

Survey & installation guide

vitrio

Kitchens and bathrooms



expression and harmony with glass





Contents

Key	4
Survey Walls & borders	8
Survey Surfaces	12
Installation Walls & borders	17
Installation Surfaces	21
Survey / Installation Considerations	24
Panel positioning	24
Panel adjustment	25
Skirting boards	26
Wall panel design	27
Architrave	29
Glass processing limits	30
Tolerances	31
Fixing	32
Cutting	33
Glass thickness	34
Glass thickness options	35
Glass edging options	36
Glass corner options	37
Technical product features	38
Cleaning / Maintenance	39
Terms & conditions	40

This guide is for use by installers to support the specification, surveying, ordering and installation of Vitrio. It has been written to compliment the knowledge and skills of installation professionals and as such is not prescriptive. For any further support or information, contact Glassolutions Solaglas. A kitchen has been used for illustrative purposes however, the guidelines and principles are identical for bathrooms.

Key

Suggested equipment, legend & tips

Safety



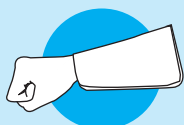
Protective glasses



Gloves



Protective boots

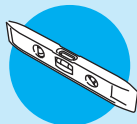


Wrist protection

Surveying



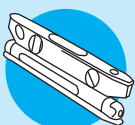
Tape measure



Spirit level

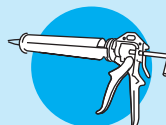


Pad & pencil

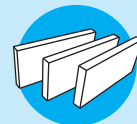


Laser spirit level
(optional)

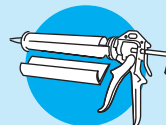
Installation



Low modulus neutral cure
silicone & gun



Assorted
packing pieces

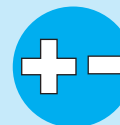


Trims & caulking
(finishing exposed edges)



Lifting suckers

Icons



Tolerances



Template
(optional)



Dimensions only



Adjustment only

Safety

Ensure that all electrical, plumbing and gas connections have been made safe by a professional before any work is undertaken.

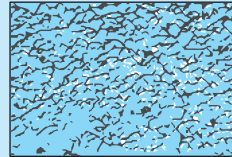
Glass handling

Glass is heavy (see weights given on page 35), and incorrect handling could lead to injury. It is the responsibility of the installer to ensure an appropriate number of personnel are involved during all stages of handling and positioning of glass panels, and to ensure that correct lifting practices are adhered to (refer to HSE manual handling guidelines).

Types of glass



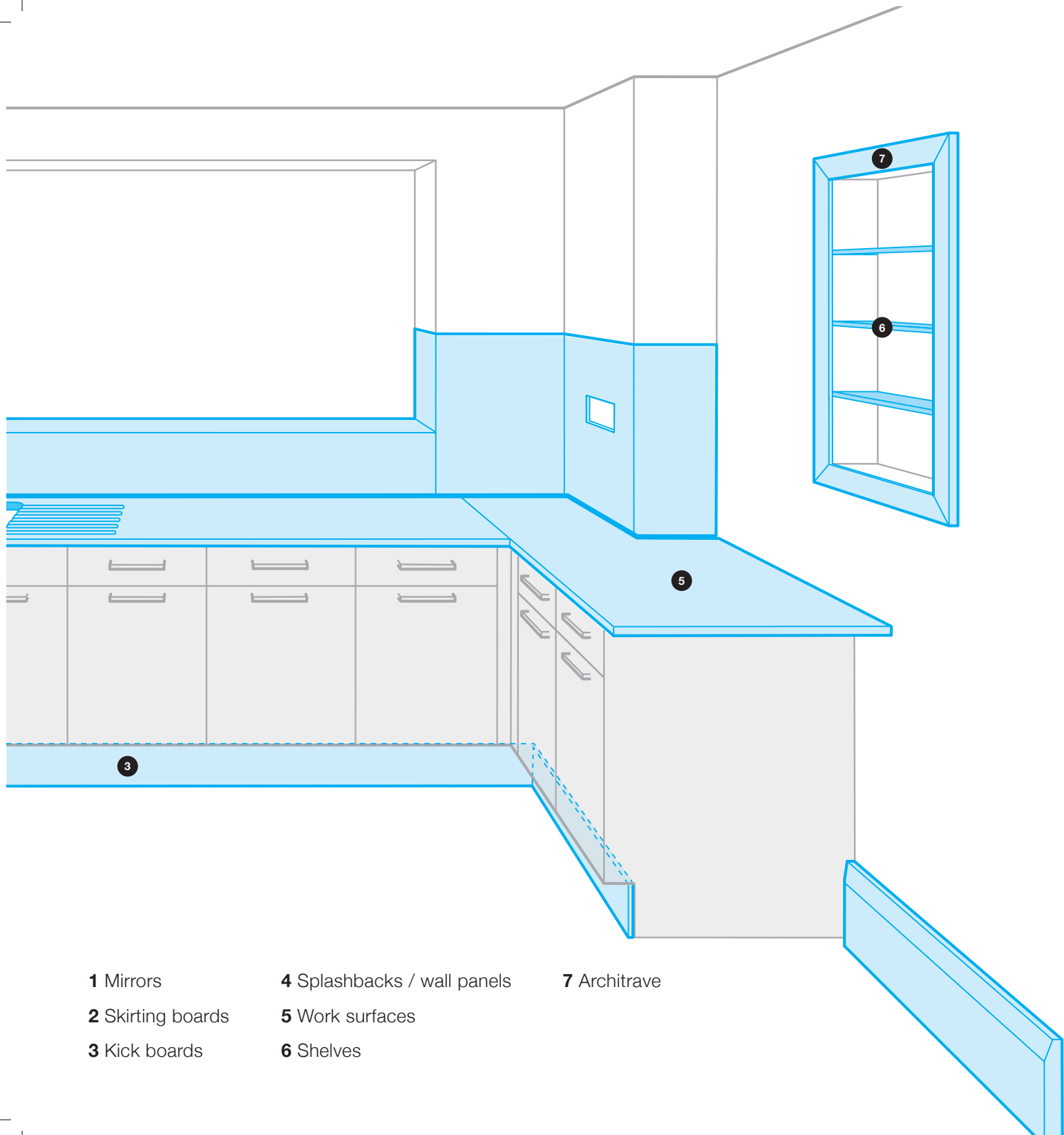
Annealed
(non-toughened)



Toughened
(a safety glass and 5 x stronger than annealed)



vitrio



1 Mirrors

2 Skirting boards

3 Kick boards

4 Splashbacks / wall panels

5 Work surfaces

6 Shelves

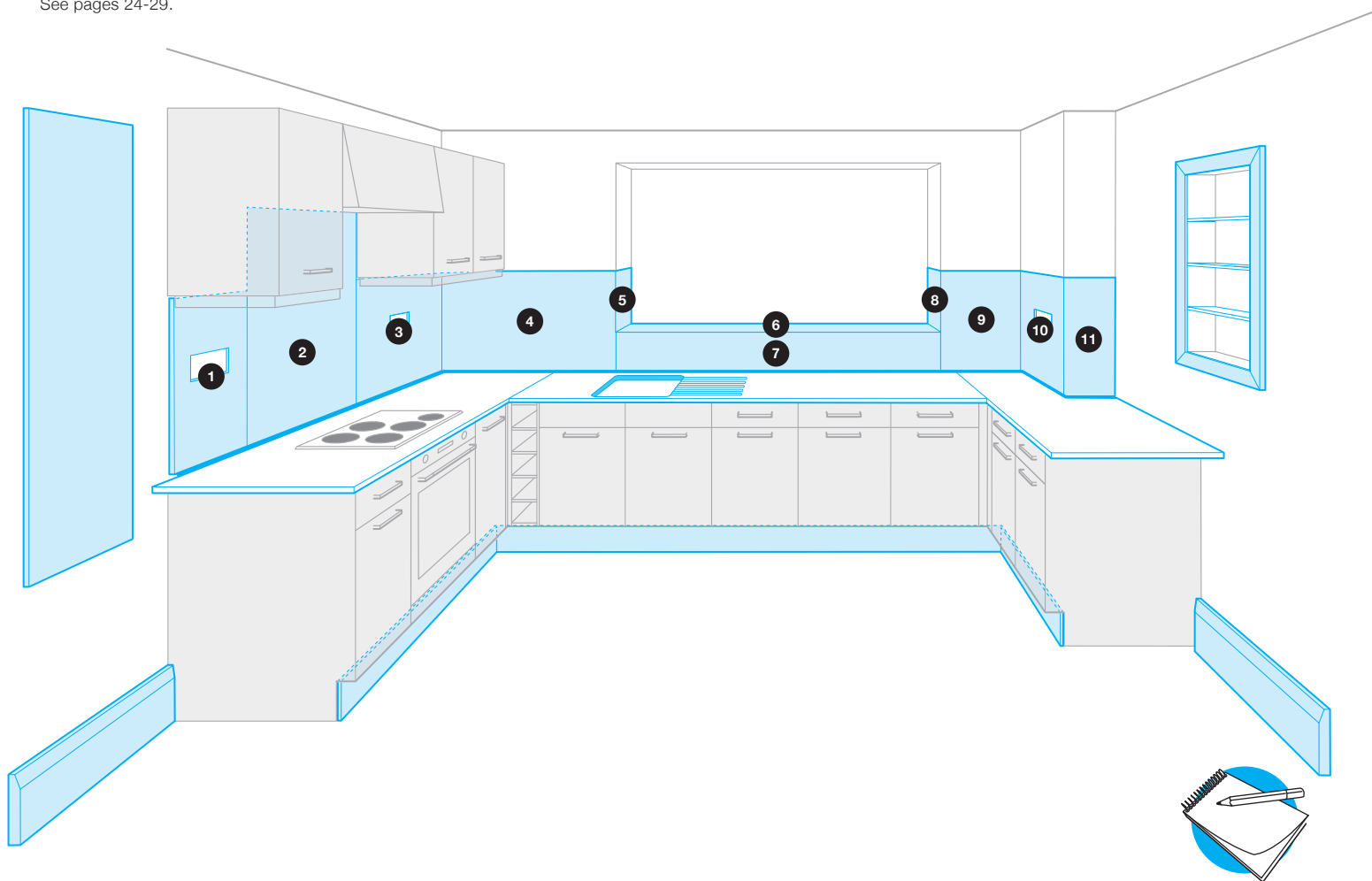
7 Architrave

Survey Walls & borders

Step 1

Determine the appropriate 'break-up' of the area under consideration from both practical and aesthetic perspectives.

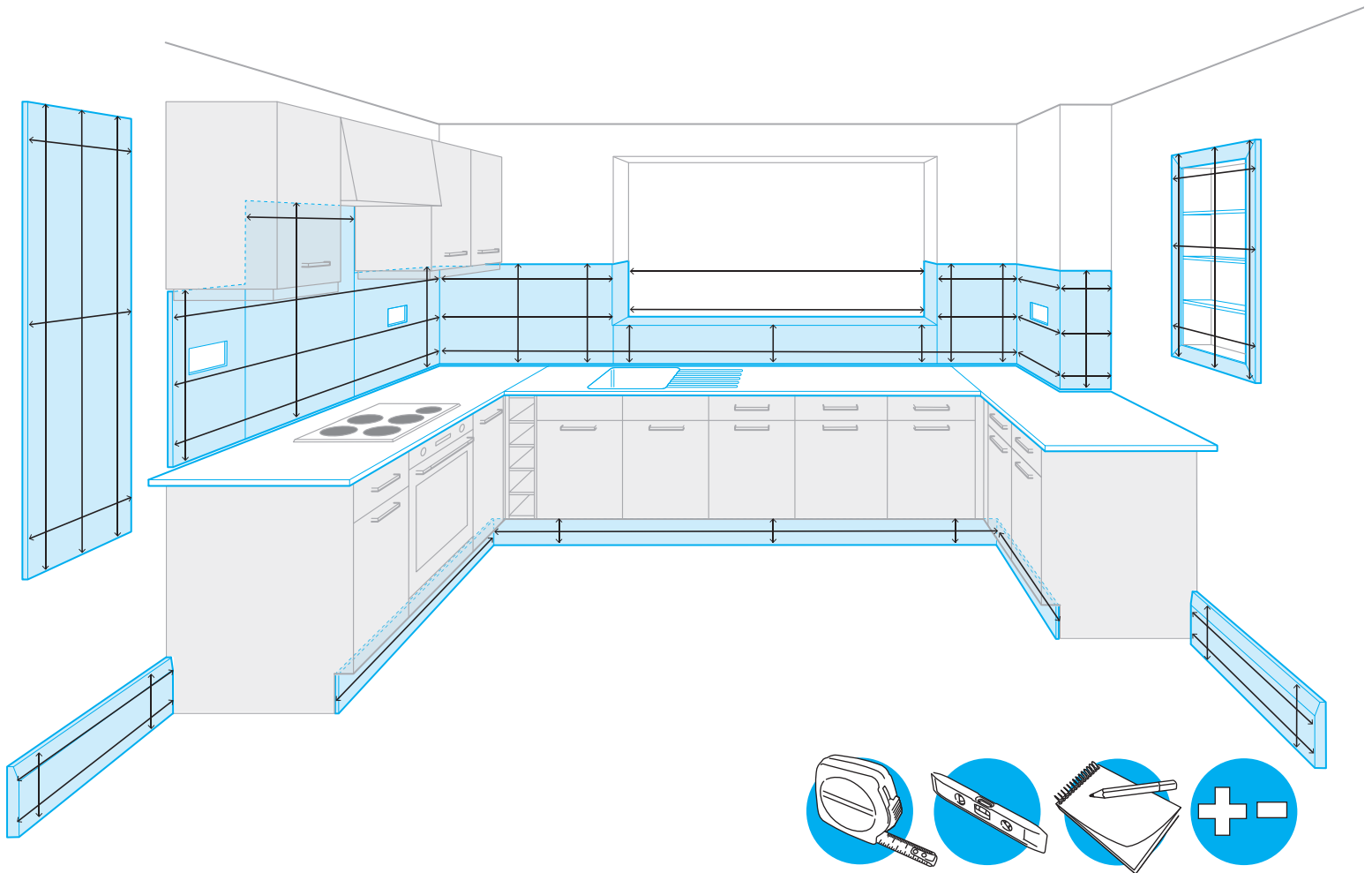
See pages 24-29.



Survey Walls & borders

Step 2

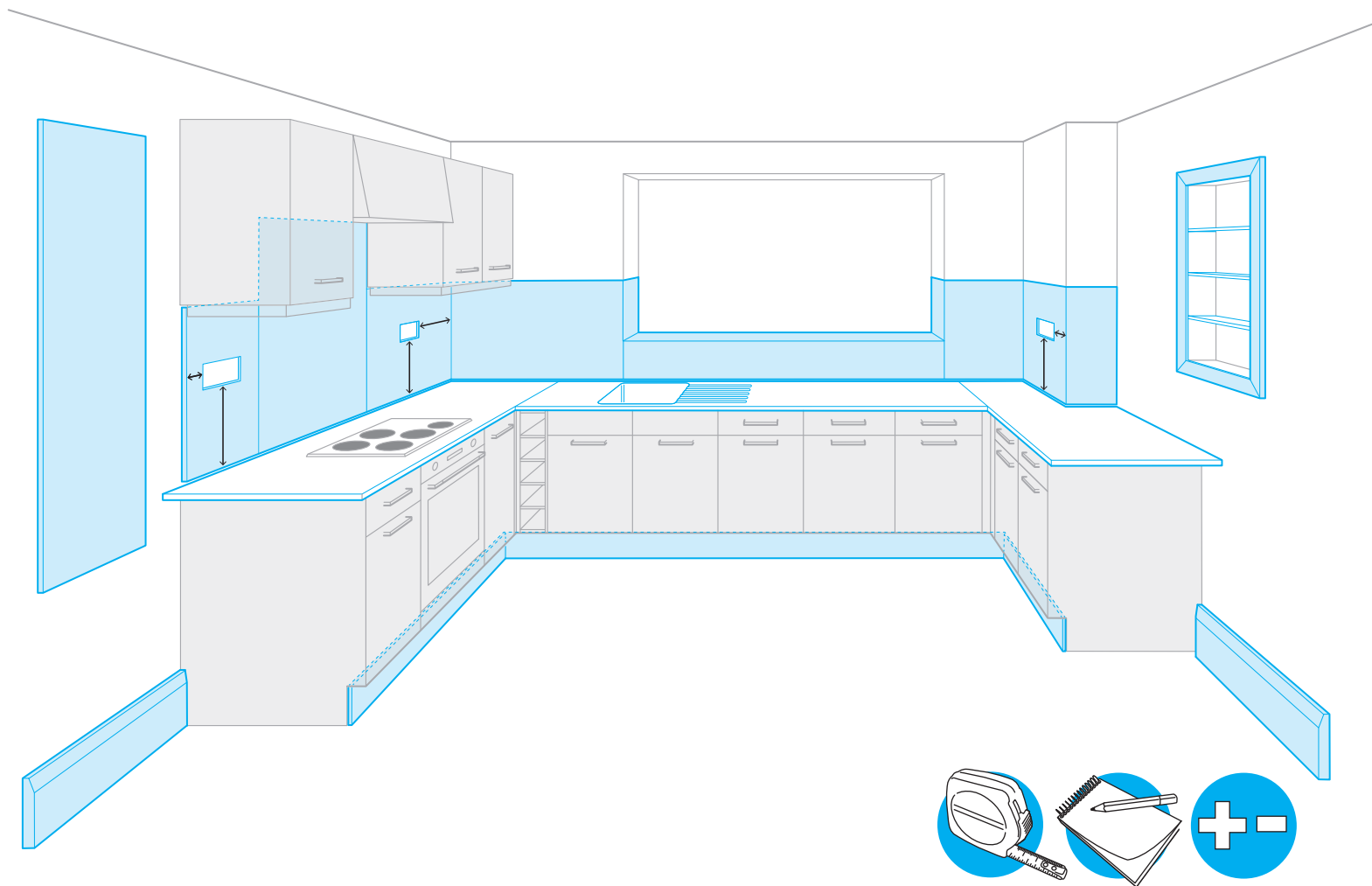
Take multiple 'tight size' height and width measurements, allowing for suitable tolerances and necessary packing pieces. See pages 30-31.



Survey Walls & borders

Step 3

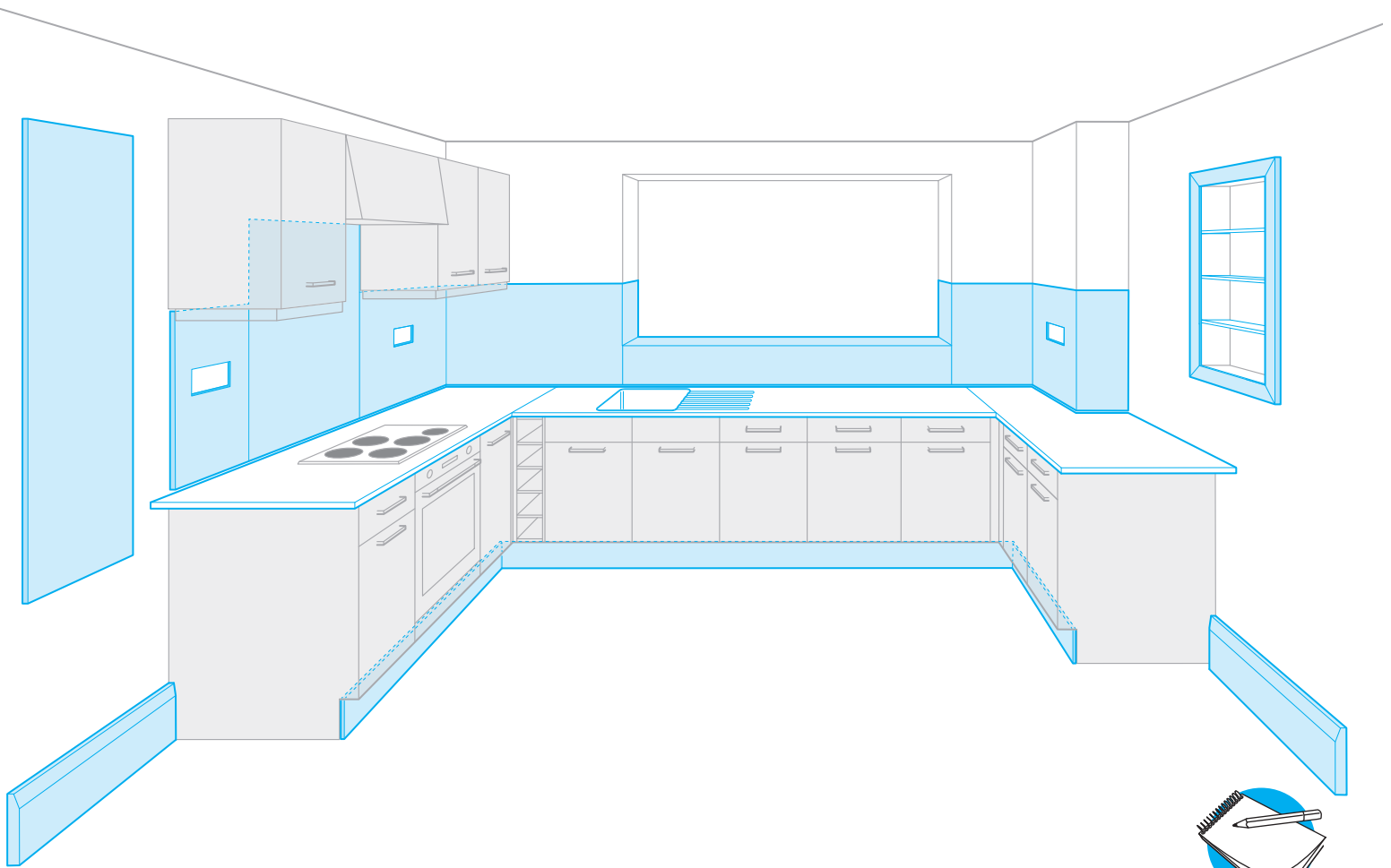
Determine where electrical sockets are positioned – accuracy is critical as there will be little room for adjustment.



Survey Walls & borders

Step 4

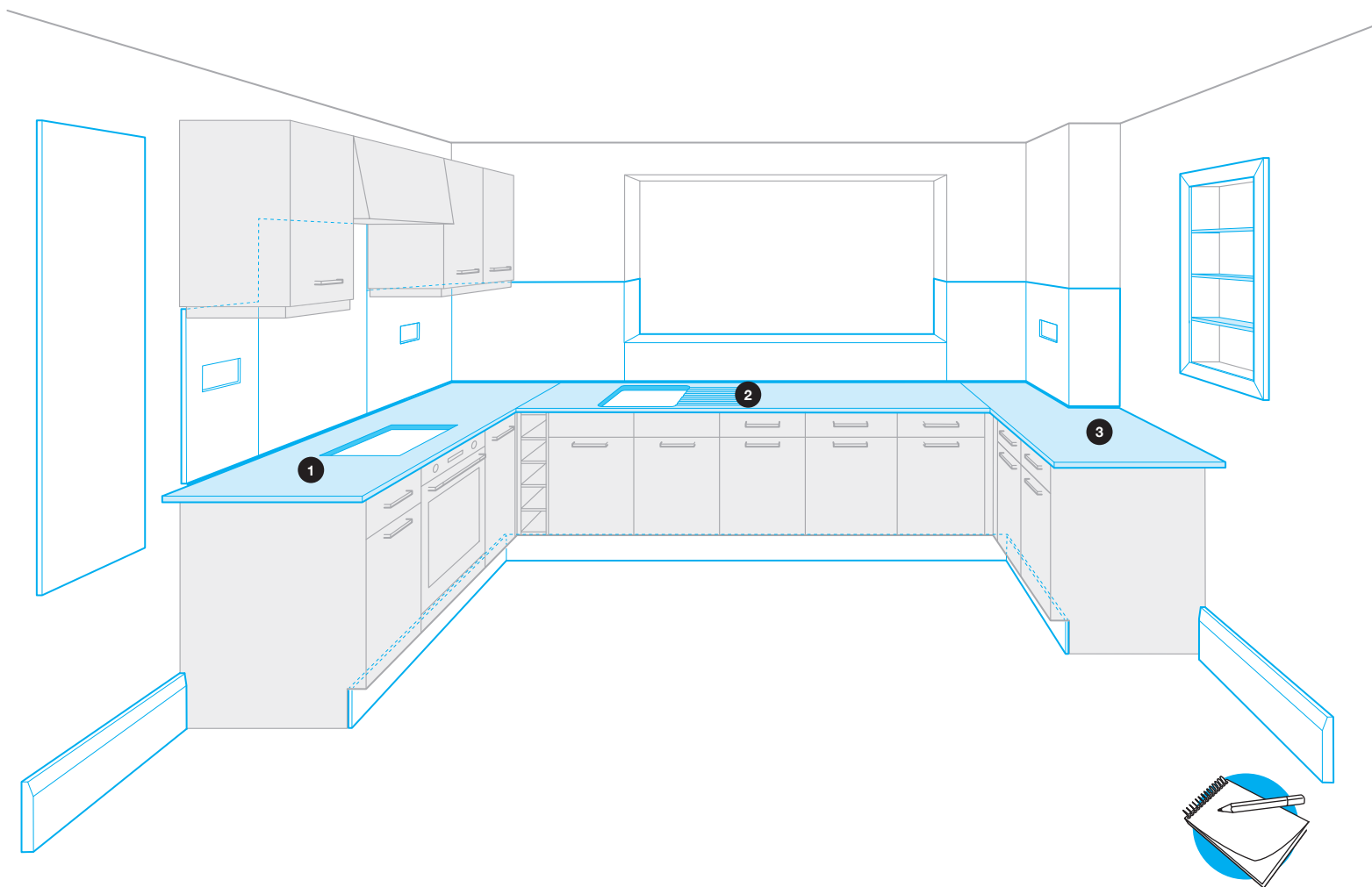
Record thickness, edging, corner and colour choices, and any other considerations. See pages 35-37.



Survey surfaces

Step 1

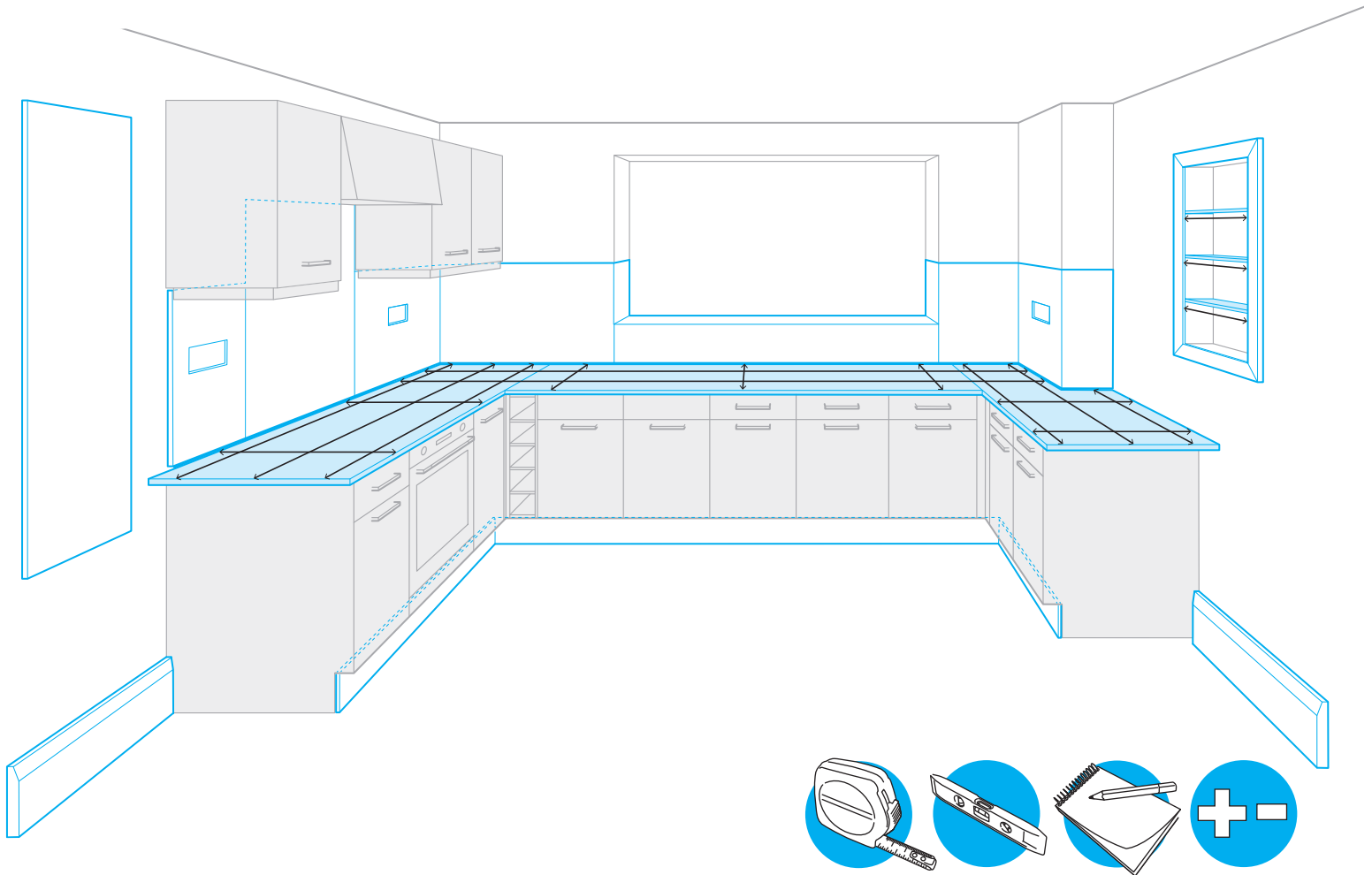
Determine the best 'break-up' of the area under consideration from both practical and aesthetic perspectives.



Survey surfaces

Step 2

Take multiple 'tight size' length and width measurements, allowing for suitable tolerances and necessary packing pieces. See pages 30-31.

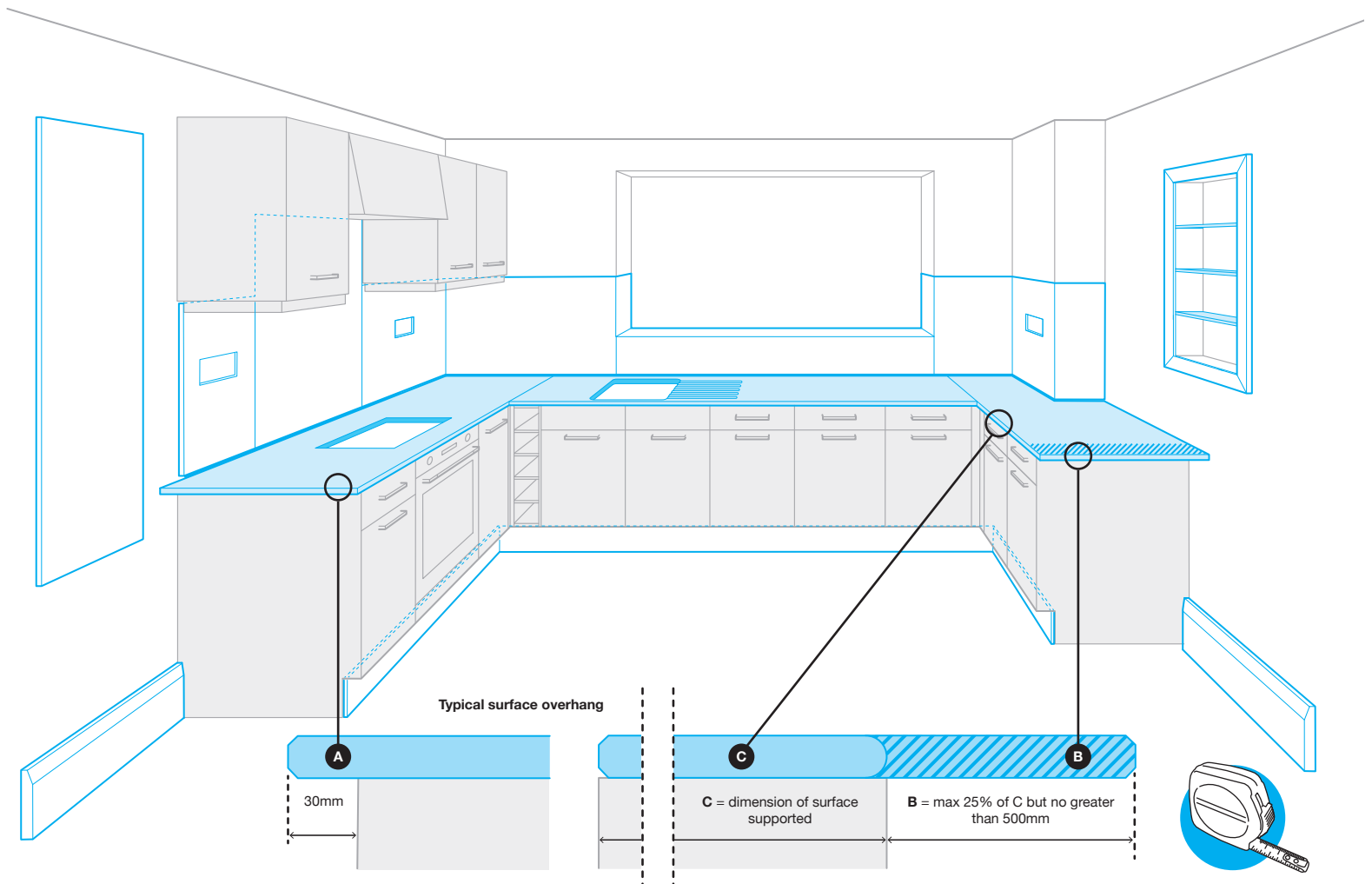


Survey surfaces

Information

Standard work surface overhang is approximately 30mm (**A**).

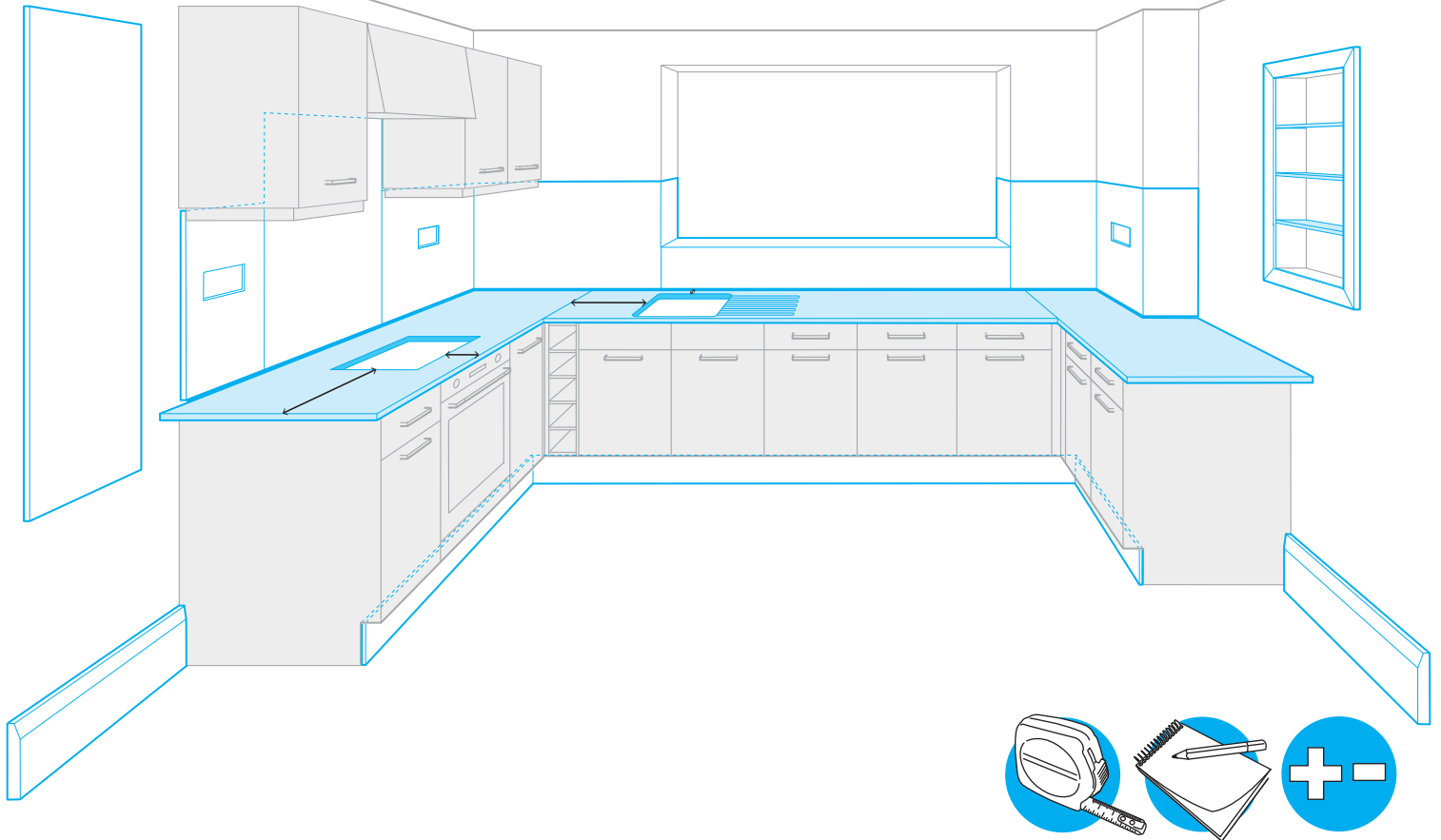
Extended work surface overhang/
cantilever maximum 25% of
supported glass dimension,
but no greater than 500mm (**B**).



Survey surfaces

Step 3

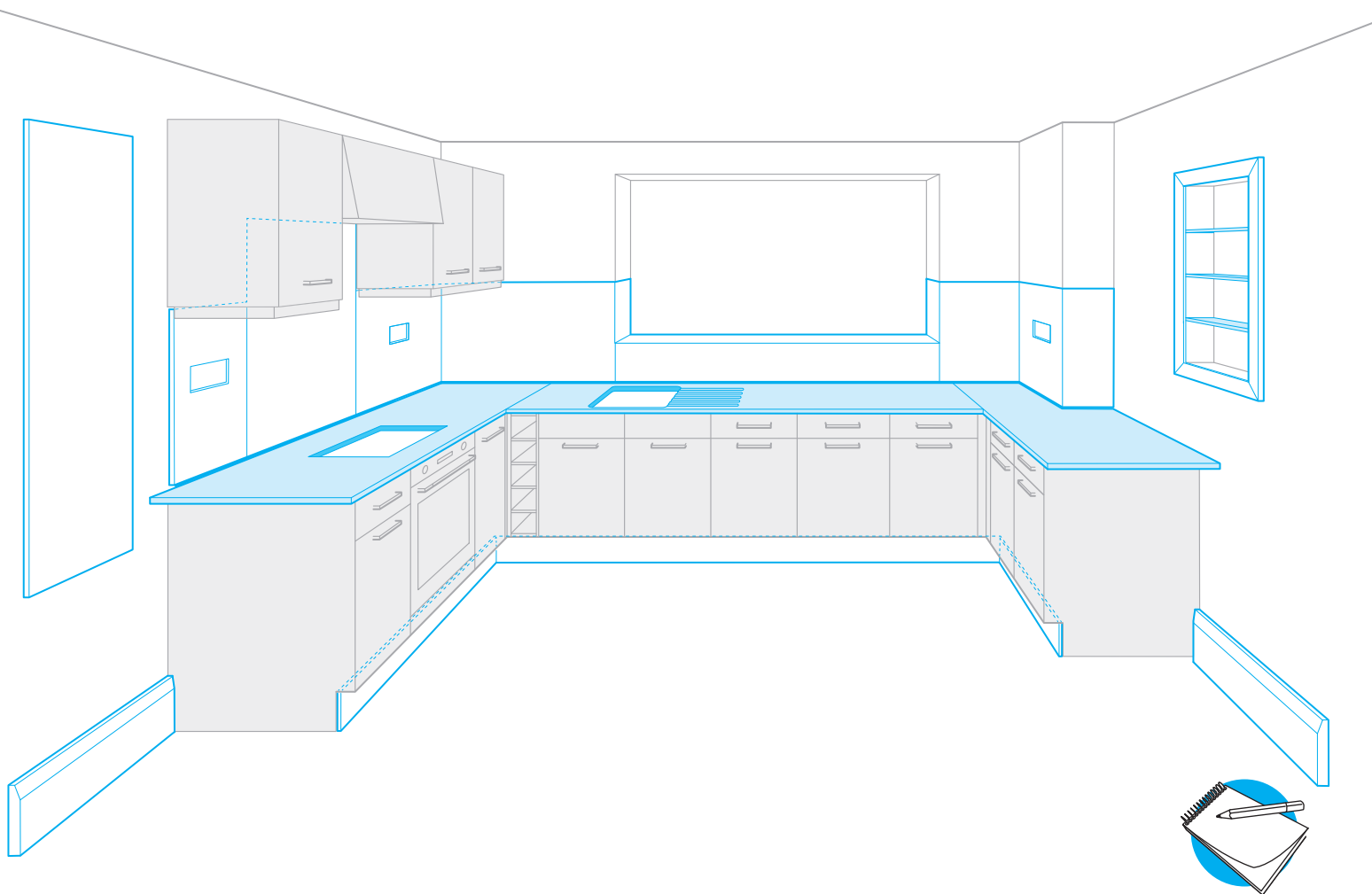
Determine where any cut-outs / holes are positioned for hobs, sinks, taps etc. Accuracy is critical as there will be little room for adjustment.



Survey surfaces

Step 4

Record edgework, corner, thickness and colour choices and any other considerations (such as drainage grooves). See pages 35-37.



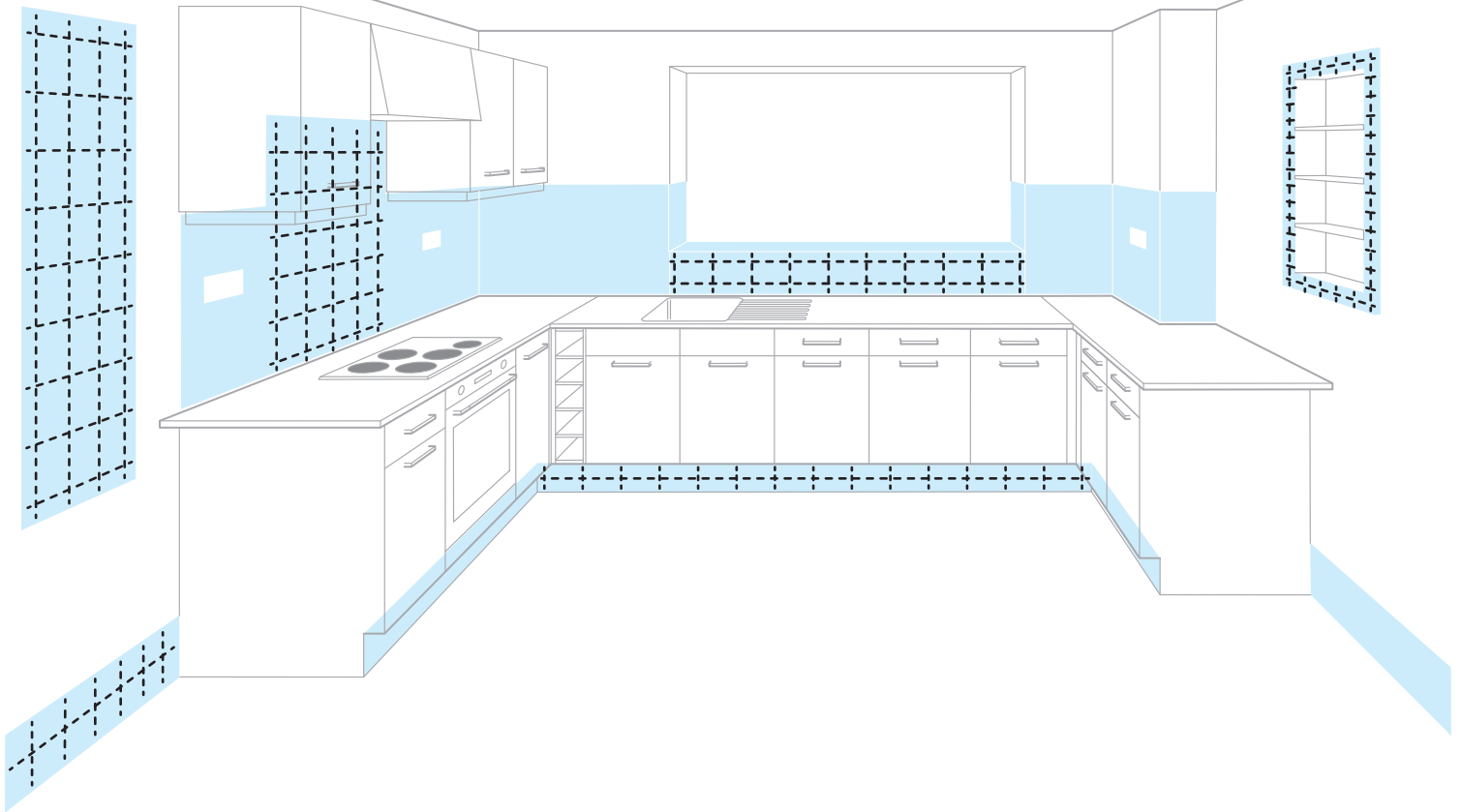
Installation Walls & borders

Step 1

Mark the walls where the panels are to be fixed with a grid of approximately 150x150mm.

Step 2

Paint the walls at the abutment points with a one inch brush using either a matching paint colour or black paint (to avoid the potential to view the wall through the joints).

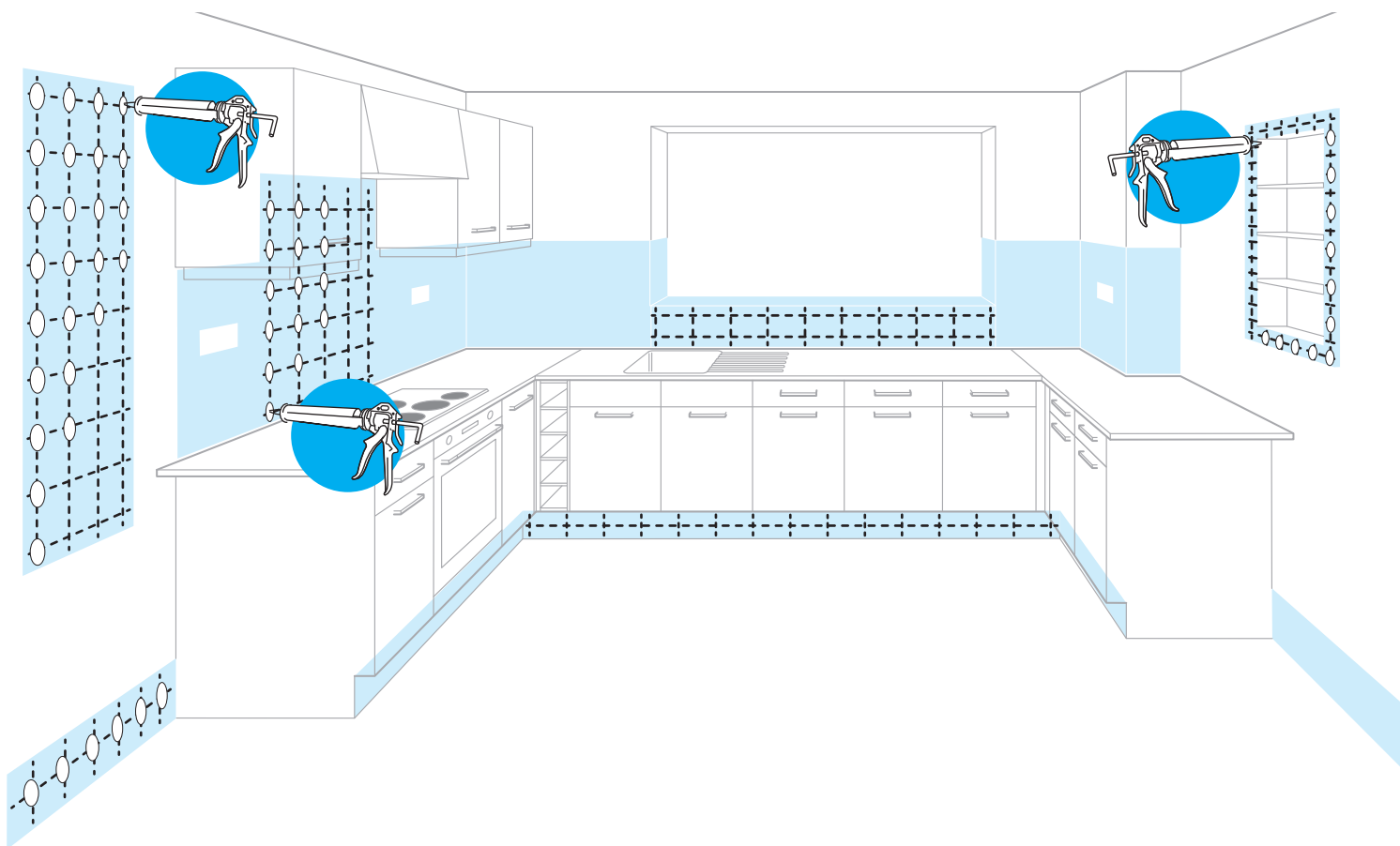


Installation Walls & borders

Step 3

Apply adequate 'blobs' of a low modulus neutral cure silicon (see page 32) to one area at a time working from the centre of a run (visual below is indicative only),

ensuring enough material is used to accommodate deviation in surface finish. See page 34.



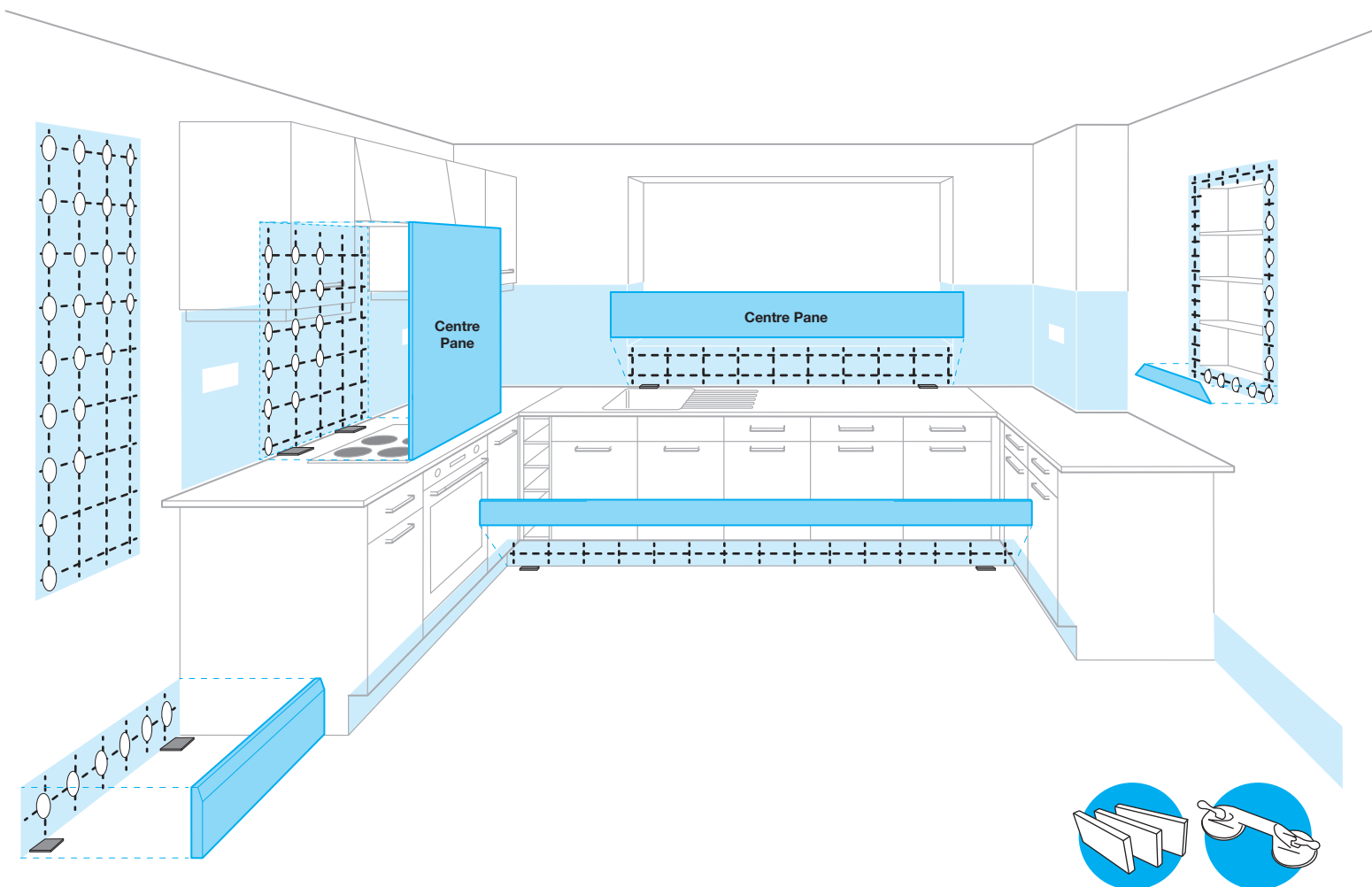
Installation Walls & borders

Step 4

Working from the centre of a run mount panels on two suitable sized 'packing pieces'.

Step 5

Manoeuvre panel into position and lightly bed onto adhesive.



Installation Walls & borders

Step 6

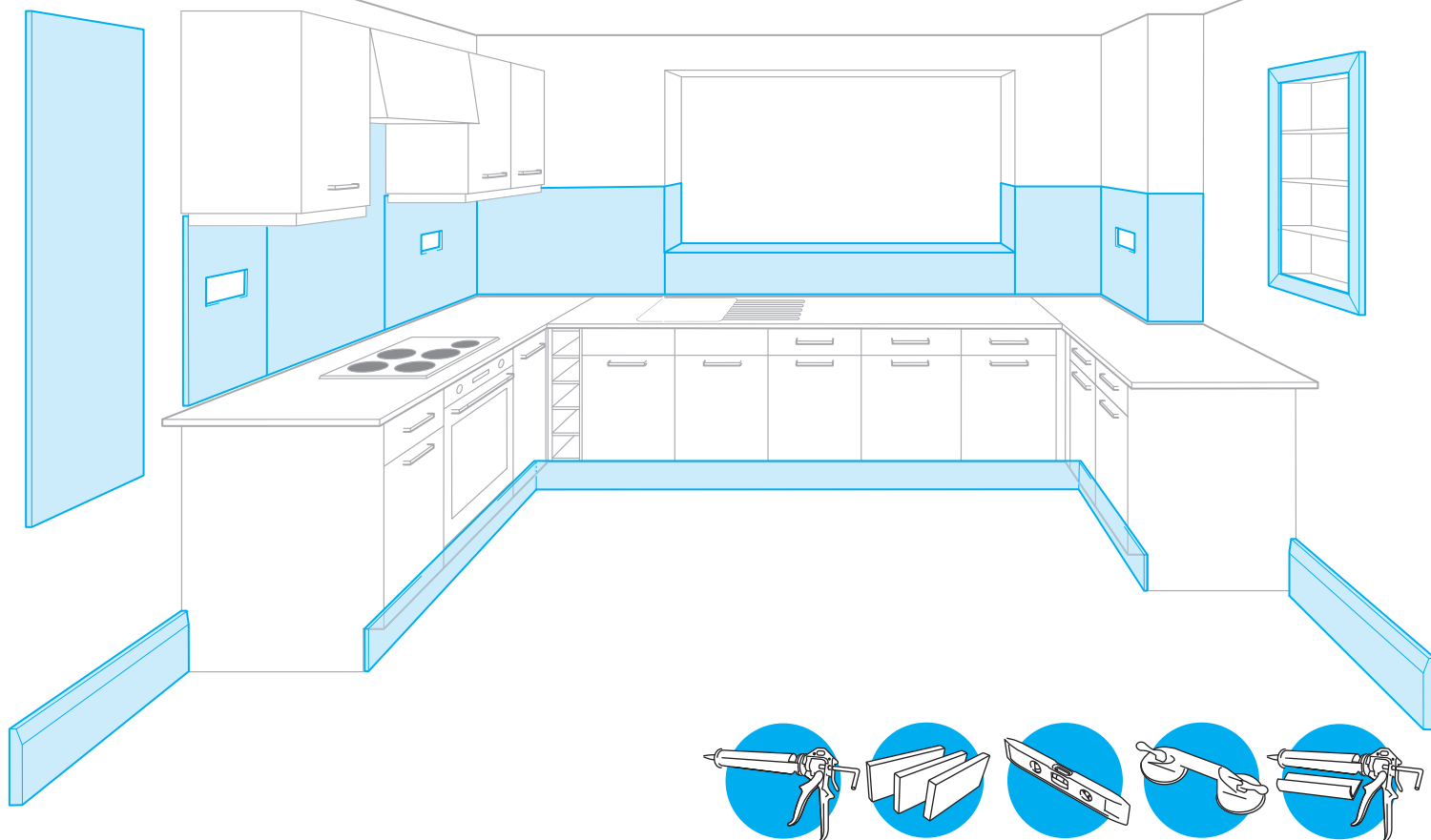
Repeat Steps 1 through 5 for the remaining panels leaving a minimal gap between panels. See page 31.

Step 7

Manoeuvre and adjust panels to get uniform spacing for maximum visual effect and squareness. Constantly check levels and fully bed panels.

Step 8

Leave the adhesive to cure as per adhesive guidelines, then remove packing pieces. Finish edges accordingly, if desired. Afix socket covers - do not over tighten screws.



(Optional)

Installation surfaces

Step 1

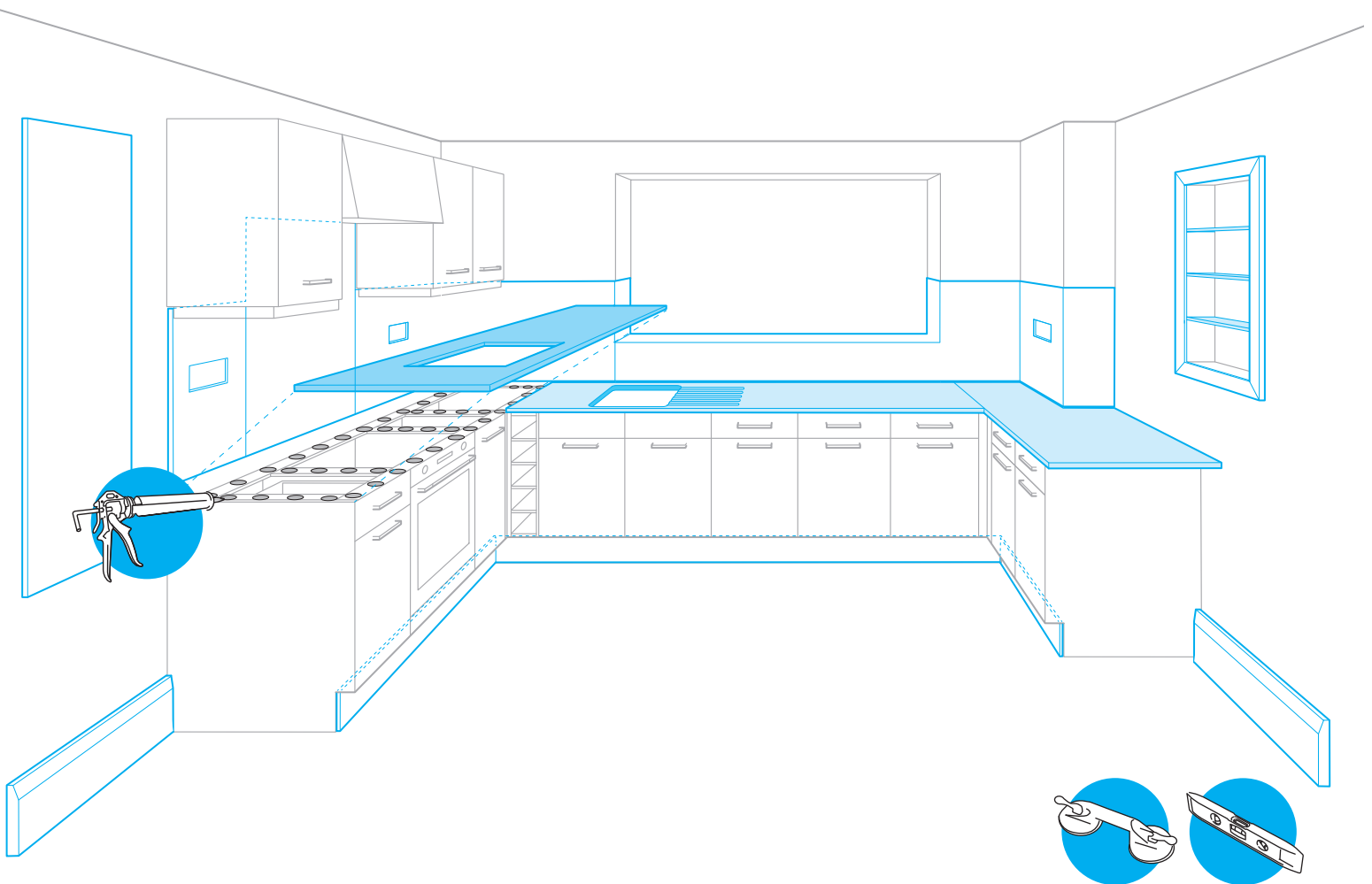
Apply adequate 'blobs' of a low modulus neutral cure silicon (see page 32) to one full area at a time.

Step 2

Manoeuvre panel into position and lightly bed onto adhesive.

Step 3

Repeat steps 1 and 2 for remaining panels.



Installation surfaces

Step 4

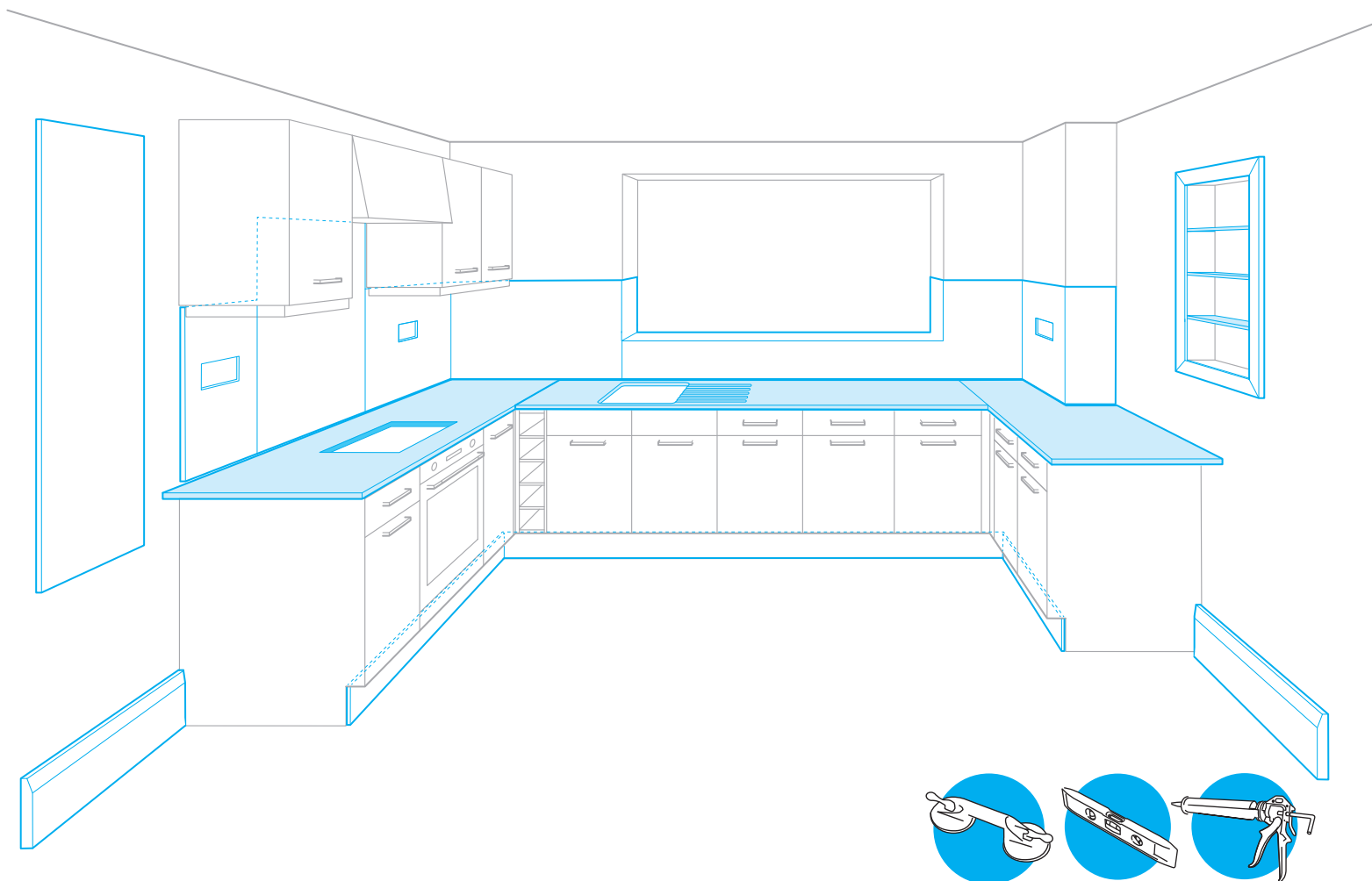
Manoeuvre and adjust panels to get uniform spacing and constantly check levels.

Step 5

Fully bed panels.

Step 6

Seal the edges around and between the panels accordingly, if desired.



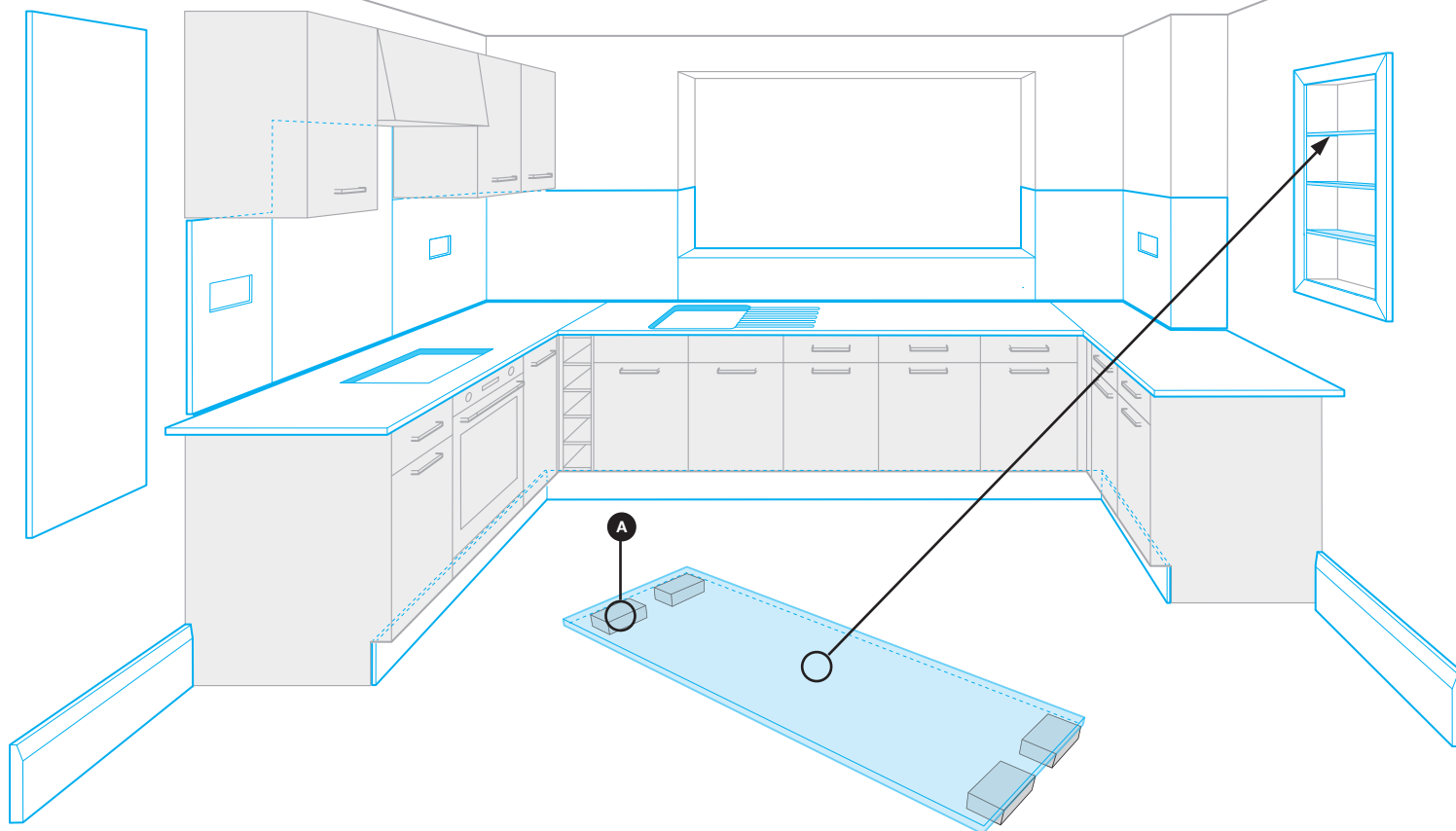
Installation surfaces

Shelves - information

Shelving can be supported using suitable clips or other proprietary fixings **(A)**.

Ensure thickness is suitable for intended loads (see table for guideline).

Approximate weight bearing for glass shelves			
Span ←→	Span between supports		
	≤0.5m	≤ 1.0m	≤ 1.5m
6mm toughened	20kg	5kg	2kg
10mm toughened	75kg	20kg	10kg
12mm or 15mm toughened	110kg	40kg	20kg



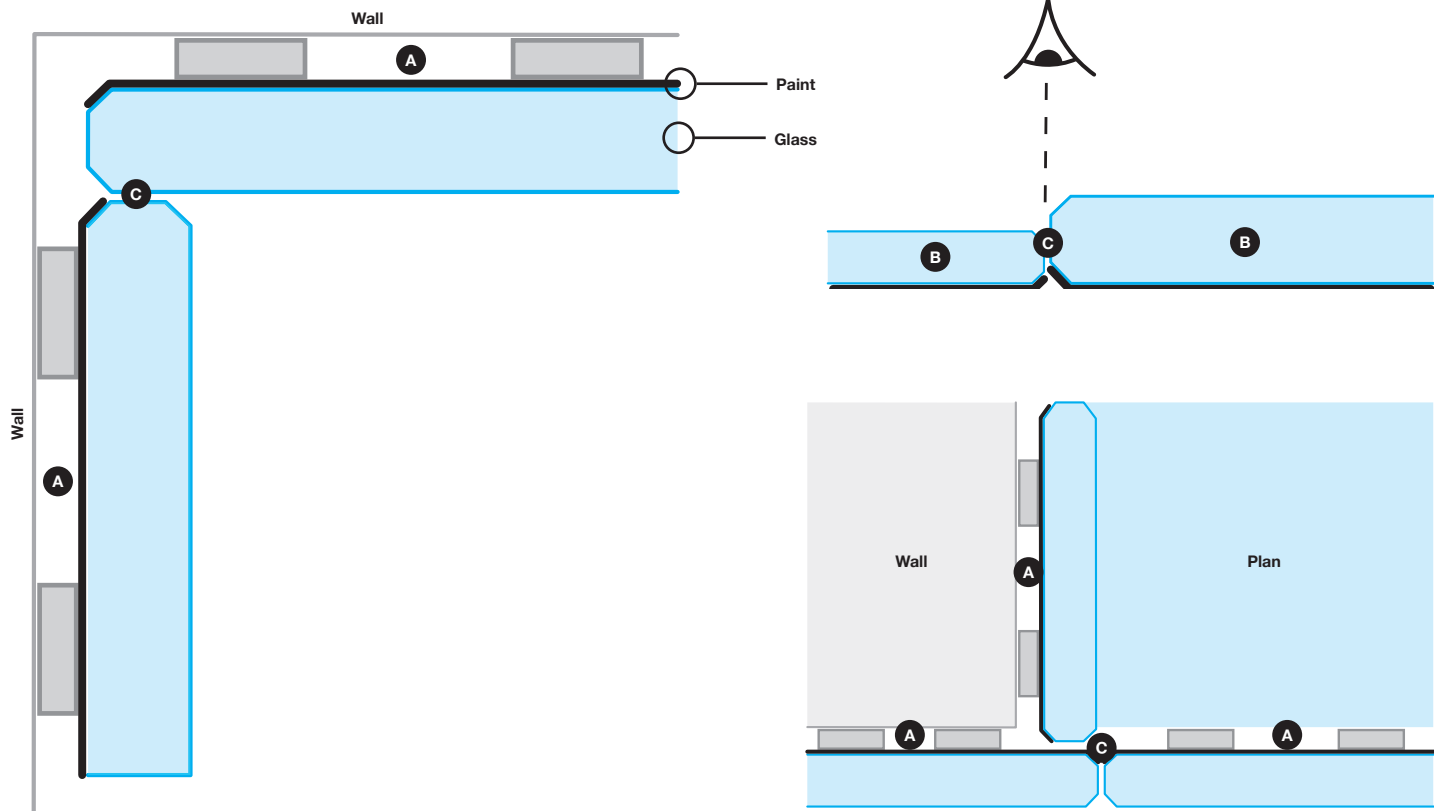
Survey / Installation Considerations

Panel positioning

Painted face of glass panels should always be installed facing the wall/surface it is to be adhered to **(A)**.

If mixing thicknesses of glass with the same paint colour, the colour through the glass will look different **(B)**.

Never install the glass with edges touching **(no glass-to-glass contact) (C)**.

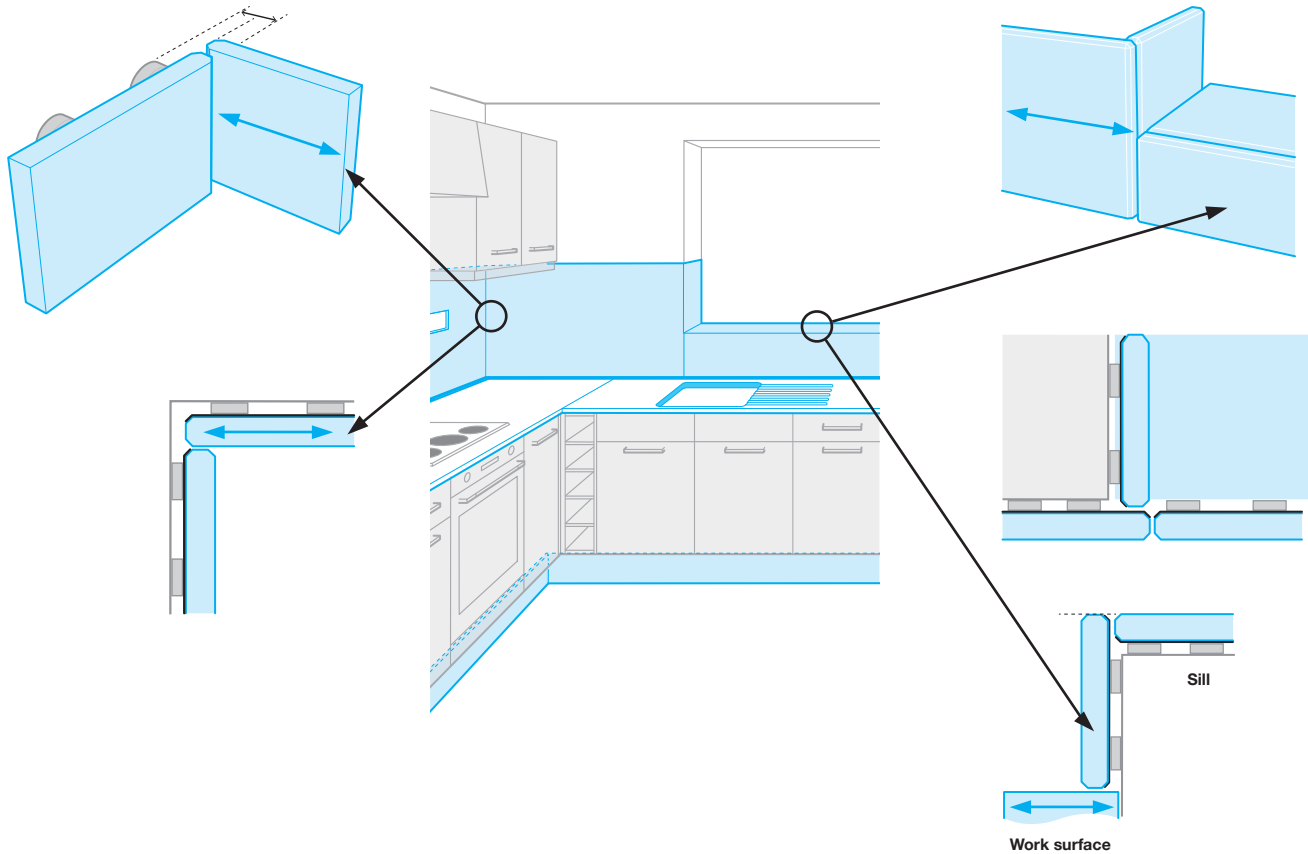


Survey / Installation Considerations

Panel adjustment

Maximum adjustment on internal corner details = glass thickness plus stand-off distance.

Some panels, such as those with cut-outs will have restricted positional adjustment.



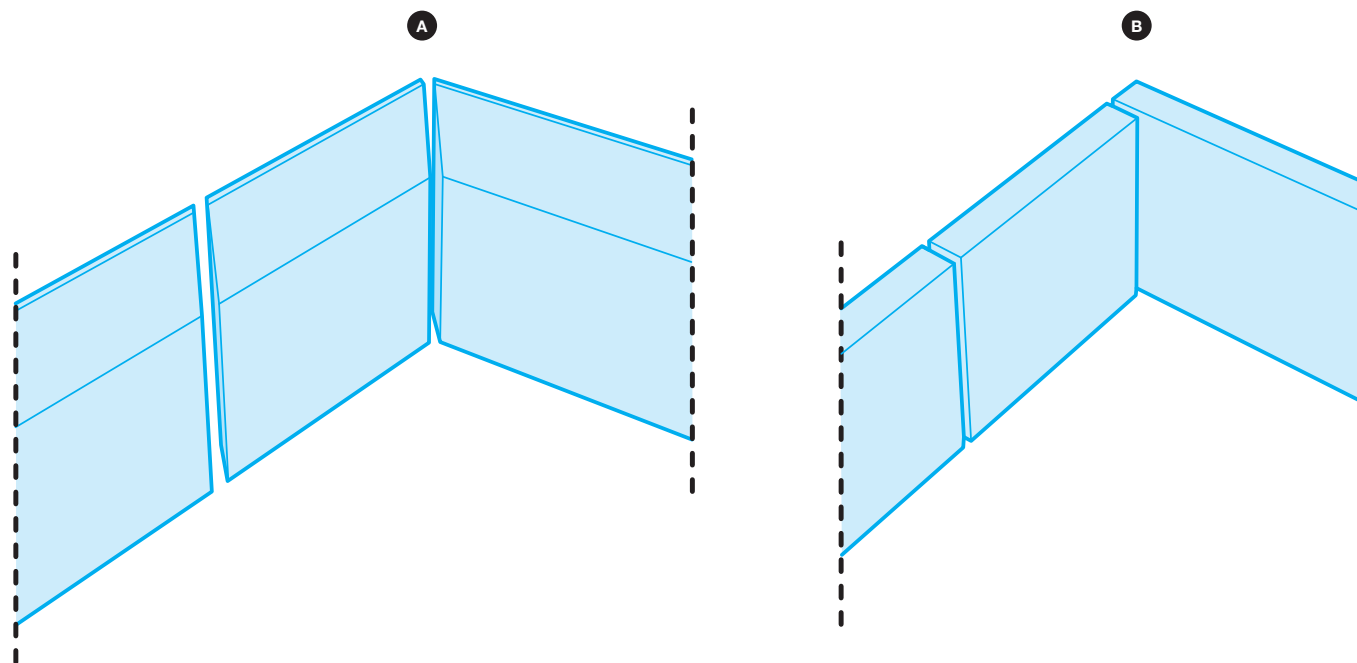
Survey / Installation Considerations

Skirting boards

With skirting boards, how they join together 'mid-run' and at the corners should be considered from both a practical and aesthetic perspective.

Option (A):
45° mitred joints are less forgiving of dimensional inaccuracy.

Option (B):
90° square joints allow more adjustment.



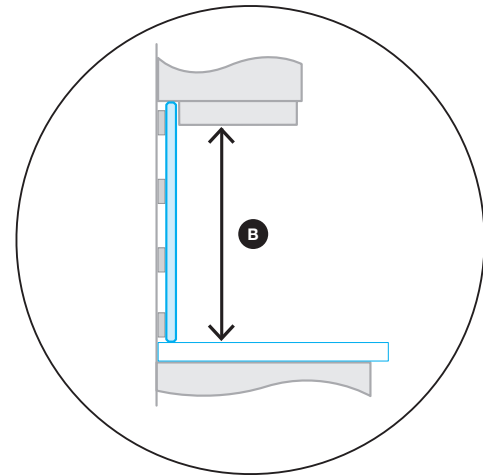
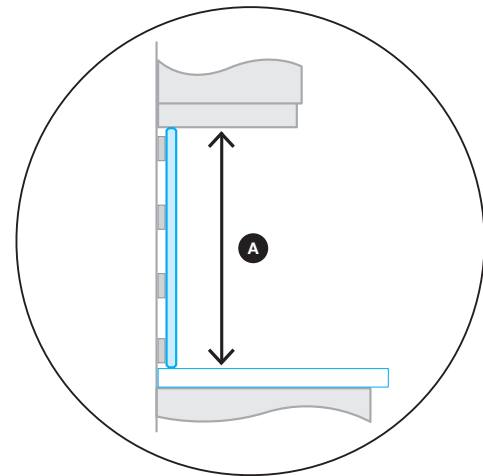
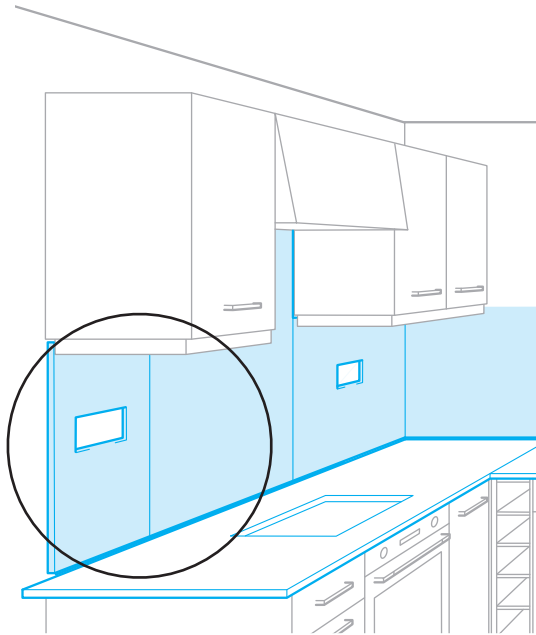
Survey / Installation Considerations

Wall panel design

Consider the design of splashbacks / wall panels both from an aesthetic and practical aspect.

Diagram **(A)**: simplest method but wall visible if cupboards viewed from low level.

Diagram **(B)**: requires valance to be removed and trimmed, but visually complete if viewed from low level.

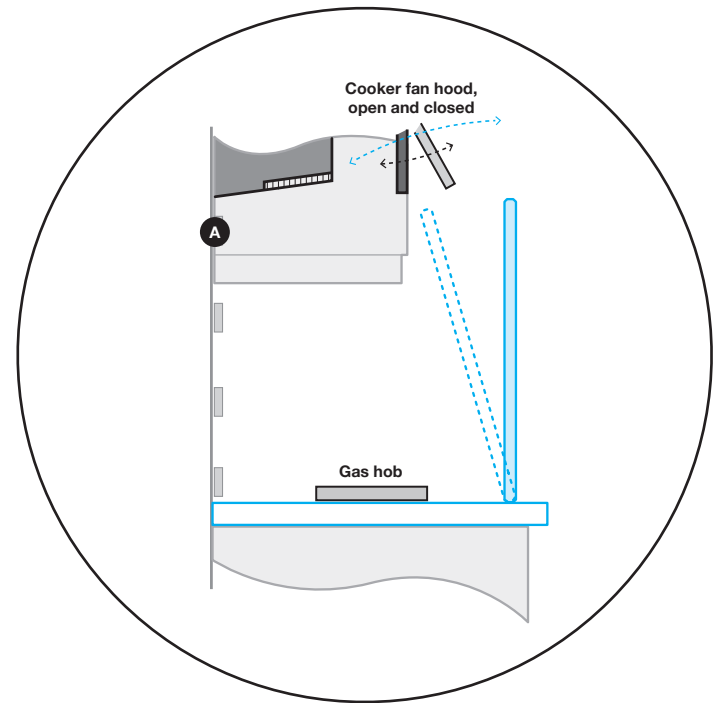
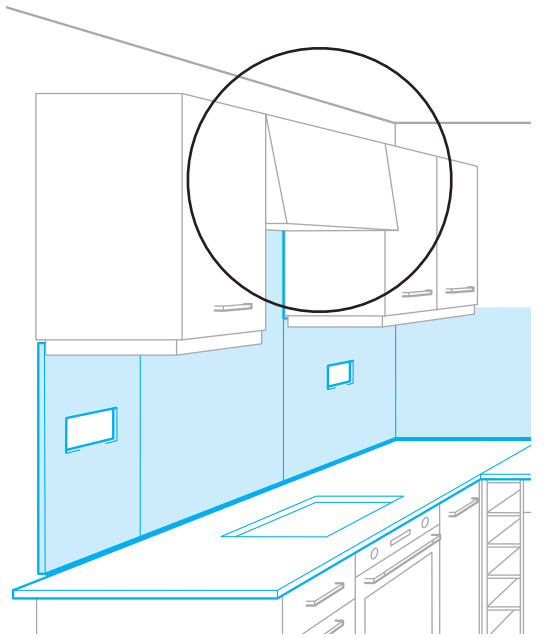


Survey / Installation Considerations

Wall panel design

Are you able to install the panels behind other structures (such as a cooker fan hood shown below)?

Where glass is fitted behind structures ensure that it is possible to manoeuvre into position without fouling **(A)**.



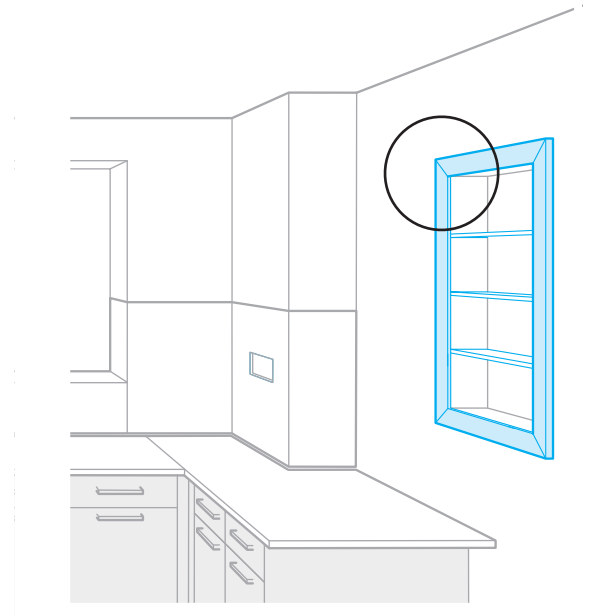
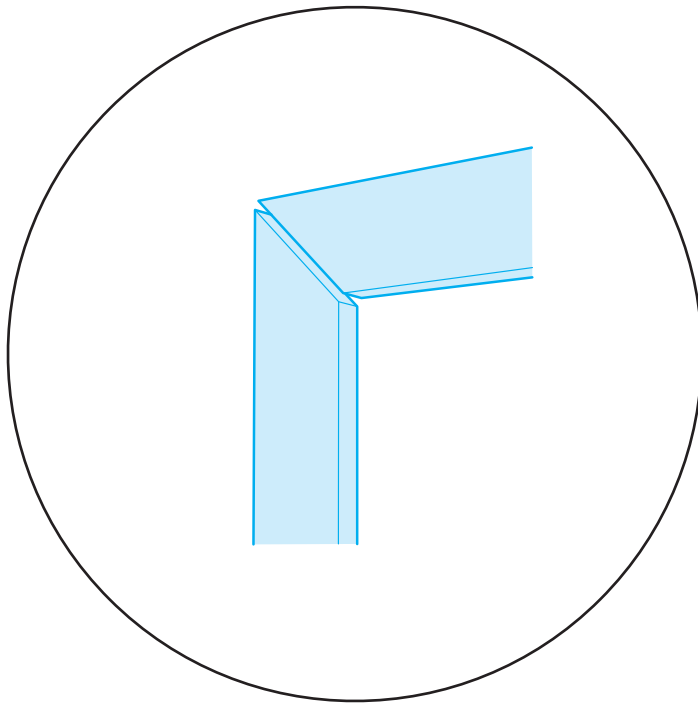
Survey / Installation Considerations

Architrave

Architrave is fixed using a similar method to wall cladding. (It may be necessary to temporarily retain the sections by mechanical

means (batons / pins etc) until the adhesive has cured if the elements are not supported after installation.

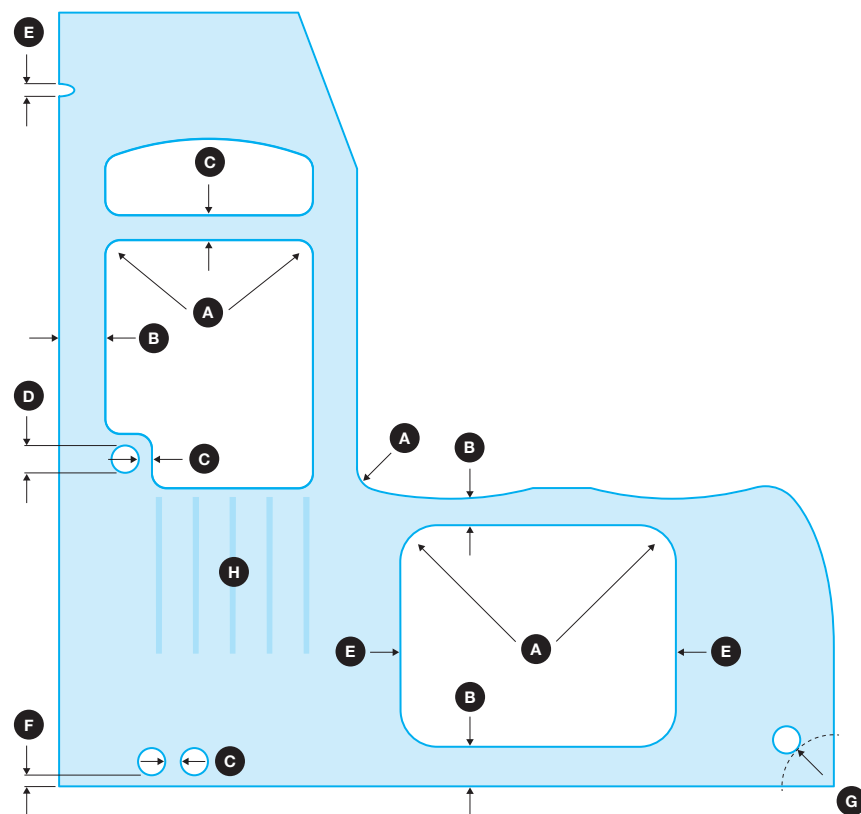
There is less room for tolerances with architrave. Either a 'raked' corner joint (shown below) or a square joint can be used.



Survey / Installation Considerations

Glass processing limits

While glass is highly adaptable there are processing limits.



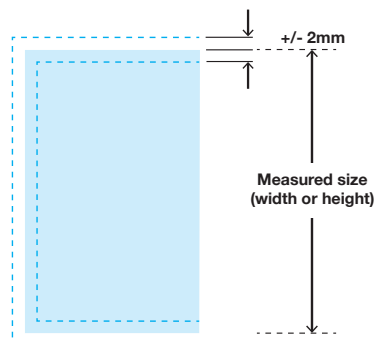
- A** minimum radius = 13mm or glass thickness if greater
- B** minimum dimension = 75mm
- C** minimum distance between holes/cut-outs = 4 x glass thickness
- D** minimum hole diameter = glass thickness
- E** minimum notch/cut-out dimension = 13mm, maximum = consult with manufacturer
- F** edge of glass to edge of holes = 1.5 x glass thickness
- G** corner of glass to edge of holes = 4 x glass thickness
- H** drainage grooves: starting depth at sink edge = 1.5mm, finishing depth = 0.5mm; starting width at sink edge = 12mm, finishing width = 10mm

- all processing limits are applicable for walls, surfaces and borders
- all notches and cut-outs will have radiused internal corners
- maximum overall width = 2000mm; maximum overall height = 3500mm
- maximum width/height ratio is typically 1:15
- constant depth grooves can also be supplied (as a work surface front edge groove or decorative groove in other applications)

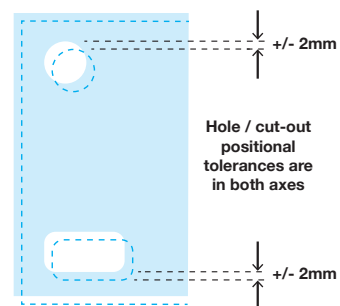
Survey / Installation Considerations

Tolerances

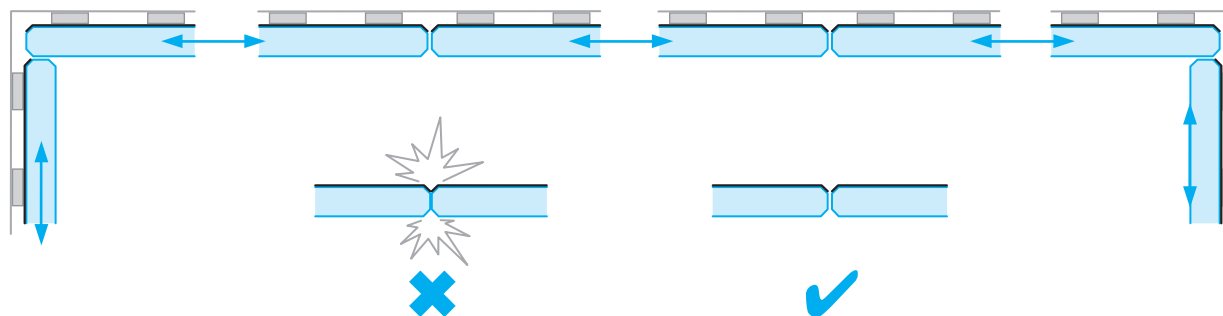
Cutting



Processing



Glass positioning



There should be no glass-to-glass contact with panels next to, or above / below each other. However, the gap should be an absolute minimum to ensure an aesthetically

pleasing finish. Any spacers used should be left in place until the adhesive is fully cured.

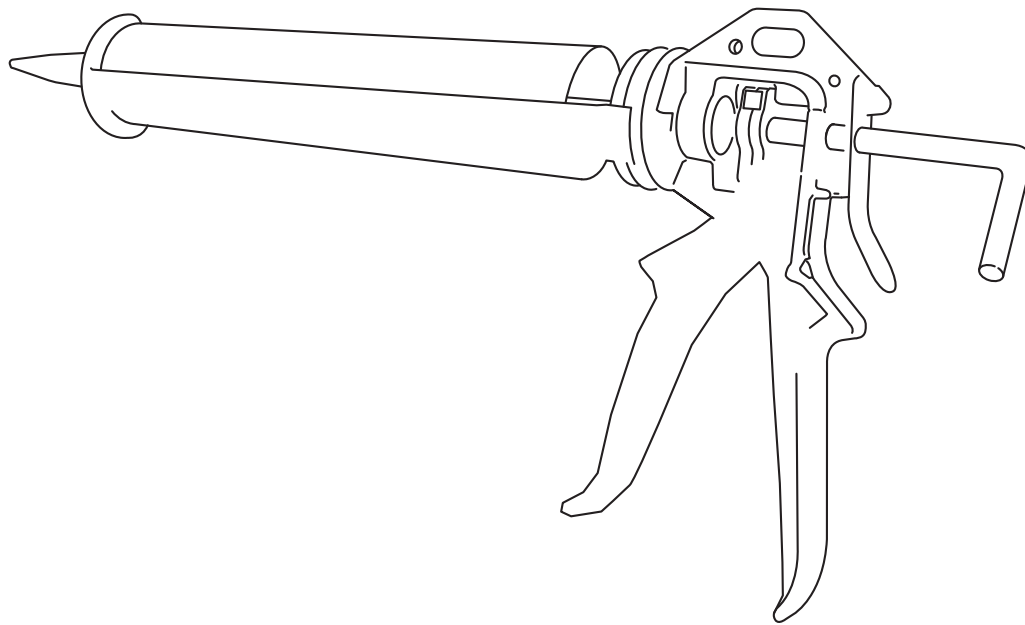
Survey / Installation Considerations

Fixing

Use an appropriate **low modulus, neutral cure silicon** for fixing back to suitably prepared walls and surfaces.

For example, Silfix U9 (Hodgson Sealants Ltd, www.hodgsonsealants.com), Bohle Xtragrip (Bohle Ltd, www.bohle-group.com) or similar. Both Silfix U9 and Bohle Xtragrip are available from Glassolutions Solaglas branches.

Anti-mould kitchen and bathroom sealants can be used for sealing joints



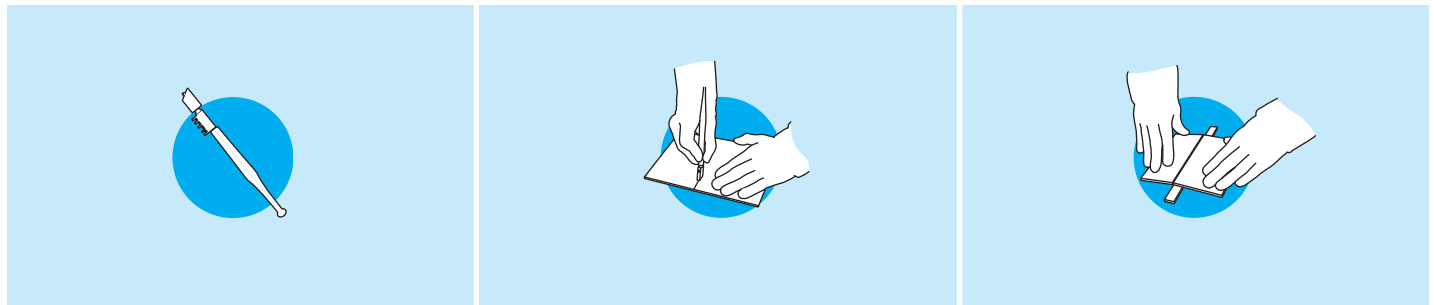
Survey / Installation Considerations

Cutting

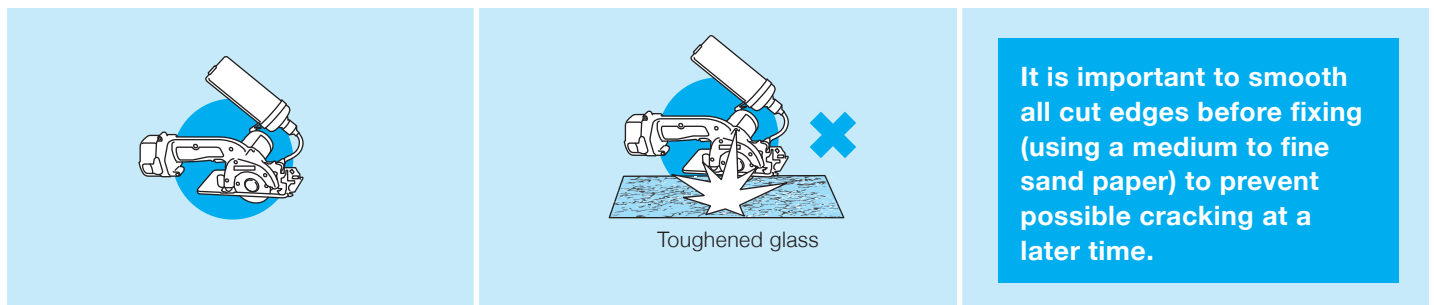
Only 6mm annealed (non-toughened) glass can be cut or shaped on site by an installer.

Ensure the work surface being used to support the glass being cut is clean and free from abrasive particles that could cause scratching.

Simply mark the outline and score the glass with the cutter. Lay a thin strip of timber or plastic beneath the glass, position it under the score and apply firm but even pressure either side until the glass snaps.



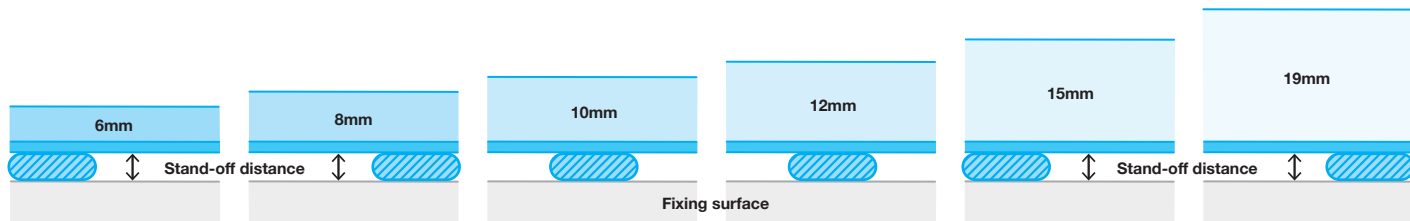
A hand-held circular saw with a circular blade suitable for glass cutting can also be used, but make sure the tool has a water reservoir for wet cutting, the water acting as a coolant. **Toughened glass of any thickness cannot be cut under any circumstances.**



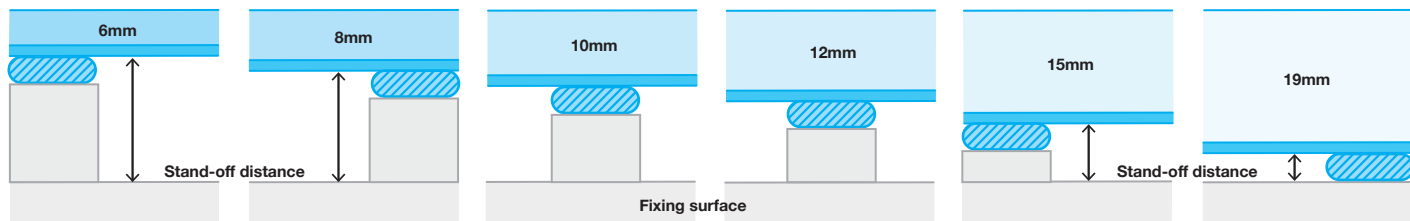
Survey / Installation Considerations

Glass thickness

If mixing glass thicknesses be aware that a step will occur if the stand-off (spacing) distance from the fixing surface is kept uniform.



If mixing glass thicknesses with a flush face be aware the stand-off (spacing) distance from the fixing surface is variable and fixing allowances need to be considered.

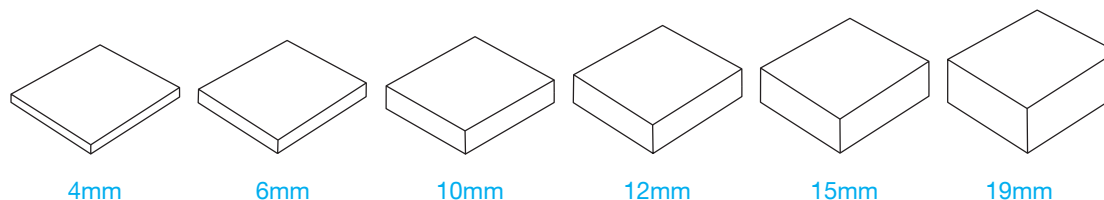


If mixing glass thicknesses, be aware that a colour variation may be noticeable even though the base colour is uniform (colour is indicative only and not representative).

Paint thickness above is for illustrative purposes only.

Survey / Installation Considerations

Glass thickness options

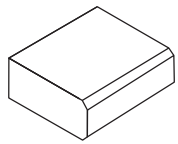


	Standard thickness (Weight)	Option 2	Option 3	Annealed or toughened glass options
Splashbacks / wall panels	6mm (15kg/m ²)	10mm	4mm (in mirror options only)	Toughened (annealed only mirror options)
Upstands	19mm (47.5kg/m ²)	6mm	-	Annealed (option for toughened)
Work surfaces / vanity units	19mm (47.5kg/m ²)	12mm	15mm	Toughened
Window sills / shelves*	12mm (30kg/m ²)	15mm	6mm	Toughened
Skirting	15mm (37.5kg/m ²)	-	-	Annealed (option for toughened)
Architrave	12mm (30kg/m ²)	-	-	Toughened (option for annealed)
Kick boards	15 (new) (37.5kg/m ²)	6mm (cladding existing)	-	Annealed (option for toughened)

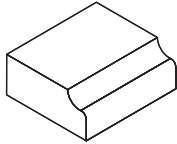
*Also see table on page 23

Survey / Installation Considerations

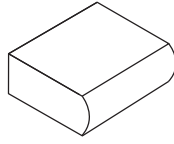
Glass edging options



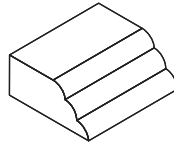
Flat polish



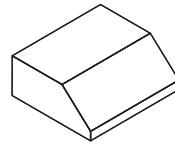
Ogee



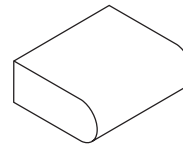
Pencil



Triple ogee



Mitre

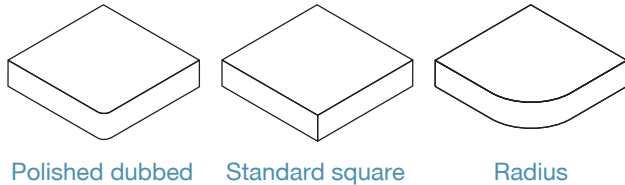


Bullnose

	Standard edging	Option 2	Option 3	Option 4	Option 5
Splashbacks / wall panels	Flat polish	-	-	-	-
Upstands	Flat polish	45° mitre	-	-	-
Work surfaces / vanity units	Flat polish	Pencil	Ogee	Triple ogee	Bullnose
Window sills / shelves	Flat polish	Pencil	-	-	-
Skirting	Flat polish	Ogee	Triple ogee	Pencil	45° mitre
Architrave	Flat polish	Ogee	Triple ogee	Pencil	45° mitre
Kick boards	Flat polish	-	-	-	-

Survey / Installation Considerations

Glass corner options



	Standard corners	Option 2
Splashbacks / wall panels	Standard square	-
Upstands	Standard square	-
Work surfaces / vanity units	Radius (20mm or 50mm)	Polished dubbed
Window sills / shelves	Polished dubbed	Radius (10mm or 20mm)
Skirting	Standard square	-
Architrave	Polished dubbed	Radius (10mm or 20mm)
Kick boards	Standard square	-

Survey/ Installation Considerations

Technical product features



Vitrio is manufactured to order in the UK



Ready for use and no on-going maintenance needed – no sealing or polishing



High humidity resistance



Safe and extra strong, Vitrio toughened (tempered) glass to BS EN 12150 where appropriate (all splashbacks and surfaces as standard)



Back arriss painted as standard meaning no large unpainted gaps



Hard material resistant to bending, breakage, and abrasion or cutting



Paint is applied on the back face of the glass which gives Vitrio its depth of appearance



Glassolutions Solaglas is Q-Mark 3rd party quality accredited for its toughened glass products by BM TRADA



Completely stain resistant



Vitrio has a layered painting process for uniformity of colour



Extra clear, low-iron glass as standard (standard float glass on request)



Hygienic – perfectly smooth surface so bacteria can't linger



Vitrio uses specialist water-based, non-leaded, moisture resistant paint



Bespoke shapes and curves can be incorporated



Easy to clean and maintain



Vitrio can have a thickness of 4-19mm dependent on application



Cut-outs and holes for plugs, shower controls, taps, sinks etc can be incorporated



Available in large sizes to give seamless surfaces



Vitrio is suitable for writing on – with the correct pen!



High impact resistance – 5 times that of annealed (standard), non-toughened glass



Bespoke corners, edgework, thicknesses, colours and colour matching service available



Vitrio is UV stable

Cleaning / Maintenance

Information

Cleaning

Vitrio products should be washed and cleaned using a non-abrasive cloth to avoid scratching and clean water or a standard glass / window cleaning product.

For extra surface protection

Glass as a material is inherently easy to clean, is stain resistant and hygienic. However, if an enhanced level of surface protection is required, Glassolutions are an Approved Applicator of ClearShield™ technology (www.ritec.co.uk).

ClearShield



ClearShield is a polymeric resin that uniquely cross-links with the glass. It is completely transparent, chemically inert, non-hazardous and UV stable. Unlike a coating, ClearShield becomes part of the glass and will never discolour, peel or crack.

For the consumer, ClearShield:

- makes glass even easier to clean
- ensures glass stays cleaner for longer due to its 'non-stick' properties
- resists limescale in shower / bathroom applications
- is highly durable
- is completely non-hazardous.

Terms & Conditions

Information

The information contained within this guide is indicative only and is designed to compliment the inherent skills and expertise of installers.

Glassolutions Solaglas reserve the right to introduce changes and additions over the course of time.

Vitrio is for internal applications only.

It is the responsibility of the purchaser / installer to ensure that the products purchased are fit for purpose. Glassolutions Solaglas make no express or implied warranty as to fitness or suitability of the products for particular installations. Glassolutions Solaglas extend no guarantees, express or implied, as to wear resistance or maintenance procedures.

It is also the responsibility of the purchaser / installer that the correct fixing material is used.

Always use personal protective equipment (PPE) such as goggles, gloves etc when handling and installing glass products.

Visit **www.hse.gov.uk** for further health and safety advice.

Glassolutions Solaglas accept no liability for the faulty installation of Vitrio products. In the case of any claim relating to Vitrio products, Glassolutions Solaglas' liability, to the extent permitted by law, is limited to the replacement of the product, and does not extend to cover any consequential loss. See Glassolutions Solaglas' full terms and conditions for more information.

Please be advised that installation constitutes acceptance of the quality, colour, size and processing options of the Vitrio products.

Although Vitrio for most applications is made with toughened glass ensuring it is highly durable, as with virtually any material used for surfaces, Vitrio can be scratched in certain circumstances. Vitrio with toughened glass can not be cut or altered under any circumstances.

Continue to use a chopping board and to place hot pans on trivets or hot pads as per normal. Wash using clean water or a standard glass/window cleaning product and a non abrasive cloth.

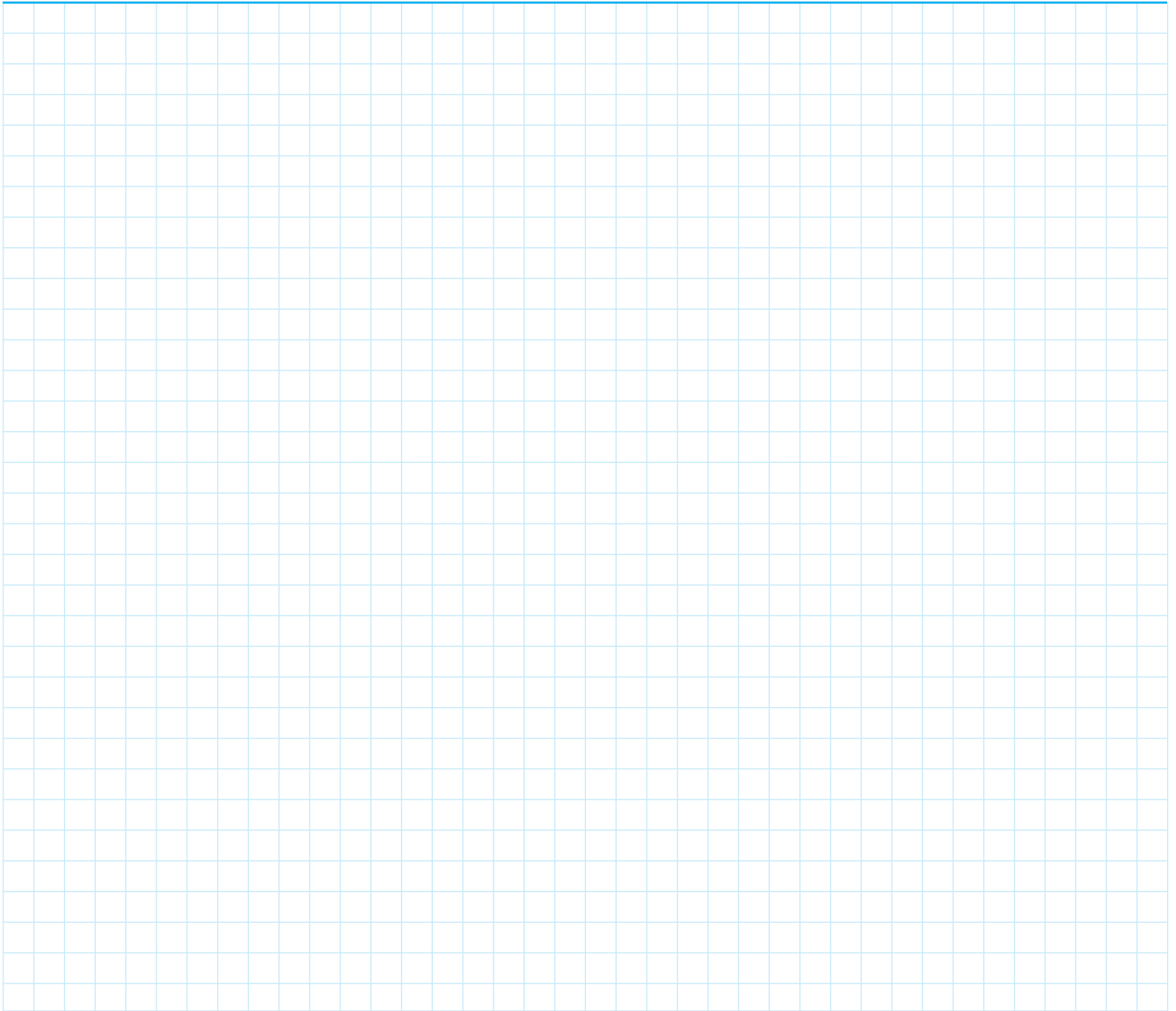
Installer notes

A large rectangular area filled with a light blue grid pattern, intended for the installer to write notes. The grid consists of small squares and covers most of the page's width and height.

Installer notes

A large grid of graph paper, consisting of 30 columns and 30 rows of small squares, intended for taking notes. The grid is bounded by a thin blue line.

Installer notes





www.glassolutions.co.uk

Glassolutions Solaglas, Herald Way, Binley, Coventry CV3 2ZG.