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Our Ref: P21-478/AB/MB

10th January 2022

Simon Bell
Norr
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Dear Simon

Gunnerton Farm Buildings - Visual Inspection Survey

At the instruction of Norr Consultants, 3e were appointed to carry out a visual structural inspection of the stone barns/outbuildings located at Demesne Farm, Gunnerton. The inspection was carried out on Wednesday 27th October 2021. Laura MacIver from Norr Consultants carried out a site inspection together with Adrian Batey from 3e.

The existing barns/outbuildings are robust traditional loadbearing masonry buildings with timber floors/roofs. They are considered to be suitable for sympathetic conversion into dwellings although this will require a degree of structural intervention to ensure that the resulting buildings are structurally sound. The following points indicate the findings of the visual inspection; building notation is as the attached site location plan.

Barn 1

Barn 1 is a two-storey solid masonry construction with a timber first floor and slate roof (P1). The roof is supported on timber rafters/purlins spanning between A-frame timber trusses (P2).

The timber floor appears to be in poor condition and was not accessed during inspection.

The roof has significant deflections at ridge level along the length of the building.

The external walls are poorly pointed and are damp in a number of locations.

There appears to have been a previous building attached to the eastern gable (P3).

Timber lintels are in poor condition at the door openings.

The external wall is acting as a retaining wall to one elevation with obvious signs of damp/water ingress.

A single storey link structure with a corrugated sheet roof connects the barn to the main farmhouse and is currently used as a store.

Rainwater goods are in poor condition and it is not clear how this currently drains or if it is adequately connected to below ground drainage (P4).

Barn 2

The building is generally a two-storey solid masonry construction with a timber first floor (P5). There is a single storey section attached to the northern side.

Both portions of the building have been re-roofed with a corrugated metal sheet supported on the timber roof construction. Galvanised metal holding down straps are provided in a number of locations externally and internally to attempt to accommodate uplift on the lightweight roof (P6).



There is a noticeable crack in the gable wall at the junction between the two storey and single storey section of the building (P7). There is also a large crack internally in the party wall between the two sections of the building (P8).

There are obvious signs of damp in the walls in a number of locations and particularly at the North elevation where the wall retains the external ground level (P9). There do not appear to be any gutters or RWP's to this elevation therefore increasing risk of saturation of the ground adjacent to the property (P10).

Barn 3

The barn is a two-storey solid masonry construction with a timber floor and slate roof finish (P11). The roof structure comprises timber purlins/rafters supported on timber A-frame trusses.

The first floor was not accessible due to safety concerns as we were informed of a previous incident (P12).

The ground floor also appeared to be suspended and similarly was not accessed due to safety concerns.

Areas of cracking were noted in the external walls together with areas of damp (P13).

The Eastern single storey gable wall is leaning outwards to a significant extent (P14).

There are a number of trees in close proximity to the property (P15,16).

Sections of the external walls are retaining the ground external to the property.

Barn 4

Barn 4 is a single storey/two storey solid masonry construction (P17). The roof has a slate finish to the end sections with a corrugated metal roof to the central section. The roof finishes are supported on timber rafters/purlins. The Northern section has a first floor which was accessed using external steps which are no longer in place.

The most northerly gable section of the roof is badly damaged with missing slates and damaged roof timbers. A section of the gable wall is also missing (P18).

There is a noticeable dip in the ridge line along the central section of the building (P19).

Lintels are generally stone but with exposed timber lintels to the central section of the building.

The building is located on a sloping section of the site with the external walls retain the external ground level in a number of locations (P19).

There are trees in close proximity to the property on the Northern and Western elevation (P20).

Shed 1

The building is a timber framed construction with corrugated sheet roofing and wall cladding. A block wall is provided to the three enclosed sides to approximately 1100mm (P21). The building is considered to be at the end of it's design life and is not considered to be suitable for future conversion.

Shed 2

The building is a pre-cast concrete portal framed construction supporting a corrugated asbestos sheet roof (P22). The external walls to the enclosed sides are blockwork to part height with timber cladding above. It is likely that the building has been designed as an agricultural shed and as such the normally accepted design life would be 20 years. The building is likely to be at the end of it's original design life although there were no signs of major structural defects and is considered suitable for conversion subject to the relevant final design checks.

The proposed development of the buildings will clearly require structural intervention/enhancements to convert the buildings into habitable dwellings. Each unit will require a detailed structural inspection to develop the full scope of works required.

As a minimum the following works are recommended:

- Site investigation to determine level and properties of bearing strata.
- Expose existing foundations to determine existing bearing and allow development of underpinning options.
- Re-pointing and crack stitching where required to stabilise the external walls.
- Full timber survey. It is considered likely that all floor and roof timbers will need to be replaced.
- Re-build existing gable to Barn 3 and Barn 4. A portion of Barn 2 is also likely to require re-building due to extent of cracking at the wall junction noted above.
- Review external levels to eliminate and/or minimise retaining walls on the line of the buildings.
- Check damp-proofing/tanking of external walls.
- The existing pre-cast concrete shed (Shed 2) will require a full structural survey to assess long-term stability and integrity. Any construction to create a new dwelling in this location should not rely on the current frame for vertical or lateral support.

We trust that the above report is adequate for your current requirements however please do not hesitate to contact us if you have any queries or require further clarification.

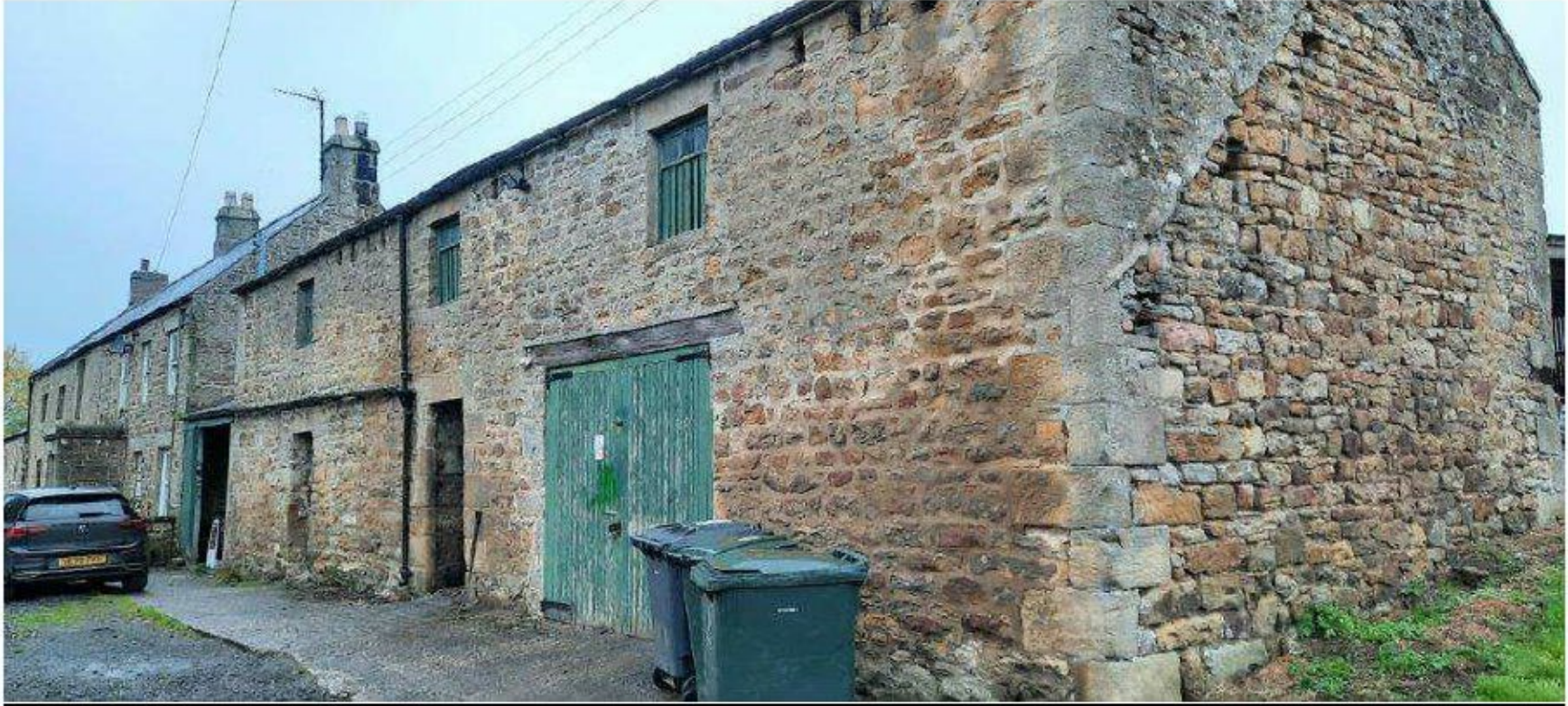
Yours Sincerely



Adrian Batey
Technical Director

Photographs

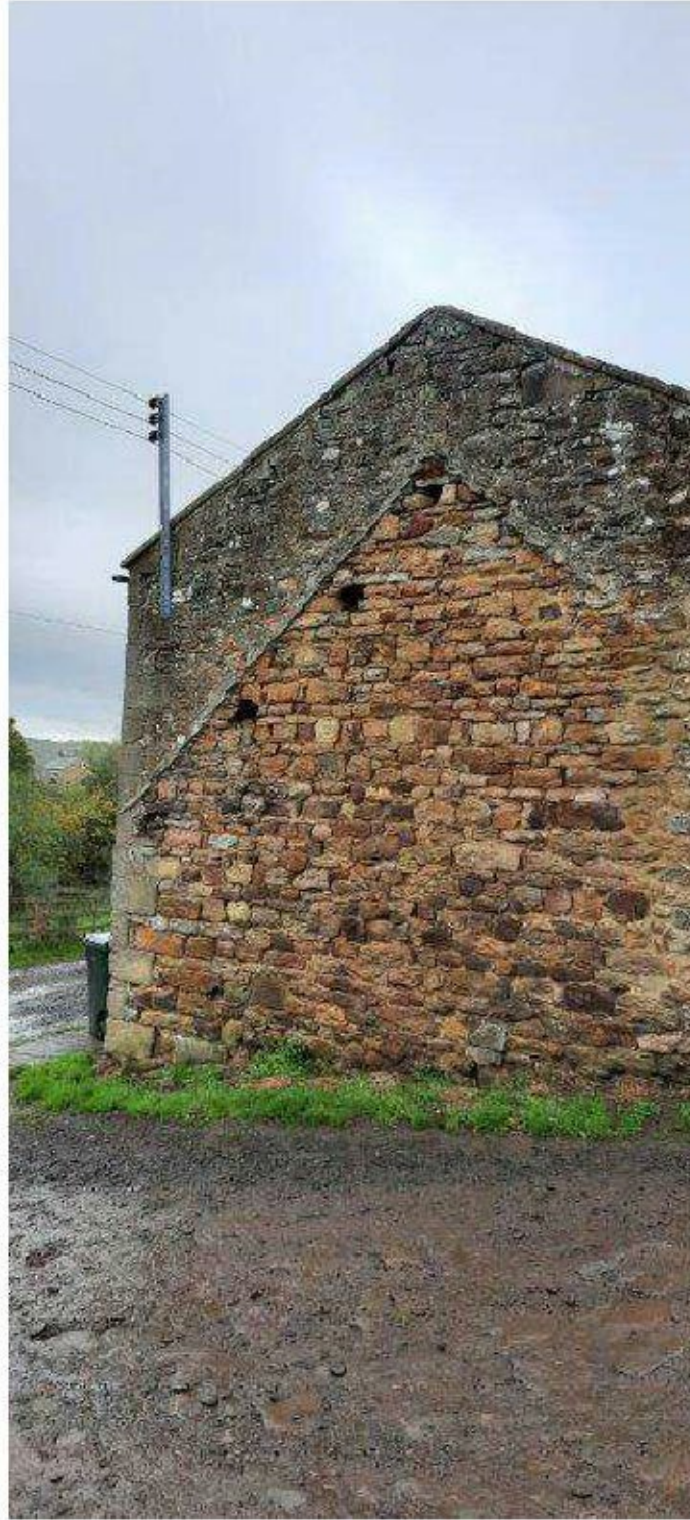
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P2



P3



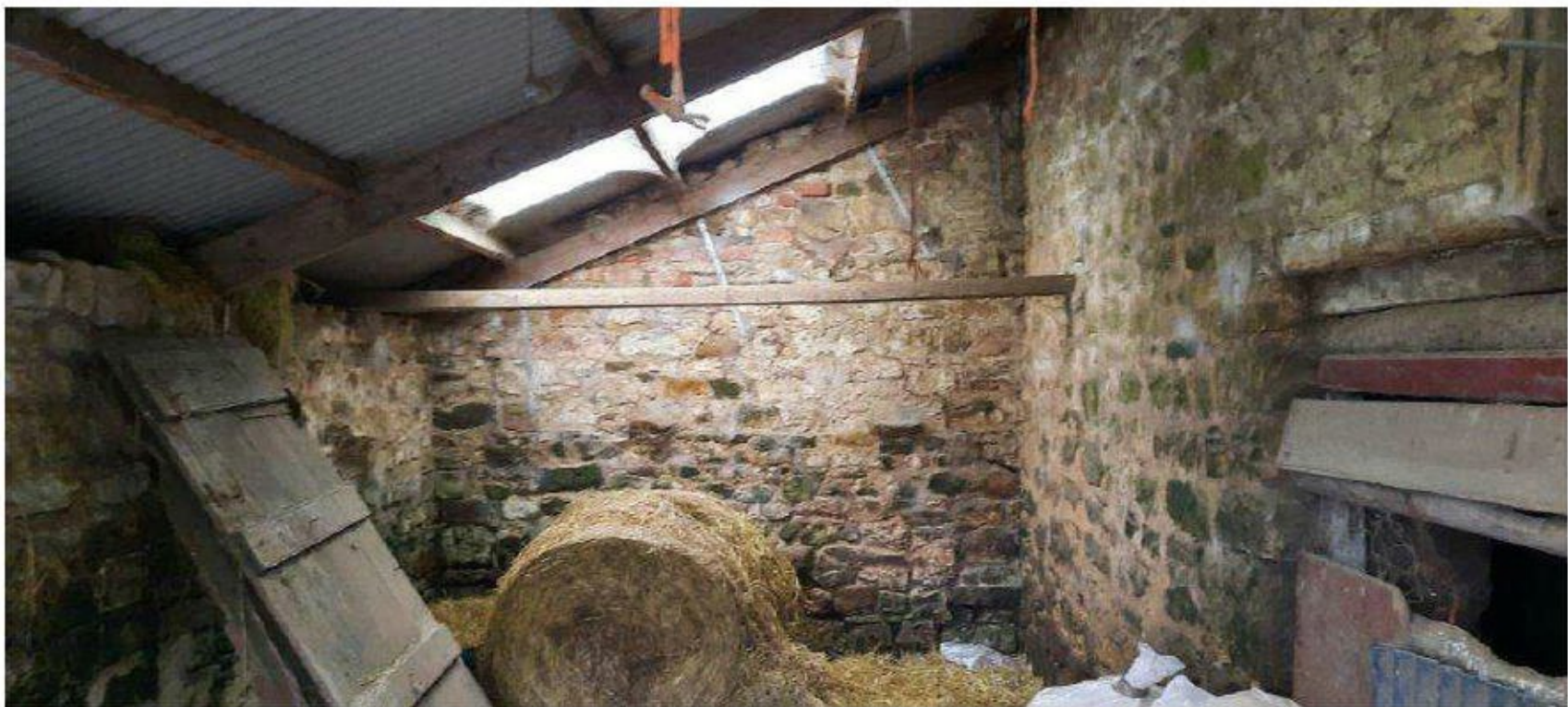
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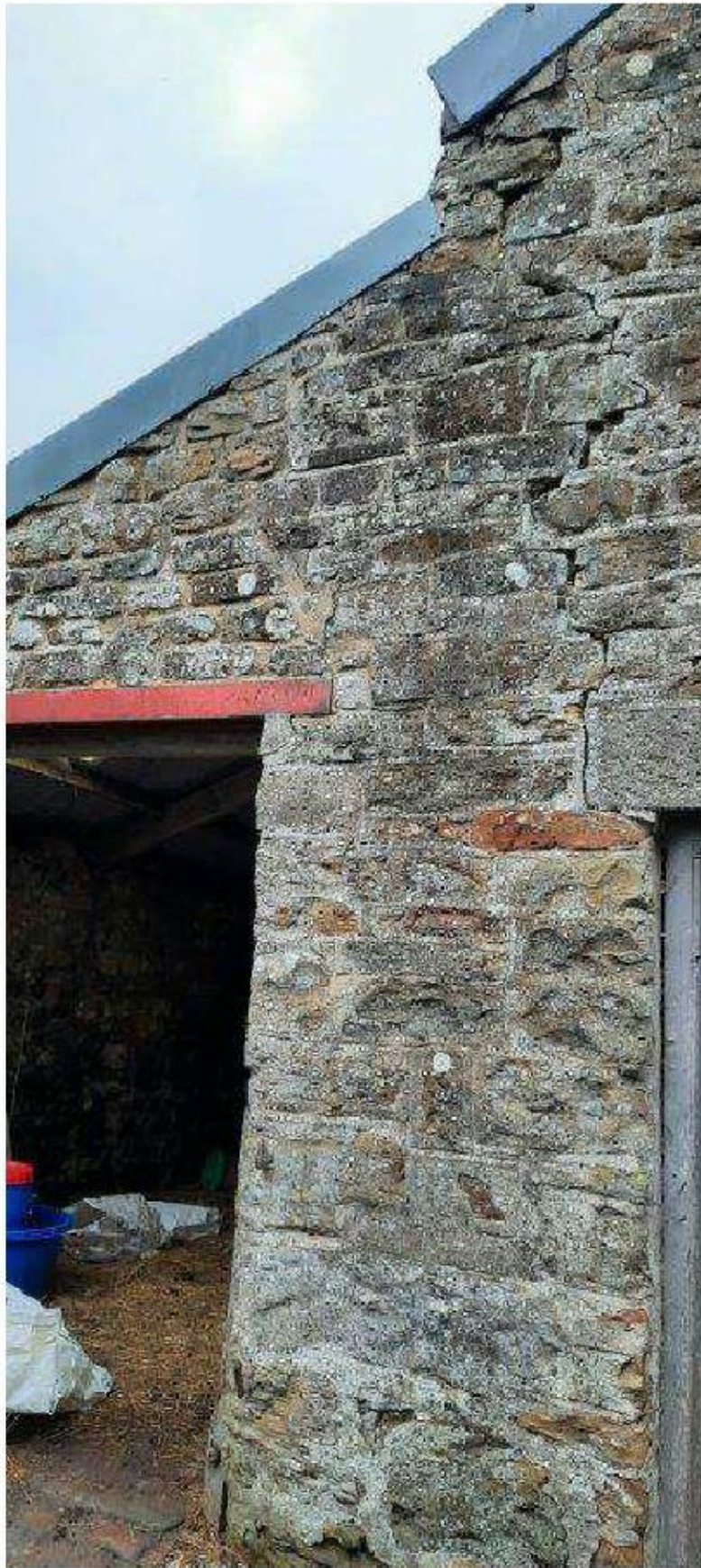
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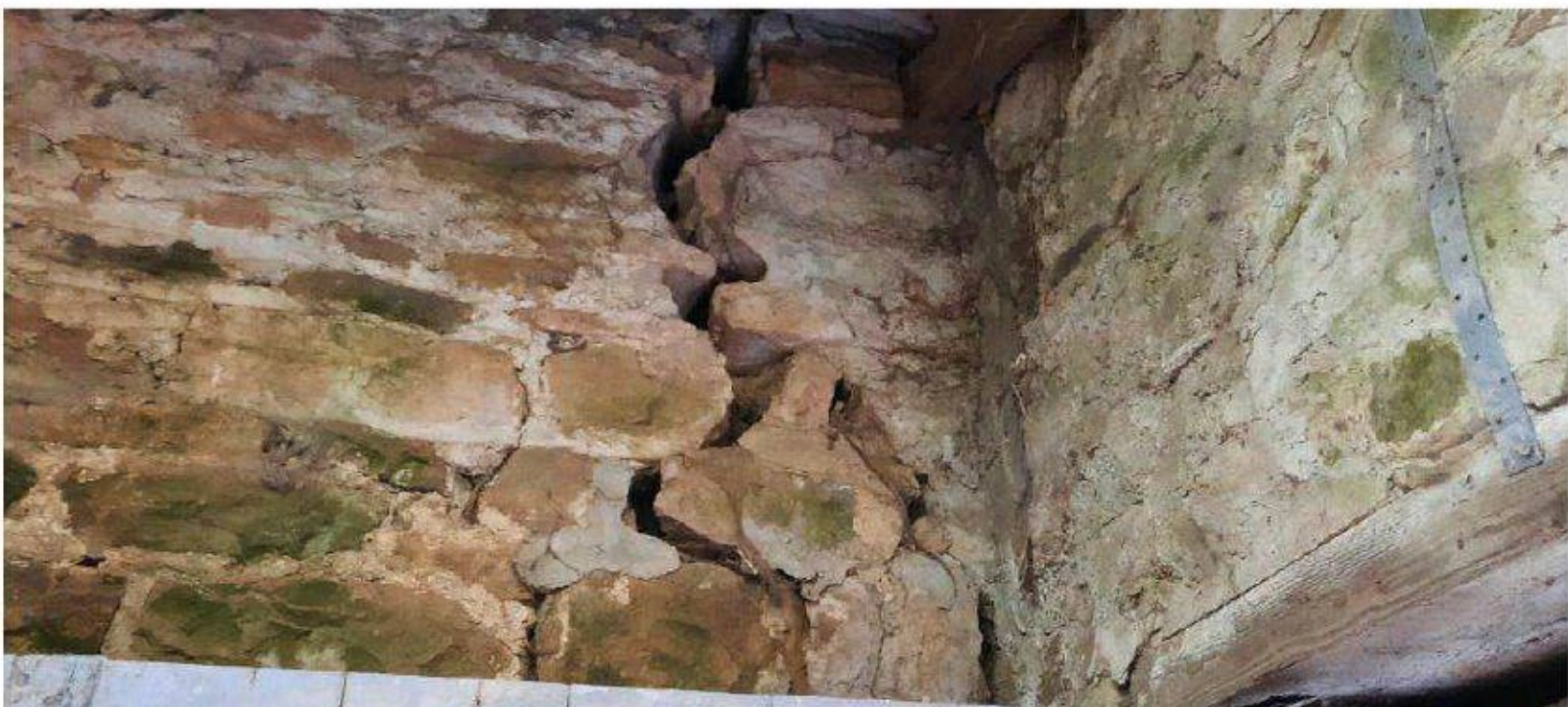
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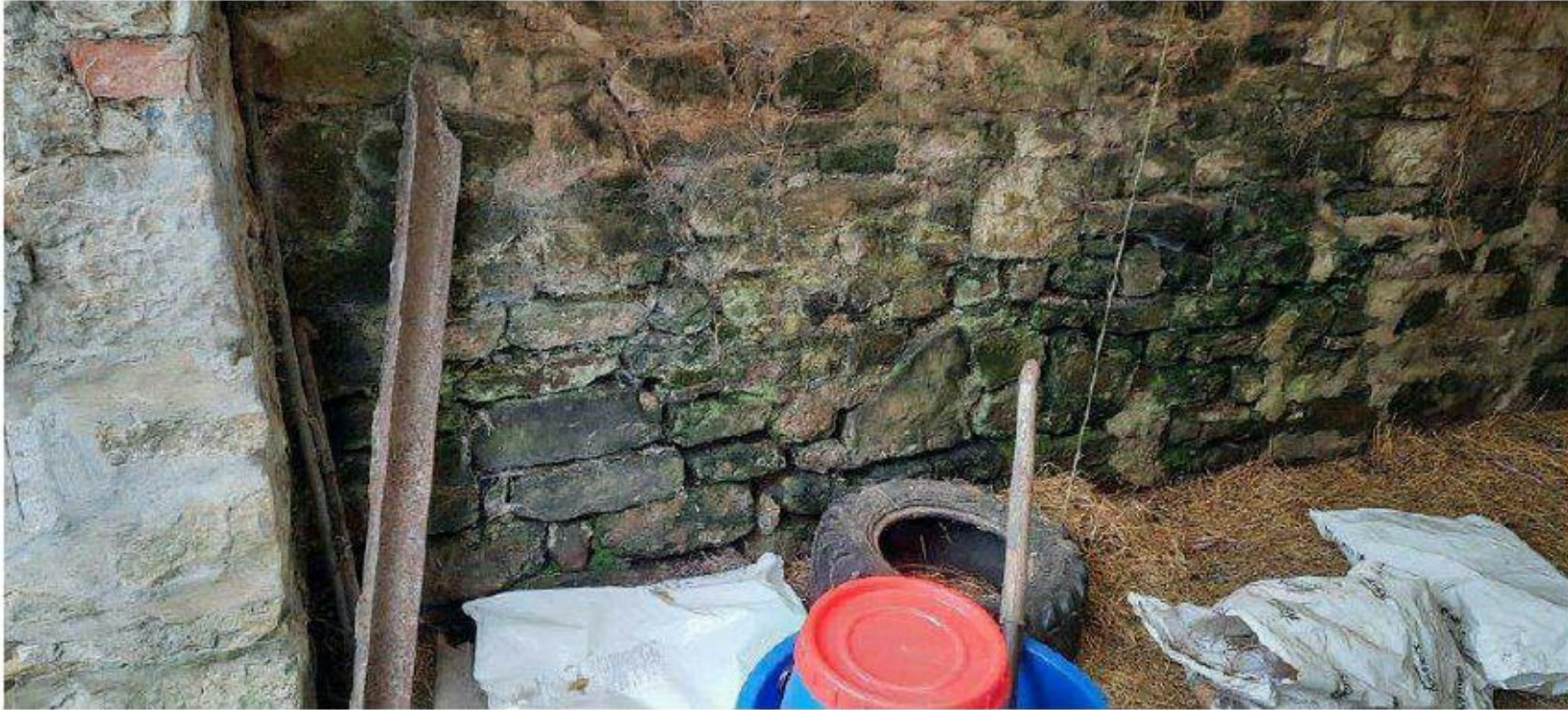
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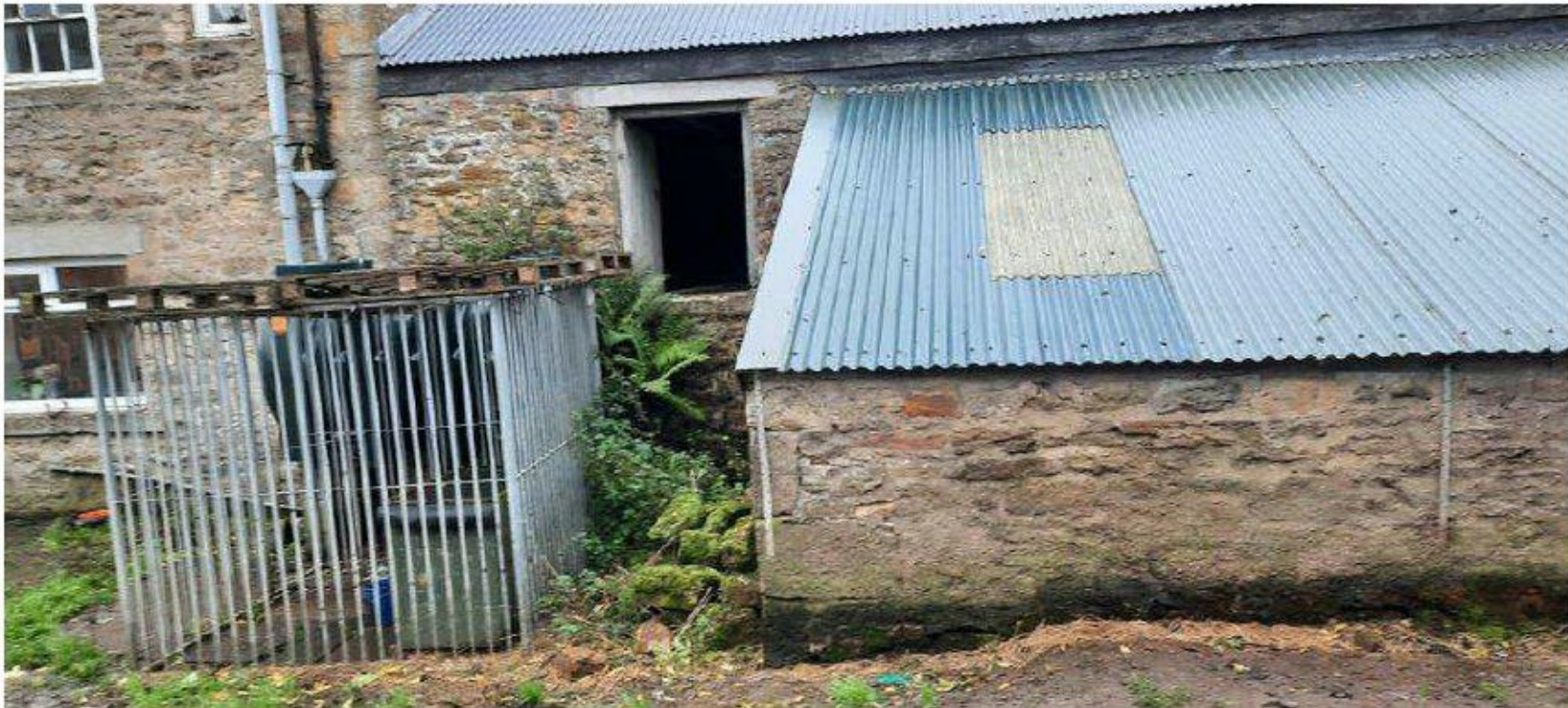
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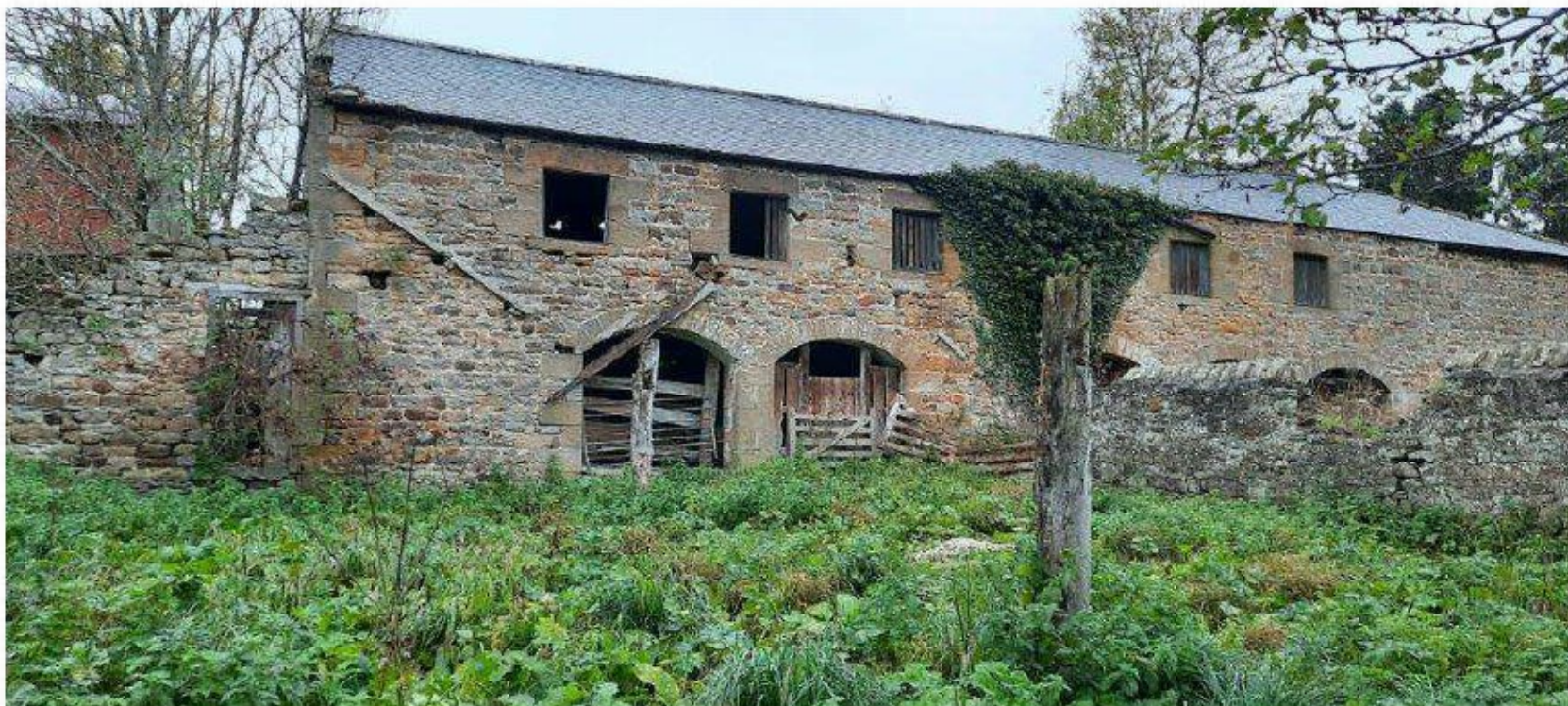
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P11



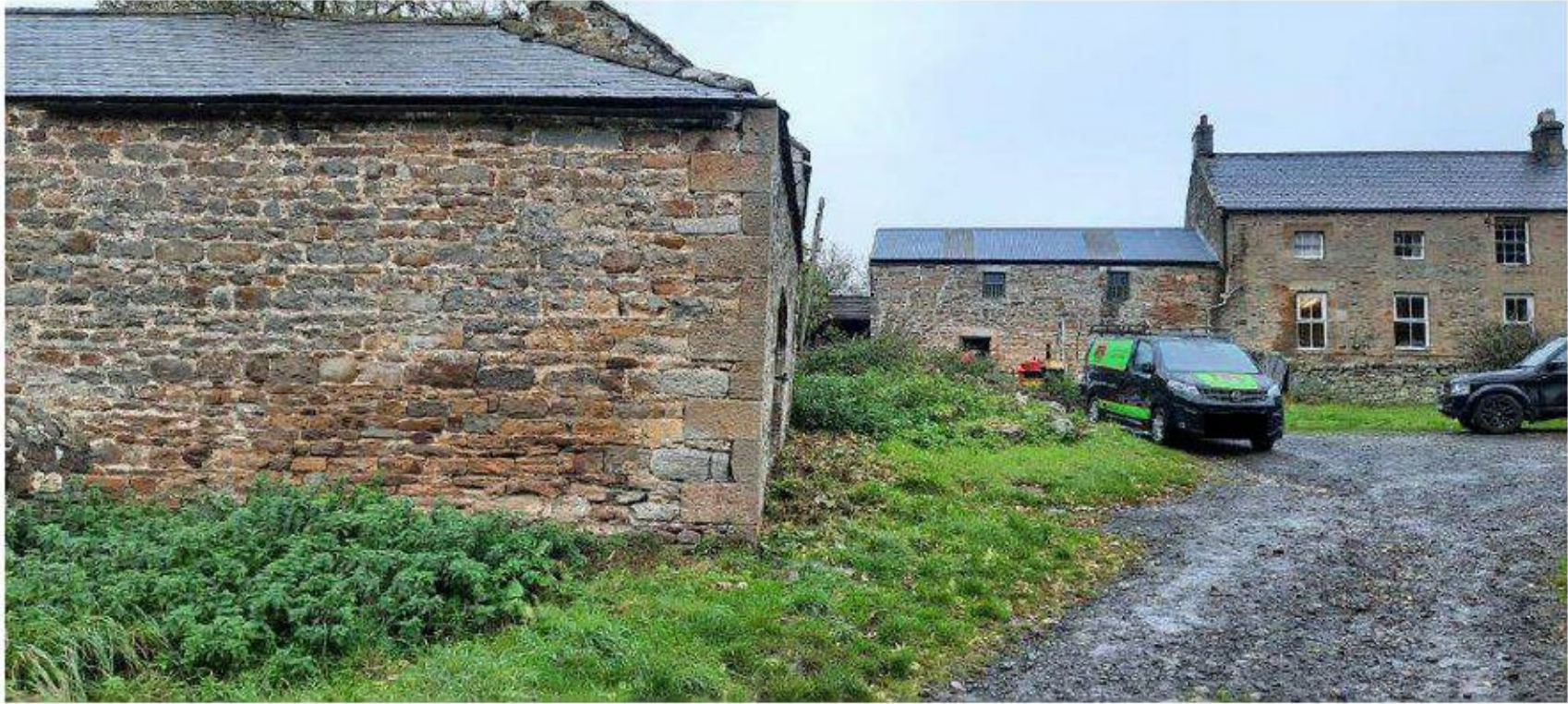
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P13



P14



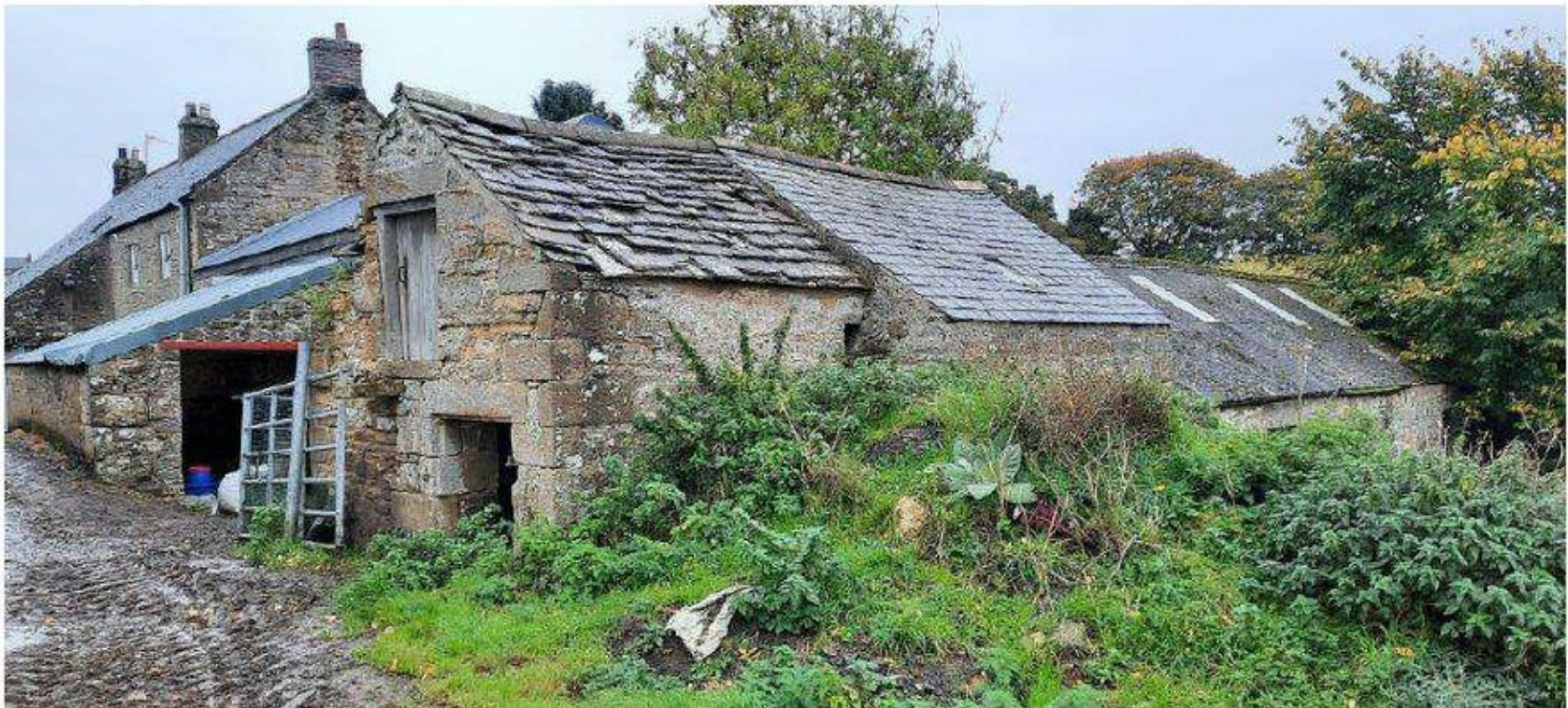
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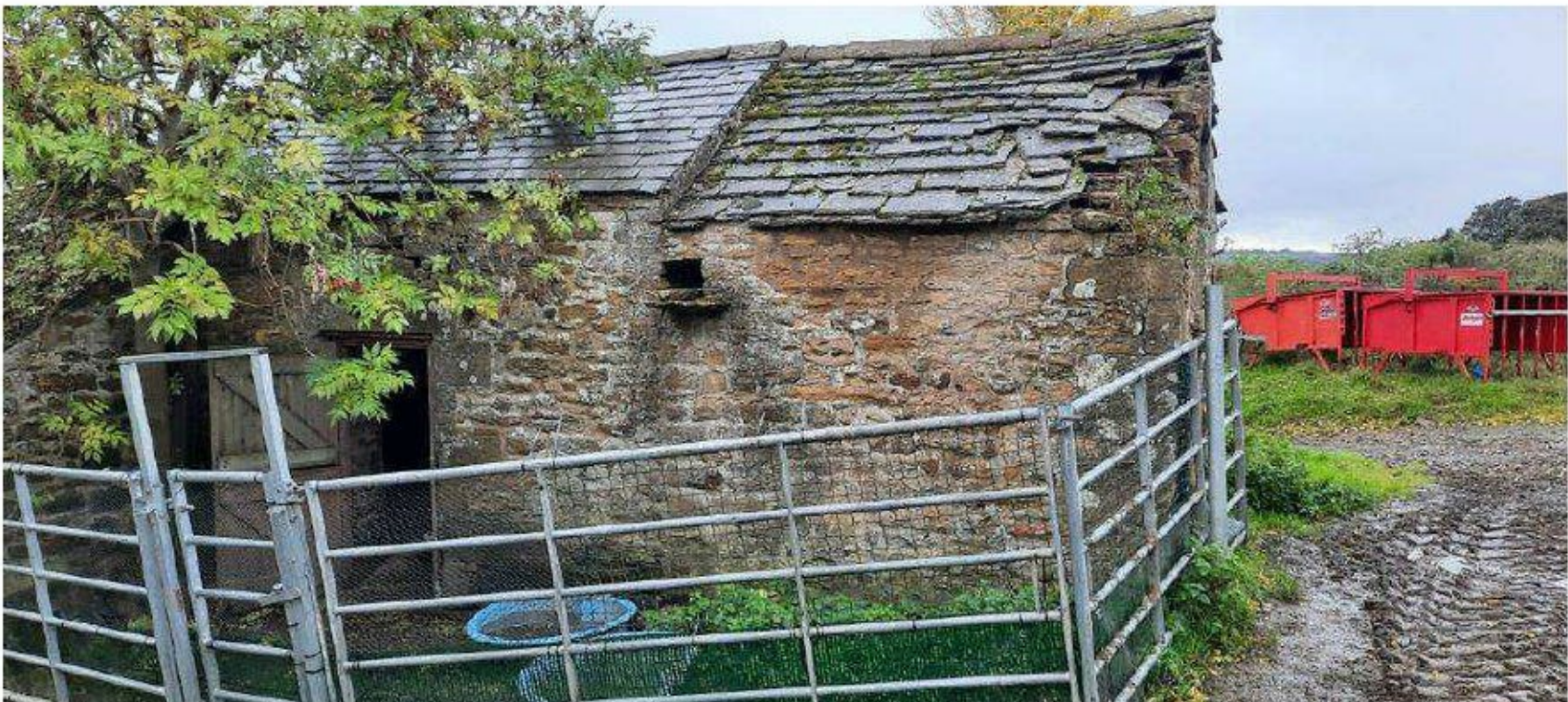
P16



P17



P18



P19



P20



P21

