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P BELL
BUILDING CONSULTANCY | CONSTRUCTION MANAGEMENT

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Heritage Statement for:
Proposed Repairs and Alterations at Orford House Social Club

Prepared by: P Bell BSc MCIOB

Date: 29 July 2024

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Contents

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Assessment of heritage significance

Building Listing and General Information

Orford House Social Club is a Regency period two storey detached villa constructed in the early nineteenth century. It occupies a one acre site located on the approach to Walthamstow Village and lies wholly within the Orford Road Conservation Area. The site faces north with an 80 metre long frontage onto Orford Road. It slopes towards the west where it is bounded by Pembroke Road and Hastingwood Court. To the east is Wingfield Road. The grounds comprise a tree lined macadam surfaced forecourt at the front and a bowling green at the rear.

The building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990. The list entry number is 1065597 and it was first listed Grade II on 7 May 1980. The listing description is as follows:

'Large, detached villa. Early C19. Slate hipped roof to parapet. Neo-classical manner. 2 storeys. 5 wide bays, the second and fourth set forward slightly with pediments and ground floor windows set in in arched reveals. Central recessed Doric columned entrance. Square headed windows, corniced to ground floor. Sashes, glazing bars. Blind oculi to pediments. Cornice to outer bays. Rear elevation also of architectural interest. Interior understood to contain plain but elegant cantilevered spiral staircase.'

For the purposes of this heritage statement the building will be described as comprising an original main central area with wings to both sides (the five wide bays), annex buildings built onto the west flank and believed to be of the same age as the main building. Then a modern extension to the east which was built in the 1980s.

A brief history of Orford House and it's immediate environs

Orford House was built circa 1802 in a neo-Classical style and as a family home for a Scottish city merchant named Patrick Chalmers. At that time Walthamstow was predominantly rural and comprised of several small villages. The oldest of was Church End which had developed over the centuries around the parish church of St Mary's, first mentioned in a charter dated 1108 CE. From Tudor times the area became popular with London's rich and famous some of whom set up country residences here as retreats from the hustle, bustle and stale airs of the ever growing city.

The first census of 1801 records a population of just 3,006 and contemporary maps show the land around Church End laid out as a patchwork of fields interspersed with large houses set in landscaped estates. Orford House is the most recent building to have been erected on the site as evidenced by John Roques map of 1744 which showing an older construction complete with tree lined avenues radiating from the front of it. John Coe's map of 1822 and a tithe map of twenty years later show the current building located on the south-west corner of the church common. The estate included a large ornamental pond and avenues of trees tracing an approximate line along current day East and West Avenues.

Changes began to take place in the early 1840s when the church common was enclosed, and the Church Common Lane (present day Orford Road) became increasingly important as a thoroughfare and cut off the estate lands to the north. The then owner reacted by draining the ornamental pond and erecting eight rental homes on the site. These were known as Orford Villas and stood until the 1960s. The site is now occupied by a 1970s flat block named Chalmers House: a reference to the original landowner.

For the rest of the nineteenth century the house passed through several different owners, one of these being the City of London Building Society who sold off parts of the estate as building plots to speculative developers. The area became increasingly urbanized with the arrival of railways along the Lea Valley, particularly the Chingford branch line which opened in 1870.

The house ceased to be a private residence when its final owner, Sarah Gower, died in 1920. Within a year her children had sold its entire contents by auction and then the house itself was sold and transformed into the Orford House Social Club. The club opened on 17 September 1921 and recently celebrated its centenary.

The condition of the building and the popularity of the club tend to reflect the ups and downs of the wider area. As land prices started rising in the early 1980s the promotion of home ownership led to an influx of young newcomers seeking affordable homes as asking prices further into London became unaffordable. The club took advantage by selling off its tennis courts to

developers. Hastingwood Court flats were subsequently built on the site and proceeds of the sale were used to fund the construction of a two storey extension on to the east wing of Orford House which provided the club with a ballroom on the ground floor and a games room / snooker hall above.

As the 1980s ended a recession set in across the country, lasting well into the following decade. Walthamstow along with the rest of east and north east London was particularly hard hit by the demise in the manufacturing industry. The borough experienced harsh times as unemployment levels rose, and local government funding was cut. Both the village and the High Street suffered as a result, and this was mirrored in the club where membership began to steadily decline leading to a drop in subscriptions and with less money available for maintenance the building began to take on an air of neglect.

Fortunately, things began to change as the economy picked and recent years have seen another wave of newcomers to the area, primarily young affluent professionals looking for affordable and traditional family homes. This has seen a change in the demographics, a renewed interest in the history and preservation of the local area, a demand for good food and entertainment all coinciding with the local authority's long term vision for environmental improvements. The impact on the village because of these events has been significant. With its combination of winding streets, historic buildings, modern restaurants, lively bars and sense of community its popularity has spread beyond the borough.

Orford House still occupies its prominent position overlooking the entrance to what has now become one of London's landmark locations. It has benefited like the rest of the area and a recent membership drive saw its numbers increase to over a 1000 bringing in new people and new ideas. Whilst its primary function still revolves around its members bar and bowling green it increasingly serves the wider neighbourhood, hosting community groups, weddings, funerals, yoga classes, choirs, children's activities and various festivals.

Membership fees and a proper business plan have put the club in a position where it now has sufficient maintenance budget to start addressing the long term decay in the building's fabric. The club recently celebrated its centenary in what is the oldest building in the conservation area. A phased plan of restoration works will ensure that it is retained as an invaluable asset for both members and the wider community during the century ahead.

Style, construction and historical alterations to the building

Orford House was constructed at the beginning of the nineteenth century, the centrepiece of a large estate belonging to the Chalmers family. The design and size would have been an outward reflection of the family's opulence whilst heeding the architectural trends of the day.

General details about the architectural style have already been described. This section will focus on the original construction and changes that have been made to the building. Extensive structural alterations were carried out in the last 100 years and the current layout is shown on the attached floorplans. The original arrangement of rooms is unknown and apart from the windows, shutters, some door linings and the spiral staircase mentioned in the listing there are no original fittings or ornamentation left.

The external walls and main cross walls are constructed in brickwork of varying thickness (9", 13½" and 18"). External faces are covered with stucco and from evidence in one of the first floor storerooms it appears that the internal faces were originally framed out and lined with lathe and plaster. The main walls extend deep into the ground and a cellar was formed below what is now the members bar. It is accessed by brick/stone steps and remains largely untouched allowing us opportunity to view the exposed walls and vaulted ceilings along with the underside of the timber floor beams. The area is used as a traditional beer cellar and has a hatch located on the forecourt complete with timber trap doors. Foundations to the main walls are assumed to be corbelled brickwork bearing on to gravel or hogging. The arrangement appears to be sufficient as there is very little evidence of foundation related movement in the superstructure.

Most of the original roofs remain in-situ. Very little of the slate covering is assumed to be original given that the building is over 200 years old and even the best slate tends to have only half that life span before it starts to fail. The main roof has an underlay of softwood sarking boards. Elsewhere the slates are nailed to battens and the beds left exposed. Roof framing is largely intact and allows us an insight into the structural knowledge carpenters possessed in those days. The roof over the east wing is assumed to have mirrored the west wing with a shallow pitched hipped roof hidden behind parapet walls. Unfortunately, the structure had already been demolished and converted to a flat roof before the building was extended in the 1980s.
The extension was built in a style sympathetic to the original. The main walls are cavity construction and finished externally in lightly rusticated render. Windows generally replicate the originals in appearance however the mouldings are chamfered, not ovolo, and the opening mechanism is by spring balance not counterweighted. The roof is a cold deck flat roof which covers

both the extension and the east wing. The roof membrane is traditional three layer bitumen felt dressed up over the low parapets. The membrane was covered with a reinforced liquid system approximately 10 years ago. The extension is stiffened by a heavy steel framework which also supports the remaining elements of the original east wing. The ground floor is formed by an uninsulated concrete slab over consolidated hardcore and the first floor is suspended timber construction.

Assessment of impact

General summary

The building fabric has deteriorated in the last few decades due to a general lack of maintenance funds coupled with ad hoc and patch repairs being carried out, often to a poor standard, and generally with little regard for building's age or historical importance. The situation has recently changed recently. There has been a significant increase membership receipts from an influx of new members many of whom have volunteered their skills and professional knowledge which amongst other things has included good finance and business acumen.

The works proposed in this application are the first phase of an overarching planned programme being developed to abate further deterioration of the superstructure, make the club more accessible and inclusive along with improving the energy performance of the building wherever practicable. Our aim is to ensure these, and all future works, align with both national and local planning policies and are designed and executed to preserve the character and historical importance of the building.

The first phase of repairs will be to rectify failed external elements that are affecting the structural integrity of the building and causing damage to internal surfaces. These are:

West wing hipped roof and west hip of the main roof

The west wing roof is specifically mentioned in the listing description. It is concealed behind parapet walls and not visible from ground level, consequently its deterioration had gone largely unnoticed until recent years when frequent leaks have been reported from the residents living in the flat below. Numerous patch repairs have been carried out generally to a poor standard often exacerbating the problem.

A full internal and external survey of these roofs revealed that the slates and gutters have deteriorated beyond a point of effective and economic repair. One of the hip rafters and the front wall plate to the west wing have decayed due to long term persistent water ingress and will require replacement.

To prevent further failure of the roof framing our proposal is to remove all slates, remaining leadwork, sarking boards, asphalt membrane, gutter boards and brackets along with the collapsed lathe and plaster soffit below main roof. All carpentry repairs can then be carried out which will include new timber bracketing and boarding to the parapet and hidden gutters. The roof slopes will be covered with Welsh slates from the Blaenau Ffestiniog quarry and new leadwork to match the existing hip, ridge, eaves and hidden gutter detailing.

The original lining to the parapet gutter is assumed to have been lead which was later replaced with mastic asphalt. We considered returning it to lead but the detailing required to achieve the sufficient falls to the existing outlets are not practical and would require a high level of maintenance and clearing in the future. The choice was then between modern day membranes, and we concluded EPDM offered the best in terms of longevity, impermeability and future maintenance and clearing costs. The original lathe and plaster soffit to the underside of the west hip of the main roof will be replaced with a modern fire rated external grade board such as 'Magply' or similar, fitted with a strip ventilator and then paint finished.

East wing and extension roof

Opening up roof works merely to facilitate access to the repairs required to the parapet walls and cornice. Once these are completed the roof membranes will be reinstated to match the existing.

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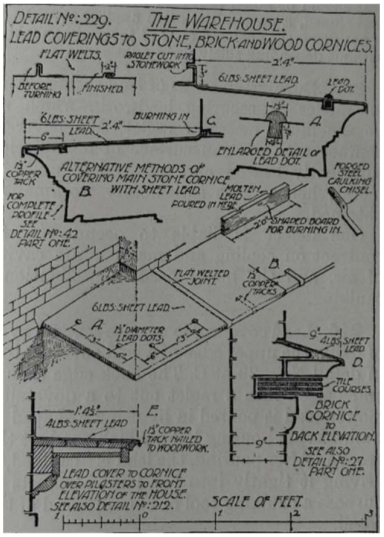

Cornice: traditional protection techniques

Cornices

The stone cornices to the original building are suffering localised deterioration. The concrete cornices to the extension have failed. Water ingress via the joints has resulted in extensive water damage to plasterwork in the games room. An attempt to rectify the problem has been carried out in the past when bitumen felt was used to cover the top surface of the mouldings. This appears to have been only temporarily successful and the problem continues to the extent that it will soon start to affect the ends of the structural steels. The reason the cornice has failed is due to detailing. Each length of concrete is butt jointed rather than utilising a traditional saddle joint which would have protected against this problem.

Our proposals are to carry out repairs and sectional replacement where necessary to the original stone cornice. We then propose to use traditional lead detailing to provide protective covering to the tops of all the cornices. The technique is recommended in older building books (see for opposite from Jaggard & Drury, 1923) and has been successfully employed on the restoration of the similarly designed Elizabeth Gaskell House, 84 Plymouth Groce, Manchester (see below).

Cavity walls

Horizontal cracking to the extension rear elevation cavity walls indicates wall tie failure. This is presumed to be due to the water ingress is mentioned above. Until recently cavity wall ties were generally made of galvanised steel. When moisture is allowed to enter the cavity, the ties can corrode and expand causing the brick joints to lift which in turn presents as a horizontal crack at regular intervals. We will employ standard techniques to open the cavity and replace the affected galvanised ties with stainless steel ones. The brickwork and render to then be reinstated to match the original

Parapet walls and chimney stacks

Parapet walls, particularly on the exposed rear and west elevations have deteriorated to the point where the render is now extensively crazed and cracked. There is no protective capping/coping to any of the walls. It is assumed this would have originally been lead. We propose to carry out all brickwork repairs and renew defective render to match the original. The walls to be fitted with a modern aluminium coping system to prevent repeat deterioration of these exposed walls.

Chimney stacks to the west wing roof and the west hip end of the main roof will be repointed and the flaunching remade to match existing. A rendered chimney stack on the rear elevation of the annex buildings will be repaired and repainted to match the existing.

Elizabeth Gaskell's House Manchester following restoration works completed in 2014

Accessibility Alterations

Our proposals include some alterations to improve access for both our members and the general public. Primarily this will be the conversion of the ground floor female toilets to a wheelchair accessible toilet. Whilst we have not at present found a feasible solution for wheelchair users to access the building other than using temporary ramps improvement toilet facilities would enhance the experience of the club for those less mobile.

The existing female toilets have been refurbished within the last twenty years. The current arrangement has left original fittings intact but covered over with new wall and ceiling linings (see photos). Our proposals will leave the wall linings in-situ, remove the false ceiling then provide a new unisex layout in accordance with current building regulation/DDA recommendations. Baby changing facilities will be retained but repositioned.

The above changes will make it necessary to provide female toilets elsewhere in the building. There are two male toilets on the first floor. The smaller of these is in poor condition and currently out of use. Our proposal is to repair and overhaul the fixtures and fittings so that it can be brought back into use, then convert the other to female toilets. Any changes to the existing arrangements will be relatively minor such as removal of the urinals in the proposed female toilet. We will however use the opportunity to carry out general plumbing and drainage repairs including provision of rodding access points.

Energy Saving Alterations

We propose to change eight windows on the first floor. These are in the games room and bar. They are all spiral balance single glazed timber sliding sash windows and were installed as part of the 1980s extension and refurbishment works. The ones fitted to the rear elevation have rotted beyond repair with the sashes fixed shut with restraint timbers to prevent them falling out.

The new windows will replicate the existing style but will be double glazed to achieve a 'U' value of 1.4 W/m²K which is in line with current guidelines. The only proposed deviation is that the frames will be slightly deeper to accommodate the glazed sealed units.

Other energy saving alterations are centred on the west wing roof. Renewing the slate covering will necessitate improving the insulation to meet current part L requirements of the building regulations. The existing roof space is uninsulated.

Our proposal is to provide a 'cold roof' design which means there will be no externally visible changes. Mineral wool will be laid between and over the existing ceiling joist to achieve a U value of 0.15 W/m²K. We anticipate that these changes will lead to increased levels of condensation in the roof space, so we propose to use an 'open' roofing underlay such as the 'Permo Air 160' system manufactured by Klober. This will allow excess moisture to permeate to the outside air.

Our final alteration is to renew the west wing roof rooflight and lightwell. The existing is a modern single glazed dormer window fixed on top of what appears to be the original lightwell. The dormer is rotted beyond repair and is a constant source of water ingress. The original rooflight design is unknown. Our proposal is to replace the dormer with a double glazed top hinged rooflight which will give an inconspicuous, recessed, finish that directs natural light onto the landing below whilst remaining watertight then to rebuild the lightwell with insulated walls to avoid cold bridging from roof space. The works will include the repositioning of the roof access point from the lightwell to the kitchen where a new insulated hatch will be formed in the ceiling.

Mitigation strategy

The main works are to preserve, repair and restore existing features. Other works seek to improve inclusivity and reduce fossil fuel consumption by addressing fabric heat loss wherever this can be practicably achieved in such an old building. On that basis we do not consider a mitigation strategy necessary. Notwithstanding, all proposed alterations along with the proposed inclusion of modern systems/materials are potentially reversible and lend themselves to improvements should these be required in the future.

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Appendix A

Floor Plans and Elevations

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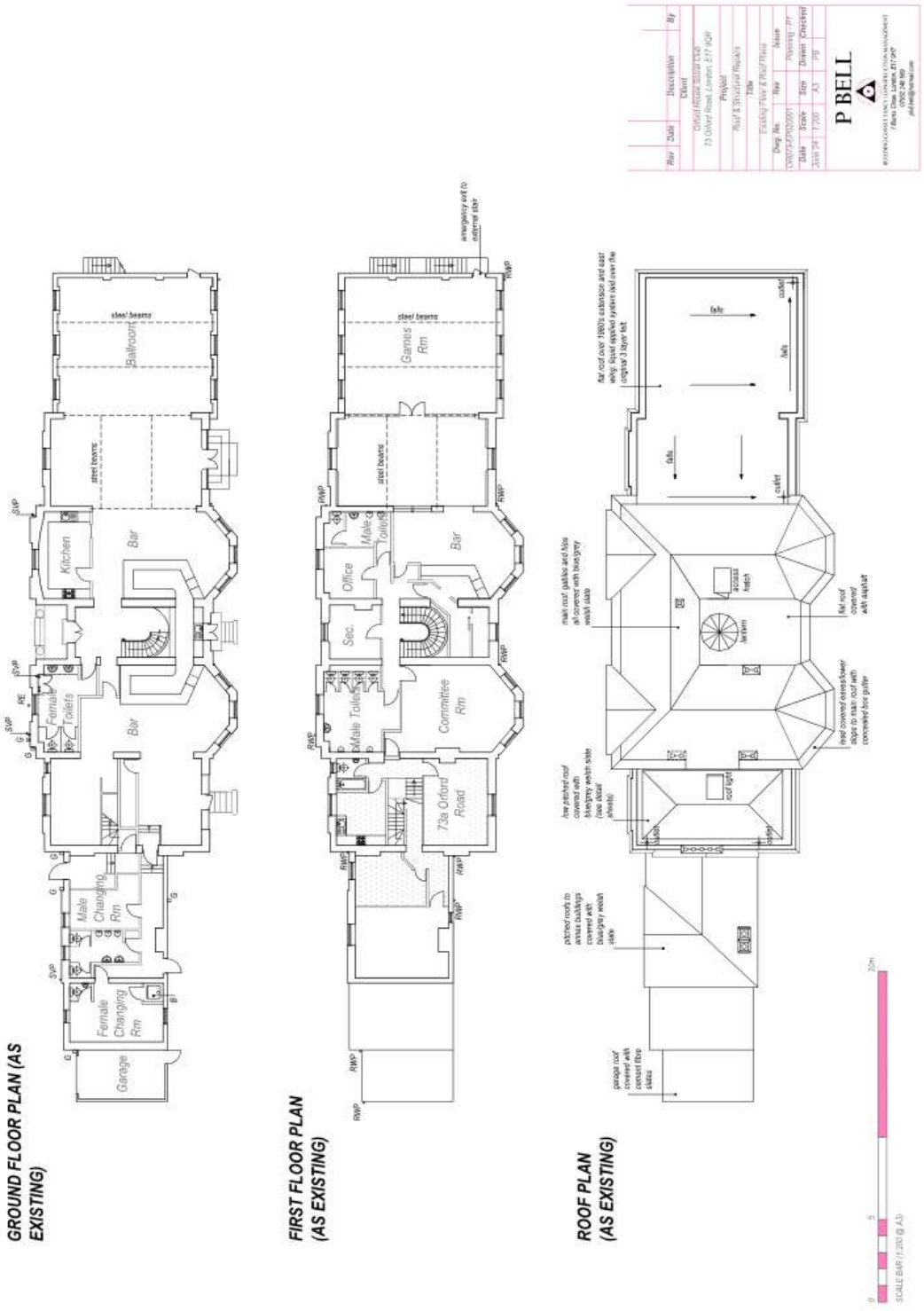

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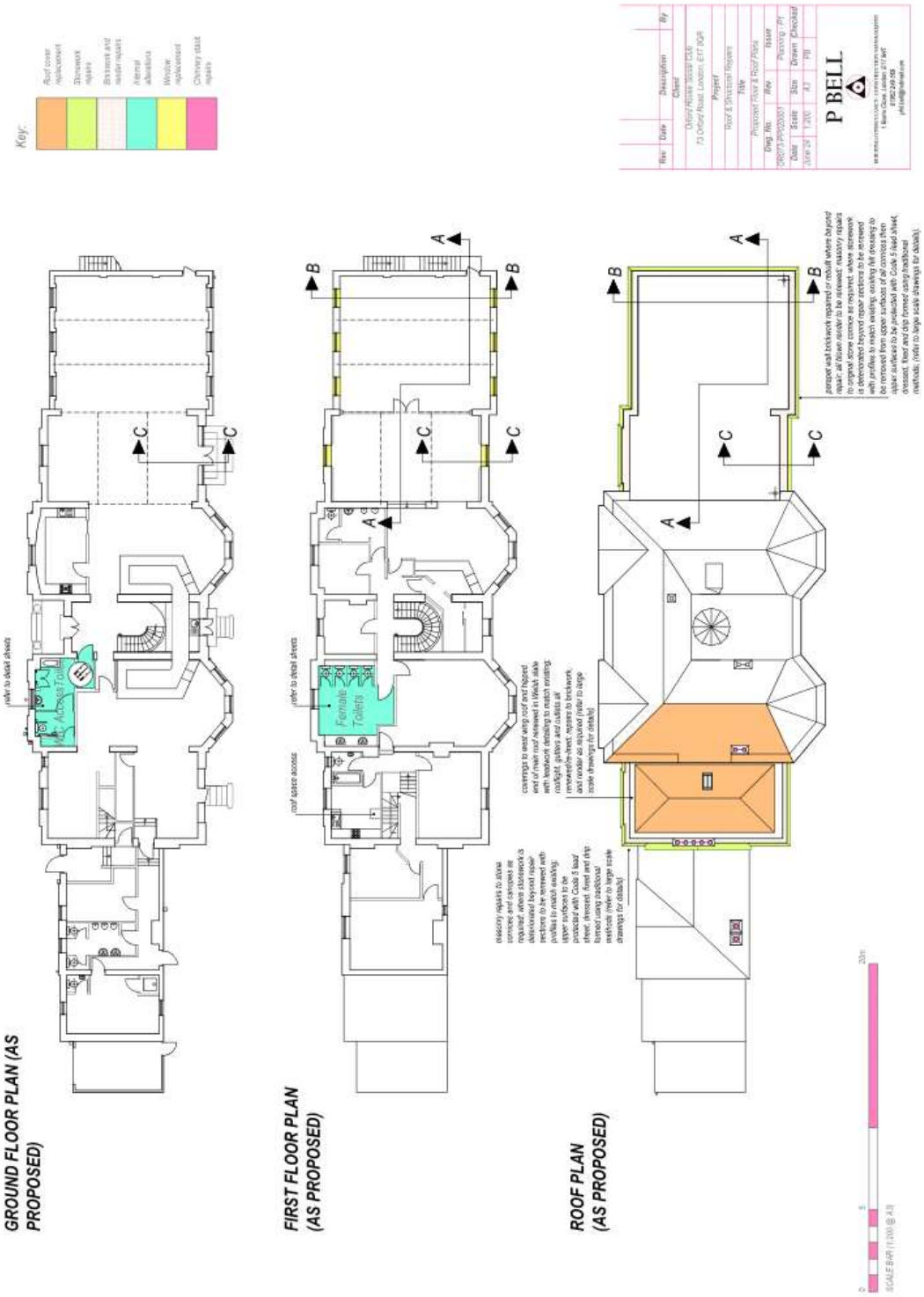

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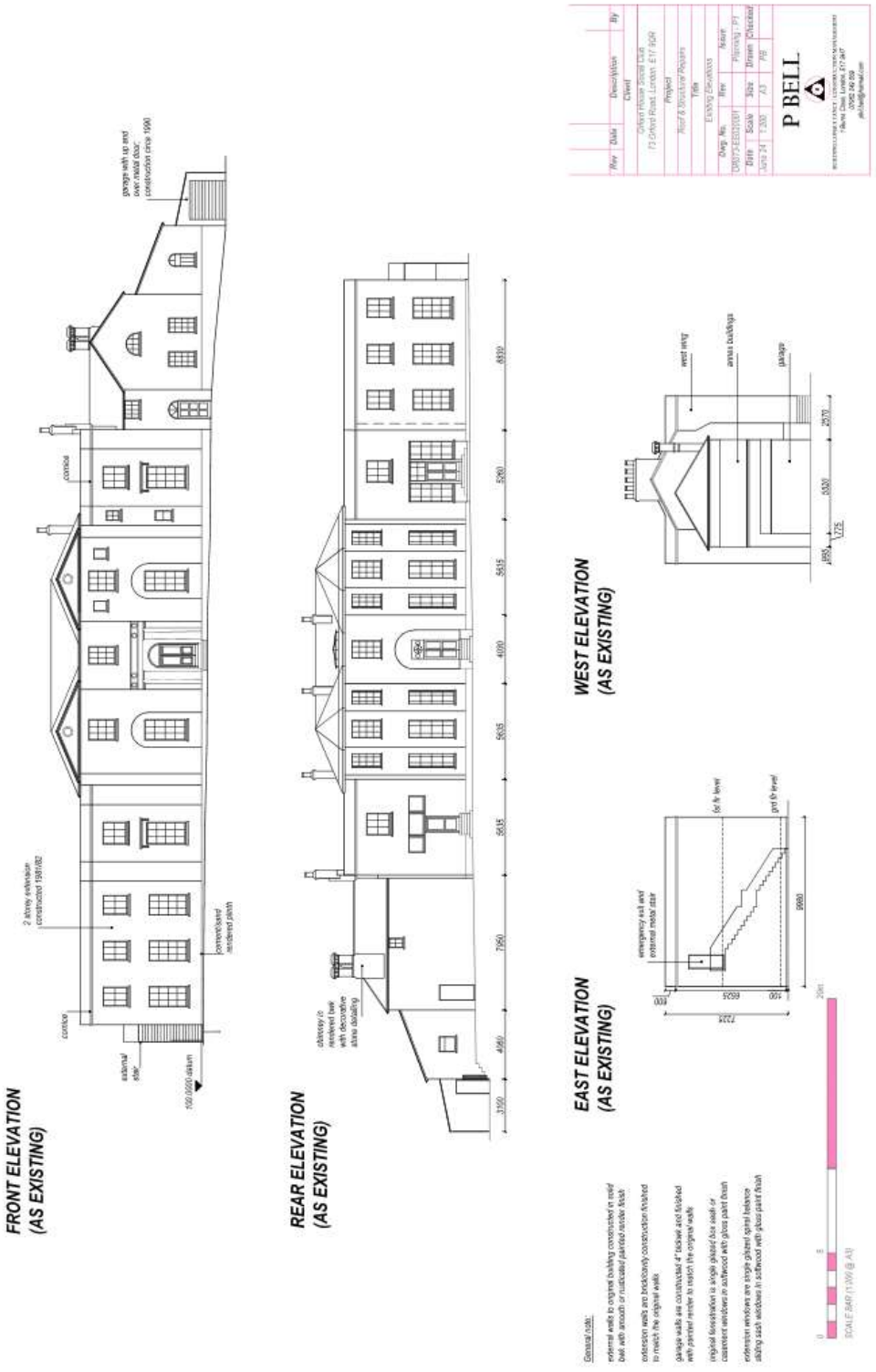

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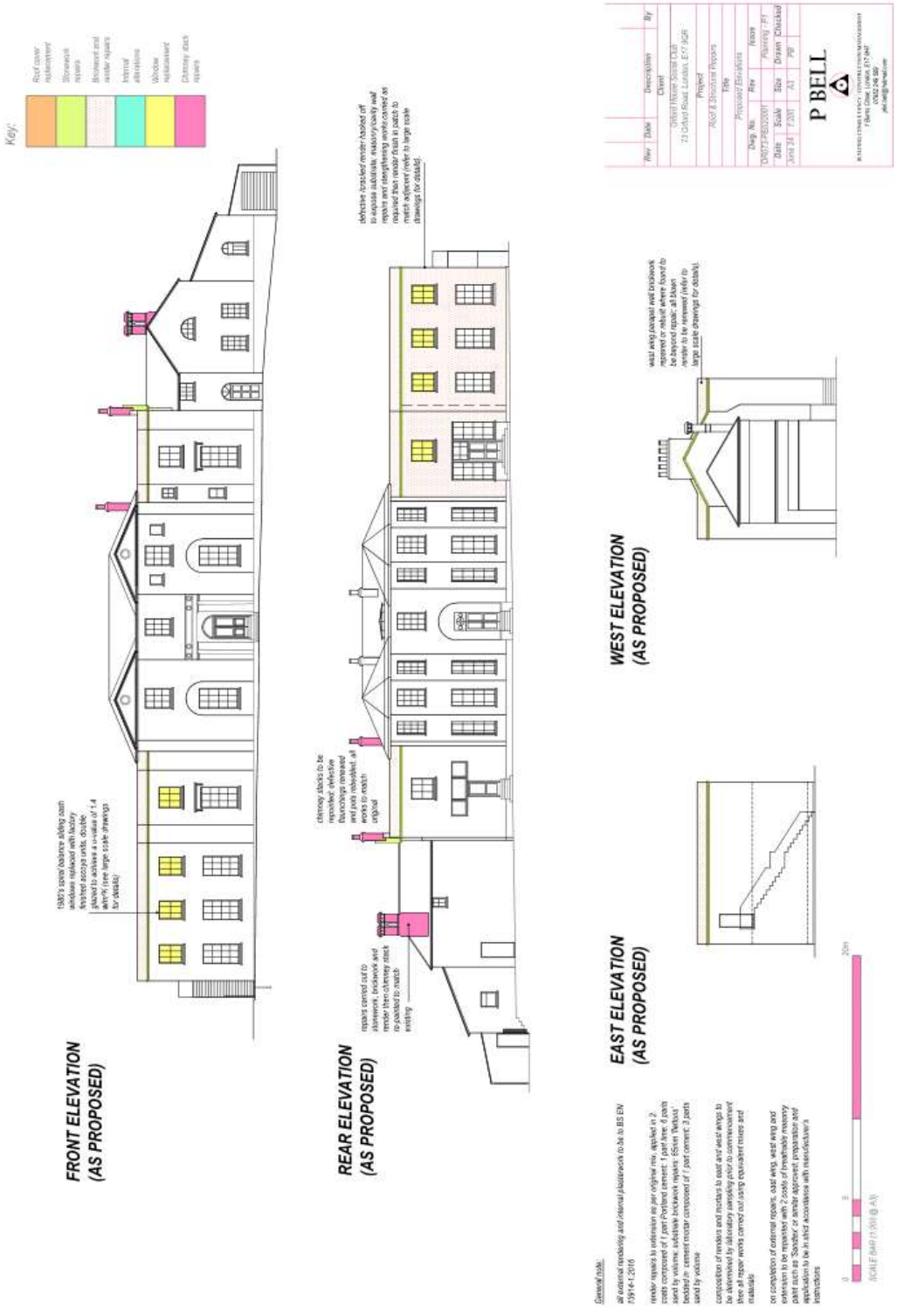

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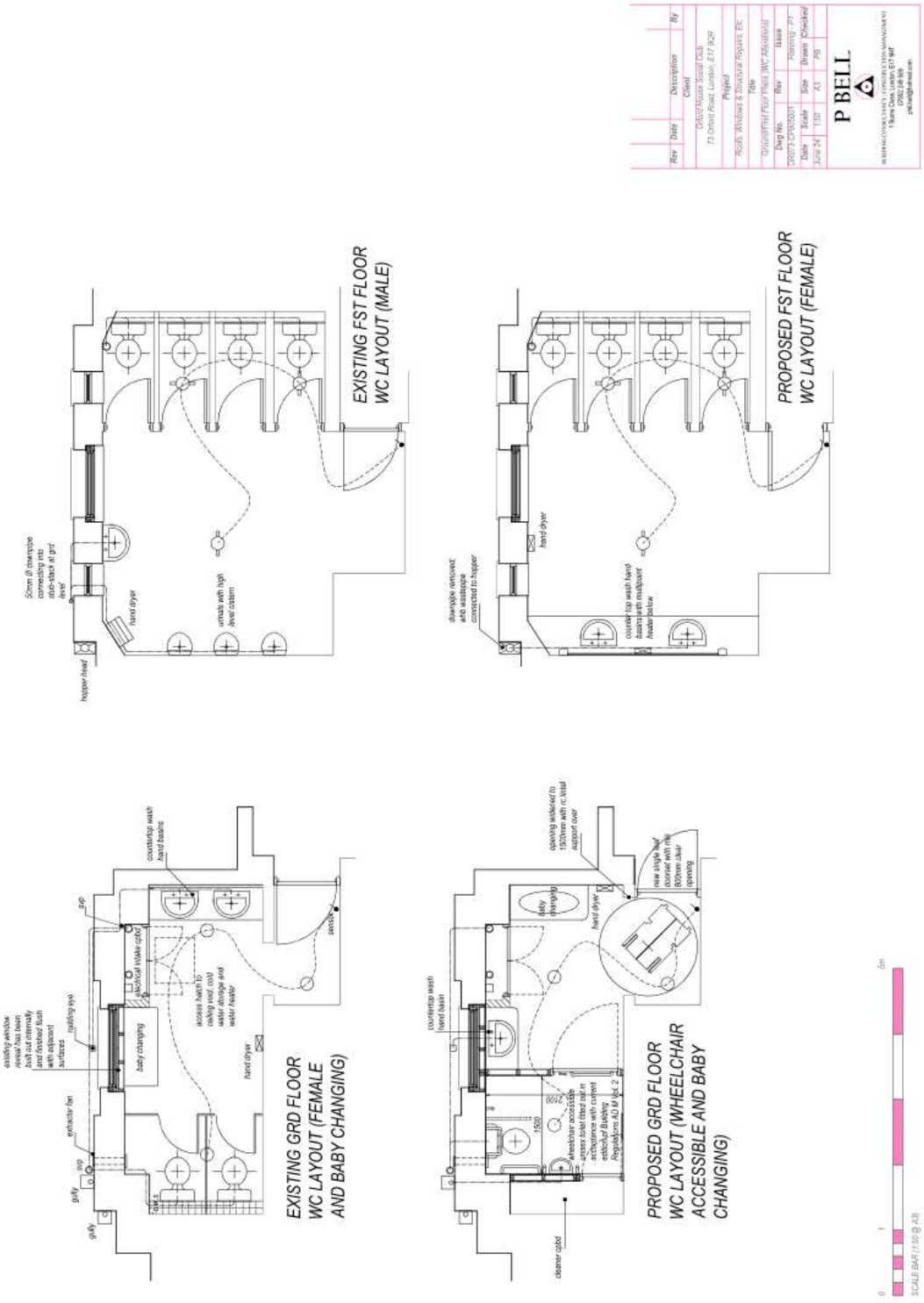

Appendix B

Products

Welsh Slate roofing material is available in three colours that reflect the true nature of beauty. These subtle and elegant colours are further complemented by the distinctive natural texture of slate, creating an added dimension to any roof whilst the variety of colours can be used to create a pattern or subtle contrast in a design.

These aesthetic qualities are combined with the material's natural durability and resistance to weather and temperature, making slate superbly adaptable and ideal for all environments.

As Welsh Slate produces only natural products from the finest raw material each slate has its own unique visual characteristics. Cwt-y-Bugail and Ffestiniog slate features natural Blue Grey banding. Penrhyn Quarry slate has natural Heather Blue tonal variations and may include natural green marking.

The quality of slate allows roofing slate to be produced up to 42" long as standard.

BENEFITS OF WELSH SLATE ROOFING

- Aesthetically pleasing
- Colour-fast
- Highly durable
- UK manufactured
- Sustainable material – 100 year+ useful life
- Low carbon footprint in the UK
- Eco friendly
- Unaffected by normal extremes of temperature
- Highly resistant to acids, alkalis and other chemicals

WELSH SLATE MANUFACTURE THE FOLLOWING PRODUCTS

- Roofing
- Walling
- Flooring
- Paving
- Aggregates
- Minerals
- Cladding
- Hard Landscaping

St Pancras Station, London.
Ffestiniog Blue Grey
Capital & County Grade Roofing

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Penrhyn Randoms

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BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Agrément Certificate
07/4435
Product Sheet 2 Issue 6

PERMO AIR 160 AIR OPEN ROOFING MEMBRANE

FOR USE IN COLD NON-VENTILATED PITCHED ROOF SYSTEMS

This Agrément Certificate Product Sheet(1) relates to Permo Air 160 Air Open Roofing Membrane, a polyolefin laminate composite for use in cold non-ventilated pitched roof systems.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review

KEY FACTORS ASSESSED

Section 1. Mechanical resistance and stability
Section 2. Safety in case of fire
Section 3. Hygiene, health and the environment
Section 4. Safety and accessibility in use
Section 5. Protection against noise
Section 6. Energy economy and heat retention
Section 7. Sustainable use of natural resources
Section 8. Durability

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Sixth issue: 15 November 2023
Originally certificated on 12 July 2007

Hardy Giesler
Chief Executive Officer

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Skyline Coping System

The Skyline Coping system provides an economical and easily installed capping to upstand parapets, in conjunction with flat or pitched roofs. The strap fixing method avoids penetration of the capping, whilst allowing ventilation over the top of the wall. Skyline Copings are equally suited to retrofit and new build projects.

Applications

- Provides a totally weatherproof covering to upstand parapets as fixing method does not penetrate the Skyline Coping
- Suitable for new buildings and retrofit

Performance

- Attractive, clean lines are maintained as fixings are not visible on the surface of the Skyline Coping
- The fixing strap profile allows ventilation over the top of the wall whilst remaining weatherproof
- Material thickness and fixing mechanism gives excellent rigidity
- Lightweight, durable and non-corrodible
- Coefficient of linear thermal expansion is 23 x 10-6mm/m/°C
- A gap of 3-4mm should be left between Skyline Coping sections to accommodate thermal expansion
- Life expectancy of aluminium: 40 years (rural/suburban areas); up to 25 years (industrial/marine areas)
- Aluminium is 100% recyclable

Components and Manufacture

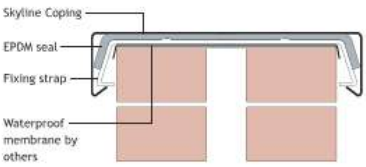
- UK manufactured
- Skyline Copings are fabricated from 2mm or 3mm thick aluminium alloy sheet, depending on width
- Fixing straps are pressed 3mm aluminium with extruded EPDM seals bonded to the top surface
- All fabricated fittings (90° corners, irregular corners, stop ends, closed ends, upstands, 90° tee junctions) are mitred, welded and have a smooth finish on the front face
- A waterproof membrane will be required beneath the Skyline Coping to provide an effective seal

Colours & Finishes

- In-house polyester powder coating facility with 16 BBA approved standard colours
- Additional BS or RAL colours available to special order; also available in plain mill finish for on-site painting

Installation & Fixing

- Simple and quick to install
- In most cases fixing can be carried out from the roof so no external access is required making it particularly suitable for renovation work
- Minimal maintenance requirements



Email: sales@guttercentre.co.uk or contact us on Tel: 0330 223 1731

ROOFTEC FLEX

Product Code	Colour	Width	Length
RPF1505AG	Anthracite Grey	150mm	5m
RPF15010AG	Anthracite Grey	150mm	10m
RPF2005AG	Anthracite Grey	200mm	5m
RPF20010AG	Anthracite Grey	200mm	10m
RPF3005AG	Anthracite Grey	300mm	5m
RPF30010AG	Anthracite Grey	300mm	10m
RPF4505AG	Anthracite Grey	450mm	5m
RPF45010AG	Anthracite Grey	450mm	10m
RPF6005AG	Anthracite Grey	600mm	5m
RPF60010AG	Anthracite Grey	600mm	10m

All rolls are sold individually. Black and lead grey colours available soon.
Wider roll lengths available to special order.

ROOFTEC H.T. ADHESIVE

Rooftec H.T. Adhesive is an MS Polymer based high tack adhesive suitable for sealing Rooftec Flex overlaps and sealing Rooftec Flex to tiles, slates, brickwork and mortar. Rooftec H.T. Adhesive can also be used for the adhesion of masonry, concrete, glass, PU, PVC, copper, lead, zinc, tin, aluminium, metals, alloys and stainless steel.

Product Code	Description	Colour	Box Quantity
RPFHTA	Rooftec H.T. Adhesive	Black	12

ROOFTEC FLEX ACCESSORIES

Product Code	Description	Quantity
RPFROLLER	Rooftec Steel Seam Roller	1
RPFSCISSOR	Rooftec EPDM Scissors	1

SAMAC

Samac Fixings Ltd
2 – 4 Capitol Industrial Centre
Fulmar Way
Wickford, Essex
SS11 8YW

Tel 01268 764488
Fax 01268 562085
Email sales@samacfixings.co.uk
www samacfixings.co.uk

Rooftec Flex is an EPDM-based lead replacement with a core of expanded aluminium mesh, giving the product exceptional strength, flexibility and life expectancy. EPDM and aluminium are both environmentally friendly materials, neither of which have any scrap value resulting in an (almost) endless list of advantages over traditional lead.

USES

- **Roof Abutments**
- **Chimneys**
- **Dormers**
- **Valleys**
- **Ridges**
- **Skylights**

Anywhere you used to install lead.

ADVANTAGES

- **Excellent UV and Ozone Resistant**
- **Long Roll Lengths**
- **Exceptional Flexibility**
- **Incredibly Malleable**
- **Super Light Weight**
- **Quick and Easy to Install**
- **Non Toxic**
- **40 Year life Expectancy**
- **No scrap value**

APPLICATION

Rooftec Flex acts just like traditional lead and should therefore be treated just like lead.

The following guidelines should be followed:

- Prior to applying Rooftec Flex it is important that surfaces should be dry and free from grease, oil and any loose particles.
- If Rooftec Flex is being applied to a porous surface, a primer should be used prior to fitting.
- When shaping Rooftec Flex during mounting, traditional lead tools can be used. Users should also be able to shape part of the application by hand.
- Rooftec Flex can be cut using heavy duty scissors or a sharp knife.
- Unlike lead, Rooftec Flex can be installed in full roll lengths up to 10 metres as it is not susceptible to thermal expansion. However for detailed work shorter roll lengths are recommended for easier shaping and mounting.
- If longer roll lengths are required or it is necessary to join shorter lengths, Rooftec Flex can be overlapped. Ensure a minimum lap of 100mm and seal with a continuous bead of Rooftec H.T. Adhesive.
- When mounting Rooftec Flex on to walls, Rooftec Flashing Clips, nails or rivets should be used to fix in place.
- The edges of Rooftec Flex can be folded to increase strength and make the roof covering even more stable.

CE **BS13956: 2006**
Flexible sheets for waterproofing

VELUX Heritage conservation roof window, GCL

Glazing 01

10 YEARS GUARANTEE

The VELUX Heritage conservation roof window is designed to be in keeping with historic façade aesthetics. Slim and elegant and sitting flush to the tiles, it blends beautifully into historic roofs.

- Authentic top-hung design in keeping with heritage aesthetics
- Slimmer black exterior profile for a perfect fit
- Seamless and stunning glass-to-edge fit
- Near flush installation blends into the roofing material, in keeping with the building's original character
- Central glazing bar that fulfils the design requirement for period authenticity
- Double glazing with glass-to-edge technology that comes with premium features, including safety lamination, toughened outer glass, UV filter, easy-to-clean coating and unique rain noise reduction
- The traditional roof window winding handle mechanism combines a simple operating method with a timeless heritage design

CE UKCA

PEFC

Accoya is a modified wood setting the benchmark for wood performance, finish and sustainability. It has been proven through intensive testing and in 1000s of projects worldwide to outperform the competition.

Approved Manufacturer Training Programme

Accsys run a training programme for manufacturers of Accoya products. We strongly recommend all companies manufacturing products from Accoya participate in the programme.

Key features

Accoya wood is produced from sustainably sourced, fast growing wood and manufactured using Accsys' proprietary patented modification process from surface to core.

- HIGHLY STABLE
- HIGHLY DURABLE
- IDEAL FOR COATING
- EXCELLENT MACHINABILITY
- BAREFOOT FRIENDLY
- NON TOXIC
- SUSTAINABLY SOURCED
- NATURAL WOOD
- 100% RECYCLABLE
- THERMAL INSULATOR
- INSECT RESISTANT
- STRUCTURALLY CERTIFIED

Standard lengths & grades

2.4m, 3.0m, 3.6m, 4.2m, 4.8m

Intermediate lengths of 1.8m, 2.7m, 3.3m, 3.9m and 4.5m also available on a lower volume basis. Finger Jointed available in 4.2m, 4.8m and 6.0m lengths.

- All A1, A2 and B grade dimensions are actual rough sawn.
- Companies processing Accoya can supply a wide range of standard and custom profiles from these sawn sizes.
- Accoya is available in four primary grades:

A1: **4 sides primarily clear. C22 strength grade.**
FJ/A1: **Finger Jointed to clear lengths.**
A2: **3 sides primarily clear. C16 strength grade.**
B: **Where there is greater tolerance for defects such as knots, resin pockets, wane or edge damage.**

Standard dimensions & grades

Heights	Widths				Grades
	100	125	150	200	
25	✓	✓	✓	✓	A1, A2, B
32		✓	✓	✓	A1, A, B
38		✓	✓	✓	A1, A2, B
50	✓	✓	✓*	✓*	A1, FJ/A1*, A2, B
63	✓*	✓*	✓*	✓*	A1, FJ/A1*, A2
75	✓*	✓*	✓*	✓*	A1, FJ/A1*, A2
100	✓				A1, A2

* See Finger Joint leaflet for actual FJ dimensions

Material
100% Solid Accoya wood
Durability
EN 350 Class 1 (the highest rating) and exceeding the performance of durable woods in long term ground contact field tests according to the local national standards in Australia, Japan, New Zealand and USA.
Equilibrium Moisture Content
3–5 % at 65% relative humidity, 20°C
Density
Average 510 kg/m³, 65% RH, 20°C, Range 400 to 600 kg/m³
Shrinkage
WET – 65% RH / 20°C* Radial – 0.4% Tangential – 0.8% *Average Values
WET – Oven Dry* Radial – 0.7% Tangential – 1.5%
Material Fire Rating
Class C in USA (ASTM E84) and D in Europe (EN14915) like most softwoods. Accoya wood can be fire treated to meet higher requirements.
Thermal Conductivity
EN 12667, λ = 0.12 W/m · K ASTM C177, y = 0.102 W/m-K
Bending Strength
Accoya A1 quality is classified as C22 strength grade and Accoya A2 quality is classified as C16.
Bending Stiffness
EN 408, 8800 N/mm²
Janka Hardness
ASTM D143, Side 4100 N (922 LBF), End grain 6600 N (1484 LBF).
Brinell Hardness
2.4 EN 1534 (2010)

Insect decay

Accoya wood is indigestible to a wide range of pests and an effective barrier to attack. Five year ground contact testing by independent laboratories in Florida USA, Northern Territory Australia and sites across Thailand has shown less termite damage on Accoya than on naturally durable species such as FEQ Burmese Teak and Spotted Gum.

Salt water contact and immersion

Accoya is not detrimentally affected by salt water contact or immersion. Field testing over 10 years immersion have shown some attack on Accoya by marine organisms but less than that sustained on other durable woods in test.

Machinability

Processing does not affect the unique properties of Accoya wood, as it is modified to the core. It is relatively easy to process and comparable to a softwood or medium density hardwood such as Yellow Poplar (Tulip Wood). With the right training no special tools are required for cross cutting, ripping, planing, routing and drilling. Further details can be found in the Accoya Wood Information Guide.

Gluing

Both load bearing and non-load bearing applications have been tested using adhesive systems for laminating, finger jointing and frame corner joints. While good results can be achieved with most common adhesives, PU, EPI, epoxy and PRF give the best results. Results using polyvinyl acetate (PVAc) can vary greatly. MUF adhesives should be avoided. Contact your adhesive supplier for more information.

Finishing

A finish or coating does not need to be applied to Accoya to achieve longevity and dimensional stability. Details on natural weathering of uncoated Accoya can be found in the Wood Information Guide. Most commonly used coating systems can be used on Accoya wood. Testing has been performed with a full range of oil-based and water-based coating systems. Leading coating manufacturers have found that their film form coating systems last longer on Accoya. Contact your coating supplier for more information.

Fastening

The use of corrosion-proof steel fastenings that conform to EN 10088-1 is recommended such as A2, A4 quality stainless steel. Use of other metals and alloys is included in the Accoya Wood Information Guide.

For more information please refer to the Wood Information Guide at www.accoya.com

BEST PRACTICE:

When coating Accoya wood it is strongly recommended to follow these supplemental guidelines whenever possible to achieve a quality finish.

1. A fully factory applied coating is strongly recommended. If site finishing is required, then at least a primer and mid coat should be applied in the factory and the top coat must be applied before the coated product gets wet on site.
2. Accoya wood must be dry, clean and free from dust when coated. This is critical when brush applying top coats on site. Please see the Accoya Wood Information Guide Section 4.
3. When using an opaque base coat, preferably an effective and well applied stain blocking primer is included.
4. Translucent coating systems should contain an effective moldicidal component to protect the wood from unattractive molds and mildew. As with other wood types and being a natural material, the porosity of Accoya may vary. Therefore when applying translucent stains, it is advisable to test a sample area first.
5. Surface preparation is recommended to achieve a more uniform appearance with translucent coatings. Planed surfaces that are left for a period also benefit from surface preparation by sanding, fladding or textured brushing, helping to balance and freshen the surface. Accoya has a pH range of 4 - 5.5. Please see the Accoya Wood Information Guide Section 5.
6. Sealers must be effectively used on all end grain, with a product that is compatible with the paint system and approved by the coating manufacturer.
7. Dip and flow coat application of the first coating layer is widely practiced on all wooden joinery and is particularly effective in forming an all encompassing first coat. Monitor and control the level of wetting of Accoya during the flow coat, dipping & deluge application process. Accoya is more porous than hardwood and some softwoods. Excessive wetting should be avoided as this can significantly extend drying times. Please see the Accoya Wood Information Guide Section 9.5.
8. Coating manufacturer's application guidance should be followed with particular focus on, avoiding aeration in the coating film when spraying, cold coatings (should typically be above 15°C at application), correct film thickness and appropriate drying techniques/conditions.

   Opaque coatings with calcium carbonate (chalk) fillers can cause coating blistering on Accoya and should be avoided. Please consult your coatings provider.
9. Coatings should be thoroughly cured in a moisture and temperature controlled environment and in line with coating manufacturers guidelines. This often involves overnight drying between layers. Control is particularly important in colder months. Coated Accoya should be stored on site as per coating manufacturers guidelines.
10. It is strongly recommended to use corrosion resistant hardware with Accoya products. However, applying 3 layers of paint behind hardware that may be prone to corrosion helps to create an isolation barrier between it and the wood. It is also good practice to spray inside any lock housings and apply end grain sealer. Please see the Accoya Wood Information Guide Section 9.

VERSION: ECGV006OCT21LON

SANDTEX MICROSEAL SMOOTH MASONRY PAINT

SUITABLE SURFACES

Suitable: For use on most sound, dry exterior surfaces including render, roughcast, pebbledash, concrete, building blocks, facing bricks and previously painted surfaces.

Not Suitable: On common, fletton or engineering type bricks. If in doubt contact our Sandtex Advice Centre on 0330 024 0303.

PREPARATION

General Preparation: All surfaces must be sound, clean, dry and free from anything that will interfere with the adhesion of the paint. New surfaces usually require little preparation but must be completely dried out before painting. Avoid the inhalation of dust. Wear a suitable face mask if dry sanding.

Fungal Growth and Mould: Treat any organic growth with Sandtex Fungicidal Wash, see pack for application details.

Loose or Flaking Material: Remove all loose and flaking material by scraping or brushing with a stiff bristle brush (not wire).

Chalking, Weathered. Powdery or Porous Surfaces: These surfaces should be brushed down and treated with an application of Sandtex Stabilising Solution.

As with all coatings preparation is key and poor preparation will result in poor coating performance.

APPLICATION

Colour: We recommend a trial application before you start, in an inconspicuous area to confirm your colour choice. If using more than one batch of paint mix them together before application to ensure colour consistency.

General Application: Stir well before and during use. Apply with a good quality masonry brush, exterior roller or airless spray. See spray manufacturer's instructions for guidelines on application. Do not apply if there is a risk of rain or frost, or if the temperature will fall below 8°C during drying.

Drying Time: Re-coatable after 3-4 hours in normal conditions.

Cleaning: Wash all equipment in clean water immediately after use.

TRANSPORTATION & STORAGE

Ensure this pack is stored upright and secure at all times. Do not store below 5°C or above 40°C. Crown Paints is not liable for decorating costs caused as a result of an incorrect colour being applied, damage caused by spillage or a failure to follow manufacturer's instructions.

Appendix C

Photographs

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1 Burns Close
London
E17 9HT

		
Front elevation	*1980s extension*	*Annex buildings*
		
Rear elevation	*West wing roof viewed from ridge of west hip end of main roof*	*Roof framing to west wing roof*
		
Parapet gutter, west wing roof rooflight, west hip of main roof	*Parapet gutter and front parapet wall looking towards west hip of main roof with gable roof over front pediment in the background*	*Chimney stack to west wing roof and decorative stack to annex building in background*
		
Parapet gutter lining detail	*Lathe and plaster soffit to west hip of main roof*	*Deteriorated stonework to west wing*

		
Lead detail to ridge and hips of west wing roof, eaves details to west hip of main roof on the right	*Hidden gutter detail to main roof eaves*	*Cornice detail to west wing parapet with flaunching added to top surface to allow rainwater run off*
		
Rotted end of hip rafter below west wing roof	*East wing and extension roof*	*Reinforced liquid membrane poured over original three layer bitumen felt*
		
Rear parapet looking east	*East hip end of main roof looking south*	*East hip end of main roof looking north*

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Internal plaster damage below extension parapet	*Internal detail showing brickwork bearing onto concrete cornice stone and steel beam built into brickwork*	*Plaster damage to walls and ceiling in games room*
		
East wing and extension rear elevations	Detail showing cracking to render and possible cavity tie failure below concrete cornice	Rear elevation looking east with west wing parapet in foreground
		
Rear elevation, main building, east wing and extension	*East wing and extension with butt joints to cornice visible*	*Extension windows detail*

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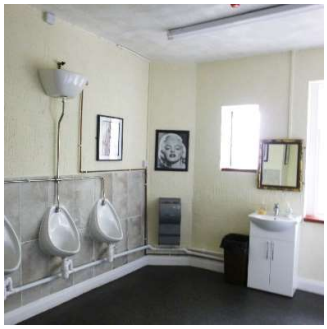
Female toilets and bay changing	*Female toilets showing hatch to ceiling void*	*Ceiling void showing window shutters and original wall surfaces concealed behind wall and ceiling boarding*
		
First floor men's toilets 1	*First floor men's toilets 2*	*First floor men's toilets 3*

Appendix D

Historical Maps

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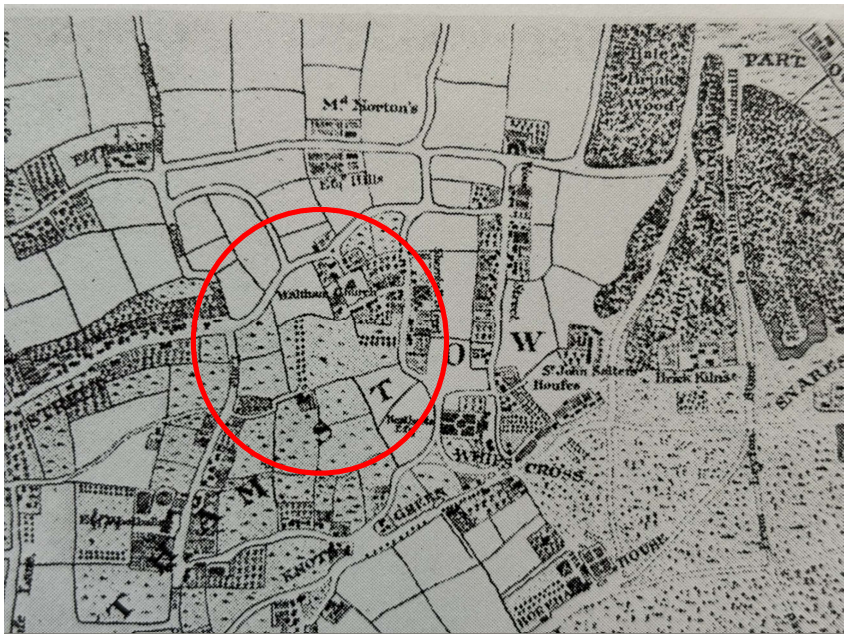
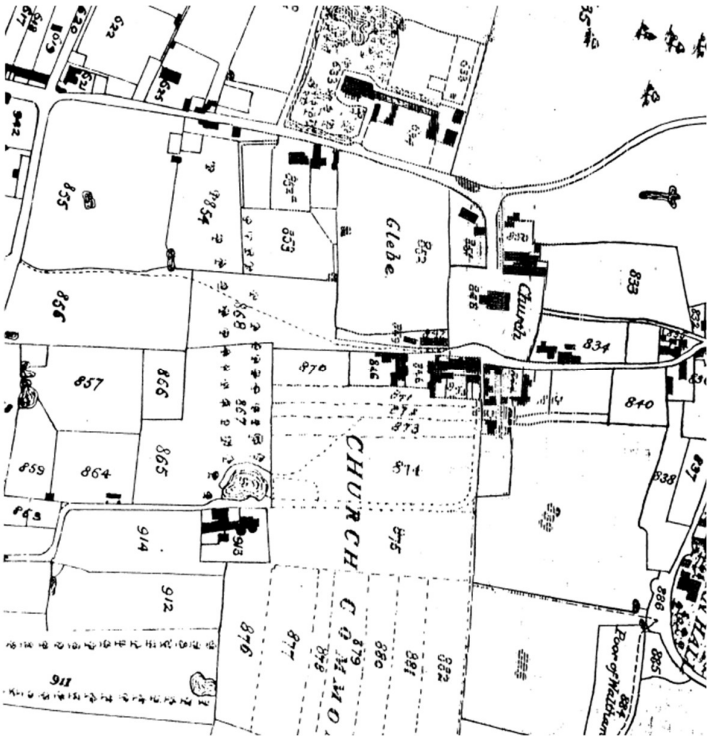


John Roque Map 1744



John Coe Map 1822

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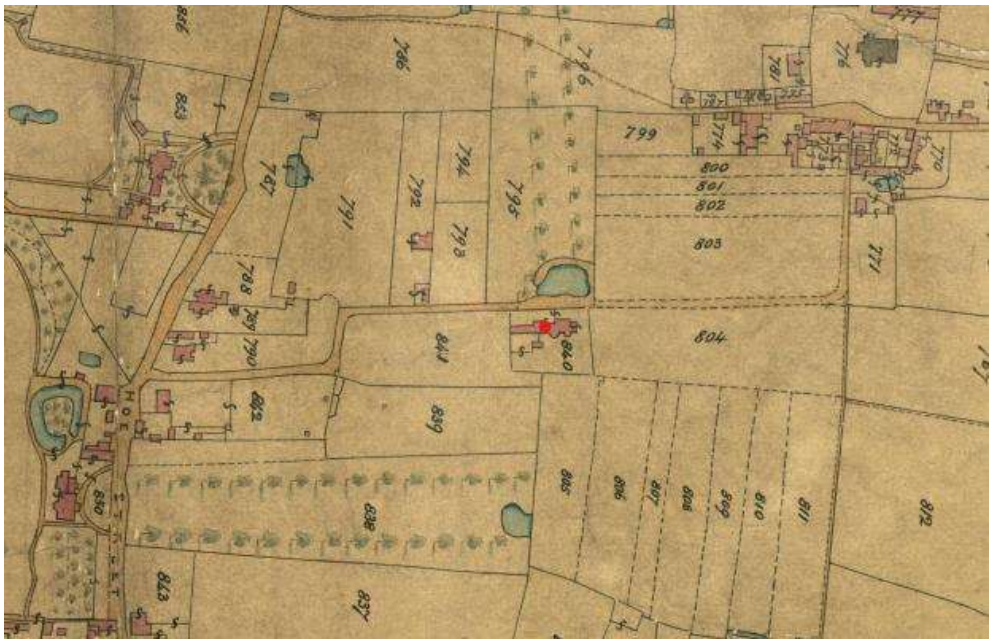
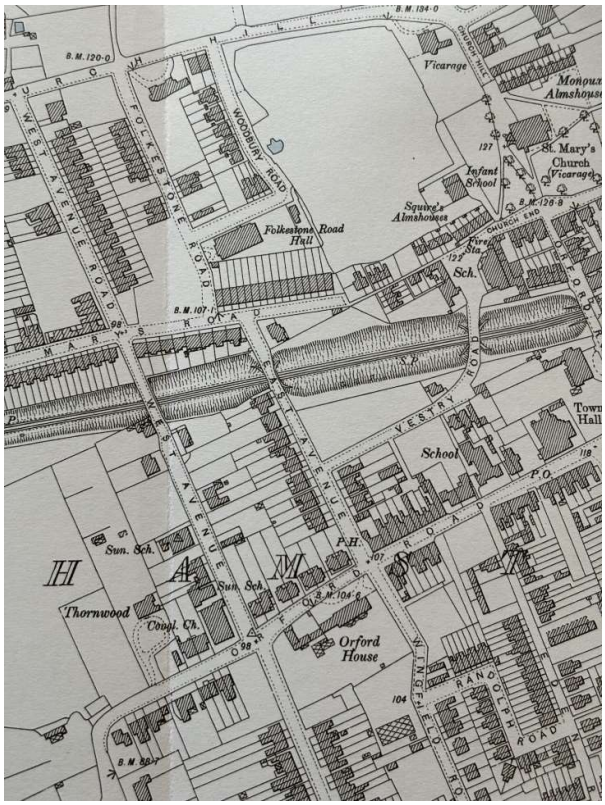


Tithe Map 1842



OS Map 1896

Appendix E

Historical Photographs

South elevation 1969

North elevation 1971

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Commencement of extension works August 1981