

LODGE & ESTATE WATER AUDIT

The SANS 241 audit checklist.

Fourteen questions the auditor will ask, the general manager should already know, and any luxury-lodge water installation should have answered before signing handover.

How to use this pack

Walk the plant room and the four most representative outlets on site (kitchen header, presidential suite, spa, staff village). Score each row Pass / Concern / Fail. Anything below Pass is a defensible action item against the Water Services Act of 1997 and SANS 241:2015.

#	Topic	What to verify on site
01	Source-water analysis	Full SANS 241 panel through a SANAS-accredited lab in the last 12 months — bacteriology, heavy metals, hardness, TDS, turbidity, fluoride, nitrate, iron, manganese.
02	Pre-treatment	Iron/manganese, hardness and silica all addressed upstream of the membranes — not pushed onto the RO to deal with.
03	Membrane train	Tier-one OEM elements (DuPont, Toray, Hydranautics or Memstar) with model and serial recorded on the handover pack.
04	Post-RO conditioning	Permeate is remineralised to a Langelier-positive profile — never delivered bare to the kitchen or guest taps.
05	Final disinfection	Validated UV dose ≥ 40 mJ/cm ² at end-of-lamp-life, with intensity monitor and dose alarm wired to the on-call rota.
06	Point-of-zone polish	GAC column upstream of the guest-facing header — strips residual taste and odour at the suite without losing disinfection margin.
07	Telemetry & alarms	Free-chlorine, conductivity, flow and ORP visible on a cloud dashboard. Alarms reach the duty engineer's phone, not just a panel light.
08	Hydraulic sizing	System sized to Saturday-night peak occupancy with every spa bath running, not to annual average daily demand.
09	Storage & redundancy	Pressure vessels and reservoirs sized for 4–8 hours of gravity-fed supply on a generator-down event.
10	Sampling cadence	Monthly SANAS-accredited microbiology + chemistry pack at four representative outlets — lab report archived 24 months.

#	Topic	What to verify on site
11	Compliance documentation	Water Services Act file, SANS 241 certificates, corrective-action log and trustee briefing pack are all present and current.
12	Plant-room acoustics	Measured ≤ 55 dBA at 1 m on standard pressure sets, mid-40s with acoustic hoods. Measurement written into the handover pack.
13	Wastewater & reuse	Treated effluent quality verified for reuse on irrigation; General Authorisation under Section 39 of the National Water Act is on file.
14	Service agreement	Named SLA on critical response, spares budget for membranes/UV lamps, annual full-service window agreed in writing.

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