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EDINBANE SHOP
Edinbane, Isle of Skye

Condition Exception Report

Client:
Edinbane Community Company
c/o Andrew Prendergast
Development Officer
IV51 9PW

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1.0 Introduction

1.1 Introduction

Glyn Young Associates were instructed by the Edinbane Community Company to inspect and report on the condition of the Edinbane Shop Building. The purpose of the commission was to provide a condition exception assessment of the buildings structure and fabric. The client wishes to understand if the existing building is viable to be retained as part of a larger redevelopment of the site.

The condition assessment will thereafter inform a brief analysis of the building's potential for re-use or demolition in the context of condition, usefulness and other relevant considerations.

1.2 Methodology, Conditions and Exclusions

The site survey was undertaken on Monday 25th October 2021. The inspection comprised a survey of structure and fabric; externally, internally and accessing both attic spaces. Specific critical defects that have a bearing on the remit of the report were photographically recorded. Full access around the structure was possible.

1.3 The weather was overcast and there were frequent heavy showers for the duration of the inspection.

1.4 Edinbane Shop lies on moderately sloping ground within a sizeable plot. It lies within the township of Edinbane, directly to the east of the A850 road, between Dunvegan and Portree. The original road runs directly to the west of the building with the more recent public road further west again.

1.5 For the purposes of the report the main façade will be deemed to face west, with other orientations following this basis.

1.6 General Description

Edinbane shop in a single rectangular block lying on what would have originally been croft in-by ground. It is understood the building was erected in 1949 as a grocer's shop and garages. There are also fuel pumps and tanks lying to the west of the main building. At a later point the northerly garage and rear parts of the building have been converted to domestic accommodation, which has seen the garage doors to the west and south elevations built up to form smaller lower window openings. It is understood that the shop may have operated to a lesser extent up to 2008. The domestic dwelling section is believed to have been occupied up to three years ago. (Ref Images 1-6)

1.7 The building is constructed on, what is believed to be, a concrete pile and ring beam foundation. Local discussion indicated the ground has a substantive peat layer that required a more complex foundation. The main external walls and internal spine separating wall are constructed of single skin cast in-situ concrete from this foundation up to eaves level. These concrete walls have a cementitious wet dash harl applied with masonry paint finishes. There is an up standing simple crenelated parapet wall to the main westerly façade, which has no specific coping stone detail. Later infills and adaptations to the concrete walls are formed out of standard concrete blocks with repaired harling and matched redecoration.

1.8 The roof is a single span pitched roof arrangement, formed from steel trusses bearing on the external wall head. Steel purlins run horizontally over the trusses and are built into gable wall heads for final support. The truss footings and other mid-point intersections with spine walls are also built into the concrete outer wall structure. The centres of this roof and its purlins are notably wide. The original roof covering was small profile corrugated asbestos fibre cement sheeting with occasional clear plastic roof lights. More recently this has been overclad with modern box profile polyester coated roof sheeting supported on further overlaid 47x100mm timber purlins. Earlier rainwater goods have been removed, with metal bracketing bent down and left. These have been replaced with black uPVC deepflow gutters and downpipes on new treated timber eaves boards. Various external drainage and service pipes remain around the building.

1.9 The building has white uPVC double glazed windows and doors to the shop openings and to the dwelling's rear kitchen door. Thereafter timber tilt and turn double glazed casement windows to openings elsewhere. A cast iron final adorns the rear gable apex, which must have been reused from an earlier building, but adds a grandeur and charm unfamiliar to the otherwise functional design of the building. A single brick rendered

chimney stack rises from the eaves of the north flank wall, terminating in a concrete tabling and a single fireclay pot.

1.10 The domestic property has a solid fuel back boiler open fire with pumped wet heating system to radiators in other parts of the dwelling. There is a hot water cylinder and gravity tanks for the back boiler and cold-water systems present in the attic space. Cold water supply is believed to be from a public main. Wastewater is believed to lead to an assumed brick septic tank to the north of the property, and thereafter out-falling to a water course. There is no notable heating or wet services on the shop side of the building.

1.11 Two single phase 100-amp electrical supplies are provided to the building, linked to two separate meters and associated consumer units, dealing with the shop and domestic dwelling respectively. There is evidence of a security alarm system having been present in the shop. A satellite dish is mounted on the east gable assumed to provide TV signal to the domestic dwelling.

1.12 Internally ceilings are formed of independent suspended timber framed ceilings with plasterboard finishes and overlaid glass wool insulation on the domestic dwelling side of the attic space. The external cast in-situ concrete walls are framed internally with 47x100mm timber framing with plasterboard finishes. There is evidence in the domestic dwelling that those frames have modest levels of glass wool insulation.

1.13 The ground floor has originally been a cast in-situ concrete floor slab. This has a single step in level running between the north / south flank walls. On the shop side this floor remains as the finish surface, with a further step up on entry through the shop porch. On the domestic dwelling side, the original concrete garage and store floors have been overlaid with a floating timber floor formed of packed 47x50mm treated timbers and 18mm chipboard flooring over. There is no evidence of any insulation or uniform DPM present. The undulating nature of the concrete floor surface is notable.

1.14 Internal walls comprise two forms; original cast in-situ concrete walls separating what would have been the original shop and stores, and possibly the shop from the office space to its rear. It is assumed this wall is also founded on a further pile and beam foundation. Elsewhere walls are formed of simple timber stud partitions. Internal doors are consistently veneered plywood with simple timber skirtings and facings. There is a fitted kitchen to the northeast corner of the building and a bathroom comprising bath, basin, and WC on north flank wall.

1.15 <u>Report Content</u>

This report will examine the high-level condition of the existing building by main headline element. We appreciate the client is considering this building based on a partial or full redevelopment of the site. The question therefore is whether this structure is viable for re-use within a larger scheme, or whether its condition and limitations make demolition more sensible. Our observations will therefore focus on the principal elements of roof structure and coverings, external walls, floor, foundations, internal fabric and layout, services, and site generally – those in essence which could theoretically be retained for re-use. Smaller minor condition defects will not be noted as there is an assumption that generally none of these elements would be retained in any development scenario.

1.16 We will then consider in balance whether it is a viable proposition to consider this building, or parts of it, for inclusion in any redevelopment scheme. This options appraisal will balance considerations of condition, scale and possibility of repairs, longevity, statutory consent implications, construction process and engineering concerns.

1.17 The report is supported by a referenced photo appendix giving context to observations on condition.

2.0 Existing Building – Condition Exceptions

<u>2.1 Roof Structure and Coverings</u>

Although the roof coverings have been renewed more recently this work has been undertaken poorly and is causing water ingress and related fabric failures in several locations around the building. Generally, the areas of roof slopes are functional however abutment flashings to the main façade parapet wall and around the chimney stack (Ref: Image 48/49/66/69) are causing chronic water ingress and heavy damage to internal fabric. This is evidenced in the room spaces (Ref: Image 7/87-91/116/117/138-141/144) but also in the attic spaces where adjacent fabric is heavily affected (Ref: Image 66/127-132), some timbers with apparent active wet rot.

2.2 The abutment flashing point between the roof sheeting and the parapet is open in places. A slight raggle chase has been cut for a flashing but this has never been installed, with only minor mortar haunchings apparent (Ref: Image 26). The parapet upstand wall on the west gable has open cracks from the upper surface down the wall (Ref: Image 7 & 17)). Internal face render coatings to the parapet wall are poor and inconsistent (Ref: Image 35). In two external areas the concrete core of the wall is exposed and visibly saturated and friable (Ref: Image 25/51/52/53). In the attic space and at ground floor level the wall is seen to be completely saturated (Ref: Image 63/64/133).

2.3 There are similar active water ingress issues at the east gable, in the absence of an upstanding parapet and the presence of adequate flashings. The source of the moisture could either be via the modest air brick opening, by the presence of hygroscopic salts in the concrete walls, or general porosity of the rendered concrete structure which has inconsistent casting beds. It is also understood that beach sand and aggregate may have been used for the concrete, which may explain the heavy presence of salts and salt banding in various locations. (Ref: Images 76-81/84)

2.4 As a result the steel roof trusses and purlins, where these bear or contact any saturated concrete, have suffered considerable corrosion (Ref: Image 59/60/61/65/75/134/135). This is exacerbated by the presence of salts, now potentially hygroscopic in places, holding moisture at built in interfaces. The structure is not unstable yet, but the degree of general corrosion (Ref: Image 57/58) and longevity of this element is of concern. It is worth noting that there is general corrosion to all steelwork within the attic.

2.5 The retained fibre cement roof sheeting which has been over covered by the new roof finishes has a high likelihood of containing chrysotile asbestos fibres. The client should immediately consider commissioning a demolition and refurbishment asbestos survey of the building to understand this properly, put in place management precautions and prepare for CDM Regulation planning for any forthcoming phases. The method of fixing the new roofing has drilled through this covering to affix to the original purlins and hence there is potential for asbestos containing dust to be present at ceiling level below this. (Ref: Images: 67/123/124/125). There was also notable condensation on the underside surface of the new roof sheeting which could in time lead to an accelerated corrosion of the new sheeting. Due to the high humidity within the roof space isolated non-structural timbers are visibly affected by wood boring insects (Ref: Image 86)

2.5 In terms of adaptability, the centres and spans of the existing roof if considered serviceable and re-useable may have a limitation as to load, should a more heavily insulated covering be consider in future.

2.6 External Walls

In the climate of Western Skye the probability of a cast in-situ concrete single skin wall preventing water ingress is unlikely. Cavity walls or frames are the accepted minimum to give protection. There is evidence of saturated walling in several locations around the building. As mentioned previously water is entering the wall on both gables but is also entering the building on both flank walls at ground level. This is evidenced by dampness and salt blooms in all partitions that contact the west flank wall (Ref: Images 92/100/105). The problem is exacerbated by a failing cement harl whose cracks will allow water to enter and by its impervious nature will then trap that moisture in the concrete.

2.7 High ground levels, which in places bridge over solum space air bricks (Ref: Image 13/33), or others blocked by paintwork, allow moisture to wick up and through the wall in the absence of a damp-proof course. Ground levels also allow water to enter through air vents. On the east flank wall this has led to considerable decay to the inner wall frame and plaster finishes in the shop office space (Ref: Images 149-152).

2.8 The poor fitting of doors and windows, with inadequate seals and internal finishings, has allowed further water ingress and decay in localised areas (Ref: Images 101/102). Threshold seals are inadequate and floor finishes have been affected and repaired in some but not all places. Window DG units are failed in places and broken glass is apparent in a couple of units (Ref: Image 14/15/18/21/40/55/56).

2.9 Persistent moisture contained in the concrete walls has allowed corrosion to occur in reinforcement over window and door lintels (Ref: Image 11/31/43). There is also evidence of potential corrosion jacking of the concrete wall head at locations around the building (Ref: Image 29/83). There are numerous remnant ferrous fixings which have been left to corrode on the wall surfaces (Ref: Image 8/9). Where other service holes exist, these have been filled by an excess of expanding foam (Ref: Images 107/108). General failure of external paint coatings makes a minor contribution to the problem, but heavily affects the aesthetics of the building to the rear sides (Ref: Image 20/39).

2.10 In addition to corrosion cracking there is also evidence of settlement cracking occurring diagonally from window openings around the building. These are modest but suggest a certain movement or settlement has occurred since construction (Ref: Image 27/28/46/47).

2.11 Two original garage sized openings have been reduced in size to form windows for the domestic dwelling. These have been built up with concrete blockwork and lintels with patched harl repairs. These patches conceal the original opening beams which could be steel (Ref: Image 10/32/34). Their condition could not be ascertained, however with the level of saturation evident in the front wall, there must be concern over their, and the newer lower lintels, medium-term condition.

2.12 In terms of incorporating this superstructure into a larger development, I would have concerns over the structural performance of these walls, due to the nature of their casting and the condition of their reinforcement. The extent of corroded reinforcement around the building, the high prevalence of salts, the absence of stability piers and movement joints, and the poor general performance of single skin masonry in this climate, balanced against the potential costs of repair and upgrading (if viable) likely rule out economic reuse.

2.13 Foundations and Ground Floor

The building is believed to be built from concrete pile and ring beam foundation, due to the peaty nature of the subsoil on the site. This should signal a warning for future development and a need for possible non-standard foundation designs by a structural engineer for any developing scheme. This ring beam appears to be exposed at the western end of the building (Ref: Images 22/23). There is evidence of structural movement on the external walls, however the shuttered concrete walls skin is slender, and it was noted there was no piers to aid stability nor expansion joints to alleviate tensions in the long flank walls. There are some render and finishing issues around the foundation course but these are largely superficial (Ref: Image 38).

2.14 The solid concrete floor of the building appears to cast within the external walls and internal spine walls. In the shop area where the floor slab remains the finished surface, the levels undulate considerably (Ref: Image 137). It must be assumed therefore that this has moved and settled over soft ground and was not built that way, subsequently that there is an absence of reinforcement resisting movement (Ref: Image 143). Given the nature of the rest of the construction and dates it is unlikely that there will be any insulation or damp-proof membrane in the slab (Ref: Images 148/153/154). The rising dampness beneath and through floor coverings laid directly to the concrete slab in the shop office suggests this is the case. Trial holes through the floor in the house exposed the original slab and a subsequently infilled inspection pit from the garage (Ref: Images 98/99).

2.15 Further damage to the original concrete floor slab is evident on the step edge at the change in level between the shop and the office, where salts and / or carbonation have decayed the exposed edge of the concrete slab (Ref: Images 145-147).

2.16 Within the domestic house side the floating timber floor also undulates but to a lesser extent, and where the chipboard flooring is exposed, this has been poorly laid in an irregular manner, with t&g joints to apparent in many places (Ref: Image 104). There are uneven transitions between rooms (Ref: Image 93) and water damage and dampness evident at door thresholds, some now repaired (Ref: Image 94/95).

2.17 Re-use of these elements are again complicated. The foundation may be stable, but the sizing and design of it are unknown and would require significant investigation. If the walls that rise from it are determined to be unserviceable then it would be difficult in my view for an engineer to subsume and certify this element into any new scheme without understanding their very nature for his design process. To work with this foundation would also limit the flexibility of any new build to the footprint of the existing and once committed to that extent of a new superstructure build, perhaps that flexibility of design negates efforts to reuse this element. The note on ground conditions being problematic must however be seen as a consideration to the wider scheme in due course.

2.18 In terms of the existing floor slab and later floating floor, the general condition, absence of DPM, reinforcement or insulation, and evidence of movement and settlement confirms that this element will need replacement also.

2.19 Internal Fabric and Layout (Ref: Folder Images)

Generally, the remaining internal fabric is in very poor condition. There are negligible levels of insulation throughout the building. Previously mentioned and recorded defects as a result of failings in the other main external elements have produced a compounded situation: Water damage to ceilings, walls and floors; general dampness and condensation mould growth; localised timber decay; failing substandard kitchen fittings; poorly fitted and finished external window and doors - all contribute to a sense that even if the buildings superstructure was to be repurposed, a comprehensive refurbishment of all internal fabric is not in question.

2.20 Of particular concern is the undersized and poorly supported nature of the shop side ceiling framings, which span independently of the roof trusses above. These are in very poor condition and cannot support human movement in the attic space. Several ceiling linings are loose and hanging into the spaces below, either due to failure or water ingress.

2.23 For the purposes of this viability study the internal fabric of the building must be consider for complete replacement. Once the rigours of the building regulations consider this building in terms of insulation, fire and safety, the works will be so substantive that retention will be uneconomic.

2.21 Services (Ref: Folder Images)

Most services within the building are beyond serviceable use. A great number of these are already redundant. All plumbing and heating installations should be considered unsafe given the corrosion evident to the open fire back boiler, and a leak noted from the base of the hot water cylinder at attic level. The incoming water supply should be tested for capacity and pressure to inform any developing scheme and the potential to provide fire hydrant capability that may be a requirement for a larger development.

2.22 Electrical services remain working presently in places, but the general age and condition of the installation is poor and given the amount of active water ingress the system should be isolated immediately and made safe. The capability of two 100-amp single phase supplies to serve the developing scheme should be checked as proposals develop.

2.23 Other internal services, such as Satellite TV, Alarm, Bell, and phone installations are beyond their serviceable life.

2.24 Rainwater drainage on the building has been renewed recently as part of the re-roofing exercise and this generally has capacity to function well. The collection and dispersal of this water around the building is sporadic. Gully heads exist, but some are choked and causing significant fabric damage such as that on the south flank wall, with resulting damage inside the shop office. Where the water is collected, and where it is then dispersed to is not clear. The ground around the building is very wet, heavily vegetated, and this too contributes to the condition of the external walls and floor slab around the property.

2.25 The existing septic tank is believed to exist to the north of the property, and if so, this would locate the assumed brick tank in an area of trees and shrubs. The condition of the tank and the effects of roots is of

concern. The capacity, location, and discharge point of the tank also present challenges for incorporation into a new scheme. Therefore, a new package treatment plant should be considered with new soakaway or consent to discharge and sized accordingly to the new scheme requirements.

2.26 Site (generally)

The only consideration obvious on site is the presence of fuel pumps and subterranean fuel storage tanks. This poses a need to assess the way these tanks are treated and sealed, infilled, or removed. There is also a risk of contaminated land and resultant works in relation to this. It would be prudent for any developing project to consider these aspects early in the planning stage to understand the cost implications.

3.0 Viability Analysis

3.1 Consideration of the building's viability for inclusion in a any redevelopment should include condition-based observations but must look at other aspects also. The building's upgradable capacity to comply with statutory requirements, specifically building regulations in relation to structure, weathertightness, and insulation are important. Whether working around an existing building presents complication and cost to a building process is also an issue. The ability for the existing structure and foundations to perform to an evidenced standard to allow engineering certification may be key. Normally costs of refurbishment and repair of an existing building are critical, however in this instance I think the first question must be can this specific building be viably repaired.

3.2 Condition

To summarise condition, we need to focus on the core issues affecting the elements of the building that would be expected to survive a refurbishment project; roof structure, external walls; ground floor, foundations, services and site:

- Roof Structure – interfaces and detailing of the existing roof coverings are substandard; the heavy corrosion of the steel trusses where they interface with salt laden walls; presence of potentially asbestos containing roof sheets that risk contamination of the roof spaces; longer term issues of interstitial condensation on the back of new roof sheets; inadequacy of ceiling framing to support its own weight
- External Walls – poor construction of single skin concrete walls; absence of piers in construction for stability and a cavity for weather protection; corrosion of reinforcement above openings and at wall head; general salt contamination of concrete which is now potentially hygroscopic; render and décor failings; high ground levels; settlement cracking due to subtle movements in foundations
- Ground floor – uneven, uninsulated, absence of reinforcement, and likely absence of a damp-proof membrane
- Foundations – unknown nature of the foundation design, therefore inability to assess adequacy for existing loading; or additional loading of upgraded or enhanced construction; level of foundation beam appears high and is exposed; evidence of subtle movement under existing load
- Services – redundancy of most service installations within the building; checks needed on existing septic tank, but this is likely to be redundant to a larger modern development's requirement; existing water and electrical supplies to site are however useful and could be re-established in a new scheme
- Site – any developing project should consider the requirement to remove of stabilise the existing fuel tanks and consider issues relating to potentially contaminated ground

3.3 Statutory Consent Implications

The presence of the building on site establishes a precedent, and I envisage that the LA Planning Department would look favourably on any redevelopment of the site that enhances local services, provides facility, while improving the presentation of the site. The building, if retained, would however require a change of use application to any new use as parts span both commercial and domestic classification as things stand. It might be that if the property has been taken off the commercial rates role or council tax list, then the building will now be classified as derelict. In any case, any scheme is likely to be seen positively by local planners.

3.4 The most critical issue for retention of the building is likely to be in terms of Building Standards. If the building were to be retained any proposal is likely to be considered a conversion. A conversion from domestic to commercial at least in part, or most likely from derelict wholly. As a conversion this would expose the existing building, as part of a refurbishment scheme, to the regulations. Fully in terms of structure, fire and safety; and to a level of most reasonably practicable in terms of other aspects including insulation standards. It is this rigour that will cause the building issues – the roof may not be strong enough to support the required level of insulated sheeting; the walls have no cavity, nor do they have structural piers to provide stability, amongst other issues. To advance with the retention of this building any design team would have to explore these implications and effects fully, but I foresee issues.

3.5 During planning consent and building warrant processes other statutory requirements will manifest themselves. Environmental standards will come into play in respect of the fuel tanks and surrounding ground, and also the need for upgraded wastewater treatment and dispersal, and rainwater collection and dispersal. The local authority roads department will also be consulted on access and effects on adopted roads. Although I highlight these issues for your consideration, they can be considered later with a design team and are navigable.

3.6 Construction Process

Constructing a new development on a clear or cleared site is likely to be more economic than working around and incorporating an existing building. Even when the building is in good condition, has potential for a long life and provides the flexibility the proposed scheme needs in terms of space. Again, in this instance the viability to repair this building is questionable, but furthermore when you consider the knock-on effects of

then building around this structure, upgrading it to current standards and trying to incorporate it aesthetically and functionally into a larger purpose-built scheme – the proposal I believe detracts from the greater potential.

3.7 Engineering Design

To adapt an existing building, impose further load through insulation and fabric improvements - a structural engineer, as part of the building warrant process, will be expected to certify the loadings and foundation capabilities. This normally requires investigative excavations to expose sections of foundation to record sizes and condition. If this construction is a pile and ring beam build that will be problematic to expose, and I sense early in any design process an engineer will present concerns over the adoption of the foundations. Assumptions will not be acceptable in this respect and there may be concerns over retention. The project should also recognise the ground condition issues of the site in any larger scheme and ensure early investigations are undertaken.

3.8 Summary

The survey work has in my view presented insurmountable issues with this building, not only in terms of condition, but also the general quality of the construction and its potential future length of life. I have resisted a financial appraisal of the works needed to bring the building into a serviceable condition, or a comparison with rates for new build commercial or retail construction, simply because in my view I do not believe it can be feasibly repaired. The building is substandard in a number of ways that can never be fully resolved technically or with any financial balance.

3.9 Edinbane Shop as it stands, is of its time, of its locality and of the means to construct in 1949. It has been a key facility and has served the local community in this period, but if a rejuvenation of that facility is required any investment would be most advantageously directed to a new building with robust climate resistant detailing, high environmental and insulative standards, and longevity.

Glyn Young
Glyn Young Associates
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