



# RIDGE

**1-87 REGINA ROAD SOUTH  
NORWOOD SE25 4TW – TOWER  
BLOCK SURVEY  
CROYDON COUNCIL**  
August 2021

# VERSION CONTROL

VERSION	DATE	DESCRIPTION	CREATED BY	REVIEWED BY
1.0	03/08/2021	PARTIAL DRAFT ISSUE – PRIOR TO QA	CF	N/A
2.0	09/08/2021	QA'd DRAFT	CF	MT
3.0	10/08/2021	Revised following meeting with CH & OSB	CF	N/A
4.0	13/08/2021	Revised following comments & FRA record information	CF	N/A
5.0	09/12/2021	FINAL	CF	CF

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## 1. EXECUTIVE SUMMARY

Ridge and Partners were appointed on 14<sup>th</sup> May 2021 to undertake a targeted Survey of 1-87 Regina Road, South Norwood, SE25. The objective of the survey is to summarise the condition of the block and provide sufficient information in order to inform Croydon Councils investment strategy for the block.

The building was surveyed by representatives of Ridge and Partners on the 18th June 2021 and the 25<sup>th</sup> June 2021.

1 – 87 Regina Road, South Norwood, SE25 is a 10 Storey (Plus Ground) block consisting of 44 flats. Each floor contains 4 One-bedroom flats. The block was constructed in 1964 by Messrs Wates.

We have recommended remedial works to the block within Section 17 of this report. We have provided cost and programme options within Appendix 8 & 7 respectively, i.e., refurbishment works with and without residents in situ, as well as a high-level option for redevelopment of the site.

Please note a Croydon Council have confirmed a number of the recommendations within the FRA's have been completed and this information is contained within the Appendix 5, however, we have not been provided with a schedule of the works executed or certificates of compliance for the works completed. Until such time as this information is provided, we will retain the foregoing within the report.

We have not undertaken a full HHSRS assessment and would recommend that one is undertaken in order to understand the rating per dwelling including assessing the occupants and occupancy levels. We have undertaken a highlight assessment of the whole block and not specific dwellings. None of the categories were classed as Severe (Class I).

We believe that building would fail Decent Homes Standards, due to one of the four criteria not being met.

Within the limitation of this report, surveys and information reviewed to date including recommendations/statements, we do not believe that block requires vacating and decanting.

## 2. INTRODUCTION

Ridge and Partners were appointed on 14<sup>th</sup> May 2021 to undertake a targeted Survey of 1-87 Regina Road, South Norwood, SE25. The objective of the survey will be to summarise the condition of the block and provide sufficient information in order to inform Croydon Council's investment strategy for the block.

The building was surveyed by representatives of Ridge and Partners on the 18th June 2021 and the 25<sup>th</sup> June 2021.

## 3. BRIEF

The client's brief was confirmed as follows and Ridge and Partners offer against the foregoing (Appendix 1). The brief has been refined during various meeting since the original brief:

### **Croydon Councils Brief**

#### Phase 1 - Information Gathering

Appoint a Technical Specialist to undertake full condition surveys across all 26 Tower Blocks in partnership with other services as required.

Undertake a full desktop review of all data that the Authority currently has in relation to the building fabric, compliance, health and safety, repairs data planned works across the 26 tower blocks.

Surveys will review and confirm the following:

1. Structural integrity of the building
2. General condition of stock and key components (Decent Homes Standard)
3. Fire safety requirements
4. General compliance, health and safety (HHSRS)
5. Collation of available statutory certification and documentation

The key outcome of this first stage is to understand the type, urgency, volume and cost of works that need to be undertaken across the estate.

### **Outline Services Brief**

The brief was further developed and confirmed as follows:

- Undertake a full desktop review of all data that the Authority currently has in relation to the building fabric, compliance, health and safety, repairs data planned works across the 26 tower blocks. Noted: the initial piece of works will be required to 5/6 blocks
- Surveys will review and confirm the following:
  - Structural integrity of the building
  - General condition of stock and key components (Decent Homes Standard)
  - Fire safety requirements (from existing information no surveys are required)
  - General compliance, health and safety (HHSRS)
  - The key outcome of this first stage is to understand the type, urgency, volume and cost of works that need to be undertaken across the estate.

We have interpreted the following deliverables from the outline services brief section above and propose the deliverables as follows:

- Reconfirm the deliverables and brief.
- Undertake a full desktop review of all data that the Authority currently has in relation to the building fabric, compliance, health and safety, repairs data planned works.

- Undertake a Building Survey – We consider this to be the envelope i.e., Roofs, Rainwater Goods where visible, External Walls and Windows. Communal areas but excluding external landscaping.
- Inspections within dwellings will be required to achieve a portion of the brief, these tasks will focus on windows, general condition of the visible areas of the properties i.e., walls, ceilings, floors, sanitaryware, kitchens and general comments on services.
- Undertake a structural inspection which consists of a site visit, desktop study of the client held record information make recommendations and report.
- Review properties in relation to HHSRS compliance (however this will not be a full assessment and will exclude biocides, carbon monoxide and fuel combustion products, lead, radiation, uncombusted fuel gas, volatile organic compounds crowding and space, domestic hygiene, pests and refuse, food safety, personal hygiene, sanitation and drainage, water supply, flames, hot surfaces etc, collision and entrapment, explosions, position and operability of amenities etc etc) and decent homes standards
- Summarise the fire safety actions within the Type 4 FRA reports previous undertaken.
- Provide outline budget estimates of costs.
- Provide a clear conclusion with recommendations.
- The deliverables will be summarised within a report format, which will include observations and recommendations for remedial works.
- Note: The meetings/surveys will be undertaken in accordance with the current Ridge and Partners return to work/remobilisation plan and government guidance in respects of Covid 19.

The brief was extended on the 30<sup>th</sup> June 2021 to incorporate the provision of a MEP inspection within a selection of dwellings

## 4. PROPERTY DESCRIPTION

1 – 87 Regina Road, South Norwood, SE25 is a 10 Storey (Plus Ground) block consisting of 44No flats. Each floor contains 4No, One-bedroom flats. The block was constructed in 1964 by Messrs Wates.

The four flats open directly onto a lobby with a separated stairwell. A second stairwell links the eighth floor to the tenth floor. The lobbies are served by lifts that alternated so that only one lift stopped at each floor above ground level. The lift did not extent to the tenth floor. The block has one central core with a secondary stair available between the 8<sup>th</sup> and 10<sup>th</sup> floor

Bin chutes are accessed off the main stairwell via a lobby. A roof top lift motor room and water tank room are accessed through a ceiling hatch on the tenth floor. Two enclosed spaces are accessed through the lift motor room. One of the spaces houses a plant room with telephone masts mounted on the roof. The electrical supply entered the building through an intake room located on the ground floor, adjacent to the bin store. The intake room is accessed off the main stairwell.

The building is of concrete framed construction, with all floors and external walls assumed to be formed of reinforced concrete. The block is of Large Panel System (LPS) construction, which is a form of construction where large storey height pre-cast Reinforced Concrete panels are assembled together on site to form the buildings' structure. This was a very popular method of construction for council housing in the 1960's and 1970's. LPS buildings were based on the Bison method of construction. The original building elevations would have been finished with exposed aggregate cladding panels but was refurbished in 1998/2000 with the building provided with mineral wool insulation and metallic cladding system, double glazing and secondary profiled metal

roof. The building is provided with concrete stairs, two lift shafts (which service alternate floors and separate refuse shaft which is accessed off the stairwell at each half landing level).

## 5. TENURE

The building occupancy consists of:

Tenants: 43 No

Leaseholders: 1 No

## 6. BUILDING SURVEY

### 6.1. Main roof

The main roof and lift motor/tank room areas are covered in profile metal sheeting with detailing to suit (Appendix 4 – Langley Water Proofing Report).

The main roof is profile sheet covering and supported on a metal subframe. Beneath the metal profile sheet roofing is rigid mineral wool slab, laid over the original mineralised felt covering which appears to have been overcoated with a liquid water proofing system in a number of locations. The exposed area of the roof is also provided with timber box gutters coated with a liquid waterproof covering, and lead detailing. The profile sheet covering has been designed as the primary waterproofing layer with no apparent rainwater disposal provided below the profile sheet level (on the original flat roof).

Investigations have confirmed that the profile sheet covering has failed in several locations with missing fixings, failing coatings, inadequate box gutters/outlets and failing junctions between the cladding and roof surfaces. The foregoing elements have received various piecemeal repairs primarily using liquid coatings.

Intrusive investigations and a core sample have been undertaken confirming the following:

- Below the profile sheeting is 200mm of Rockwool RWA 45 semi rigid mineralised wool insulation (which was noted to be wet)
- The gutters are formed from timber and are failing.
- A core sample has confirmed that below the profile sheeting. The original roof build up is screed, concrete, asphalt (2 layers 40mm), 50mm EPS insulation, 10mm fibreboard, built up felt with a liquid coating. The insulation and screed were noted to be wet.

We have been unable to review the exact detailing around the rainwater goods, but record information suggests that the roof level outlets connect to the original down pipes via an offset rainwater pipe with spigots made up of limited diameter/bore pipework and bends, which are susceptible to blocking.

The external timber doors from the tank room housing are generally in need of repair/renewal with one door having been wired shut.

The roof structure to the lift motor/tank room, has been formed over the original brick-built structure using a metal subframe. The roof area is accessed by an external CAT ladder. The covering to the lift motor/tank room appeared in serviceable condition at the time of our inspection, however, the areas outside of the original brick-built structure (the original flat roof) has been coated in a liquid system suggesting the area may have been subject to water ingress at some point.



We understand that properties at 10<sup>th</sup> floor level have suffered water ingress.

We recommend that the existing profile sheet covering to the main roof is removed and the original flat roof covering stripped. A new flat roof covering should be provided to comply with the current building regulations.

We also believe that the existing rainwater goods should be surveyed, once access is available to the vertical runs, as previous surveys have proved abortive due to the routing of the rainwater pipes. Allowance will be made for a CCTV survey and remedial works.

Note: There is a significant quantity of mobile telephone masts and antenna, fixed to the lift/tank room structure which must be considered prior to any works.

## 6.2. Elevations

The existing elevations have been over clad. Prior to over cladding the external wall make up would have been typically formed from two >100mm leaves of Reinforced Concrete filled with insulation (typically EPS or XPS). The cavities were generally 20mm wide, but this can vary across the different manufacturers.

The composition of the over cladding system has been derived from record drawings and the results of the BB7 EWS1 report dated the 30<sup>th</sup> April 2021 (Appendix 5) and is summarised below (we have extracted general descriptions for the two main wall types).

**Ground Floor Level** - The system was found to be:

10mm render

100mm PIR insulation Euroclass E combustible thermoset insulation

130mm solid concrete. A hole was drilled through the concrete to determine the thickness; however, it could not be further determined what was behind the concrete without potentially compromising the integrity of the structure and causing damage internally. Based on the style of construction the LPS panel would be substantially larger than 110mm. This was also confirmed based on a view underneath the external walls at ground floor level.

**4<sup>th</sup> Floor Level** - The system was found to be:

50mm metal cassette panel cladding formed of 5mm aluminium.

40mm cavity

100mm mineral wool

130mm solid concrete. A hole was drilled through the concrete to determine the thickness; however, it could not be further determined what was behind the concrete without potentially compromising the integrity of the structure and causing damage internally. Based on the style of construction the LPS panel would be substantially larger than 110mm.

Based on the information collated by BB7 and the repairs history, we noted the following defects:

- Water ingress through the cladding system
- Potential cold bridging where insulation has been removed for ductwork and the like.
- Failing mastic joints
- Back falls to the ledges formed around window openings

Please note the wall U Value, which current at the time of over cladding construction would have been 0.45 W/m<sup>2</sup>K, whereby the current regulations are 0.28 W/m<sup>2</sup>K.

We believe that based on our current understanding of the composition of the Cladding system that consideration should be given to renewal in its entirety, to address all of the issues with the envelope including the concerns noted later. **Note: Allowance will be made for two options i.e., insulated render and brick slips replacement system at Croydon Council request.**

Please refer to the Fire Risk Assessment section of this report for comments in respects of the cladding system.

### 6.3. Windows

The windows are predominately double glazed UPVc Tilt and Turn windows to the dwellings.

The common parts also provided with UPVc window infill panels with double glazed side hung casement windows, AOV's and insulated panels.

The double-glazed windows to the dwellings were noted to have cavities of approximately 12mm. With a U Value of between 3.0 – 3.3W/m<sup>2</sup>K, dependent on the final specification at that time, the current building regulations requirements are 1.6 W/m<sup>2</sup>K for an existing building.

The window inspected were noted to have the following defects:

- Stiff and defective opening mechanisms
- Defective window hardware
- Failing gaskets
- Defective locking systems
- Failing glazed units
- Poor design relating to the corner window units within the kitchens, which clash when opened (tilted or fully opened) at the same time
- The large sashes were around 955mm x 1060mm (typical maximum sizes dependent on the brand used, however 1500x1500mm is a general guide as a maximum, therefore the windows are in the upper range)
- Heavy to operate tilt and turn windows
- Anecdotal evidence of windows allowing water ingress.

The communal windows at each floor level within the lift lobbies are set with UPVc frames with insulated panels between up to around 1300mm above floor level, with central AOV (which could not be tested at the time of our inspection) in a metallic finish. The communal windows tested were in a variety of conditions, however the following defects were noted:

- Stiff and defective opening mechanisms
- Defective window hardware
- Failing gaskets
- Defective locking mechanism
- Failing glazed units
- A number of side opening casements had been replaced

UPVc windows typically have a life expectancy of between 20-35 years, dependent on the product and maintenance regime. Based on the sample areas inspected we believe that the windows are at the end of their affective life and would benefit from renewal. **Note: At Croydon Council request further cost options to be provided for aluminium double glazed and aluminium triple glazed.**

Note: There were a number of vents noted to the refuse chute areas and at the head of the stairs. Although they could not be tested at the time of our inspection.

Please refer to the Fire Risk Assessment section for comments in respects of the AOV and window infill panels.

## 6.4. Common parts

The refuse chutes and hopper were not inspected in detail during these surveys.

Although a number of repairs were noted to seals around chute hoppers. Access was not available to the paladin store at the time of our inspection.

Allowances will be made for a detail's specialist survey and remedial works.

## 6.5. Doors

There are several different door types present to the block which can be summarised as follows: hardwood block main entrance doors, flat entrance doors (of a variety of different types). Glazed panelled lift lobby doors, set within glazed timber screens, glazed panelled refuse area doors and variety of timber communal cupboards.

The front entrance doors are a combination of flush composite doors, timber door blanks and a limited number of UPVc panelled doors. The front entrance doors, where inspected, appeared to be of serviceable condition, however, we were unable to verify that they were of the appropriate fire rating. It is also presumed that UPVc panelled front entrance doors and timber door blanks would not be FD30s. At the time of our inspection the fanlights had all been sealed over with presumed Fireline plasterboard (pink) with mastic (intumescent?) to the perimeter as a temporary repair.

We noted on some of the composite front entrance doors, the hinges were marked with 'Masterdor'. Doors by this manufacturer are known to not perform to the specified/advertised fire resistance. (Please refer to the Fire Risk Assessment section for further details.)

The communal main entrance doors and screens are of hardwood-stained (glazed) panelled 'Portcullis' type design. At the time of our inspections and various ad-hoc visits the doors and screen were noted to be in serviceable condition and operation. The rear entrance doors to the block were noted to be a solid door blank and would benefit from redecoration.

The communal lift lobby doors and screen are Georgian wired glazed panelled doors, set within timber Georgian wired glazed screens. At the time of our inspection the fanlights had all been sealed over with plasterboard which we have assumed to be Fireline (pink) with mastic (intumescent?) to the perimeter as a temporary repair. There were a number of high-level asbestos panels noted to the screens. The doors had all been lipped with additional timber (conceivably to reduce gaps to the perimeter) and provided with intumescent strips and smoke seals with some noted to be missing. All doors appeared to close adequately and comfortably within the frames. Due to age and miscellaneous repairs executed we are unable to verify that the doors and screen will perform to the required fire rating.

The refuse area doors are located off the escape stair and accessed via a lobby arrangement formed by 2 No glaze panelled timber doors. The timber glazed panelled doors had all been lipped

with additional timber (conceivably to reduce gaps to the perimeter) and provided with intumescent strips and smoke seals with some noted to be missing. Although all doors appeared to close adequately within the frames. Due to age and miscellaneous repairs executed we are unable to verify that the doors will perform to the required fire rating.

The remaining doors are timber doors (and frames) which predominately service riser and meter cupboards. The riser/meter cupboard doors were largely secured during our inspection, however, there were a number which were open/unsecured and filled with combustible materials. The meter cupboard doors have had their fanlights sealed over with plasterboard which we presume to be Fireline (pink) as a temporary repair with mastic (intumescent?) to the perimeter. Due to age and miscellaneous repairs executed we are unable to verify that the doors will perform to the required fire rating.

We would recommend all the doors and screen are replaced with an appropriate fire rated door set and screen where required.

Please refer to the Fire Risk Assessment section for comments in respects of the fire doors.

## 6.6. Floors

The floors structures throughout the block are presumed to be reinforced concrete, finished with a variety of different materials. Within the majority of the common parts i.e., lift lobbies, refuse areas and stairs the floor finishes are a studded ceramic tile. The flooring within the common parts is generally tired. We were unable to confirm the slip rating and a number of areas were lifting. Patches were missing primarily around the base of the lift lobby doors where the floor mounted door closers would have been sited.

The floor finishes to the stairs are the same as the lift lobbies with purpose formed nosing's. Other than a limited number of damaged nosing they were generally in good condition. Although we noted that there does not appear to be a significant Light Reflective Value (LRV) contrast between the floor coverings and nosings.

We would recommend that the floor finishes are replaced as part of any block refurbishment.

Please refer to the Fire Risk Assessment section for comments in respects of the floors.

## 6.7. Walls

We have presumed that the majority of the internal walls are of solid blockwork construction with the external walls formed from large panel external wall system. The common parts walls are finished with patterned plaster and a decorative coating which could not be identified but visually appeared to be in good condition and well adhered although limited localised making good is required.

We noted that the refuse area was not part of the original construction and record drawings indicate the addition had been constructed of lightweight block work. During our inspection we noted areas of impact damage and localised stepped cracking (10<sup>th</sup> floor) which should be investigated and repaired.

The communal decorations were generally in good condition; however, localised remedial works are required.

Please refer to the Fire Risk Assessment section for comments in respects of the communal walls.

## 6.8. Ceilings

The ceiling finishes generally comprise a decorative plaster/artex and decorative coatings which could not be identified, but visually appeared to be in good condition and well adhered.

At 9<sup>th</sup> and 10<sup>th</sup> floor levels ceiling hatches were noted which we were unable to verify the composition of.

The communal decorations were generally in good condition. Investigations should be undertaken to verify that the hatches provide sufficient resistance to the passage of fire.

Please refer to the Fire Risk Assessment section for comments in respects of the communal ceilings.

## 6.9. Dwelling internal inspection

Ridge and Partners gained access to the following occupied dwellings 51 and 13. 31, 15, and 7 were vacant/void units.

15, and 7 had suffered extensive water ingress and the condition of the finishes were generally poor and will not be considered below. As the ceilings and walls were stained, mould covered. The floor screeds in some properties were failing, where we presume service pipework had failed within the floor structure.

### 6.9.1. Finishes

The finishes within the dwellings/properties inspected were variable in terms of decorative order but are noted as below:

Ceilings – The ceilings were Artex finished and generally in a condition, commensurate with the age of the property. Although the decorative condition differed significantly. A number of the previous service voids were visible (which we presume serviced the original warm air heating system).

Walls – The walls where inspected were generally regular and appeared free from significant structural damaged. It should be noted that some of the flats flanking the lift shafts have had their walls lined with makeshift materials which should be investigated further to determine the reason for this.

Floors - The floors where inspected were general regular and free from significant structure damaged.

Doors – The doors within the dwellings were generally free from significant defects, however, we did note that a number of kitchens we provided with sliding doors. As these spaces are of special fire risk these doors should be replaced with appropriate side hung doorsets with closers. This has been undertaken within some properties.

It should be noted that the properties are provided with sprinklers. The doors on the whole where inspected were not provided within self-closing devices, were missing ironmongery and are in a

generally poor/fair condition. The screens between the entrance corridors and lounge may also not provide the required level of fire resistance and should be reviewed further.

### 6.9.2. Bathrooms

The bathrooms were provided with pressed steel baths, vitreous enamelled WC pans (with various cisterns) and vitreous enamelled wash hand basins (with pedestals). The wall finishes were a combination of satin/eggshell paint finishes with tiling to the rear of the wash hand basins and perimeter of the baths. The bathrooms were generally provided with mechanical extraction (generally switched off) and heated towel rails to heat the spaces. The above ground service pipework also terminated behind the head of the baths within a service riser. We were unable to inspect these areas in detail. Anecdotally we understand that there have been a number of leaks relating to the above ground drainage within the block over the years.

We would recommend a CCTV survey is undertaken to understand the condition of the soil and vent pipes with localised opening up to provide an understanding of the condition of the stacks within the dwellings. **Note: Croydon council have requested provisional allowances are made for new bathrooms as part of the works.**

### 6.9.3. Kitchens

The kitchens within the properties appear to have been replaced in recent years and are generally in serviceable condition, however, they have been cared for and maintained to different extents.

The kitchens are provided with chipboard carcass units with bullnosed laminate work tops and stainless inset sinks with chrome plated mixed taps.

The walls and ceilings are generally paint finished plaster or similar with ceramic tiled splashback to the perimeter of the worksurfaces.

The kitchens were noted to have the following common faults: poor cutting out of service runs through units, lack of maintenance or cleaning of kitchen units and services, no heating and mechanical extracts were of limited use/operation and were not maintained (They were often noted to be turned off). **Note: Croydon council have requested provisional allowances are made for new kitchens as part of the works.**

### 6.9.4. High-level services review

Representatives from Ridge and Partners attended the block on the 7<sup>th</sup> July 2021 to inspect the services within a number of dwellings. At the time of our inspection, we were unable to access any occupied dwelling, but inspections were undertaken to 7, 15, 23, 31 and 87.

We understand that the natural gas was removed from this block some years ago and the primary services provided to this property are electric and water.

The condition of the dwellings visited can only lead to a simple conclusion that, with the exception of certain components, a complete building services refurbishment and modernisation programme is required throughout, with a clear 'whole building' strategy.

We noted that the electrical supplies to a number of the flats have been updated with newer consumer units and meters, however, the extent of the update seems to have stopped at the flat front door. Particular examples:

The electric storage radiators are either well in excess of their economic life or approaching it. These systems are complicated to programme for tenants to make sure they take advantage of night-time electrical tariffs. Without correct control, the heating will be very expensive to run.

Note: **At Croydon Council request cost options will be allowed from replacing all heating with a central heat pump system. The foregoing will require the overall fabric to significant improved in order to retain the heat generated.**

We were surprised that the kitchens did not have some form of heating as they are where most moisture is created and are also located on the external wall. This and poor ventilation will lead to mould growth and deterioration of the fabric.

The towel rails are also at the end of their economic life and are not large enough to heat the bathroom space adequately, again leading to potential mould and fabric damage.

Flat 23 has a new unvented hot water cylinder and programmer. This should be replicated across all of the apartments with suitable controls to take advantage of night-time electrical tariffs. A general observation passed by residents were that the heating systems were expensive to run.

We noted the refurbishment works in flat 23 did not appear to include the heaters, which is a questionable false economy as the walls are being replastered around them?

The local kitchen and bathroom extract fans are all in poor condition and need replacing, perhaps modernised to a heat recovery ventilation system to reduce running costs?

All of the flats have newer prepayment electrical meters and modern consumer units, however, some of these have not been mounted at the correct height for access.

The extent of the rewiring and conditioning of the electrical equipment should be tested and consideration to a complete rewire as part of a full refurbishment.

The rewiring should extend to replacement of all light fitting with modern LED equipment. Adequate lighting should also be provided to the electrical cupboard outside of the apartment and the bathroom lobby or utility cupboard.

The fire alarm classification for the apartments is unclear, some have simple battery-operated surface mounted detectors, some not installed, some in the entrance lobby, one in the lounge. The strategy should be defined by a Fire Consultant and hard-wired detectors provided. Comments should also be sought as to whether further detectors should be provided for the kitchen and electrical cupboards.

New audio door entry handsets have been installed to each apartment, we are surprised that a video system was not considered and the advice of the Crime Prevention Officer and Secured by Design.

The building looks to have had 2 television systems in the past, one TV/FM and the other TV/FM/DAB.