HousingExecutive

Response to:
FOI_22-23_143
October 2022

Survey by Cooke and Kettyle

1. **Copies of the survey that commenced on the 10th June 2019 which was to be completed over 5 weeks by Cooke and Kettyle**
2. **The estimated cost of the works from that survey 2019.**

A copy of the information is provided below.

Please note that some of the information has been redacted or withheld under Section 43 of the Freedom of Information Act.

Section 43: Commercial interests

(1) Information is exempt information if it constitutes a trade secret.
(2) Information is exempt information if its disclosure under this Act would, or would be likely to, prejudice the commercial interests of any person (including the public authority holding it).
(3) The duty to confirm or deny does not arise if, or to the extent that, compliance with section 1(1)(a) would, or would be likely to, prejudice the interests mentioned in subsection (2).

SECTION 1

BRIEF

1.00 SCHEME OBJECTIVES

1.01 The Northern Ireland Housing Executive has identified the requirement for upgrade works to be carried out to defective balconies at 76 flats and maisonettes in Glassillan Grove and Rossmore Green at Greenisland, Carrickfergus, Co. Antrim which are leading to water ingress throughout the blocks.

2.00 SCOPE OF COMMISSION

2.01 A Survey and Condition Report has been carried out on the instructions of the Executive to determine the condition of the elements identified in the brief and to identify problems that will establish:-

(i) The sources of water ingress to the dwellings
(ii) The factors permitting condensation within the dwellings
(iii) The required level of works that will resolve and eliminate the sources of water ingress and condensation

3.00 LOCATION

3.01 The dwellings identified in this project are located in Glassillan Grove and Rossmore Green within Greenisland estate.

4.00 HISTORICAL CONTEXT

4.01 PREVIOUS WORKS

Dwellings were included in the following previous schemes:

MEI works carried out in 1994 and 1996 – Projects No 22/84/036 & 22/84/041
ECM works carried out to dwellings in 2013 – Project No 22/78/046
Double glazing works carried out in 2015/16 – Project No 22/78/0051
Kitchen replacement works carried out in 2015 – Projects No 22/70/0038 & 22/70/0042

5.00 LIST OF ADDRESSES

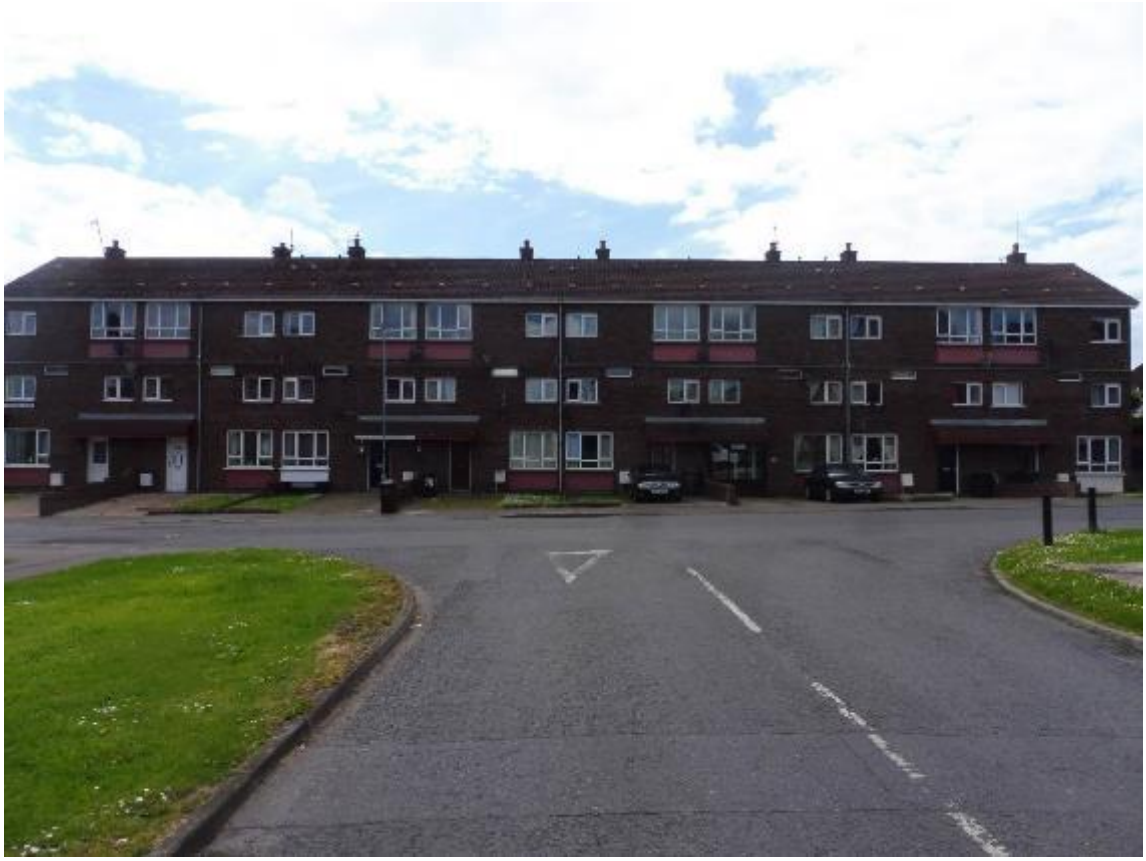
Type M1 Maisonettes:-
(8Nr)
Rossmore Green [redacted]

Type F2 Flats:-
(8Nr)
Rossmore Green [redacted]

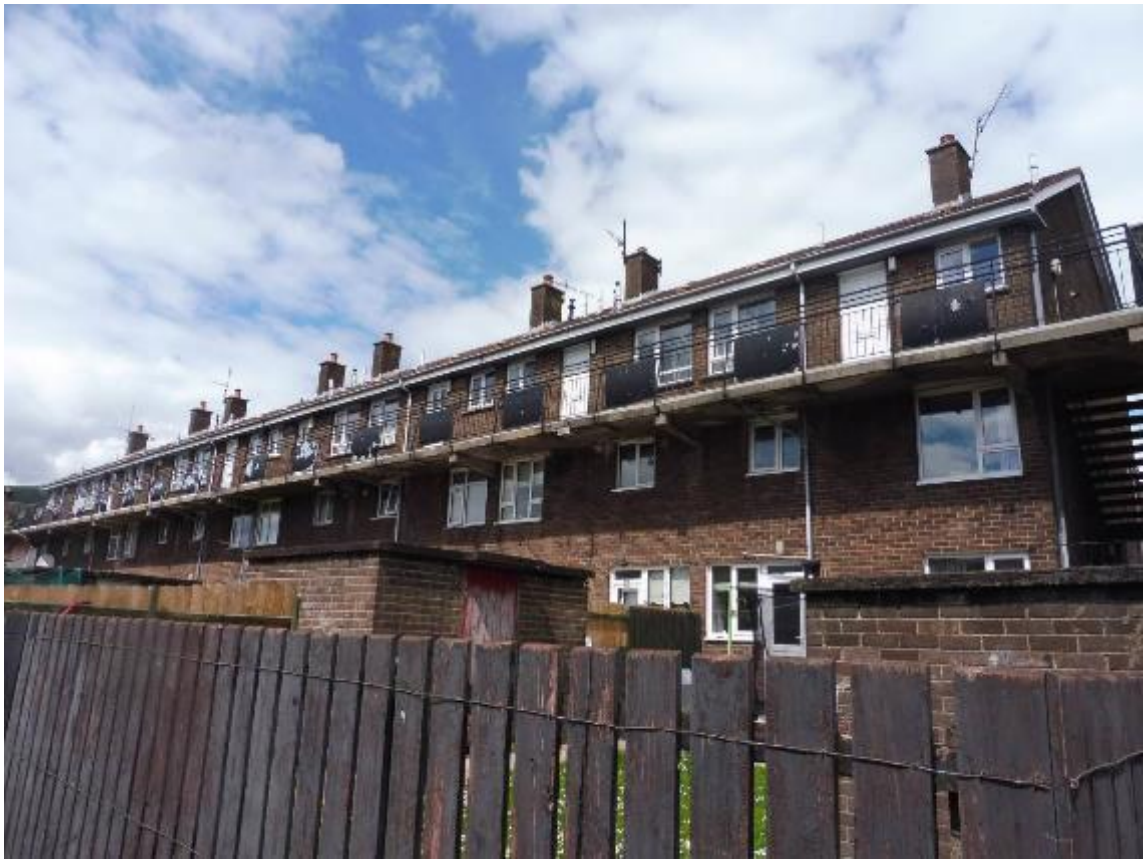
6.00 PROGRAMME

6.01 We estimate that the works will take approximately 56 weeks made up of the following:

Site Set up: 4 Weeks
Glassillan Grove: 4 weeks per block x 10nr blocks = 40 weeks
Rossmore Green: 10 weeks
2 weeks to tidy and clear site



Front elevation to Rossmore Green



Rear elevation to Rossmore Green

SECTION 2

CONDITION REPORT

AND

PROPOSALS

3.00 CAVITY WALLS INCLUDING INSULATION TO ALL DWELLINGS

3.01 Existing Condition

Walls to all blocks have been drilled at various levels to allow checking of the existing cavity insulation with a boroscope. The findings are that, at Rossmore Green, there is a mixture of different types of insulation to the cavities with some white beads having been used and some blown fibre evident, in all other instances the walls have been insulated with white polystyrene beads. In all cases areas of missing cavity insulation were observed. Refer to typical photographs 13 to 15 which were taken within the wall cavity. This was the case at both high and low level in the wall elevations. Insulation has settled and boroscope inspections indicate areas of the cavities that have no insulation present.

It could also be the case that insulation may not have been installed correctly or that it could have been installed in the 1980's when industry standards were not as advanced as they are today. The mortar pointing to the existing brickwork is badly weathered with areas of pointing having lost its struck joint and the softer more porous jointing bed being exposed. A mortar fillet has been provided at reveals of windows and external doors.

Steel angle lintels over windows and doors have rusted in numerous positions due to the water ingress as described in section 1.01 above. These lintels are now affected by ferrous oxide which is causing the steel to expand and widen the joints within the surrounding brickwork.

Figure 13 [redacted] - Glassillan Grove – Insulation absent

Figure 14 [redacted] – Glassillan Grove – Insulation absent

Figure 15 Rossmore Green - Void in insulation

Figure 16 Poor mortar pointing to the existing brickwork

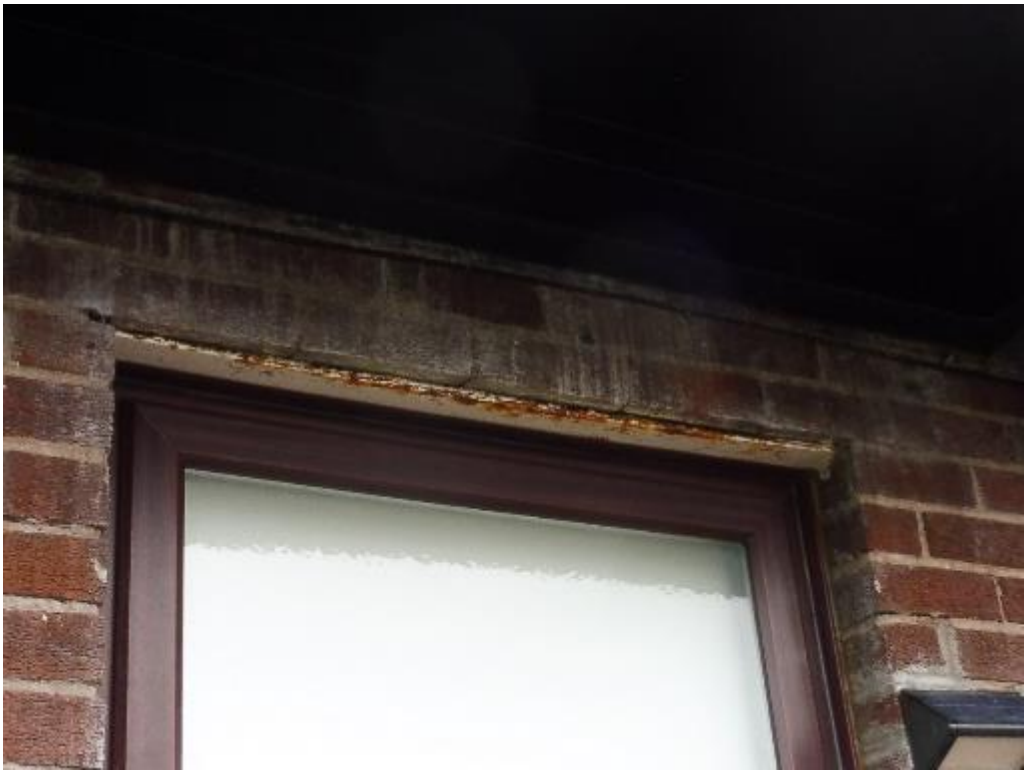


Figure 17 Steel angle irons affected by rust

3.02 Proposals

The remnants of the existing blown fibre or bead cavity insulation will be mechanically removed by a BBA accredited cavity clean specialist. Cavities will be allowed time to dry and refilled with an approved expanded polystyrene bonded bead cavity wall insulation by a registered installer (BBA accredited) and a Cavity Insulation Guarantee Agency (CIGA) guarantee obtained.

Brickwork, where covered in moss or water stained, will be cleaned to remove moss and staining (260m2) and treated with a biocide. All brickwork will be repointed (3980m2) in accordance with the NIHE Specification. A masonry water repellent will be applied (3980m2). Mortar fillets will be provided to all window and door reveals.

Steel lintels will be replaced where affected by rusting. This will entail cutting out the existing steel lintel together with the end brickwork and the brickwork courses carried by the lintel. It is proposed to use a stainless steel lintel together with a rigid plastic cavity type cavity damp proof course with end closers and weep holes fitted above the lintel, the brickwork above the lintels with be built up using the salvaged existing bricks to maintain the existing appearance as far as possible. (118Nr)

5.00 CONCRETE BALCONY TO ROSSMORE GREEN MAISONETTES AND FLATS

5.01 Existing Condition

A concrete balcony exists at second floor level of this block to access the flats which are above the maisonettes at Rossmore Green. This balcony appears to form part of the reinforced in-situ concrete floor slab separating the flat from the maisonette. The balcony is asphalt coated but the asphalt is in poor condition with cracks evident. Leaks are occurring through the cracks in the asphalt as evidenced by the water ingress to the first floor ceilings in some of the maisonettes (see photographs 26 and 27) with areas of water staining, mould evident and water running down the internal face in severe instances. It appears that rainwater is penetrating the concrete balcony at the defective asphalt skirting and by capillary action is being carried across the cavity wall by the concrete floor which appears to bridge the cavity wall into the first floor of the maisonettes below. It is also possible that wind-blown rainwater from the soffit of the concrete balcony is running onto the wall and is being carried across the cavity. The balustrades to these balconies have a mixture of panels of railings and solid curved panels. The curved panels are considered unsightly.

The asphalt skirting detail is incorrect in that the top edge is not dressed into a chase in the wall. There is no asphalt upstand at thresholds of recently installed composite doors to flats – see photograph number 24.

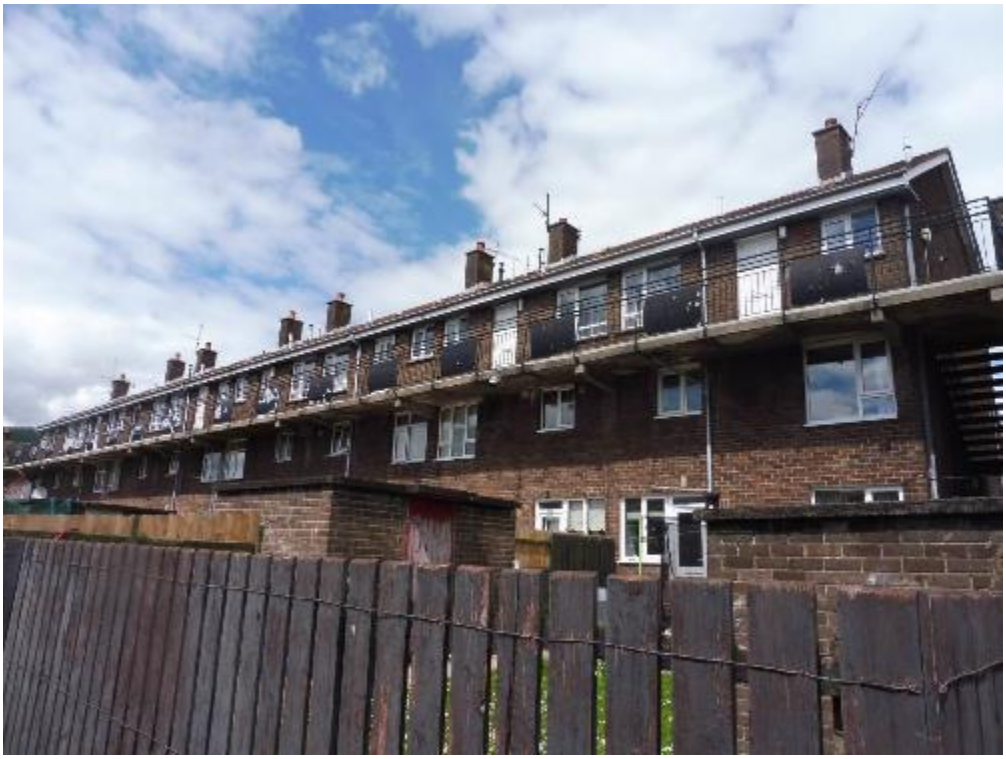


Figure 20 Concrete balcony to Rossmore Flats

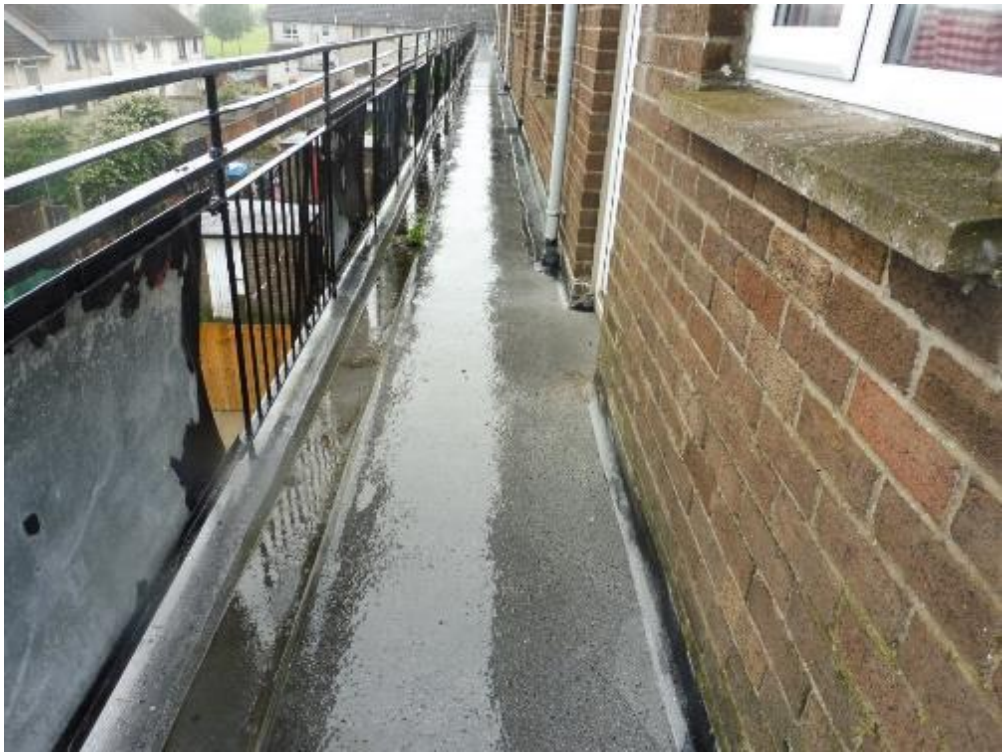


Figure 21 Asphalt to concrete balconies

Figure 22 water staining to underside of concrete balcony and external walls of maisonettes

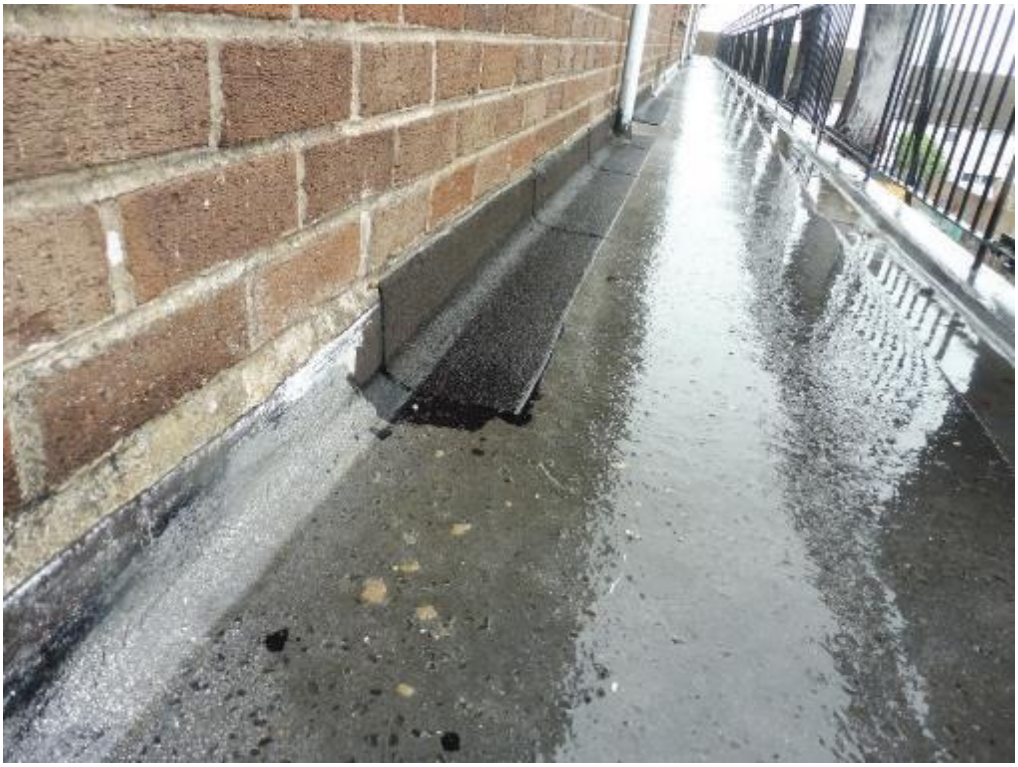


Figure 23 Repairs carried out to where the asphalt meets the external walls at flats

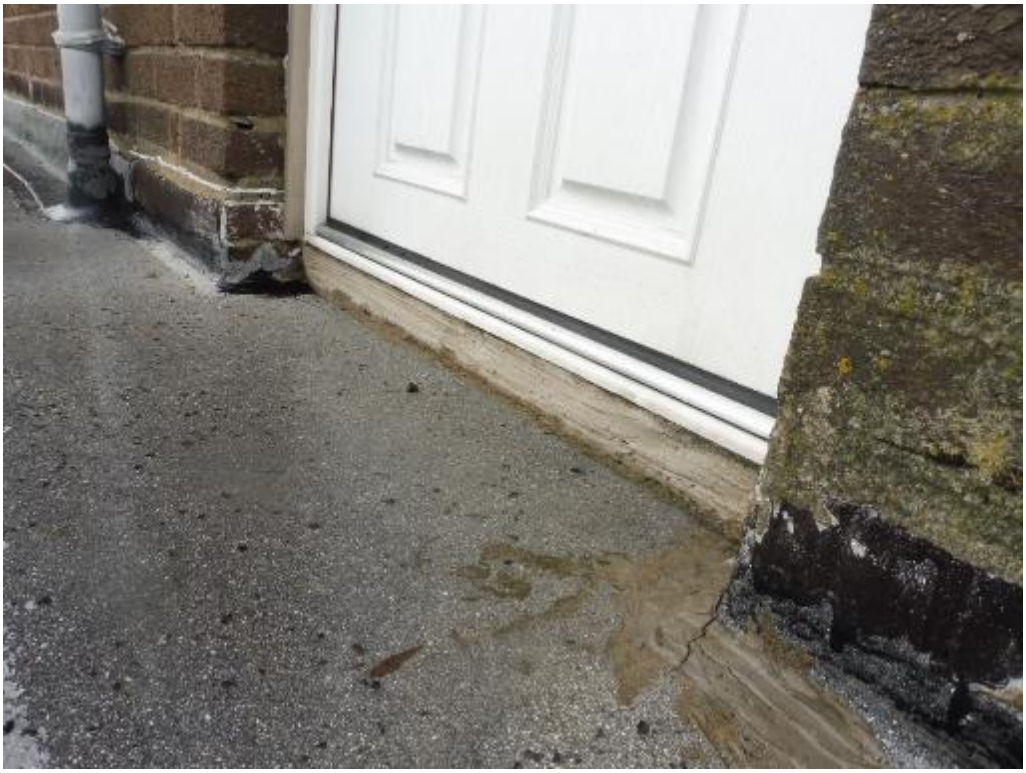


Figure 24 Where new doors have been installed, no asphalt upstand provided

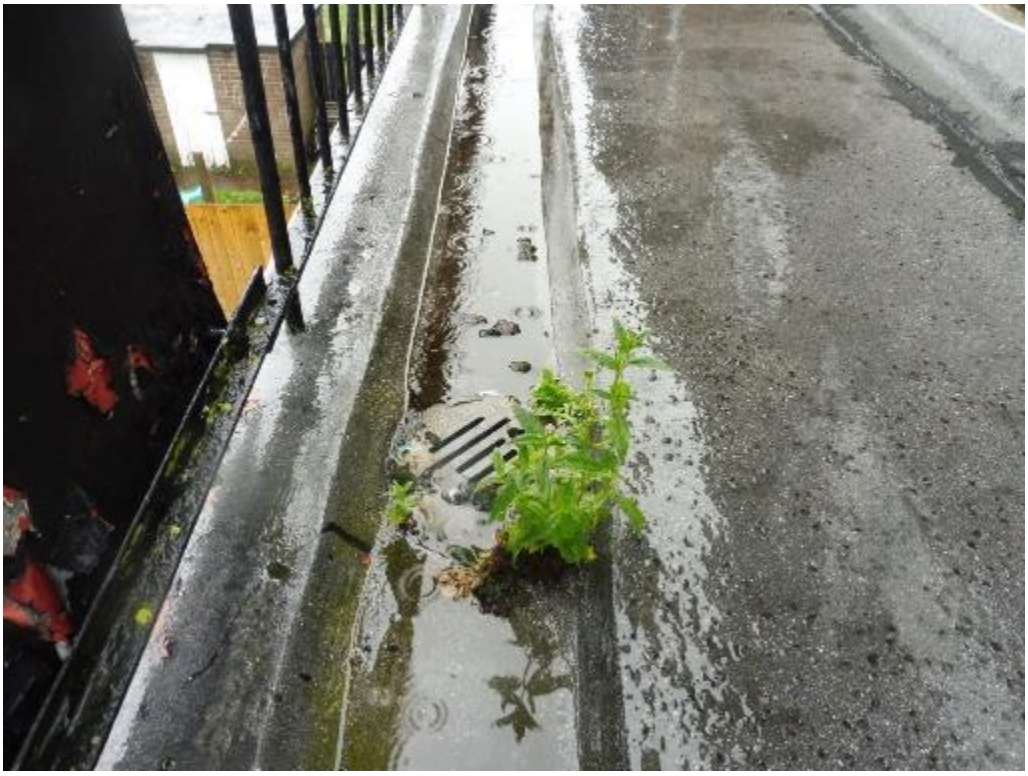


Figure 25 Outlet from the balcony to downpipe below

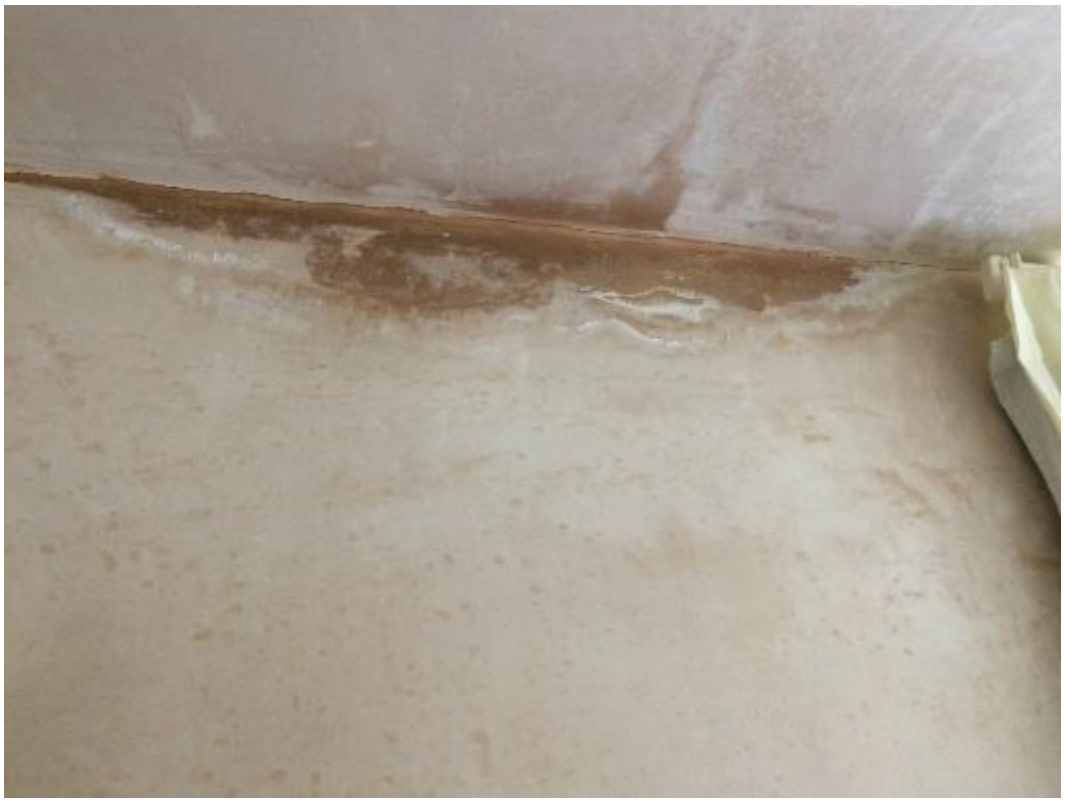


Figure 26 Water staining to rear external wall to bedroom at [redacted]

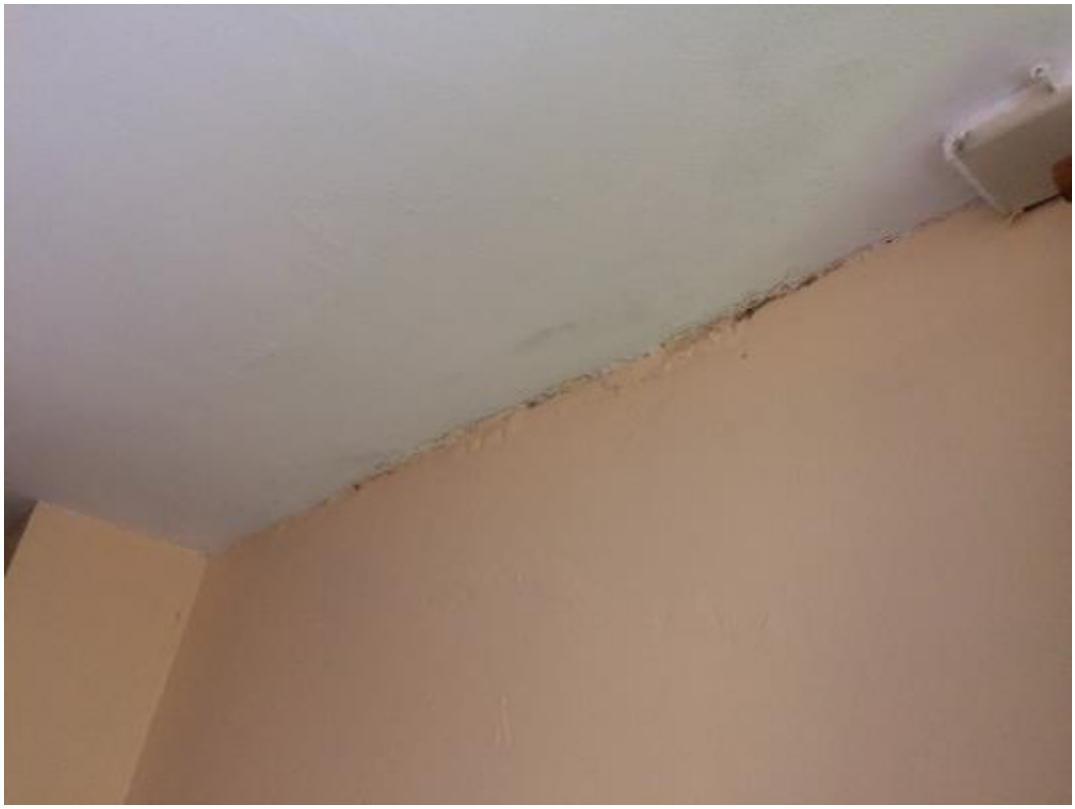


Figure 27 Evidence of water penetration to bedroom at [redacted]

5.02 Proposals

It is proposed to remove and replace all asphalt with an isolating membrane and 20mm asphalt including upstands, drips, channels, etc. The upstand at the outer edge of the balcony will be replaced and a GRP edge trim provided to create a drip. An upstand will be provided at each door threshold. The solid curved panels within the handrails will be replaced with panels of railings and all metal railings will be repainted, balustrades can remain in-situ throughout the works.

Work will be phased, so far as is reasonably possible, in order to maintain access to the balcony for residents of the 8nr flats which it serves.

6.00 SUNDRY WORKS

Existing Condition and Proposals

Other defects which are possibly leading to water ingress are as follows: -

6.02 Replace 12m defective soffit to Rossmore Green

6.03 Replace 1nr missing roof tile to Rossmore Green

6.04 Clean gutters and downpipes to all blocks

6.05 Clean roof tiles to all blocks and provide biocide spray

Figure 29 Roofs in need of cleaning

6.07 Replace 3nr defective rear doors with composite door sets at Glassillan Grove and Rossmore Green.

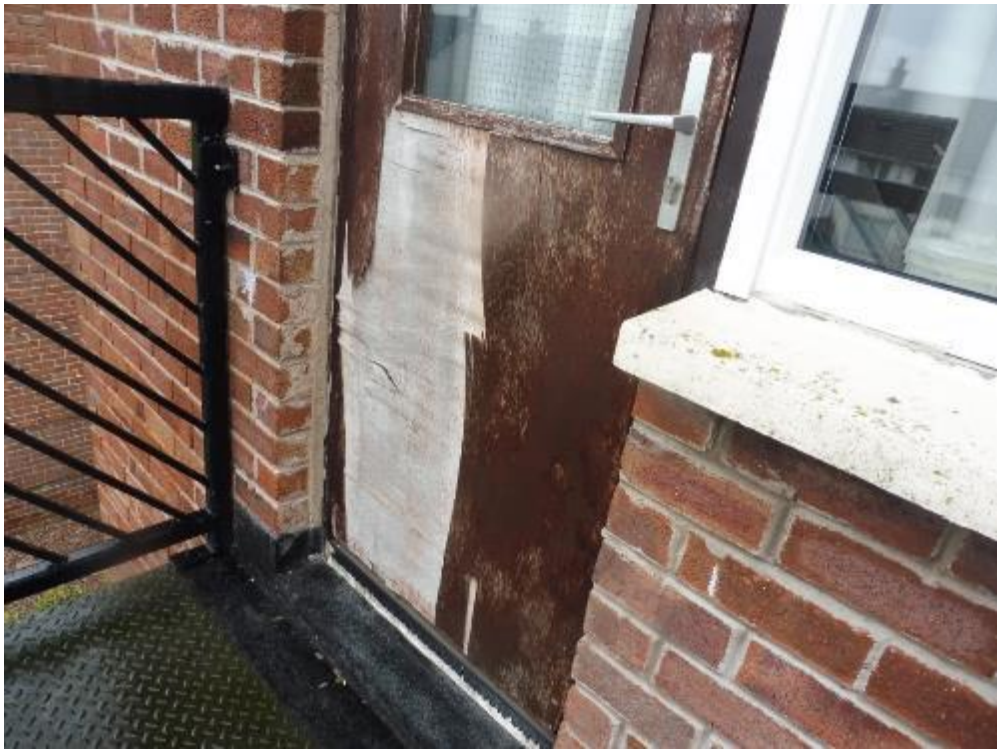


Figure 30 Rear fire exit door in need of replacement

6.08 Replace 2nr defective front doors with composite door sets at [redacted]

7.00 OTHER CONDENSATION ISSUES

7.01 Our surveyors observed a number of scenarios which are contributing to the condensation problems experienced by some tenants, but probably more so by tenants of sold flats. These include:

a. misuse or lack of knowledge of the correct use of extract fans

b. the absence of extract fans to bathrooms and/or kitchens in sold flats

c. the lack of use of window ventilators

d. the absence of window ventilators in sold flats

e. inadequate heating and ventilation of flats generally

f. lack of knowledge of how to minimise the build-up of moisture in flats

g. general lifestyles

h. unavoidable cold bridging due to the original building design

7.02 Proposals

To install a positive input ventilation system (PIV) in specific flats or maisonettes where condensation is a particular problem. These systems are designed to take fresh air from outside, clean the air by means of a filter and discharge the air, via a duct, into the central hallway at high level (filters require to be removed and cleaned every 12 to 24 months). These systems provide a low energy ventilation system.

8.00 ASBESTOS SURVEY

8.01 Asbestos Survey reports are available to all but a few dwellings.

9.00 DECANTING

8.01 It is proposed that no decanting will be provided.