QUANTIL

Bid price decision

Management report for the bid board

Kestrow Link: Bored Tunnel Lot 2

Westmere Regional Transport Authority

Tender reference KSL-L2-2026 | Submission 2026-12-15

Prepared by	**Bid manager (demo)**
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1. Executive summary

This report supports the bid decision for Kestrow Link: Bored Tunnel Lot 2 for Westmere Regional Transport Authority (tender reference KSL-L2-2026), with submission on 2026-12-15. It brings together the cost and risk position, the competitive situation and the price that gives the best balance between the probability of winning and the profit if won.

Submit at EUR 301.9 M: 30% chance of winning and EUR 2.49 M expected profit

We recommend submitting at EUR 301.9 M, +13.0% on the reference estimate of EUR 267.0 M. At this price the probability of winning is 30%, the expected profit after tender cost is EUR 2.49 M and the expected profit if won is EUR 12.29 M (4.1% of the price). The probability that the project makes a loss if won is 14%.

4 of the 4 decision rules are met. Verdict of the tool: BID at the chosen price.

PRICE (EUR M)	P(WIN)	E[PROFIT] (EUR M)	MARGIN IF WON	P(LOSS IF WON)	PEAK FUNDING (EUR M)
301.9	30%	2.49	4.1%	14%	16.4

Key findings

- **The optimal bid price is EUR 301.9 M, +13.0% on the reference estimate.** Expected profit is highest at EUR 301.9 M (EUR 2.49 M).
- **At the chosen price we win the tender with a probability of 30%.** This is above the neutral share of 20% for 5.0 expected bidders.
- **If won, the project earns a margin of 4.1% with a 14% probability of a loss.** Expected profit if won is EUR 12.29 M; expected profit across win and loss of the tender is EUR 2.49 M after tender cost.
- **Expected cost is EUR 282.0 M; P80 needs EUR 24.3 M contingency.** The cost uncertainty (standard deviation EUR 11.4 M, 4.0% of expected cost) is the main source of the loss risk.
- **Oakhurst & Lind Construct is the most aggressive competitor.** Its median price is EUR 301.7 M (about equal to our price); 5 of 5 competitors can realistically (P10) bid below our price.
- **Direct cost is the largest driver of expected profit.** Its swing is EUR 16.3 M, followed by competitor price level (EUR 5.0 M) and overheads (EUR 2.9 M).

Decision requested from the bid board

1. Approve submission at EUR 301.9 M, with authority for the bid team to adjust within EUR 299.5 M to EUR 303.1 M.
2. Confirm the risk position: a probability of a loss if won of 14% and a P80 contingency of EUR 24.3 M.
3. Assign owners to the recommendations in this report and record the decision on 15_DECISION.

2. The tender and our approach

2.1 The tender

Item	Value
Project	Kestrow Link: Bored Tunnel Lot 2
Client	Westmere Regional Transport Authority
Tender reference	KSL-L2-2026
Location	Westmere (fictitious)
Contract	Design & Build, lump sum, 42 months
Award method	Lowest price
Submission date	2026-12-15
Bid manager	Bid manager (demo)

Table 1. Tender data.

The contract is a Design & Build, lump sum contract with a duration of 42 months. The award method is lowest price.

2.2 How the price is determined

The total cost is simulated with 10,000 Monte Carlo iterations (seed 42) from three-point estimates for 26 cost lines and 15 discrete risks, with cost correlation preset 'Medium'. For every price on a grid around the reference estimate the model calculates the probability of winning against 5 named competitors, based on how often they bid and how they price relative to our estimate.

Expected profit is the probability of winning multiplied by the profit if won (net price minus expected cost), minus the tender cost of EUR 1.20 M. The recommended price is the price with the highest expected profit that also meets the decision rules of the bid board: a margin if won of at least 3.0%, a probability of a loss if won of at most 25% and a probability of winning of at least 10%.

Status of the analysis: Up to date (10,000 iterations, correlation Medium). Converged: precise enough for a bid decision.

3. Cost and risk

3.1 Cost basis

The direct cost has an expected value of EUR 241.0 M. With site and general overheads of 13.0% and 15 discrete risks with an expected value of EUR 9.6 M, the expected total cost is EUR 282.0 M with a standard deviation of EUR 11.4 M (4.0% of expected cost).

The reference estimate (direct cost most likely plus overheads, excluding risk) is EUR 267.0 M. To reach 80% certainty the cost budget must be EUR 291.3 M, which means a contingency of EUR 24.3 M (9.1% of the reference estimate). The break-even price, at which the expected profit if won is zero, is EUR 289.3 M.

The largest cost category is subcontract (41% of the most likely direct cost), followed by materials (23%). The three largest cost lines are Segment lining production (3.2 km), TBM procurement and refurbishment and TBM operations crew and consumables; together they account for 36% of the direct cost.

Cost item	Value
Direct cost (expected)	EUR 241.0 M
Overheads (site and general)	13.0% of direct cost
Discrete risks (expected value, 15 risks)	EUR 9.6 M
Reference estimate (excluding risk)	EUR 267.0 M
Expected total cost E[C]	EUR 282.0 M
Standard deviation	EUR 11.4 M
Cost at P80	EUR 291.3 M
Contingency at P80 (above reference)	EUR 24.3 M
Break-even price	EUR 289.3 M

Table 2. Cost basis of the bid.

3.2 Cost uncertainty

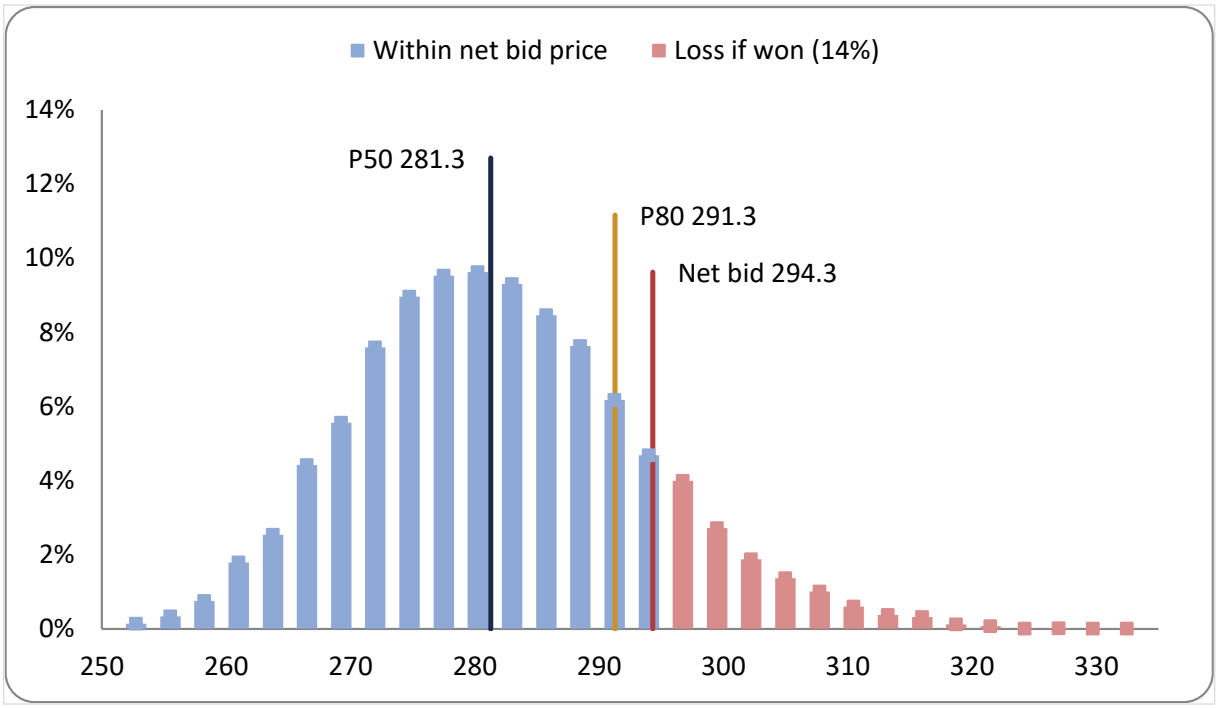


Figure 1. Distribution of the simulated total cost with P50, P80 and the net bid price.

The figure shows the distribution of the simulated total cost. Blue bars are outcomes within the net bid price; red bars are outcomes in which the project makes a loss if won. The vertical lines mark the median

(P50), the chosen P-level and the net bid price. The area of the red bars is the probability of a loss if won (14%).

3.3 Main risks

The five risks with the highest expected value are listed below. Together they represent EUR 5.4 M, or 56% of the total risk expectation of EUR 9.6 M. The largest is 'Boulders or obstructions in the TBM drive' with a probability of 35% and a mean impact of EUR 4.92 M.

Risks are part of the simulated cost, not an addition on top of it. Reducing the probability or impact of these risks lowers both the expected cost and the probability of a loss if won.

Risk	Owner	Probability	Mean impact	Expected value
Boulders or obstructions in the TBM drive	Tunnel manager	35%	EUR 4.92 M	EUR 1.72 M
Steel and concrete escalation above index	Procurement	40%	EUR 3.25 M	EUR 1.30 M
Systems integration and commissioning delays	Systems manager	35%	EUR 2.47 M	EUR 0.86 M
Settlement above limits under existing buildings	Design manager	20%	EUR 3.92 M	EUR 0.78 M
Design changes after client review	Design manager	45%	EUR 1.68 M	EUR 0.76 M

Table 3. Top five risks by expected value.

4. Market and competition

5 named competitors are active. Taking their participation probabilities into account and including ourselves, the expected number of bidders is 5.0, so a neutral share of the market would be a probability of winning of about 20%.

Oakhurst & Lind Construct is expected to price lowest, with a median of EUR 301.7 M (about equal to our price) and a P10 of EUR 274.3 M. 5 of 5 competitors have a realistic chance (P10) of bidding below our price.

The figure shows for each competitor the range between P10 and P90 of the expected price, as a percentage above our reference estimate, with the median marked. Competitor prices are correlated through a common market factor of 0.30: in a busy market all competitors tend to price higher, in a quiet market lower.

Our non-price win factors shift the probability of winning upwards (logit shift 0.174), for example through client relationship, local presence or technical solution.

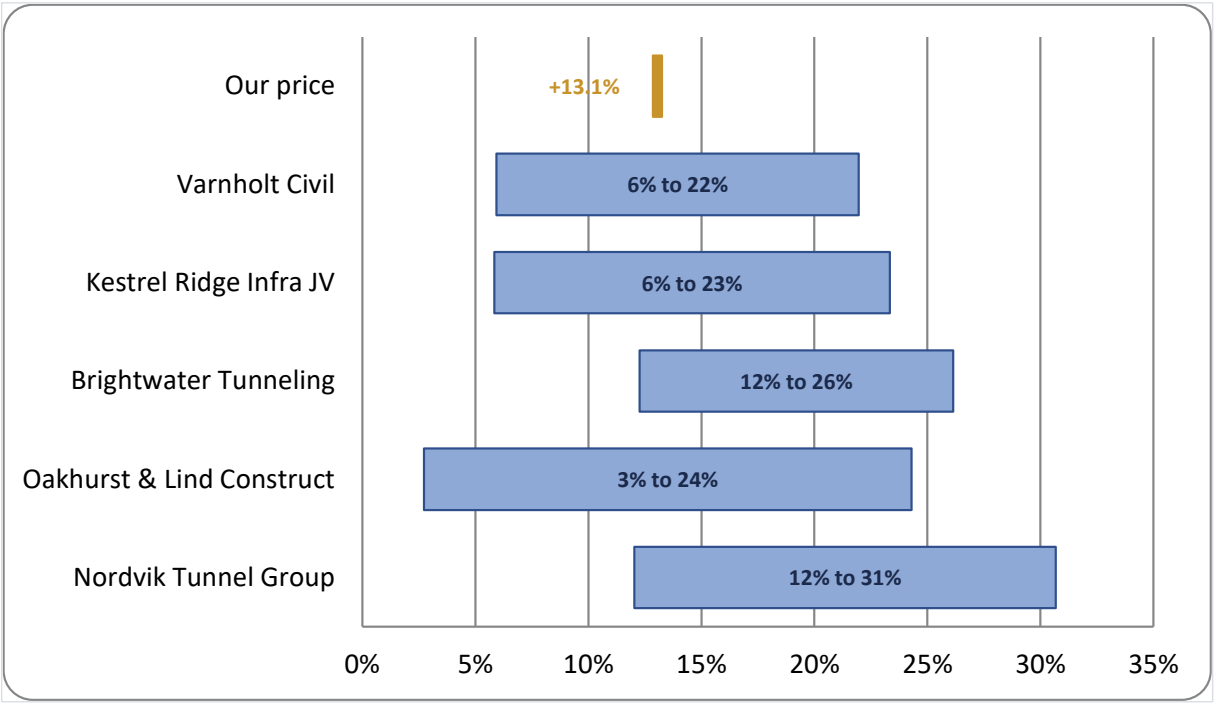


Figure 2. Expected price range (P10 to P90) of each competitor, as a percentage above our reference estimate.

Competitor	Participation	Median price	P10	P90	Median vs our price
Varnholt Civil	95%	EUR 303.5 M	EUR 282.9 M	EUR 325.7 M	+0.5%
Kestrel Ridge Infra JV	90%	EUR 305.1 M	EUR 282.6 M	EUR 329.3 M	+1.1%
Brightwater Tunneling	85%	EUR 317.8 M	EUR 299.8 M	EUR 336.8 M	+5.3%
Oakhurst & Lind Construct	70%	EUR 301.7 M	EUR 274.3 M	EUR 331.9 M	0.0%
Nordvik Tunnel Group	60%	EUR 323.1 M	EUR 299.2 M	EUR 348.9 M	+7.0%

Table 4. Competitor assumptions used in the analysis.

5. Price optimization

5.1 The optimal price

The figure shows expected profit (left axis) and the probability of winning (right axis) for every price on the grid. A higher price increases the profit if won but lowers the probability of winning; expected profit is the product of both and peaks at EUR 301.9 M with EUR 2.49 M.

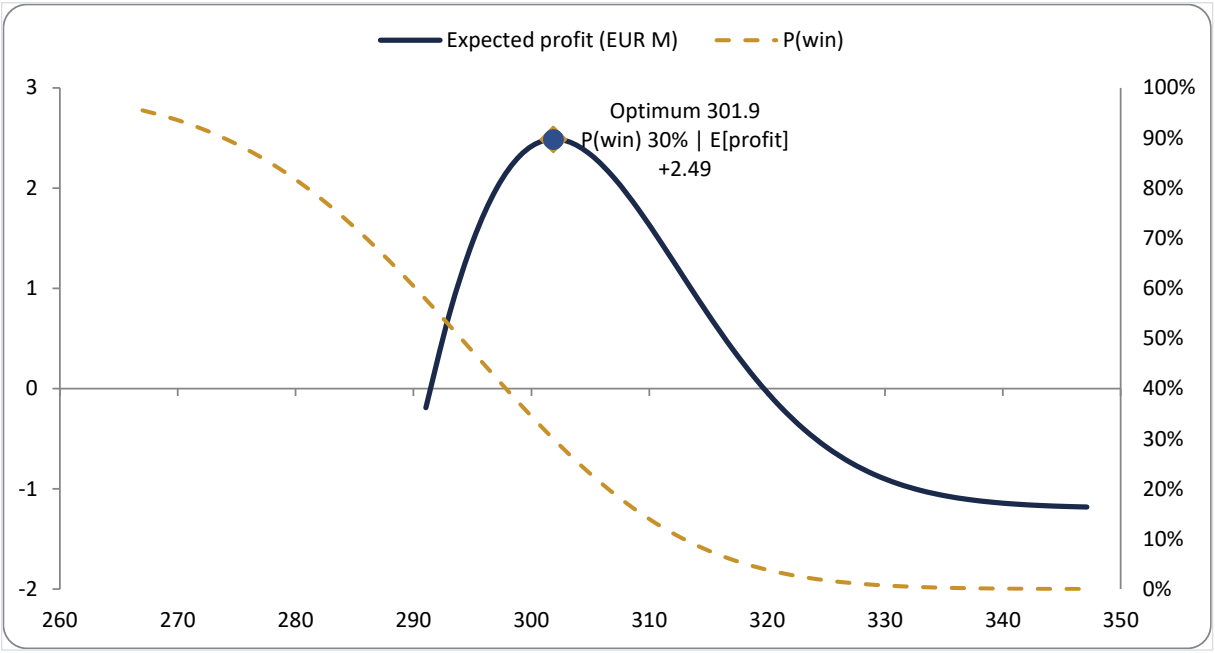


Figure 3. Expected profit (left axis) and probability of winning (right axis) by bid price.

Within the band from EUR 299.5 M to EUR 303.1 M expected profit stays within 5% of the maximum. Prices in this band are economically equivalent, so the final choice can follow strategic considerations such as order book, client relationship or risk appetite.

The recommended price is 7.0% above expected cost and 4.4% above the break-even price.

5.2 Alternative price strategies

The table compares the recommended price with standard alternatives. The defensive strategy prices at the target profit and risk margin, the aggressive strategy at the lowest price that still meets all decision rules, and the break-even price shows the floor below which the project is loss-making on average.

Strategy	Price	P(win)	E[profit]	Margin if won	P(loss if won)	Meets rules
Recommended	EUR 301.9 M	30.0%	EUR 2.49 M	4.1%	14.3%	Yes
Defensive (target margin)	EUR 308.2 M	16.9%	EUR 1.92 M	6.0%	6.2%	Yes
Aggressive (lowest feasible)	EUR 299.1 M	36.9%	EUR 2.33 M	3.2%	19.4%	Yes
Break-even	EUR 289.3 M	62.3%	EUR -1.20 M	0.0%	47.5%	No

Table 5. Comparison of price strategies.

The defensive price of EUR 308.2 M raises the margin if won to 6.0% but lowers the probability of winning to 17%; expected profit falls to EUR 1.92 M.

The aggressive price of EUR 299.1 M raises the probability of winning to 37% but also the probability of a loss if won to 19%, with an expected profit of EUR 2.33 M. The recommended price is the best balance of these effects within the rules of the bid board.

6. Sensitivity

The figure ranks the drivers of expected profit at the chosen price. Each bar shows the change in expected profit when one driver moves to its low or high setting while all others stay at their base value.

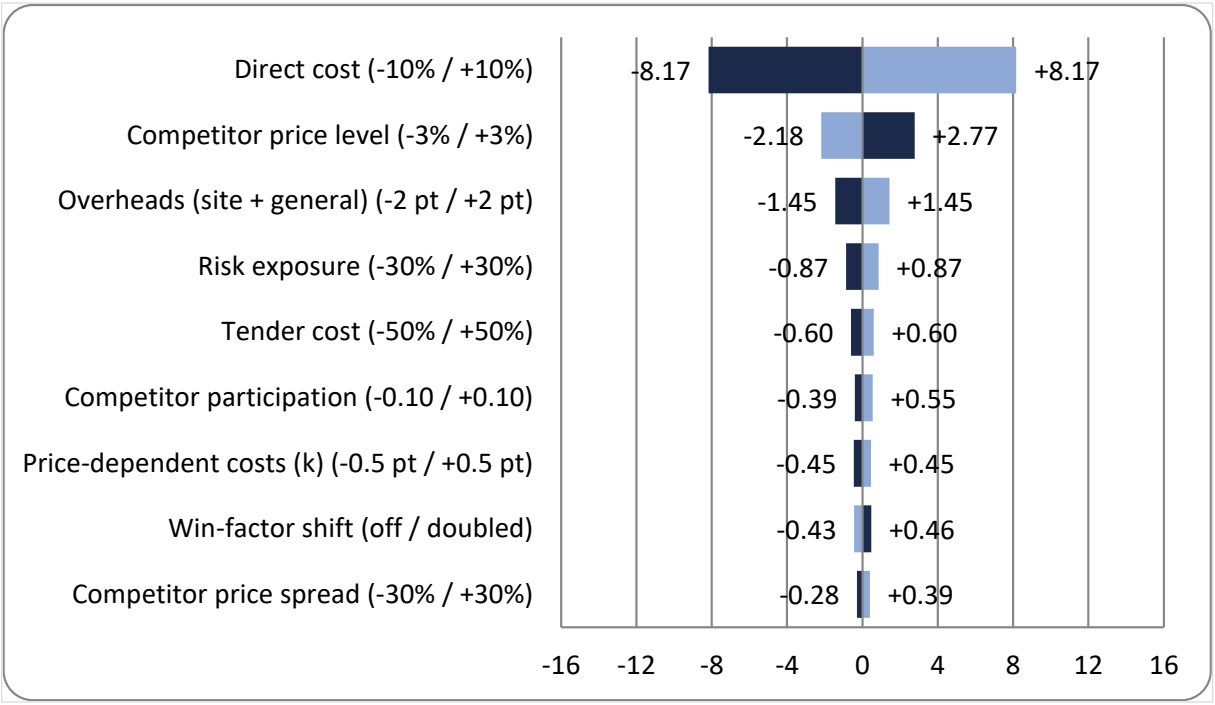


Figure 4. Change in expected profit at the chosen price when each driver moves to its low or high setting (EUR M).

The largest driver is direct cost, with a swing of EUR 16.3 M between the low and high setting. It is followed by competitor price level (EUR 5.0 M) and overheads (EUR 2.9 M).

Because a cost driver leads, the quality of our own estimate determines the result most; reducing the uncertainty in the largest cost lines has the highest value.

Driver (low / high setting)	Change low (EUR M)	Change high (EUR M)	Swing (EUR M)
Direct cost (-10% / +10%)	8.17	-8.17	16.34
Competitor price level (-3% / +3%)	-2.18	2.77	4.95
Overheads (site + general) (-2 pt / +2 pt)	1.45	-1.45	2.89
Risk exposure (-30% / +30%)	0.87	-0.87	1.73
Tender cost (-50% / +50%)	0.60	-0.60	1.20
Competitor participation (-0.10 / +0.10)	0.55	-0.39	0.95
Price-dependent costs (k) (-0.5 pt / +0.5 pt)	0.45	-0.45	0.91
Win-factor shift (off / doubled)	-0.43	0.46	0.90
Competitor price spread (-30% / +30%)	0.39	-0.28	0.68

Table 6. Sensitivity of expected profit, sorted by swing.

7. Cash flow and financing

Based on the chosen price, the S-curve of cost and revenue and the payment terms, the cumulative cash position reaches its lowest point in month 23 with a peak funding requirement of EUR 16.4 M (5.4% of the price). The NPV of the project cash flow at a WACC of 8.0% is EUR 5.55 M.

The financing cost that follows from this profile is 0.9% of the price, against 1.0% included in the price-dependent markups. The markup covers the financing need.

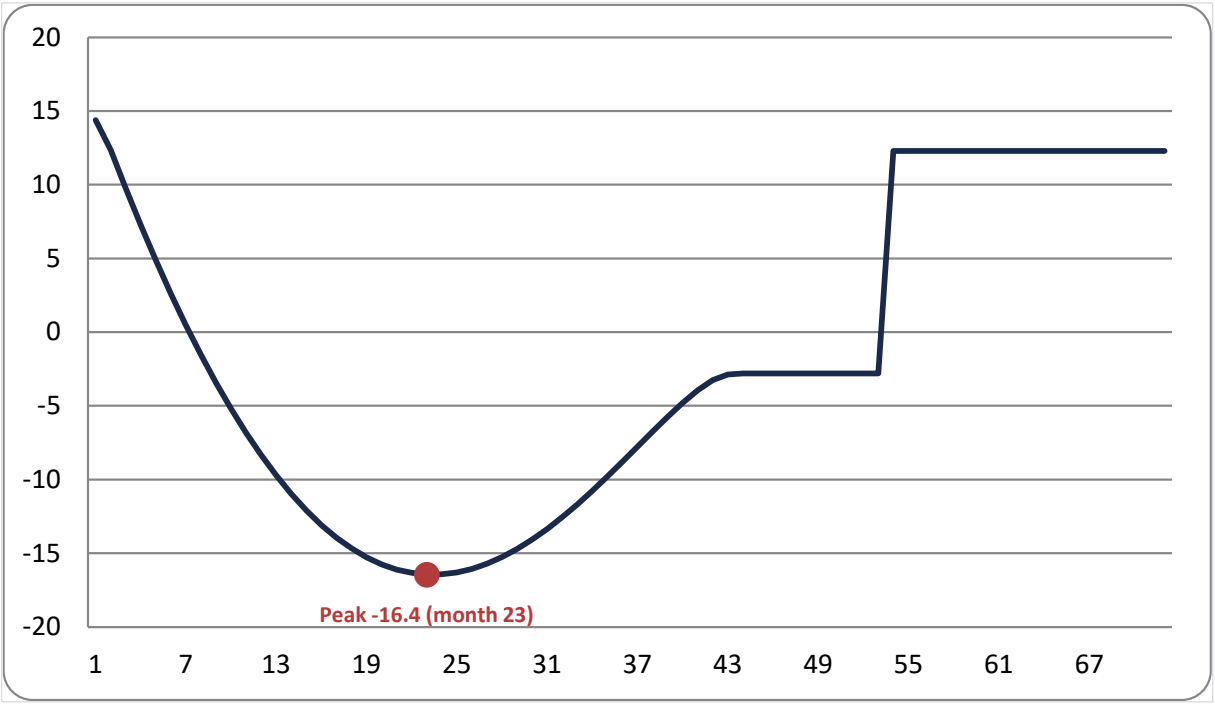


Figure 5. Cumulative cash position of the project by month (EUR M).

Cash flow item	Value
Peak funding requirement	EUR 16.4 M
Month of peak funding	23
NPV of project cash flow at 8.0% WACC	EUR 5.55 M
Financing cost as share of price	0.9%
Financing markup included in the price	1.0%

Table 7. Cash flow key figures at the chosen price.

8. Conclusions

The analysis leads to the following conclusions.

1. **The optimal bid price is EUR 301.9 M, +13.0% on the reference estimate.** Expected profit is highest at EUR 301.9 M (EUR 2.49 M). Within the band from EUR 299.5 M to EUR 303.1 M expected profit stays within 5% of this maximum, which gives the bid board room for strategic positioning without a material loss in value.
2. **At the chosen price we win the tender with a probability of 30%.** This is above the neutral share of 20% for 5.0 expected bidders. The price is competitive: it sits on the favorable side of the market while meeting the minimum margin.
3. **If won, the project earns a margin of 4.1% with a 14% probability of a loss.** Expected profit if won is EUR 12.29 M; expected profit across win and loss of the tender is EUR 2.49 M after tender cost. The loss probability is well within the limit of 25%. The margin is below the target profit and risk margin of 6.0%; the market does not reward the full target at an optimal win probability.
4. **Expected cost is EUR 282.0 M; P80 needs EUR 24.3 M contingency.** The cost uncertainty (standard deviation EUR 11.4 M, 4.0% of expected cost) is the main source of the loss risk. The break-even price is EUR 289.3 M; the chosen price is 4.4% above it.
5. **Oakhurst & Lind Construct is the most aggressive competitor.** Its median price is EUR 301.7 M (about equal to our price); 5 of 5 competitors can realistically (P10) bid below our price. Competitor prices move together (market factor 0.30), so in a busy or quiet market the whole field shifts at once.
6. **Direct cost is the largest driver of expected profit.** Its swing is EUR 16.3 M, followed by competitor price level (EUR 5.0 M) and overheads (EUR 2.9 M). The result depends more on the quality of our own estimate than on the market; firming up the estimate has the highest value of information.
7. **Peak funding of EUR 16.4 M is reached in month 23.** That is 5.4% of the price; the NPV of the project cash flow at 8.0% WACC is EUR 5.55 M. The financing cost (0.9% of the price) is covered by the 1.0% included in the markups.
8. **The analysis is up to date and statistically reliable.** Up to date (10,000 iterations, correlation Medium). Converged: precise enough for a bid decision. All figures are model outcomes based on the stated assumptions; they support but do not replace the judgment of the bid board.

9. Recommendations

Based on the conclusions we recommend the following actions, in order of priority.

1. **Submit at EUR 301.9 M.** The price meets all four decision rules and maximizes expected profit within them. Approve the price within the band of EUR 299.5 M to EUR 303.1 M so the bid team can make final adjustments without a new decision.
2. **Keep the top risks actively managed.** Assign owners and responses for 'Boulders or obstructions in the TBM drive' and 'Steel and concrete escalation above index'. Together the top five risks represent EUR 5.4 M of expected value (56% of the risk total).
3. **Firm up the estimate of the largest cost items.** Obtain binding quotations or a second opinion for Segment lining production (3.2 km), TBM procurement and refurbishment and TBM operations crew and consumables. Moving direct cost between -10% and +10% changes expected profit by EUR 16.3 M; narrowing the estimate range is the most valuable next step.
4. **Accept a margin below target consciously.** Pricing at the target profit and risk margin (EUR 308.2 M) would raise the margin to 6.0% but lower the probability of winning. See the strategy comparison: the higher margin does not compensate for the lower chance of winning in expected profit.
5. **Improve the payment profile.** Peak funding of EUR 16.4 M ties up capital for a large part of the contract. Negotiate an advance payment, milestone payments or a lower retention, and check the financing markup on 06_MARKUPS.
6. **Log the bid and its outcome.** Record this tender with 'Log this bid' and enter the result and competitor prices once known. Every logged tender sharpens the competitor calibration and the hit-rate track record for the next bid.

Decision requested from the bid board

1. Approve submission at EUR 301.9 M, with authority for the bid team to adjust within EUR 299.5 M to EUR 303.1 M.
2. Confirm the risk position: a probability of a loss if won of 14% and a P80 contingency of EUR 24.3 M.
3. Assign owners to the recommendations in this report and record the decision on 15_DECISION.

Appendix A. Decision rules and approval

A.1 Decision rules at the chosen price

Rule	Limit	Value	Status
Margin if won >= minimum	3.0%	4.1%	**Met**
P(loss if won) <= maximum	25.0%	14.3%	**Met**
P(win) >= minimum	10.0%	30.0%	**Met**
Expected profit > 0	EUR 0.00 M	EUR 2.49 M	**Met**

Table 8. Decision rules (15_DECISION).

A.2 Rationale

No rationale has been recorded yet on 15_DECISION.

A.3 Approval

Role	Name	Date	Decision	Remarks
Bid manager				
Commercial director				
Managing director				

Table 9. Approval of the bid price.

Appendix B. Method and assumptions

The main settings behind the figures in this report are listed below. They are taken from the workbook at the time the report was generated.

Setting	Value
Monte Carlo iterations and seed	10,000 (seed 42)
Cost correlation preset	Medium
Market co-movement of competitor prices	0.30
Confidence level for contingency (P-level)	80%
Recommendation band (share of maximum)	95%
Price grid (x reference estimate)	1.00 to 1.30
Site and general overheads	9.0% + 4.0%
Price-dependent costs k (bond, insurance, financing)	2.5% of the price
Target profit and risk margin	6.0%
Tender cost	EUR 1.20 M
WACC for NPV	8.0%
Decision rules	Margin >= 3.0%, P(loss) <= 25%, P(win) >= 10%
Simulation status	Up to date (10,000 iterations, correlation Medium)

Table 10. Model settings.

B.1 Definitions

- **Reference estimate:** direct cost (most likely) plus overheads, excluding risk; the yardstick for competitor price ratios.
- **Expected cost E[C]:** mean of the simulated total cost including overheads and risks.
- **Net price:** bid price minus price-dependent costs (bond, insurance and financing).
- **Probability of winning P(win):** probability that our bid is the lowest (or, in a MEAT tender, the best) valid bid.
- **Expected profit:** P(win) x (net price minus expected cost) minus tender cost.
- **Probability of a loss if won:** probability that the actual cost exceeds the net price.
- **Contingency:** cost at the chosen P-level minus the reference estimate.

This report was generated with the Quantil Bid Price Optimizer v1.2.2 (cost source: Monte Carlo simulation). All figures are model outcomes based on the inputs and assumptions in the workbook. They support, but do not replace, the professional judgment of the bid board.