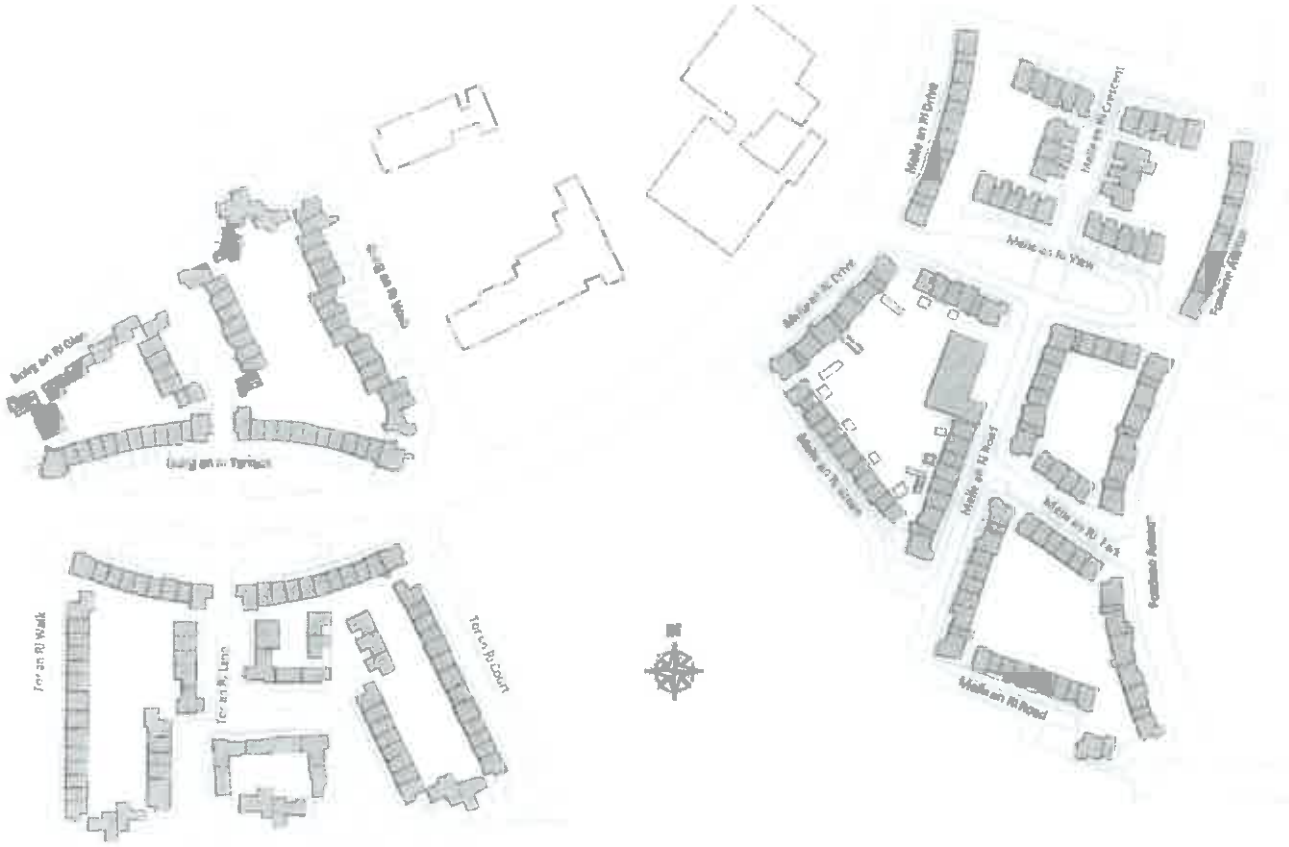
HOUSING DEVELOPMENTS AT BALGADDY

Buirg an Rí, Meile an Rí, Tor and Rí, part Foxdene Avenue

Structural Surveys & Reports on Selected Properties

Survey Dates 5th May – 31st May 2011



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First Issue - 20th June 2011
Revision 1 - 5th July 2011

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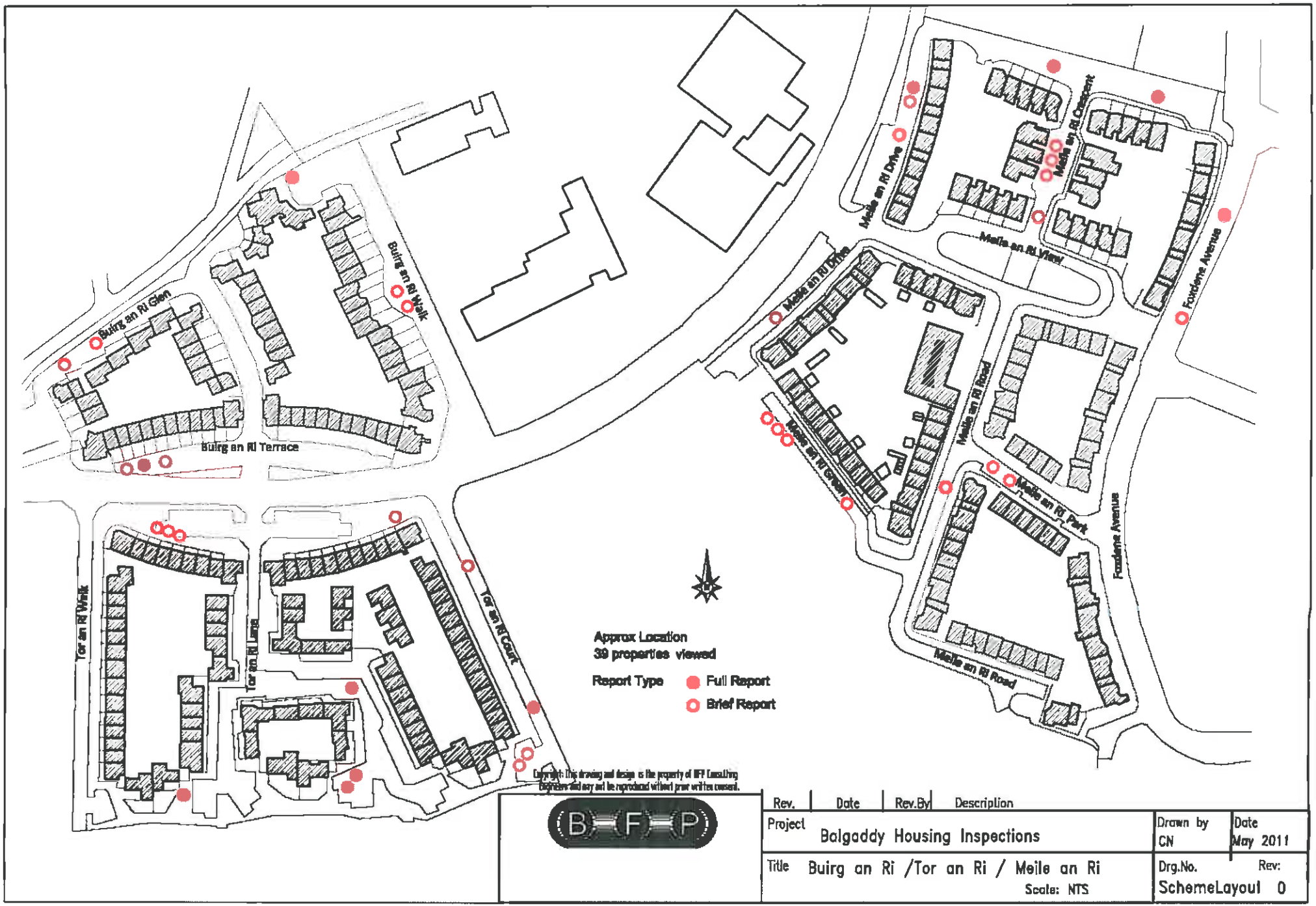
DOCUMENT CONTROL SHEET

REPORT ON HOUSING DEVELOPMENTS AT BALGADDY
BUIRG AN RÍ, MEILE AN RÍ, TOR AND RÍ, PART FOXDENE AVENUE

Revision	Date	Description
Rev 0	20/6/2011	Preliminary issue to BWTG & client.
Rev 1	5/7/2011	Addendum 1 added.

Housing Developments at Balgaddy Volume 1 -Main Report

Housing Developments at Balgaddy Volume 2 - Appendices


Buirg an Ri Glen
Buirg an Ri Walk
Buirg an Ri Terrace
Meile an Ri Drive
Meile an Ri Crescent
Meile an Ri View
Foxdene Avenue
Meile an Ri Drive
Meile an Ri Road
Meile an Ri Green
Meile an Ri Park
Foxdene Avenue
Meile an Ri Road
Tor an Ri Walk
Tor an Ri Lane
Tor an Ri Court
Approx Location
39 properties viewed
Report Type
Full Report
Brief Report
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Project
Balgaddy Housing Inspections
Drawn by
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May 2011
Title
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REPORT ON HOUSING DEVELOPMENTS AT BALGADDY BUIRG AN RÍ, MEILE AN RÍ, TOR AND RÍ, PART FOXDENE AVENUE

EXECUTIVE SUMMARY

This report is based on a series of 11 detailed surveys and 28 brief surveys of properties at Balgaddy in May 2011. Individual reports are printed in Appendices B & C and should be consulted for reference to individual property conditions. The surveys were carried out to establish an overview on the condition of the various property types, to establish the frequency and severity of the perceived building defects, and to allow a preliminary assessment of possible further investigations or repair works necessary.

The properties surveyed were selected from a list of properties prepared by Balgaddy Working Together Group. The selection was based in part on severity of reported problems, but also an effort was made to get a random sample of buildings within the overall scheme boundaries. In practice the survey included access to most building types and building conditions varied from properties with minor decorative issues to properties with more serious underlying problems. The individual survey data is presented on a property by property basis in the Appendices. Within the body of the report I have included an overview on the issues encountered in the surveys and I have outlined proposals for further actions to remedy the problems encountered.

The following issues were encountered in the survey (the order in which headings are presented is not significant):

- Roofing leaks are apparent in a large number of roofs where flat roof sections or parapet gutter details are incorporated into the building design. Repairs to date have been of an "emergency" nature. The underlying timber and plywood is in many areas water damaged, with mould growth established in a number of attics.

- Roofing leaks have also occurred on a large number of flat roof areas at parapets, at steps in roof and at pipe/flue exits. Some of these leaks appear to have been most active during the deep snow but many have persisted afterward.
- Detailed examination of attics shows that in a number of cases there are unacceptable gaps in party walls to adjoining properties, breaking the fire seal.
- Some local roofing, wall coping and window cill defects were noted to cause moisture internally but these were generally isolated incidents. Poor drips and overhangs on cills and copings have caused significant visible damage to external paints and renders, in some cases obviously allowing saturation of the outer wall leaf.
- Aluminium windows and doors in Meile an Ri have presented persistent problems due to poor construction and fitting. Some repairs and upgrades have been carried out and in some cases these may have aggravated ventilation problems.
- Aluminium doors on Buirg an Ri Terrace balconies are of poor quality in terms of thermal performance and contribute negatively to the condition and usability of the room.
- High moisture content was recorded in a number of properties in skirtings and walls. In some of these properties varying degrees of mould staining was also observed.
- Heating systems are widely reported to have problems. While detailed testing was not in the scope of this survey it is apparent from observing pressure gauges, from comments by householders, and from moisture readings within properties, that there are a percentage of properties in which the systems are leaking into the floor screed, with consequences for heating effectiveness and for humidity levels within the property.
- Ventilation of the properties is generally in compliance with the 1997 building regulations. There are some units where the room size or the kitchen location does not meet these standards fully. It is also noted that, in 2002, new regulations published required use of mechanical ventilation in kitchens and bathrooms in addition to other provisions. There is generally no mechanical ventilation in these situations and I believe the designers or builders relied on an exemption from regulations in respect of buildings complete before the end of 2005.
- Lifestyle observed in a number of units is a contributory factor to the moisture content observed. The use of condenser tumble dryers which were of limited effect, the closing of trickle vents etc. was noted.

In terms of ongoing investigations and repairs I believe that a certain percentage of the issues raised in inspections can be dealt with by programming in upgrade or replacement works in the course of

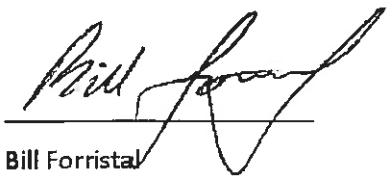
routine maintenance. There are, however, a number of issues which I believe should be advanced independently of tenant complaint and these are as follows:

- Heating systems: As the possible problem of leaks in the underfloor pipes is a factor in moisture levels, the investigation of possible heating leaks and the implementation of a repair/replacement programme should be a priority.
- Ventilation: Consideration should be given to a programme for the installation of externally vented mechanical ventilation to cooking areas in kitchens and to bathrooms.
- Flat Roof / Parapet Gutter Problems: The parapet gutter detail which repeats on apartments and in sections on houses was found to be suffering numerous minor leaks which will compromise the roof timber integrity in due course. These should be systematically examined, evaluated and repaired or rebuilt.
- Damp walls: In a small number of cases very high moisture contents were noted in the inner face of external walls. These occur where there are likely defects in dpc's at windows or doors or where the cavity is bridged. These should be investigated and the cause of the water ingress treated rather than the internal symptoms.
- Aluminium Windows and Doors: A review of the extent of problems in Meile an Ri with aluminium windows and doors should be carried out. The present haphazard approach to upgrading by reglazing or refitting and to retrofitting various ventilation solutions should be reconsidered and a programme for replacement of units with defects should be established.
- Buirg an Ri Terrace Balcony Doors: These should be reviewed with regard to thermal performance and a programme for replacement considered.
- Fire safety issues: Although small in number, there are a number of individual windows and doors in properties which do not meet requirements for fire escape. These should be replaced. Also there are a number of stairwells where recommended minimum clear heights are not available. These should be assessed in regard to safety implications.
- Information programme: In relation to the possible contribution of lifestyle to the difficulties encountered it might be beneficial to prepare a targeted information programme advising tenants of best practice regarding ventilation, heating, clothes drying etc.

In conclusion I believe the perception of significant defects within the development is justified in terms of the overall performance of the buildings. The extent to which lifestyle issues contribute to the problem cannot be ignored but in a large number of the properties examined it is not a factor or not the significant factor. Some of the problems identified in this survey can best be dealt with by

upgraded or modified maintenance procedures, however a number of the problems will need a more proactive approach.

I would recommend that there should be a review of the issues raised in this report, in conjunction with other matters of which the Council are aware from their ongoing involvement with the project, with the intention of focussing efforts to address certain works as a matter of urgency and to target other works as part of ongoing planned maintenance within defined timescales.



Bill Forristal

B.E., C.Eng., MIEI, MIStructE

----------Refer also to Addendum 1, added to report 5th July 2011.----------

1.0 INTRODUCTION

On the instructions of CPLN I have carried out a survey and inspection of a number of properties in Balgaddy and have prepared a series of reports on the individual properties. The brief for the surveys was developed in discussion with CPLN and with the Balgaddy Working Together Group and my proposal dated 21st April sets out the basic scope of work undertaken.

The properties inspected are all believed to have been constructed in the period 2002-2007 and there has been a certain amount of publicity to date on the general condition of the properties and their general standard of construction. The surveys carried out for this report were done in the knowledge of the publicly reported problems but without access to any previous reports or assessments or to design drawings, specifications, or as-constructed drawings.

A total of 39 properties were visited in the course of the inspections. The inspections were of two types:

- A total of 11 properties were inspected in the form of a full visual survey where access for visual inspection was made to all accessible areas of concern to the householders and a report for each relating to condition was prepared.
- The balance of 28 properties were subject to brief limited visual inspections in relation to specific areas of concern to the householders and to specific problems observed in similar properties elsewhere and brief reports were prepared on each.

The reports referred to above on individual properties are appended as Appendices B & C. It should be noted that the surveys and reports are limited in nature both by the terms of the original brief and by the limitations on access. Refer to the Terms & Conditions & Llimitations included in Appendix A.

2.0 SURVEYS

The buildings inspected vary in type and include 2 and 3 storey terraced houses, single floor apartments and two storey apartments.

Below I have highlighted under a number of headings the issues which arose in the inspections. Reference is to be made to the individual reports appended for specific cases.

2.1 Roofing Issues

The development contains a variety of different roof types and details.

Traditional pitched roofs:

These are used in large number of properties, utilising trussed rafters for structure with slate on batten on membrane as outer roofing and conventional plasterboard ceilings with glassfibre attic insulation.

In a high proportion of these roofs there are full or part length parapet gutter details where, rather than using a conventional eaves gutter, the gutter has been built up behind the parapet wall using a plywood base on secondary timber framing. Examples of full length details are the units on the northeast of Foxdene Avenue and units on the north of Meile an Ri Drive.

In many of the houses examined with this detail these gutters are leaking. In a small number of cases the leaks are substantial and water is damaging ceilings. In at least one such case there is extensive mould growth in the ceiling plasterboard slabs.

In other cases the leaks are less aggressive and exhibit in the form of water saturated plywood and water stained secondary timbers, visible within the attic. In a number of cases there is visible mould growth on this plywood.
I note due to limitations of access I was not able to examine the gutters externally in the areas of concern, however it is clear that there are defects in the gutter design or construction allowing the water leakage.

In a number of houses there are small areas of flat roofing, generally behind parapets, which abut the end of the pitched roof geometry. In a number of properties examined these were also found to be a source of water ingress, generally at the inner edge of ceiling bulkheads where the sloped roof meets the flat portion, but also where joints occur in leadwork where valleys meet parapets. These details need to be reviewed where water is entering internally. Repairs carried out to date have been of limited benefit and high moisture contents and visible mould remain after such repairs.

One apartment was noted during inspections (Buirg an Ri Walk) where roof slates are visibly misaligned and water leakage into ceilings of an apartment below is ongoing despite efforts at repair. The issue may relate to flashing details where slate abuts the 2nd floor wall above or may relate to the visibly dislodged slates on this roof.

Flat roofs:

These are used in large number of apartments at the south end of Tor an Ri and, where visible during inspection, asphalt roofing seems to be used.

In a number of units there have been leaks at outer walls and where walls overhead meet flat roof within rooms. There are also leaks where vent pipes and flues go through roofs. In some cases the leaks are intermittent and at time of inspection moisture readings were low. In other cases leaks are regular and ongoing and there are elevated moisture readings locally in wall and ceiling and also some cases of persistent mould.

In one such two-storey apartment the livingroom/kitchen, the bathroom, the main bedroom, and the stairwell roof are all separate roof areas and all are suffering leakage as

described above. Repair techniques witnessed during inspection were "first aid" in nature and do not appear to have addressed the problem fully.

There are a number of patio decks over ground floor apartments where asphalt roofs are used with paving slabs fitted over. The edge flashing for these roofs was noted to be poorly lapped and embedded. The outlet for these roofs was concealed within a "Storage cupboard" and in some cases was obscured and possibly obstructed by materials stored by the householder.

Roof outlets generally from flat roofs and from parapet gutters discharge to external hopper heads. In a large percentage of cases observed leaks occur at these hoppers with waterstains evident from hoppers to ground level. Some of the hopper outlets were blocked with debris, small balls, etc.

2.2 Heating System & Plumbing

In general gas fired boilers generating hot water and serving radiators are used in the scheme. The heating circuits are mainly sealed pressurised systems although one gravity based system was observed. The hot and cold water systems are in some cases gravity fed from attic tanks and in other cases combi-tanks are used in the hot-press with booster pump set to generate sufficient pressure at the taps. A mixture of copper and pex pipes were observed with joints probably concealed in floor screeds.

While the survey did not include a test of this system, there were numerous householder comments about difficulties with heating system and a number of comments about the water supply to taps etc. The issues are summarised as follows (in no particular order):

- Difficulties with the boilers possibly due to weather blow-back in the flues.
- Difficulties with boilers and radiators due to low water level/pressure in circuit
- Three port electric valves governing hot water/heating selection malfunctioning
- Difficulties with booster pumps
- Problems with airlocks in supply to taps/toilets
- Restricted flows to some taps (e.g. good flow to bath but poor flow to WHB)

Observations during the survey confirmed issues with the latter five items. Most of these issues are minor in nature and are readily dealt with by a programme of repair or minor upgrade within an ongoing maintenance programme, however in my opinion the most significant of the above issues is the loss of water pressure in the heating system as this indicates probable leakage in the systems. In one of the houses concerned the householder noted that they could hear water trickling at times behind the livingroom fireplace feature.

Of more concern was the observation during the survey that elevated moisture readings in skirtings and evidence of mould growth was more prevalent in houses where there was also evidence or history of heating leaks.

2.3 Electrical Installation

The survey does not include assessment of the electrical installation. In carrying out the survey however, note was taken of any specific defects which were seen or identified in the course of the survey. The issues observed or identified are summarised as follows (in no particular order):

- Reported frequent bulb failure in a number of units.
- Immersion heater faulty/disconnected in one unit.
- Faulty 3 port valves / heating control units reported in a number of units
- Loose or defective sockets noted in anumber of units
- Incorrect placement of switches in hallway in one unit - front door handle has smashed switch cover plates because of impact.

2.4 Windows & Doors

There are a number of door and window types in the development. In general doors and windows are double glazed timber construction in Buirg a Ri, Tor an Ri, and in the southern part of Meile an Ri. Double glazed aluminium is used in the northern part of Meile an Ri. In Buirg an Ri Terrace a double glazed aluminium door is used at first floor balcony level.

Aspects of each are discussed below:

Timber windows and doors:

These seem to present the least problems in respect of weatherseal and comfort. There were a few areas where window frames were not well sealed to the window reveals or

window boards. There were also a few comments re draughts and the lack of seal in the corner window units. No specific problems were recorded with the timber doors.

Aluminium windows and doors generally:

A lot of problems were visible on the general aluminium windows and doors. Original windows and doors were observed to have poor fit with many tenants having to fill gaps in opening sections or tape opening sections to frames to seal the units. Also in a number of cases glazing strips had fallen off the units leaving the glazing poorly supported.

The original vent strips also seemed to be potentially troublesome as they have large direct openings which allowed blown rain etc through.

In some cases the window opening section was below the optimum dimension for fire escape. (see 2.6 also)

Front doors to some apartment blocks and front doors to a number of units were observed to be significantly below the recommended minimum clear width for universal access and fire safety. (see 2.6 also)

Timber infill to a number of aluminium frame doors was seen to be a poor insulator and prone to condensation and mould.

Works have been carried out to a number of units to rectify the original defective windows. In a number of cases it was observed that the opening sections had been replaced either with fixed glazing or with new opening sections without any trickle vent strips.

The aluminium double doors on Buirg an Ri balcony level are an architecturally elegant slim door design. They appear to have only a 6mm glass cavity in the double glazed units and the main door sections are non-thermally broken aluminium. They are perceived as being a cold feature in the room and in all properties inspected householders report water running off the doors in adverse weather and cold floor where the balcony structure is hung from the floor edge. Although I do not have specific data on their thermal performance, I believe it that as components they are permissible under the earlier building regulations but would not comply with 2005 regulations.

2.5 Wall construction

In the course of the survey there were a number of indications of defective wall construction or wall/window installation allowing damp penetration.

In one property locally high moisture readings have been recorded in a first floor window area, with window board reading 30% and wall reading 23% - this is most likely a local defect in dpc detail allowing water penetration either in the window reveals or cill.

In another property rising damp was observed at the entrance doorway. This may be related to the level access paving detail externally.
In the same property water ingress was observed in a door head internally where a concrete canopy detail is used externally. The drip feature on the canopy was seen to be ineffective. The construction of the canopy in the cavity is also probably a factor.

A general observation was made that cill and coping projections and drips were in many cases below acceptable standards and as a result moisture damage was occurring to render finishes etc. This is most obvious in the southern end of Meile an Ri where the rich red finish shows every such defect clearly.

In a third property a local damp spot in the livingroom is thought to be related to an external stairs and wall detail abutting the gable.

In a number of properties examined, improvements in the form of dry lining have been made, presumably to address previous problems with damp or water ingress in the treated walls. In some of these cases the dry lining is showing elevated moisture levels and in one case the ceilings in the room beneath the treatment shows high moisture readings locally.

In one case a concrete wall to a habitable room was exposed within an adjacent uninsulated attic space without appropriate insulation.

2.6 Building Regulation Compliance

In the survey a number of issues were noted which were potentially in conflict with the building regulation technical guidance documents.

Widths of doors & windows, clear heights

Basic geometric requirements with regard to access and circulation are set out in part M and part B of the regulations.

Minimum clear opening width requirements at entrance doors of 775mm (1997 regulations Part M) for accessibility or 750mm for fire escape are not complied with in a number of units, with clear openings measuring of order 720mm in a number of cases.

Minimum "escape window" widths in habitable rooms in dwellings of 450mm are not complied with in some units, being less than 200mm in some aluminium units of original design and less than 400mm in some modified aluminium units.

Minimum clear heights in stairwell areas are less than the prescribed minimum of 2000mm, measuring 1864-1950mm in a number of cases. While the differences are small they are significant in areas of public access.

Mechanical ventilation requirements:

The recommendations for building ventilation in the building regulations have changed a number of times in recent years. Reference should be made to the Building Regulations Technical Guidance Documents (TGD) Part F for 1997 and 2002 for a more detailed explanation, however the key points of relevance in this survey are that at time of construction the Building Regulation guidance documents 2002 required minimum standards of mechanical ventilation in the kitchen and bathroom, however any building which had planning permission applied for prior to 31 December 2002 and which was substantially complete by 31 December 2005 could be constructed by reference to an older guidance document, TGD Part F 1997, in which the requirement for mechanical ventilation was optional. None of the units surveyed had mechanical ventilation complying with the later guidance document.

Natural ventilation requirements:

Background ventilation:

This has been dealt with generally by the use of trickle vents in windows. The regulation requirement is for "background ventilation having a total area of not less than 6500mm^2"

Trickle vents in the timber windows consist of a 10mm slot in the window frame rebate, protected from insects etc by the inclusion of a foam filter insert. This insert reduces the effective area of the slot and in some cases it is likely the requirement is not met.

Trickle vents in aluminium windows where provided comprise an accessory vent installed at the top of the glass in the opening section. In all cases where present this vent meets the dimensional requirements, however in some cease this vent has been taped over due to water ingress complaints.

Also in a number of larger rooms the ventilation requirement is larger than standard (650mm2 per 10sq m of floor plan is a recommendation for larger floor plans) and the existing arrangement is not satisfactory from the point of view of overall area and of distribution.

Rapid Ventilation:

Each room should have an openable window to provide 1/20th of the floor area for Rapid Ventilation. The dwellings in general are adequate in this regard with the exception of a limited number of combined livingroom/kitchen areas where the room size is large. (Note in those cases observed in addition to the large room size, the cooking area was located in an internal corner with no rapid or mechanical ventilation at hand.)

Compartmentation of properties.

In a number of cases there are gaps between party wall and roof, leaving openings to the adjoining properties which give rise to risk of smoke or fire spread through attics.

Some of these are small openings easily remedied but in a number of areas, particularly where parapet gutters cross property boundaries, the openings are large and will require more specialised treatment.

3.0 RECOMMENDATIONS

The following are the recommendations in respect of the general observations made in section 2.

3.1 Roofing Issues

Traditional pitched roofs:

As noted there are a number of leakage problems associated with full or part length parapet gutter details in pitched roof areas.

Short term repairs and external patching may not deal with these issues satisfactorily, as plywood and supporting timbers are at risk of wet and/or dry rot in the medium to long term. In my opinion it is necessary to systematically examine houses with the parapet gutter detail and to programme works to repair or rebuild the gutters, rectifying the original design or construction issues and also replacing or treating any damaged underlying timbers.

In small areas of flat roofing, generally behind parapets, which abut the end of the pitched roof geometry, details need to be reviewed where water is entering internally. Repairs carried out to date have been of limited benefit and high moisture contents and visible mould remain after such repairs. More comprehensive repairs and/or rebuilding are likely to be necessary. Any such review should examine the height to which the flat roof waterproofing is carried up the slope in addition other matters.

In one apartment (Buirg an Ri Walk) investigation is needed at the interface of 2nd floor wall and pitched roof to 1st floor to determine the source of an ongoing leak and carry out appropriate repairs.

In a number of other cases local leaks near chimneys should be investigated and chimney cappings or flashings improved as necessary.

Flat roofs:

Flat roof leaks have been noted relating to edge and parapet details and to pipe and flue penetrations. Some of the repair techniques witnessed during inspection were "first aid" in nature and do not appear to have addressed the problem fully.

The flat roofing should be examined in more detail to establish adequacy of upstands and flashings and effectiveness of collar details on pipes and flues. Repairs should be carried out to the required standard for the original roof. Roof outlets should be protected from blockage by stored material – in this context the design feature repeated on a number of units which placed the only outlet from a patio within a closed storage cupboard needs to be reconsidered. Roof outlets where hopper heads are not adequately catching the flow should be reworked to direct flows correctly. Local guarding on hopper heads should be considered to prevent blockage of downpipes.

3.2 Heating & Plumbing

There is a suspected relationship between heating systems which lose pressure regularly and properties with elevated moisture levels in skirtings etc. In this respect I would advise that a review take place as soon as practicable of the properties, identifying the units where leaking heating systems are suspected and a programme be put in place to repair or replace the faulty installations. Also, as part of ongoing maintenance procedures a programme should be put in place to check and rectify local leaks within the "hot press" areas and to check and rectify the operation of the boiler heating and hot water controls (primarily the 3 part valve control) in properties.

3.3 Electrical Installation

The survey did not include assessment of the electrical installation. In specific properties some issues were noted in the detailed survey notes regarding damaged switches, outlets etc. These, in some cases present safety risks and should be dealt with as reported. Also co-ordination between electrician and plumber is needed in relation to proper maintenance of boiler controls.

3.4 Windows & Doors

A review of the extent of problems in Meile an Ri with aluminium windows and doors should be carried out. The present haphazard approach to upgrading by reglazing or refitting and to retrofitting various ventilation solutions should be reconsidered and a programme for replacement of units with defects should be established.

See 3.6 below also regarding widths of windows and doors.

In the case of the Buirg an Ri Terrace Balcony Doors, these should be reviewed with regard to thermal performance and a programme for replacement considered.

3.5 Wall Construction

Where excessive damp or water penetration has been identified in external walls, repairs should insofar as possible address the source of the problem rather than concentrating on short term internal decorative appearance. This may involve local opening and rebuilding to rectify defective dpc's or cavities or in cases where this is not practical. More specialised waterproofing or tanking methodologies may be appropriate.

3.6 Building Regulation Compliance

The following actions are recommended in respect of the concerns raised in section 2.

Widths of doors & windows, clear heights

Doors and windows which do not meet the minimum applicable requirements for compliance with parts 'B' and 'M' of the Building Regulations should be replaced or modified in an appropriate manner to comply with the regulations.

Stairwells with heights below the minimum recommended should be assessed with respect to safety requirements and appropriate mitigating action or remedial action applied.

Mechanical ventilation requirements:

On the basis of observations during inspection, provision of appropriate mechanical ventilation exhausting to external air in cooking areas and bathrooms should be considered. Such provision is a standard requirement in all accommodation completed since 2005.

Natural ventilation requirements:

In some individual reports specific recommendations are made re natural ventilation, however the following general observations apply throughout.

- Trickle or background ventilation needs to be available in all habitable rooms. In properties where, due to changes in windows, the trickle ventilation detail has been reduced or lost, a suitable alternative should be considered. The provision of new wall vents where appropriate or the introduction of suitably sized trickle vents in replacement windows are two means of achieving the latter provision.

- Tenants also need to be made aware of the importance of ventilation in the properties. An information programme advising tenants on best practice regarding ventilation, heating, clothes drying etc. should be considered.

Compartmentation of properties.

The continuing of party walls to provide a fire-break to the underside of the roof finishes should be checked throughout the scheme and any works necessary to bring the construction into compliance with the building regulations should be carried out promptly. In relation to specific areas noted in the survey this requirement may involve simply pointing up excessive gaps or dry joints in the party wall, or as in the case of the parapet wall gutter detail crossing boundaries, more specialised construction methods may be necessary to close larger voids in the compartment wall.

4.0 CONCLUSIONS

In conclusion I believe the perception of significant defects within the development is justified in terms of the overall performance of a number of the properties examined. The extent to which lifestyle issues contribute to the problem cannot be ignored but in a large number of the properties examined it is not the sole factor or not the significant factor.

Some of the problems identified in this survey can best be dealt with by upgraded or modified maintenance procedures, however a number of the problems will need a more proactive approach.

I would recommend that there should be a review of the issues raised in this report, in conjunction with other matters of which the Council are aware from their ongoing involvement with the project, with the intention of focussing efforts to address certain works as a matter of urgency and to target other works as part of ongoing planned maintenance within defined timescales.

Bill Forristal

B.E., C.Eng., MIEI, MIStructE

----------Refer also to Addendum 1, added to report 5th July 2011.----------

ADDENDUM NO. 1

REPORT ON HOUSING DEVELOPMENTS AT BALGADDY
BUIRG AN RÍ, MEILE AN RÍ, TOR AND RÍ, PART FOXDENE AVENUE

5th July 2011

Following a meeting 4th July 2011 with CPLN and Balgaddy Working Together Group to review the initial issue of the report, the following addendum has been prepared to clarify the works/actions recommended following this survey.

Certain works which cannot easily be dealt with as part of routine maintenance should be prioritised and the following is an initial list of such issues.

Please note that this list is based on survey to date and other issues may exist of which the council may be aware or which may come to light during further works.:

1. Fire Compartmentation: Priority should be given to works to provide proper compartment division in attic spaces between the properties. In my opinion while some of this work is simple packing of small voids, this work requires the services of a specialist contractor as some of the voids are large and consideration needs to be given to the correct choice of details and to the correct installation to ensure barriers cannot easily be dislodged or disturbed.

2. Clear widths and heights on doors, windows, stairs: As these impact on safety, escape windows and doors should be replaced or suitably upgraded with compliant products as soon as possible. While all observed cases should be dealt with as soon as possible, where these issues impact on safety in houses adapted for disabled use immediate action is necessary. An assessment of the safety implications of the height clearances on stairs should be carried out also and appropriate action taken as soon as possible.

3. Heating Systems: As leaks in the heating system appear to be the possible significant factor in humidity or mould problems, high priority should be given to assessing which properties are affected and a specific programme of works targeting repair/replacement of these systems in advance of other works should be put in place.

4. Window Problems: The current pattern of upgrading defective windows in Meile an Ri does not appear cost effective and is not producing a satisfactory result. In conjunction with 2 above a specific window replacement programme should be put in place. This action should be extended to include the balcony doors on Buirg an Ri Terrace.

5. Ventilation Issues: A programme for the installation of externally vented mechanical ventilation to cooking areas in kitchens and to bathrooms to comply with best practice should be implemented. It is noted that in discussions with the residents it is apparent that a number of houses/apartments were not completed until 2007 and that any reliance on a legal waiver on requirements for mechanical ventilation would not have been valid after 2005.

6. Wall dampness: Cases of wet or excessively damp walls/window boards etc. should be properly assessed and appropriate action taken to find the source and to prevent water ingress rather than simply line or repaint the inner surfaces.

7. Roof/Gutter Leaks: A programme of upgrading or rebuilding the defective areas rather than repairing individual leaks should be implemented as the present approach leaves significant risk of wet rot or dry rot taking hold in roofs in terraces and in individual buildings.

Note :
The above is not the exclusive list of items requiring action but is the authors opinion on works which cannot properly be dealt with as maintenance and which need to be programmed as priority projects with finite timescales.
Some further investigation/survey is needed also on most of these issues to establish the full extent of buildings affected.

End of Addendum 1

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