STILES & Co
CHARTERED SURVEYORS

The Old Barn
Dunsborough Park
Ripley Surrey GU23 6AL
T 01483 225755
F 01483 225754

E enquiries@stilesco.co.uk
W stilesco.co.uk

BUILDING SURVEY REPORT

ON

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FOR

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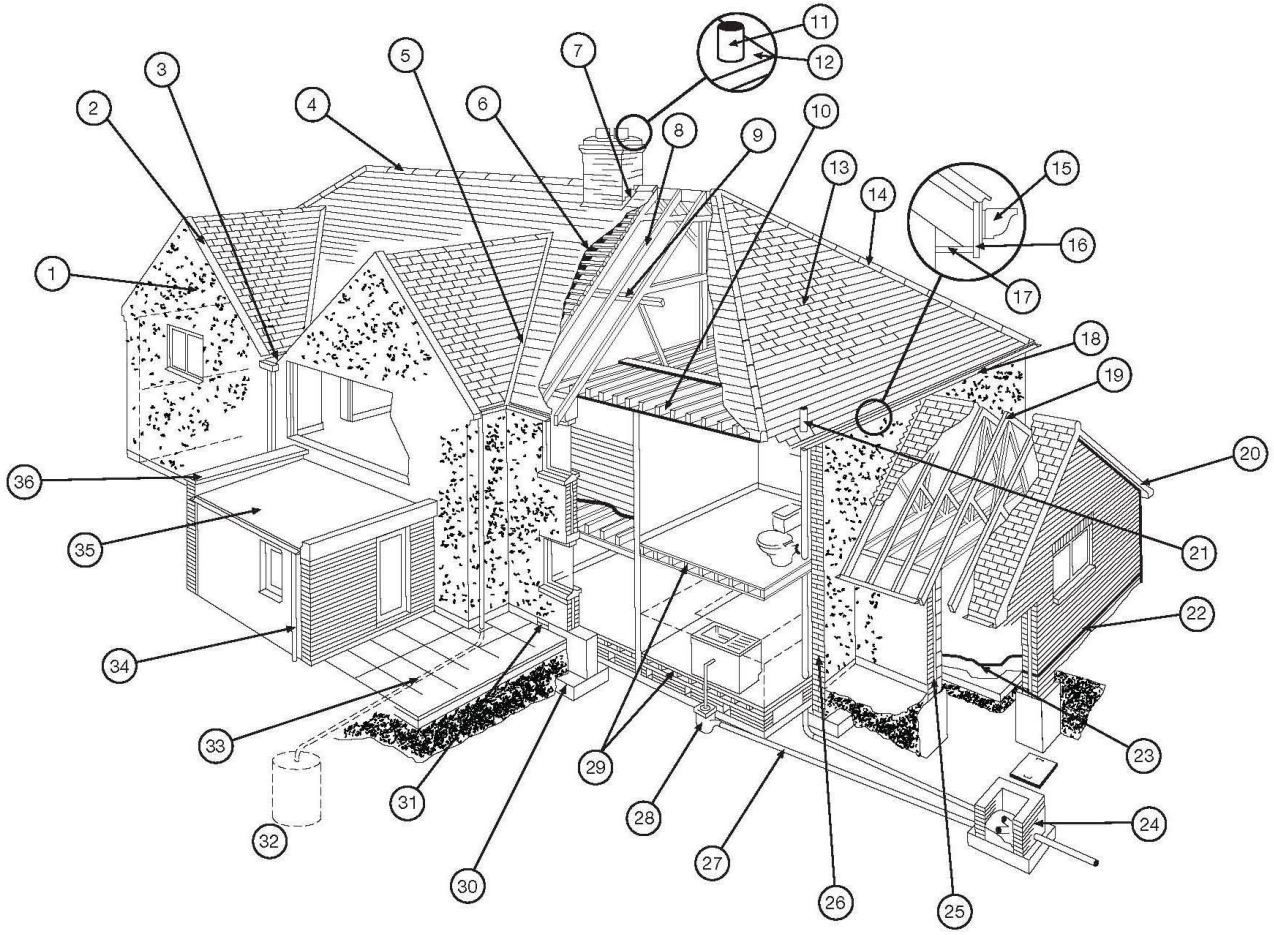
DATE OF INSPECTION: ###

Contents



KEY

1 Gable end wall
2 Verge
3 Valley gutter
4 Ridge tile
5 Valley
6 Roofing felt
7 Flashing
8 Rafter
9 Purlin
10 Ceiling joist
11 Pot
12 Cement
13 Hip roof
14 Hip tile
15 Gutter
16 Fascia
17 Soffit
18 Eaves
19 Roof truss
20 Barge board
21 Soil-and-vent pipe
22 Damp-proof course (DPC)
23 Damp-proof membrane (DPM)
24 Inspection chamber
25 Cavity wall
26 Solid wall
26 Foul drain
28 Gulley
29 Floor joists
30 Foundation
31 Airbrick
32 Soakaway
33 Surface water drain to soakaway
34 Downpipe
35 Flat roof
36 Parapit

1 CLIENTS' INSTRUCTIONS

Further to our letter dated ## and accompanying terms of engagement, I am pleased to confirm that in accordance with your instructions a full and detailed building survey of ## was successfully completed on ## in connection with your proposed acquisition of the freehold title.

We have seen plans for a proposed extension parallel to the north boundary and single storey link at the current kitchen position. Although reviewed briefly, no detailed appraisal has been carried out.

2 METHOD AND EXTENT OF SURVEY

We refer in the first instance to standard limitations in our terms of engagement. The property was visually inspected externally from the front, sides and rear. All of the roof slopes were capable of inspection. However, due to height restrictions and access limitations, it was not possible to inspect some roof surfaces, particularly those shrouded by creepers. Similarly, it was not possible to inspect the chimneystack flaunchings (mortar bedding) holding pots or similar in place.

The front elevation is mostly obscured by dense vegetation and as a consequence I could not inspect concealed surfaces beyond. Where possible, I did push back twigs and branches to reveal as much of the background as I could, but you will appreciate that in some areas greenery is dense and impenetrable. Nevertheless, internally I carried out a thorough inspection with a view to identifying any significant cracking or other defects.

Exposed and accessible inspection chamber covers serving the underground drainage installation were lifted, but those that were screwed down were not raised and some I found were seized shut with silt.

The garage was locked and no internal inspection was carried out.

The adjacent paddock/parcel of land to the south east side was not inspected nor the boundaries walked.

Internally, a comprehensive inspection of both roof spaces was possible, but the central vaulted area, where cold water storage tanks are housed, is raised and effectively inaccessible. Only a remote inspection of this area was possible from both ends, but sufficient to understand the structural arrangement and general condition. Both of the under stair areas were inspected and the fireplace chambers.

As far as I am aware there are no cellars and none were inspected.

All rooms were inspected individually, with small sections of carpeting raised in corners where possible to assess the nature of floor construction beneath. Damp meter readings were taken with the aid of an electronic moisture meter at spot locations around the

perimeter and on internal walls and partitions at low level. Supplementary meter readings were taken in vulnerable positions such as around the top of chimneybreasts.

Without carrying out specialist tests, the electrical, plumbing and heating installations were inspected and are discussed later in this report.

The property was occupied and fully furnished with fitted floor coverings throughout. At the time of survey, weather conditions were poor, overcast and with heavy intermittent rain throughout.

Directions are given as if looking towards the house from adjacent lane.

3 EXECUTIVE SUMMARY AND RECOMMENDATIONS

was initially constructed as an oak box frame "hall house", thought to date from the late 15th century and later altered to accommodate a central smoke bay, which was commonplace in the 16th century.

With bricks becoming more widely available in the 17th century it is most likely that the inglenook fireplace and chimneystack was built into the smoke bay space at that time, combined with other alternations and refinements to the accommodation. Many of these alterations are quite apparent, particularly following an inspection of the roof spaces and with specialist knowledge of older buildings such as this.

Originally the oak frame would have been fully exposed, with lightweight infill panels between the framing members, but to improve durability and weather protection, solid masonry claddings or infill panels were often added during the 17th century and this seems to be the case here, with external walls now built from what I presume to be Bargate stone in lime mortar and finished with a ironstone galleting detail.

Clearly, over the years the position of window and door openings has altered, as have the north and south flank walls which have been raised in height to accommodate the half hip roof configuration.

It must be appreciated that when acquiring an ancient house such as this, you are becoming a custodian for the time being and there must be reasonable expectations about its condition and what one might expect given that the core structure is likely to be over 500 years old.

Generally, it is fair to say that the house is in above average condition for a property of this type although there are some maintenance issues to be addressed. I found the house to be structurally sound and free from any other major defects, but for ease of reference the principal items in need of attention or further consideration are summarised below.

EXTERNALLY

3.1 There is weathered mortar and some delaminating (flaking) bricks within the central chimney stack. There is evidence that there may be some water penetration at the foot of this stack – undesirable when there are oak roof timbers in close proximity. I recommend some refurbishment work of the chimney stack and mortar fillet around the base.

3.2 The roof structure has good line and level with usual subtle historic distortions evident. Nevertheless, there are some minor repairs required to the roof framework and I would recommend some local preservative treatment where there are signs of minor, more current beetle infestation. There are bats roosting in the roof space and these are a protected species. Any work in the roof space must be carried out in compliance with statutory legislation and good practice.

3.3 A light overhaul of the roof coverings is necessary combined with some timber repairs at verges and under eaves locations.

3.4 It is essential to rationalise vegetation growing over the north flank wall and roof coverings. Creepers are beginning to penetrate into the roof space.

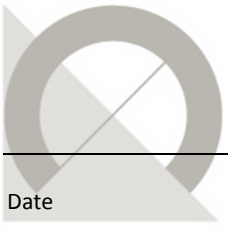
3.5 Some of the cast iron gutters and downpipes are corroding and will require refurbishment or replacement. At the front left hand corner there is a leaking rainwater outlet/downpipe and at the front right hand corner the upper downpipe bracket has pulled away and requires refixing.

3.6 It appears that a single downpipe on the rear elevation is inadequate and this is likely to be a contributory factor to some local penetrating dampness at the corner of the WC. Rationalising the rainwater installation can be easily achieved.

3.7 Much of the window joinery is quite recent replacement joinery, but unfortunately there has been poor paint maintenance. As a consequence, there are areas of peeling paint and some bare joinery where minor wet rot has developed. Minor refurbishment and redecoration is recommended combined with repointing of any gaps between frames and structural openings.

3.8 Stone elevations have been subjected to some local repointing with cement based mortar. This is not ideal and ultimately can lead to premature deterioration of the softer, less durable stonework. Ideally, I recommend that where cement based mortars have been introduced, these should be carefully raked out and a lime mortar introduced.

3.9 There is some deterioration of roof coverings above the garage, combined with maintenance related defects, including wet rot to the front doors. In the event that the garage is to be demolished these issues become irrelevant.



INTERNALLY

3.10 The house is satisfactorily dry, but there is some isolated dampness at the foot of the partition between the kitchen and adjacent living room/stair enclosure. There is some isolated low level dampness at the fireplace chamber positions as one would expect.

Further isolated low level dampness was noted around the south door opening, with further dampness emerging on the rear elevation in the same room, extending into the WC compartment. As a consequence, some specialist remedial work will be necessary, potentially combined with adjustment of external pavings where they may be contributing to penetrating dampness.

3.11 As one would expect, there is significant historic beetle infestation evident, quite normal for an oak framed building of this type. There is also some evidence of more recent minor outbreaks here and there, which will require local treatment.

3.12 One rail on the kitchen/living room stud partition wall has become dislodged and the plaster panel infill is loose. Local repairs will be necessary here.

3.13 Both fire chambers require a little tidying up including some local repointing and local repairs where there is a pocket of masonry missing and corrosion evident to the steel flue plate on the south side.

3.14 The main two bathrooms have no mechanical extractor fans and as a consequence some paint surfaces have deteriorated due to condensation. This can be easily dealt with by introduction of extractor fans and improved ventilation.

3.15 In limited locations where low voltage down lights have been introduced, I recommend that these are upgraded to LED light fittings, where penetrating old soffit linings.

In the event that the proposed extension is constructed it is likely that the central heating and hot water system will have to be upgraded to cater for the greater capacity required. This should be borne in mind.

With the proposed extension in mind, it is also important to appreciate that there is quite clearly a great amount of rainwater runoff from the rear garden and land beyond. This must be catered for in the design of the extension and particularly external treatments such as pavings and retaining walls. Suitable land drainage should be designed to cater for the runoff and minimise the amount that collects against the back of the house.

We are experience project managers and construction cost consultants and if you require specialist assistance with your project we would be please to assist your further.

In simple terms, there is nothing that I have identified that cannot be addressed in a wider project scenario, otherwise remedial works and upgrading should be prioritised to suit your requirements.

Should you wish to meet me to run through any of my findings and discuss the issues in any more detail, I would be pleased to accommodate you.

4 DESCRIPTION OF PROPERTY

is a detached house that is likely to date from around the late 15th century, built originally as a rural oak box framed house and subsequently altered to incorporate innovations at the relevant times. A detailed history is outlined in the attached report prepared by the Surrey Domestic Building Research Group labelled Appendix A.

The original house has a substantial load bearing oak box frame, although there have been some minor additions where there is now load bearing masonry, presumed to have independent foundations.

Solid random coursed stone walls around 15 inches in thickness were introduced at some time, probably during the 17th century, mostly concealing the oak framework beyond.

The house stands beneath a robust oak framed roof that has been subject to some strengthening and realignment, probably before the last time roof coverings were replaced. The tiles are likely to be hand made clay peg tiles with matching accessories, including valley tiles and hogsback ridge tiles.

The central chimneystack is constructed within a former smoke bay and judging by the straight joints, an original slender stack has been altered and adapted. This chimneystack has three separate flues, two of which are currently redundant.

Rainwater goods are mainly old cast iron half round gutters supported on rafter brackets, discharging to matching circular cross section downpipes around the perimeter. Some isolated plastic drainage components have been introduced.

The windows appear to have been replaced fairly recently with painted timber casements, complete with hardwood cills. Doors at either end of the house are robust oak matchboard, complete with weatherboards and matching frames.

As is usual for a rural cottage such as this, there is an open eaves detail with exposed rafter feet and no fascia or soffit board.

All mains services are connected other than gas. There is an oil fired central heating and hot water system, with floor mounted boiler in the WC/utility room.

The ground floors are solid in-situ concrete ground bearing slabs throughout, with a variety of finishes above. The upper floor is suspended timber construction, featuring many exposed principal tie beams and infill floor joists, with boards above. Typical for a property of this age and type there is quite significant distortion to some of the upper floors.

The inner surfaces of outer walls are conventionally hard wall plastered as are internal walls/partitions of masonry construction. Elsewhere there are a number of oak stud partitions, with plastered infill panels. A number of the partitions at first floor level will be constructed from ancient wattle and daub, replastered over the years.

As one would expect, storey heights at ground and first floor level are relatively modest, but there is a central first floor area that has been vaulted. There is the potential for further vaulting in the master bedroom suite, subject to further investigation and dealing with some practical limitations.

The house occupies a site of approximately ¾ acre at the foot of a hill. As a consequence, retaining walls have been constructed at the back of the patio, with steps and a mower ramp.

There is a small garden at the front, but most of the land is at the rear and laid to lawn. At the southeast side there is a paddock area, which is now part of the property.

Boundaries are denoted by mature planting and timber post and rail fences. At the front there is a dwarf stone and brick wall parallel to the lane. There is a small detached single brick garage adjacent to the north boundary, roughly on the same axis as the main house.

The front elevation parallel to the lane faces approximately west.

5 EXTERNAL EXAMINATION

5.1 CHIMNEYSTACK

A triple flue brick chimneystack penetrates the roof at the centre of the house with a mortar fillet/tile listing at its base.

It is clear that the stack has evolved and has been extended and altered to suit the provision of fireplaces in the house.

I am pleased to confirm that the chimneystack is satisfactorily plumb and level, with no significant defects apparent. However, there is some erosion of the soft lime mortar pointing and some of the brick faces are delaminating (flaking) as a result of long term weathering.

There are three terracotta pots/cowls, with only one fireplace currently in use. One of the pots is out of plumb and may be loose. I recommend that this is checked and rebedded as necessary, with suitable repairs to flaunchings (mortar bedding) holding pots in place as found to be necessary.

The chimneystack is structurally sound, but is in need of some light refurbishment to address long term maintenance issues.

5.2 ROOF STRUCTURE AND COVERINGS

The 15th century hall house would have stood beneath a gablet hipped roof, but the roof has subequently been altered to what we see today – a half hip arrangement.

Irregular oak members were used to frame up the roof originally and with the passage of time, roof structures have a tendancy to sag a little, resulting in the subtle distortions that

give many old English buildings their character. This of course is dependent on the quality of the original construction and size of principal framing members.

In this instance, the original framework remains mostly intact but it is clear that supplementary rafters have been introduced between the original and north and south ends altered to create the current half hipped arrangement.

Some of the original rafters have been 'packed up' or supplemented with over rafters to achieve a more even roof slope. This is common practice in ancient buildings.

With the exception of a couple of collar ties that have become dislocated at the rear of the chimneystack on the west side and a couple of badly beetle ridden timbers that I recommend are replaced, overall I found the roof framework in satisfactory condition, robust and fit for purpose.

As one would expect there is evidence of widespread historic beetle infestation but nothing to cause concern although there is some recent activity here and there and some specialsit treatment is recommended to prevent further deterioration.

As a principle, it should be understood that original oak structural timbers are effectively oversized and beetle infestation invariably affects only the outer layer of the timber, without impairing the core structural strength. The early origins of an open hall house are clearly evident with smoke blackened timbers readily visible in the roof space. Overall, I am satisfied that the roof structure is sound, with good line and level.

In common with most rural dwellings of this nature there is an open eaves detail with exposed oak rafter feet. In a number of locations rafter feet have suffered long term wear and tear with some rot and beetle infestation evident. This is what I would expect of a building of this age but, some repairs to the eaves will be necessary, particularly at the east side of the house where crude attempts have been made at sealing some of the under eaves areas with expandable urethane foam. This is now deteriorating and should be raked out and the detail improved to allow proper ventilation of the roof space.

Where gutters and downpipes have overflowed at the east corner of the ground floor WC, local timber repairs will be necessary here and some adaption of the rainwater goods to prevent continued overflowing.

It is most likely that the house was originally thatched and has been re-covered with tiles on a number of occasions. Most recently a heavy hessian, bitumen reinforced underlay has been incorporated beneath the clay peg tiles. Condensation can develop on the underside of such coverings is good natural ventilation is not provided and it is for this reason that some eaves to eaves ventilation is recommended.

Clay hand made tiles are naturally porous and with the passage of time become worse, allowing moisture to become trapped within. This can result in frost damage, causing tile faces to delaminate (flake). Although generally I found the roof tile coverings to be in serviceable condition there are of course signs of long term wear and tear with some tile delamination on the more exposed slopes combined with isolated broken, cracked and loose tiles. Accordingly, I recommend that a light overhaul of the roof coverings is carried out, so as to prevent further deterioration and improve longevity.

The verge pointign at the southeast extended 'cat slide' is loose and will require raking out and repointing.

At the base of the chimneystack there is a rigid mortar fillet/tile listing detail and I suggest that this is checked because there is evidence of some penetrating dampness around the chimneystack in the roof space. Such rigid weathering details are suseptible to thermal movement, leading eventually to rainwater ingress. This detail should be checked as part of the roof overhaul and local repairs carried out as found to be necessary.

The roof is badly obscured by creepers at the north end and these should be cut away and significantly reduced in size to avoid problems developing. Tendrils have entered the roof space and this is clearly undesirable.

There may be some concealed damaged tiles in these areas and this should be dealt with as part of the overhaul works.

5.3 RAINWATER GOODS

Rainwater is collected at the eaves by half round cast iron bolted gutters, supported on metal rafter brackets, in turn discharging to matching circular cross section downpipes around the perimeter. Overall, the gutters are corroding, with a number of leaking joints and widespead peeling paintwork. Gutters at low level were capable of internal inspection, confirming further corrosion and some clogging with silt and moss.

Specifically, there is a dislocated gutter outlet and downpipe at the front left hand corner of the house. Additionally the upper downpipe bracket at the front right hand corner has pulled away from the masonry. Both of these defects require attention.

It is clear that the rainwater gutters have been leaking for some time and this has led to some deterioration of exposed oak rafter feet. In particular rot and beetle infestation at the east side above the ground floor WC. At this point there is a downpipe connecting the upper gutter to a lower section of gutter. Long term overflowing is apparent, with wetting of the low level brickwork, probably contributing to dampness that I identified in the WC.

It is clear that this small downpipe cannot cope with the quantity of rainwater from the roof slopes above and will either surcharge (overflow) or cause overflowing of the gutter below.

A single downpipe at the southeast corner of the house is insufficient to deal with the quantity of rainwater runoff and I recommend that the rainwater goods in this area are altered with an additional downpipe introduced, ultimately connected to the underground drainage system.

In view of the above and my earlier observations about some eaves timber remedial work, I suggest that all of the rainwater goods are removed and refurbished to ensure that they are watertight and well painted to prevent premature deterioration.

Defective rainwater goods are a frequent source of damp penetration, which in turn can lead to concealed timber defects developing. Regular inspection and adequate maintenance are therefore essential.

It was not raining at the time of my inspection and I am therefore unable to confirm that the rainwater goods are free from blockages, leakages etc., or that they are capable of dealing with prolonged periods of heavy rainfall.

A number of the downpipes are routed directly into the ground/pavings with no accessible gullies for maintenance purposes. It is assumed that these downpipes do discharge satisfactorily to an underground drainage system but I am unable to verify this. I would be wise for some local excavation to be carried out around the rainwater pipes in question to ensure that they are watertight and discharge a satisfactory distance away from the house. It is important to determine this as otherwise they could cause destabilisation of walls with shallow foundations and lead to penetrating dampness.

5.4 STRUCTURE AND MAIN WALLS

Reference to the Geological Survey Map of Great Britain by our soils consultant, Ashmere Soils Laboratories, indicates that this area is on the faulted boundary between The Bargate Beds and the Hythe Beds that normally underlie them. Both are sands and silty sands and sandstones, which are granular subsoils and a good founding medium in a well compacted and undisturbed state. However, this type of subsoil can suffer from 'wash out' of fine particles in the soil matrix due to aggressive natural ground water conditions or long term leakage of underground water bearing services.

The original hall house is constructed from an oak box frame, which fulfils the main load bearing function. As is usual with surveys of this kind, no investigative excavations have been undertaken and I am therefore unable to comment on the type of foundation beneath the ancient oak framed part. The type of foundation would could expect varies from halved, sawn oak trunks (or similar) or perhaps stone rubble fill with a lean mix binder.

With the later introduction of solid external walls as cladding, it would not be unreasonable to expect some form of stepped stone or brick foundations extending beneath the posts and other infill wall panels.

I am pleased to confirm that I found the frame as a whole structurally sound and no significant 'racking' or other structural movement in spite of some slight structural alterations to the frame, which will be discussed later in this report.

The external 15 inch thick random coursed Bargate stone walls are satisfactorily plumb and level with no evidence of any subsidence or settlement beneath the foundations. I did notice some very minor differential movement at the abutment line between the extended part of the south reception room where the house extends beyond the oak framed structure. There is some disturbance of the vertical mortar fillet at the abutment line and this should be raked out and neatly repointed.

Given the history of the house, it is clear that window and door openings have been infilled and opened up over the years with evidence to confirm that where patched masonry can be seen and the occasional straight joints.

Decorative ironstone galletting has been introduced to the lime mortar joints, which is purely for decorative purposes although with practical origins, where stone masons used hard ironstone spacers to stop heavy blocks of masonry squeezing fresh mortar out of joints.

The stone and brick elevations are generally in good condition, although there is some weathering, resulting in isolated delamination (flaking) of stone and brick faces, combined with some erosion of mortar.

Regrettably, cement based pointing has been introduced where patch repairs have been carried out and some local repointing. Such pointing is in fact more durable than the masonry and does not allow the evaporation or moisture from the joints. The result is that eventually stone faces deteriorate at an advanced rate and ideally, cement based mortar should be raked out and replaced with a matching lime mortar.

Where there has been a tendency for water to collect against the foot of the building, eroded mortar and stonework should be repaired locally and detailing of pavings reviewed to avoid any water collecting, potentially leading to penetrating dampness.

There is clear evidence of rainwater running off onto the hard pavings on the south side of the house, from the slightly higher land above and I believe that this has contributed to the local penetrating dampness around the doorway.

At higher level, midway along the east elevation there is a small bare rendered infill panel, which appears to be no more than 100mm in thickness. The render finish is cracked and local repairs should be carried out here to prevent the potential for penetrating dampness.

As far as I could determine the original oak box frame remains intact with only minor structural alterations. This includes a slight reduction in the depth of a tie beam where a door has been introduced into the central bedroom. The top of an arch brace has been cut away to allow for the door opening leading to the rear bedroom.

There is no evidence of 'racking' of the oak frame, but this is to be expected given that the frame remains mostly intact and the substantial stone walls around the perimeter will provide a buttressing effect.

The door and window openings are satisfactorily square with only minor distortions evident here and there with oak plates, beams and bressumers spanning the openings.

A damp proof course (DPC) is a waterproof layer built into or formed within the walls to prevent ground water from rising as a result of capillary action. The original part of the house would not have any form of damp proof course and close inspection revealed no evidence of any post construction remedial chemical injected damp proof course. It is possible that a damp proof course may have been injected from the inside.

There is evidence internally that a dense cement based render has been introduced and this is typically associated with specialist damp proofing treatment. Your nominated firm of solicitors should make further enquiries to see whether there is the benefit of any assignable guarantee for damp proofing works completed in the past.

I did identify evidence of chemical injection at the raking brick buttress on the northeast corner. However, this may have been isolated treatment to prevent the potential for penetrating dampness in this area.

Overall, the external walls are satisfactorily dry, but there are some isolated areas of dampness that will need to be addressed and this will be discussed later in the report.

5.5 WINDOWS AND EXTERNAL JOINERY

Unusually for a house of this age, all of the older windows have been removed and replaced with modern painted timber casements with contrasting clear finish hardwood cills. Regretably paint maintenance has been poor and surfaces have peeled leaving some joinery bare. As a consequence, some isolated wet rot has developed here and there, requiring local repair before redecoration.

Although I found most frames well sealed around the perimeter, I did notice some open joints between framing timbers and structural openings. This appears to be due to early shrinkage of mortar or perhaps a combination of this and timber shrinkage. Neat mortar pointing should be carried out to match the existing.

An old style single glazed cast iron roof light in the rear middle bedroom offers little thermal insulation and it is clear that condensation has developed on the inside, leading to discoloration of adjacent painted surfaces and furniture below. As part of refurbishment work you may wish consider installing a conservation roof light incorporating double glazed sealed units.

The house has a pair of oak plank doors (matchboard), one at each end. These were found to be in good condition, robust and fit for purpose. The keep to the kitchen case lock is missing and the door can only be secured by means of the cylinder rim deadlock.

As already mentioned, there is an open eaves detail with exposed rafter feet and no prepared joinery. I recommend that following repair and tidying beneath the eaves, all exposed timber is treated with a brush applied preservative, with a dark stain finish.

5.6 UNDERGROUND DRAINAGE INSTALLATION

It is presumed that mains drainage is available, with foul and waste water routed to an inspection chamber within the front driveway. Three inspection chamber covers were raised confirming that the system was clear and free flowing at the time of my inspection.

Below the last inspection chamber there appears to be pitch fibre pipework on the outfall, downstream leg. This material was commonly used in the 1960s and 1970s but is well known to have poor durability and can become misshapen with the tendency for the crown of the pipe to flatten and become more oval in cross section. However, in this instance I can confirm that water was running away comfortably with no evidence of any downstream blockages.

I do recommend that as part of any proposed project work a full CCTV survey of the drainage installation is undertaken to determine condition and identify the need for any upgrading. Given the quite shallow invert levels, it is quite possible that much of the drainage installation will need reconstruction, but this will need to be reviewed in due course.

It would seem that the rainwater is piped into a separate, more modern drainage system, with proprietary plastic circular chambers with screw down covers. I was only able to raise one of these and found heavy natural salt deposits around the chamber, suggesting long term infiltration by ground water. Proper provision for dealing with ground water must be carefully considered as part of the proposed project work, potentially including a cut off French drain running parallel to the patio retaining wall.

5.7 EXTERNAL MATTERS GENERALLY

GARAGE

There is a single brick built and rendered garage at the left hand side of the house, standing beneath a simple gable roof. The garage was locked at the time of my survey and no inspection was carried out internally. It is quite likely that there may be rainwater penetration along the left hand side due to the difference in levels but I cannot verify this.

The garage structure, although currently sound, is suffering from long term wear and tear, including deterioration of roof coverings, wet rot to joinery and erosion of brick mortar. If the structure is demolished, these items will of course be of no consequence, but if it is retained, refurbishment of the building is recommended.

The internal electrical installation was not capable of inspection and care should be taken in the short term.

GROUNDS AND BOUNDARIES

As part of the proposed extension and alterations there is a comprehensive landscaping scheme and implementation of the new layout will deal with many of my recommendations.

However, for the record, I found that the front concrete pavings are uneven and cracked, as a consequence of long term weathering. The water stopcock chamber at the front right hand side is flooded.

A former stone boundary wall at the front has been repaired with brickwork and is rather overgrown. An earlier gated pathway or similar is no longer used.

At the right hand side of the house there is clear evidence of significant rainwater runoff and pavings here are poorly detailed with a small trough allowing water to accumulate. This, I believe is the principal cause of the penetrating dampness around the door. Ideally, pavings should be reduced in level and a step could be introduced at this doorway to improve matters.

Similarly, across the rear elevation, budget precast concrete pavings have been introduced and these ideally should not abut the rear elevation. I would prefer to see a margin detail of some kind, but these needs to be further considered with the wider amended scheme.

Currently at the position of the garden retaining wall and adjacent steps there are no guard rails or handrails. This poses a potential safety hazard, particularly for young children or elderly people.

Between the formal garden and southeast paddock area the timber post and rail fencing is dilapidated and partially fallen down. This will need to be repaired or replaced.

The house occupies a quiet rural location, with little traffic passing in the lane during my visit.

6 INTERNAL EXAMINATION

6.1 ROOF SPACES

NORTH

Access to the roof space at this end of the house is through a hinged double bulkhead door above the master bedroom suite. I was able to gain access by ladder and found the immediate area decked with softwood boards with artificial lighting supplied.

A hayloft door has been incorporated externally in the north elevation at high level but this is not an original feature. It would have been added when the roof was reconfigured.

Some goods were stored in this area but I was able to carry out a thorough inspection, notwithstanding floorboards/decking concealed ceiling joists below.

The central smoke stained timbers are immediately apparent, with later infill rafters. There is historic beetle infestation, as one would expect, combined with some more recent infestation, evident where some edges of timbers have been eaten away and the associated tell tale signs of lighter exposed timber beneath.

One of the hip rafters at the junction with the ridge is particularly badly beetle ridden and I would recommend that this section is cut away and replaced with oak.

Elsewhere, it is clear that structural strengthening has been carried out, with blacksmiths cleats, brackets and tie bars.

Overall the roof structure is satisfactorily framed up and fit for purpose.

As part of roof re-covering work, hessian reinforced bitumen underlay has been incorporated. This has now been penetrated at some of the lap locations by creeper tendrils.

Bat droppings were clearly visible across the floor decking, concentrated beneath the ridge line. I found a couple of bats roosting at high level, confirming that this is an active roost.

Bats are a protected species and heavy fines can be imposed for either killing one or interfering with their roosts.

For further information see: ttp://www.bats.org.uk/pages/uk_bats.html

The usual recommendation is to take care of any maintenance work in the roof spaces when the bats have left the roost and gone into winter hibernation. This tends to be between late September and spring.

There is a pair of plastic circular cold water storage tanks above the higher vaulted part of the central accommodation. These tanks do not have proper fitting lids and have become fouled by the bats. I recommend that the lagging jackets and covers are removed and the installation upgraded. The cold water storage tank overflow pipe is not insulated and there is a risk of freezing and overflowing as a consequence. Proper lagging should be introduced and where at all possible, insulation in the roof space upgraded.

SOUTH

Access into this separate roof space is by means of a hinged bulkhead door at the rear of the inglenook. My findings at this end were similar to the north side, but I did not see any bats here although there is evidence of quite widespread bat activity.

Smoke staining on the roof timbers is quite striking confirming reconfiguration of the roof structure to form a half hipped arrangement.

Crude, but probably effective sealant along the south side has been carried out using expandable polyurethane foam.

At the rear of the inglenook flue a pair of collar ties has become dislocated and ideally these should be replaced to match the existing.

Some local additional treatment for beetle is necessary, which in view of the presence of bats, must only be carried out using special chemicals. The roof space should also be sanitised to remove the bat droppings. These are inert and are not know to pose any health hazard.

I was unable to gain access to the tank area, which is sited above the higher vaulted accommodation.

6.2 CEILINGS AND SKEILINGS

Typical of a house of this age, ceiling soffits are constructed in a number of different ways and using different materials. The majority of ceilings are original lath and plaster.

Note: *Lath and plaster depends for its adhesion upon the plaster being applied over narrow strips of wood or laths with small gaps and the plaster working its way between those gaps. With the passage of time and the advent of central heating the plaster dries out, cracks occur between the lath and the plaster, and the adhesion weakens and is frequently lost. It is never possible to say with any confidence how well lath and plaster will continue to perform. However, if you attempt to strip any lining papers or ceiling papers, almost inevitably substantial plaster repairs will be necessary.*

Overall, the ceilings are in satisfactory condition, with only minor cosmetic cracking here and there. I did not identify any widespread debonding but inevitably there will be some hollow and loose areas.

Where there are sloping soffits (skielings) it is unlikely that there will be any insulation beyond and as a consequence there will be a high rate of heat loss through the structure.

A consistent feature throughout the house is the exposed oak frame, including principal trusses, tie beams, floor joists and the like. At ground floor level in order to keep these members exposed, plasterboard and similar infill panels have been introduced.

Overall, I found the ceilings and skielings satisfactory with only usual wear and tear apparent.

6.3 WALLS AND PARTITIONS

The inner surfaces of outer walls are conventionally hard wall plastered as are internal walls and partitions of masonry construction. Probing with a damp meter confirmed cement based render at least up to waist height, extending above in some areas. This suggests some specialist remedial damp proofing work has been completed in the past but I am unable to verify this. I recommend that your solicitors make further enquiries and check whether there is the benefit of any assignable guarantee relating to any past damp proofing activities.

With the exception of the central inglenook fireplace and brick flue, most internal partitions are timber stud, with exposed timber and infill plastered panels. As one would expect I found some of the infill panels a little hollow, but there is one that has become significantly loose on the kitchen/living room partition, with one of the timber rails loosened as well. Local repairs will be necessary here.

As discussed later in this report, although I found the house to be generally dry, there are some isolated areas affected by rising and penetrating dampness. These are highlighted on the attached sketch plan, labelled Appendix B.

It is likely that as part of specialist remedial work in these areas, local replastering will be necessary with a specialist waterproof system.

Please appreciate that this will involve some disturbance and disruption, possibly combined with removal and reinstatement of fixtures and fittings. You will of course appreciate that the house is ancient and some of the timber partitions, particularly at first floor level, will be wattle and daub construction. Some of this is exposed and visible in the roof space. From my experience of old houses such as this, it is common for the tinder dry timber wattles to have beetle damage, rendering them particularly fragile.

In an older house there is the potential for higher maintenance and repair costs, simply due to long term wear and tear.

The external walls are not insulated and there will be a high potential for condensation in bathroom areas. As a consequence, there is some peeling paintwork and this in part is due to lack of good ventilation. You may wish to consider introducing electrical mechanical extractors to improve matters.

The east elevation of the central bedroom has only a thin, 100mm (4 inch) external wall and will be quite cold. It would be possible to introduce a false wall with insulation and a plasterboard lining, reducing the heat loss through the structure. I think this would be a worthwhile alteration in this room to make it more comfortable, particularly since it has a vaulted ceiling.

6.4 FLOORS

Throughout the ground floor there are in-situ concrete ground bearing floor slabs but of course, originally there would have been bare beaten earth floors.

In modern floor construction there will be damp proof membranes but these are concealed and I therefore cannot verify that any are incorporated.

Notwithstanding the above, I found no evidence of any penetrating dampness through the floor slab. All of the ground floor slabs were found to be satisfactorily firm and level with no evidence of any subsidence or settlement beneath.

The oak boarded overlay flooring in the central living room is good quality, with even joints and no evidence of any adverse shrinkage or other distortions.

The first floor is suspended timber construction, featuring exposed oak framing members and infill joists. As is usual, I found quite significant distortion of some of these upper floors, particularly parallel to the central, east elevation. However, I found nothing to suggest any recent or progressive movement, with these floors firm underfoot. The unevenness is due to a combination of factors including irregular shaped original timbers, later adaptations/alterations and long term service.

Some of the floor timbers on the internal jetty have been cut away to facilitate insertion of the north staircase. As a result these have become short cantilever timbers with limited means of restraint, resulting in some deflection at the side of the stairwell. Nevertheless, these timbers were found to be firm but there is the potential for some slight future movement.

6.5 INTERNAL JOINERY AND STAIRCASES

Oak joinery features throughout, including a number of ancient matchboard/plank doors, with hand forged ironmongery. As with the oak frame there is a combination of historic some more recent and current beetle infestation.

Later in this report I recommend that some specialist inspection and subsequent treatment is carried out to prevent any further deterioration.

There is a pair of oak and softwood staircases, one of which turns through 90^{o} and the other emerges onto a small half landing between the east bedroom and adjacent bathroom. Both staircases were found to be reasonably firm underfoot, but do creak a little and some stiffening of the carriages would be beneficial.

It is important to appreciate that neither of these staircases has a proper handrail and this poses a potential safety hazard, particularly if young children are present in the household.

Head height is also restricted in some of the stairwells.

The house has a nicely fitted pine farmhouse style kitchen with contrasting tiled worktops and a separate utility room. Wall and floor cabinets are relatively basic, but appear to have been hand made and other than light wear and tear, are in good condition.

None of the appliances were checked or tested.

6.6 FIREPLACES AND CHIMNEYBREASTS

There is a single brick chimneystack, split into three flues serving fireplaces below. Only one fire chamber remains in use in the living room, with other sealed at the bottom of the flues.

The large brick inglenook fireplace in the living room, now fitted with a solid fuel burning stove, typically has an oak bressumer spanning across the opening.

All is as I would expect but I did notice very soft eroded mortar in the brickwork at the left hand side. I recommend that all loose mortar should be carefully raked out and

replaced with lime mortar. At the upper left hand side, currently a plastic bag has been pushed into a rough opening. This should be tidied up.

On the opposite side of the inglenook there is a bare brick chamber. The steel sealing plate is corroded with evidence to suggest rainwater penetration. If you do not intend to recommission this fireplace, I suggest that the upper pot is suitably capped and the steel plate either replaced or patched. Please remember that in the event that a brick chimneyflue is recommissioned, it will need to be thoroughly swept and checked before use.

6.7 DAMP, DAMP PROOFING AND TIMBER TREATMENT

With the aid of an electronic moisture meter (Protimeter – MMS), spot readings were taken at various locations around the perimeter of external walls and internal walls at low level. Supplementary meter readings were taken at high level in vulnerable positions such as around the top of chimneybreasts and at the position of roof valleys with a view to identifying any problems associated with penetrating dampness.

Although I found the house to be predominantly dry, there are areas of rising and penetrating dampness that need to be addressed. These are highlighted on the attached sketch plan.

The most significant and most difficult to address, is the rising dampness affecting the living room/kitchen dividing partition, causing softening and proliferation of beetle infestation of the oak sole plate.

This problem is simply to do the lack of any damp proof course with dampness being drawn into the partition base due to long term capillary action.

It is quite possible that a new sole plate may be required but this would have to be reviewed, once the masonry/mortar infill below is removed and the plate further inspected.

Penetrating dampness affecting the ground floor WC is likely to be due to long term overflowing rainwater goods and it is for this reason that some upgrading should be carried out to prevent this in the future.

There is dampness around the door and on the east side in the south reception room. I believe that this is attributable to penetrating dampness brought about by perimeter pavings being a little high. This should be further reviewed and appropriate remedial work carried out.

Around the fireplaces, high dampness readings were obtained on both sides. This is quite usual, since the soft red bricks will readily draw moisture from the ground below as a result of capillary action. Potentially, injection of a discreet chemical injected damp proof course may be beneficial but both fireplaces could just be left alone, with the isolated dampness accepted – all part of owning an older house. Provided there is no timber or anything that can deteriorate as a result of contact with the damp brickwork, no significant deterioration will occur.

Within the south roof space there is evidence of some penetrating dampness around the top of the chimneystack, probably due to rainwater ingress through the upper mortar fillet/tile listing. This can be easily addressed by attending to the weathering detail and ensuring that it is watertight.

To reduce the likelihood of condensation in both bathrooms, I do recommend that extractor fans are introduced as part of any future planned upgrading work.

Throughout this report I have referred to historic beetle infestation, which is inevitable given that the core structure is around 500 years old. This is very much as I would expect, but where there is evidence of more recent and current beetle infestation, this must be addressed to prevent any further deterioration.

Timbers in the roof space, throughout the accommodation and other joinery show signs of some local beetle infestation, which should be further inspected by a PCA (formerly BWPDA) registered timber treatment company, who should be able to provide an insurance back guarantee for the work.

Please remember that in the roof space, bat friendly chemicals should be used and timing of the works coordinated with their hibernation period.

Below the eaves I found some evidence of long term isolated timber decay. Rafter feet should be prepared or locally replaced as found to be necessary. This problem has been exacerbated by long term leaking rainwater gutters and remedial work should be coordinated with repair or replacement of the gutters.

6.8 ELECTRICAL INSTALLATION

There is an underground mains 240 volt, single phase electrical supply to the house. The main head terminates at an outside meter cabinet, with a short submain running to the consumer unit (fuseboard). This is a modern Contactum consumer unit fitted with miniature circuit breakers and an integral RCD (safety trip device).

The house has been totally re-wired, or upgraded, recently with PVC insulated twin and earth cabling throughout.

There is a pair of isolator switches at low level in the kitchen corner cabinet, likely to isolate external electrical supplies although I cannot verify this.

Reference to labelling on the consumer unit indicates that a Periodic Inspection was recommended on 18 April 2004, but clearly no inspection has taken place, otherwise labelling would have been altered.

Periodic inspection and testing of electrical installations is important to protect your home and ensure the safety of the occupants. Guidance published by the Institute of Electrical

Engineers recommends that inspections and testing are undertaken by an NICEIC or ECA approved contractor at least every 10 years and on change of occupancy or ownership. An Electrical Installation certificate completed by a Part P competent electrician should identify all electrical works undertaken after 1 January 2005.

Whilst it is clear that the electrical installation is modern and I observed no significant shortcomings, I do recommend that a Periodic Inspection is carried out by a competent electrician as a precautionary measure. However, if you have plans are to carry out the proposed extension and alterations in the near future, testing of the installation and upgrading will become part of the project work.

The main house has 13 electrical circuits, all labelled per the schedule next to the consumer unit. Five of these are protected by the RCD.

Tungsten halogen low voltage downlights have been introduced in a couple of bathrooms. These heat up significantly and can pose a safety risk, particularly in older buildings. I recommend that were at all possible, any low voltage downlights are replaced with low energy LED lamps/fittings.

I particularly recommend that cabling in the roof space is closely checked to ensure that there is no significant damage caused to insulation by vermin.

6.9 PLUMBING INSTALLATION – COLD WATER

Mains water is connected. As already mentioned there is an external stopcock/valve chamber in the driveway but this was flooded. This is likely to be due to ground water and should not prevent usage of the stopcock in an emergency. However, I would check it to ensure that the valve is not seized up.

As part of any proposed alteration work, I would check the competency of the incoming main (communication pipe) and if necessary, upgrade this to new blue MDPE one – possibly increasing the size to allow enhanced capacity for the enlarged house.

Currently the house has an indirect cold water system with water fed under mains pressure via a rising main to a pair of plastic cold water storage tanks located in the roof space. From here there are gravity feeds to draw off points below.

Provided that supply pressure is adequate, it should be possible to convert the house to a direct system and this would negate the need for cold water storage tanks in the roof space. This may be well worth considering particularly given the extension is only single storey.

6.10 GAS

Mains gas is not available.

6.11 CENTRAL HEATING AND HOT WATER SYSTEM

Central heating and hot water is provided by an oil fired Grant Vortex floor mounted boiler located in the WC/utility area. This is a modern boiler and is likely to have been installed

relatively recently. Your solicitors should check to see whether there is any manufacturer's guarantees or warrenties available. Failing this, details of the service history and when I was last serviced should be obtained. In the event that it has not been serviced in the last 12 months, it would be beneficial to arrange for a service, however, if the boiler is to be upgraded to suit the larger house, this may not be necessary.

The boiler was working satisfactorily during my visit, but I found it very loud, in fact, roaring. You will need to check the capacity of this boiler and whether it will be adequate for the enlarged house. If it is a little small, given that it is modern, there may be some merit in considering a split system with a smaller boiler dedicated to the new, extended parts.

Oil is stored in a modern Titen bunded tank. This will have to be sited to suit the new extended accommodation.

Simple pressed steel panel radiators are fitted throughout, with normal lock shield valves. I recommend that these are upgraded to thermostatic valves, allowing individual control of room tempreatures.

Hot water is provided by a vented system, in this instance using a factory insulated cylinder located in the bathroom airing cupboard. This was found to be in good condition and fitted with a supplementary electric immersion heater, with equipotential bonding of copper distribution pipework.

Hot water pressure was found to be satisfactory at the draw off points checked.

As part of proposed extension work you may wish to consider converting the system to a pressurised (unvented) system. This would ensure good hot water pressure at all draw off points.

6.12 SANITARY WARE AND FITTINGS

The sanitary ware and fittings were found to be in satisfactory condition, although quite basic.

Bathrooms do not benefit from mechanical extractor fans and as a consequence, paint finishes have deteriorated due to the adverse affects of long term condensation.

7 MATTERS FOR YOUR LEGAL ADVISER

Your appointed solicitors should check the following points.

7.1 Ownership and repairing responsibilities for boundary fences and walls.

7.2 Rights for you to enter on to the adjacent property to maintain any structure situated on or near the boundary, and any similar rights your neighbour may have to enter onto your property.

7.3 Obtain any certificates, guarantees or approvals in relation to:

- Planning Permissions, Building Regulations and Listed Building Consents.
- Any remedial damp proofing work and timber treatment.
- Gas installation.
- Electrical installation.
- Any other matters pertinent to the property.

7.4 Title – confirm that there are no defects in the legal title in respect of the property, and all rights associated therewith, e.g. access.

7.5 Rights of Way, e.g. general access, foot paths, easements and wayleaves.

7.6 Liabilities in connection with any shared services.

7.7 General development proposals in the locality.

7.8 Ascertain whether there are any local planning restrictions i.e. whether the building stands within a conservation area and the extent of the building listing, including curtilage structures.

7.9 Confirm from enquiries that no underground problems exist.

7.10 Confirm that the land has not previously been subject to contaminative usage.

8 EXCLUSIONS AND LIMITATIONS

This Report is prepared for the sole and confidential use of the named client and confers no benefit or liability on any third party without the author's consent in writing. The Report is prepared to the best of my ability in respect of all items uncovered or inspected and no liability is admitted for any item not uncovered or that would not be uncovered in such a survey without an adverse symptom being apparent. We are unable to confirm or rule out the presence of any hidden asbestos that is contained within the fabric of the building or concealed by surface coverings, fixtures, furnishings or stored items. Although the service installations were inspected superficially, no warranty is given or implied that the installations comply in all respects with current Building Regulations, British Standards, Codes of Practice or manufacturer's directions which could only be confirmed by specialist examination and testing.

MARTIN STILES MRICS MCIOB
CHARTERED SURVEYOR AND REGISTERED VALUER
MEMBERSHIP NUMBER 0078151

MJS/pmk

STILES & Co
CHARTERED SURVEYORS
The Old Barn
Dunsborough Park
Ripley Surrey GU23 6AL
T 01483 225755
F 01483 225754

E enquiries@stilesco.co.uk
W stilesco.co.uk