



TWO WATERHOUSE SQUARE

MIDTOWN

OUTLINE SPECIFICATION

1.1 Building Description

Location

Two Waterhouse Square
138-142 Holborn EC2

The building forms part of a complex of buildings developed over a period of time from the mid 1870's onwards by The Prudential Assurance Company, known as Holborn Bars. Parts of the complex were designed by Alfred Waterhouse and the whole site is Grade II* listed.

Two Waterhouse Square incorporates three previously separate terra-cotta and red brick clad buildings: the richly moulded offices facing onto Waterhouse Square – R6 (1895), the offices with internal arches on Leather Lane – R7 (1885) and the turretted R11 on Brooke Street (1895). Two further floors were added by Alfred Waterhouse's son Paul in 1919 to R6 and R11. These buildings were linked by the new build extension in the 1980's, extending the building Northwards. The new extension included two internal atria.

No.2's main entrance is from Waterhouse Square and shares boundaries with Buildings No.s 1 and 3 all of which face onto Waterhouse Square. The Square has public access from Leather Lane to the East, Brooke Street to West, and Holborn to the South.

Planned Letting Strategy

The refurbishment provides brand new Cat A finishes and a remodeled and re-clad atrium to reflect the revised letting strategy, providing a reception desk, as a focal point to the building.

The refurbishment will create efficient Grade A office space. The building is capable of being let as a whole or on a floor by floor basis. The floor plates may be subdivided further.

Strategic Overview

The redevelopment of the main entrance is influenced by the building's listed status and will create a striking entrance with a visual link from Waterhouse Square into the heart of the building – the Main Atrium.

The building comprises large open plan office floor plates over Lower Ground to Fifth floors. It has two full height atria, termed 'Main Atrium' and 'Atrium 2'. A further internal atrium open at the First floor, enclosed and rising to the Fourth floor, at the north side of the building brings additional natural light into the office spaces.

Car parking is shared with No.s 1 and 3 Waterhouse Square and cycle racks are provided in allocated areas within the car park.

8 x passenger lifts are provided from the Main Atrium; 2 x goods lifts which serve the loading bay serve to Lower Ground floor and Basement levels at Core 1. There are 2 x fire fighting lifts at Cores 5 and 6.

Cores 1 and 2 will provide general toilets, including a unisex toilet at each core, all in accordance with Part M of the building regulations. New showers are to be installed at Lower Ground floor level adjacent to the car park and cycle provision.

The works shall review the existing design in relation to Part M of the Building Regulations / BS8300:2009, and the Disability Discrimination Act (DDA), and incorporate improvements wherever practically possible.

1.2 Critical Design Data

Floor to Ceiling Heights

Office areas: 15,725 m² (169,264 ft²) Total to be confirmed following measured survey

Floor to floor: 4100 mm generally, 4400 mm at First floor, spaces to R6, R7 and R11 vary.

To include:

Raised floor zone (overall): 250 mm (generally)
Finished floor to suspended ceiling: 2700 mm generally, 3000 mm around the zone adjacent the main atrium at the First floor, with local variations as may be necessary to accommodate the sensitive architectural fabric.

Ceiling / lighting zone: 150 mm
Ceiling void and Structure: 1150 mm



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Occupancy Levels

For the purpose of calculation, the following occupancy levels will be used:

Sanitary accommodation:	1 person / 10m ² (60% male / 60% female)
Means of escape:	1 person / 7m ²

Floor Loadings

Existing 1980's structure:	4+1kN/m ²
Existing 19th century structure:	2.5kN/m ² capacity
Existing car park:	2.5kN/m ²
New office floors:	(3+1)kN/m ²

Design Life

The design life for the works undertaken as part of this project is to be generally as set out in Table 4 of BS 7543:2003 and assumes that maintenance will be carried out as Level 2 of Table 1.

Elements of structure:	60 years
Curtainwalling:	30 years
Interior stone:	60 years
External envelope works:	30 years

1.3 Quality Standards

All workmanship will be specified to be executed in accordance with the relevant British Standards Codes of Practice current at the time of the development. All materials used in the works are specified to comply with all relevant British Standards and/or Agreement Certificates. In the absence of an appropriate code, the work is specified to conform with current good practice, including the recommendations of the British Property Federation's 'Good Practice in the Selection of Building Materials'.

The works shall at all times have due regard to the principles and (where appropriate) requirements of:

- PRUPIM Environmental Policy Statement dated October 2006;
- PRUPIM FSC Policy on the Purchasing and Use and Timber dated 30th January 2007; and
- PRUPIM Development's document entitled 'Sustainable Refurbishment – A Framework for Decision Making'.

1.4 Superstructure

Frame

From site investigation the existing building is of in-situ concrete at Basement, Lower Ground and up to Ground floor. The superstructure is of steel framed construction with composite concrete 'holorib' slabs. Stability is achieved by the bracing action of the cores.

The R6 building is apparently of riveted steel and will be subject to further site investigation. New structural steel work will include the extension of 2no. existing floor slabs and remedial work where masonry infill shall be removed.

R7 is of concrete floors spanning onto masonry arches.

All new steel will be protected with zinc-rich epoxy paint and barrier coated with micaceous Iron Oxide. Fire protection will be achieved by intumescent paint. Any existing steel structure uncovered as part of the works and has evidence of damaged fire protection this shall be remediated with fire boarding.

Upper Floors

The new extended floor slabs will be of composite concrete 'holorib' slabs on steel frame. Existing hanger 'columns' shall be removed. Subject to structural design new risers to be formed in the existing floor slabs to accommodate future tenant fit-out of kitchen/ restaurant facilities and IT risers.

Roof

The roof structure was constructed as an inverted roof system with pebbles as ballast, or concrete slabs, on a filter membrane, on Foamglass insulation board on asphalt waterproofing and sheathing felt on a concrete deck laid to falls.

Main Atrium has a clear double glazing finish on a painted steel truss construction.

Atrium 2 has a clear double glazing finish on a painted steel truss construction.

The roofs to R6, R7, and R11 were constructed on asphalt with solar reflective paint on Foamglass insulation, on a concrete deck.

Staircases

The structure to cores 1, 2, 5, 6, 9 and 18 are retained and of pre-fabricated metal.

Stair 10 is existing and of concrete construction.

Handrails and Balustrades

The handrails and balustrades to the existing staircases in cores 1, 2, 5, 6 and 18 are of Trimite painted steel.

The handrails to existing stair 9 are of polished hardwood with Trimite painted steel balustrades.

The handrails to existing stair 10 are of polished hardwood.



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New balustrade and handrails will be polyester powder coated galvanised steelwork or polished stainless steel to match existing.

1.5 External Walls

Facade

The rear of the building portion is generally of red granite cladding and louvers with a mixture of polished, honed and flamed surface finishes. The windows are of polyester powder coated aluminium with clear double glazed units and metal doors, fixed onto a concrete block/reinforced concrete walls with thermal insulation vapour seals.

The First to Fifth floors are generally as the Ground Floor, with granite rain screen metal cladding panels.

The full height glazed feature wall on Beauchamp Street is a powder coated double glazed curtain wall, fixed onto curved steel trusses and stepped back above the Third floor.

The 19th century portions are of decorative terracotta or brickwork.

New windows to the East Elevation shall match existing, incorporating matching granite to complete the new construction conversion from doors to windows. The external panes at Ground floor level will be toughened for security reasons. All toughened / laminated glass will be to BS 6206 Class A and toughened glass will be heat soaked in accordance with DIN 18516 Part 4.

External Doors

The entrance to the main reception Entrance Hall (R6) is via two manual action fully glazed revolving doors of 3no. leaves and of 2.40m diameter. Disabled access is provided by fully glazed automatic pass doors to either side of the entrance.

Car Access

As existing: via the basement shared with other buildings within the complex.

Goods Access

As existing: via the basement shared with other buildings within the complex.

1.6 Internal Walls & Partitions

Existing internal walls are of both blockwork and lightweight metal stud partitions, with a plaster or plasterboard finish both sides.

New walls to upper floors shall be of lightweight metal stud with plasterboard finish both sides.

Walls to plant rooms and basement areas will be dense concrete blockwork.

Toilet Cubicles

Cubicle doors, Amwell Sylan or similar approved, will be floor to ceiling finished in timber veneer with stainless steel push plates and skirting. Doors are to be inline and flush. Cubicles walls shall be a white laminate.

Air circulation to be allowed below and above each door for discreet extract purposes.

Ironmongery will be satin stainless steel.

Internal Cladding to Main Atrium

New cladding to be of laminated glass and glazed spandrel panels and provide a capless system, framing to be of PPC finish.

The feature tube shall be fixed through the glazing system.

1.7 Internal Doors

New American black walnut doors will be provided to the office, circulation and stair lobby areas. New toilet entrance, lobby doors and on floor AHU plant doors shall be solid core softwood.

All fire check doors to be either FD30/FD30S or FD60/FD60S complying with BS 476 Part 22, to be self closing with intumescent strips, signage and smoke seals to Fire Officer / Building Control approval.

Ironmongery will be stainless steel and will typically include 1.5 pairs butts, overhead hydraulic closers, 600 mm long pull handles and push plates and discreet signs. Mortice locks will be fitted with interchangeable suited barrels with escape snibs as appropriate. Ironmongery shall be Allgoods 'D' line.

Lock suiting and master key requirements will be as specified by the Client.

Duct access doors will be painted flush timber doors sets, fire rated to the appropriate standard.

1.8 Internal Finishes

Wall Finishes

Office Areas

Three coats emulsion paint on taped and jointed plasterboard. Existing timber skirting shall be refurbished. Painted MDF skirting will be provided to core walls within office areas.



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R11 Office Level 2

Existing timber wall panelling shall be refurbished.

Toilet Areas

Walls will generally be finished in a combination of three coats of emulsion paint, applied directly to taped and jointed moisture resistant plasterboard, mirrors and back-painted glass, with 100 mm stainless steel skirting.

Escape Stairs

All walls will be refurbished with emulsion paint finish on the existing substrate.

Entrance Hall (R6)

The existing walls shall have three coats emulsion on the existing substrate.

The existing feature faience columns shall be cleaned and restored.

The existing fire alarm panels shall be replaced and reinstalled within a frosted glass panelled door, subject to Fire Officer / Building Control approval, and shall be flush with the wall finishes. Ironmongery is to be minimal, subject to Fire Officer / Building Control approval.

Main Atrium

Existing finishes to South wall to be refurbished and cleaned including roof structure and glazing.

Atrium 2

Existing finishes to be refurbished and cleaned including roof structure and glazing.

Lift Lobbies

The Ground Floor lift lobby walls shall have the existing marble architrave detail removed and replaced with low-iron inter-layered white glass panels, with a 10 mm wide stainless steel detail between the panels.

The First floor lift lobby walls shall have the existing marble architrave detail removed and replaced with 3 coats emulsion paint on taped and jointed plasterboard.

The Lower Ground, and Second to Fourth floor lift lobby walls shall have three coats emulsion paint on taped and jointed plasterboard.

The Fifth floor lift lobby walls shall have 3 coats emulsion paint on existing plasterboard.

Car Park

An area for recycling shall be delineated with external grade paint finish in line with BREEAM guidance. 20 car parking and 50 bicycle spaces are available to let with Two Waterhouse Square.

Floor Finishes

Office Areas

Medium Duty fully accessible steel encapsulated raised floor to comply with MOB PF2 PS/SPU. Shiny finish to the raised access floors – to be protected as part of the works until handover. Sealed cavity fire barriers provided at max. 20m centres.

Toilets

Self levelling screed with ceramic tiles to provide slip resistance value (SLV) (minimum) to comply with BS 7932 with a Pendulum Test Value (PTV) of 40 in both wet and dry conditions.

Escape Stairs

Above Ground level, all landings and treads will be finished in heavy duty, bonded loop pile, carpet with PVC nosings and edge trims, with tactile carpet at head and foot of each stair riser. Below Lower Ground level the finish will be sheet vinyl with PVC nosings and edge trims.

Entrance Hall (R6)

Sanded dark grey slate floor with a sanded light grey pattern inlay, to provide a slip resistance value (SLV) to comply with BS EN 14231 (natural stone) with a Pendulum Test Value (PTV) of 40 in both wet and dry conditions.

An aluminium reinforced entrance mat will be fitted adjacent the main entrance doors.

Ceiling Finishes

Office Areas

Fully accessible modular suspended ceiling system utilising perforated metal tiles based on a 750 mm grid. It will incorporate 600 mm square low brightness louvers allowing tenants to provide a scheme to comply with CIBSE LG7 requirements as part of their fit out. Air extract will be via dedicated swirl diffusers for the air-conditioning extract system. Swirl diffusers shall be incorporated within the 750 mm grid. Acoustic pads will be provided to the back of the perforated ceiling tiles for damping to achieve the specified acoustic performance where necessary. All ceilings to be laser levelled. Sealed cavity fire barriers provided at max. 20m centres.

Perimeter slot diffusers for air supply will allow even air distribution adjacent to the perimeter located within a continuous plasterboard margin. 'True-Line' shadow gap edge trim to perimeter of office space. Provision is made at the ceiling edge at windows for the tenant to install blinds. The ceiling is designed to allow partitioning on a 1.5m planning module for flexibility and efficient space planning.



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Ceilings will be capable of achieving a weighted sound reduction index, R_w (minimum), to BS EN ISO 717-1: not less than 40dB. Ceilings will have a sound absorption value of approximately NRC 0.8.

Toilets

Plasterboard finished with three coats emulsion paint. Ceiling to include feature lighting incorporating low voltage recessed downlighters. Access to services above ceiling to be accessed from accessible ceilings from the AWC, cleaners cupboards/service ducts.

Escape Stairs

Emulsion paint finish on dry lining as above or fair faced pre-cast concrete soffits.

1.9 Fittings, Furnishings

Reception Desk

A reception desk will be provided to the Main Atrium at Ground Floor level. This will substantially be of Corian or similar approved, with bead-blasted stainless steel and glass writing surfaces.

The desk shall incorporate mechanical and electrical services, and the external face shall be lit from buried uplighters

Installed flush with the existing floor finish. Heating and cooling to the desk will be located within the floor.

Reception Desk 'Spun Halo' Sculpture

Over the reception desk two connected circular tubes of polished stainless steel

shall be hung from a stainless steel frame and steel wires.

Illuminated curved tube sculpture to new Main Atrium cladding

Security Turnstiles

The Main Atrium will be provided with security turnstiles and associated toughened glass barriers.

1.10 Services

Main, Sub-Main and Final Distribution

Each tenant's demise will be supplied from the existing utility mains and existing rising bus-bars. Within each on-floor riser tenants supplies will be derived from the non-essential and critical bus bars via a new tap-off units and sub-meter. The non-essential panel board will support all tenant's CAT-A loads.

The critical panel board will supply the under-floor power and be provided with a drop-out mechanism which will shed the respective loads in the event of a mains failure.

Sub-metering will be provided to each tenant's distribution boards and networked to a standalone billing/metering system to enable automatic monitoring of Tenant's electricity usage.

Local landlord's distribution boards will be provided complete with tap-off units and energy meter to serve landlord's demises.

Services Equipment

The building is provided with roof mounted plant space and a riser strategy to facilitate the installation of the following tenants systems:

- Kitchen supply and extract plant
- Comms room heat rejection plant
- On-floor reheat ('Deli') kitchen exhaust plant

The building strategy has also been developed to allow the installation of a kitchen and restaurant facility in the following locations:

- Kitchens floors Second to Fifth floor
- Deli-kitchens Ground to Fifth floors

Design Criteria

General office areas:	12 litres/s/person
Toilets:	10ac/hr
Deli Kitchens:	10ac/hr
Kitchens (full):	40ac/hr

Disposal Installations

The above ground foul waste and rainwater drainage will be retained as existing and adaptations to the systems shall comply with BS 5572 and be subject to the approval of the Building Control Officer.

All soil and rainwater systems will use separate pipe work and will be designed to allow for effective future maintenance and cleaning.

Hot and Cold Water Services

Domestic hot water will be provided by the central domestic hot water calorifiers. The water supply will meet current water regulations and all statutory requirements.

Potable water supplies will be provided at Cores 1 and 2, at the service risers for future tenant tea points and kitchen requirements, all derived directly from existing gravity fed roof water tanks.

The hot water services will be in copper pipe work to the various sanitary appliances as necessary.



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Domestic cold water will be supplied to all sanitary fittings from existing roof mounted tanks via gravity fed system.

A new meter will be provided to the Building 2 water supplies.

Sanitary Appliances

Fixtures and Fittings

Vanity unit tops and splashbacks will be of 'Corian' or similar approved, with formed basins and refuse chutes. Vanity units all have fitted mirrors over, concealed steel frame support system and feature lighting.

Concealed WC suites and urinals and be white vitreous china. Wash hand basins will have chrome plated 'popup' waste.

Spurs shall be provided for the future provision of electric hand dryers.

PIR action taps and waste traps will be chrome plated.

A full range of accessories including coat hooks and toilet roll holders will be provided within each cubicle.

Unisex Accessible WCs

There will be two unisex accessible toilets on each floor from First to Fifth, and one at Ground and Lower Ground floor level. Finishes are as the main toilets with all statutory grab rails and facilities provided.

Showers

Male and female showers are provided at Lower Ground floor. The facility shall provide one unisex accessible shower / toilet room and five single-sex showers to each the male and female changing zones. The finishes shall be to the standard of the other toilet areas.

All non-accessible showers to incorporate a tiled floor, chrome plated shower unit with concealed pipe work and glass door. The accessible shower will incorporate a shower deck grille on frame to lie flush with tiled floor finish.

There are capped services for increased occupancy at First floor at both main cores.

Cooling Plant

CHW:

Chilled water will be derived from existing common chiller plant. A new plate heat exchanger and associated secondary pumps will be installed to hydraulically separate Building 2 from Buildings 1 and 3.

Heat Source

Heat generation will be from the Landlord's common boiler plant.

Internal Design Conditions Criteria

Temperature

The controlled environment conditions shall be maintained at:

Offices:	22°C db + 2°C or -2 °C
Reception desk:	21°C min. -26°C db max.
Toilets:	18°C db minimum
Showers/drying room:	25°C db minimum
Entrance:	16°C db minimum
Corridors/circulation:	18°C db minimum
Staircases:	16°C db minimum

at all occupation times when:

1) the external temperature conditions are at or between the following values:

3°C db / 2°C wb	Summer condition
-4°C db 100% RH	Winter condition

2) the concurrently occurring internal loads are as scheduled below:

Occupancy density:	10m ² floor space/person 7m ² floor space/person (First floor only)
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Occupants	90 W sensible / 50 W latent per person (Occupants are assumed to be at an activity level of seated, working at rest)
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Lighting:	12 W/m ² floor space (a target of 10.125 W/m ² is set to achieve PRUPIM aspirations)
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Small power:	25 W/m ² plus 15 W/m ² floor space (in the risers and on-floor plant)
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60 W/m² floor space (First floor only)

Relative Humidity

No humidity control will be provided.