Built Environment

JRP Heritage

Conservation

Potash Farm and adjacent agricultural buildings, Holbrook, Suffolk.

Heritage Report, Summer 2023

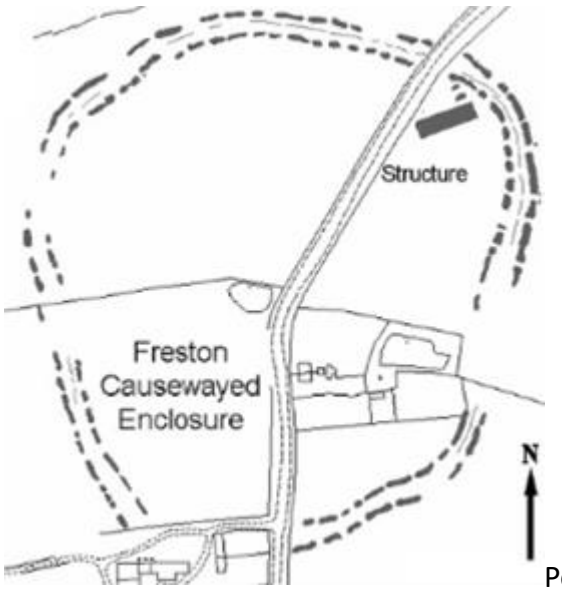
By J Parker MSc.

1. Introduction.

This report is part of a submission to redevelop the site and convert the agricultural buildings into homes. The barns sit in the setting of a listed building therefore a Heritage Impact Assessment is required. Though showing signs of disrepair the barns have had C20 repairs yet in places these have subsequently failed as a result, in part, due to the materials used.

The document will identify and report on the buildings on the site following the exert of the Existing Plan by Jon Bell, edited with each building given a number as shown below.

To the North of the site is a scheduled monument in the form of a ditch that was part of an ancient, enclosed causeway that is approximately 6000 years old. The proposed development will not have any impact on the Ancient Monument. A Map of the ditches is below.



Potash Farm is at the bottom to the picture.

2. Location.

Potash Farm,

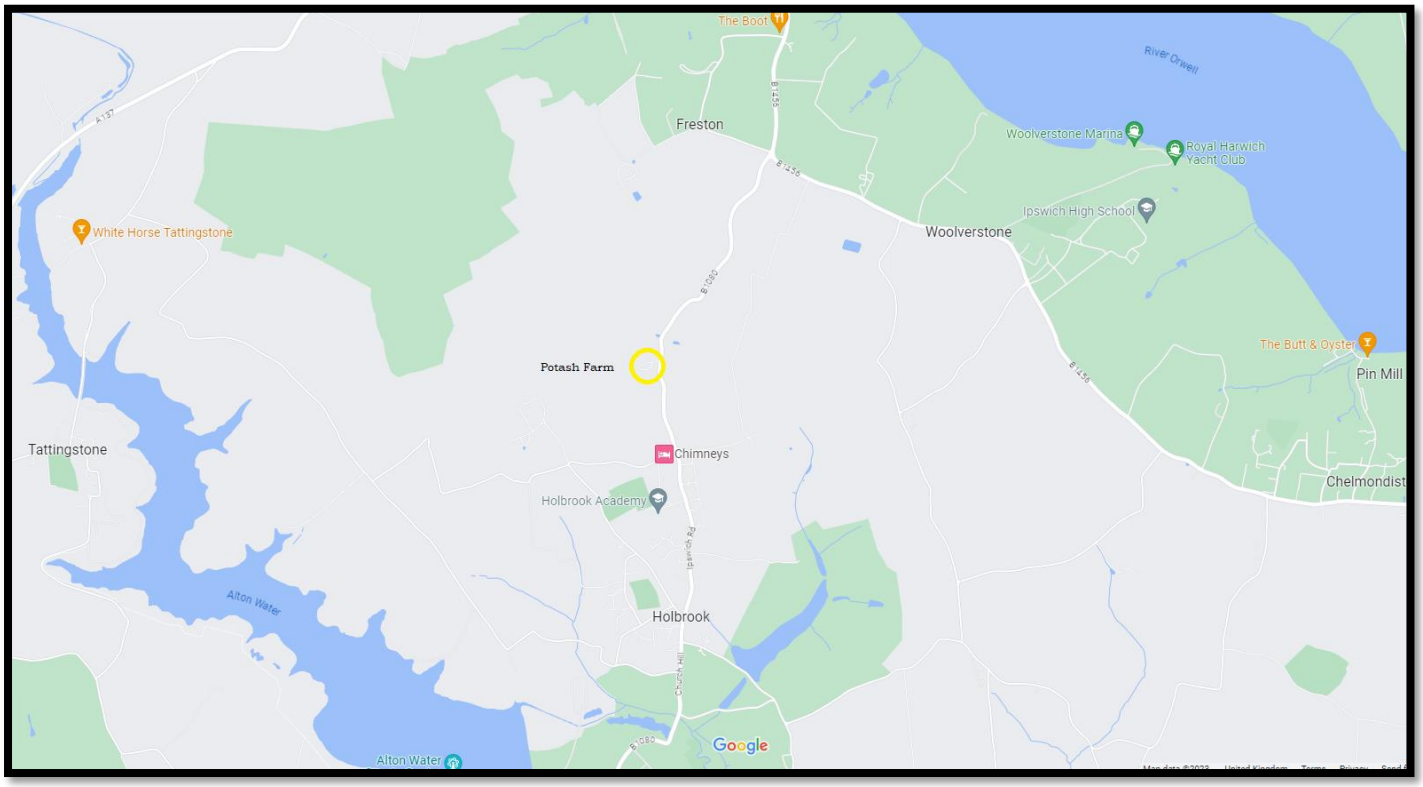
Holbrook,

Ipswich,

Suffolk,

IP9 2PJ.

What 3 Words. stoops.gobblers.model and, dark.thus.broadcast.



From Google Maps.

3. Listing.

Official list entry.

Heritage Category: Listed Building

Grade: II

List Entry Number: 1351630

Date first listed: 29-Jul-1987

List Entry Name: POTASH FARMHOUSE

Statutory Address 1: POTASH FARMHOUSE, B1080

Location

Statutory Address: POTASH FARMHOUSE, B1080

The building or site itself may lie within the boundary of more than one authority.

County: Suffolk

District: Babergh (District Authority)

Parish: Holbrook

National Grid Reference: TM 16773 37764

Details

TM 13 NE FRESTON B1080 (West side) 4/2 Potash Farmhouse II Farmhouse.
Two main builds, C17 and C19 with later alterations and small C20 addition.
Timber-framed with brick additions, rendered.
Pantile roof to earlier range, pantiles to later range. Single-storey and attic lobby-entry range with later 2-storey range to left.
Single-storey and attic range: off-centre C20 door. 2 casements and one fixed light window.
To far left a further 6-panel door in C20 porch. Flat dormers with casements.
Swept roof. 2 -storey range: segment-arched 16-pane sash and tiny fixed light to right.
Above a 16-pane sash and small C20 fixed light. Gable end stack. Low C20 addition to left.
Interior: no exposed framing.
Chamfered spine beam with ogee stops.

Listing NGR: TM1677337764

Legacy

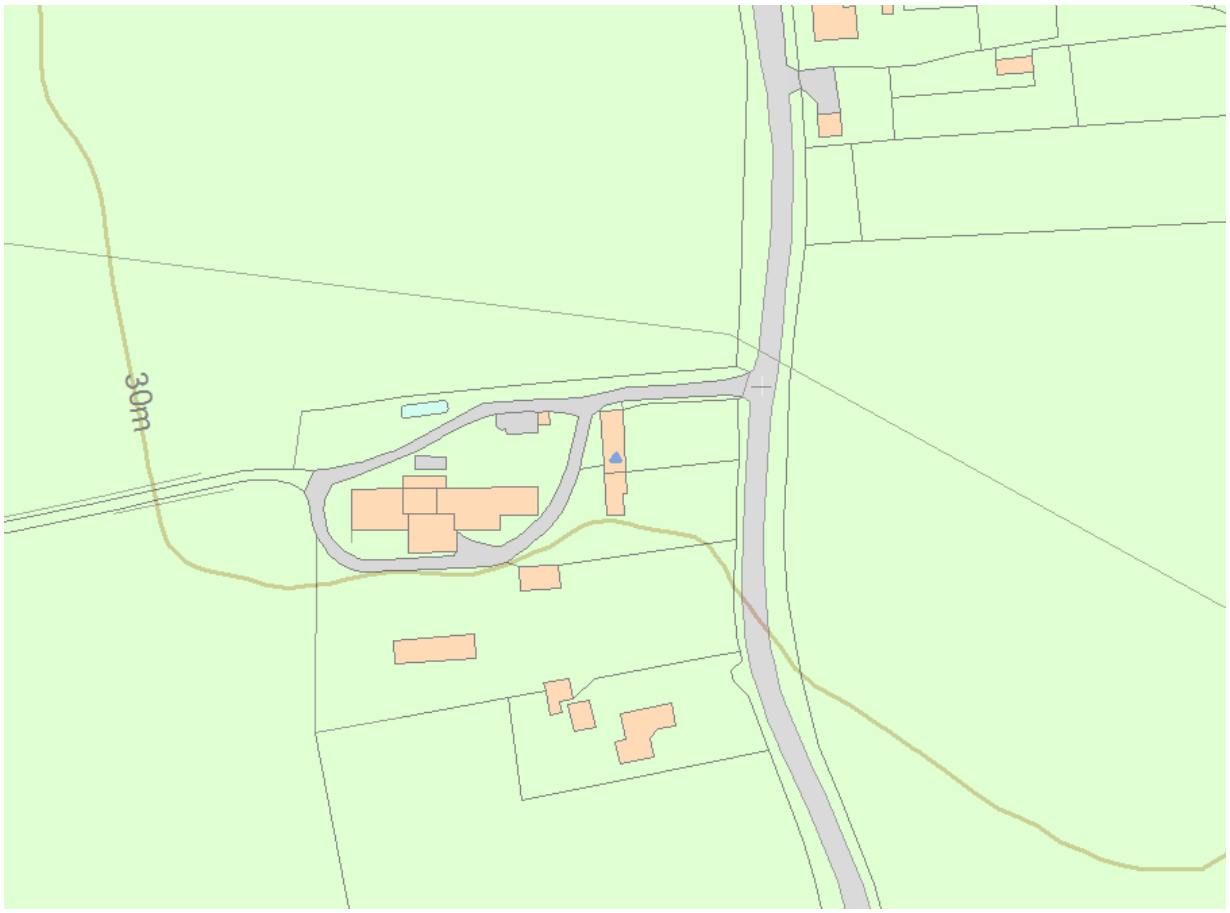
The contents of this record have been generated from a legacy data system.

Legacy System number: 277281

Legacy System: LBS

Legal

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.



4. Summary.

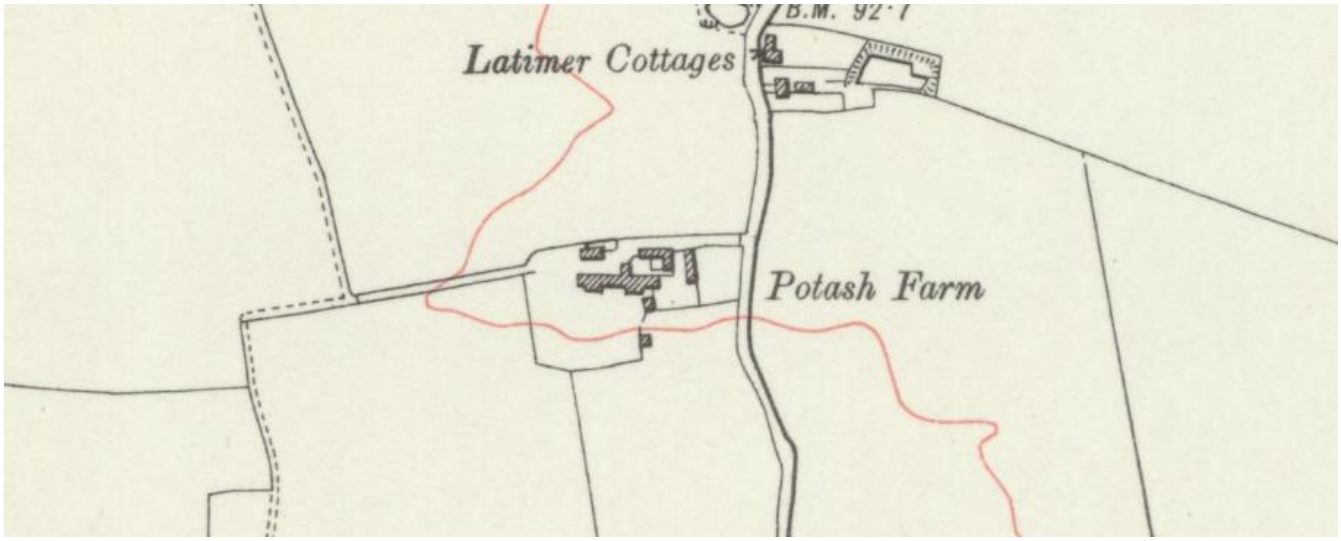
This report is in conjunction with a planning application to redevelop the redundant farm building on land within the setting of Potash Farm.

The site sits South of Freston Ditch system ancient monument, visible in the picture below.

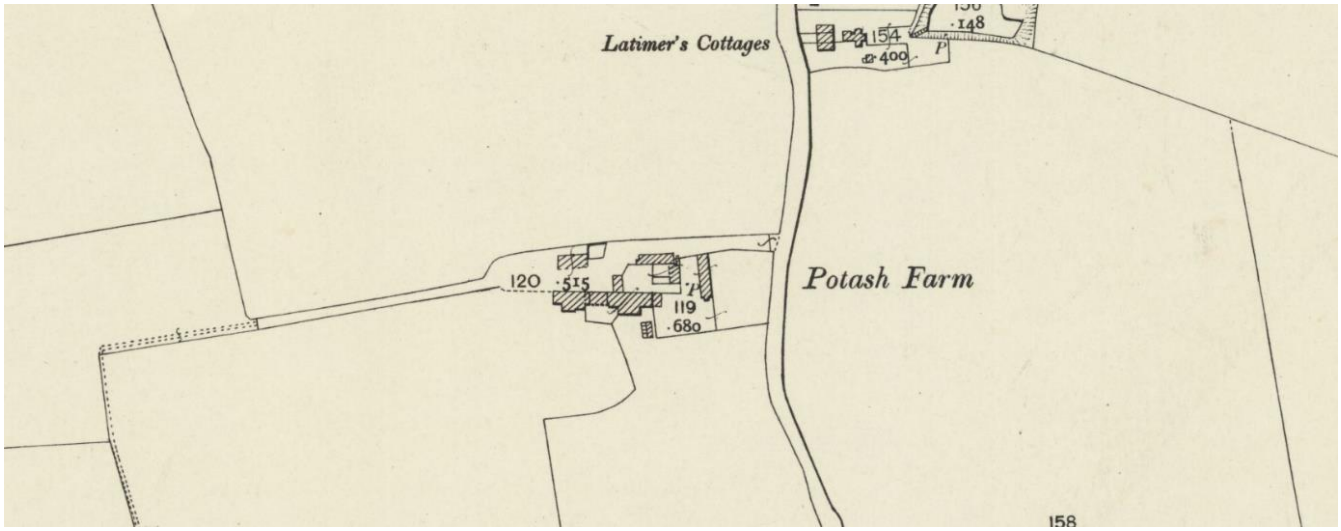
Being around 6000 years old it is assumed the builders of Potash Farm were not aware of its existence.

The following historic maps show and evolution of the Farm over the last 142 years where buildings appear to have come and gone. There are concrete floor slabs still on site that show the positions of now lost buildings.

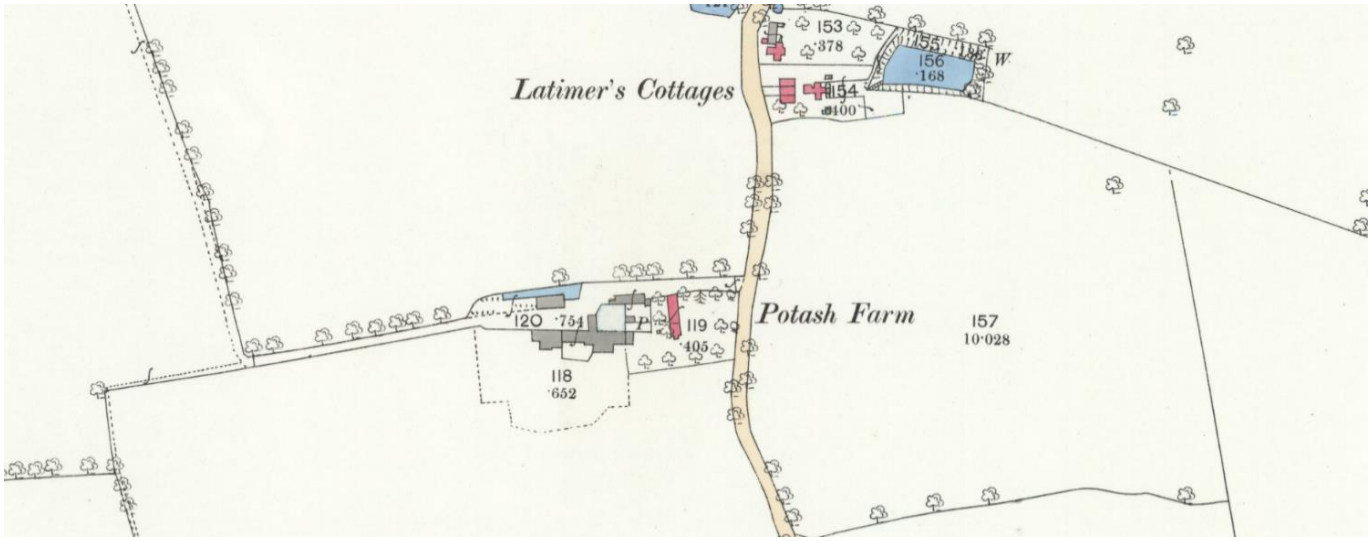
TM13 – C. Publication date: 1955



Suffolk Sheet LXXXII.SE. Revised: 1924, Published: ca. 1933



Suffolk LXXXII.11. Revised: 1902, Published: 1904



Suffolk LXXXII.11. Surveyed: 1881, Published: 1882

5 Survey Findings.

Building 1.

From Summer 2023.

Streetview from 2019.

The owners of these houses are not involved with the proposed development therefore access to the buildings was only available from the public highway and the site resulting in just the exteriors being available for comment.

Front elevation.

Starting at the base and working upwards. The concrete path is always a concern as it holds moisture at the base of the building where originally the cill beam would be, or a brick plinth designed to let moisture escape from the lime mortar joints. Additionally, it allows rain to splash up against the lower section of the building.

At the base of the wall is a black painted plinth, this evidence of a now superseded C20 repair, cementing over the brick plinth then painting in a bituminous paint. In practice this held more moisture in the exterior wall making the problem worse. Current practice is to remove the cement to reveal the red brick plinth wall, remove any cement mortar and replace it with a breathable lime mortar, allowing the interstitial moisture to evaporate away as originally intended.

Above the plinth the wall is rendered then painted in a waterproof/plasticised paint further reducing the buildings' ability to breath. Looking through what appears to be the kitchen window, the reveal is deeper than expected for a timber frame or solid 9" wall. This suggests the building has seen some gentrification works to the front wall at least. The forward set windows and deep walling implies a brick outer wall has

been built in front of an earlier timber frame, resulting in the depth of the wall. The air brick above the plinth further supports this.

If the wall is solid brickwork or timber frame the conservation advice would be the same. Remove the waterproof paint to investigate the render material. Should the render be lime, either limewash or decorate with a breathable paint to allow the wall to breath out any trapped moisture.

Windows. In the 1 ½ storey section of the building the windows are all timber casements except the Kitchen window that is a steel framed Crittall type, single glazed window. All appear in good condition. The thickness of the materials and use of the modern window cill as a prentice board suggest these are C20 items.

The 2-storey section has a pair of Georgian style sliding sash windows with 8 panes per sash. The lack of horns on the sashes is commonly associated with the windows being original or well-made replicas. Without closer inspection it is not possible to know.

The single storey extension has C20 timber casement windows.

The Roof.

In the 1 ½ storey section the curve in the rafter feet is repeated in the ridge suggesting movement in the roof. As the rafters have pushed out this would result from a tie beam being cut out to aid access to the first floor when it was adapted, following the availability of economically viable machined floorboards and chimneys. This may also be the result of poor fitting of the dorma windows. The roof is covered in clay pantiles. Beneath the eaves is a white painted facia with timbers underneath that look as though they were to have a soffit attached yet have been decorated and the gaps between the rafters filled. There are Black plastic gutters serving the whole building.

The Dormas in the roof structure are flat roofed with stained ship-lap timber side panelling. The windows are timber casements.

The 2-storey section and single storey extension are covered in clay peg tiles with white painted timber facia and closed soffits.

Right Elevation.

Starting at the base of the building the plinth protrudes further than the front and rear elevations. This may suggest the end wall may not have had an additional brick outer wall installed. The plinth has the same treatment as the front elevation hence the same advice applies.

The wall has signs of large crack repairs prior to being painted. The cracking suggests a cement render beneath. As cement render holds moisture in the building the timber frame will be suffering. It is recommended the cement render is carefully removed and replaced with timber laths prior to being rendered in a minimum of 2 coats of lime render prior too coats of fine lime that is then decorated in either colour matched lime was or breathable paint.

The barge boards and end covers are UPVC, it is recommended these are removed and replaced with PSE softwood boards, treated, and painted in white exterior paint.

Rear Elevation.

Once again, starting from the base of the 1 ½ storey section to the left of the chimney. Thankfully, there is no concrete path, just a small patio.

Above is the black painted plinth as before. To the right of the chimney the plinth juts out with what appears to be a rendered over buttress of some kind, the wall above leans back suggesting a previous repair following what is referred to a Rot & Roll. This is caused by trapped moisture allowing decay/rot to set in on the outer side of the cill beam, eventually the force of the studs and weakness of the decayed beam allow the beam to roll outward, changing the angle of the wall, rather than attempting to lift the whole building and return the wall to upright, it was common practice to simply build a secondary plinth wall with a new cill beam to accommodate the stud wall in this new position, as appears to have happened here. The buttress detail is likely to be a method of joining the cill beams to insure no further movement.

The rear ground floor fenestration consists of from left to right, C20 timber single glazed casement window with one opener and one fixed pane. Next is a later porch addition, with a 2XG timber half glazed door above which are timber barge boards with timber shiplap infill all painted white. The roof is insulated polycarbonate, behind the porch is a second 2XG timber half glazed door, both of which are single glazed. To the right of the porch is a single glazed casement window with opening fanlight and an unpainted

prentice board above. The next window is the 3 casement UPVC double glazed window with a central opener all with internal horizontal glazing bars and a plastic prentice board above.

First floor fenestration is made up of two UPVC double glazed casement windows. The left window is two bays with top fanlight openers and bottom opening casement with white UPCV cheeks on the dormas. The right window is the same design but with only the top casements opening. The Dormas do not appear to be deep enough to be insulated which questions the insulation benefits from the double-glazed windows.

The sagging in the roof has been previously discussed, the rear of the roof in in fair condition with timber facias and soffits.

The chimneys. The corbelled brickwork of the left side of the chimney is built sooner than the right side. This may be due to several reasons yet the most likely is the right side is a later addition or the left side required additional support due to earlier failure.

Building 2. The 2 Storey section and C20 extension.

From the base upward. We have the now familiar black painted rendered plinth. The exterior of this section is in brickwork, yet the change of pitch suggests it be similar to the listed building with a timber frame later gentrified, it may just have been built this way to match the existing building, without further investigation we cannot be sure. The main section of the building has been covered in rough and pebbled render that is in the process of failing. It appears the render has detached from the wall most likely due to the moisture in the wall trying to escape, then seasonal movement has formed the cracks to allow it to move away from the building.

Fenestration. From left to right, the C20 rear extension which is probably a bathroom has a UPVC double glazed casement with a side and top opener. The next window is a Victorian style, single glazed sliding sash. The sash boxes seem quite heavily buried in the render, yet being a smaller window there is a chance it doesn't have weights or it's a later window with a different slide system. On the first floor is a UPVC double glazed casement with a side and top opener and one fixed unit.

The Facias and soffit are timber and in need of repair and decoration, as decay is present at the right side.

The roof is red clay plane tiled; the ridge tiles are worn showing the cement mortar joints standing proud of the ridge tile. The chimney is C20 item evident by the brick size.

The single storey C20 extension. At the base is black painted brickwork plinth, as it the current style the render is bell-dripped over the plinth. The walls are covered in rough and pebbled painted render. The window is a C20 timber casement with a side and top opener.

The roof is plane tiled to match, once again the ridge tiles are worn. The end of the roof does not have barge boards. There is a timber studwork rear porch, yet this does not appear to be a permanent structure.

Building 3. The partly collapsed Barn.

The interior facing East from the centre of the building.

The North elevation exterior facing Southwest.

The South elevation.

The East elevation.

The West elevation is obscured by buildings 4, 5, 6 & 7.

The North elevation of Building 3.

Starting from the base upward. The base of the wall is constructed in soft red brickwork in an English garden wall bond with lime mortar.

A large proportion of the wall needs repointing. Small sections have been repointed in cement that has caused spalling of the bricks.

Above the plinth wall is timber frame that has had cement render applied directly onto the feather-edge boarding, though this has proved detrimental to the building the finish is smooth. The render has added additional weight to the wall which has aided its failure by trapping water in the timber frame which has then weakened the timber behind. The collapsing of the roof destabilised the wall requiring the large timber post to be utilised as a brace.

As is common in farm buildings items not necessarily made for the building have been utilised to adapt the building to its changing requirements in the form of the timber window frames, most likely installed to provide daylight inside the barn.

The Roof will be discussed later in the report as the interior pictures clearly show the replacement roof structure and the compelling evidence for its failure.

The East elevation of Building 3.

Starting from the base upward. The base of the wall is constructed in soft red brickwork in a current stretcher bond as this section of the barn is a C20 addition to the larger barn behind. The wall is in overall acceptable condition.

Once again, above the plinth wall is modern timber frame that has had cement render applied directly onto the feather-edge boarding, the finish is smooth.

The fenestration consists of a door/gate that is in the process of collapsing and an open timber window frame.

The Roof is tiled in clay pan tiles with the structure still intact even with the fallen gable of the main section leaning on it.

The South elevation of Building 3.

Behind the vegetation is the Midstrey serving the barn.

Starting from the base upward. The base of the wall is constructed in soft red brickwork but is hardly visible as the land is raised to the opening and the inside floor has been concreted only showing the top course of bricks.

Above this the Midstrey has once again been cement rendered on top of the timber feather-edge cladding. The timber gates are asymmetric with a split/stable type door to the left. They are upright but maybe troublesome to open if the vegetation were to be stripped back. Entry was only available by the lower section of the stable type of door. The gates/doors are hung from the inside resulting in the doors opening into the building, this suggests they are a later addition as traditionally barn doors open outward for maximum storage space inside the building.

To the left the roof has been extended to serve a wall clad in corrugated asbestos sheeting. The right of the building is buried behind the vegetation, yet it is safe to assume this too is has been rendered in cement over timber feather-edge boarding.

The Midstrey roof is covered in corrugated asbestos type sheeting, while the roof to the left of it is still intact and covered in clay pantiles as expected.

Interior of Building 3.

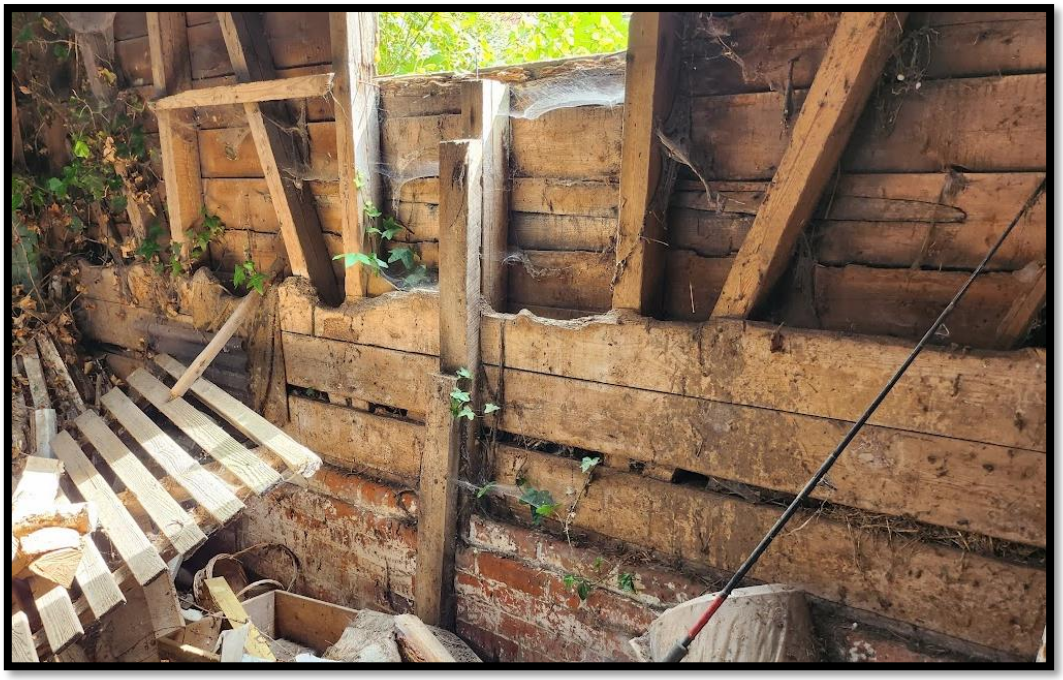
The Midstrey of Building 3.

From inside the C20 extension the original exterior wall is present.

Additional rooms have been built on either side of the Midstrey that will be addressed later in the report.

Staring with the walls, the carpentry style is dependant on nails rather than pegs as would be seen on older barns, this would be in common with carpentry practices in the 19th and 20th century, the diagonal bracing looks to have been a later addition as the timbers are clearly machined. This may have been a later repair as it was a common style of stud walling up to the intervention of sheet materials in the mid C20.

At the base of the wall the timbers have been timber clad, this and encasing in cement was a common practice in the late 1880's following the move to animal farming due to cheap wheat etc coming over from the continent. The timber cladding or cement encasement was to stop cattle chewing the structural timbers. The picture below from the extension show traces of this behaviour.



The top rail has been chewed to this shape.

The timber feather-edge cladding is further evidence of the Victorian origins of the building with clear machining marks visible.

The roof is a C20 replacement item with corrugated sheeting above.

The timbers are all relatively modern machined softwood with rafter spacings to only support a corrugated sheeted roof.

The main Barn of Building 3.

In the image above we see the start of the remaining roof, a C20 replacement that has catastrophically failed. A timber mezzanine floor has also been installed on the left.

The wall carpentry is unsurprisingly the same as the Midstrey, mid to late Victorian with suspected later repairs. On the first floor of the mezzanine floor the base of the wall ahs been cemented, though this time as reinforcement to stop crops from pushing the walls out as they wait to go through the hopper on the left.

The Roof. The 20th century saw the cement and concrete become the go to materials for almost all buildings, now we know the damage it causes to breathable buildings the majority of conservation repair works are as a result of the idea that we knew better and the new cements and concretes were the answer.

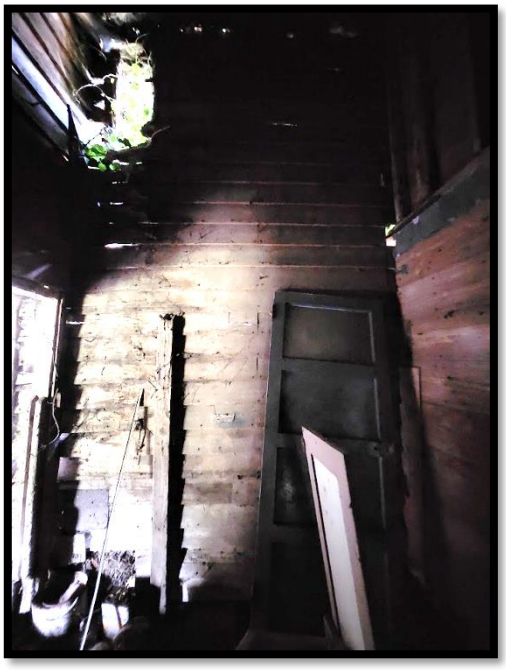
Less common is this theory when it comes to carpentry, yet this building follows the familiar pattern of C20 intervention. The new roof clearly ignores the ideas of the past and has collapsed as a result.

In the above picture we see 3 kneelers that have been cut off to accommodate the new roof. Each one of the kneelers would have been attached to a tie beam, whereas the new roof only has 1 tie beam with a steel tie bar which is only fixed to the wall plate with no post beneath it. There are collars above this, but these will not provide the strength of a tie beam. This and the additional weight of the cement render is clearly a huge contributing factor to the collapse of the roof structure. The weight of the Pan tiles would push the roof down and with little strength in tie beams, the walls were pushed outward facilitating the collapse when the tie beams give way. Additional weight from snow or even the vegetation would put additional stress on an already weakened roof. So once again C20 ingenuity has resulted in failure of an older building.

The side Rooms either side of the Midstrey.

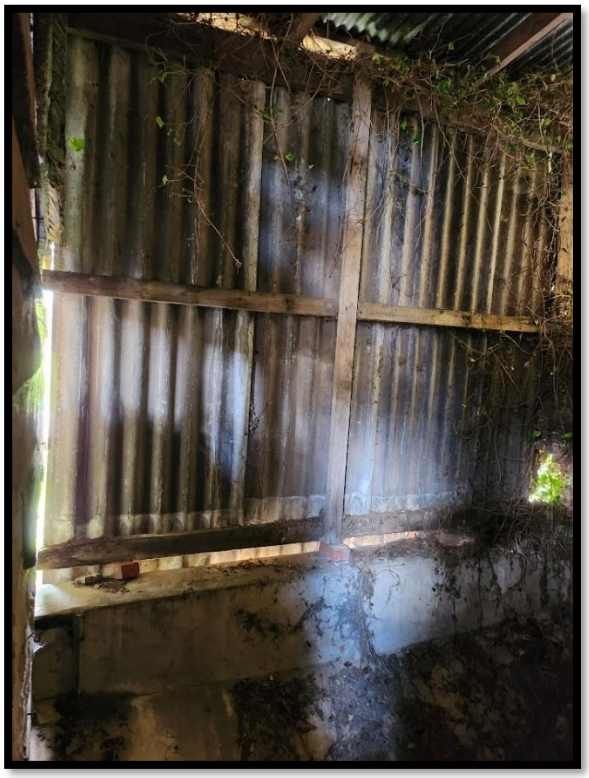
Right room.

To call this a room is probably a stretch as it appears the tree growing in front of the building is forming a front wall. The three walls are the exterior of the Midstrey, the exterior of the main barn and a C20 wall built to form the space. The C20 corrugated metal lean-too roof is a continuation from the main barn providing cover. The side door in the Midstrey suggests its purpose was connected to the processes of the main barn.



Left Room.

A



B C

Pic A. The far wall looking from the side door in the Midstrey.

Pic B. The front exterior wall.

Pic C. The floor with some form of either water holding or former drainage gulley/hopper.

A. The wall in this picture started as a Soft Red brick solid 9” with a wall plate on top. Above this is later stretcher bond brickwork that would have been built up to accommodate the end of a lean-too roof, yet currently the room is served by a C20 flat roof in corrugated metal sheeting.

When viewed from the other side in building 7 the cleanliness of the brickwork shows this as a former exterior wall as the excess mortar seen on the inside has been washed off. We also see the exterior left-hand end of the original barn with the cement render has been applied up to the brick wall confirming the this was applied after this room was created.

We have another stable type, door suggesting the practice of this room was available from inside and outside of the building. Above the door the top rail of the frame forms a lintel with a half soldier course of bricks above, this is most likely to keep the brick courses uniform rather than for any structural or architectural benefit.

B The front stud wall is a later inclusion on top of a cement rendered plinth wall, the horizontal timbers rested on the wall covered in corrugated asbestos sheeting. This wall almost looks removable.

C. Not being versed in farming procedures the floor/gulley at the base of this room is not something I can detail as much to say it is a cement benched gulley of some sort.

Building 4.

From the base the walls have been replaced in concrete blockwork up to the wall plate. The roof is timber construction covered in red 3 radius pantiles.

The building is still accessed from building 7 where we can see the back wall of building 5. The other end wall is the end wall of building 3 making this building an infill. The historic maps show this building being in position as far back as 1882 which confirms this is a later replacement building.

The roof is timber construction covered in red triple radius pantiles.

Building 5. Timber framed Barn.

At the base of the building is the original plinth wall built in soft red bricks in Monk's bond with an upturned header course at its base. Above this is what appears to be a shuttered concrete walling between the timber posts of the bay construction. The change in materials suggest this is a later building that replaced an older barn. The current construction is mid C20 with machined timbers and a shallow pitched roof that is designed to support the corrugated cement sheeted roof.

The walls above the shuttering are timber stud with the weather boardings fixed vertically.

The end wall nearest building 3 is built in an older style of carpentry with cut in diagonal braces shown below. This supports the suggestion that the current building is a replacement of a former structure.

To the right of the double doors the shuttered wall extension has not been included, yet a later brick section has been added to the left side in modern bricks and cement mortar, this presumably had a farming purpose. The left-hand side wall in the above picture has openings to allow access to the brick lean too section of the building.

The solid brick lean-too section is built similarly to earlier pig styes, yet these are usually only half roofed this may well have been their original use with a full-length roof being added when their purpose changed to storage attached to the main building. The heaps of pan tiles may have been from the previous roofs.

Interior bay of lean-too section of former pig pens.

Building 6.

Building 6 is a collapsing timber lean-too shelter, abutted to Building 4. It is a C20 studwork frame with evidence of previous budget repairs. To the left is a section almost completely covered in foliage, it appears to have been a large cupboard.

The roof is timber construction covered in corrugated asbestos type sheeting.

Building 7.

Building 7 side elevation.

Building 7 front elevation.

Building 7 rear elevation.

Building 7 is a mid C20 steel framed barn.

Starting from the base up, there is a concrete floor with the base of the steel frame set in it.

Between the posts of the steel frame concrete block panels are built up to approximately 2.4 m.

The walls are clad in corrugated asbestos type sheeting, as is the roof.

The building abuts building 6 and curves round the end of building 3 to meet up with the side room of the Midstrey.

Building 8.

Building 8 viewed looking South Westerly.

Building 8 viewed looking North Easterly.

Buildings 8 & 9 are reported as being ex MoD buildings purchased at the end of WWII. Above is building 8.

Building 9 is totally covered in vegetation, yet interior pictures will feature later in the report.

Interior view of building 8.

Building 8 from the base upward. The building is sat on a concrete slab with what appears to be a drainage channel in the centre running the full length of the building.

The structure of the building is concrete bolt together frames with concrete kneeler bracing forming bays. Between the bays are a mix of full and half height blockwork walls that are cement rendered on the interior of the building. Beyond this in some of the bays are the remains of timber stud walling. A few of the bays also have cement render applied to them. There are also the remains of timber casement windows in a Victorian style with top horizontal openers. These have all lost their glazing and are economically beyond repair.

The exterior of the roof is covered in corrugated asbestos type sheeting, beneath this on interior, the vaulted ceiling is clad in what looks like old Sundeala pin board.

The building appears to have been designed to be habitable workspace yet has been adapted to facilitate farm uses, currently as straw storage.

Building 9.

Building 9 is under the foliage in the right of the picture.

Peering through the foliage the building within is revealed.

Building 9 is also reported as a post war building purchased from the MoD.

Starting from the base we have the customary concrete slab floor. The first 4 foot or 1.2 m of the wall has rendered blockwork between what appears to be timber frame bay construction.

The walls are covered in painted Sundeala boarding.

The windows are steel framed Crittall type casements in poor condition.

Above this we have timber engineered trusses that are in differing states of disrepair, these support steel purlins above.

The roof is covered in corrugated asbestos type sheeting that is failing in places.

Conclusions.

Building 1.

The listed house is in overall good condition yet has modern materials that would benefit the building by being carefully removed and replaced with historically sympathetic materials. The movement in the roof appears historic, yet further investigation would be prudent. The replacement of the cement render with a lime render and breathable paint would be the most beneficial conservation work to aid the timber frame.

Other conservation works include,

- The removal of the black cement plinth render.
- The removal of the concrete path at the front of the property.
- The UPVC windows, facias and barge boards may be unauthorized works yet as they only last for 20 to 25 years a notice to ensure their replacements are approved timber items may suffice.

Prior to any works taking place Listed Building Consent must be obtained.

Building 2.

The 2-storey section of the building is a later addition and confirmation of its structure will steer the correct conservation methods, yet from the information visible on site it is clear the render is failing. Depending on the construction materials and condition of the wall below either repairs to brickwork or re-rendering in a breathable lime render followed by breathable decoration.

- The removal of the black cement plinth render.
- The UPVC windows, facias and barge boards may be unauthorized works yet as they only last for 20 to 25 years a notice to ensure their replacements are approved timber items may suffice.

The C20 single storey is in fair condition as to be expected of a building of this comparative age.

Buildings 3 to 7 are reported as listed by way of being in the curtilage of Potash Farm, yet I am informed the barns are no longer within the ownership of Potash farm, therefore they are treated as being in the setting of a listed building.

Building 3.

This barn has suffered extensively as a consequence of C20 materials and insufficient repairs to the roof.

The remaining historic timber frame is restricted to the walls, this is from the Victorian era with soft red brick plinths and a timber frame that's extensive use of nails and the style of the diagonal bracing are coherent with vernacular building methods of the time. There are several C20 machined timbers in the walls suggesting repairs have been carried out prior to the collapse of the roof. The careful removal of the render is urgently required to reduce the stress on the remaining timber frame and boarding beneath.

The careful removal of the cement rendered half height walls may reveal areas of decay, yet I have seen this kind of walling removed and the timbers have been in good condition.

Due to the conditions of the site visit, it was not possible to assess the condition of the stud joints to the wall plate though I suspect them to short tenons nailed through the wall plate, in which case the strength and condition of the frame may be compromised, and the joints will need additional strengthening works.

A Carpenter experienced in timber frame conservation should be instructed to assess the frame when access is less challenging prior to any repairs.

The plinth wall will benefit from any cement mortar being carefully removed and replaced with the correct lime mortar, preferably using local sand to get a colour match.

Buildings 4.

From the roof down building 4 has been completely constructed in C20 blockwork. Further inspection of the roof structure to appraise its age and therefore historic value is advised.

Building 5.

The brick plinth walls, timber frame wall (facing Potash fame) and former styes appear to be the only pre C20 features that remain in this building. The west facing brickwork is in need of sympathetic repair requiring any cement mortar being carefully removed and replaced with the correct lime mortar, preferably using local sand to get a colour match. The bricks are worn by the elements, and there are a few missing, these should be replaced with matching reproduction items that are readily available from Bulmer Brick and Tile amongst others.

Building 6.

The historic maps show a structure here, yet it is doubtful the lean-too structure is it, as it is constructed of C20 materials. To the left is a structure beneath the foliage yet we did not have permission to reveal it in its entirety. The visible components suggest that it was rendered at the same time as building 3.

Building 7.

A mid C20 steel framed barn of no historic interest.

Building 8.

A WWII concrete framed building of little historic significance.

Building 9.

A WWII timber framed building of little historical significance.

As is common with farm buildings, changing agricultural practices are reflected in adaptations made to their structure as their requirements evolve. The collapse of the roof of building 3 shows this is not always beneficial to the buildings.

The historic maps show lost buildings that are similar to a loose traditional Farmstead as found throughout East Anglia. The missing buildings appear to have been built on top of the semi- recently discovered ancient ditch system. From that, just buildings 3,4 & 5 remain with building 4 being almost completely re-built.

The proposed redevelopment includes the repair of the older barns, this will be an expensive undertaking that would not be feasible without the resources provided by the additional new buildings to the South of the site. The barns not being owned by the residents of Potash farm are not in the curtilage of the listed building, therefore, are not afforded the protection of listing. This would imply the best chance the barns have of continued existence, is the proposed redevelopment almost akin with enabling development.

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ISBN 780-0-80-097112-4

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