SECTION 5

ALTERNATIVE WINDOWS LTD

METHOD STATEMENT AND QUALITY PLAN

FOR

SURVEY AND INSTALLATION OF

WINDOWS AND EXTERNAL DOOR SETS

TO

CODE OF PRACTICE FOR THE SURVEY AND INSTALLATION OF WINDOWS AND EXTERNAL DOOR SETS TO B.P.F. CODE 363/2

ALTERNATIVE WINDOWS LTD

Issue No. **Date:** **Authorised by:**

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ALTERNATIVE WINDOWS LTD

Issue No. **Date:** **Authorised by:**

SURVEY METHOD STATEMENT

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Issue No. **Date:** **Authorised by:**

Good Surveying is essential to ensure a trouble free and successful quality installation.

IMPORTANT POINTS

All styles and elevations are viewed from the outside.

Take all dimensions from the brickwork not the plaster.

Always check there is not a large difference between the internal and external dimensions of the aperture.

Check inside that there is nothing that can affect the inward opening operation of a window where applicable.

Photographs should be taken of the existing frames.

? risk assessment ?

Wind loading ? (high rise or a particularly exposed area, a request should be made for wind loading calculations to be carried out by the system supplier).

STRUCTURAL WORK

Check for defects around the structural opening, (if any defects are found the customer shall be notified and agreement reached as to who is responsible for rectifying the defects prior to the new frames being installed).

Ensure that the existing window is not load bearing and a lintel of some kind is employed. (Where no such support exists and the load is carried on the existing window or door set, then alternative means of providing support shall be provided).

Check for any wires for TV, telephones etc… that may need to be moved. If found, then the facts should be recorded and the customer advised before proceeding.

Check if fitting a new window will allow damp or water penetration and if it will effect the existing damp proof course.

Where there is any brickwork to be removed the method of any cavity closing shall be specified. The method of making food shall be agreed with the customer.

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MATCHING APPEARANCE / SPECIFYING NEW FRAME

Take photographs of the existing windows and doorsets as applicable.

Check that the proposed new windows will line up with the existing windows if any are to remain.

Styles and designs should already have been agreed with the customer, if there is any variation then this needs to be signed for by the customer.

Draw a sketch of the proposed new windows noting:

Size:	See measuring aperture and deductions. Supply transom drop and/or mullion splits as required for the design of the window.
Hinge Position:	Show the hinge position on the opening casements, also note if any special hinge is required such as restricted or egress.
Cill Detail:	Specify if a cill is required or not. If a new cill is to be fitted specify which cill is most appropriate ie. 85, 150, 180.
Drainage Type:	State drainage type. This will be dependant upon the cill detail.
Glass Type:	Note if the unit is obscure with pattern type and any units that require to be toughened. The survey should highlight any special glass requirement ie. leading or Georgian bars and the need for any alignment. Any glass set out should be agreed by and signed for by the customer.
Extra's:	Note any extra ancillary items that will be required such as knock-ons, head drips or trims.

MATCHING APPEARANCE / SPECIFYING NEW FRAME

Doorsets: **State**:

If the door is inward or outward opening.
The threshold detail.
Any ancillary hardware such as letterplates, restrictors, door knocker, safety chains.
Panels specify type and design and hardware as above.

Coupling/ Combination Frames: Where windows and/or doorsets are to be coupled, the surveyor shall determine the method to be used.

Building Regulations: The surveyor shall ensure that the replacement windows and doorsets comply with current building regulations.

Part B : Fire Safety (with regards to emergency egress)

Part F : Ventilation

Part L : Energy Conservation

Part M : Access

Part N : Safety Glazing

The survey should be countersigned by the customer wherever possible.

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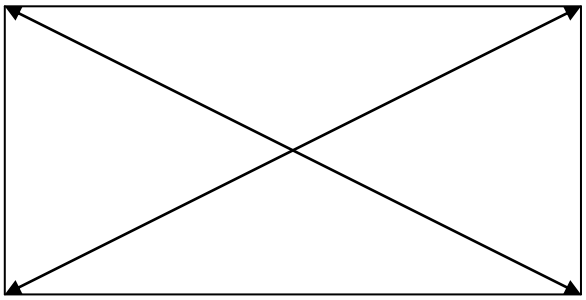
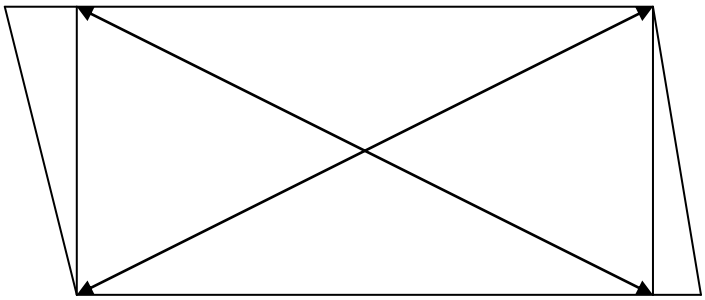
MEASURING THE APERTURE

Measure the diagonals to check for basic squareness of the aperture.

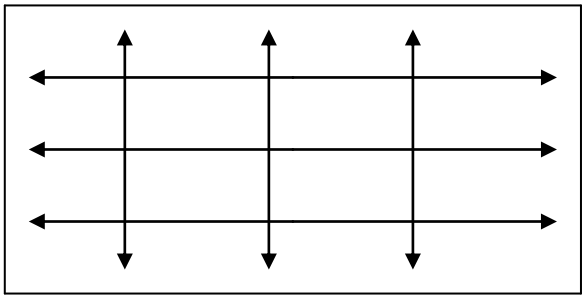
If the aperture diagonals are within 10mm of each other then measure the aperture as is.



If the aperture diagonals are more than 10mm out of each other, use of a straight edge to determine the usable area of the aperture. Then measure the width and height of the remaining aperture.



Take measurements in several places, measuring vertically and horizontally.



Take the narrowest width and height dimensions.

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DEDUCTIONS AND LIMITATIONS

The following guide lines should be used when making deductions from the aperture sizes.

WHITE PROFILE

For apertures up to 1500mm, deduct **10mm** from the width and height.

For apertures up to 1500mm to 3000mm, deduct **12mm** from the width and height.

For apertures up to 3000mm to 4500mm, deduct **15mm** from the width and height.

COLOURED PROFILE

For apertures up to 1500mm, deduct **15mm** from the width and height.

For apertures up to 1500mm to 3000mm, deduct **17mm** from the width and height.

For apertures up to 3000mm to 4500mm, deduct **15mm** from the width and height.

Check the restrictions and limitations of the size and style selected.

That the units are within the supplier's specification.

That the units are within the min/max size limitations as per the system suppliers recommendations.

That the windows will perform as designed.

That the windows are acceptable to the customer.

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BAY WINDOWS

In addition to the standard survey checks, special care needs to be taken with bay windows.

It must be assumed that all bay windows are load bearing unless it can be proved beyond doubt that alternative support is sufficient to carry all dead and imposed loads.

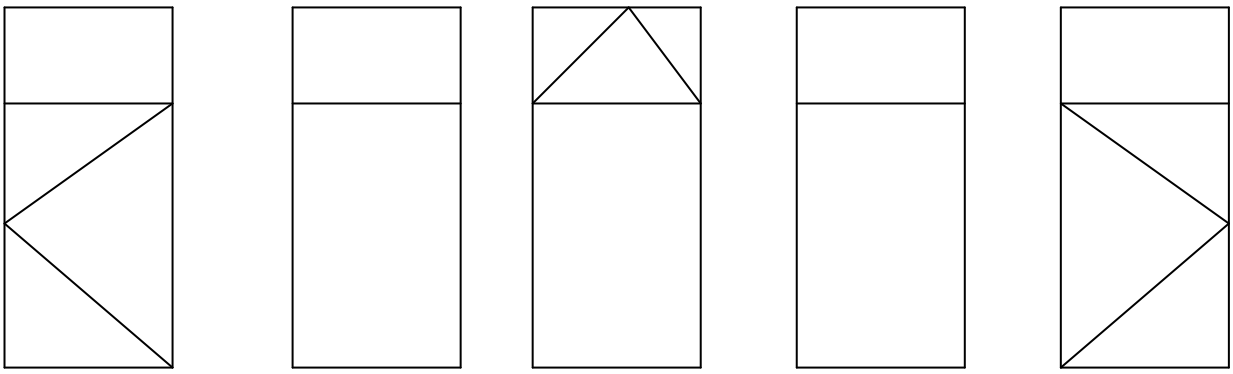
Bay windows supported by structural mullions (brick, stone, etc.), bays with small flat roofs and oriel windows are considered non load bearing.

All bay windows should be fully reinforced due to the method of coupling the frames with bay poles or support members. If bay windows are load bearing it is recommended that the bay poles be located directly onto stone cill or the masonary beneath the cill by either a galvanized steel base plate or a bay pole jacking base as per our system supplier's recommendations.

If in doubt with regards to load bearing refer to the system suppliers technical department.

Bay windows require to be replaced along the outside line of the existing frame, consequently, accurate measurements of the external and internal angles is essential in addition to the overall dimensions. (It may be necessary to remove internal or external bay trims to ascertain correct width or height of any bay opening).

Draw a sketch to show the required window style, including the information as per section **2 specifying new frame** but also stating the **bay pole method** to be used.



The correct deductions will then be made as per our suppliers recommendations.

When surveying bay windows it is important that the angles are correct, particularly for the manufacture of bay cills because no alteration can be made to the configuration once on site.

BAY WINDOWS

Bay Plan

Provide the following dimensions:

Dimension A: On the side of the existing frame measure across from corner to corner. (if necessary remove all or part of any architrave's to access the corner of the frame).

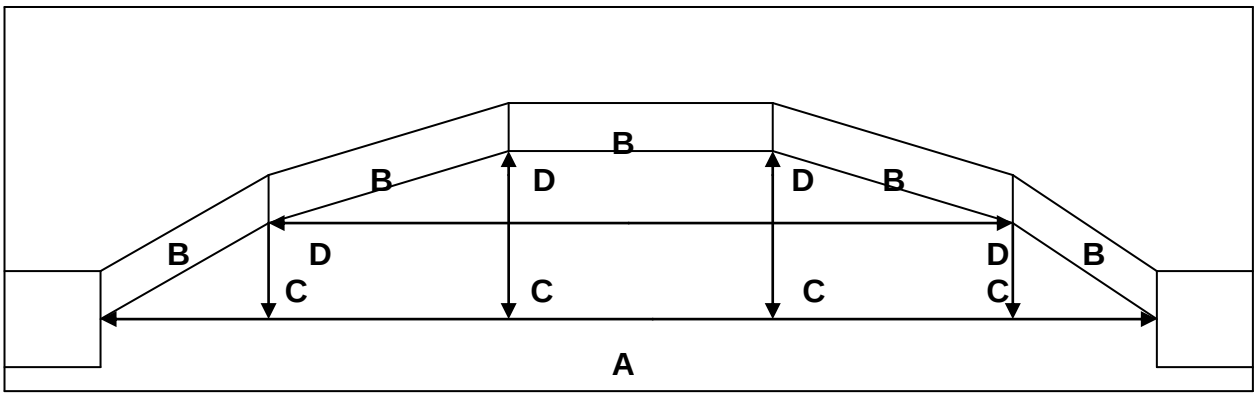
Dimension B: Measure every window separately for width and height. (the lowest height measured will determine the height of all other frames In the bay).

Dimension C: Provide all dimensions. (use a taught string across **A-A** as a guide for the front to back measurements)

Dimension D: Either:
Bay angles; state the angle formed by each pair of windows

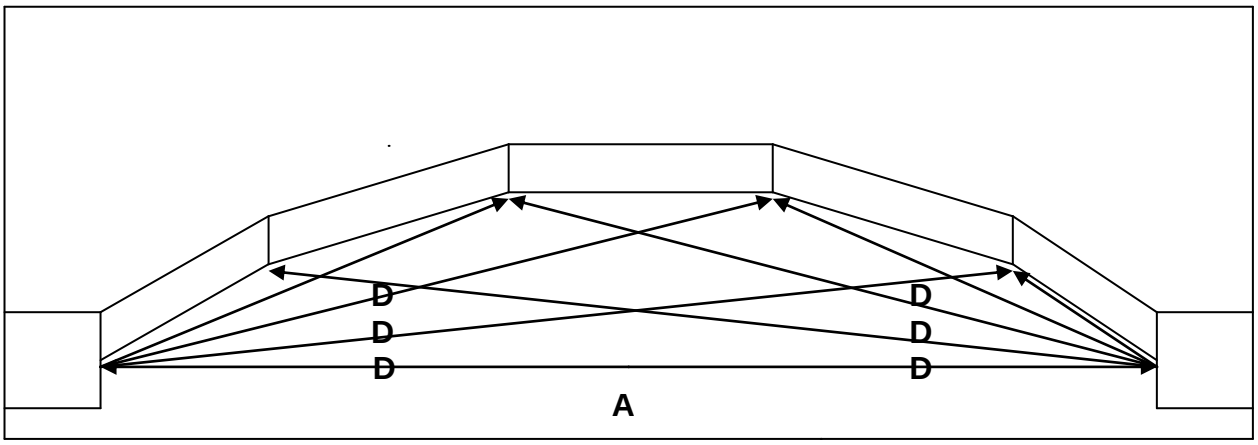
Or

Common point measuring (diagonals) – Measure and state the common point diagonals from the **A** line internal corners or the (springing line).



BAY WINDOWS

Measure all dimensions from the inside



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BOX SASH WINDOWS

Proceed as per sections 1 – 5, however with the following information taken into account.

It is essential when measuring for replacement of box sash windows that accurate internal and external measurements are taken.

It may be necessary to remove internal or external trims or architrave's to ascertain the correct width or heights.

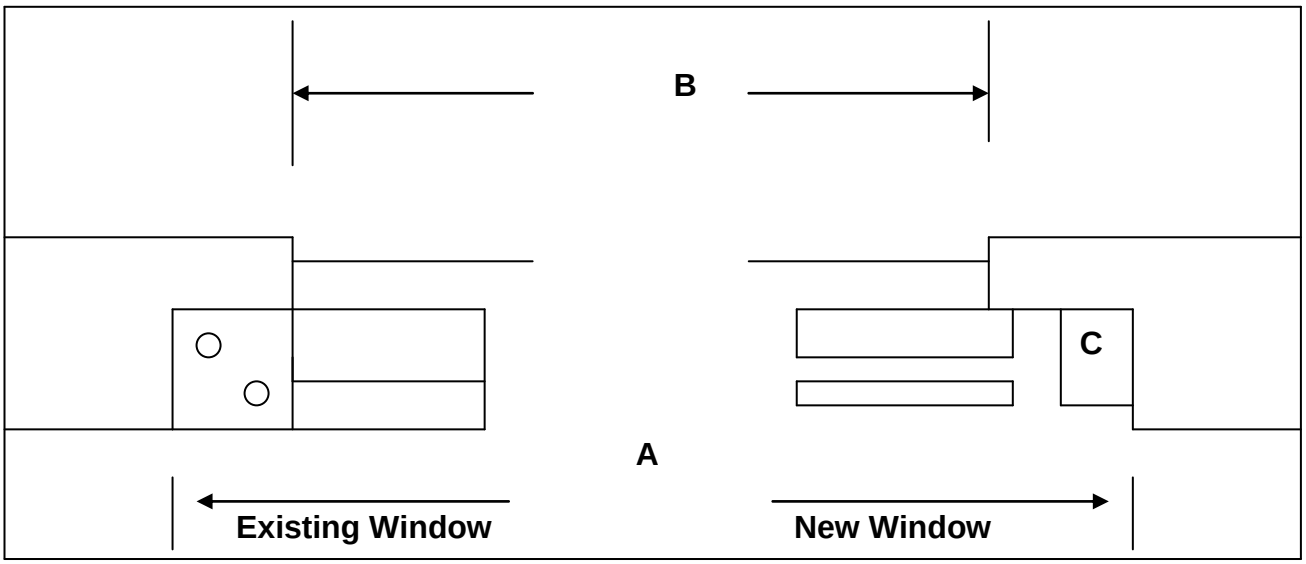
Most box sashes normally have a arched top, this should be allowed for when measuring the height.

Dimension **A**: Measure the brickwork from corner to corner.

Dimension **B**: The frame width has to be wider than the widest measurement.

Note: For sash clearance on casement windows, it is appropriate to allow for the plaster depth. This can be done by windows designed with a large outerframe, or by incorporating add – on profiles. In these cases, the difference must be added to the dimensions **B-B.** As a guide line add 30mm (ie 2 x 15mm). For **tilt and turn windows**, allow clearance for face mounted hinges. As a guide add 60mm (ie. 2 x 30mm).

Dimension **C**: Treated wood side fillers should be measured for loose fit. Allow 5mm clearance between frame and wood, (check that you have the narrowest dimension).



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NEW BUILD

The manufacturing sizes and methods of installation in new build are normally decided by the customer in conjunction with estimating / sales in accordance with current building regulations.

The surveyor shall ensure that the details agreed are suitable for the products to be used and clearly defined.

Note:

The use of cavity closers can enable accurate construction of the window opening and simple installation of the windows.

Do not use PVC-u window frames as building templates.

Factory finished windows should be programmed for installation as late as possible in the building process to minimise the risk of damage.

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Issue No. **Date:** **Authorised by:**

FITTING METHOD STATEMENT

1. Issuing of Job.

2. Issuing of frames and loading of vehicle.

3. Arrival and site preparation.

4. Removal of existing window or doorset.

5. Installation of new frame.

6. Completion.

ISSUING OF JOB

Fitting teams to collect the installation documents from the contract manager and discuss any special instructions or requirements for the job they have been allocated to.

Installation documents should include:

Copy of survey sheet.

Installation notes.

Photographs.

Stores requisition “as necessary”

Completion sheet.

Invoice “if applicable”.

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Issue No. **Date:** **Authorised by:**

ISSUING OF FRAMES AND LOADING OF VEHICLE

The job is to be collected from the warehouse loading bays.

Fitters should check the quantity of frames, units and ancillaries against the installation documents and sign the paperwork.

Vehicles should be loaded with care using protective packing to prevent damage and movement of frames/materials in transit.

“if building materials are required”

Adequate measures should be taken to separate these materials from the frames and units ie… 8 x 4 plywood sheet.

The vehicle should be fit for the purpose of the job.

ARRIVAL AND SITE PREPARATION

On arrival at site, introduce yourself to the customer and provide a brief explanation of how the installation will take place.

Agree upon a starting point “usually an upstairs room”.

Check the property for any existing damage to the building and/or fixtures and fittings and record on the completion sheet.

Note:

If no damage is found the section should still be completed and “no damage recorded”.

Ensure that the area to be worked in is clear of any obstacles (remove as necessary) and check for any safety issues that may cause harm to yourself or the customer. Also to be used are safety positions on site to prevent them from being damaged.

Finally check the frame against the aperture before the removal of the existing frame.

Safe Room

“One room left available for customer to use”.

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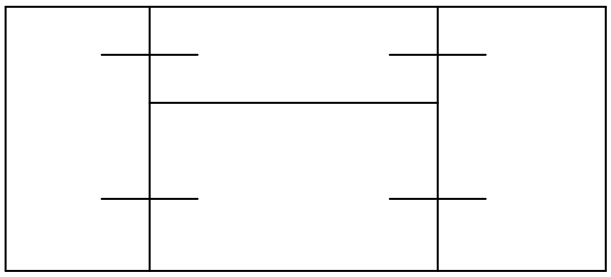
Issue No. **Date:** **Authorised by:**

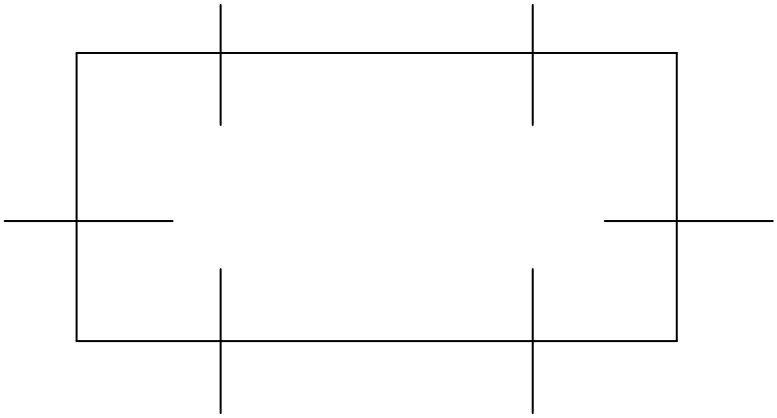
REMOVAL OF EXISTING WINDOWS AND DOORSETS

The following technique for removal is based on the removal of a timber window. Before removal always wear adequate P.P.E. equipment (see annex c).

a) Remove any casements and fixed light glazing as appropriate.
b) Cut through mullions and transoms and remove.



c) The outer frame should be cut into several sections and carefully levered out to cause minimal damage to the aperture.



(Secure any loose brickwork by means of Acro prop or similar)

d) Clear the area and safely dispose of the original frame and glass.

e) Clean and tidy the existing aperture ready to take the new frame.

FOOTNOTES:

Metal frames into brickwork or concrete, cut through the fixing lugs, then follow the procedure for timber windows.

Plastic frames remove glazing beads and deglaze, unscrew fixings, cut around frame to free silicone and ease the frame out. If the frame is particularly large the procedure for timber windows may need to be followed.

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Issue No. **Date:** **Authorised by:**

INSTALLATION OF NEW FRAMES

Pre installation

Remove glazing beads and mark for their location.

Cills if required can be fitted in two ways, either fixed independently of the frame or fixed to the frame prior to offering the entire assembly into the opening, this will depend on the circumstances.

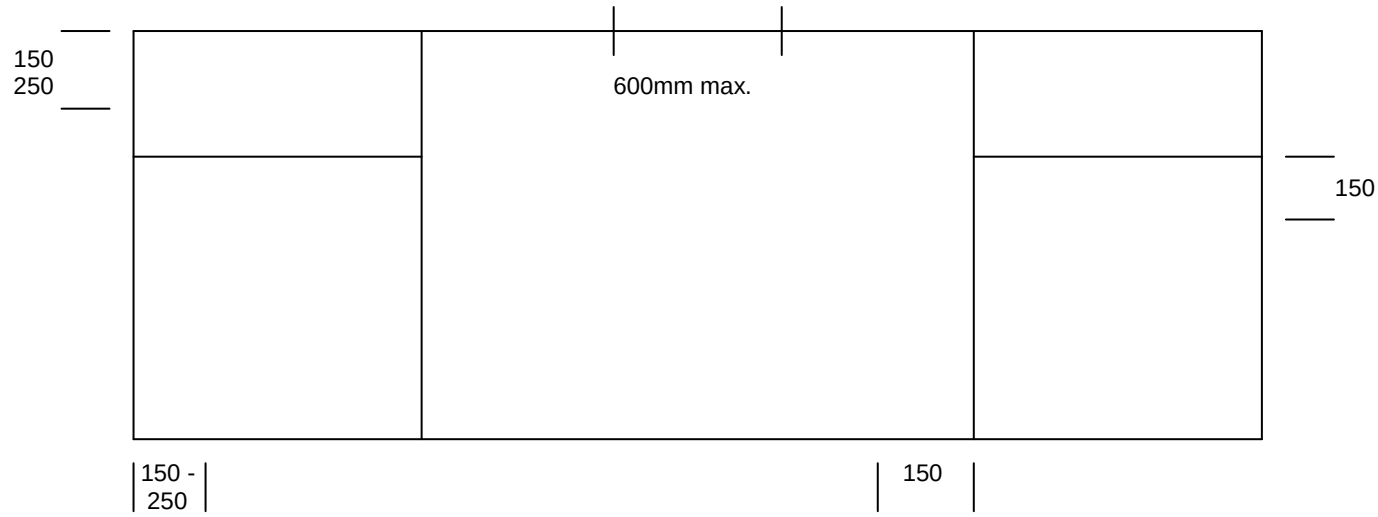
Installation

Frames can be fixed by either “fischer” type bolts or fixing lugs. Polyurethane foam may be used in certain circumstances as an addition to the above methods where they cannot be used ie. pre cast concrete or steel lintels.

Offer the frame into the aperture and check it is both level and plumb.

Frames should normally be fixed on all four sides and secured as follows:

a) Corner fixings shall be between 150mm and 250mm from the external corner.
b) No fixings shall be less than 150mm from the centre line of a mullion or transom.
c) Intermediate fixings shall be at centres no grater than 600mm.
d) There shall be a minimum of two fixings on each jamb.



Secure the frame by whichever method ensuring not to overtighten the fixing, packers should be fitted adjacent to the fixings to hep prevent distortion of the outerframe.

If it is not possible to follow these rules, then alternative positions should be agreed with the customer on large contracts and closest possible on domestic installations.

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Issue No. **Date:** **Authorised by:**

INSTALLATION OF NEW FRAMES

Glazing

Ensure the drainage channels are clear of debris.

Fit bridge packers and insert sealed unit, pack with glazing packers to ensure the unit is square and sightlines are equal.

Side hung casements and doors should be toe and healed.

Refit glazing beads to the correct location.

Finishing Off

Ensure all protective tape has been removed, then fit any trims according to the surveyors notes.

Clean the frames down with a mild water/household detergent mixture. (Stubborn stains may have to be removed with an industry recognised cleaner).

Finally seal the frame/wall joints neatly using a silicone sealant in accordance with manufacturers recommendations. (Large gaps should be trimmed prior to final sealaing).

Remove any debris away from the site.

COMPLETION

On completion of the job a final inspection should be carried out with the customer/client where possible.

This inspection should cover the points on the completion sheet which should be fully filled out and countersigned by the customer.

Any outstanding issues or remedial action should also be recorded on the completion sheet (fitters comments) ie. broken units. This will aid a prompt response from the service department and save the need for the customer having to phone in after the event.

I have received a copy of the

ALTERNATIVE WINDOWS LTD

Fitting method statement

I have read and understand the document

Signed ……..

Print ……..

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Issue No. **Date:** **Authorised by:**

FINAL INSPECTION CHECK LIST

FORM QA103

CUSTOMER: **DATE:**
SITE ADDRESS:

		✓/ X
VISUAL APPEARANCE	Is the frame installed plumb and square?	…….…
	Are the beads fitted correctly and evenly?	
	Are exposed faces – including beads free from damage?	
	Is the frame clean with all protective tape removed?	
	Has any damage to aperture been correctly made good?	
	Have all trims been fitted correctly?	
	Has all site debris been removed?	
GLAZING	Is all glazing as specified on contract?	
	Are all sealed units free from scratches and signs of failure?	
	Are obscure and coated glasses oriented properly?	
	Are sealed unit spacer bars covered by frame and beads	
	Is the glazing held properly by beads/gasket, etc?	
	Is safety glass used where necessary?	
OPERATION	Do all openers open/close and lock as intended?	
	Are seals on frames without gaps?	
	Are cams free from binding against strikers?	
	Is all operating gear lubricated as necessary?	
	Is all hardware attached with correct numbers of fixings?	
SIGHT LINES	Are all sight lines visually correct?	
	Are adjacent opening lights aligned as appropriate?	
	Are all decorative features eg leading, correctly aligned?	
SEALING	Are all joints smooth and correctly formed?	
	Is the sealant continuous around the frame?	
	Is the frame face free from excess sealant?	
DRAINAGE	Are all drainage channels free from obstruction?	

FINAL INSPECTION COMPLETED:

SIGNATURE: ……...

CORRECTIVE ACTION REQUIRED: **SIGNED:**

DATED:

CORRECTIVE ACTION COMPLETED: **SIGNED:**

DATED:

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Issue No. **Date:** **Authorised by:**

FORM QA102

SURVEYORS CHECK LIST

CUSTOMER:
SITE ADDRESS: **DATE:**

✓ /

X

Is the condition of the aperture satisfactory and without evidence of damp or cracks?

Is the aperture square and even to within 5mm height and width and 10mm diagonals?

Will any loads be carried by the building and not the window or doorstep?

Has the size and method of fixing any sub sill been determined?

Will the proposed style function without being fouled by plaster etc?

Will any trickle vents be fitted function without being fouled by plaster etc?

Will hinges function without being fouled by plaster etc?

Are curtain tracks and nets clear of proposed design?

Is the size and configuration within the manufacturer's limits?

Will the products exposure category be suitable for the location?

Will the installation comply with Building Regulations?

Is the method of drainage appropriate for the installation and product?

Has the customer confirmed the position and handling of opening lights?

Has any additional hardware been specified?

Is the access for installation safe?

Has the fixing method been determined?

Has the extent of making good been agreed with the customer?

SURVEY COMPLETED:

SIGNATURE: ……

SURVEYORS NOTES:

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Form QA 101

INSPECTION AT COLLECTION – CHECK LIST

ITEM NUMBER	CHECKING REQUIREMENTS	ITEMS CORRECT YES / NO
1	CORRECT NUMBER OF FRAMES FOR CONTRACT CHECK FOR DAMAGE AND WHETHER FULLY BEADED.	
2	CHECK CORRECT AMOUNT AND STYLE OF CILLS	
3	CHECK CORRECT AMOUNT AND TYPE OF GLASS	
4	CHECK SURVEY SHEETS FOR TRIMS AND ANY EXTRAS THAT MAY BE REQUIRED FOR THE CONTRACT EG. ACROS, TIMBER, SAND.CEMENT ETC.	
5	CHECK CONTRACT FOR ANY SPECIAL NOTES MADE ON SURVEY, IE. WIRES, BROKEN TILES ETC.	

SIGNED FOR ACCEPTANCE : _____

DATED: _____

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QA FORM 104

CUSTOMER SATISFACTION SHEET

YES / NO

DID THE FITTERS ARRIVE ON TIME ON THE DATE SPECIFIED?

WERE DUST SHEETS USED?

WERE THE FITTERS CURTIOUS?

ARE ALL ITEMS FITTED TO YOUR SATISFACTION AND HAVE YOU BEEN SHOWN HOW TO USE THEM CORRECTLY?

If you have answered 'NO' to any of the above or have any queries, please list below:

I confirm that I have inspected the windows / doors / conservatory fitted, I am happy with the product and the installation. I have been shown by the fitter how the lock mechanism works.

CUSTOMER SIGNATURE: _____

PRINT NAME: _____

ADDRESS: _____

DATE: _____

FITTERS SIGNATURE: _____

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Issue No. **Date:** **Authorised by:**

INSTALLATION TRAINING PROCEDURE

a) Surveyors and site supervisors, senior installers and senior fixers will be suitably experienced in their duties and attain NVQ Level 3 within one year.

b) All junior fixers and installers of fenestration will be suitably experienced in their duties and/or attain NVQ Level 2 within on year.

c) NVQ candidates will be enrolled with an appropriate training centre and their performance will be monitored to ensure progress.

d) Staff will be instructed in the Code of Practice 363/2.

e) A copy of the Code of Practice 362/2 for the Survey & Installation of Windows and External Doorsets (April 2006) will be available to all staff and retained in the Fixing Supervisors Office.

f) Registration with CSCS or equivalent will be arranged within twelve months, for all surveyors and fixing staff.

g) Surveyors will be recruited on the basis of experience in installation techniques appropriate to the role.

h) In House Training may be carried out when suitably qualified instructors are trained or recruited. It is agreed that BSI will be invited to attend and assess In House Training, if this is introduced.

i) Copies of proof of training and experience will be maintained and kept on file, all training will be logged on the Training Matrix QA 16C.

j) The Company Quality Controller will maintain detailed and accurate records of training that relates to surveying/installation. These to be kept on file as above.

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Issue No. Date: Authorised by:

QA 16C

WINDOW PRODUCTION
EMPLOYEE SKILLS TRAINING MATRIX
INSTALLATION

Name: …….

Position: ……..

Date of Employment: …….

	NOT TRAINED	NEEDS MORE TRAINING	FULLY TRAINED	DATE FULLY TRAINED	SIGNED INSTALL. MANAGER
SURVERYOR FULLY TRAINED TO NVQ LEVEL 3 WITHIN ONE YEAR					
FITTERS & INSTALLERS FULLY TRAINED TO NVQ LEVEL 2 WITHIN ONE YEAR					
INSTRUCTION IN THE CODE OF PRACTICE 362/2					

REVIEWED

DATE

COPY OF QUALITY POLICY RECEIVED:…….