# MODULAR TREATMENT RANGE

## Mega Modular

**Nanofiltration Plant**

**0.5ML<2.5ML** / DAY

| Nano-Filtration Table of Treatment | | | |
|---|---|---|---|
| **Parameter** | | **Raw Water** | **Final Water** |
| **pH** | – | 2.0 > 9.5 | Typically 8.0 |
| **Turbidity** | FTU | Max. 10 | Less than 0.2 |
| **Colour** | Deg H | Max. 430 | Less than 2 |
| **Iron** | µg/l | Max. 3670 | Less than 7 |
| **Total Mn** | µg/l | Max. 430 | Less than 10 |
| **Total Al** | µg/l | Max. 860 | Less than 9 |
| **Susp Solids** | mg/l | Max. 5.0 | trace |
| **TOC** | mg/l | Max. 43 | Less than 10 |

THE MODULAR

# WATER TREATMENT

EXPERTS

A range of robust solutions based on Nanofiltration treatment for the supply of excellent quality water from extremely poor quality raw water sources. This range is particularly suited to municipal water supplies and industrial applications.

Each plant is comprised of modular skids which are fabricated and fully dry assembled including interconnections within our purpose built facility before shipping to site for installation within a portal frame building. All terminations and civil interfaces are accurately surveyed, confirmed and verified before leaving our premises.

### Our mega modular treatment range includes the following as standard

- BIM compliant autodesk inventor 3D model
- Factory pre assembly
- Duty/standby plant and equipment
- Water quality sampling instruments
- Integrated HMI (human machineinterface)
- Telemetry
- IMCC intelligent motor control centre)
- Profibus communications network
- Remote plant control

### The following ancillaries / enhancements can be provided

- Reverse osmosis
- Chloramination
- SCADA
- Plumbosolvency dosing
- UV disinfection

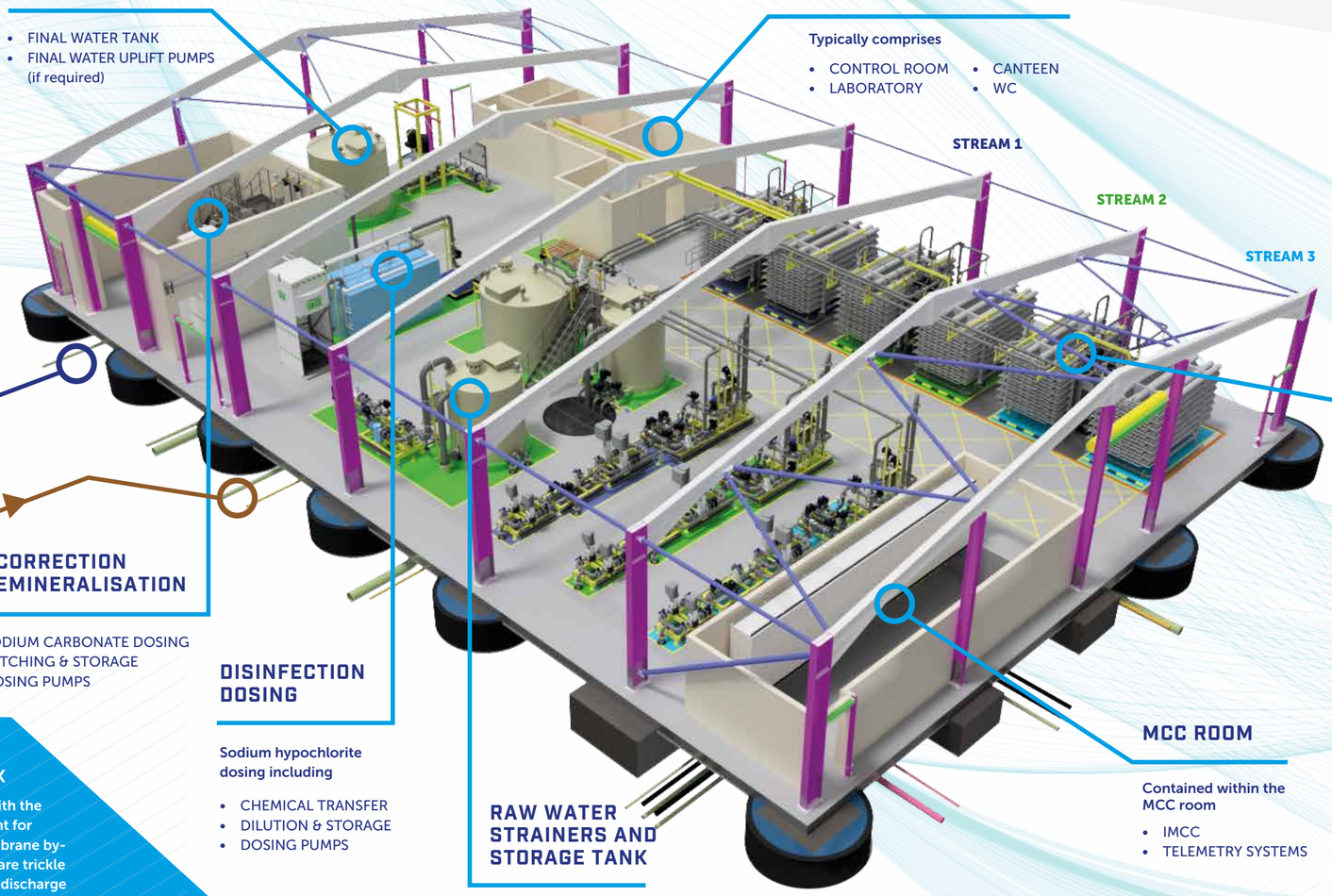
### FINAL WATER COLLECTION AND TRANSFER

- FINAL WATER TANK
- FINAL WATER UPLIFT PUMPS (if required)

### MESS FACILITIES

**Typically comprises**

- CONTROL ROOM
- LABORATORY
- CANTEEN
- WC




### TREATED WATER TO SUPPLY

### RAW WATER

### PH CORRECTION & REMINERALISATION

- SODIUM CARBONATE DOSING
- BATCHING & STORAGE
- DOSING PUMPS

### DISINFECTION DOSING

**Sodium hypochlorite dosing including**

- CHEMICAL TRANSFER
- DILUTION & STORAGE
- DOSING PUMPS

### RAW WATER STRAINERS AND STORAGE TANK

- 2MM BASKET STRAINERS
- REMOVAL OF COARSE SOLIDS

### NANOFILTRATION MEMBRANES

**Nanofiltration membranes remove**

- COLOUR
- CRYPTOSPORIDIUM
- GIARDIA
- PARTICLES AS SMALL AS 2000 AMU

**Nanofiltration membranes are arranged in streams, each stream includes**

- DUTY / STANDBY FEED PUMPS
- DUTY / STANDBY RECIRCULATION PUMPS
- DIVERSION VALVE SKID
- 2no MEMBRANE STACKS

**Modular plants typically comprise 2 to 5 nano filtration membrane streams according to the required plant capacity**

### MCC ROOM

**Contained within the MCC room**

- IMCC
- TELEMETRY SYSTEMS


### CHEMICAL WASTE TANK

Contained outwith the building footprint for storage for membrane by-products which are trickle fed to the waste discharge

### CHLORINE CONTACT PIPE

Contained outwith the building footprint

### RAW WATER SETTLEMENT TANK/RAW WATER BLEND TANK

Contained outwith the building footprint (if required)

### Why Nanofiltration?

- No chemical / sludge removal
- Fully automated membrane cleaning system
- Low chemical usage
- Unmanned operation
- Remote monitoring
- Profibus enabled
- Duty stand-by system
- Energy efficient management system

ROSS-SHIRE ENGINEERING

www.ross-eng.com