

Waste 3R (W3R) was established with a Vision to source and implement environmental friendly & energy saving technologies along with non-toxic chemical supply. Since its inception, Waste 3R (W3R) has grown from strength to strength while progressing from one success to another higher level of success. Waste 3R (W3R) is a well-established, dynamic and professionally managed organization with years of experience and perfect Blend of People, Technology and Service.

Waste 3R (W3R) has the entire relevant infrastructure for Consultancy, Designing, Drawing, Detail Engineering, Supply Fabrication, Servicing, Testing, Installation, Commissioning, and Operation & Maintenance of all quality products. Waste 3R (W3R) is a well-acknowledged company ensuring “Professionalism” “Guaranteed Quality” and customer satisfaction having a strong client base which includes projects from major private companies as well as government, PPP and World Bank and covers the spectrum of industries like Textile- Dyeing, Washing, Denim, Printing, Refinery, Petrochemicals, Pulp & Paper, Chemicals, Food Product, Sugar, Pharmaceutical, Automobiles etc. W3R also provides environmental consultation for preparing Environmental Impact Assessment (EIA), Initial Environmental Examination (IEE) and Environmental Management Plan (EMP).

Waste 3R (W3R) Concerns-



Waste 3R Solutions Ltd. (W3RS)

Waste 3R Engineering & Solutions Ltd. (W3RES)



Company Background

WASTE 3R (W3R) began its brand name WC with a Vision to Source and Create a potential Distribution channel of Environment Friendly products such as Chemicals, Machineries & Accessories focusing on Industrial, Commercial and Domestic Sectors.

With an emerging necessity for wastewater management and convenient technologies for achieving a sustainable environment, Bangladesh has grown a huge demand for environmental solutions. Therefore, Waste 3R (W3R) started its journey to provide state of the art environment friendly solutions blended with latest technologies. Our company has always had an international outlook and has always-paid special attention to expertise and Professional training, as we consider them an integral part of our Quality Management System. Innovation does not consist of brilliant ideas alone; laboratory and in-field tests are required to develop our value added product and service. Utilizing a decade of experience in Environmental engineering along with strong research and logistic support W3R aims to offer a 360° solution with the best intention to benefit its client.

W3R services are developed to give solutions to industries like Textile- Dyeing, Washing, Denim, Printing, Refinery, Petrochemicals, Medical, Pulp & Paper, Chemicals, Food Product, Sugar, Pharmaceutical, Automobiles, Municipal, City Corporation etc. It also provides environmental consultation for preparing Environmental Impact Assessment (EIA), Initial Environmental Examination (IEE) and Environmental Management Plan (EMP).

Mission

To innovate and integrate eco-friendly, pollution free and cost effective wastewater management solutions consisting advance technology for positive environmental outcome and being an excellence for the nation.

Vision

To be a Leading Bangladeshi Organization of highly professionals dedicated to extend VALUE ADDITION in the expertise field of Environmental Engineering.

Commitment

We are committed as industry's leading water & environmental solution service provider, specializing supply of membrane, membrane related products, environmental monitoring products and providing integrated engineering design and construction services.

Environmental resources like clean water and air are precious assets not only for our generation but to be passed down to our children. The impacts of increasing population, demand, global warming and climatic changes have greatly magnified the importance of protecting these environmental assets. W3R believes in the value of protecting these resources by developing better technologies and solutions to assist our planet.

Our Team

We draw our energy and creativity from working together. As an organization, we foster teamwork through our highly effective international practice structure, while retaining strong local capabilities in each of our activities we carry out by the followings individual teams:



Civil Engineering



Mechanical Engineering



Chemical Engineering



Environmental Engineering



Electrical Engineering



Process Engineering & Service



As an organization owning a complete package of above expertise, Waste 3R (W3R) aims to carry out a successful and effective water & wastewater treatment solution optimizing all its resources.

Services & Training

Waste 3R Engineering & Solutions Ltd. (W3RES)

Industrial Waste Water Treatment (ETP)

Waste 3R Engineering & Solutions Ltd. (W3RES) has introduced local engineering based Wastewater Treatment Plant in Bangladesh. It has a wide range of experience of installing a large number of Effluent Treatment Plants (ETP) in different type of industries. The activities involved the design, construction supervision, commissioning, monitoring after commissioning and training for company staffs regarding the operation & maintenance of ETP.

Waste 3R Engineering & Solutions Ltd. (W3RES) has installed ETPs of different methodology depending on the type of wastewater generated from different process industries. It has also introduced different technologies like “Flow Segregation” method, Sequential Batch Reactor (SBR), Moving Bed Biofilm Reactor (MBBR) technology, Membrane Bio Reactor (MBR) etc.

Waste 3R Engineering & Solutions Ltd. (W3RES) was also involved in different government and World Bank projects like Hathazari 100 MW Peaking Power Plant ETP, Kaliakoir Hi- Tech Park Project (World Bank Project).

Waste 3R Solutions Ltd. (W3RS)

Environmental Management & Documentation

Waste 3R Solutions Ltd. (W3RS) works as an environmental consultancy firm for preparing environmental reports like Environmental Impact Assessments (EIA), Environmental Management

Plan (EMP). It is also a pioneer of preparing Environmental & Social Impact Assessment (ESIA), complying with the environmental & social guideline of World Bank.

W3R Solutions

- Water Management Engineering
- Indigo Dye Recovery Systems.
- Causti-COR Systems.
- PVA Recovery Systems.
- Water Treatment Plant (WTP)
- Effluent Treatment Plant (ETP)
 - o Membrane Bio Reactor (MBR)
 - o Conventional Biological Treatment
 - o MBBR
 - o Bio Chemical Treatment Plant
 - o Central Effluent Treatment Plant (CETP)
- Sewage Treatment Plant (STP)
- Reverse Osmosis (RO)
- Ultrafiltration (UF)
- Zero Liquid Discharge (ZLD)

Sector We Serve

1. Textile
2. Leather
3. Food and Beverage
4. Commercial & Institutional
5. Drinking Water
6. Municipal
7. Pharmaceuticals
8. Pulp & paper
9. Environmental Consultancy



Textile



Leather



Food & Beverage



Commercial & Institutional



Drinking Water



Municipal



Pharmaceutical



Pulp & Paper



Environmental Consultancy

W3R Collaborations

Membrane Systems Partnership

W3R Is Jointly Providing State of the Art Water Solutions with Koch Membrane System (KMS), USA by Using Hollow Fiber Membrane to Achieve Effective and Sustainable Treatment.

As a world-class manufacturer of innovative membrane filtration solutions, KMS is the global resource for advanced membrane technology, custom-engineered systems and exceptional customer support. KMS is focused on helping thousands of its customers to recover high value products, reduce their water footprint, increase productivity, and reduce costs.



KOCH Membrane System, USA

Hollow Fiber Membrane

There are over 125 different products in KMS hollow-fiber line, made for applications with a moderate level of suspended solids. Our Hollow-Fiber membranes include pressurized and submerged products, operating in Inside-Out or Outside-In direction.



Research Partner

W3R is jointly working with EsTex, Buettanagar, for environmental research work, wastewater solution development and technological promotion along with laboratory & on field test support.

The annual exports value of textile sector in Bangladesh being so high, there has been a rise in demand for chemicals, hence comprehensive survey work on chemical sustainability and capacity building in chemical use and waste management are required. W3R and EsTex, Buettanagar is working together to achieve solutions for a sustainable sectoral growth against increasing chemical demand.



EsTex, BUET

Press Release

KSS is pleased to announce a Partnership with Waste 3R Engineering & Solutions (W3RES)

-October 23, 2020; KOCH NEWS-ARTICLE

“The partnership agreement will function to serve the local Bangladesh markets to achieve the recycling and reuse by leveraging Koch’s state-of-the-art membrane products and systems combined with W3RES’ local presence and technical expertise that will help serve the end-users closely & efficiently,”

- Palani Mudaliar, KSS Regional Sales Manager.

Koch Separation Solutions (KSS) is excited to announce a partnership with Waste 3R Engineering & Solutions (W3RES) to promote KSS’ advanced separation technologies for industrial water and wastewater projects across Bangladesh.

W3RES offers turnkey design, supply, installation, and commissioning of complete water and wastewater solutions and will work with KSS to introduce membrane products and systems for a wide range of industrial sectors which include, but are not limited to, life science, automotive, chemical, and food and beverage markets. This partnership will drive sustainability initiatives as well as tackle in-process recovery challenges, such as indigo dye and caustic recovery in textile operations.

“The partnership agreement will function to serve the local Bangladesh markets to achieve the recycling and reuse by leveraging Koch’s state-of-the-art membrane products

and systems combined with W3RES’ local presence and technical expertise that will help serve the end-users closely & efficiently,” says Palani Mudaliar, KSS Regional Sales Manager.

“W3RES is excited to have KSS as a technological partner in this journey. Koch has a long experience, high reputation, global acceptance and a wide range of membrane-based products to reduce pollution load downstream and to help in resource recovery to make the production process compliant, efficient and economic. The collaboration between W3RES and KSS will surely help industrial and government sectors to implement prudent environmental management solutions and to ensure a sustainable economy,” says Md Arshed, W3RES Managing Director.

For more information, please visit KSS at www.kochseparation.com and Waste 3R Solutions at www.w3rs.com

CONTACTS



www.w3rs.com

Palani Mudaliar
Regional Sales Manager
Koch Separation Solutions
mudaliarp@kochsep.com

rana@w3rs.com, +88-02-8170653

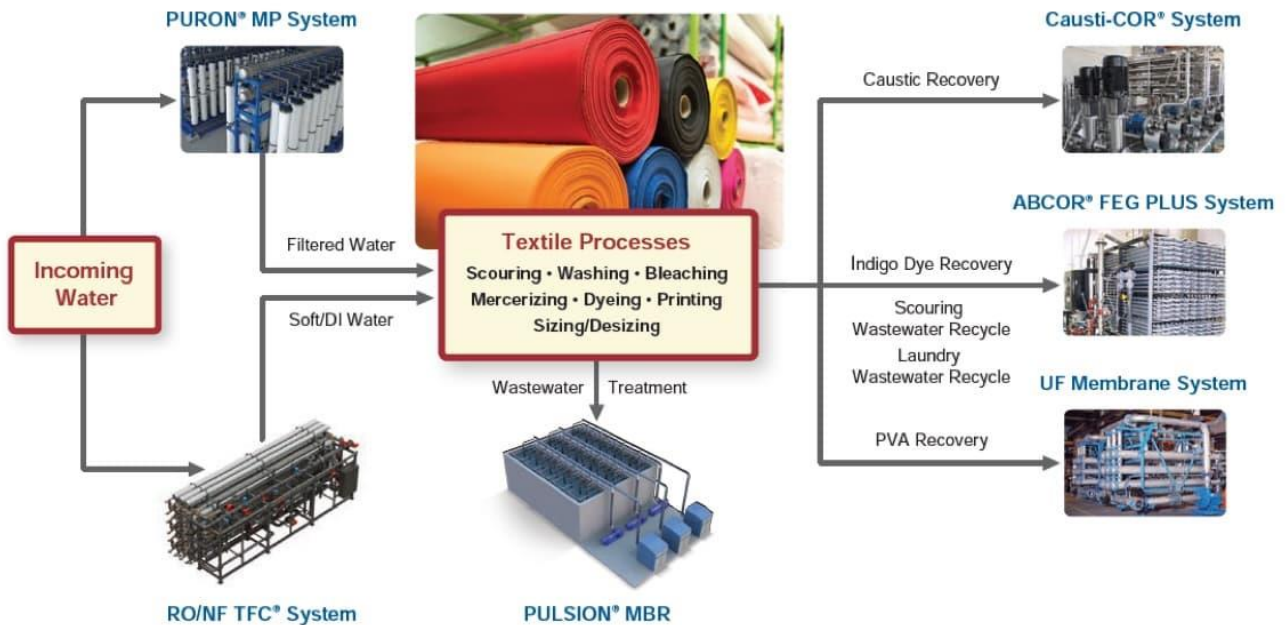


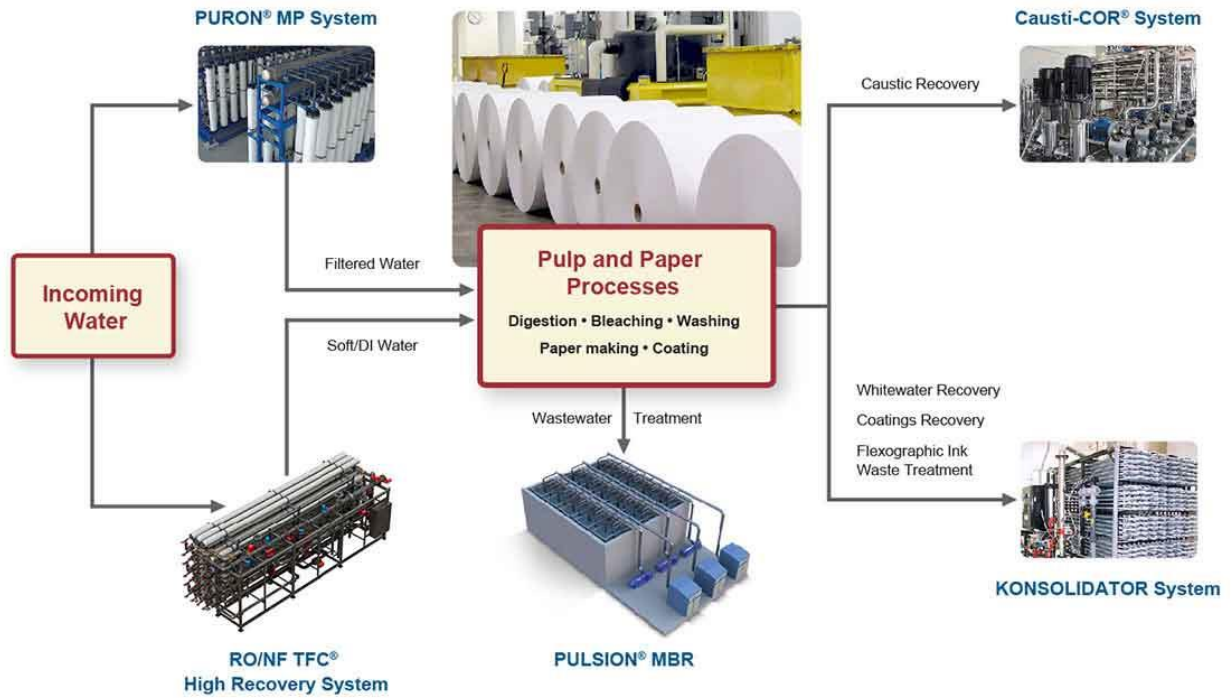
Md. Masud Rana Shahin
General Manager
Waste 3R Solutions
rana@w3rs.com

[illegible]

W3RES and KOCH Membrane Systems are jointly providing solutions for cleaner water. KMS (KOCH Membrane Systems) membrane separation technologies are used to concentrate, clarify and purify liquids, and recapture valued materials across diverse industries to increase yield and reduce waste.

Whether you are purifying water or wastewater for reuse, discharge or potable purposes on the front and back end of your operations, we customize advanced filtration systems to help you achieve environmental sustainability.



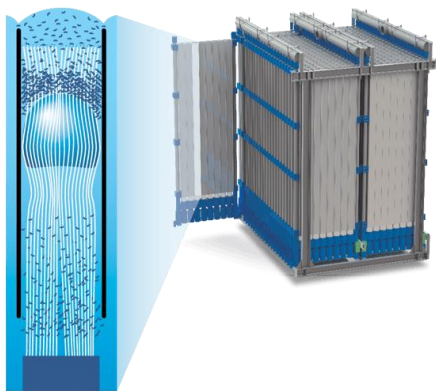


KMS Membrane Categories

PURON MBR & PULSION MBR Modules

PURON MBR





The single-header ultrafiltration PURON membrane bioreactor changed industrial and municipal wastewater treatment. This patented module features reinforced PVDF hollow fibers that are fixed only at the bottom, virtually eliminating the clogging buildup of hair, fibrous materials and sludge solids. Solids and particulates, including bacteria, remain on the outside, while permeate is drawn through the membrane to the inside of the fibers. The aeration nozzle is centered in the fiber bundle to scour the entire fiber length, minimizing power consumption.

PULSION MBR

The next generation of PURON MBR, PULSION MBR modules offer up to 40% aeration energy reduction and 25% footprint reduction. This innovation pulses a large bubble through a chambered fiber bundle, creating a piston-like pumping action that results in lower

air and aeration energy requirements than traditional scouring methods. Improved recirculation of mixed liquor in the membrane module boosts achievable fluxes and overall performance.

PURON HF & PURON MP Modules

PURON HF (High Flow)

An evolution of the PURON MBR modules, the PURON HF series is ideal for tertiary applications including RO pretreatment and surface water treatment. With system recoveries of more than 95%, the PURON HF produces consistent, high-quality effluent that meets or exceeds most regulatory requirements.



PURON MP

PURON MP pressurized hollow-fiber ultrafiltration provide a cost-effective solution for a variety of water and wastewater treatment applications. The system's high flux and solids tolerance properties eliminate the need for costly pretreatment and chemical cleans while producing high-quality effluent and meeting stringent regulatory targets, including drinking water LT2 specifications.



Polyester reinforced PVDF membranes and a unique single-potting design help to avoid downtime. Performance, simplified operation, reduced maintenance and compact footprint add up to one cost-effective filtration solution.

REMICON SERIES

Based on polysulfone (PS) chemistry, our ROMICON® hollow-fiber cartridges are performance leaders in a variety of industrial biotechnology and general industry applications. ROMICON® cartridges utilize Inside out fibers of wide range of pore sizes and fiber diameters. The fiber lumen (inner diameter) can be adjusted to best suit the solids tolerance required for each process.

ROMIPRO HOLLOW-FIBER CARTRIDGES

Designed to meet the most stringent regulations in the pharmaceutical industry, all ROMIPRO cartridge components have passed USP Class VI test guidelines. Each cartridge ships with a Certificate of Quality.



VINEGAR AND CITRUS HOLLOW-FIBER CARTRIDGES

Made for the acidic environments of vinegar and citrus juice filtration, these cartridges provide high filtration yield with low risk of fiber plugging. They are easy to clean and conform with food processing regulations and practices.



TARGA II CARTRIDGES

The TARGA II membrane provides safe, high-quality solutions for drinking water, seawater pretreatment, industrial water treatment and tertiary wastewater treatment. The product is based on polyether sulfone (PES) chemistry to provide chlorine tolerance. Ideally suited to meet drinking water requirements, the TARGA II membrane achieves 4-log virus removal. TARGA® II systems are fully automated, featuring intelligent process controls to handle fluctuating feed flow with minimal operator intervention.

WINEFILTER and BEERFILTER

WINEFILTER hollow-fiber cartridges

Engineered for advanced crossflow filtration, our WINEFILTER cartridges are known for producing high-quality, clarified and stabilized wines full of aromas and rich in color. The microfiltration WINEFILTER membrane was optimized to maintain the unique character of each wine, producing clear and stable wines without using additives.



BEERFILTER hollow-fiber cartridges

The advanced microfiltration of KMS BEERFILTER hollow-fiber cartridges removes only undesirable suspended solids without affecting bitterness, aroma, color, taste or foam stability of the final shelf-stable product. The cartridges produce consistent, high-quality beer from start to end of the filtration run.



Industrial Solution

W3RES is a Complete Water & Wastewater Solution Provider

It is observed that the dominant barriers to ETP installation generally occurs at the purchase stage, rather than the construction stage. As no design and engineering solutions of ETP are available in local markets, the solution provider is mostly foreign based. W3R Steps in to change this scenario and offer a complete wastewater solution.



Effluent Treatment Plant

Wastewater treatment for the industrial sector requires an in-depth understanding of industry-specific production process, compliance and chemical processes, and higher level of expertise to ensure maximum quality effluent discharge and reuse up to Zero Liquid Discharge.

- Bio Chemical
- Biological
- MBR
- MBBR

Reverse Osmosis

Taking ETP effluent quality for further purification W3R offers highest quality Reverse Osmosis (RO) solution for effective elimination of bacteria, virus and coliforms from effluent.

- Water Recycle
- Clean water for production
- Direct use in production process

Zero Liquid Discharge

W3R offers ZLD technologies with related equipment and proper services for potential treatment plants to

- Eliminate Liquid Discharge
- Recover valuable process water
- Reduce Industries' Environmental Impact

Municipal Solution

Sewage poses potential COVID-19 transmission risk

[Environmental biologists at the UNIVERSITY OF STIRLING have warned that the potential spread of COVID-19 via sewage must not be neglected in the battle to protect human health. The response to the global pandemic has focused upon preventing person-to-person transmission, however, experts now believe the virus could also be spread in wastewater.]

Large Scale Solution and Retrofits

W3R solutions, based upon highly advanced biological processes, enable municipal clients to deal with a variety of challenges, such as strict nutrient removal standards as well as space limitations and produce high quality effluent for discharge or reuse. The solutions may be implemented within an existing wastewater treatment plant, or designed and constructed as greenfield plants in a number of configurations, depending on local condition and requirements.



Small & Medium Scale Solutions

W3R offers compact, easy to deploy and simple to operate package plants. The package plants are offered as pre-assembled or containerized units, which are designed to take advantage of the simplicity and small footprint of advanced technology. W3R package plant provide a perfect solution for clients in remote or isolated locations who requires to treat and dispose of wastewater with minimal operator attention.



Treat Sewage before discharge to environment through Sewage Treatment Plant.

We, Waste 3R Engineering & Solutions Ltd, waiting for one easy call from you to provide appropriate STP Solutions in Residential Building, Commercial, Institutional and Industrial Segment, as per your requirement.

Value Proposition

- Prefabricated Plug & Play Sewage Treatment Plant.
- Simplicity of operation
- High Biological Nutrient Removal capabilities.
- Ideal retrofit solution for minimal civil work.

Waste Incinerator

Waste incineration is a treatment process that involves the combustion of organic substances contained in waste materials by means of high temperatures. Waste incineration transforms waste into a small amount of ashes, flue gas and heat, which can be further used as energy for other processes.

W3R is providing highest quality *incinerators*

- Hospital Waste Incinerator
- Medical Waste Incinerator
- Industrial Waste Incinerator
- Household Waste Incinerator



Application

1. Hospital medical waste: Bandage, Paper/ Injection Syringe/ Drop Bottle, expired drugs, infectious viscera, etc.
2. Infectious diseased animal body/fur/hair, widely used in pets' carcasses disposal: pig, dog, cat, fish, chicken, cattle, duck, etc.
3. Domestic daily home waste.
4. Disposable plastic waste.
5. Some other industrial waste.

Main Features

- Gasified incineration is used for burning many kinds of waste.
- Both gas-motivated and oil-motivated are all can be preferred according to customers' needs.
- Daily waste can be burned once by gasified incineration.
- Gasified incineration, mixed incineration and burnout treatment ensures low emission standard of dust, dioxin etc. (lower than International standard).
- Totally enclosed operation is suitable for treating infectious waste to avoid secondary pollution. Compact structure and small land occupation.

Value Propositions

- Long lifetime
- Totally enclosed operation
- Suitable for treating many kinds of solid waste
- Avoid secondary pollution
- Simple operation

Challenges of Foreign Solutions / Supply to Local Industries

There are numbers of active foreign companies are doing business in Water & Waste Water Treatment Solutions segments in Bangladesh. Mostly they are designing and supplying equipment. The challenges over here is every industry has different type of effluent than other similar industries. So, the solution should be customized as per generation of effluent quality. But here foreign suppliers are supplying Standard ETP rather than actual requirement. Now, here questions come on sustainable treatment method. Basic key challenges of foreign designing and supplying are as follows

- Not understating the actual treatment method for individual customer.
- No involvement of customer, while designing their ETP.
- Technology is not transferring to Customer.
- No proper training provided to customer ETP operators.
- Unnecessary equipment / process provided for Solution, which impacts on customer's capital and operating cost.
- For further ETP modification, customer depend on supplier only.
- Spare parts are not available in local market.
- Very poor after sales service.

For the above challenges, although customer invested a lot for capital & civil constructions, but ultimate stable treatment process is not establishing. Technological Failure impacts customer as well as our environment.

To build an ETP it's require huge area and costly civil work. It is very difficult to modify heavy civil work, if the process not functioning properly. This is why in our country, most of the ETP's are not functional or not meeting the all discharge parameter of waste water. Foreign suppliers are making money by providing one time solutions, as for the lake of local technical team have not developed yet.

W3R Dimensions

- In house engineering design
- Customer involvement in design stage
- In house process design.
- Actual and customized solution as per customer requirement.
- In house documentation.
- In house civil drawing.
- Equipment Supply
- Supervision of work progress
- Civil Construction
- Installation & Commissioning
- Process Test
- Operational Training
- Hand over
- Contract on operation & maintenance
- After Sales Service.



Waste 3R Solutions Ltd. (W3RS)

Waste 3R Engineering & Solutions Ltd. (W3RES)

388, TEJGAON INDUSTRIAL AREA,
DHAKA-1208, BANGLADESH

Tel: +88 02 8170653;

Mob: 0174 373 2295

Web: www.w3rs.com