Window Validation Condition Survey

London Borough of Camden
Rhyl Community Primary School
Rhyl Street,
London,
NW5 3HB

Refurbishment Works

Prepared on behalf of
London Borough of Camden
5 Pancras Square
London
N1C 4AG

Job No: 35463
Date: April 2024

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Prepared By: **Josh Fay BSc (Hons)**

Authorised for Issue:

For and on behalf of Baily Garner LLP

May 16, 2024

Version	Issue Date	Reason for Issue
1.0	15/05/2024	Client Issue

Contents

1.0 Introduction

1.1 Objectives and purpose of the survey

Baily Garner LLP have been instructed by London Borough of Camden to undertake a validation condition survey of Rhyl Community Primary school to inspect the timber windows to the main building in order to produce a report which will validate the recommendations in the previous condition report conducted in 2019.

We understand that this report is required in consideration of costs associated with identified essential works and to provide information regarding the overall condition of the assets for their continuous maintenance.

The purpose of this report is to summarise the initial findings and to identify the major areas of repair and any pressing immediate defects requiring urgent attention. The survey brief is to validate the previous condition survey and comment on whether recommended remedial methods are appropriate and of priority across the clients education portfolio.

This report specifically does not cover safeguarding and health and safety issues unless they are related to a building condition item.

1.2 Date of Survey

The survey was undertaken on two separate occasions, Wednesday 1st November 2023 by Josh Fay BSc (Hons) and Saturday 29th January by Upshot (UAV operatives).

1.3 Weather Conditions at Time of Survey

The weather conditions were dry and approximately 10˚C on both occasions.

1.4 Statement

This Report has been prepared solely for the use of LB Camden and may not be used or relied upon by any third party without specific written permission from Baily Garner LLP.

2.0 Limitations and Exclusions

2.1 Generally

Unless expressly provided, no term in the agreement between Baily Garner LLP and the Client is enforceable under the Contracts (Rights of Third Parties) Act 1999 by any person other than Baily Garner LLP or the Client.

We will report on obvious health and safety hazards only to the extent that they were apparent from elements of the facility considered as part of the inspection.

We will not comment on or advise on any matter the significance of which in relation to the facility was not apparent at the time of the inspection from the inspection itself.

2.2 Accessibility

We will inspect as much of the internal and external surface area of the building as is practicable but will not inspect those areas which are covered, unexposed or not reasonably accessible from within the site or adjacent public areas.

We will not open up or inspect those parts of the structure that are unexposed, or inaccessible. We will therefore be unable to confirm such parts are free from defective concrete, corrosion, condensation, wet rot, dry rot, woodworm or any other defect.

We will not lift any floorboards, nor will we lift any ply, hardboard, fitted carpets or other fixed floor coverings.

We will not move any obstruction to inspection including, but not limited to, furniture, fixtures, fittings or equipment.

We will not carry out any exposure work or destructive testing, however in the event of our suspicions being aroused, we will recommend further exposure. Such intrusive investigations, if instructed by the Client, will be at the risk and liability of the Client and will be assumed to be with the agreement between the Client and the building owner.

Roof areas will only be inspected where safe access is provided and fall restraint is present. Where not accessible, roof areas have been assessed from ground level or via UAV survey.

2.3 Services

We will not carry out any testing of installations. The report is based upon a visual inspection only, we will advise upon the need for any specialist tests if deemed necessary within the body of the report.

2.4 Areas Not Inspected

All areas of the Main Building were inspected at time of survey.

2.5 Environmental Issues

Particular noise and disturbance affecting the facility will only be noted if it is significant at the time of the inspection and specific investigations will not be undertaken.

Our survey and report will not take into account the energy performance of the facility.

2.6 Hazardous Materials

This report cannot be relied upon to confirm the presence or otherwise of asbestos or asbestos containing materials. If you are unaware of the pretense of such materials, a suitably qualified specialist should carry out a specific asbestos survey.

Should any refurbishment works arise from the forth coming condition survey, the necessary refurbishment and demolition surveys will be required further to undertaking of any works.

2.7 Ground Conditions

We will not comment upon the possible existence of radon, noxious substances, landfill or mineral extraction implications, or any other forms of contamination.

2.8 Consents, Approvals and Searches

We have assumed that the building or site is not subject to any unusual or onerous restrictions, obligations or covenants which apply to the property or affect the reasonable enjoyment of the property.

We have assumed that the property is unaffected by any matters which would be revealed by a Local Search and replies to the usual enquiries, or by a Statutory Notice, and that neither the Property, nor its condition, its use or intended use, is or will be unlawful.

We have assumed all planning, building regulations and other consents required in relation to the property have been obtained and such consents have not been verified by us.

3.0 Survey Findings

3.1 General

3.1.1 Our validation survey consists of a visual survey only from ground level and vantage points to inspect the condition of windows and the external façade. In addition, we commissioned a UAV (drone) photographic survey of the façade to ascertain high level damage that cannot be seem from ground level. This has been undertaken alongside review of previous condition survey information to validate recommended works.

3.1.2 Below is a summary of our findings elevation by elevation. This is not all defects but a select few to give a summary of extend of defective windows and types of repairs required.

3.2 South Elevation

3.2.1 Detailed below are a summary of the findings

	
Defective timber cill & frame	Defective timber cill & frame
	
Defective timber cill & frame	Defective timber cill & frame

3.3 West Elevation

3.3.1 General text

	
Defective timber cill & frame	Defective timber cill
	
Defective timber cill	Defective timber cill & frame

3.4 East Elevation

3.4.1 General text

	
Defective timber cill & frame. Algae growth indicating rot and decay.	Defective timber frame
	
Defective timber frame	Defective timber frame

3.5 North Elevation

3.5.1 General text

	
Defective timber frame	Defective timber cill
	
Defective timber cill	Defective timber frame

3.6 Roof Windows

3.6.1 General text

	
Defective timber frame	Defective timber frame

4.0 Conclusion and Recommendations

4.1 Conclusion

4.1.1 In conclusion, the survey conducted by separate building surveying practice in 2019 (see appendix B) reported that the windows require, 'Overhaul and repair [to] all windows with Timbercare type system and redecorate'.

4.1.2 Following our validation surveys, the windows to the main building are in a poor condition and to the majority, sympathetic repairs will be acceptable.

4.1.3 Although the condition survey in 2019 is brief and lacks detail, the recommendation mentioned above is correct and remains valid.

4.2 Recommendations

4.2.1 It is our recommendation to undertake timber repairs to all windows where required, which shall be ascertained by further high level inspections once access is available (i.e. scaffold). We would also recommend a repair method of Timbercare type system or equal (see appendix A).

4.2.2 With the building being of educational/public status, it is of the upmost importance that these windows are repaired to ensure all building users are safeguarded. The defects present shall compromise the structural integrity of the windows and security. The repairs proposed shall remove any need for wholesale replacement, and preserve the original features and heritage.

4.2.3 It is our recommendation that due to the age of the building, a Refurbishment and Demolition Survey is conducted prior to the commencement of any works. This should be conducted in line with HSE guidance Introduction to asbestos safety: Arrange an asbestos survey - HSE

4.2.4 It is also our recommendation that due to the age of the building, a lead-in paint survey should be conducted prior to works being commenced on site. This should be conducted in line with HSE guidance Lead - Controlling hazardous substances - Managing occupational health risks in construction (hse.gov.uk)

4.3 Additional Recommendations

4.3.1 Although this was not originally part of the validation survey, it is important to note that if works to complete repairs to the timber windows were to be carried out, then we would recommend a sympathetic cleaning of the façade and Concrete/stone repairs.

4.3.2 The façade has sustained a considerable amount of pollution staining to the external brickwork and stone/concrete work. We would recommend using a DOFF cleaning service, negating the use of high pressure washers which could damage the building fabric. We would recommend a Façade clean at this time to make use of scaffolding as opportunistic works.

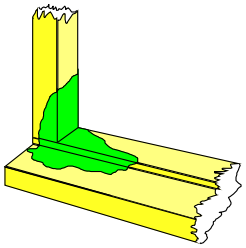
4.3.3 We would recommend carrying out stone and concrete repairs in line with Sourcing Stone for Historic Building Repair Technical Advice document by Historic England. The stone is not deteriorating but there are some isolated defects visible which require minor repairs.

APPENDIX A
TIMBER CARE REPAIR METHODS

WINDOW CARE REPAIR SYSTEM

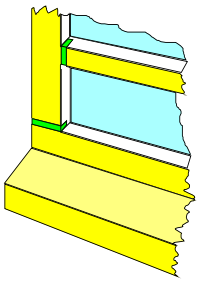
Prior to carrying out repairs, remove paint system from areas of decay extending to 10mm beyond repair.

Resin-Only Repairs

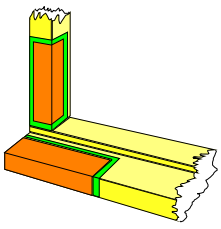


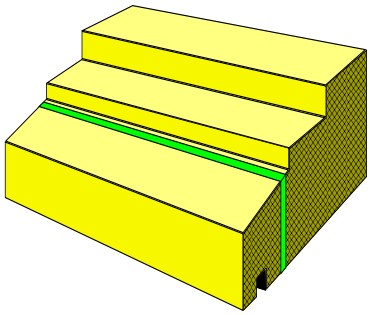
Typical example area identified in sketch: Remove decayed timber using Window Care Profi with round cutter, back to sound timber, check for excess moisture, form up as necessary with perspex slips, apply Dry Fix Wood Stabilizer and after interval apply Dry Flex RP Repair Compound to shape of timber section. When fully cured remove formers and sand sections to shape ready for decoration **(See repair Method No 2).**

Conservation Joints



Typical example area identified in sketch: To all lower joints where a horizontal member meets a vertical member on main frames, opening and fixed lights, cills and the like, form a conservation joint by opening up the joint to a width of 4mm and a depth of 10mm, checking for decay, removing dust and dirt, apply Dry Fix Wood Stabilizer and after interval apply Dry Flex RP Repair Compound. When fully cured sand to shape ready for decoration **(See Repair Method No 1).**

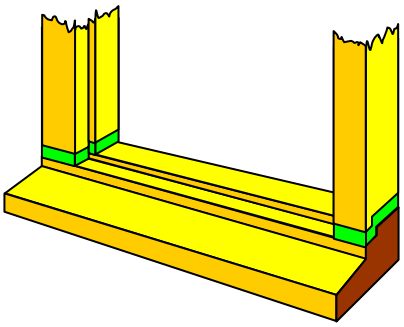




Face Splice of Timbers including Fronts of Cills

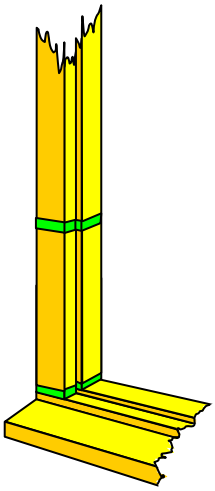
Typical example areas identified in sketches: Remove decayed timber to depth indicated below and renew face section of timber with new section to match existing (unprimed on meeting surfaces). Apply Dry Fix Wood Stabilizer to all meeting surfaces and after interval apply Dry Flex RP Repair Compound ensuring a gap of 4mm all round. When fully cured sand to shape ready for decoration **(See Repair Method No 3)**

Renew Cill Timbers Complete



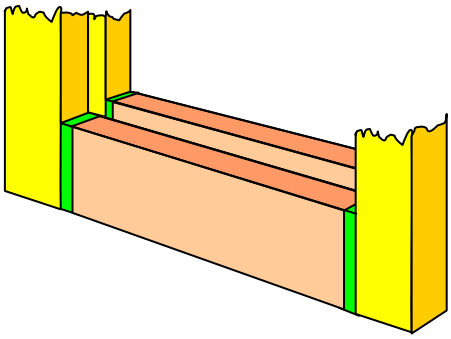
Typical example area identified in sketch: Renew decayed cill complete in hardwood/ softwood (unprimed on meeting surfaces) to match existing section and joint to existing frame and mullions with Dry Fix and Dry Flex RP ensuring a minimum 4mm joint of Dry Flex. When fully cured sand to shape ready for decoration. Assume 2 joints per 900mm **(See repair Method No 4).**

Renew Full Section of Frame or Mullion



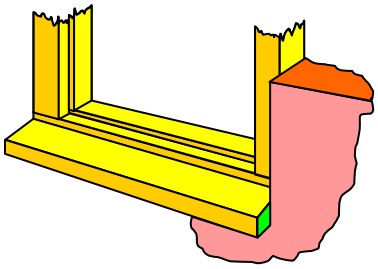
Typical example area identified in sketch: Renew decayed section complete in softwood (unprimed on meeting surfaces) to match existing section and joint to existing section at both ends with Dry Fix and Dry Flex RP ensuring a minimum 4mm joint of Dry Flex. When fully cured sand to shape ready for decoration **(See Repair Method No 4).**

Renew Complete Bottom Rail To Sash or Door



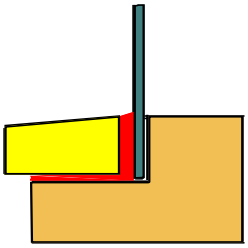
Typical example area identified in sketch: Renew decayed section complete in softwood (unprimed on meeting surfaces) to match existing section and joint to existing section at both ends with Dry Fix and Dry Flex RP ensuring a minimum 4mm joint of Dry Flex. When fully cured sand to shape ready for decoration **(See Repair Method No 4).**

End Grain Treatment To Exposed Ends Of Cills



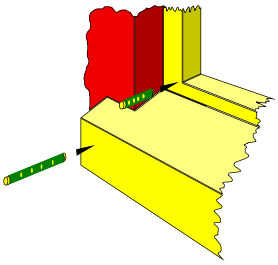
Typical example area identified in sketch: New And Existing Timbers Clean back existing timbers with Profi and to new and existing timbers apply Dry Fix and surface fill with Dry Flex RP. Sand to shape after curing.

Glazing Beads



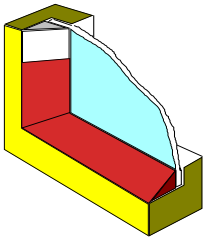
Typical example area identified in sketch: Remove all glazing beads to lower and sides of glazed openings and replace with rounded flush fitting beads (pressure treated), end grain sealed with Dry Flex SK and primed all round and bedded in Dry Seal Elastic Glazing Compound 2mm thick to both meeting surfaces **(See Repair Method No 6.2 & 7)**

Dry Pin Local Preservation



Typical example area identified in sketch: Drill and insert Dry Pins (See Product Sheet).

Face Putties



Typical example area identified in sketch: Remove all lower and vertical putties 50mm from horizontal and replace with Dry Seal Elastic Glazing Compound **(See Repair Method No 6.1 & 7).**

Back Putties or Internal Putty Line

Remove all lower and vertical back putties 300mm from horizontal using the Profi Assist Kit and replace with Dry Seal Elastic Glazing Compound.

Arrisses

Remove sharp edges to all vertical and upper horizontal arrisses and round off using Window Care Profi Assist Kit **(See Repair Method No 5).**

Knots

Cut out surface of all knots to a depth of 10mm using Profi fitted with round cutter on horizontal members and up to100mm on vertical sections.

General Repair Items

Overhauling Sliding Sash Windows

Remove sliding sashes, ease as necessary, renew cords, check and lubricate pulleys. Fit new parting bead where damaged. Check action of catches and security fittings where fitted, lubricate and ease as necessary. Leave all parts of sliding sash window in good working order.

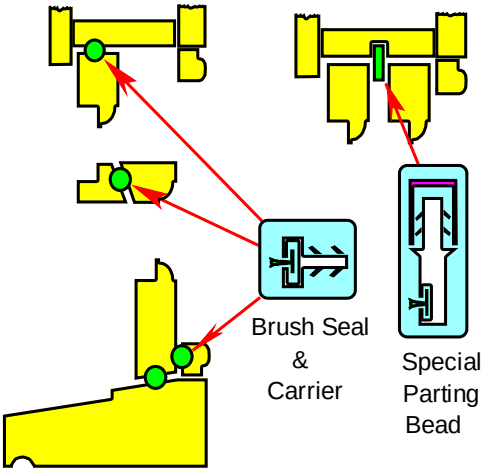
Overhauling Casement Windows

Remove and rehang as necessary including removal of excess paint from frame and sash. Ease, refit sash, adjust catches and security devices where fitted, lubricate and leave in good working order.

Draught Proofing Sliding Sash Windows
Method Statement

Remove staff beads all round, release weights, remove inner sash, remove parting beads and remove outer sash. Ease sashes for width if necessary, ease for length to accommodate brush seals and at meeting rail also to accommodate brush seal. Rout out sashes and fit brush carriers, refit outer sash and fit new (removable) brush seal parting beads, adjust weights, renew cords, renew chains and other fittings as necessary. Refit inner sash as above and fit new staff bead incorporating brush seals and position to give ease of movement to sash. On completion, test for correct working, both sashes should slide easily, non-moving at any level and casement fasteners should locate and release with ease. Any security fittings should also locate without difficulty. Check for excess movement and for any rattles.

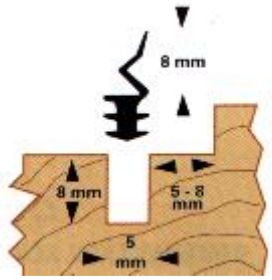
Typical arrangement



Draught Proofing Opening Casements and Doors (where required)

Rout out frame or sash as appropriate and fit cranked blade wiper seal with minimal resistance to opening or closing. This seal is weather energised and tightens as wind pressure increases. This operation to be carried out on all opening windows and doors but excluding the sliding sash windows for which see preceding item.

Typical arrangement



Prime Bare Timbers

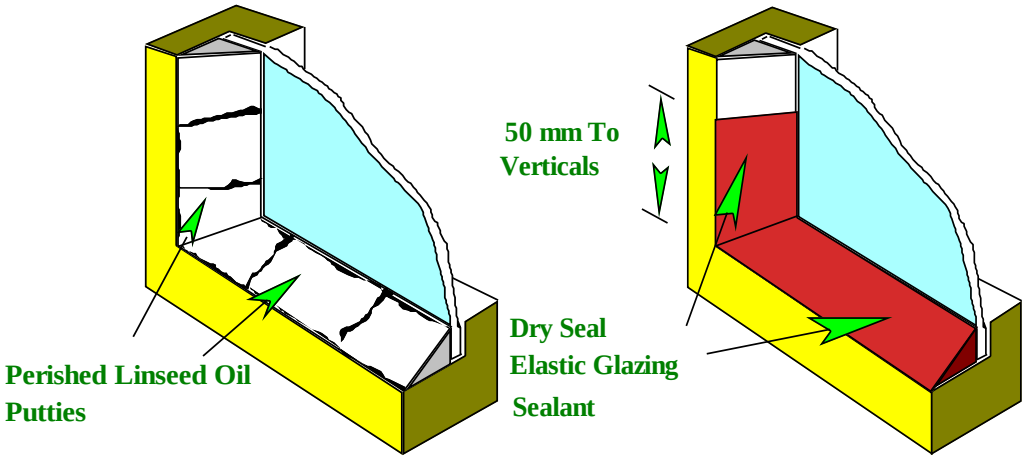
On completion of Window Care Repairs prime all bare timbers in accordance with painting specification.

The Following Are Typical Recommendations For Repairing and Conserving Timber Joinery

Removal of Paint Finish

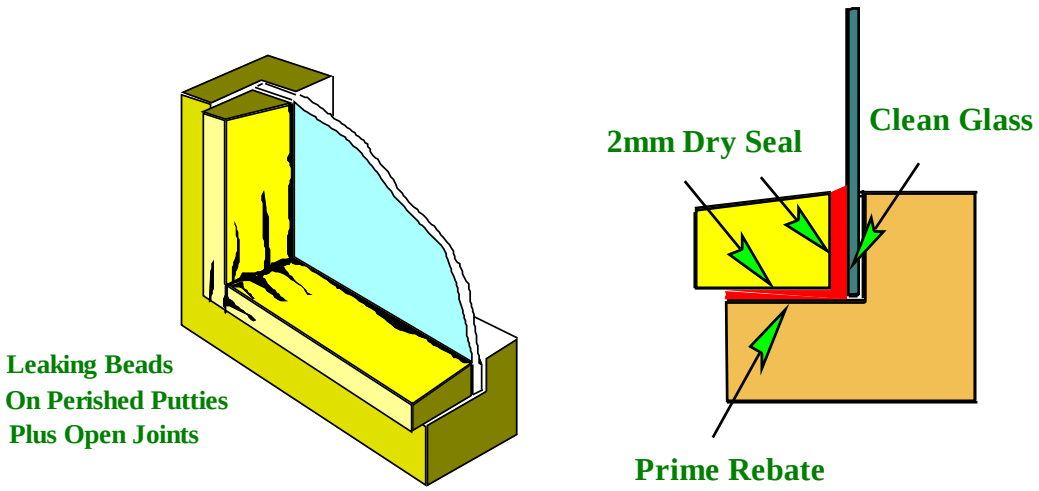
Remove paint from the areas to be treated or repaired. In this instance we would suggest the bottom rails of the sashes and the cills to at least 10mm beyond any repair. Use a warm air stripper and avoid charring of timbers as this will affect adhesion of repair compound. Note: You may consider that more paint removal will be necessary to effect easing of sashes and for a quality finish.

Bottom Glazing Line



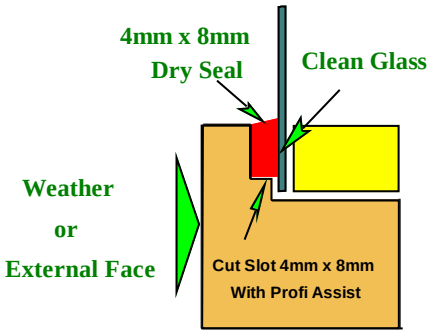
Remove bottom glazing putties including a minimum of 50mm to adjacent verticals and replace with DRY SEAL elastic glazing sealant. This will effectively seal the glazing line from moisture penetration and prevent moisture reaching the frame joints and rebates. See repair methods 6 & 7.

Glazing Beads



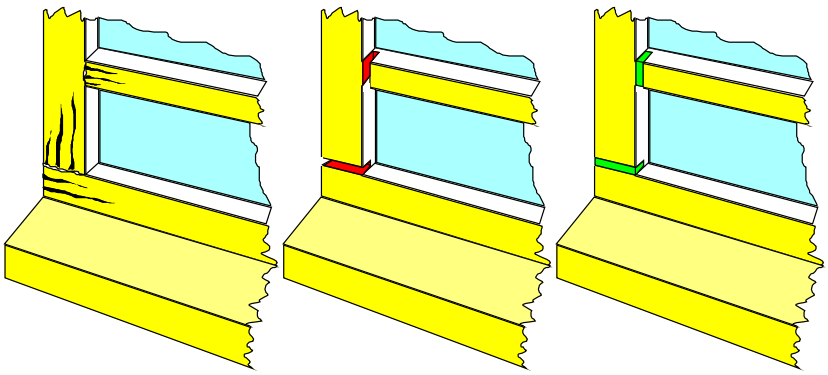
Remove bottom and side glazing beads and renew to same or revised section bedded in 2mm of DRYSEAL elastic glazing sealant. This will effectively seal the glazing line against moisture penetration and prevent moisture reaching the frame joints and rebates. **See repair methods Nos 6 & 7.**

Back Putties or Internal Glazing Line



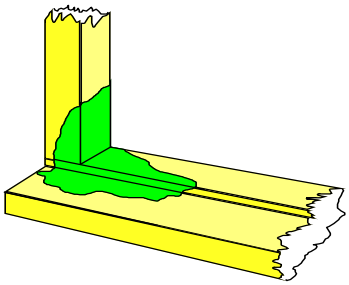
Using the PROFI ASSIST cut out the back putties to a depth of 4 - 8mm on the bottom and up to 300mm on the vertical glazing line and apply DRYSEAL elastic glazing compound in accordance with our recommendations. This will effectively seal the glazing line against moisture penetration and prevent moisture reaching the frame joints and rebates.

Open Joints



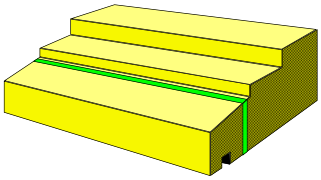
To the bottom joint lines of sashes, mullions and frames to cills, ends of transoms and sound old splices, using the PROFI with straight cutter, cut open the joint to a width of 4mm and a depth of 10mm, check for moisture content using the WOOD CONDITION METER, apply DRY FIX, allow for penetration and fill with DRY FLEX RP. After curing, sand off and apply paint finish. This will effectively seal the joints and prevent further moisture penetration and movement and, if done properly, the hair line cracking normally a feature at these joints will not re-appear. **See repair method 1**.

Areas of Decay



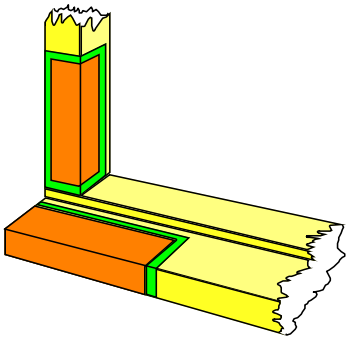
Remove decayed areas back to sound timber using the PROFI with round cutter. Check for moisture content using the WOOD CONDITION METER, apply DRY FIX, allow for penetration and fill with DRY FLEX RP. After curing, sand to shape and apply paint finish. This will give a permanent repair to the areas affected by wood decay, it will be stronger than the original timber and is flexible enough to allow movement without loss of strength or adhesion. **See repair method 2.**

Excessively Damaged Cills



Where cill sections are excessively damaged by decay the fastest and most economical method of repair is to replace the section affected for the full width of the window. This involves cutting away the front section of the cill back to the first rebate line, checking moisture content of old timber and bonding on a new section (having sealed the end grain) using DRY FIX and DRY FLEX RP ensuring that a cushion of repair compound of at least 4mm is present, allow to cure and sand to shape as before and apply paint finishes. This will quickly achieve an economical repair and the joint between the old and the new timber will remain bonded and the whole will act as a complete new cill. **See repair method 3.**

Renewal of Timbers

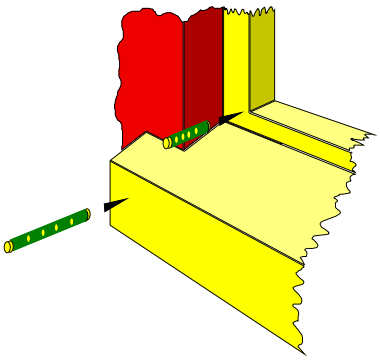


Splicing in of new timbers is easily achieved using the methods described above remembering to provide the 4mm cushion of DRY FLEX RP all round the repair. **See repair method 3.**

Treatment of Knots

Cut back the area of the knot to a depth of at least 5mm using the PROFI with round cutter. Check for moisture content using the WOOD CONDITION METER, apply DRY FIX, allow for penetration and fill with DRY FLEX RP. After curing, sand to shape and apply paint finish. This will permanently seal the knot and prevent future paint breakdown. **The procedure is similar to repair method 2.**

In-Situ Preservative Capsules



Where the timbers are vulnerable to moisture penetration from adjacent brickwork or a masonry cill it will be beneficial to introduce DRY PINS to give local preservation. These are designed to remain inert unless the moisture content in the surrounding timber rises above the level where decay could start and at that level the contents diffuse into the timber giving similar protection to that of pressure treatment. In this case we would suggest that DRY PINS should be sited at ends of cills and outer section of box near joint with cill. See Systems Brochure for further details.

Treatment of Exposed End Grain (Ends of Cills)

Using the PROFI with round cutter cut back the end grain to sound timber. Check for moisture content using the WOOD CONDITION METER, apply DRY FIX, allow for penetration and surface fill with DRY FLEX RP. After curing, sand to shape and apply paint finish. This will give an effective seal to the end grain and prevent the uptake of moisture at this point. **Procedure is similar to method 2.**

REPAIR METHOD NUMBER 1

Conservation Of Wooden Joints On Existing Joinery

1. Remove the existing finish around the joint. Ensure that up to a minimum of 10mm from the vicinity of the joint, the timber is sanded back to bare shiny wood.

2. Cut open the existing joint to a width of 4mm and a depth of 10mm with the Window Care Profi, using a Straight Cutter.

3. Sand the "Open Joint" using a medium grade abrasive paper and remove the dust/dirt completely.

4. If the moisture content of the wood is above 18%, blow dry the joint using a Hot Air Blower at a temperature of 60-80°C.

   Use the Window Care Wood Condition Meter CSI to check the moisture content.

5. Mix the required quantity of Window Care Dry Fix Wood Stabilizer in the correct ratio.

   Apply the Dry Fix well into the joint using a small brush. Wipe off the excess Dry Fix.

   Leave for 30 minutes before sealing the "Open Joint" with Dry Flex RP.

   Work the Dry Flex RP into the seam and seal the joint.

   Allow the Dry Flex RP to dry for at least 24 hours at 20°C.

   The drying time may take 2-3 days at lower temperatures.

   Use the Window Care Scraper to remove 'excess' cured Dry Flex RP if necessary.

   Sand the sealed joint to a smooth, even finish.

   Remove dust/dirt.

   Apply the decorative/protective paint finish.

- Wooden joints affected by excessive insitu wood decay - Continue to cut out the decayed wood until sound timber is reached.

- Check that the moisture content of the timber is below 18% before applying the Dry Fix/Dry Flex RP.

- Check with the Contract Administrator, if, Window Care DRY PIN is to be used.

- Where applicable, DRY PIN should be applied as illustrated in the "Systems" Brochure.

  A test application is always advisable before commencing work.

REPAIR METHOD NUMBER 2

Repair Of Decayed Wood With Window Care Dry Flex RP

1. Window Care Dry Flex RP allows insitu repair of timber affected by wood decay. It is advisable to take into account the strength of the constructlon after repair. For example, in situations where the timber is "load bearing", it may be appropriate to use timber splice in accordance with Repair Method Number 5.

2. Remove all decayed wood with the Window Care Profi using the Round Cutter. Continue to remove the decayed wood until sound timber is reached.

   The sound timber can be recognised by the high-pitched sound of the Window Care Profi, it is generally of harder structure and uniform colour.

3. Lightly sand the surface of the timber using a medium grade abrasive paper. Check that the moisture content is below 18% using the Window Care Wood Condition Meter CS1. Apply hot air using a Hot Air Blower at 60-80°C. Avoid burning the timber fibres, this ensures good adhesion of Dry Flex RP.

4. Ensure that the adjoining paint system is removed up to l0mm from the vicinity of the repair.

5. Mix the required quantity of Dry Fix Wood Stabilizer in the correct ratio.

   Apply the Dry Fix well into the surface us'ing a small brush. Wipe off any excess Dry Fix.

   Leave for 25-30 minutes before applying the Dry Flex RP.

6. Mix the Dry Flex RP thoroughly until a homogeneous "butter-like" mass is achieved.

7. Apply the Dry Flex RP using plastic modelling knives available from Window Care Systems Limited. For more complex repairs use perspex plates for "shuttering."

8. Apply hot air to the surface of Dry Flex RP for a few minutes. This is optional and is only recommended at times when wet weather can be anticipated or application at low temperatures.

9. Ensure that the Dry Flex RP is completely dry (normally 24 hours are required at 20°C) and longer periods when applied under low temperature conditions.

10. Use the Window Care Scraper to remove 'excess: cured Dry Flex RP.

11. Sand the repaired areas lightly to achieve an even, smooth surface before painting with an alkyd or water-based paint system.

    - Check with the Specifier, if, Window Care DRY PIN is to be used.

    - Where applicable, DRY PIN should be applied as illustrated in the "Systems" Brochure.

A test application is always advisable before commencing work.

REPAIR METHOD NUMBER 3

Repair Of Decayed Wood By "Splicing In Timber"

Cut out the decayed wood at an angle of 75° until the sound timber is reached- The timber may be cut using a saw, chisel or Window Care Profi.

The strength of the construction after repair should be taken into account. In situations where the timber is "load bearing", the use of steel reinforced rods may be necessary.

For normal repair by "splicing in timber", follow the procedure below:

1. Prepare the new timber splice (moisture content ‹18%) in such a way that there is a seam/gap of at least 4mm between the contact areas, use the Window Care Wood Condition Meter CS1 to measure the moisture content.

2. If the contact areas of the existing wood have a moisture content of over 18%, blow dry the affected area using a hot air blower at a temperature of 60-80°C. Strip the existing paint finish up to at least 10mm from the joint on existing timber.

   Ensure that the new timber is left clean and un-primed during the fixing process.

3. Apply Window Care Dry Fix Wood Stabilizer to the end grain of the existing timber and the new timber splice using a brush. Work the Dry Fix well into the surface. Leave for about 25.30 minutes.

   Apply Dry Flex RP on all areas of contact (already treated with Dry Fix).

Use a 4mm "space" at the joint and secure the new timber splice in position using a perspex fixing plate. Fill the “joint" with Dry Flex RP and smooth the surface using a plastic knife.

Avoid any surface irregularities.

4. Allow at least 24 hours drying at 20°C before any surface sanding and subsequent painting.

   At lower temperatures allow a longer period of time for Dry Flex RP to dry.

   The fixing plate can be removed when the Dry Flex RP has dried completely.

Use the Window Care Scraper to remove 'excess' cured Dry Flex RP.

Sand the Dry Flex RP lightly. Remove dust/dirt before painting with an alkyd or water-based' paint system.

- Check with the Contract Administrator, if, Window Care Dry Pin is to be used.

- Where applicable, DRY PIN should be applied as illustrated in the "Systems" Brochure.

  A test application is always advisable before commencing work.

REPAIR METHOD NUMBER 4

Replacement of Entire Styles/Sills Affected by Wood Decay

1. Remove the decayed style/sill. Check if the contact areas of the existing wood are affected by wood decay. Remove all the decayed wood using a Window Care Profi until sound timber is reached.

2. If the contact areas of the existing wood have a moisture content above 18%, blow dry the surface using a hot air blower at a temperature of 60-80°C, use the Window Care Wood Condition Meter CS1 to measure the moisture content.

3. Remove the existing paint to at least 10mm from the joint.

4. Cut the new style/sill to a size to allow a 4mm seam/gap at each contact point. Apply a coat of decorative/protective finish all around before fixing. A dry thickness of 40 microns of the protective finish is recommended.

   Ensure that the meeting surfaces of the existing timber and the new timber is left clean and un-primed during the fixing process. The painting of the end-grain is not necessary in view of the water sealing capacity of Dry Flex RP.

5. Wet the contact areas of the existing and the new wood using the Window Care Dry Fix - Wood Stabilizer with a brush. Work the Dry Fix well into the surface. Leave for about 25 - 30 minutes. Apply Dry Flex RP on all areas of contact (already treated with Dry Fix).

6. Insert the new style/sill using a 4mm "spacer" at the joint and secure the new timber position using a Perspex fixing plate.

   Fill the "joint" with Dry Flex RP and smooth the surface using a plastic knife. Avoid any surface irregularities.

7. Allow at least 24 hours drying time at 20°C before any surface sanding and subsequent painting. At lower temperatures, allow a longer period of time for Dry Flex to dry.

   The fixing plates can be removed when the Dry Flex RP has dried completely. Sand the Dry Flex lightly. Remove dust/dirt before painting with an alkyd or water based paint system.

   Use the Window Care Scraper to remove 'excess' cured Dry Flex RP.

   - Check with the Specifier, if, Window Care DRY PIN should be used.

   - Where applicable, DRY PIN should be applied as illustrated in the "Systems" Brochure.

     A test application is always advisable before commencing work.

REPAIR METHOD NUMBER 5

Rounding of sharp and Weathered Edges

1. Inspect the sides of the styles and sills for sharp and weathered edges.

2. Round the horizontal and vertical edges using the Window Care Assist.

3. Adjust and set the cutter on the Window Care Assist to achieve a smooth and a round edge. A test application is advisable.

4. Use the slant side of the Base Plate of the Window Care Assist if the style or sill is of the water shedding type and the flat side if the style or sill is flat.

5. After rounding the edges there should not be any grey spots in the wood. If there are, repeat the procedure.

6. If during the rounding of sharp edges, there are raised wood fibres or holes, this is generally due to the cutting action against the direction of wood grain. Working in the opposite direction will reduce/prevent the problem.

7. If the moisture content of the wood is high, blow dry the timber using a hot air blower before rounding the edges, use the Window Care Wood condition Meter CS1 to measure the moisture content.

8. After rounding the edges, sand lightly with a fine abrasive paper. Remove dust/dirt before finishing.

   A test application is always advisable before commencing work.

REPAIR METHOD NUMBER 6

Renewal Of Glazing Putty/Mastic On Existing Wooden Windows And Doors

Before commencing work, all timber repairs should be carried out with the appropriate Window Care Repair Method.

The existing putty/mastic should be removed with care to prevent breakage of glass.

1. Face Glazed/Putty Glazed Windows And Doors.

    a) Partial Renewal Of Existing Putty/Mastic

    Completely remove the existing putty/mastic affected by the breakdown on the horizontal glazing line and take it 50mm to the vertical. Lightly sand the rebate using a medium/fine grade abrasive paper. Remove dust. Degrease the affected area using a cellulose thinner applied with a lint free cloth.

    Allow the surface to dry completely. Apply Dry Seal - A Glazing Sealant available from Window Care Systems Ltd.

    Cut the nozzle of the Dry Seal tube at a 450 angle. Apply the Dry Seal with a sealant gun. Use a dry Seal Applicator to achieve a smooth finish. Remove any excess Dry Seal.

    b) For Complete Renewal Of Putty/Mastic

    Remove the existing putty/mastic completely and follow the procedure outlined in a) above.

2. Bead Glazed Windows And Doors

    Bead glazed windows and doors affected by' the breakdown of existing putty/mastic.
    Rake out the perished putty/mastic to a depth of 4-8mm on the horizontal glazing line and take it
    50mm to the vertical. Remove all dust/dirt and degrease the affected area with a cellulose thinner.
    Allow the degreased area adequate time to dry completely.
    Apply the Dry Seal with a sealant application gun. Work the Dry Seal well into the joint. Use a Dry Seal Applicator to achieve a smooth finish.

3. Renewal Of Perimeter Sealant

    Remove the existing perimeter sealant. Lightly sand the affected area using a medium/fine grade abrasive paper. Remove dust. Degrease the surface using a cellulose thinner. allow the surface to
    dry completely. -

Apply the Dry Seal with a sealant application gun. Use a spatula to achieve a smooth finish. In all cases. allow at least 48 hours before painting.

Ensure that the moisture content of the timber is below 18% before applying the DRY SEAL. Use the Window Care Wood Condition Meter CS1 to measure the moisture content.

A test application is always advisable before commencing work.

REPAIR METHOD NUMBER 7

Renewal of Glazing Beads and Putty

Glazing Beads

The glazing bead should be of the correct size. The width of the glazing bead should be measured to allow a minimum of 2mm gap between the glass and the bead. The design of the bead should be such as to have a good water-shedding profile and rounded edge.

The glazing bead should be constructed from Douglas Fir (if softwood) and vacuum impregnated with an organic solvent based preservative pre-treatment. The pre-treatment should be allowed to dry completely before finishing.

Apply one coat of the decorative finish all around before fixing.
The glazing bead should be flush in line with the vertical/horizontal rail.

When cross-cutting the bead, treat the end-grain with a fast drying solvent based primer.
Use galvanised or sheradised fixings of the Correct size.

Bed the glazing bead in Window Care Dry Seal. Set a distance of 2mm between the glass and the bead.

Place the fixings at l00mm distance from each end and approximately 150mm thereafter.

Gun-in the Dry Seal into the gap between the glass and the bead.
Smooth to an even finish using the Dry Seal Applicator. Remove any access Dry Seal.

Ensure that the gap between the rebate and the bottom of the bead is completely sealed as well as the gap between the glass and the bead.

Allow a gap of 5mm between the horizontal and the vertical bead. Fill the gap with Seal.

Thoroughly remove any surplus Dry Seal from the surface of the timber and glass.

Allow the Dry Seal at least 48 hours before finishing.

- Counter-sink the fixings. Fill the fixing-holes with Dry Seal.

- Ensure that the moisture content of the timber is below 18% before applying the DRY SEAL. Use the Window Care Wood Condition meter CS1 to measure the moisture content.

Puttied Windows

Remove the existing putty carefully (without breaking the glass) from the horizontal glazing line and up 50mm to the vertical. Remove the putty from the rebate completely. Sand the rebate with a medium grade abrasive paper. Remove dust/dirt and degrease

the surface by wiping it with a lint free cloth using white spirits or preferably a cellulose thinner. Allow the surface to dry completely before applying the window Care Dry Seal

- Where possible it is beneficial if the rebate can be primed using a solvent based fast-drying primer prior to glazing with Dry Seal.

  A test application is always advisable before commencing work.

REPAIR CARE
STANDARD SPECIFICATIONS - DRY FIX®/DRY FLEX®

Repair Care systems are designed to ensure the durability of joinery and timber components, with preventative and curative treatments. The following guidance notes and specific Working Methods apply to all repairs which are to be completed using the range of Repair Care DRY FIX® and DRY FLEX® products. All published data sheets and information should be read carefully before commencing work. Full training and further advice are available from Repair Care International Ltd (tel. 01487 830311, fax. 01487 832876 or e-mail salesuk@repair-care.com).
For information on our DRY SEAL™ UN flexible glazing sealant please refer to Standard Specifications - DRY SEAL™ UN.

Repair Care International Products

DRY FIX® 1, 4 & 16 – used as the first "primer coat" application before the appropriate DRY FLEX® product.

DRY FLEX® 1, 4 & 16 – used for completing repairs.

Please refer to full Product Data Sheets, before commencing work – available at www.repair-care.com

Recommended Tools

Repair Care Mini-Profi™ router and cutters, scraper, dosing pistol, mixing board, application knives, Perspex sheets, Repair Care Sander, Repair Care Wood Condition Meter, disposable brushes, MIX & FIX® set, EASY-Q™ WIPES and EASY-Q™ Gloves.

All recommended tools and accessories are available from your usual supplier.

Personal Protective Equipment

When using epoxy resin avoid contact with skin and eyes. During preparation and sanding use appropriate eye protection and fine particle dust masks. When handling and applying the products wear EASY-Q™ Gloves. Change gloves regularly and do not re-use after contact with epoxy resin. When appropriate, wear eye protection (e.g. when working above eye level).

Please refer to full Material Safety Data Sheets and Health and Safety information, before commencing work – available at www.repair-care.com

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Unit E, Sawtry Business Park, Glatton Road, Sawtry, Huntingdon, Cambs PE28 5GQ
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REPAIR CARE
STANDARD SPECIFICATIONS - DRY FIX®/DRY FLEX®

Preparation

1. Remove paint at least 10mm from the area to be treated.
2. Remove all decayed and soft timber using a Repair Care Mini-Profi™ router and round cutter. Rather than feather the edge of the area, create a 'shoulder' of at least 5mm.
3. Ensure the moisture content is no higher than 18%. This can be checked with a wood condition meter.
4. If the timber is too wet, it should be allowed to dry naturally.
5. Sand off any loose fibres and remove dust and dirt.

Application

1. Shake both components of the DRY FIX® and then mix in the MIX & FIX® paper cup using the wooden spatula. Brush the mixed liquid liberally onto the bare wood. If a timber splice is being used the contact areas of the splice and any exposed end grain should also be coated.
2. Allow DRY FIX® to penetrate the wood for at least 20 minutes. It can be left for up to 8 hours (DRY FIX® 4 and 16) or up to 2 hours (DRY FIX® 1). Wipe away any excess fluid.
3. Dispense the DRY FLEX® using the dosing pistol and mix ***thoroughly*** until a completely uniform colour is achieved.
4. Apply a thin coat to all areas already coated with DRY FIX®. Complete the repair by adding more DRY FLEX®, using timber inserts or face splices where appropriate and/or specified. Perspex sheets can be used to help create a straight edge.
5. Remove excess product leaving a smooth surface.

Finishing

1. When the DRY FLEX® is completely cured, remove any Perspex sheets and sand the area to ensure a smooth finish and to give a key for the decorative coating. Remove dust.
2. Finish in accordance with the paint specification. The Dulux Weathershield system is particularly suitable (Weathershield preservative primer should only be applied to the bare timber around the repair).

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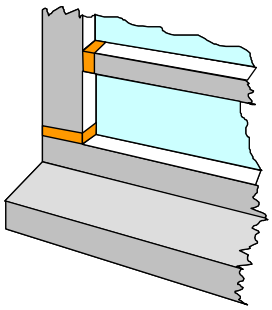
WORKING METHODS (PREVENTATIVE) - DRY FIX®/DRY FLEX®

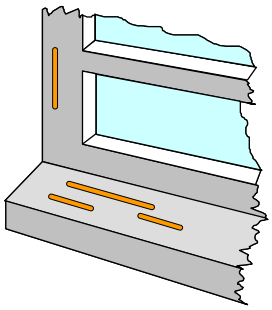
In all cases follow the Standard Specifications above in conjunction with any specific instructions below.

P2 Sealing of sound and open joints.



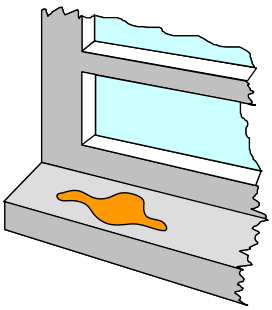
For Preparation, item 2 change to:
Using the Mini-Profi™ router, open the joint along its whole length to a minimum of 10mm wide and 10mm deep.

P4 Repairing splits/cracks in timber.



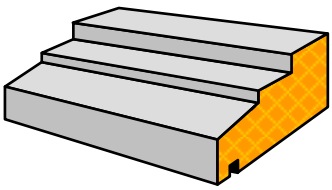
For Preparation, item 2 change to:
Using the Mini-Profi™ router, drill holes 10 mm deep at both ends of the crack, then open the crack to a minimum of 10mm wide and 10mm deep.

P5 Repairing natural flaws in timber (Knots etc).



Follow standard specification.

P6 Sealing exposed end grain.



Follow standard specification.
Recommended product is DRY SHIELD™ SK

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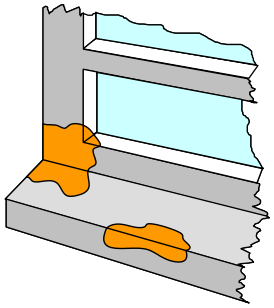
WORKING METHODS (CURATIVE) - DRY FIX®/DRY FLEX®

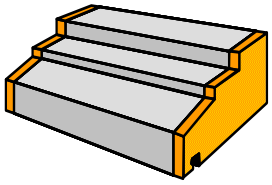
In all cases follow the Standard Specifications above in conjunction with any specific instructions below.

C1 Resin only repair of decayed wood.



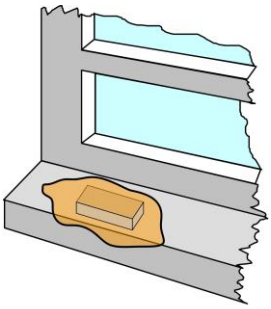
Follow standard specification.

C2 Replacing whole cills, stiles and rails.



For Preparation:
When cutting the new component allow the following resin gaps between contact surfaces:
DRY FLEX® 1: 5 – 10mm
DRY FLEX® 4 & 16: min. 5mm
All contact surfaces should be clean, dry and free of paint.

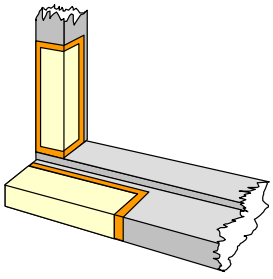
C3 Repairs using resin with timber inserts.



For Preparation:
When cutting the new component allow the following resin gaps between contact surfaces and over the top of the timber insert:
DRY FLEX® 1: 5 – 10mm
DRY FLEX® 4 & 16: min. 5mm
All contact surfaces should be clean, dry and free of paint.

For Application:
Apply a thin coat of DRY FLEX® to the end grains of the timber insert before positioning in the recess.

C4 Repairs using resin with timber splices.



For Preparation:
When cutting the new component allow the following resin gaps between contact surfaces:
DRY FLEX® 1: 5 – 10mm
DRY FLEX® 4 & 16: min. 5mm
All contact surfaces should be clean, dry and free of paint.

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REPAIR CARE
STANDARD SPECIFICATIONS - DRY SEAL™ UN

DRY SEAL™ UN is a flexible glazing sealant for replacing linseed oil putties in new or existing windows and for bedding timber glazing beads. It can be painted or stained and is suitable for use on most frames (excluding uPVC) and glass, including sealed double glazed units. As well as existing windows, it can be used to glaze new windows. The following guidance notes and specific Working Methods apply to all procedures which are to be completed using DRY SEAL™ UN flexible glazing sealant. All published data sheets and information should be read carefully before commencing work. Full training and further advice are available from Repair Care International Ltd.
For information on our range of Repair Care DRY FIX® and DRY FLEX® products please refer to Standard Specifications - DRY FIX®/DRY FLEX®.

Repair Care International Products

DRY SEAL™ UN – Flexible glazing sealant for durable replacement of defective putties.

Please refer to full Product Data Sheets, before commencing work – available at www.repair-care.com

Recommended Tools

Repair Care Wood Condition Meter, DRY SEAL™ UN dispensing gun, DRY SEAL™ UN applicator, EASY-Q™ WIPES and EASY-Q™ Gloves.

All recommended tools and accessories are available from your usual supplier.

Personal Protective Equipment

When using DRY SEAL™ UN avoid contact with skin and eyes. During preparatory sanding use appropriate eye protection and fine particle dust masks. When appropriate wear eye protection.

Please refer to full Material Safety Data Sheets and Health and Safety information, before commencing work – available at www.repair-care.com

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REPAIR CARE
STANDARD SPECIFICATIONS - DRY SEAL™ UN

Preparation

1. Remove all loose/defective putty and beads. Attention should be given to the bottom horizontal and a minimum of 30mm to the verticals.
2. Clean and sand the rebate. Ensure all corrosion is removed from metal frames.
3. Ensure the moisture content is no higher than 18%. This can be checked with a wood condition meter.
4. Clean the glass and, if necessary, use methylated spirits to remove any remaining algal growth.
5. Clean and sand the rebate.

Application

1. Prime the rebate and allow to dry.
2. Apply DRY SEAL™ UN with the dispensing gun.
3. Smooth the surface using the DRY SEAL™ UN applicator.

Finishing

1. Allow to cure.
2. If necessary, remove any excess DRY SEAL™ UN from the glass.
3. Finish with a fast drying primer, ideally within 48 hours of application, or in accordance with the paint specification. The Dulux Weathershield system is particularly suitable (Weathershield preservative primer should only be applied to the bare timber around the repair).

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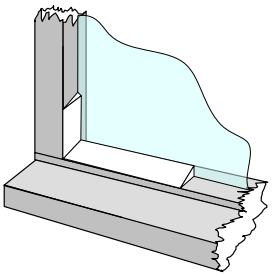
WORKING METHODS - DRY SEAL™ UN

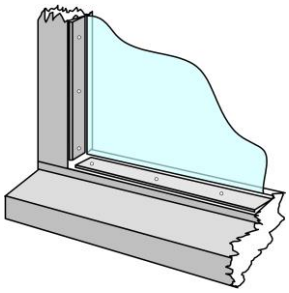
In all cases follow the Standard Specifications above in conjunction with any specific instructions below.

PG2 Face glazing and back putties.



Follow standard specification.

PG6 Bead glazing.



bead and UN behind, at bead.

For Application:
Prime the bead.
After application of DRY SEAL™ UN, fix timber
allow a minimum of 2mm of DRY SEAL™ each end and underneath the glazing

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APPENDIX B
SCHOOL CONDITION SURVEY 2019

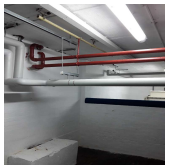
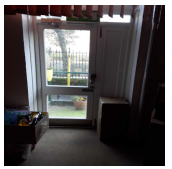
Identified Work By Element

Idwork Code	Element, Sub-element, Item	Defect	Remedy	C/P	Cost	Photo
CD001767 2502						
A						
IW00017109	01 Roofs 01.04 Rooflights 01.04.01 Roofs Comments:	Defect Location: Patent glazing to store Leaking patent glazing to store	Replace patent glazing	C3	57500.00	No Picture Available
IW00017770	02 Floors and Stairs 02.03 Ground floor 02.03.01 Floors Comments:	Evidence of water ingress into floor within stairwell B. Depressed area of floor surface requires further investigation and repair.	Investigate cause of water ingress, repair damage to floor and cause of depression and replace barrier matting. Target year: 2020/2021	C2	5750.00	No Picture Available
IW00017106	03 Ceilings 03.03 Ground Floor 03.03.01 Ceilings Comments:	Defect Location: Ceilings generally Water staining to tiles due to leaks from above	Replace ceiling tiles	C3	4025.00	No Picture Available
IW00017107	04 External Walls, Windows and Doors 04.01 Walls 04.01.01 External Envelope Walls Comments:	Defect Location: Red stairwell Water ingress and damaged finishes	Address cause of ingress and redecorate	C3	1150.00	No Picture Available
IW00017108	04 External Walls, Windows and Doors	Defect Location: All external windows	Overhaul and repair all windows with timbercare type system and redecorate.	C3	448500.00	

Identified Work By Element

Idwork Code	Element, Sub-element, Item	Defect	Remedy	C/P	Cost	Photo
	04.02 Windows and Doors 04.02.02 External Windows Comments:	Rotting timber windows 156 windows @ £2500 per window	Replacement of the windows is unlikely to be a viable proposal due to listed status of the building. Target year: 2021/2022			
IW00017110	04 External Walls, Windows and Doors 04.02 Windows and Doors 04.02.01 External Doors Comments:	Defect Location: Main classroom entrance door Broken and missing glazing bead to upvc door exposing insulation and repaired with gaffer tape	Replace door	C3	1150.00	
IW00017795	05 Internal Walls and Doors 05.03 Additional Sub Element 05.03.01 Additional Item Comments:	Fire safety issues may exist within concealed voids	Allow for undertaking investigations and carrying out additional fire safety works which may be discovered during the course of building project works to concealed areas. Target year: 2021/2022	C2	10000.00	No Picture Available
IW00017915	05 Internal Walls and Doors 05.02 Walls and Partitions 05.02.01 Internal Walls and Partitions Comments:	Fire safety issues may exist in inaccessible or concealed areas	Building Managers must ensure that Fire risk Assessments consider all risk areas (including concealed and inaccessible areas, where safe to do so) to ensure compliance to relevant fire safety standards. Undertake investigations and remedial actions arising from FRA's.	C2	1500.00	No Picture Available
IW00017104	07 Mechanical Services 07.05 Heating	Defect Location: On both LTHW boilers and high level pipework	Insulate	C3	1150.00	

Identified Work By Element

Idwork Code	Element, Sub-element, Item	Defect	Remedy	C/P	Cost	Photo
	07.05.02 Distribution System (Valves, etc) Comments:	No insulation to boiler and some pipe work				
IW00017105	07 Mechanical Services 07.06 Hot and Cold Water 07.06.02 Distribution System (Valves, etc) Comments:	Defect Location: Boiler and around the school Steel, lead and PVC pipework, contaminated Water Tbc	Replace pipework with copper pipework, Investigate and carry out required repair	C2	11500.00	
IW00017635	08 Electrical Services 08.04 Fire Alarms 08.04.02 Fire Alarms and Detection Comments:	Defect Location: Various No manual call points near exits on the ground floor and various faults on the MICC cable installation.	Install additional manual call points and rectify cable faults Target year: 2020/2021	C2	1725.00	

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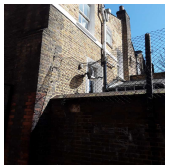
EXT

Idwork Code	Element, Sub-element, Item	Defect	Remedy	C/P	Cost	Photo
IW00017111	01 Roofs 01.05 Roofs Other 01.05.07 Roofs Comments:	Defect Location: Greenhouse roof Isolated panels of the polycarbonate roof to the greenhouse have become dislodged from their fixings	Adjust the polycarbonate panels back to their original locations and replace the fixings	C3	1150.00	No Picture Available

Identified Work By Element

Idwork Code	Element, Sub-element, Item	Defect	Remedy	C/P	Cost	Photo
IW00017112	11 External Areas 11.06 Walls Fences and Gates 11.06.01 Boundaries Comments:	Defect Location: Boundary walls Damaged chainlink fencingto boundary due to trespass	Replace damaged section of fencing	C3	575.00	
IW00017113	11 External Areas 11.01 Drainage 11.01.01 External Areas/Drainage Comments:	Defect Location: Main playground Surface water drainage is completely blocked	Clear blockages and undertake regular maintenance Target year: 2020/2021	D2	119025.00	No Picture Available

Total: £664700.00