



SOLARLUX | HOMEOWNER SERIES

BI-FOLD DOOR DESIGN & BUDGET GUIDE

The decisions, specifications and costs to understand before investing in architectural folding doors.

Prepared for Solarlux by Minimal Frame Projects | October 2026

A better way to plan your bi-fold doors

Define what success looks like

Before choosing a frame colour or counting panels, decide how the doors will be used. A kitchen extension used daily has different priorities from a garden room opened only in summer. Think about the view when closed, the route into the garden, furniture positions, accessibility and how the opening will behave on a windy or rainy day. The best design is not necessarily the one with the greatest number of panels.

Write a short project brief: opening width and height, whether the doors replace existing units or form part of structural works, desired access position, inside or outside folding preference, privacy and security requirements, and the budget available for the entire installation.

Separate the door package from the building project

A bi-fold quotation may cover the manufactured doors and installation but exclude structural steel, building-control fees, demolition, plastering, flooring, drainage, electrical works or decoration. Comparing a supply-only quote with a fully installed package creates a misleading price difference. Ask for a scope of works with explicit inclusions, exclusions and responsibility for making good.

The five decisions to settle early

Agree the required clear opening, realistic panel arrangement, threshold and water-management strategy, glazing performance, and responsibility for structural support. These decisions influence nearly every later cost and detail. Do not order based solely on an architect's nominal opening dimension: the installer must verify the finished structural opening and tolerances.

A practical starting brief

Record photographs, internal and external finished floor levels, orientation, approximate opening measurements, access constraints and any existing drainage. Tell suppliers whether the property is coastal, exposed or in a conservation area. Request drawings showing both open and closed positions, not just a front elevation.

YOUR NEXT ACTION

Put your priorities in order before seeking prices. Ask everyone in the household how the doors will be used in winter as well as summer, and note any non-negotiable accessibility or security needs. A written brief avoids repeated redesign and makes competing offers easier to compare.

Understanding the Solarlux range

Thermally insulated versus non-insulated

For a heated UK home, start with a thermally insulated system suitable for the relevant building-regulations assessment. Solarlux lists Ecoline, Highline, Megaline, Woodline, Combiline and SL 97 as insulated families, while SL 35 and SL 45 are described as non-insulated. The latter should not be assumed suitable as the thermal boundary to a heated room. Final system selection depends on the application and current technical documentation.

Ecoline and Highline

Solarlux publishes a 99 mm panel-joint sightline for both Ecoline and Highline. Ecoline has a 67 mm construction depth and published panel sizes up to approximately 1.0 m wide by 3.0 m high; Highline has an 84 mm depth and published sizes up to approximately 1.1 m wide by 3.5 m high. These are system maxima, not promises for every glass, wind load, configuration or project. Both have published UK security information; check the exact configuration and certificate applicability.

Other materials and larger formats

Megaline is presented for particularly tall formats; Woodline offers timber; Combiline and SL 97 combine timber and aluminium. Material choice affects maintenance, internal appearance, weather exposure, cost and the range of available configurations. A specification should identify the exact system, not simply say “Solarlux bifolds”.

How to compare fairly

Ask each tenderer to identify system name, frame material, finish, thermal performance for the proposed door, glazing build-up, threshold detail, hardware, locking arrangement and warranty terms. Manufacturer marketing maxima should not be used in place of a project-specific design check.

YOUR NEXT ACTION

Request the current manufacturer technical data and the exact system name on the proposal. If a quotation describes only a generic aluminium bifold, it is not yet specific enough to validate dimensions, certification, glazing and warranty assumptions.

Panel layout, stacking and everyday access

Panel count changes the experience

A larger number of narrower panels may reduce the space needed by each leaf when folding but increases the number of vertical joints. Fewer, wider panels can improve uninterrupted views when closed, subject to permissible dimensions, weight and geometry. Draw the actual stack at scale: it occupies real space and may conflict with furniture, planters, steps or paths.

Traffic doors and split configurations

A frequently used doorway can sometimes be incorporated into the folding arrangement, depending on the chosen configuration. Check whether the access leaf works independently, which side it is on, how it locks and whether it suits your daily circulation. Split configurations may allow opening from more than one side, but they also affect meeting stiles, hardware and operation. Have the supplier demonstrate the exact proposed sequence.

Inward or outward opening

Outward folding may preserve internal floor area but requires unobstructed terrace space. Inward folding protects the stack from some external obstructions but can interfere with dining tables, blinds or kitchen islands. Exposure, drainage, threshold type and door hardware must be considered together. Do not assume that every system offers every folding direction or layout.

Design for the closed position

In Britain the doors may be closed for much of the year. Evaluate mullion rhythm, visible handles, frame finish, sightline, privacy, daylight and the relationship to adjoining fixed glazing. Request a dimensioned elevation with each panel width, overall frame size and a plan showing the fully stacked doors.

YOUR NEXT ACTION

Ask for two drawings: a fully closed elevation and a fully open plan. Mark furniture, garden paths, drains and potential obstacles on the plan. A door that looks attractive in elevation can be awkward to use if its stack occupies the only convenient circulation route.

Structure, surveys and tolerances

The opening is a structural issue

Removing an existing external wall or widening an opening can require structural design, including lintels or steelwork and adequate bearing. The door frame should not be treated as a substitute for an engineered load-bearing beam unless specifically designed for that purpose. Deflection from the structure above can prevent smooth operation and compromise seals. Structural responsibility should be assigned before manufacture.

Survey before manufacture

A reliable survey checks width at multiple heights, height at several points, squareness, plumb, level, available fixing zones and finished-floor build-up. Existing walls are rarely perfectly straight. Discuss permissible tolerances and who corrects an unsuitable opening. Ordering from early design drawings without a final survey can cause expensive remedial work.

Connections matter as much as the doors

The frame-to-building junction needs a coordinated weather, airtightness and thermal strategy. Ask how the head, jambs and sill will be insulated, sealed and protected from water. Particular attention is needed where doors meet external wall insulation, cavity trays, damp-proof courses or timber construction. Hidden interfaces can fail even when the manufactured door is sound.

Installation sequence and access

Large glazed leaves are heavy. Check site access, parking, storage, lifting requirements and whether glazing must be installed before kitchen units, landscaping or scaffolding are completed. Confirm who protects finished floors and who repairs damage caused by the works.

YOUR NEXT ACTION

Agree in writing who checks structural deflection and who accepts the finished opening before installation. The glazing supplier, structural engineer and builder should be working from the same drawings and floor levels, not separate sketches or verbal assumptions.

Thermal efficiency and comfort

Understand the U-value

A U-value describes heat transfer; lower values generally indicate better insulation. The centre-pane glass U-value (U_g) is not the same as the complete doorset U-value (U_d/U_w as designated in the supporting calculation). The overall figure is affected by glass, spacer, frame and geometry. Request the calculated or declared whole-unit figure for your actual configuration and ask which standard and dimensions underpin it.

Regulations depend on the work

In England, replacement external doors and doors in extensions are controlled by Building Regulations. Requirements differ according to the nature of the work, building type, applicable edition and compliance route. The official Approved Document L should be checked for the project; do not rely on a single headline number in a brochure. A new extension with extensive glazing may require an overall energy assessment rather than an isolated product comparison.

Glass selection and solar gain

Low-emissivity coatings and insulated glass units help control heat loss. Solar-control glass can reduce incoming solar energy, which may improve comfort on sunny elevations, but can also change daylight and winter heat gains. Orientation, shading, nearby buildings and internal use matter. Ask for glass specifications including U_g , g-value and light transmission where relevant, with a clear explanation of trade-offs.

Airtightness and condensation

Poor perimeter sealing can undermine otherwise good product performance. Condensation risk also depends on indoor humidity, ventilation, thermal bridges and surface temperatures. A thermally broken frame helps but cannot compensate for an uninsulated threshold or poorly detailed building junction. Ask for the full interface detail, not just the door datasheet.

YOUR NEXT ACTION

For a meaningful comparison, request the thermal calculation for the proposed door size and glass specification, together with the basis for the value. Ask how the threshold and surrounding insulation are detailed; a high-performing unit can still be uncomfortable if the interfaces are poor.

Safety, sound and security

Safety glass is a design requirement

Glazing in doors and critical locations must be assessed against the applicable safety-glazing requirements. The correct choice may include toughened or laminated safety glass depending on position, size, impact risk, guarding function and other project conditions. Laminated glass can provide post-breakage retention, but the required make-up must be designed, not guessed. Request the glass schedule and relevant declarations.

Security is about the tested assembly

Locks alone do not establish resistance to forced entry. Check whether the proposed doorset, including glass, handles, cylinder, hardware and configuration, is covered by appropriate test evidence. Solarlux publishes PAS 24:2016 information for Ecoline and Highline, but certification and current requirements must be verified for the specific product supplied. Secured by Design accreditation should likewise be checked for scope.

Acoustics require realistic expectations

A glazing unit's acoustic rating does not necessarily equal the installed doorset's sound reduction. Seals, thresholds, panel joints, ventilation openings and flanking transmission can dominate performance. If the home faces a busy road, railway or flight path, request a project-specific acoustic strategy and evidence for the whole assembly. Avoid assuming that triple glazing automatically gives the best sound insulation.

Privacy and glass appearance

Discuss reflectivity, tint, colour rendering, manifestation where appropriate and whether privacy is required at night when internal lights are on. Samples are useful, but glass can look different at full size and in changing light. Confirm that any special coating is compatible with the specified safety and insulating-glass construction.

YOUR NEXT ACTION

If security or noise reduction is a priority, write a performance requirement into the enquiry rather than asking vaguely for upgraded glass. Require evidence for the proposed assembly and understand whether the test results refer to glass alone or the complete installed doorset.

Thresholds, drainage and accessibility

The flush-threshold question

A visually flush transition can be desirable, but the lowest-looking threshold is not automatically the most weather-resistant solution for every exposure. Track profile, seals, adjacent paving level, overhang, drainage and local weather conditions work as a system. Ask the supplier to explain the trade-off between step height, water resistance and accessible use.

Water must have a route away

Rainwater should not be directed towards the door. External paving falls, linear drainage channels, sill outlets and connections to the wider drainage scheme need coordination. Do not bury weep holes or block drainage paths with grout, decking or landscaping. A beautiful threshold can fail if the terrace is built too high or the drain cannot be maintained.

Accessible design is more than a dimension

Consider wheelchair or pushchair movement, trip hazards, door operating forces, handle heights, clear passage and the route beyond the threshold. An accessible-looking track may still be difficult if there is a steep ramp, awkward leaf arrangement or insufficient manoeuvring space. Building-regulations requirements and user needs should be checked with the designer.

Agree the interface before ordering

Request a dimensioned section showing internal floor finish, subfloor, damp-proofing, door track, external paving, drainage and the required levels. Identify who supplies the channel, who connects it and who signs off the finished detail. This is one of the most common places for scope gaps between glazing and building contractors.

YOUR NEXT ACTION

Have the designer and installer review the sill section with the groundworks contractor before paving is laid. Check where surface water flows during heavy rain and whether drains remain accessible for cleaning after the terrace is completed.

Planning permission and Building Regulations

Planning and building control are different

Replacing doors within an existing opening may often be straightforward from a planning perspective, but changes to external appearance, listed buildings, conservation areas or new structural openings can require further checks. Planning permission is not the same as Building Regulations approval. Always confirm the property-specific position with the relevant local authority or qualified adviser.

Replacement doors are controlled fittings

The Planning Portal confirms that replacement external glazing is subject to Building Regulations covering thermal performance and other matters such as safety, ventilation and means of escape. Compliance can be demonstrated through the appropriate building-control route or a relevant competent-person scheme where the installer and work qualify. Ask who will issue the completion or compliance documentation.

Extensions bring extra obligations

Where bi-folds form part of an extension, structural design, energy performance, ventilation, fire safety, access and drainage may all need assessment. Large glazed areas can affect the energy strategy. Do not assume a door that is compliant as a replacement is automatically suitable for every new extension design.

Keep a simple approval record

Before manufacture, retain the drawings, structural calculations where required, planning correspondence, building-control approach, product performance evidence and any conditions. Responsibility for applications and approvals should be stated in the contract rather than left to assumption.

YOUR NEXT ACTION

Ask the responsible professional to confirm the applicable approval route before an order is placed. Keep the resulting written advice with the drawings and product certificates so the paperwork is available for completion and any future sale.

What really drives the budget

There is no honest universal price per metre

A meaningful budget depends on opening size, panel count, system, material, glass, colour, threshold, security, access, survey, installation and the surrounding building work. A small straightforward replacement and a large structurally altered opening are not comparable. This guide deliberately does not present unverified Solarlux retail prices or promise an installed cost without a project specification.

Break the budget into packages

Use these headings: A. survey and design; B. doorset and glass; C. special finishes, hardware and options; D. delivery, lifting and installation; E. structural alterations and builders' work; F. drainage and floor interfaces; G. approvals, professional fees and inspections; H. making good and decoration; I. contingency. Ask which party prices each item and whether VAT is included.

Build a transparent allowance

Illustrative arithmetic only, NOT a market quotation: if a hypothetical complete project has £18,000 of identified works and you set aside 15% contingency, the working allowance becomes £20,700 before any unaccounted exclusions. The £18,000 is an arbitrary example used to show the method; it is not a Solarlux price estimate. The right contingency depends on survey findings, age of the building and uncertainty.

Value engineering without false economy

Compare alternative panel layouts, standard versus bespoke finishes and glazing options only after the minimum thermal, structural, safety and weather requirements are fixed. Savings that remove drainage, structural checks, correct installation or warranty clarity can create larger costs later. Seek written cost differences for each design change.

YOUR NEXT ACTION

Budget against the complete project rather than the door-only figure. Obtain provisional allowances for unknown structural and drainage work, and identify any provisional sums that could change after opening-up. The contingency should reflect the actual uncertainty, not a generic promise.

How to compare quotations properly

Make every tender answer the same brief

Issue the same dimensions, drawings, photos, site address, preferred layout, glazing performance requirements and installation scope to each bidder. Require a clearly identified system and itemised exclusions. If one proposal is cheaper because it omits the steel, drainage or making good, it is not a like-for-like comparison.

A useful quotation checklist

Check the supplier identity and exact system; measured opening and survey responsibility; drawings and panel arrangement; frame and glass specifications; performance evidence; finish and colour; handles and locks; threshold and drainage; installation and lifting; lead time assumptions; warranty; payment schedule; VAT; exclusions; and what happens if the survey differs from the design dimensions.

Ask about programme and variations

A quoted manufacturing lead time may begin only after drawings, finish, deposit and technical sign-off are complete. Site readiness, access, glass availability and special colours may affect programme. Ask for a realistic sequence, how delays are handled and how variations are approved. Never treat a verbal estimate as a fixed completion date.

Compare total risk, not just price

A clear, slightly higher quote may carry fewer unpriced interfaces. Ask who is responsible for measurements, structural opening, weather sealing, drainage, testing, snagging and aftercare. The supplier's willingness to provide a coherent interface drawing and written scope is often more informative than a headline discount.

YOUR NEXT ACTION

When comparing proposals, make a simple matrix of inclusions, exclusions, performance evidence, programme and warranty. Where an item is unclear, ask a written question and retain the reply. This is usually more valuable than negotiating a discount against an incomplete specification.

From survey to handover

Pre-contract and technical approval

Before production, obtain final survey dimensions, approved elevations, opening-direction drawings, sill sections, finish samples and glass schedule. Confirm the structural opening is ready and any design changes are signed off. A signed drawing is a technical instruction: review it carefully, including panel numbers, handles and traffic-door position.

On-site installation

The team should check openings and supports, protect the site, install and secure frames, glaze and adjust the panels, and complete perimeter weatherproofing in accordance with the specified details. The installer and main contractor must coordinate drainage, floor levels and adjacent finishes. Do not cover critical junctions before they have been inspected.

Practical completion and demonstrations

Operate every panel through the full opening sequence. Check locking, handles, smooth movement, alignment, gaskets, drainage paths and any specified access function. Inspect glass and finishes in appropriate lighting and document snags. Request a demonstration of how to open, stack, close and lock the system safely.

Documents worth keeping

Keep approved drawings, glass and product specifications, warranty documents, operating instructions, maintenance recommendations, compliance certificates where applicable, payment records and a snagging sign-off. Record the installer's aftercare contact and the process for adjustment or replacement parts.

YOUR NEXT ACTION

Before signing practical completion, request an operation demonstration and make a dated photographic record of the sill, drainage and finished junctions. Keep a concise snagging list with agreed rectification dates and the name of the responsible party.

Maintenance, decisions and next steps

Maintenance protects performance

Keep tracks and drainage outlets clear of grit and debris; clean glazing and frames with products suitable for the specified finish; and inspect seals and moving parts periodically. Follow Solarlux's current system-specific maintenance instructions rather than applying generic oils or chemicals. Exposed coastal sites may need more frequent attention.

Know what is normal and what is not

Some adjustment over a door's life may be necessary, especially after surrounding building movement. Persistent rubbing, water ingress, failed locking, damaged gaskets or misting inside a sealed glass unit should be reported rather than forced or ignored. Do not modify security hardware or drainage details without technical advice.

Ten questions to ask before you commit

1. Which exact Solarlux system and configuration are proposed? 2. What is the whole-door thermal evidence? 3. What glazing build-up and safety specification are included? 4. How will the panels stack? 5. Where is the daily access door? 6. What threshold and drainage details are approved? 7. Who designs the structure? 8. What work is excluded? 9. Who provides compliance documents? 10. What warranty and aftercare are included?

Evidence and important limitations

Primary product references: Solarlux official product overview and Ecoline/Highline system pages. UK guidance: Planning Portal doors/windows Building Regulations and GOV.UK Approved Document L. Product maxima are manufacturer-published and configuration-dependent. UK guidance is principally for England; requirements can differ elsewhere in the UK and may change. This guide is educational and does not replace project-specific engineering, legal, regulatory or supplier advice.

YOUR NEXT ACTION

Keep the manufacturer maintenance guidance, certificates and approved drawings together in a digital folder. If you later change flooring, paving or landscaping, revisit the door drainage and threshold detail before work starts; small alterations can have significant consequences.