CBS
CALEDONIAN BUILDING SURVEYORS

RICS

RICS Level 3 / STRUCTURAL BUILDING SURVEY REPORT

Dalrainich, Lochaline, Morven, Oban, PA80 5XT.

Malcolm Burge & Kay Nuttall
Dalrainich
Lochaline
Morven
Oban
PA80 5XT

FG/2578

13th September 2023

Dear Sir / Madam,

RICS Level 3 / Structural Building Survey – Dalrainich, Lochaline, Morven, Oban, PA80 5XT.

Introduction – Background

Following your invitation to tender we provided a fee proposal dated the 17th of August 2023 and your instruction was received thereafter to undertake a structural building survey inspection of the above noted building with provision of a written structural building survey report thereafter.

The purpose of the inspection and report is to provide a record of the main existing structural and fabric components of the building, their type, condition and any remedial works recommendations in order that you may plan and prepare for completion of these works in due course.

Our inspection was completed by Frazer Gillespie MRICS on Friday the 1st of September 2023 during which time the weather conditions were clear and dry with no cloud cover.

Limitation of Inspection

The following document does not constitute a specification of works and its principal purpose is to record the structural and fabric condition of the visible components of the building.

We have not carried out any testing or specialist inspection of the mechanical, electrical, plumbing, or drainage installations serving the building. We have not lifted any manhole covers to ascertain the type and condition of the drainage installations. However, we have completed a localised intrusive inspection of the prefabricated concrete wall panels and associated fixings within the wall void.

During our inspection we accessed the entire roof void area via the formed existing ceiling access hatch at the hall. We also gained partial access to the sub-floor area via the formed floor access hatch at the living room.

This report should not be used for contractor pricing. No identified works should be instructed without further measurement and careful specification of works.

Location

Dalrainich is positioned upon an elevated site to the north side of the rural village of Lochaline, immediately to the west side of the A884 road and to the west of Loch Aline sea loch. The exact boundaries of the single house plot were not fully confirmed at the time of our inspection but are understood to be excess of one acre. The generally sloping site falls downwards from north to south. Nearby property is generally of a residential nature. The local school is around 150 metres to the south, the local fire station is around 200 metres to the south. Lochaline ferry port is nearby with a regular link to Fishnish on the Isle of Mull.

Strontian, the nearest main settlement is around 20 miles away by car, to the north-east. Corran (Corran Ferry) is approximately 31 miles away. Fort William is approximately 40 miles away (via the Corran Ferry); and Inverness the main local authority administrative centre is 105 miles away (via the Corran Ferry).

The mapping position references are as follows:

Easting:	167734
Northing:	745062
NGR:	NM6745SE

For the purposes of this report only the front elevation (sea-facing facing elevation) is deemed to face south-east.

General Details

The building is a detached 4-bedroom single storey residential dwelling house, originally constructed around the mid 1960s. It is of Dorran precast reinforced concrete (PRC) panel non-traditional construction type. The house is of no listed status with Historic Environment Scotland, nor is it contained within any local authority designated conservation area. There are a variety of detached outbuildings to the north-west of the house.

The foundations are of a solid red engineering brick strip type laid upon poured concrete strip footings. The foundations are constructed upon either well compacted grounds or directly upon the bedrock; or a combination of both. The solum is of compacted hardcore / cement blinding mix. There is a mineral felt sheet damp proof membrane atop the foundations. The foundation arrangement includes internal dividing sub-floor walls in generally corresponding positions to the internal wall partitions above. The solum is well ventilated with the provision of naturally ventilating airbricks built-in to the perimeter foundation wall, which is coated with a smooth cement render on the outer face.

The structural and load bearing walls appear consistent with that of precast reinforced concrete (PRC) panel type, steel bolted together. The panel joints have gunned bitumen internally and a pointed with cement externally. They are fixed atop a precast reinforced concrete ring beam which bears weight directly upon the perimeter foundations. The wall panels are approximately 408mm / 16 inches wide and in single sections of one storey to eaves level, or floor to ceiling height.

There is around 20mm of expanded polyurethane insulation between the outer PRC wall panels and the internal plasterboard sheet linings, which are fixed to softwood timber strappings appended to the interior face of the PRC panels. The overall outer and structural wall thickness, inclusive of internal strappings and linings, was noted to be 190mm at the main house. The wall thickness at the south-west entrance porch is 130mm.

At the upper gable wall sections, the construction type is of softwood timber framed type, building paper membrane, and externally clad with painted tongue and groove timber boards.

The main, and porch, roofs are of dual pitched gable configuration, there is a projecting canopy at the south-east elevation pertaining to the projecting living room bay window and covered external porch.

The main roof trusses are of softwood 2-section W-fink type with each full dual-pitched truss constructed in 2 sections along the ridge line. Each truss section is mechanically fixed at the vertical ties with nailed straps. The trusses are of doubled-up main timber components, each main component has a sectional profile dimension of 60mm x 30mm and each full truss is positioned at 500mm centres.

The roof trusses are overlaid with plywood timber sheet sarking, mineral felt membrane, softwood tile battens and flush finished Marley interlocking concrete roof tiles. The soffits are flashed with powder coated aluminium tiles and the main roof ridge is flashed with mechanically fixed ventilated concrete ridge tiles.

At the overhanging eaves these are lined with both painted timber fascia and barge boards. Where the entrance porch adjoins the gable wall this connection is flashed with a code-5 lead sheet detail.

There is a single chimney stack serving the living room fireplace. The single flue stack is constructed from concrete block work and is coated above the roofline with a smooth cement render. It has a prefabricated concrete coping and single fired clay mortar bedded chimney pot.

The rainwater goods are entirely of black PVC type. All are of half-round gutter and round downpipe profile. Downpipes are bracket fixed directly into the wall masonry. The gutter brackets are fixed to the timber fascia boards at the eaves.

All rainwaters discharge to a network of ground set drains and although the end disposal point was not confirmed at the time of our inspection this is likely to be to a nearby open ditch or soak away.

Window installations are entirely of anodised aluminium framed casement type. All windows have sealed double glazed insets. Generally, the opening casements are top-hung opening, with simple latch locking devices.

The front external door includes a pair of side hung ply lined hollow-core storm doors with glazed upper insets. The rear door is of similar material but of side hung single pass configuration. All external doors are paint finished.

Internally, the main building ground floor structure is of suspended softwood timber joist type. The timber joists have a sectional profile dimension of 110mm x 50mm and these are positioned at 450mm centres. The timber joists bear weight upon the perimeter PRC ring beam, and also to the inner dividing brick foundation walls via timber wall plates / felt membrane. The floor joists are overlaid with timber floorboard decking. The floor structure is not insulated.

Internal partition walls are of timber stud type and lined with plasterboard sheet. The overall internal partition thicknesses are approximately 80mm thick. No access was gained to the partitions to confirm the presence of either thermal or acoustic insulation materials at the internal partition walls. The ceilings are also lined with plasterboard sheet. Minor amounts of laminated Wetwall panelling were noted at the shower enclosure. Plain plaster ceiling cornices were noted at the living room.

Decorative finishes to wall and ceiling linings are primarily of emulsion paint. Some wallpaper and ceramic wall tiles were also noted. Floor to ceiling heights were noted to be approximately 2,410mm throughout.

Joinery installations within the building include standard pencil rounded profile skirting and facing boards; flush panelled hollow core single pass doors; a variety of built-in shelves, cupboards and housings; windowsills; and a variety of laminated chipboard floor and wall mounted kitchen units with a laminated worktop.

The central heating provision includes a network of wall fixed pressed steel radiators. The radiators have individual thermostatic control valves. The network of radiators is powered by an oil-fired Grant Vortex Pro Utility 15- 26kW internal floor mounted condensing boiler. The efficiency rating of the boiler is 90-7 – 93.3%. There is a Danfoss programmable timer and thermostatic control panel. Supplementing the central heating system is one solid fuel burning stove at the living room. This is reckoned to have an output rating of around 4-6kW.

The cold-water supply is from the Scottish Water main. The internal PVC cold water storage tank is positioned within roof void upon a timber framed housing. The tank has no meaningfully insulation or lid installed. The water distribution pipe work is of both 15mm and 22mm diameter copper, and PVC flexi-pipe type, with quick-connection PVC couplings also used at the copper pipework.

The primary hot water supply is provided from the electrically powered copper immersion heating hot water cylinder, also located within the roof void. This is insulated with spray foam insulation.

The mains electricity supply is provided over ground from the nearby pylon to where it enters the building at the north-east upper gable wall of the building.

The mains supply is 1-phase and of 230 volts, 20-100 amps and 50 hertz supplied via 2 wires; this is considered to be a standard domestic building arrangement. The main electrical equipment includes 1 main cable-head, one distribution board with integral circuit breaker, and one supply meter. Where available for inspection the distribution wiring was noted to be PVC coated.

A wall ducted Manrose centrifugal mechanical extractor fan was noted at the shower room. Throughout the building the power sockets, heating, and lighting switches, etc are generally of white PVC type. Light fixtures are a mixture of standard drop pendants and ceiling fixed. External lighting includes a manually operated metal halogen floodlight fitting at the south-west entrance door and one manually operated PVC bulkhead at the front door eaves barge board.

The foul drain connection is understood to be directly to the main Scottish Water foul drainage system at the roadside. No detailed inspection was made of either the tank or associated foul drainage pipework at the time of our inspection.

Generally, the building was noted to be in a satisfactory structural condition with only works of a cyclical maintenance, upgrading, or component renewal nature currently required.

The services to the building are confirmed as being the following:

Electricity:	Mains (1-phase).
Water:	Mains.
Drainage:	Mains.
Gas:	No mains. Private LPG cylinder supply.

CONDITION - EXTERNALLY

Foundations

The foundations are of a solid red engineering brick strip type laid upon poured concrete strip footings. The foundations are constructed upon either well compacted grounds or directly upon the bedrock; or a combination of both. The solum is of compacted hardcore / cement blinding mix. There is a mineral felt sheet damp proof membrane atop the foundations.

The foundation arrangement includes internal dividing sub-floor walls in generally corresponding positions to the internal wall partitions above. The solum is well ventilated with the provision of naturally ventilating airbricks built-in to the perimeter foundation wall, which is coated with a smooth cement render on the outer face.

No longstanding or current structural movement, cracking or displacement was noted at any of the PRC walling, ring beam, or foundation dwarf walls and therefore we would suggest that the foundations are in a good condition and currently providing adequate lateral support to the building for which they were designed. The sub-floor solum and void were noted to be dry and well ventilated space. Some minor localised hairline cracking was noted at the external smooth render coat but no repair, other than redecoration, is necessary at this time.

External Walls

The structural and load bearing walls appear consistent with that of precast reinforced concrete (PRC) panel type, steel bolted together. The panel joints have gunned bitumen internally and a pointed with cement externally. They are fixed atop a precast reinforced concrete ring beam which bears weight directly

upon the perimeter foundations. The wall panels are approximately 408mm / 16 inches wide and in single sections of one storey to eaves level, or floor to ceiling height.

There is around 20mm of expanded polyurethane insulation between the outer PRC wall panels and the internal plasterboard sheet linings, which are fixed to softwood timber strappings appended to the interior face of the PRC panels. The overall outer and structural wall thickness, inclusive of internal strappings and linings, was noted to be 190mm at the main house. The wall thickness at the south-west entrance porch is 130mm.

At the upper gable wall sections, the construction type is of softwood timber framed type, building paper membrane, and externally clad with painted tongue and groove timber boards.

The structural wall panels are in a structurally good and sound condition. No evidence of displacement, distortion, or cracking was noted. Some minor localised uniformed hairline pointing cracks are evident and these are attributed to initial thermal shrinkage of the pointing material. Minor localised pointing repairs should be undertaken.

Where intrusively inspected at the north-east most outer wall (most likely to suffer from the resultant effects of condensation moisture), the steel PRC wall panel fixings were noted to be free of any significant corrosion.

At the south-east (front) elevation one ring beam unit to the right hand side of the external door has exposed and corroded reinforcing bar. This is not a structural issue but a localised masonry repair should be undertaken to prevent the spread of the corrosion.

The thermal performance of the prefabricated concrete panel walls is poor. Consideration may be given to the installation of insulated render system to improve the thermal performance. We have included an option cost below for your information only.

The non-traditional concrete panel wall construction may not be considered mortgageable by some lenders. This may or may not affect you at this time, but should you wish to improve the marketability of the property in the future consideration may be given to the addition of a further external load bearing masonry leaf. This would require to be designed and specified by a certified structural engineer. We have included an outline budget option cost for this below.

The gable wall timber cladding boards would benefit from redecoration.

Chimneys

There is a single chimney stack serving the living room fireplace. The single flue stack is constructed from concrete block work and is coated above the roofline with a smooth cement render. It has a prefabricated concrete coping and single fired clay mortar bedded chimney pot.

The chimney stack was noted to be in a good structural condition. Defects evident include a badly cracked chimney pot, and some hairline cracking to the render coat. The latter may be bossed (hollow and detached from the underlying concrete block work) and may require re-rendering. We have included an option cost for this below.

Roof

The main, and porch, roofs are of dual pitched gable configuration, there is a projecting canopy at the south-east elevation pertaining to the projecting living room bay window and covered external porch.

The main roof trusses are of softwood 2-section W-fink type with each full dual-pitched truss constructed in 2 sections along the ridge line. Each truss section is mechanically fixed at the vertical ties with nailed straps. The trusses are of doubled-up main timber components, each main component has a sectional profile dimension of 60mm x 30mm and each full truss is positioned at 500mm centres.

The roof trusses are overlaid with plywood timber sheet sarking, mineral felt membrane, softwood tile battens and flush finished Marley interlocking concrete roof tiles. The soffits are flashed with powder coated aluminium tiles and the main roof ridge is flashed with mechanically fixed ventilated concrete ridge tiles.

At the overhanging eaves these are lined with both painted timber fascia and barge boards. Where the entrance porch adjoins the gable wall this connection is flashed with a code-5 lead sheet detail.

Generally, the structural roof timbers are in a good, sound, dry and rot-free condition. No woodworm or other infestations were noted. The roof void was noted to be a dry and well ventilated space.

The provision of insulation within the roof void was noted to be approximately 300mm gauge of mineral wool. Some local gaps were noted, and the insulation should be re-positioned to ensure no gaps exist.

The concrete roof tiles are estimated to be in excess of 40 years of age. As such, we would consider it prudent to anticipate the renewal of the roof tiles in the medium to long term (10-15 years). A build-up of vegetation was noted at the roof and this should be mechanically removed.

A missing soffit tile was noted at the south-west gable apex and this should be renewed with that of a matching type, line and profile.

Windows & Doors

Window installations are entirely of anodised aluminium framed casement type. All windows have sealed double glazed insets. Generally, the opening casements are top-hung opening, with simple latch locking devices.

The front external door includes a pair of side hung ply lined hollow-core storm doors with glazed upper insets. The rear door is of similar material but of side hung single pass configuration. All external doors are paint finished.

The aluminium windows are estimated to be in excess of 30 years of age. The odd failed sealed glazing units were noted. With a life expectancy of around 35-40 years of age in protected locations we would anticipate that the glazing insets could continue to fail in the immediate to short term (0-5 years). As such it would be prudent to anticipate the renewal of all window installations in the immediate to short term (0-5 years).

The external doors were noted to be in a generally good and serviceable condition.

Rainwater Goods

The rainwater goods are entirely of black PVC type. All are of half-round gutter and round downpipe profile. Downpipes are bracket fixed directly into the wall masonry. The gutter brackets are fixed to the timber fascia boards at the eaves.

All rainwaters discharge to a network of ground set drains and although the end disposal point was not confirmed at the time of our inspection this is likely to be to a nearby open ditch or soak away.

No leaks or broken / missing brackets were noted. Slight weathering and fading of the gutter section at the north-west elevation was noted but generally the installation is in a good and serviceable condition.

CONDITION - INTERNALLY:

Floors

Internally, the main building ground floor structure is of suspended softwood timber joist type. The timber joists have a sectional profile dimension of 110mm x 50mm and these are positioned at 450mm centres. The timber joists bear weight upon the perimeter PRC ring beam, and also to the inner dividing brick

foundation walls via timber wall plates / felt membrane. The floor joists are overlaid with timber floorboard decking. The floor structure is not insulated.

The floor structure is in a good condition, level, dry and free from displacement or distortion. No woodworm or other infestations were detected from our sub-floor inspection. Where weight tested the joist end and mid-span connections were noted to be sound and solid. The odd uneven or loose floorboard was noted, minor fixing repairs can be undertaken when next renewing the floor coverings.

Internal Partitions & Linings

Internal partition walls are of timber stud type and lined with plasterboard sheet. The overall internal partition thicknesses are approximately 80mm thick. No access was gained to the partitions to confirm the presence of either thermal or acoustic insulation materials at the internal partition walls. The ceilings are also lined with plasterboard sheet. Minor amounts of laminated Wetwall panelling were noted at the shower enclosure. Plain plaster ceiling cornices were noted at the living room.

Decorative finishes to wall and ceiling linings are primarily of emulsion paint. Some wallpaper and ceramic wall tiles were also noted. Floor to ceiling heights were noted to be approximately 2,410mm throughout.

Generally, the internal linings and partitions are in a good and sound structural condition.

Some tape joints are visible / lifted and the occasional localised uneven or damaged ceiling lining (front entrance porch) were noted. Minor plaster lining repairs and tape join renewal are necessary.

Joinery Installations

Joinery installations within the building include standard pencil rounded profile skirting and facing boards; flush panelled hollow core single pass doors; a variety of built-in shelves, cupboards and housings; windowsills; and a variety of laminated chipboard floor and wall mounted kitchen units with a laminated worktop.

Generally, the joinery installations are complete, intact, and in a good condition. The kitchen installation is in a good condition.

Heating

The central heating provision includes a network of wall fixed pressed steel radiators. The radiators have individual thermostatic control valves. The network of radiators is powered by an oil-fired Grant Vortex Pro Utility 15- 26kW internal floor mounted condensing boiler. The efficiency rating of the boiler is 90-7 – 93.3%. There is a Danfoss programmable timer and thermostatic control panel. Supplementing the central heating system is one solid fuel burning stove at the living room. This is reckoned to have an output rating of around 4-6kW.

The condensing boiler was installed around 2016 and as such is relatively new and of modern efficient operation. No leaks, either current or historic, were noted from any of the fixed heating radiators or apparatus.

The solid fuel burning stove flue should be swept clear every two year period. The boiler should be serviced and maintained annually to ensure continued efficient and proper operation.

Hot & Cold Water

The cold-water supply is from the Scottish Water main. The internal PVC cold water storage tank is positioned within roof void upon a timber framed housing. The tank has no meaningfully insulation or lid installed. The water distribution pipe work is of both 15mm and 22mm diameter copper, and PVC flexi-pipe type, with quick-connection PVC couplings also used at the copper pipework.

The primary hot water supply is provided from the electrically powered copper immersion heating hot water cylinder, also located within the roof void. This is insulated with spray foam insulation.

No leaks were detected from any of the fixed water apparatus or distribution pipe work. All sanitary and metal pipe work installations appear to be adequately earth bonded.

The cold water storage tank, along with all associated pipework within the roof void should be insulated.

The hot water cylinder is estimated to be around 20-25 years of age. The immersion heating element was renewed in 2006. As such it would be prudent to anticipate the renewal of the hot water cylinder in the short to medium term (5-10 years).

Electrical Installations

The mains electricity supply is provided over ground from the nearby pylon to where it enters the building at the north-east upper gable wall of the building.

The mains supply is 1-phase and of 230 volts, 20-100 amps and 50 hertz supplied via 2 wires; this is considered to be a standard domestic building arrangement. The main electrical equipment includes 1 main cable-head, one distribution board with integral circuit breaker, and one supply meter. Where available for inspection the distribution wiring was noted to be PVC coated.

A wall ducted Manrose centrifugal mechanical extractor fan was noted at the shower room. Throughout the building the power sockets, heating, and lighting switches, etc are generally of white PVC type. Light fixtures are a mixture of standard drop pendants and ceiling fixed. External lighting includes a manually operated metal halogen floodlight fitting at the south-west entrance door and one manually operated PVC bulkhead at the front door eaves barge board.

No test of the installation was undertaken as part of our remit. However, the majority of the distribution wiring is reckoned to be original to the building and therefore around 55 years of age. Domestic electrical installations have a lifespan of around 40-50 years, dependent upon usage levels.

A full Electrical Inspection & Condition Report (EICR) should be undertaken in early course to establish the extent of any wiring renewals. Any works of a C1 category identified following the test should be undertaken.

In the meantime, we have included an outline budget amount below for the re-wiring of 60% of the building for your information only. All works should be undertaken by a SELECT / NICEIC registered electrical contractor.

Gas

There is no mains gas supply to the building nor is there a mains gas supply available in the immediate locality.

There is a private LPG cylinder supply serving the kitchen hob only. No detailed inspection was made of the supply pipe work, but it and the external cylinder connector appear in a good visual condition.

Foul Drainage

The foul drain connection is understood to be directly to the main Scottish Water foul drainage system at the roadside. No detailed inspection was made of either the tank or associated foul drainage pipework at the time of our inspection.

No leaks, either current or historic, were noted from any of the internal foul disposal pipework, where available for inspection. The external cast iron soil vent pipe requires redecoration.

Asbestos

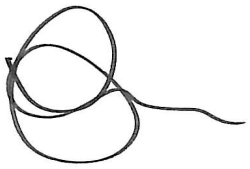
Asbestos containing materials were widely used within the construction and repair of buildings up to the year 2000. However, some asbestos containing materials were used beyond this time, particularly in the

repair and alteration of buildings. We did not identify any suspected asbestos containing materials at the time of our inspection.

Should you propose to undertake any substantial refurbishment or alteration works to the building you will require commissioning a full asbestos sampling survey ahead of any works progressing. This would be a necessary document for inclusion with any building warrant application.

Should you wish to discuss any aspect of the building or this report then please do not hesitate to be in contact.

Yours faithfully



Frazer Gillespie MRICS
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Dated: 13th September 2023
Appendix 1: Summary Schedule of Repair / Maintenance Works – Outline Budget Costs.

APPENDIX 1:

SCHEDULE OF OUTLINE REPAIR / MAINTENANCE WORKS:

Outline Schedule of Repair Works:

Dalrainich, Lochaline, Morven, PA80 5XT:

		£
1.	Redecoration of gable wall cladding, eaves barge & facia timbers.	1,200.00
2.	Redecorate basecourse render coat.	700.00
3.	Redecorate external metal soil vent pipe.	150.00
4.	Renew cracked chimney pot.	70.00
5.	Undertake minor localised external wall pointing repairs.	300.00
6.	**Provisional Allowance –** Renew render coat to external chimney stack.	800.00
7.	**Provisional Allowance –** Renew roof tiles (10-15 years).	16,000.00
8.	**Option –** install an insulated render system externally.	22,000.00
	Or,	
9.	**Option –** install an additional load bearing external leaf.	28,000.00
10.	Renew missing soffit flashing tile.	50.00
11.	Renew window installations throughout (0-5 years).	11,500.00
12.	Undertake localised repair to damaged / corroded ring beam masonry unit.	200.00
13.	Reinstate roof void insulation.	250.00
14.	Insulate cold water storage tank and roof void pipework.	400.00
15.	Undertake minor localised internal plaster tape joint and lining repairs.	450.00
16.	Renew immersion heating hot water cylinder (5-10 years).	1,200.00
17.	Commission a full Electrical Installation Condition Report (EICR).	400.00
18.	**Provisional Allowance –** re-wire 60% of the entire installation.	6,500.00

NB:
1. All of the above budget costs are exclusive of VAT at the appropriate rate.
2. The above costs are established on the basis that each item described works is completed in isolation as single items.
3. The above budget costs include an allowance for access and equipment but exclude professional fees.