FOXGLOVE FUTURES

NATIONAL RESILIENCE · UNITED ARAB EMIRATES

Operational Resilience Services

Pre-positioned modular life support, project managed and logistically sustained — with drone operations delivered as a service across energy, environmental and critical national infrastructure security.







DOCUMENT

Operational Resilience Services
Capability Statement — Version 5.0

ISSUED BY

Foxglove Futures LLC
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Executive Summary

Operational Resilience is not simply about the "hardening of bunkers". It is about being prepared to support your personnel and giving them the capacity to endure protracted engagements — such as the one we are now seeing in the region.

Adverse weather conditions will increase the risk of loss of use of facilities. In the Gulf that means a 50 ℃ design ambient, wind-blown sand, coastal humidity and an intense but short wet season that can close an access route in hours.

Relying on "just in time" logistics for life support creates a fragile posture. If a camp or facility cannot expand its life support internally, it loses the ability to sustain operations or house any specialised teams required to complete the repairs — medics, for example. It will be unable to absorb reinforcements, displaced civilian populations, or partner forces without degrading the living standards, and thus the combat effectiveness, of the units. Pre-positioned stock becomes a must-have requirement.

The following outlines why and how **Foxglove Futures** can support the offering of turnkey and specialised modular infrastructure solutions to enhance the operational resilience of installations — and how the same deployed estate hosts persistent drone operations across energy, environmental and critical national infrastructure security.

24 hrs	14–21	30–60	48 hrs
RELEASE FROM READINESS STOCK	DAYS TO END LOCATION	DAYS FOR RESERVED PRODUCTION	ONSET OF HEALTH & MORALE CRISIS WITHOUT REPLACEMENT

How Foxglove Futures delivers

Foxglove Futures is a UAE company acting as **prime**, with regional reach. We own the survey, the design freeze, the programme, the movement of materiel, the flying and the through-life support. Manufacture and supply of the modular product set is drawn from an established supply chain of **trusted partners** whose capability to procure, supply and install the key components is tried and tested in the market.

What is new in this version

Version 5.0 is written for a UAE client base and adds the capability sections that describe how the product set is delivered, sustained and exploited in theatre:

- **Project Management and Survey Team** — the recce, the design freeze, the programme and the handover (page 7).
- **Logistic Support** — the three-tier stock model, movement, customs and in-service support (page 11).
- **Drones as a Service** — energy, environmental and CNI security, flown under our own operator approval (page 14).
- **In-Country Value** — how the offer scores in commercial evaluation (page 17).

Key Reasons for Additional Personnel Life Support (PLS)

Allied defence establishments consider that maintaining troop morale and health is a “National Security Imperative” for operational readiness. Therefore, we must consider:

- **Surge Capacity and Force Multiplication**
- **Combat Attrition and Redundancy**
- **Disease and Non-Battle Injury**
- **Psychological Factors**

Modern conflicts are volatile. Having pre-positioned stock ensures that if a DEFAC, medical facility or other PLS structure is destroyed, a unit can maintain functional continuity. Without immediate replacement, a camp may face a health and morale crisis within 48 hours.

Overcrowding is the primary driver of non-battle injury. Having excess sanitation and support units allows for effective quarantine and social distance during outbreaks. A virus could easily affect an entire battalion.

Psychological factor. Quality PLS — hot showers, reliable food, climate control — acts as a cognitive reset, reducing the time for recovery from combat fatigue faster than for those in improvised shelters. In a 50 ℃ environment, reliable cooling is not a comfort item; it is the difference between a rested soldier and a heat casualty.

The Brief

To identify products that are:

1. **Critical to the life support of camps** and can be easily stored at the facility or off-site in secure environments ready for immediate deployment — such as flat-packed accommodation, ablutions, catering facilities and medical units.
2. **Identify supply chain partners** that hold completed units and spare parts stored in central locations ready for immediate deployment to a camp or facility within 24 hours, reaching the end location within 14–21 days.
3. **Ensure agreements are in place** with suppliers for production space of standard units (pre-agreed specifications) within 30–60 days or longer.
4. Items 1 and 2 would be **pre-paid for by clients** and/or a rental agreement in place, as applicable.
5. Item 3 a **pre-agreed specification** for the units in place — signed off by the end user. This then simply is an order in waiting.

Facilities and PLS Units That Should Be Considered

Maintenance of troop morale and health must be considered. Therefore, it is suggested that as a minimum, additional "stand-by" units for the following are required:

- **Medical Facilities** — fully equipped clinics for casualty care, emergency response and disease control
- **Billeting and Housing** — modular barracks that provide secure rest areas
- **Sustainment Hubs** — DEFAC, laundry units and sanitation facilities (ablutions/showers)

Products and Services

Foxglove Futures delivers as prime, drawing on an established modular supply chain. Our **trusted partners** hold a capability to procure, supply and install the key components required that is tried and tested in the market, with the ability to supply high-quality modular products including:

- Accommodation
- Medical facilities
- Ablutions and showers
- Catering facilities

Specifications

The specifications and quality requirements are generally time driven.

Standard	Required life-span	Typical application
Gold	5 years and upwards	Enduring main operating bases; permanent training estate; medical and DEFAC
Silver	1 to 5 years	Forward operating bases; surge accommodation; partner-force billeting
Bronze	Less than 1 year	Rapid emergency response; displaced-population overflow; short exercises

Criteria Considered for Product Selection

- Flatpack
- Modular
- NFPA, as adopted by the UAE Fire and Life Safety Code of Practice
- IEC 60364 and local distribution company regulations
- Connectivity
- Gulf climate rating — 50 °C design ambient, dust and salt exposure

> Criteria are confirmed against the surveyed site conditions before the design is frozen. See **Project Management and Survey Team**, page 7.

PART TWO

Delivery Capability

Product is the easy part. What turns a container of panels into a functioning camp is the survey that preceded it, the programme that sequenced it, and the supply chain that keeps it running once the delivery team has gone home — and then the capability that operates from it.

Project Management and Survey Team

You cannot flat-pack your way out of a bad site. Almost every failure in expeditionary camp delivery traces back to something that was not measured — ground bearing pressure, drainage fall, available kVA at the point of connection, or the turning circle on the last kilometre of the main supply route.

Foxglove Futures therefore leads with a survey, not a catalogue. The survey team deploys first, the recce pack is issued at D+14, and the design is frozen at D+21. Nothing is manufactured, shipped or released from readiness stock against an unsurveyed site.

Team composition

Indicative establishment for a 500-person Gold-standard camp. Teams scale down to a three-person survey party and a single project manager for a 50-person Bronze deployment.

Role	FTE	Responsibility and qualification
Project Director	0.2	Client authority, commercial change, escalation. Chartered or equivalent, 15+ years expeditionary.
Project Manager	1.0	Programme, cost, risk, stage gates. PMP, APM PMQ or equivalent.
Site Survey Lead	1.0	Owns the recce pack and the design freeze. Chartered civil engineer.
Topographical Surveyor	1.0	GNSS RTK and drone photogrammetry; sets the site grid and datum.
MEP Engineer	1.0	Power, potable water, waste and cooling loads; points of connection.
HSE Manager	1.0	RAMS, permit to work, incident reporting. NEBOSH IGC or equivalent.
Site Supervisor	1 per work face	Daily control of the module set, fit-out and commissioning crews.
Local Liaison Officer	1.0	Host-nation permits, labour, language, community engagement.
Commissioning Engineer	0.5	ITP hold points, test certification, handover pack.

> Where the client requires it, the survey party can deploy under escort or as a low-profile two-person team using drone and handheld GNSS only, with the full engineering assessment completed on reachback.

The Survey — What We Measure

The recce pack is a single controlled document. It is what the design freeze, the bill of materials and the movement plan are all built from, and it is issued to the client for signature before anything is ordered.

Survey line	Method and tolerance	Why it matters
Topographical	GNSS RTK to ±20 mm horizontal, ±30 mm vertical; UAV photogrammetry; 1:500 site plan at 0.25 m contours	Sets the module grid, cut and fill volumes, and drainage falls
Geotechnical	Trial pits on a 25 m grid to 2 m depth; CBR and plate bearing tests; soil classification	Modular pads need 100–150 kN/m². Coastal sabkha can offer as little as 50 kN/m², forcing ground improvement or piling
Groundwater chemistry	Chloride, sulphate and gypsum content; water table depth and seasonal variation	Drives sulphate-resisting concrete to BS 8500 class DC-4 and the galvanising specification on every buried fixing
Climate and exposure	Design dry bulb to 50 °C; prevailing sand-bearing wind; coastal salt deposition rate	Sets cooling capacity, filter grade and service interval, and the external coating system
Utilities	GPR sweep for buried services; measured kVA available at point of connection; earthing resistance	Determines whether the 2 × 440 kVA duty/standby set is a supplement or the primary supply
Water	Source yield test; potability sampling; hardness, TDS, coliform	Regional groundwater often exceeds 5,000 mg/L TDS, changing the filtration train and the resupply cycle
Drainage and flood	Catchment model; 1-in-100-year event plus climate allowance; grey and black water discharge route	A short, intense wet season on impermeable ground is the most common cause of loss of use of facilities
Access and route	Port-to-site route recce; bridge and culvert load classification; turning circles	A 40 ft flatbed needs a minimum 25 m outer turning radius. One low bridge re-plans the whole movement
Security	Standoff distance mapping; blast overpressure lines; berm and barrier alignment; ECP layout	Places the hardened shelters and sets the minimum separation for life-support modules
Airspace	Proximity to controlled airspace, restricted areas and critical infrastructure; GNSS and RF environment	Determines whether drone operations can be flown from site, and under what approval — page 14
Permits and environment	Host-nation approvals, waste licences, protected-species and heritage screening	Permit delay is the single most common cause of programme slip

Survey timeline

D+0	**Task issued.** Team warned off, visas and clearances actioned, imagery and terrain analysis begins.
D+3 to D+5	**Mobilisation.** Survey party in country with GNSS, UAV, GPR and sampling kit.
D+5 to D+12	**On site.** Five to ten working days for a 10 hectare site, including trial pits and water sampling.
D+14	**Recce pack issued.** Site plan, geotechnical report, utilities assessment, movement plan, risk register, costed options.
D+21	**Design freeze & GO/NO-GO.** Client signature. Bill of materials released to readiness stock and reserved production.

Delivery Programme

Indicative programme for a **500-person Gold-standard camp** from mobilisation, assuming a surveyed site with road access and no permit obstruction. Bronze and Silver deployments compress the same sequence.

Phase	Activity	Duration	Key resource
0 — Survey	Recce, recce pack, design freeze	3 weeks	Survey party of 4–6
1 — Enabling	Clear and grub, hardstanding, drainage, perimeter	3–4 weeks	Plant fleet, local labour
2 — Utilities	Power, potable water, waste, comms containment	3 weeks (concurrent)	MEP crew of 8
3 — Module set	Accommodation, DEFAC, ablutions, medical	4–5 weeks	2 × 25 t telehandler, 12-man crew, 20–25 modules per week
4 — Fit-out	Second fix, FF&E, commissioning, snagging	2 weeks	Fit-out and commissioning teams
5 — Handover	Test certification, O&M, operator training	1 week	Commissioning engineer, PM

Indicative end-to-end

- **50-pax Bronze:** 4–6 weeks from mobilisation
- **50–500 Silver:** 8–10 weeks
- **500+ Gold:** 12–14 weeks

Where programmes slip

- Host-nation permits and customs clearance
- Ground conditions worse than assumed
- Point-of-connection capacity overstated
- Summer working-hours restrictions on labour

Method, control and assurance

Contract and control

- FIDIC forms as standard, or the client's own conditions
- Stage-gated delivery with client sign-off at each gate
- Live RAID log; weekly commander's situation report
- Earned value reported monthly (SPI and CPI)
- Change control with priced options before instruction
- BIM model where the client estate requires it

Health, safety and quality

- RAMS per work package before any work face opens
- Permit-to-work for hot works, confined space, lifting, live electrical
- Compliance with midday summer working restrictions
- Daily toolbox talk; weekly site safety inspection
- Target accident frequency rate below 0.15 per 100,000 hours
- Inspection and Test Plan with client hold and witness points
- Independent third-party inspection available on request

Handover and Assurance

A camp is not handed over when the last module is set. It is handed over when the client's own staff can operate, maintain and account for it without us. The handover pack is contractual and is issued in hard copy and as a structured digital asset file.

Deliverable	Content
As-built drawings	Site plan, module layout, MEP schematics, drainage and buried services, all issued to the site grid and datum established at survey
O&M manuals	One per system, with planned preventative maintenance schedules and consumable part numbers
Electrical certification	Certification to IEC 60364 and the local distribution company's requirements; board schedules, earth loop and RCD test results
Water certification	Chlorination and potability certificates, pressure test records, filtration commissioning data
Fire and life safety	Cause-and-effect matrix, emergency lighting test records, extinguisher schedule, and a compliance statement against the UAE Fire and Life Safety Code of Practice
Asset register	Every module and major plant item serialised, with location, condition code, warranty expiry and spares reference
Spares scale	Recommended 12-month holding, priced in AED, with lead times — see Logistic Support, page 11
Operator training	Two-day package for client staff: daily checks, first-line fault finding, genset and water plant operation, escalation routes. Delivered in English or Arabic.

Post-handover

Defects liability

Twelve months as standard, extendable to twenty-four. Response measured from the client's report, not from our acknowledgement.

Aftercare visit

A returning visit at 90 days to verify the assets are being operated as trained and that the spares holding matches actual consumption.

Relocation and re-role

Because the units dismantle back to flat pack or lift as complete volumetric modules, the same project management and survey process is used in reverse to recover, refurbish and re-site a camp — typically at 30–40% of the cost of new build.

> ### The single point that matters
>
> One organisation carries the survey, the design freeze, the programme, the movement and the through-life support. There is no seam between the surveyor who measured the ground and the team that has to build on it, and no seam between the team that built it and the supply chain that keeps it running.

Logistic Support

The brief asks for stock held ready, released within 24 hours and at the end location within 14–21 days, backed by reserved production. That is not a warehouse. It is a three-tier readiness model with the commercial, customs and materiel accounting arrangements already in place before the call-off is made.

The three-tier readiness model

Tier	Release	What is held and how it is paid for
Tier 1 **Immediate Readiness Stock**	24 hours to release 14–21 days to site	Complete, tested units in secure bonded storage — accommodation, ablutions, DEFAC, medical, laundry, water and power. Client pre-paid or held on a rental agreement. Rotated and function-tested quarterly.
Tier 2 **Reserved Production**	30–60 days	Pre-agreed specification signed off by the end user, against reserved manufacturing capacity. No design work at the point of order — it is an order in waiting. Longer slots available for Gold-standard bespoke units.
Tier 3 **Spares and Consumables**	Held forward	Twelve-month spares scale positioned in theatre or at the nearest hub: cooling plant, luminaires, water heaters, filtration media, genset service kits, door and window sets, sanitaryware.

Hub architecture — UAE based, regional reach

Indicative and configurable to the client's operating geography. The principle is that no supported location is more than one sea leg or one charter from a hub.

Primary — Abu Dhabi

Bonded storage in the Khalifa Economic Zones, alongside Khalifa Port. Suits UAE in-country value positioning and places the stock inside the client's own jurisdiction.

Secondary — Jebel Ali

Deep-water redundancy and sailings of roughly 3–7 days to Salalah, Jeddah, Djibouti and Mombasa; direct road access to KSA and Oman.

Forward hubs

Established against a specific programme, in-country, so that spares and replacement modules sit inside the customs boundary they will be used in.

Lift and cube — what a camp actually weighs

Planning figures for movement estimation. Confirmed against the bill of materials at design freeze.

Deployment	40 ft HC equivalents	Approx. gross weight	Air option
50-pax Bronze	6–8	110–150 t	2–3 × IL-76 class loads
250-pax Silver	28–36	500–650 t	Charter by exception only
500-pax Gold	55–70, plus 4 flat-rack for gensets and tanks	1,000–1,300 t	Sea or road; air for critical path items only

A 40 ft high-cube gives roughly 67 m^3 and 26 t of payload. Flat-packed accommodation modules stow at approximately eight per 40 ft HC; volumetric units ship as one-for-one deck cargo.

Movement, Customs and Compliance

Getting the materiel to the port is procurement. Getting it across the border and onto the site is the capability that separates a 21-day delivery from a 90-day one.

Freight modes

- Full container load sea freight as the default, Incoterms DAP or DDP to the client's preference
- Charter air (IL-76, An-124 and C-17 class palletisation) for surge and critical path items
- Escorted road movement, including cross-border convoy with armed escort where the threat requires it
- Coastal and inland barge where port congestion or route classification prevents road movement

Customs and border

- Pre-cleared HS classification — for example 94069090 for the hardened cabin range
- Host-nation duty exemption and military end-use certification prepared in advance of sailing
- ATA carnet for survey and commissioning equipment moving in and out
- Bonded warehousing at hub, so stock is not duty-encumbered until it is called forward
- Nominated in-country customs broker under contract, not appointed at the quayside

Export control screening

- UAE controls under Federal Law No. 13 of 2007 and the National Committee for Commodities Subject to Import and Export Control
- Origin-country licensing obtained where the goods attract it
- US-origin content screened for ITAR and EAR exposure before order placement
- End-user certificates and denied-party screening on every consignment
- Full audit trail retained for the life of the contract

Materiel accounting

- Every module and major plant item serialised at manufacture
- Barcode as standard; passive RFID where the client estate supports it
- Condition coding on receipt, issue, return and repair
- Consignment tracking visible to the client from hub release to site receipt
- Interface to the client's ERP, or a Foxglove-provided asset dashboard where none exists

Anti-bribery and route integrity

Foxglove Futures operates strictly within the anti-bribery provisions of UAE Federal Decree-Law No. 31 of 2021, and within the UK Bribery Act 2010 and the US Foreign Corrupt Practices Act where those regimes reach our activity. Facilitation payments are not made, are not budgeted for, and are not tolerated in the supply chain. Where a route or a broker cannot be used within those bounds, we say so and re-plan the movement. Every agent and broker is contracted, screened and audited.

In-Service Support

The units are only resilient if they keep working. Support is structured in three lines, with a defined spares scale and measured availability against the life-support-critical facilities.

Support lines and response

Line	Who	Target response	Scope
Level 1	Client operator, trained at handover	Immediate	Daily checks, filter changes, resets, consumable replacement
Level 2	In-country technician	On site within 24 hours	Component replacement from the forward spares scale, genset servicing, water plant faults
Level 3	Manufacturer or factory	7–14 days	Major repair, module replacement from readiness stock, warranty resolution

Indicative spares scale

Per 100 accommodation modules and their supporting plant, held forward for a twelve-month period. Gulf service intervals run shorter than temperate ones — dust roughly halves filter life.

Item	Holding
Cooling units	6
Luminaires and emergency fittings	10%
Water heaters (300 L)	2
Door and window sets	5%
Sanitaryware and taps	8%

Item	Holding
Genset 250 h / 500 h service kits	4 / 2
Fuel bowser per 440 kVA duty pair	2 × 4,000 L
Air and fuel filtration sets	8 sets (6-weekly)
Chlorination consumables	12 months
Washer / dryer drive spares	1 set per 8 machines

Availability and planned maintenance

Availability targets

- **97%** — life-support critical: ablutions, DEFAC, medical, potable water
- **95%** — general accommodation, laundry, recreation
- **N+1** — power, by design, on the duty/standby genset pair

Recurring tasks

- Genset oil analysis, quarterly
- Water tank clean and potability test, 6-monthly
- Condenser coil clean, 3-monthly in dust
- Fixed wire inspection, annually or on redeployment

Through-life and commercial models

Obsolescence management

- Five-year rolling spares forecast, reviewed annually
- Form-fit-function substitution so a discontinued part does not ground a module
- End-of-life reuse: units dismantle to flat pack for relocation or refurbishment

How it can be bought

- Outright purchase with a priced support package
- Rental, typically 24 to 60 months, including maintenance
- Availability contract priced per person per day against measured KPIs
- Pre-paid readiness stock with a call-off agreement

In-country value

- Local assembly labour, haulage and warehousing to standard
- UAE-domiciled spend and Emirati technician training
- Full ICV position set out at page 18

Drones as a Service

The client buys sorties and data products, not aircraft. Foxglove Futures holds the operator approval, carries the safety case for each operation, employs and currency-trains the crews, and delivers a defect register rather than a hard drive of photographs.

Persistent aerial work is bought as a service for the same reason life support is pre-positioned: the capability has to be there on the day it is needed, not procured after the event. Buying airframes creates a continuing airworthiness burden, a pilot recruitment and retention problem, and a regulatory exposure that sits with the asset owner. Buying the service moves all three.

The deployed drone operations cell

Indicative establishment for a single persistent task. Scales from a two-person team for a periodic survey up to a 24-hour operation on three shifts.

Role	Per shift	Responsibility
Accountable Manager	—	Holds the operator approval; answerable to the regulator
Operations Manager	1	Tasking, airspace coordination, crew currency and rostering
Safety Manager	—	Owns each operational risk assessment and the occurrence reporting chain
Remote Pilot in Command	1–2	Flies the sortie; licensed and type-current
Payload / Sensor Operator	1	Runs the camera, thermal, gas or LiDAR payload and first-look interpretation
UAS Maintainer	1	Scheduled maintenance, battery management, airframe serviceability
Data / GIS Analyst	1	Processing, change detection, defect register, client reporting

What the operation needs on the ground

A persistent drone operation is not a man with a case. It needs conditioned space to maintain airframes in 50 °C heat, secure storage for aircraft and lithium batteries, reliable power, a data link, a processing workstation and somewhere for the crew to live and rest. That is typically **three to five modules**, and it is the same modular estate described in Part Three of this document.

Operations module

Ground control station, planning, comms, data processing workstation.

Maintenance module

Conditioned workshop, spares, tooling, fire-rated battery charge and storage.

Crew accommodation

Billeting, ablutions and messing, so the operation can run at night and at short notice.

> The three capability areas that follow — energy, environmental and critical national infrastructure security — use a common crew, a common airframe fleet and a common data pipeline. Only the payload and the analysis change.

Energy Security

Asset integrity, emissions assurance and generation performance — without a shutdown

The value here is almost always avoided downtime rather than a cheaper inspection. A drone that inspects a live flare tip is not competing with a rope access team; it is competing with the decision to shut a train down.

Task	Method and payload	Planning figure	What it displaces
Flare tip inspection	Long-range zoom EO and radiometric IR from safe standoff	2–4 hours per stack, flare live	A shutdown, or rope access on a cooled stack
Pipeline right-of-way patrol	VTOL fixed-wing, EO/IR, 2–4 h endurance	150–250 km per sortie	Vehicle patrol, or a manned helicopter
Fugitive emissions survey	Optical gas imaging plus tuneable laser methane detection	30–60 assets per day; supports OGMP 2.0 Level 4 and 5 reporting	Handheld sniffing and estimated factors
Confined space and tank inspection	Caged, collision-tolerant indoor UAS with lighting	A tank interior in a day, with no man-entry	Scaffolding, entry permits and the associated HSE exposure
Solar PV thermography	Radiometric IR on an automated grid pattern	A 100 MW plant in roughly 2 days, to module-level fault mapping	Handheld IR on foot, which never completes a full plant
Soiling and dust-loss monitoring	Multispectral, correlated to reference cells	Weekly cycle across a plant	Manual spot checks that miss spatial variation
Transmission line survey	Corridor LiDAR plus IR on fittings and joints	25–40 km per day; sag, clearance and hot joint detection	Foot patrol or helicopter survey
Substation and switchyard thermography	Radiometric IR, fixed pattern, repeatable	A full switchyard in under 2 hours, energised	Ground thermography limited by sightlines

Where the money is

- Avoided shutdown on live inspection
- Removal of man-entry and working-at-height exposure
- Generation recovered by finding the faulty strings, not the average
- Emissions data good enough to report, not estimate

Why it suits this region

- A very large and growing solar estate, where dust is the dominant loss mechanism
- Long pipeline and transmission corridors through remote desert
- National net-zero and methane commitments now requiring measured data
- Summer heat that makes manual inspection slow, short and dangerous

A note on what is actually being sold

Almost every figure in the table above is a rate, not a price. That is deliberate. The commercial case for aerial inspection is built from the client's own cost of downtime, not from ours — so the first task on any energy contract is to agree what an hour of lost production, a deferred shutdown or an unreported emission is worth. Everything after that is arithmetic.

Environmental Security

Baseline, monitor and evidence the natural estate

Task	Method and payload	Planning figure and output
Mangrove and blue carbon baselining	Multispectral, canopy height model from photogrammetry	500–800 ha per day; NDVI, extent change and above-ground biomass estimate
Marine megafauna survey	High-resolution EO at 60–120 m AGL with automated detection	60–100 km of transect per sortie; far less disturbance than a manned aircraft
Oil spill detection and mapping	EO, IR and multispectral discrimination	Slick extent and drift within an hour of tasking
Coastal erosion and shallow bathymetry	Structure-from-motion photogrammetry	1:500 shoreline model to roughly 0.1 m vertical; repeat cycles show movement
Quarry, landfill and illegal dumping	Photogrammetric volumetrics and change detection	Stockpile and void volumes to about ±2%; dated evidence for enforcement
Air quality profiling	Sampling pod carried to 120 m	Vertical profile at a stack or site boundary, which fixed ground monitors cannot give

Critical National Infrastructure Security

Persistent overwatch, faster response, and an honest line on counter-UAS

Task	Method and payload	Planning figure and output
Persistent perimeter surveillance	Drone-in-a-box, autonomous launch on alarm	On target in under 90 seconds across a 3–5 km radius; 4–6 autonomous sorties a day
Incident overwatch	Rapid-launch multirotor, EO/IR, live downlink	Overhead in under 3 minutes with a picture the control room can act on
Post-incident assessment	Photogrammetric survey and 3D model	Site model the same day, for damage assessment and investigation
Route and convoy overwatch	EO/IR ahead of the packet	5–10 km forward look, cued to the ground commander
Water and desalination asset integrity	Thermal and EO over intakes, reservoirs and outfalls	Survey without taking the asset out of service
Counter-UAS support	RF detection, radar cue and EO classification	Detect, classify and cue only. Effect remains a sovereign function and is not offered here.

The response-time argument, in one line

A patrol vehicle reaches a perimeter alarm in five to fifteen minutes and arrives with one man's eyes. A docked aircraft is overhead in ninety seconds and arrives with a thermal picture, a recording and a position — before anyone has decided whether to commit a response team.

Airspace, Data and Commercial Model

Regulatory position

In the UAE

- Operations flown under a General Civil Aviation Authority operator approval held by Foxglove Futures — not by the client
- Each operation carried on a specific operational risk assessment, with mitigations agreed before flight
- Flight authorisation and airspace coordination obtained per task; crews security cleared as the site demands
- Beyond visual line of sight approved case by case — it is the unlock for corridor and pipeline work, and we plan for it from the first survey

Regional reach

- The model transfers: Foxglove Futures obtains the host-nation operator approval for each jurisdiction rather than flying on a foreign one
- Crews, airframes and the operations cell deploy on the same logistic chain as the modular estate
- Where a host nation has no mature framework, we work to UAE and ICAO-aligned standards and document it
- Airspace is assessed at site survey — see page 8 — so basing decisions are made before mobilisation

Data and exploitation

The deliverable is a decision, not a dataset. Raw imagery is retained and handed over, but the product the client acts on is a georeferenced defect register with severity, trend and recommended intervention.

Products

Orthomosaic, 3D model, thermal and gas overlays, defect register, change detection against the previous cycle.

Sovereignty

Data is the client's. Stored in country, handled to the client's classification, processed on a deployed workstation where offshore cloud is not acceptable.

Integration

Findings pushed into the client's asset management or GIS system, so the survey closes a work order rather than filling a folder.

How it is bought

Model	Basis	Suits
Per sortie or per task	Mobilisation, day rate and data product fee	One-off or annual inspection campaigns
Per unit of asset	Per kilometre of corridor, per MW of generation, per asset inspected	Repeatable, measurable estates
Availability contract	Annual fee against a guaranteed response time and sortie availability	Persistent CNI security and emergency response
Embedded operation	Crew, aircraft and operations cell resident on the client site	Large sites, or where response time is the requirement

In-Country Value

ICV is scored as a weighted factor in commercial evaluation, and it is scored on audited fact rather than on intent. A bidder either has the certificate and the numbers behind it, or it does not.

Foxglove Futures is a UAE company. The certificate is obtained through a certifying body approved under the National In-Country Value Programme, calculated from audited financial statements and valid for fourteen months from the financial year end. Every element below is a line in that calculation, not a statement of intent. Percentages are not quoted here because they mean little outside the audited year they are drawn from; the current certificate is provided with any bid.

Calculation driver	What Foxglove Futures does about it
Goods and services from UAE suppliers	Module assembly labour, haulage, warehousing, fuel, consumables and facilities management sourced in country wherever they can be delivered to standard. Imported content is limited to the manufactured module envelope and specialist payloads.
Investment in fixed assets	Readiness stock, airframes, sensors, workshop plant and the ground control fit held as UAE-registered assets, inside the customs boundary, rather than called forward from abroad per task.
Emiratisation	Weighted heavily in the calculation and treated accordingly. Emirati remote pilots, technicians and project managers are recruited and trained as the default route to manning, not as a contract-specific gesture.
Expatriate contribution	Staff resident in and paying into the UAE economy. Drone crews and support teams live here; they are not flown in for a task and flown out again.
Revenue booked in country	Contracting entity is the UAE LLC, so contract value is recognised domestically rather than routed offshore.

Why this particular offer scores well

Structurally, not cosmetically

- A service model keeps people, aircraft and spares resident by definition
- Readiness stock is a fixed asset held in the UAE, which a call-off from an overseas warehouse is not
- Training transfer is the delivery method, not an add-on — every handover includes it
- Relocation and refurbishment of modules is in-country work, so the through-life spend stays here too

What we ask the client for

- Early sight of the ICV weighting applied in the evaluation, so the delivery model can be shaped to it
- Agreement on Emiratisation targets at contract award rather than at first review
- Visibility of the client's own ICV obligations, where we sit in a subcontract chain

Offset

Separately from ICV, where a non-UAE prime carries an offset obligation under the Tawazun Economic Programme, Foxglove Futures can be structured as the in-country partner through which that obligation is discharged — by investment, by partnership or by the transfer of capability into the UAE. We are a beneficiary and partner in that arrangement, not an obligor.

PART THREE

Layout Drawings and Specifications

Standard configurations for 50, 50–500 and 500-plus personnel. All layouts are indicative and are confirmed against the surveyed site before the design is frozen.

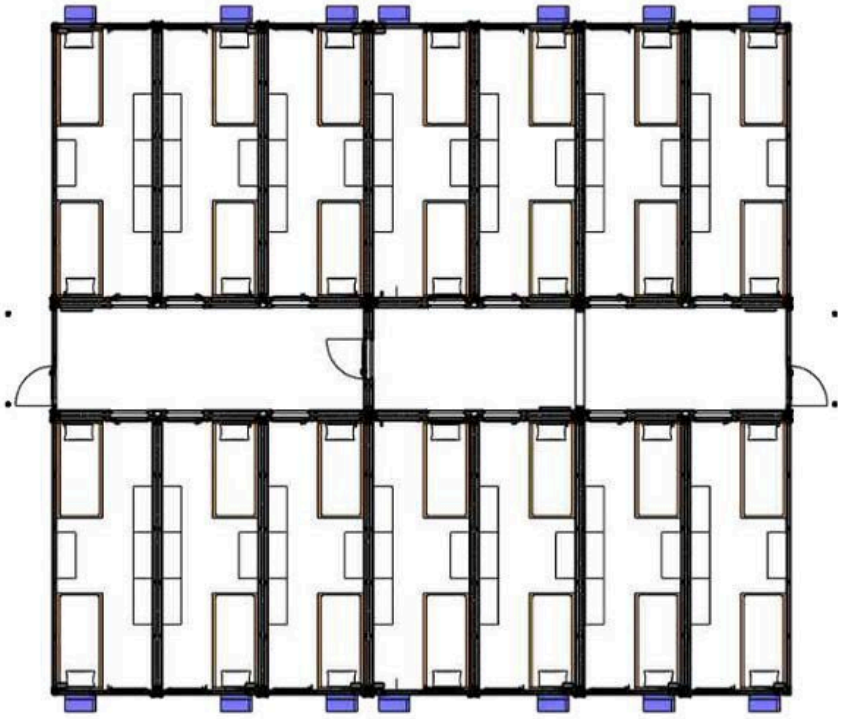
Accommodation

a. For 50

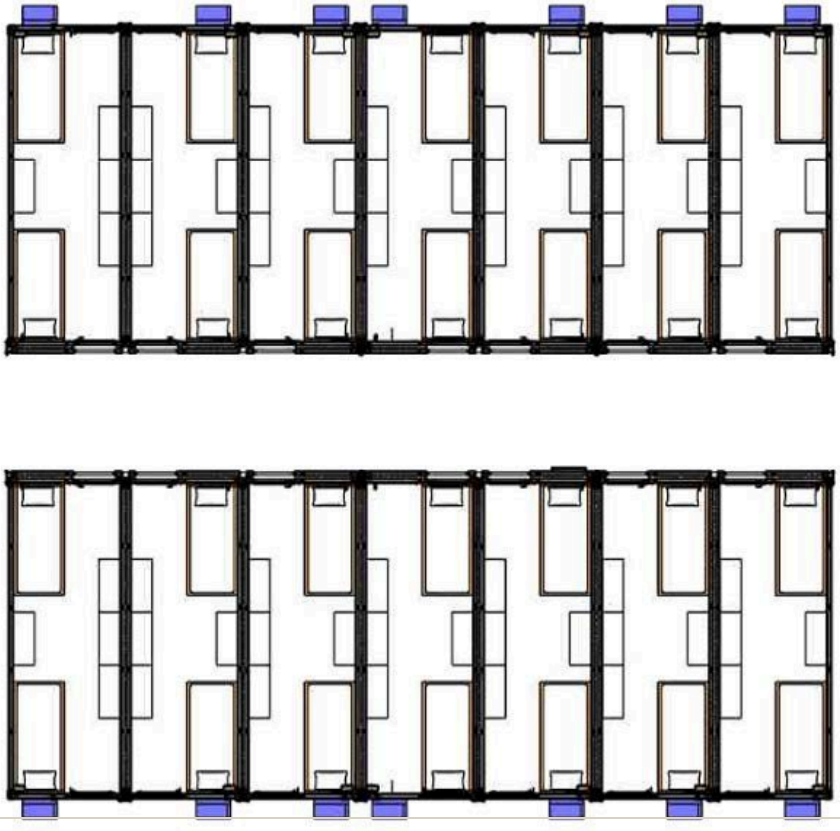
b. For 50–500

c. 500 and above

Accommodation floor plan — with corridor



Accommodation floor plan — with no corridors



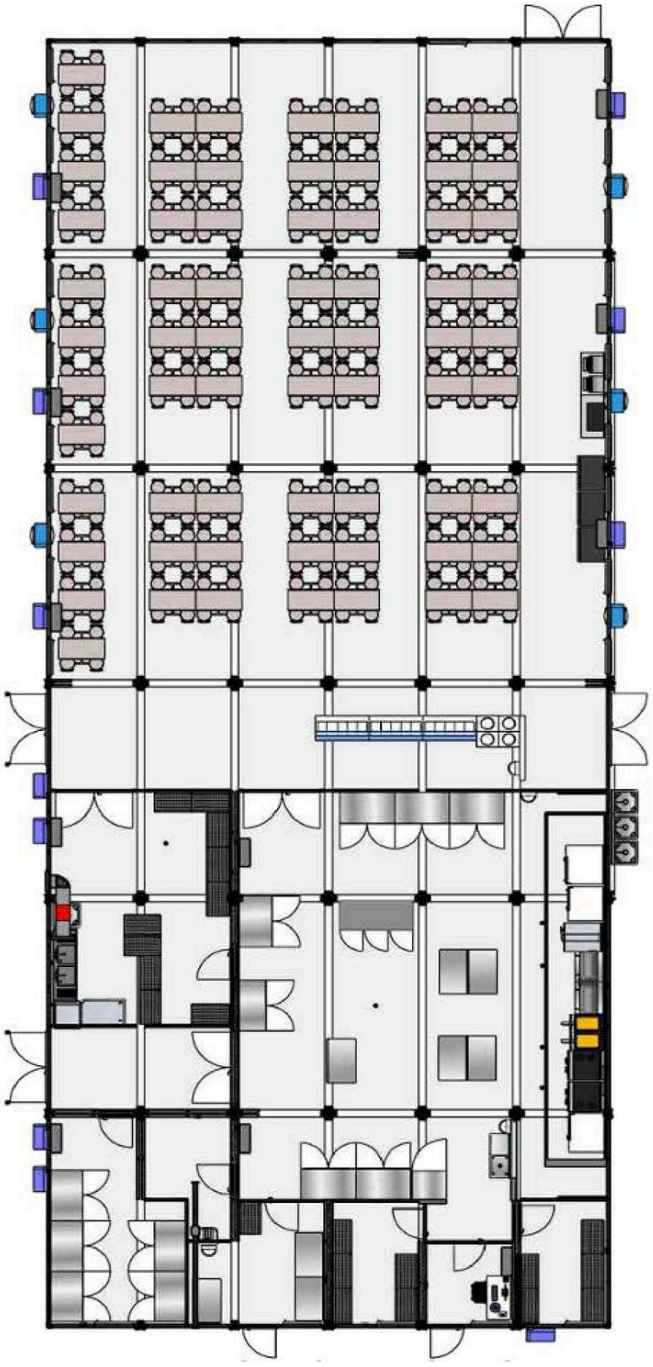
DEFAC Units

a. For 50

b. For 50–500

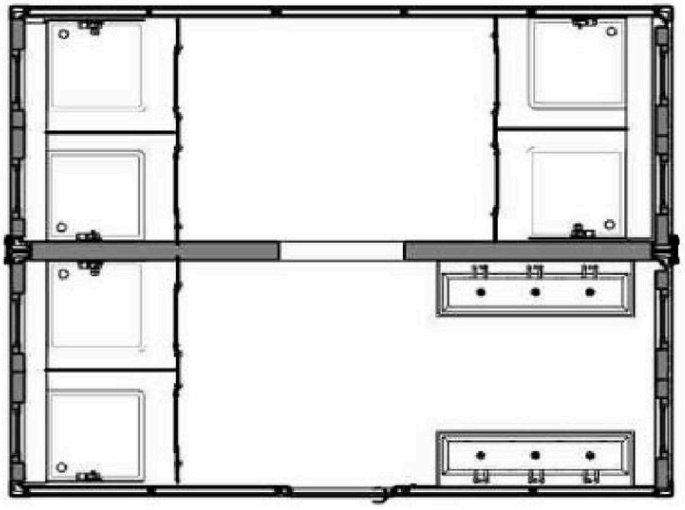
c. 500 and above

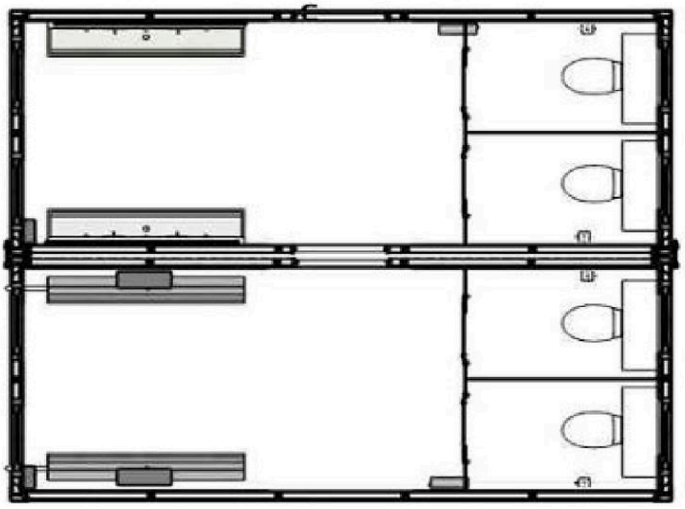
Kitchen and canteen — 250 person double sitting



Ablutions and Showers

Shower block (upper) and toilets block (lower)





Standard Shower Layout



Item	Qty
Shower cubicles	4
Hand wash basins	3
Space heating	1
Ventilation	1
Water heating	1
Emergency lighting and smoke alarm	1

Shower block — dimensioned plan, 6055 mm × 2435 mm



External connections for black water sewage, grey water sewage, water supply and electrical supply. For Gulf deployment the space heating element is substituted for additional cooling capacity at design freeze.

Specification

1 NO. Sanitary cabin 20′

Construction

- Construction type: assembled
- External cabin height 2800 mm
- Internal floor to ceiling height 2500 mm
- Reinforced roof frame (optional payloads)
- Reinforced corner post (optional payloads)
- Reinforced floor frame (optional payloads)
- Water in and outlet points in the wall (sunk)

Paint

- Cabin colour RAL 6020 Chrome green

Internal finish

- Internal finish: see sketch
- Ceiling: fire-protection gypsum plasterboard with coated steel sheet, similar to RAL 9010

Insulation

- Wall insulation rock wool 110 mm
- Roof insulation PU foam 140 mm
- Fire protection design REI 30/60 roof section, 1×15 fire protection boards
- Floor insulation PU foam 100 mm

Electrics

- Electrical connection including industrial countersinks, with consumer box
- IEC 60309 industrial connectors, 400 V / 32 A / 5-pin

Floor construction

- Forklift pocket distance 2050 mm
- Floor board standard floorboard
- Slip-resistant vinyl floor covering, 2 mm, R10/C
- Floor covering pulled up at perimeter, 2 mm, R10/C

Fittings

- 5 NO. wall reinforcement
- 1 NO. external steel door
- Standard dimensions (width) 875 mm
- Light passage width 811 mm; height 2065 mm
- Outward opening; 625×2000 mm

Partition walls

- 8 m WC partition wall
- 4 NO. internal door WC partition wall 625×2000 mm

Electrical equipment

- 1 NO. single socket, 350 mm above floor level (FOK)
- 3 NO. single socket

Wet room electrics

- 1800 mm above floor level (FOK)
- 1 NO. power off switch
- 1150 mm above floor level (FOK)
- Drawing No. 9666308-001
- 1 NO. motion detector
- 1 NO. cable preparation for lighting

Sanitary equipment

- 3 NO. ceramic hand wash basin, 500×410 mm, including single lever tap, metallic mirror, metal hooks and soap dish
- 2 NO. floor gully
- 4 NO. GRP shower cubicle, including single lever tap and shower curtain
- 1 NO. 300 litre boiler
- 1 NO. pressure reduction valve 1″

Heating, ventilating and cooling

- 1 NO. fan heater 2 kW, or cooling equivalent for Gulf deployment

Lighting

- 2 NO. surface-mounted luminaire 43 W

Electrical upgrade to UAE codes and defence client requirements

- Submain supplies from DB main switch to plug-in isolator located on each container
- Daisy chain module sub-supplies, internally wired behind trim
- Distribution circuit protection; consumer unit within container
- Single phase consumer unit with type 2 SPD (6-way)
- Distribution circuit protection for final circuits
- Fused spur connection for extractor fan; PIR linked to trigger fan unit
- Fused spur connection for water heater
- Installation of radial supply for AC
- 4-way TP&N MCB distribution board; IP rated enclosure
- DB/X 5 core glanding and termination
- Installation of 45A final circuit double pole shower isolation switch
- Emergency lighting — internal and external EM lighting installation

Elevations

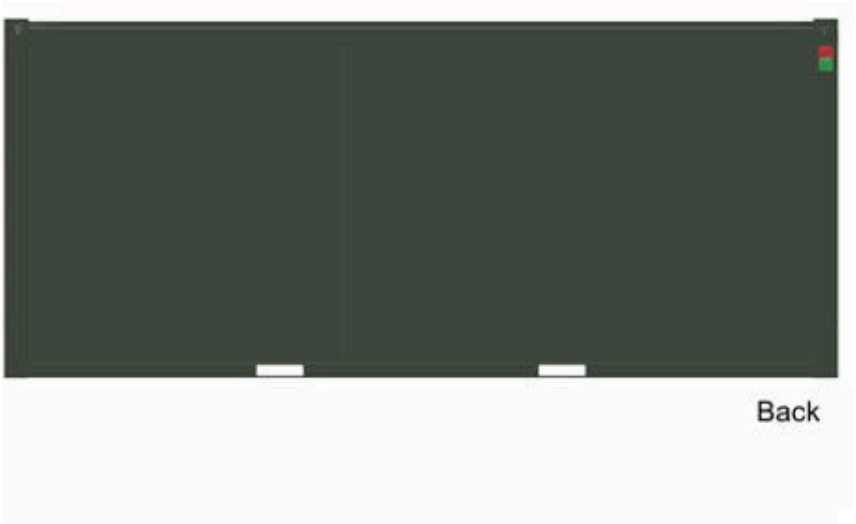
a. For 50

b. For 50–500

c. 500 and above



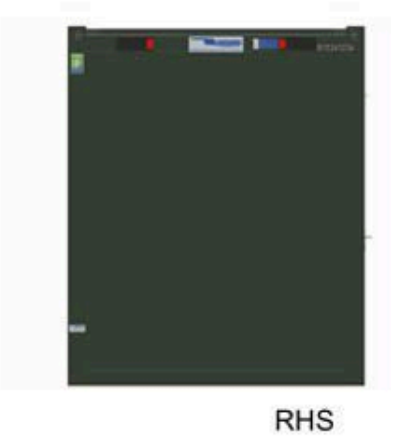
LHS



Back



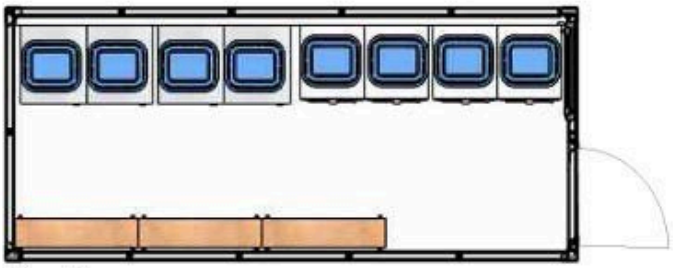
Front



RHS

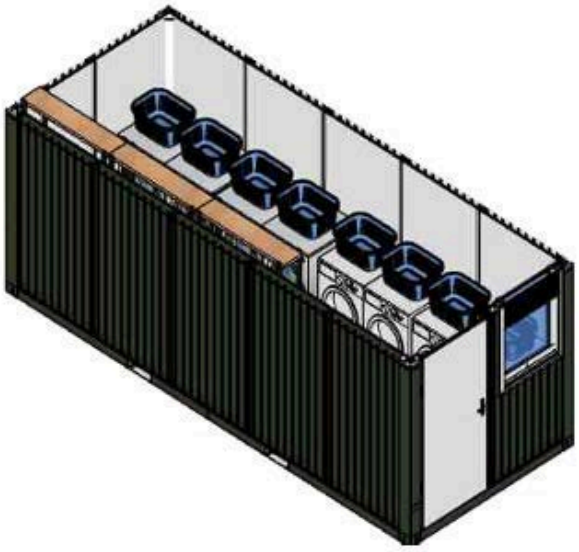
Sanitary cabin — left-hand side, back, front and right-hand side elevations

Laundry



Item	Qty
Commercial washing machines (20 kg)	4
Commercial tumble dryers	4
Ventilation	1
LED lights (2 per module), IP rated	1
Small power sockets, double per module	8
Emergency lighting and smoke alarm	1

> External connections for grey water sewage, water supply and electrical supply.



Laundry floor plan and module view

Throughput planning

Indicative only, and confirmed against the client's laundry policy at survey. Four 20 kg washers and four 16 kg dryers on a nominal one-hour cycle give approximately **640 kg of washing per eight-hour shift**. At roughly 2.5 kg per person per change, that is around **250 personnel served per shift**, or one module per 250-person sub-unit on a daily cycle.

50-pax camp

1 module, part-shift operation. Ample margin for surge.

250-pax camp

1 module on a single daily shift, plus consumables held forward.

500-pax camp

2 modules, or 1 module on double shift with a spare drive set held.

> Water and power draw from the laundry is carried into the utilities survey at page 8 — four washers and four dryers add roughly 12–14 kW of connected load and materially change the grey water discharge rate.

Laundry Specification



Laundry module elevations — LHS, back, front and RHS

Item	Qty	Specification	Image
1	4	**Commercial washing machine, 20 kg front loading** Capacity 20 kg · 980(H) × 690(W) × 880(D) mm · No built-in drain pump · 1,049 rpm spin · Cold fill only · 98 kg · 51 kWh/annum · Energy class A · 76 dB · 230 V · 13 A supply	
2	4	**Tumble dryer, heat pump condenser** Capacity 16 kg · 984(H) × 686(W) × 844(D) mm · Condenser type · 72 kg · 292 kWh/annum · Energy class A+++ · Front loading · 64 dB · 2.1 kW · 230 V · 13 A supply	

Laundry Cabin Specification

1 NO. Sanitary cabin 20′ — base module specification as configured for laundry.

Construction

- Construction type: assembled
- External cabin height 2800 mm; internal floor to ceiling 2500 mm
- Reinforced roof frame, corner post and floor frame (optional payloads)
- Water in and outlet points in the wall (sunk)

Paint and internal finish

- Cabin colour RAL 6020 Chrome green
- Ceiling: fire-protection gypsum plasterboard with coated steel sheet, similar to RAL 9010

Insulation

- Wall insulation rock wool 110 mm
- Roof insulation PU foam 140 mm
- Fire protection design REI 30/60 roof section, 1×15 fire protection boards
- Floor insulation PU foam 100 mm

Electrics

- Electrical connection including industrial countersinks, with consumer box
- IEC 60309 industrial connectors, 400 V / 32 A / 5-pin

Floor construction

- Forklift pocket distance 2050 mm; standard floorboard
- Slip-resistant vinyl floor covering, 2 mm, R10/C, pulled up at perimeter

Fittings and partitions

- 5 NO. wall reinforcement; 1 NO. external steel door
- Width 875 mm; light passage 811 mm × 2065 mm; outward opening
- 8 m WC partition wall; 4 NO. internal door partition 625×2000 mm

Electrical and wet room

- 1 NO. single socket at 350 mm FOK; 3 NO. single socket
- Wet room electrics at 1800 mm and 1150 mm FOK
- 1 NO. power off switch; 1 NO. motion detector
- Drawing No. 9666308-001; cable preparation for lighting

Sanitary equipment

- 3 NO. ceramic hand wash basin 500×410 mm with single lever tap, mirror, hooks, soap dish
- 2 NO. floor gully; 4 NO. GRP shower cubicle with tap and curtain
- 1 NO. 300 litre boiler; 1 NO. pressure reduction valve 1″

HVAC and lighting

- 1 NO. fan heater 2 kW or cooling equivalent; 2 NO. surface-mounted luminaire 43 W

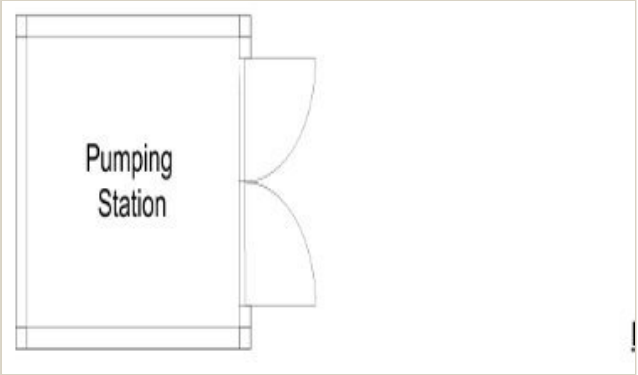
Electrical upgrade to UAE codes and defence client requirements

- Submain supplies from DB main switch to plug-in isolator on each container
- Daisy chain module sub-supplies, internally wired behind trim
- Distribution circuit protection; consumer unit within container
- Single phase consumer unit with type 2 SPD (6-way)
- Fused spur for extractor fan, PIR linked; fused spur for water heater
- Radial supply for AC; 4-way TP&N MCB distribution board; IP rated enclosure
- DB/X 5 core glanding and termination
- 45A final circuit double pole shower isolation switch
- Internal and external emergency lighting

Clean Water and Grey Water Storage

8′ ISO shipping container

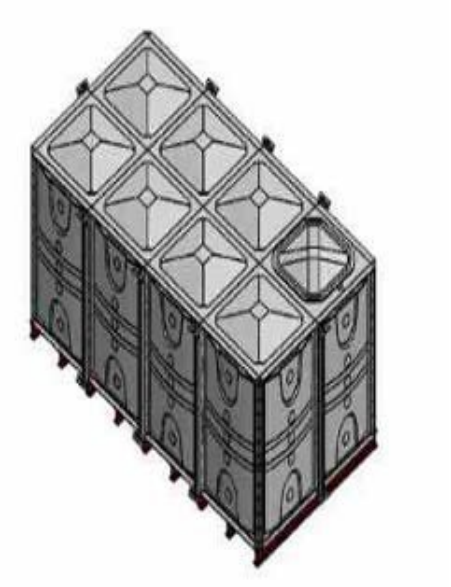
Cold water storage in 2 NO. water storage tanks with booster pump set to provide 3 bar pressure and flow rates, housed in an 8′ shipping container.



Water tanks

2 NO. potable water storage tank, insulated, with internal ball-valve to cut off incoming water. The 2 NO. tanks (13,200 L each) will be interconnected and provided with independent pump sets.

We would also include filtration equipment and, in temperate deployment, trace heating on all external pipework. In Gulf deployment the equivalent measure is shading and thermal insulation to keep stored water below the temperature at which bacterial growth accelerates.



Electrical upgrade to UAE codes and defence client requirements

- Submain supplies from DB main switch to plug-in isolator located on each container
- Daisy chain module sub-supplies, internally wired behind trim
- Distribution circuit protection

Consumer unit within module

- Single phase consumer unit with type 2 SPD (6-way)
- Distribution circuit protection for final circuits

Additional power

- Fused spur connection for extractor fan
- PIR linked to extractor fan spur to trigger fan unit
- Fused spur connection for water heater
- Installation of radial supply for AC
- Installation and supply of double sockets
- Radial supply consisting of two points; reading light

Smoke alarm and emergency lighting

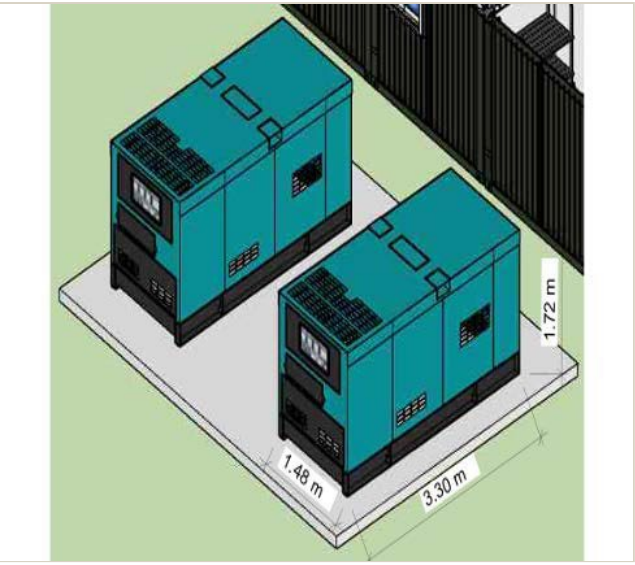
- Supply and install domestic mains powered smoke alarm
- Internal and external EM lighting installation

> Tank sizing, filtration train and resupply cycle are set by the water source survey — see page 8. Regional groundwater above 5,000 mg/L TDS will require a reverse osmosis stage ahead of storage.

Power Generation

Generator sets. Duty standby generator sets. 2 NO. 440 kVA generators (N+1) with the 4000 L refuel tank and control/warnings. These generators are provided within close-fitted acoustic housings but are suitable to be located externally.





Generator set — 440 kVA class

- 400 kVA prime power
- Tier 2 emissions compliant diesel engine, 13-litre class
- Water jacket heater; electronic governor
- Brushless alternator with AVR
- Local and remote start controller; volt free pack fixed
- 4 pole circuit breaker
- Acoustic, weatherproof housing
- 87 dBA @ 1 m; 71 dBA @ 7 m
- Base fuel tank 470 litres; 7 hours autonomy @ 75% load
- Fully bunded
- 4.48 × 1.41 × 2.58 m including bund tray; 4,330 kg

Fuel storage

- 4,000 litres; autonomy 50 hours @ 100% load
- Steel sheet construction; tank-in-tank design, bunded to 110% of capacity
- Integral lockable fill cabinet with fuel gauge
- Fuel fill 2″; breather 2″
- Battery bund alarm; bund alarm
- Non return valve; fuel isolation valve; feed and return spigots
- 5 metres of pipe-in-pipe fuel lines
- Generator base tank will not be used
- 2500 × 1500 × 1300 mm LWH

Derating in Gulf conditions

Prime ratings are quoted at 25 °C and sea level. At a 50 °C design ambient a set of this class loses roughly **8–12%** of output, so the pair should be planned at nearer 390–400 kVA each rather than nameplate. Radiator sizing, enclosure airflow and fuel cooling are confirmed against the measured site ambient at survey, and dust loading shortens air and fuel filter intervals to roughly six weeks.

Controls / telemetry / warning signals

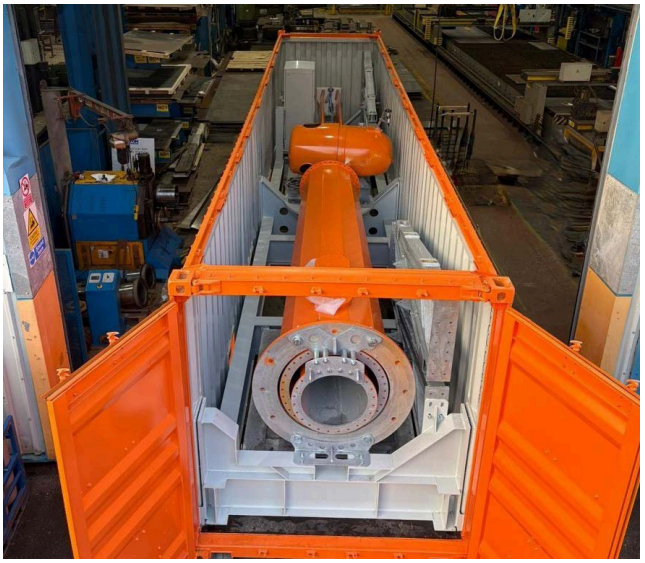
System supports 4 separate email addresses and 4 separate mobile phones: generator running/stopped, generator common alarm/cleared, low fuel warning/cleared, remote tanks (optional), battery charger failure/OK, mains failure/remote start signal, bund alarm active/cleared (optional).

All volt free packs, interconnecting cables and connections are included. Customer to provide a suitable data SIM card (contract only, not PAYG).

Packaged Wind Turbines

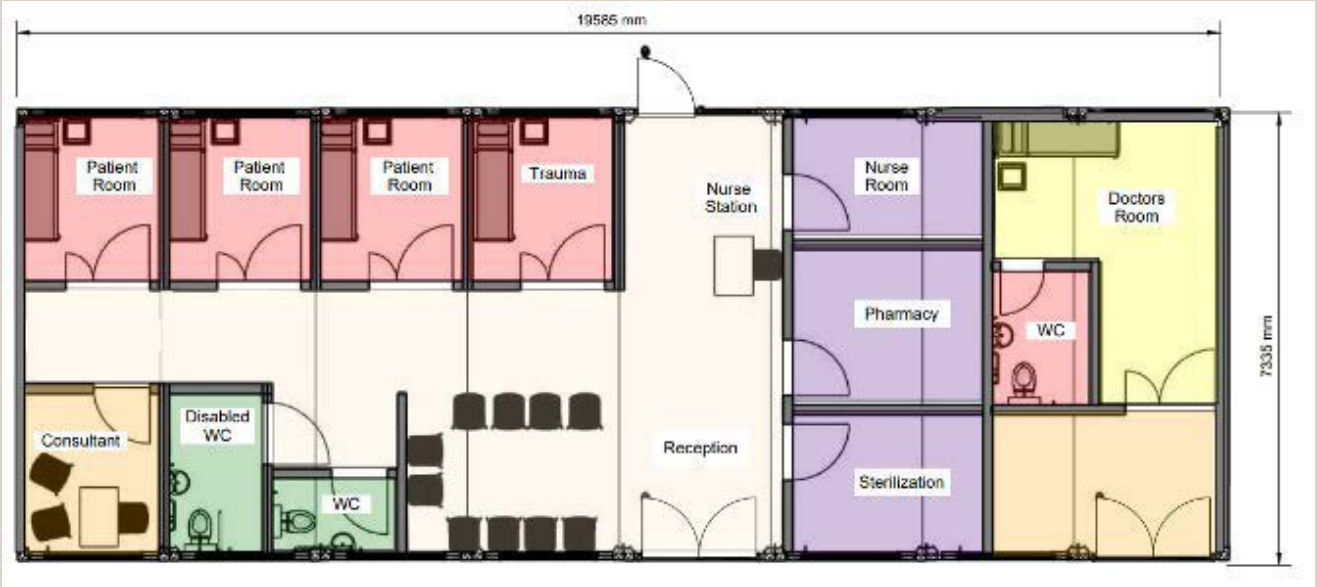
15 kW turbine that can be erected in a day. A small crane and cherry picker are required for the install, and locally sourced ballast blocks (12 × 2.4 tonnes).

> Ballast is locally sourced, so the movement plan carries the turbine only — not the mass. Viability is site specific: coastal and elevated inland sites in the region carry usable mean wind speeds, while much of the interior does not. Confirmed against the survey at page 8.



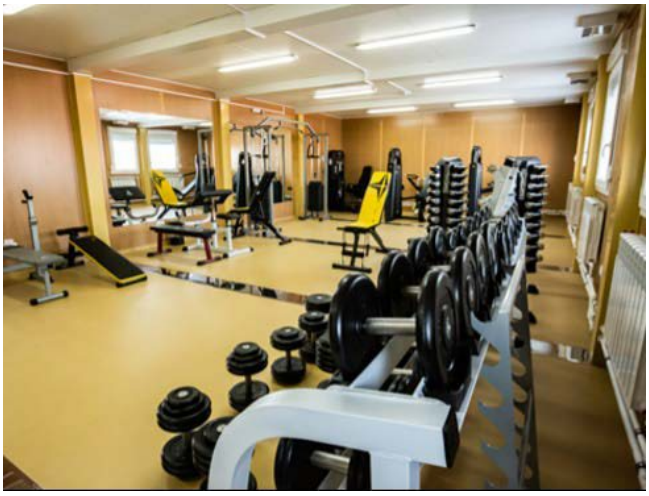


Medical Facilities



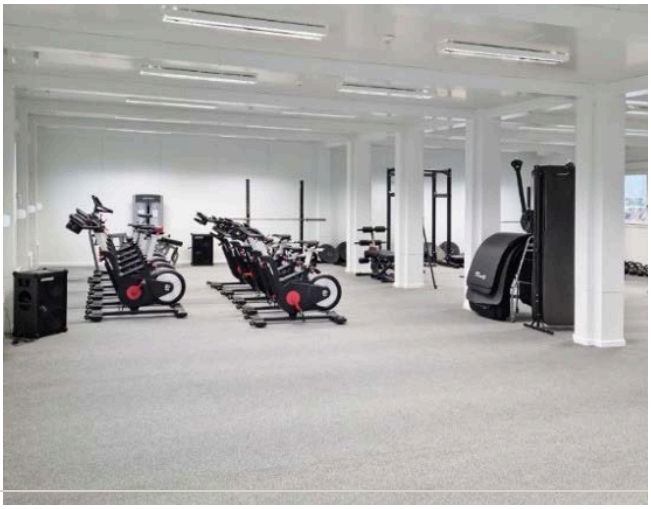
Modular clinic — 19,585 mm × 7,335 mm. Four patient rooms and trauma bay, nurse station, reception, pharmacy, sterilisation, consultant and doctor's rooms, disabled WC.

Recreation Facilities



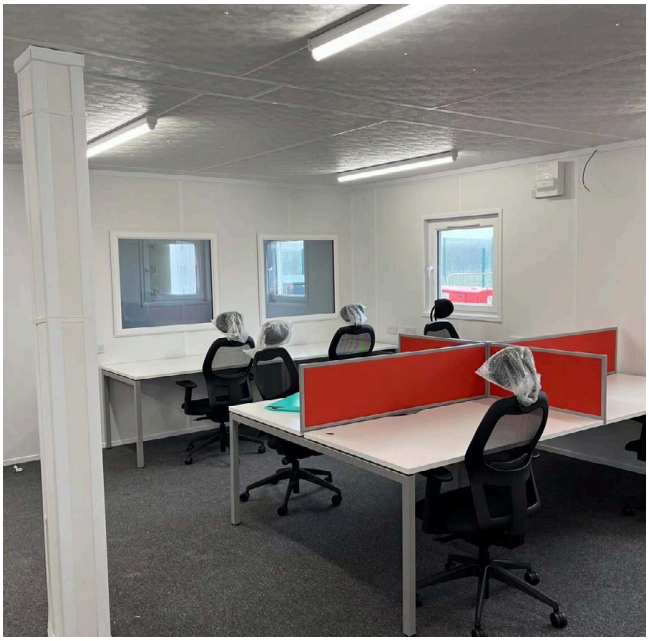






Training Facilities







Classroom, open-plan office and welfare configurations from the same module set. The classroom configuration also serves as the ground control and mission planning space for drone operations.

Hardened Shelters





General features

- Internal pressure relief valve, activates at 50 Pascal
- Rescue procedure: special emergency guard rescue protocol included
- Delivery: unit shipped fully assembled and pre-wired, ready to use
- Natural air inlets with automatic airtight closure in case of nearby explosion, to block shock wave entry

Product identification

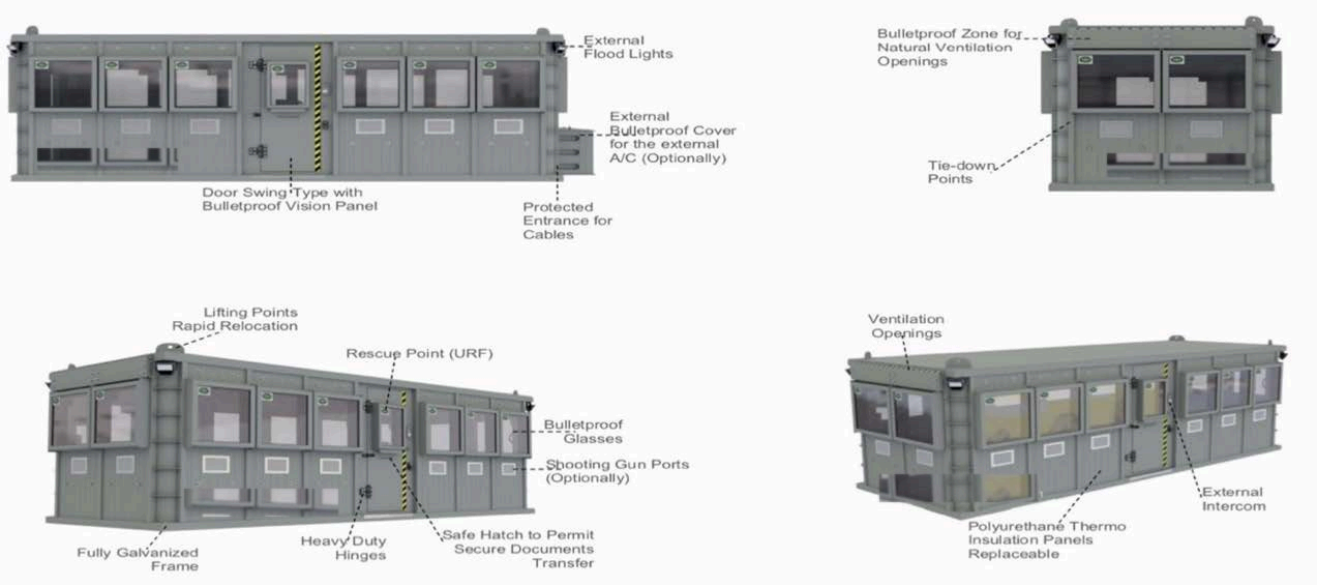
Item	Details
Type	Hardened cabin, 20′ class
Dimensions (L × W × H)	2.40 m × 6.00 m × 2.25 m (external)
Shelter type	Stand-alone, mechanically separate
HS code	94069090 (customs)
Supply route	Trusted partner, NATO-codified, pre-cleared for export

Compliance standards

- EUROCODE 1: Actions on Structures
- EUROCODE 3: Design of Steel Structures
- UL 752 / NIJ / EN 1063: Ballistic Resistance Rating
- EN 61439-1/2 / IEC 61439-1/2: Electrical Installations

Hardened Shelters — Protection Levels

Component	Standard	Level / rating
Option A: walls / roof / floor	EN 1063 BR6 / UL 752 Level 5, overpressure	Stops 7.62×51 mm FMJ · 3 psi
Option B: walls / roof / floor	EN 1063 BR7 / UL 752 Level 9/10, overpressure	Stops 7.62×51 mm AP and 12.7×99 mm · 5 psi
Windows	EN 1063 BR7 / UL 752 Level 9	Stops 7.62×51 mm AP, plus 12.7×99 FMJ polycarbonate inner layer
Connections	Moment-resisting	Entire frame resists lateral forces



Blast resistance

- Tested with 100 g C4 in water container at 0 m standoff
- Tested with 240 g PETN at 0 m standoff
- Designed to resist blast pressure of at least 3 psi
- Proven resistant to close-range light rocket impact at 20 m, and to ballistic missile impact at 75 m, by an independent national defence test laboratory

Shelter siting, standoff distance and blast overpressure lines are set by the security survey — see page 8.

Silver and Bronze Level Products

Flat pack units designed for easy transportation and rapid installation, with each unit capable of being erected within 1–2 hours by a team of 3 people.

The units are well insulated and finished with durable, high-quality materials, making them suitable for a wide range of applications and environments.

Modules can easily be connected to create larger spaces and open-plan areas, while the structural design allows stacking of up to 5 storeys high.

The units can also be relocated either as complete volumetric modules or dismantled back into flat pack form for efficient transportation and reinstallation.





Joined units to create bigger living quarters



Residential apartments

Silver and Bronze Level Products

Joined units to create large open spaces, can be scaled to your needs









Commercial offices



Residential configurations

Get in Touch

Resilience, surveyed, sustained and flown.

HEAD OFFICE

Foxglove Futures LLC
Abu Dhabi
United Arab Emirates

CAPABILITY ENQUIRIES

Operational Resilience Services
Defence & Critical National Infrastructure

PROJECT MANAGEMENT & SURVEY

Survey tasking, recce packs and programme enquiries

DRONE OPERATIONS

Energy, environmental and CNI security tasking

FOXGLOVE FUTURES

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