

RESIDENTIAL TOWNHOUSES (11 UNITS) — WATERPROOFING BILL

Sample check of a real BOQ and drawing set before issue. Names removed.

SAMPLE REPORT · ANONYMISED

Checked: BOQ workbook (6 sheets) + 5 architectural drawings

Focus: waterproofing and sealants

Delivered: PDF report · Excel register · corrections schedule

5

FINDINGS

1

CONFLICTS

3

MISSING

0

INFERRED

5

CORRECTIONS

2

HIGH IMPACT

Summary. The waterproofing bill reproduces exactly from its take-off, but the take-off misses work shown on the drawings. **Shower and bath walls are measured only 300 mm high**, balcony waterproofing is drawn but not billed, and roof outlets and skylight upstands are not itemised. The summary adds VAT at 15% (Botswana is 14%), and quantities already include 5% wastage, which should be stated or removed.

Documents reviewed

- BOQ Waterproofing workbook: BOQ, take-off (Unit 01 × 6, Unit 02 × 5), summary
- Drawings Plans, sections and roof plans, Rev 0

Specification not yet written; items that depend on it are marked Inferred.

Automatic checks

LEVEL	CHECK	RESULT	WHERE
MED	vat_rate	Summary adds VAT at 15%. The current rate for Botswana is 14%.	Summary sheet
MED	waste_included	Quantities include 5% wastage. Standard measurement is net; state it clearly or remove it.	B0Q header

Rule-based checks run in code on every B0Q: location splits, units, repeated quantities, trade items in other bills, ratios, unpriced items, VAT, wastage, provisional status.

Issues to fix before issue

MISSING C01 · Wet areas

HIGH IMPACT

Shower and bath walls are measured only 300 mm high

Every unit has showers and built-in baths, but wall waterproofing is measured as the wet-area perimeter $\times$ 0.30 m. Shower zones normally need full height or at least 1.8–2.0 m.

WORKING

Take-off formula: perimeter $\times$ 0.30 m on every wet area.

SOURCE Take-off 'Wall' rows; drawings first-floor plans

ACTION Measure shower walls to the specified height; add bath surrounds.

MISSING C02 · Balconies

HIGH IMPACT

Balcony waterproofing is on the drawings but not in the bill

Sections call for a waterproofing coating on balcony screeds before tiling. No item exists in the waterproofing bill.

SOURCE Sections A-A, B-B

ACTION Add a measured item for balcony waterproofing.

38 roof outlets and 11 skylight upstands are not itemised

Roof plans show outlets and sealed skylights, but the membrane item does not mention outlets, upstands or terminations.

WORKING

Counted from roof plans: 38 outlets, 11 skylights.

SOURCE Roof plans

ACTION Add enumerated items for outlets and upstands.

Baths: BOQ says freestanding, drawings show built-in

The BOQ describes freestanding baths; plans show built-in baths, which need waterproofed surrounds.

SOURCE BOQ C1.5; first-floor plans

ACTION Align the description with the drawings.

VAT at 15% instead of 14%

The summary adds VAT at 15%.

WORKING

Botswana standard rate 14%.

SOURCE Summary sheet

ACTION Correct the VAT line.

Corrections schedule

NO.	AREA	CORRECTION NEEDED	REF
C-01	Wet areas	Re-measure wall waterproofing in shower zones and around built-in baths to the required height (currently 300 mm).	C01
C-02	Balconies	Add a measured item for the balcony waterproofing coating shown in the sections.	C02
C-03	Roofs	Add enumerated items for 38 roof outlets and 11 skylight upstands, with terminations.	C03

NO.	AREA	CORRECTION NEEDED	REF
C-04	Description	Change bath description to built-in to match the drawings, or confirm freestanding.	C04
C-05	Summary	Correct VAT to 14%, and state whether quantities include 5% wastage.	C05

Notes for the tender documents

Items to add

- Balcony waterproofing item
- Roof outlet and upstand items

Items to clarify

- Height of shower-wall waterproofing
- Wastage allowance in quantities

Specialist input needed

- Waterproofing system to be named in the specification

AI-assisted document coordination review, checked by an experienced person. It does not replace professional design review; decisions on the documents stay with the design team.

Pre-tender check sample · every issue states its document and location · Status key: Verified = stated in the documents, with the page; Calculated = worked out in code from verified figures; Inferred = a reasonable reading that needs confirming; Conflict = the documents disagree and we have not chosen one; Missing = required by rule, not located in the supplied documents.