



MADE FOR LIFE UNDER THE SUN



Before You Issue the RFQ

A facility and procurement guide to outdoor structures

How to define the scope, test the price, compare suppliers properly, and manage the asset that follows.

FACILITY · PROCUREMENT · PROJECT · ASSET MANAGEMENT

Performance Beyond Installation.

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Twenty-four short sections in six parts, plus eleven frameworks you can lift straight into a tender file. Read it through once; then use it as a reference before each RFQ.

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FOREWORD

Why we build, and what we leave behind

Engineering is the discipline of solving human problems responsibly. Every road, hospital, car park and outdoor structure begins with a human need, and engineering turns that need into something physical.

But everything physical leaves a footprint. It uses land, energy, water, raw materials, human effort, manufacturing capacity and transport. And every asset eventually reaches another stage of its life: it is maintained, repaired, upgraded, reused, dismantled or discarded.

So engineering is not only the question **can we build it?** It is also: do we need to build it? What is the right way? How long should it last? What will it require throughout its life? And what happens when it is no longer needed?

Those consequences do not disappear when a project is handed over. They may remain for years or decades — and the person who made the decision is often not the person who lives with it. Future owners, facility teams and communities inherit it instead.

This matters commercially, not just philosophically. **A decision that saves money today but produces repeated repairs, premature replacement or constant disruption has not removed the cost. It has transferred it — usually to the person reading this guide.**

Which is why the objective is not always to build more. Sometimes the better decision is to build less, build differently, repair what already exists, or avoid creating an unnecessary asset altogether. This guide is written to help you tell those situations apart, and to procure well when building is the right answer.

THE PRINCIPLE BEHIND THIS GUIDE

Budget should be an outcome of the performance an asset requires — not the starting point that limits what the asset is allowed to become.



The asset you are actually buying

The installation day is not the end of the project. It is the beginning of the asset's operational life.

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01 Before you issue the RFQ: what you are actually buying

A request for a shade structure usually arrives as a request for an area. Somebody needs 400 square metres of parking covered, and the natural next step is to ask three suppliers for a price.

But an area is not what you are buying. You are buying a structure that will stand over people or property for the next decade or two, in one of the harshest outdoor environments in the world, and which will remain your responsibility long after the supplier's warranty has quietly expired.

The gap between those two framings is where most procurement problems begin. An RFQ written around an area produces quotations written around an area — and the things that decide whether the asset performs sit outside that frame entirely: how it is engineered, what it is made from, how it is fixed, where the water goes, whether anyone can inspect it, and whether you will still know what was installed in year seven.

The installation day is not the end of the project. In most respects, it is the beginning of the asset's operational life. This guide is organised around that fact.

02 Why outdoor structures become a facility management problem

Ask any experienced facility manager about outdoor structures and you will hear the same list. It rarely begins with collapse. It begins with nuisance:

- Water that ponds after rain, then sheets off the low point onto a walkway
- Fabric that has gone slack, flaps in wind, and looks tired long before it should
- Rust appearing at a connection two years after handover
- Noise and movement during wind that generates tenant complaints
- Bolts nobody has checked because nobody knows how often they should be checked
- A supplier who has changed name, changed number, or stopped answering
- No drawings, no material data, no warranty document anyone can find

Individually, these are irritations. Together they describe an asset that cannot be managed — only reacted to. And an asset that can only be reacted to will eventually produce an emergency, usually on the least convenient day of the year.

The common root is not that somebody bought a bad structure. It is that nobody bought an asset. The scope covered supply and installation, and stopped there.

03 What happens when a structure fails

Failure is not one event. It runs from cosmetic through operational to structural, and the cost is rarely the cost of the structure.

LEVEL	WHAT IT LOOKS LIKE	WHAT IT ACTUALLY COSTS
Cosmetic	Discolouration, staining, minor slackness, surface corrosion.	Reputation, tenant perception, and an early signal that is usually ignored.
Operational	Ponding, leaks, noise, movement, a bay or entrance taken out of use.	Complaints, temporary closures, reactive spend, management time.
Component	A cable, fixing, edge detail or fabric panel fails; the structure stands but is compromised.	Emergency access, unplanned capital spend, possible area closure while assessed.
Structural	Loss of stability, partial or complete collapse.	Vehicle and property damage, business interruption, insurance and legal exposure, investigation of design, installation and maintenance history — and, in the worst case, injury or loss of life.

Two things follow from that table. First, the early levels are where the money is saved, because almost every serious failure was visible as a small one first. Second — and this is the principle the rest of this guide depends on — **the consequence of failure should determine how much engineering, documentation and inspection a project warrants.**

A shade over an unused corner of a compound and a structure over eighty parked cars, a school playground or a hospital entrance are not the same procurement, even if the quotation format is identical.

04 Classifying the asset before you specify it

Before writing a specification or setting a budget, classify the asset. Four questions decide the tier, and the tier decides almost everything else.

- **Consequence of failure.** What is beneath and around it — people, vehicles, public access, critical operations, adjacent buildings?
- **Required service life.** Is this needed for two years, ten, or twenty-five and more?
- **Maintenance difficulty.** Can it be inspected and repaired without closing something that cannot be closed?
- **Likelihood of change.** Will this space still be doing the same job in five years?

TIER	TYPICAL SITUATIONS	WHAT THE TIER IMPLIES
Tier 1 — Critical	Hotel and resort frontage, hospital and emergency access, high-occupancy public areas, security-sensitive locations, structures over critical operations, anywhere a closure is extremely costly.	Independent design review and documented engineering. Full submittal and handover package. Planned inspection regime. Durability, maintainability and access designed in from the start. Where appropriate to the asset, materials, environment and project requirements, a long service life — potentially 20 to 25 years or more — is a reasonable design intent.
Tier 2 — Standard	Community and staff car parks, school and campus shading away from critical access, retail and F&B canopies, most commercial installations.	Proportionate engineering and documented specification. Defined inspection interval. Repairable, with replaceable components and obtainable materials.
Tier 3 — Adaptable or short life	Leased premises, spaces likely to change use, event and seasonal cover, areas scheduled for redevelopment, relocatable requirements.	Flexibility, modularity and ease of removal or relocation valued over permanence. Lighter documentation — but the same seriousness about safety.

TEMPORARY DOES NOT MEAN UNSAFE

A temporary structure does not have permission to fail. A shorter-life or lower-cost solution must still be appropriate for its use and its environment. The distinction between the tiers is permanence, durability and lifecycle investment — never safety.

Note what the tiering does to budget. In Tier 1, budget should be an outcome of the performance the location requires, not a target set before anyone has asked what the location requires. In Tier 3, spending Tier 1 money is not prudence — it is waste, and it buys permanence for a situation that needs adaptability.



Why these structures fail

A structure may look perfectly acceptable for months. Then one exceptional weather event tests assumptions that were never visible during normal conditions.

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05 Why shade and tensile structures fail

Failures are almost never single-cause. A structure that comes down in a storm usually had three or four contributing conditions, only one of which was the weather. Understanding the combinations is what lets you ask the right question at the right stage.

WHAT YOU CAN SEE	WHAT IT MAY INDICATE	WHAT TO DO
Water ponding in the fabric after rain	Insufficient curvature or slope, membrane relaxation, a drainage path that was never designed, or blocked outlets.	Photograph it while wet. Ponding is self-worsening — the weight deepens the pond. Escalate before the next rain.
Fabric slack, wrinkled, or flapping in moderate wind	Loss of prestress, relaxation over time, or a system that was never tensioned to its design condition.	Re-tensioning is often straightforward if caught early. Persistent flapping abrades fabric and fatigues fixings.
Rust at connections, base plates or fixings	Coating breakdown, dissimilar metals in contact, water sitting where it was not expected, or a coating specification inadequate for the exposure.	Assess whether it is surface or section loss. Base plates and cable terminations matter more than a rusty rail.
Cracking, tearing or fraying at fabric edges and corners	Stress concentration at a boundary, patterning inaccuracy, or a detail that has been chafing since installation.	Corners and edges carry the highest local stress. Treat any tear as a structural item, not a cosmetic one.
Movement, creaking, or bolts that will not stay tight	Connection slip, elongated holes, fatigue, or an installation tolerance that was accommodated rather than corrected.	Repeated loosening at the same joint is a design or execution issue, not a maintenance issue.
Cracking at foundations, or a column visibly out of plumb	Foundation movement, inadequate embedment, or ground conditions that differed from the design assumption.	Stop. This warrants a structural engineer before anything is tightened, tensioned or repaired.

Behind these symptoms sit the usual root causes: design assumptions that did not match the site; environmental loading assessed optimistically; connections detailed or executed

poorly; foundations sized on assumption; membranes fabricated or installed without the intended prestress; drainage treated as an afterthought; modifications made after handover by someone who did not know what they were changing; and – most commonly of all – a complete absence of inspection, so that every early warning passed unnoticed.

Notice how few of those are about cheapness. Price is a proxy for some of them and no proxy at all for others.

06 Understanding tensile and membrane structures

A tensile structure is not steel poles with fabric pulled between them. It is a system in which the shape itself is doing structural work, and that changes what can go wrong.

You do not need to be able to design one. You do need enough vocabulary to ask a supplier a question they cannot deflect.

TERM	WHAT IT MEANS	WHY IT MATTERS TO YOU
Form and geometry	The three-dimensional shape – typically doubly curved, like a saddle or a cone – that lets a flexible membrane carry load.	The curvature is structural. A flatter shape may look sleeker and cost less to fabricate, and it is usually the one that ponds.
Prestress	The controlled tension built into the membrane so it holds its shape and resists load without going slack.	Too little and the fabric flaps, wears and ponds. Ask how prestress is specified, achieved and verified.
Patterning	Cutting the flat fabric panels that, once joined and tensioned, produce the intended curved surface.	The shape is created at the cutting table. Patterning errors show up as wrinkles, uneven stress and premature wear.
Compensation	The allowance made for the fabric stretching when it is tensioned, so panels are cut slightly undersized.	Wrong compensation means the structure either cannot be tensioned to design, or is over-stressed reaching it.
Boundaries and edges	Cables, belts, clamped edges or rigid frames where the membrane transfers load out of the fabric.	Most fabric problems start at a boundary. It is the detail worth asking to see drawn.

TERM	WHAT IT MEANS	WHY IT MATTERS TO YOU
Supporting steel and connections	Masts, arms, plates and the joints that carry membrane forces into the structure and down to ground.	The membrane pulls constantly and in more than one direction. Connections carry sustained load, not occasional load.
Foundations	What resists the uplift and overturning the system generates.	Tensile structures often pull up as much as they push down. Foundations sized by habit rather than by calculation are a recurring failure source.

THE ONE THING TO TAKE FROM THIS SECTION

In a membrane structure the parts are not independent. Change the geometry and you change the prestress; change the prestress and you change the forces in the steel, the connections and the foundations; change the fabric and you may change all of it.

This is why a proposal that alters a shape “to suit the site” — without any accompanying engineering — deserves a question, and why a quotation that reproduces the dimensions of a previous structure without examining it is not a like-for-like offer.

07 Heat, dust, wind — and the rain that tests every assumption

The regional environment is not a footnote to the specification. It is most of it.

- **Heat and ultraviolet.** Sustained high temperature and intense UV act on fabrics, coatings, sealants and moving components continuously, not seasonally.
- **Dust.** It settles in every joint, fills drainage outlets, holds moisture against steel, and abrades fabric where anything moves against anything else.
- **Humidity and coastal exposure.** Near the coast, salt-laden air changes what an adequate coating system looks like. Two identical structures a few kilometres apart may not need the same protection.
- **Wind.** Not just peak events. Repeated moderate wind is what loosens, fatigues and abrades.
- **Rain.** Infrequent, and therefore the most underestimated load of all.

That last point deserves its own sentence. **Rain being rare is exactly why drainage gets designed casually.** A structure can look entirely acceptable for eight or ten months. Then a genuine downpour arrives and every assumption is tested at once: the ponding that nobody predicted, the outlet that was never cleared, the detail that channels water onto a walkway, the low point that fills faster than it drains.

A strong wind event does something similar. It does not usually create defects. It reveals the ones that were already there — the loose fixing, the slack panel, the corroded plate, the modification nobody documented.

SCENARIO — THE STRUCTURE THAT LOOKS FINE UNTIL IT RAINS

A membrane canopy over a hotel drop-off has looked immaculate through a long dry season. During the first heavy rainfall, water ponds at one corner, the pond deepens under its own weight, and run-off sheets onto the guest walkway below.

The fabric is not damaged and nothing has failed. But the geometry never had enough curvature at that corner, the membrane has relaxed since installation, and one outlet has been dust-blocked for months. Three modest conditions produced one very visible problem, in the most reputationally sensitive location on the property.

None of the three would have been found by looking at the structure in dry weather — which is when almost all inspections happen.

08 New build, replacement or refurbishment

When an existing structure is causing problems, the default instinct is to remove it and put a new one in the same place, to the same dimensions. It is fast, it is easy to specify, and it is how the same failure gets rebuilt in new materials.

Before re-procuring anything, answer nine questions.

#	QUESTION	WHY IT CHANGES THE SPECIFICATION
1	What actually failed or deteriorated — and in what order?	The first thing to go is usually the cause; everything after it is a symptom.

#	QUESTION	WHY IT CHANGES THE SPECIFICATION
2	Was the problem design, materials, execution, maintenance, or a combination?	Each points to a different remedy. Only one of them is solved by buying the same thing again.
3	Was drainage contributing?	Ponding and standing water are behind a large share of membrane and corrosion problems.
4	Was corrosion involved, and where?	Corrosion at connections and bases is a coating and detailing question, not a fabric question.
5	Was there any inspection or maintenance history?	If there is none, you cannot conclude the design was inadequate — and you should not assume it was.
6	Have modifications been made since installation?	Added signage, lighting, cladding or altered fixings change the loading the structure was designed for.
7	Are the existing foundations and fixing points still suitable?	Reusing them may be sensible or may be the single riskiest assumption in the project. It should be verified, not presumed.
8	Has the use of the area changed?	More vehicles, higher occupancy or a changed access route may move the asset into a different tier.
9	Is replacement actually the right answer?	Refurbishment — recoating, fabric replacement, connection upgrade — is sometimes the better economic and environmental decision. It should be priced, not assumed away.

THE REPLACEMENT PRINCIPLE

Before replacing a failed asset, understand the failure mode. Otherwise you may simply repeat the original problem in new materials, and discover it on the same timescale.



SCENARIO — REPLACEMENT WITHOUT INVESTIGATION

A car park shade is removed after years of recurring problems. The RFQ asks four suppliers to reproduce the same dimensions in the same location. The cheapest is awarded and installs a structure that looks identical to the original.

Nobody established that the original had been failing at its column bases, where a landscape irrigation line had kept the ground and the base plates permanently damp. The new structure sits on the same bases, in the same conditions.

The failure was never structural in origin. It was a drainage and detailing problem — and it has just been bought again.



Price, cost, and the bid that is too low

A low price may be entirely valid. The question is whether the buyer understands what has been included, excluded or assumed in achieving it.

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09 Five questions before you set a budget

A budget set before these five questions are answered is a guess with a number attached. A budget set after them is a specification in disguise.

One — What happens if this asset fails?

Safety, occupancy, vehicles, property damage, business interruption, reputation, operational disruption. The greater the consequence, the more engineering and risk management the project justifies. This is the tier from section 4.

Two — How long do we need it to last?

Two years, five, ten, twenty-five? The answer should drive materials, protection systems, design approach, maintenance strategy and replacement planning. It is also the number most RFQs never state, which is why suppliers guess it — usually differently from one another.

Three — How difficult will future maintenance be?

Can this be inspected and repaired without closing a hotel entrance, blocking emergency access, shutting an operation or bringing in expensive access equipment? If the answer is no, maintainability has to be designed in at the start. Spending more at project stage to avoid a decade of disruptive access is not extravagance; it is arithmetic.

Four — How likely is the requirement to change?

If the space may be reconfigured within a few years, flexibility is worth more than permanence: modular systems, relocatable structures, components that can be replaced or moved. The right answer is not always the one designed never to change.

Five — What will we leave behind?

At end of life, can this be maintained, refurbished, reused, relocated or responsibly dismantled? Or will it become another asset that fails early and creates avoidable waste? Section 23 returns to this.

DESIGN FOR THE REAL LIFE OF THE ASSET

A good budget does not start with “how cheaply can we build this?” Nor with “what is the most expensive option available?”

It starts with: **what does this asset need to do, how long does it need to do it, what happens if it fails, and what level of future intervention can we realistically accept?**

The answer should then drive design, materials, procurement, budget and maintenance planning together.

10 Why two identical-sounding quotations are not the same asset

Two suppliers write the same line: **“Supply and installation of tensile shade structure — 400 m².”** The prices differ by forty per cent. Nothing in either document explains why.

Here is where the difference usually hides.

WHERE IT HIDES	WHAT CAN DIFFER WITHOUT CHANGING THE SCOPE LINE
Design responsibility	One supplier is pricing to engineer the structure and take design responsibility. The other is pricing to build to your drawing, or to a shape they have built before.
Steel	Section sizes, grades, wall thicknesses and total tonnage. Two structures of the same footprint can differ substantially in steel weight.
Corrosion protection	Paint, galvanising, duplex systems, and how the treatment is applied — including whether cut ends, welds and site-drilled holes are made good.
Membrane or fabric	Base cloth, coating, weight, finish, expected performance under sustained UV, and the manufacturer's own warranty terms.
Fabrication	Whether patterning and compensation are engineered or approximated; welding and seam methodology; factory quality control.
Foundations	Included, excluded, provisional, or assumed to be reused. This is the single most common exclusion in the category.
Drainage	Designed, detailed and included — or not mentioned, and therefore not priced.

WHERE IT HIDES	WHAT CAN DIFFER WITHOUT CHANGING THE SCOPE LINE
Access and installation	Cranage, access equipment, working hours, permits, and whether the area must be kept operational during works.
Documentation	Drawings, calculations, submittals, test records, as-builts, operation and maintenance information.
Warranty and support	Length, what it actually covers, who honours it, and whether anyone will still be reachable to honour it.

None of these differences is dishonest. A supplier who excludes foundations because your RFQ did not mention them has priced your document accurately. **If the RFQ does not define what matters, the quotation may not contain it** — and the gap becomes a variation later, at a price nobody competed for.

11 Know your cost floor: five ways to build one

Every structure has a physical cost that cannot be argued away. Steel weighs what it weighs, membrane covers what it covers, fabrication takes the hours it takes, and a crew has to be paid to install it. Below some number, a price is no longer a commercial decision — it is a number that does not correspond to making the thing.

Most buyers have no idea where that number sits, which is why an abnormally low bid can look simply like good fortune. You do not need a cost consultant to fix this. You need a baseline, and there are five practical ways to build one.

1. Your own history

The cheapest and most defensible baseline you already own. Take your last three awards for similar structures, normalise them to a per-square-metre or per-bay figure, and adjust for scale, geometry and the movement in steel prices since. If your organisation manages a portfolio, this is a benchmark you can build once and use for years.

2. Build it from materials up

Estimate the physical quantities the geometry requires — approximate steel tonnage, membrane area including seams and waste, foundation volume — and price them from current market and manufacturer information. Research tools, including AI assistants, are useful for assembling indicative market prices quickly, provided you treat the output as a starting point and validate it against at least one real supplier or mill quotation. Then add a

realistic minimum for fabrication, coating, transport and installation labour. You are not producing an estimate to bid with. You are producing a floor.

3. Require a priced build-up, not a lump sum

Ask every bidder to state, at minimum: steel tonnage, membrane area and type, coating system, foundation quantities, and installation duration and crew. You now hold three independent estimates of the same physical quantities. A bidder whose declared tonnage is well below the others has told you something important before you have looked at a single price.

4. The implied-rate test

This is the strongest tool in the section and it needs no external data at all. Take each bidder's own declared quantities and divide their price by them. You now have each bidder's implied cost per tonne of steel and per square metre of membrane, side by side.

Differences that were invisible in the lump sums become obvious. One bidder may be cheaper simply because they are proposing less steel — which is a design question. Another may be proposing the same steel at a rate that does not cover buying it — which is a solvency question. Same three numbers, two completely different conversations.

5. An independent check

A cost consultant or quantity surveyor for a significant project; or, more cheaply, a supply-only quotation from a fabricator covering material and fabrication alone, with installation added separately. For a Tier 1 asset this is a small fraction of the project cost and it is the cheapest insurance in the process.

WHAT A COST FLOOR IS FOR

Not to beat suppliers down, and not to pick a winner. A floor exists so that when a number lands below it, you notice — and ask why, before award rather than after.

12 When the lowest price is a risk, not a saving

There is a version of this conversation that gets it wrong in both directions. One says the cheapest bidder is always cutting corners. The other says the market has spoken and the lowest compliant bid must be accepted. Both are lazy.

A low price can be entirely legitimate. It may reflect a genuinely more efficient geometry, lower overheads, better buying power on steel or membrane, spare fabrication capacity, a crew already mobilised nearby, or a deliberate decision to accept a thin margin to enter your portfolio. These are good reasons and they benefit you.

But there is another cause, and it is the one experienced buyers learn to recognise. **A contractor under financial pressure may bid below cost in order to win the advance payment.** The intention is not to deliver badly; it is to generate cash now and solve the shortfall later. The compromise arrives in the middle of the project, when the money runs out — and by then the client is holding a part-built structure, a supplier who has stopped answering, and a main contractor with a programme claim.

On paper, that award was perfectly defensible. It was the lowest compliant price. Which is exactly why it needs a procedure rather than an instinct.

STEP	WHAT TO DO	WHAT YOU ARE LOOKING FOR
1 Notice	Compare each bid against your cost floor and against the spread of the others.	A bid materially below the floor, or a large gap between the lowest and the rest of the field.
2 Ask, do not accuse	Write to the bidder and ask them to explain the basis of their price, in writing.	A confident, specific explanation. Legitimate low bidders usually explain readily and precisely.
3 Require the build-up	Ask for declared quantities, rates and the assumptions behind them.	Whether the price corresponds to a real scope, or to a scope smaller than the one you asked for.
4 Run the implied-rate test	Divide their price by their own declared quantities.	Rates that do not cover procuring the material, which is the clearest signal available to you.
5 Check capacity to perform	Trade licence, years trading, comparable completed projects, references you actually call, bank or bonding capacity, current workload.	Whether this organisation can carry the project's cash flow, not just win it.
6 Decide	Accept with safeguards, ask for a re-bid on a clarified scope, or decline — with your reasoning documented.	A record that shows the decision was made on evidence, whichever way it went.

TWO THINGS TO HOLD ON TO

Never disqualify a bid for being low. Disqualify it — if at all — for being unable to explain itself. The difference matters commercially, and it matters if the award is ever reviewed.

The real cost of non-completion is not the price difference. It is remobilisation, redesign around what was part-built, a second procurement exercise, programme delay, and an asset nobody warrants. That total dwarfs whatever the low bid appeared to save.

SCENARIO — THE LOWEST QUOTATION

Three bids arrive at roughly 40, 52 and 55 units. The instinct is to ask the other two to match 40, or to award it and take the saving.

The buyer instead asks all three for declared steel tonnage and membrane area. The lowest bidder's tonnage is around thirty per cent below the others. That is not necessarily wrong — it may be a more efficient structural solution, and it may be a lighter structure than the location warrants.

The implied-rate test settles it. At the declared tonnage, the lowest bidder's implied rate per tonne is close to the others; the price difference is a design difference, not a solvency problem. The right question then becomes whether the lighter solution suits a Tier 1 location — an engineering question, asked before award instead of discovered after it.

13 Lifecycle cost, not project cost

The award figure is the smallest number in this asset's life. Around it sit inspection, cleaning, re-tensioning, minor repairs, fabric replacement at some point, coating maintenance, eventual refurbishment, and finally removal or replacement.

You do not need a discounted cash-flow model. You need four columns and honesty.

STAGE	WHAT SITS HERE	WHERE IT IS USUALLY UNDERESTIMATED
Acquire	Design, engineering, supply, fabrication, foundations, installation, documentation.	Exclusions that become variations: foundations, drainage, access, making good.
Operate	Inspection, cleaning, re-tensioning, dust and outlet clearing, minor repairs.	Assumed to be near zero, then delivered reactively at emergency rates.
Intervene	Fabric replacement, coating maintenance, connection and component renewal, refurbishment.	Cheap when planned and specified; expensive when it becomes urgent.
Retire	Removal, disposal or recovery, reinstatement, replacement.	Rarely budgeted at all — and unavoidable, since every asset reaches this stage.

Two structures with the same award price can differ substantially across the other three stages. A design that cannot be inspected without closing an entrance carries a cost every single time it is inspected. A membrane that cannot be replaced without dismantling the frame turns a routine renewal into a project. A supplier who cannot support the asset turns every intervention into a fresh procurement exercise.

This is where the two guiding sentences of this guide meet. **Budget should be an outcome of the performance required** — and performance is measured across the whole life, not on handover day.



Preparing the RFQ

If the RFQ does not define what matters,
the quotation may not contain it.

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14 The RFQ readiness framework

A procurement exercise can fail before a single supplier responds. If the request is unclear, suppliers price different assumptions — and the quotations that come back are not comparable, however neatly you tabulate them.

Six blocks of information decide whether an RFQ is ready to issue. Each has a test.

BLOCK	WHAT IT COVERS	DO NOT ISSUE UNTIL
A Project background	Why the project exists; new, replacement or refurbishment; what happened to the previous structure; what problem is being solved.	You can state the purpose in two sentences without using the word “shade”.
B Site information	Location, photographs, existing drawings where they exist, adjacent structures, access restrictions, working hours, known services, existing foundations and fixing points.	A supplier could price it without visiting — and is still invited to visit.
C Intended use	What happens under and around the structure: parking, pedestrians, public access, F&B, play areas, events, operations that cannot be interrupted.	The asset tier from section 4 is written down.
D Scope and responsibility	Who does what: survey, design, engineering, fabrication, supply, installation, foundations, drainage, approvals, testing, documentation, maintenance.	Every line has exactly one owner and no line is missing.
E Technical expectations	Design responsibility, environmental exposure, structural and membrane requirements, corrosion protection, drainage, connections, access for inspection.	Requirements are proportionate to the tier — not copied from a larger project.
F Documentation	What must be submitted for approval, and what must be handed over at completion.	You have asked for what you will actually need, and nothing you will never open.

BOTH FAILURE MODES ARE REAL

An under-specified RFQ produces non-comparable bids, hidden exclusions and variations. An over-specified one — requirements copied from a larger project, or standards named without understanding — produces inflated prices, qualified bids, and capable suppliers who decline to tender.

The target is a clear, performance-based description of what the asset must do, with responsibility unambiguously allocated.

15 Defining scope, design responsibility and interfaces

Most disputes on these projects are not about quality. They are about who was supposed to do something that nobody did.

Design responsibility is the first decision

There are three common models, and the RFQ must say which one applies:

- **Contractor-designed.** The supplier takes responsibility for the structural design against a performance specification you set. Common, sensible for specialist structures, and it requires you to define performance rather than dimensions.
- **Client-designed, built to drawing.** You or your consultant provide the design; the supplier builds it. Cheaper to tender, and design responsibility stays firmly with you.
- **Hybrid.** You provide layout and performance criteria; the supplier engineers the structure within them. Workable, but the boundary must be written down or it becomes the argument later.

Then the interfaces — the places where one party's work meets another's, and where scope quietly evaporates:

INTERFACE	THE QUESTION THE RFQ MUST ANSWER
Ground and foundations	Who investigates the ground? Who designs the foundation? Who excavates, pours and makes good? What happens if conditions differ from assumption?
Existing structure	If fixing to a building, who verifies the building can take the load? Who makes good waterproofing at penetrations?

INTERFACE	THE QUESTION THE RFQ MUST ANSWER
Drainage	Where does water go, who designs that route, and who builds it?
Electrical and lighting	Is anything mounted on the structure? Who allows for that load, and who runs the supply?
Services and utilities	Who identifies buried services before excavation, and who bears the risk if something is struck?
Approvals	Who prepares submissions, who submits, and who carries the programme risk while waiting?
Reinstatement	Who returns paving, landscaping and finishes to their prior condition?
Handover	Who compiles the documentation package, and what happens to retention if it is incomplete?

16 The information a supplier needs in order to price properly

Suppliers price risk. When information is missing, a careful supplier prices the uncertainty and looks expensive; a careless one ignores it and looks cheap. Withholding information does not save money — it just moves the cost into a variation and rewards the wrong bidder.

At minimum, give every bidder the same package:

- Dimensioned layout or marked-up site plan, and photographs of the actual location from several angles
- What is beneath and around the structure, and what must remain operational during the works
- Any existing drawings, previous structure details, or information about what was there before
- Known ground conditions, existing foundations, and whether reuse is contemplated
- Access constraints: gate widths, headroom, crane positions, permitted working hours, noise restrictions
- Required service life, and the asset tier if you are willing to share it
- The documentation and warranty expectations
- Programme constraints and any fixed dates

And ask every bidder to return the same declared quantities — steel tonnage, membrane area and type, coating system, foundation quantities, installation duration. That single requirement makes sections 11 and 18 possible. Without it, you are comparing sealed boxes.

17 Engineering, materials and documentation: how much is proportionate

Not every project needs a full submittal package, and a small canopy buried under Tier 1 paperwork wastes everybody's money. Scale the requirement to the tier from section 4.

REQUIREMENT	TIER 1 — CRITICAL	TIER 2 — STANDARD	TIER 3 — ADAPTABLE
Structural design and calculations	Required, by a qualified engineer, with independent review where the consequence warrants it	Required, proportionate to the structure	Appropriate to the system; manufacturer's standard engineering may suffice
Shop and fabrication drawings	Required and approved before fabrication	Required	Layout drawings
Material submittals and data sheets	Full, including coating system and membrane data	Key materials	Principal materials
Method statement	Required, with lifting and access plan	Required	Brief
Quality and test records	As specified for the works	Key items	Not usually required
As-built drawings	Required	Required	Recommended
O&M and maintenance schedule	Required, with inspection intervals	Required	Basic care instructions
Warranty documentation	Required, including manufacturer warranties	Required	Required

A note on standards. Name a standard only if you know why it applies and can assess a response against it. A specification that cites requirements nobody in the buying organisation understands does not raise quality; it filters for suppliers willing to sign up to

anything. Where requirements are uncertain, say so and ask the supplier to state what they propose to design to — then have that answer reviewed by someone competent to review it.

The applicable requirements should be confirmed for the specific location, asset type and project. Requirements vary by emirate, by community, by landlord and by the nature of the asset, and this guide does not attempt to state them.



Evaluation and award

The correct question is not “can everyone else match this price?” It is “what is different?”

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- 18** Comparing quotations beyond price
 - 19** Technical and commercial red flags
 - 20** Safeguards at award

18 Comparing quotations beyond price

A comparison table with two columns — supplier and price — is not an evaluation. It is a transcription.

Compare on the lines below instead. The purpose is not to produce a weighted score; it is to make gaps visible. Any row where the three bids differ is a clarification to raise before award, not a discovery to make afterwards.

#	COMPARISON LINE	WHAT A GAP HERE MEANS
1	Design responsibility	You may be carrying design risk you think you transferred.
2	Design basis and stated service life	The bidders are pricing different assets.
3	Declared steel tonnage	A structural difference, an efficiency difference, or an error.
4	Steel sections, grade and specification	Capacity, stiffness and durability all move with this.
5	Corrosion protection system	Often the single largest driver of how the asset looks in year five.
6	Membrane type, weight and area	Performance, appearance and expected life.
7	Membrane manufacturer warranty	A separate warranty from the installer's — check both exist.
8	Patterning and fabrication approach	Engineered or approximated. Ask how prestress is verified.
9	Connection details	Where most fabric and steel problems eventually appear.
10	Foundations: included, excluded or assumed	The most common exclusion in the category.
11	Drainage design and provisions	If unpriced, it was not designed.
12	Installation methodology and access	Crane and access can be a large share of the difference.

#	COMPARISON LINE	WHAT A GAP HERE MEANS
13	Works to existing structures and making good	Reinstatement is routinely omitted.
14	Programme, and what drives it	An implausibly short programme is its own red flag.
15	Documentation and submittals	What you will be holding in year seven.
16	Warranty: length, cover and who honours it	A warranty from an entity that will not exist is not cover.
17	Maintenance offer and inspection intervals	Whether the supplier can support the asset at all.
18	Stated exclusions and qualifications	Read this row first, in every bid.

Then run the implied-rate test from section 11 across rows 3, 4 and 6. If one bid is materially cheaper, the correct question is never **“can everyone else match this?”** It is **“what is different?”** — and the difference may be positive, negative, or simply a different scope. Establishing which is the job of procurement, and it has to happen before award.

19 Technical and commercial red flags

None of these proves anything on its own. Each is a prompt to ask one more question, and the answer usually resolves it in a sentence.

RED FLAG	THE CLARIFICATION THAT RESOLVES IT
A quotation of one page with no technical content	Ask for declared quantities, materials and the design basis. A capable supplier produces these quickly.
No stated design responsibility	Ask directly, in writing, who is responsible for the structural design and who is signing it.
Materials described generically — “heavy duty steel”, “high quality fabric”	Ask for the section sizes, grade, coating system, membrane type and weight.
No mention of corrosion protection	Ask what system is proposed, how it is applied, and how cut ends, welds and site drilling are treated.

RED FLAG	THE CLARIFICATION THAT RESOLVES IT
Drainage not mentioned anywhere	Ask where water goes in a heavy rainfall event and who designed that route.
Existing foundations assumed to be reusable	Ask what verification supports that assumption, and what happens if it proves wrong.
A price given from photographs alone, on a site where conditions matter	Ask what has been assumed about ground, access and fixing conditions — and whether they will visit before award.
No handover documentation offered	Ask what will be provided at completion. Then put it in the contract with retention attached.
A replacement priced by copying the failed structure's dimensions	Ask what they believe caused the original failure. If they have not asked you, that is the answer.
Major exclusions appearing only after award	Require all exclusions and qualifications to be stated in the bid, and treat unstated ones as included.
A programme materially shorter than every other bidder's	Ask what makes it achievable. Sometimes it is genuine capacity; sometimes it is optimism that becomes a claim.
Reluctance or inability to explain technical differences	The most telling flag on this list. Competence is usually easy to demonstrate when it exists.

20 Safeguards at award

Suppose the low bid explains itself well. The scope is complete, the quantities stand up, the implied rates are sound, and the saving is real. You are going to award it — and you can still protect the project.

These are ordinary commercial instruments. They are worth knowing by name, because they are rarely applied to this asset class and they are exactly what protects a client and a main contractor when a supplier's cash flow fails mid-project.

SAFEGUARD	WHAT IT DOES	WHEN TO USE IT
Performance bond or guarantee	Provides recourse if the supplier fails to complete.	Tier 1 assets, large values, or a supplier without a long track record with you.

SAFEGUARD	WHAT IT DOES	WHEN TO USE IT
Advance payment guarantee	Secures any advance payment against non-performance.	Whenever an advance is paid — which is exactly the payment a distressed bidder is chasing.
Milestones tied to verified delivery	Payment follows material delivered and verified, or fabrication inspected, rather than time elapsed.	Almost always. It is the single most effective control in this list.
Vesting of materials	Title in materials paid for passes to you, even while held at the fabricator.	Where significant payment precedes delivery to site.
Direct purchase of principal materials	You buy the membrane or steel directly and free-issue it.	Where the material is a large share of cost and supplier solvency is the concern.
Retention	A percentage held until completion and through a defects period.	Standard. Tie its release to the handover documentation as well as the physical works.
Step-in and assignment rights	Lets you take over subcontracts or fabrication if the supplier fails.	Larger projects, especially through a main contractor.
Named key personnel and subcontractors	Fixes who is actually doing the engineering and fabrication.	Where capability rests with a specific engineer, fabricator or crew.
Manufacturer warranties in your name	Membrane and coating warranties assigned to you, not to the installer.	Always worth asking. It survives the installer disappearing.

THE POINT OF SAFEGUARDS

They are not a signal of distrust, and a capable supplier will not read them as one. They are what allows you to accept a competitive price without the organisation carrying the whole of the delivery risk — which is the outcome everybody in the process actually wants.



After award, and after life

Completing a project is not the same
as creating a successful asset.

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- 21** Maintenance starts before installation
 - 22** Handover and document control
 - 23** End of life: what you leave behind
 - 24** The final checklist

21 Maintenance starts before installation

Maintenance is usually treated as something that begins when something breaks, or when the warranty ends. In practice, how maintainable an asset will be is decided during design, specification and procurement — and then it is fixed for the life of the structure.

Ask these before award, not after:

- How will this be inspected, how often, and by whom?
- What can be reached safely, and what needs access equipment or a closure?
- Which components are expected to need periodic attention — tensioning, fixings, outlets, moving parts?
- Can the fabric be replaced without dismantling the frame?
- Can a single component be replaced, or only a whole assembly?
- Will the materials still be identifiable and obtainable in ten years?
- What early signs should our team be told to watch for and report?
- Who will do the work — and can they support the asset over its life?

The last question is the one that separates a supplier from a partner. A company that installs is finished at handover. A company that inspects, maintains, repairs, replaces fabric and refurbishes is still accountable in year eight — which is when you will need somebody to be.

This is the logic behind ZIL Shades operating maintenance as a contracted service rather than a call-out: scheduled visits, cleaning and re-tensioning, cable and fixing inspection, condition reporting, and a defined response time. Whether that arrangement is with us or with somebody else, the question worth settling before award is simply who holds it.

22 Handover and document control

Documentation is unglamorous until the day it is the only thing standing between you and an expensive assumption.

Picture the position of whoever holds your job in year seven. A canopy needs modification. The original supplier has changed name. There are no drawings, no material records, no inspection history, and nobody knows whether the two extra light fittings that appeared in year three were ever assessed. Every option now starts with an investigation nobody budgeted for.

A handover package prevents that. Scale it to the tier — but never to zero.

DOCUMENT	WHY IT MATTERS LATER	TIER
Approved design drawings and calculations	Establishes what the structure was designed to do, and what any modification must respect.	1, 2
As-built drawings	What was actually built, which is not always what was drawn.	1, 2 — recommended for 3
Material data sheets and submittals	Lets you match or replace materials without guesswork.	All
Coating system record	Determines how and when the protection is maintained or renewed.	1, 2
Membrane details and manufacturer warranty	The fabric is the component most likely to be replaced within the asset's life.	All
Method statement and installation records	Records how it was erected and tensioned, which matters at every future intervention.	1
Test and quality records where specified	Evidence the works met what was required.	1
Warranty documents	Length, cover and the entity responsible.	All
O&M manual with inspection intervals	Turns maintenance from opinion into a schedule.	All
Supplier and service contacts	Who to call, in a file rather than in somebody's memory.	All

THE OBJECTIVE IS NOT PAPERWORK

It is preserving the information required to manage the asset responsibly through its life. Ask for what you will genuinely use, tie a meaningful part of retention to receiving it, and store it where the next person will find it — not in the inbox of somebody who may have left.

SCENARIO — THE MISSING DOCUMENTATION PROBLEM

Six years after installation, a tenant fit-out requires a canopy to be modified. The original supplier no longer trades under the same name. There are no as-built drawings, no material records and no inspection history.

Before anyone can quote for a modification, someone must survey the structure, establish member sizes and connection details, and make an engineering assessment of a structure whose design basis is unknown. The investigation costs a meaningful fraction of the original installation, and produces less certainty than a single folder would have.

The handover package that was never requested would have cost nothing at the time.

23 End of life: what you leave behind

Every asset reaches a final stage, and it is the one almost nobody budgets for. It arrives regardless — through failure, redevelopment, a change of use, or simple age.

Thinking about it early changes decisions that are otherwise made blindly:

- **Can it be refurbished instead of replaced?** Recoating, fabric replacement or connection renewal is often the better economic and environmental answer. It should be priced and compared, not assumed away.
- **Can it be relocated?** A structure designed with bolted rather than irreversible connections may serve a second location — which matters on leased sites and in spaces expected to change.
- **Can it be dismantled safely?** A structure erected with craneage and sequence usually needs craneage and sequence to come down. That is a planned operation, not a demolition afternoon.
- **What can be recovered?** Structural steel has well-established recycling routes in the region. Recovery options for coated membranes vary considerably by material type and should be confirmed with the manufacturer rather than assumed.

There is a commercial argument here as well as an environmental one. An asset that fails early is bought twice: once in capital, and again in disruption, replacement and waste. A decision that saved money at procurement and produced a premature replacement did not

remove the cost — it transferred it to whoever holds the budget when the structure comes down.

Which returns to where this guide started. **Every structure is, in some way, a decision left behind for someone else to manage.** The purpose of procuring one well is to leave behind something that can be maintained, understood, and eventually retired on purpose rather than in an emergency.

24 The facility and procurement manager's checklist

Take this to the file. It works with any supplier, including ones we have never met.

Project understanding

- ☐ The purpose of the structure is defined in writing.
- ☐ The use and occupancy beneath and around it are understood.
- ☐ The consequence of failure has been considered and the asset tier recorded.
- ☐ The project is classified as new, replacement or refurbishment.
- ☐ Required service life is stated.

If this is a replacement

- ☐ The failure mode of the existing structure has been investigated.
- ☐ Drainage, corrosion, maintenance history and modifications have been reviewed.
- ☐ Existing foundations and fixings have been assessed, not assumed.
- ☐ Refurbishment has been priced as an alternative.

Site and scope

- ☐ Site information, photographs and access constraints are issued to all bidders.
- ☐ Design responsibility is unambiguous.
- ☐ Foundations, drainage, reinstatement and approvals each have one named owner.
- ☐ Every interface in section 15 has been addressed.
- ☐ Exclusions must be stated in the bid to be valid.

Technical

- ☐ Requirements are proportionate to the asset tier.

- ☐ Environmental exposure, including coastal conditions, has been considered.
- ☐ Corrosion protection is specified, including treatment of cut ends and site work.
- ☐ Drainage is designed and priced.
- ☐ Inspection and maintenance access has been considered.

Commercial

- ☐ All bidders have declared quantities on a common basis.
- ☐ A cost floor has been established by at least one of the five methods.
- ☐ The implied-rate test has been run across the bids.
- ☐ Any bid materially below the floor has been asked to explain itself in writing.
- ☐ Supplier capacity to perform has been checked, not assumed.
- ☐ Scope gaps and exclusions have been reconciled across all bids.
- ☐ Technical clarifications are documented before award.
- ☐ Appropriate safeguards are attached to the award.

Handover and beyond

- ☐ The documentation package is specified in the contract.
- ☐ Retention release is linked to receiving it.
- ☐ Inspection intervals and responsibility are agreed.
- ☐ Manufacturer warranties are assigned in your name where available.
- ☐ Records will be stored where the next person will find them.

IN CLOSING

The decisions we leave behind

Completing a project is not the same as creating a successful asset. The real measure is what happens afterwards. Does it continue to perform? Does it remain safe? Can it be maintained? Does it create operational problems nobody anticipated? Does it require premature replacement, and consume more than it needed to?

The structures procured today become part of the environment other people inherit — future owners, future facility teams, the workers who maintain them, and the communities that live underneath them. The person who signs the award is rarely the person who lives with the consequence.

So responsible procurement is more than obtaining a compliant price. It is the discipline of balancing human need, safety, function, resources, environment, cost, durability, adaptability and future responsibility — and being willing to conclude, sometimes, that the right answer is to build less, build differently, or repair what already exists.

We should not only ask what we can build. We should be conscious of why we build it, how we build it, how long it should serve, and what we leave behind when its purpose is complete.

ABOUT THIS GUIDE

ZIL Shades designs, engineers and installs awnings, car parking shades, tensile shades and tents — and then inspects, maintains, repairs, refurbishes and eventually decommissions them. The order matters: the asset, its consequence of failure, its environment and its whole life come before the recommendation.

If this guide helps you write a better RFQ, compare bids more intelligently or hand over an asset your successor can manage, it has done its job — whoever you ultimately award to.

Performance Beyond Installation.

SCOPE OF USE

This guide is intended to support informed decision-making and procurement discussions. It does not constitute engineering, legal or regulatory advice, and it does not state design standards, loadings, approval

requirements, material properties, service lives or prices. Project-specific design, structural assessment, authority requirements and safety decisions should be addressed by appropriately qualified professionals on the basis of the actual site and project conditions. Applicable requirements should be confirmed for the specific location, asset type and project.

ZIL SHADES

MADE FOR LIFE UNDER THE SUN



Every structure is, in some way,
a decision left behind
for someone else to manage.

Performance Beyond Installation.

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