Catchment	50 – 20,000 m ² rooftop
Storage	1,000 L – 500,000 L (RCC / HDPE)
Filtration	Leaf + sand + carbon
Recharge	Bore-well or trench pit

APPLICATIONS

Residential buildings

Schools & campuses

Factories & warehouses

Farms

SECTOR

Green Energy

Solar, wind, biogas and smart monitoring — clean generation and measurable energy savings.

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- 01 Smart Weather Station
 - 02 Solar Energy System
 - 03 Wind Turbine Energy System
 - 04 Biogas Project



GREEN ENERGY

Smart Weather Station

Live agri-climate data at your fingertips



Solar-powered automatic weather stations that measure temperature, humidity, rainfall, wind speed & direction, solar radiation and soil moisture — streaming live data to your phone and helping farmers, researchers and industries make precise, timely decisions.

OVERVIEW

- 8+ integrated agri-climate sensors
- Solar panel + battery for 24/7 uptime
- GSM / LoRa data transmission
- Web + mobile dashboard with alerts

KEY FEATURES

- 8+ agri-climate sensors
- Solar powered, wireless
- Live mobile dashboard
- Rain, wind & frost alerts
- API for integration

TECHNICAL SPECIFICATION

Sensors	Temp, RH, rain, wind (S+D), solar, soil, pressure
Accuracy	± 0.3 °C, $\pm 2\%$ RH, ± 0.2 mm rain
Comms	4G / LoRa / Wi-Fi
Power	20 W solar + 12 V battery
Logger	1 min - 60 min interval

APPLICATIONS

Farms & greenhouses

Research stations

Airports & solar plants

Disaster monitoring



GREEN ENERGY

Solar Energy System

Cut power bills, cut carbon



On-grid, off-grid and hybrid solar power plants for homes, irrigation pumps, factories and rooftops — engineered with tier-1 modules, MPPT inverters and lithium storage to cut electricity bills by up to 80% and reduce carbon emissions.

OVERVIEW

- Site survey, shadow analysis and yield modelling
- Tier-1 monocrystalline PERC modules
- MPPT string / hybrid inverters
- Optional lithium storage for backup

KEY FEATURES

- Tier-1 PV modules
- On-grid / off-grid / hybrid
- Lithium battery storage
- Net-metering support
- Remote monitoring app

TECHNICAL SPECIFICATION

Capacity	1 kW – 5 MW
Modules	Tier-1 mono PERC, 540–620 W
Inverter	On-grid / off-grid / hybrid MPPT
Battery	LiFePO ₄ , 5–20 kWh (optional)
Life	25 yr modules, 10 yr inverter

APPLICATIONS

Home rooftops

Factories & warehouses

Solar irrigation pumps

Telecom towers



GREEN ENERGY

Wind Turbine Energy System

Clean electricity around the clock



Small and mid-scale wind turbines for coastal belts, char lands and industrial zones — deployed as standalone or hybrid solar-wind systems to deliver clean, round-the-clock renewable electricity even after sunset.

OVERVIEW

- Horizontal & vertical axis turbine options
- Cut-in from 2.5 m/s wind speed
- Hybrid controller with solar integration
- Low-noise, bird-safe blade design

KEY FEATURES

- Horizontal & vertical axis turbines
- Solar-wind hybrid ready
- 1 kW – 100 kW capacities
- Low-noise, low-vibration design
- Grid-tie or off-grid

TECHNICAL SPECIFICATION

Capacity	1 kW – 100 kW
Cut-in speed	2.5 m/s
Rated speed	10–12 m/s
Tower height	9 m – 30 m
Life	20+ years

APPLICATIONS

- Coastal farms
- Char land communities
- Telecom towers
- Industrial parks



GREEN ENERGY

Biogas Project

Waste to clean cooking gas & fertiliser



Turnkey biogas plants that convert cattle dung, poultry litter, kitchen waste and agri-residues into clean cooking gas, electricity and organic slurry fertiliser — cutting fuel costs and methane emissions on farms, dairies and communities.

OVERVIEW

- Fixed-dome, floating-drum and pre-fabricated modular designs
- 1 m³ – 500 m³ daily gas production
- Automatic mixing, feeding and gas storage
- By-product: nutrient-rich organic bio-slurry fertiliser

KEY FEATURES

- Modular & pre-fabricated options
- Cooking, lighting & power generation
- Organic bio-slurry fertiliser
- Reduces methane emissions
- Low O&M cost

TECHNICAL SPECIFICATION

Capacity	1 m ³ – 500 m ³ gas/day
Feedstock	Cattle dung, poultry litter, food & agri waste
Digester	Fixed dome / floating drum / HDPE modular
Retention	30–45 days HRT
Output	Cooking gas, generator fuel, bio-slurry
Life	20+ years (masonry) / 10+ years (HDPE)

APPLICATIONS

Dairy & poultry farms

Rural households & communities

Food processing units

Municipal organic waste



LET'S WORK TOGETHER

Let's build sustainable solutions together.

Partner with Green Axis for engineering-led solutions in Sustainable Agriculture, Safe Water and Green Energy.

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