

Heritage Impact Statement



Cintra, 39 Salop Road, Overton. LL13 0EH

Repair & Restore



<https://overtonoracle.weebly.com/old-overton-pictures.html>

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OBJECTIVE

The proposed works focus solely on repairing and restoring this extremely neglected and historically badly repaired Grade 11 cottage. To uncover the reasons why the whole house was so damp and sympathetically rectify them. Use techniques and breathable materials to complement the age and authenticity of the original building and stop the rapid decline of an uninhabitable and unsafe home. Keep the original footprint of the building and restore any historical features that have been covered up over time with modern materials, those that have contributed to the destruction of the original fabric. Most of all, inject some love back into the damp cold shell of a house to make it a beautiful home for generations to come.

HISTORICAL RESEARCH

Cintra is located on Salop Road, Overton which runs due south of the conservation area towards Ellesmere and North Shropshire. It is one of the oldest properties in the row along with Ferndale and Kew Cottage. Kew Cottage forms the central house in the row and is believed to be the earliest part. These painted brick cottages with Welsh slate roofs and substantial brick chimney stacks date back to the early 19th Century, each built in separate stages, originally with 2 rooms downstairs and 2 upstairs and have been subsequently enclosed by extensions to the rear. This is evident in the attic which shows the original pitch of the roof which has been encased by the later roof when the rear extension/s were done. Whilst red sandstone was used in the construction of the mediaeval church in Overton and was evident in small amounts in some domestic properties, red brick was the most common material used for the construction of properties in the village in the early 19th century. Many of these have been painted which has obscured this architectural detail from view. Cintra is a 2-unit plan with a doorway towards the centre, a porch was added in the early 1980s by the previous owner which has hidden its original facade that Kew Cottage still has with the flat-arched doorway. Cintra has the original flanking windows aligned on each floor which are small-paned horizontally sliding sashes. There is a simple dentil eaves course which extends across the 3 cottages and unites them together. The front of the buildings remain good examples of early C19 Vernacular cottages and retain much of their original character.

I've been unable to find any information available about the rear of the property, except some photos dating from the early 1980's which show that nothing has changed since then except from deterioration of the building and the replacement of timber framed windows with UPVC by the previous owner.

PROPOSED CHANGES

1. Repair leaking roof
2. Replace broken gutters
3. Repair leaking chimney & repoint any deteriorated mortar joints
4. Find and remedy the cause of the dampness in the utility, kitchen, living room, office, staircase
5. Insulate the internal exterior single brick walls
6. Replace the 1980's stone fireplace with an eco-design log burner
7. Install a central heating system because there is no form of heating apart from the coal fire.
8. Electrical rewire
9. Remove the wet soft plaster that's loose from the walls and allow the brickwork and timber frame to dry out before replastering using lime plaster and horse hair.
10. New bathroom & plumbing system
11. Groundworks - lower ground level, replace broken drain system & lay new patio



SUMMARY

Proposed Work	My objective	Significance of affected fabric	Assessing beneficial impact	Assessing harmful impact	Proposed solution
1. Repair Leaking Roof	Make good of a severely defective roof, make it water tight and improve the energy efficiency of the house	The slate roof dates back to the early stages in the building's history. Around the late 1800's when the rear extension was added on and the pitch of the roof was heightened.	By repairing the roof it will put a stop to the water entering and damaging the first floor rooms and ensure the longevity of the building	Loss of some of the original materials, broken tiles that can't be re-used and replaced with reclaimed welsh slate might result in a very minor change to the external appearance.	Replace all broken slates with reclaimed welsh slates that match the original in appearance, reuse as many original slates as possible, replace all rotten roof battens and use breathable felt and insulation panels that will be hidden within the existing eaves so that there is no change to the outer appearance but will increase the energy efficiency.

Proposed Work	My objective	Significance of affected fabric	Assessing beneficial impact	Assessing harmful impact	Proposed solution
2. Replace Broken gutters	Replace the broken gutters to stop water pouring down the building which is damaging the paint, bricks and mortar joints	The broken gutters are plastic and not an original installation	Prevent further deterioration of the building	If replaced like for like there will be no visible difference	Remove all gutters to the front and rear of the property and the broken downpipe at the rear and replace using the same materials.
3. Repair leaking chimney & repointing	Rake out and repoint because the original mortar joints have deteriorated and caused distortion and instability. Fit lead flashing around the chimney so that water can no longer pour in through the holes and cause water damage to all the adjoining structures within the attic and first floor which has caused the plaster to come away from the walls.	The chimney is part of the original construction of the house, 1800s	Prevent further deterioration of the chimney, roof and adjoining structures and materials and improve the appearance and safety of the substantial chimney stack.	Loss of some of the original materials, raking out the original mortar joints, repointing in lime and adding lead flashing will result in a minor change to the current external appearance.	At the same time as the roof is being done the chimney will be done to minimise the length of time that scaffolding is there and workmen are on site. The original mortar joints will be raked out and repointed using lime mortar to replicate the original materials and lead flashing is to be added to seal all the holes around the base of the chimney. With the addition of the lead flashing the appearance will be similar to the adjoining chimney which belongs to Kew cottage.

Proposed Work	My objective	Significance of affected fabric	Assessing beneficial impact	Assessing harmful impact	Proposed solution
4. Damp remedial work	Find and remedy the cause of the damp throughout the whole house and create a healthy environment to live in. Research damp caused by disrepair, rising damp, penetrating damp and condensation.	The damp is widespread and affecting the original floors, walls & ceilings throughout the whole building which date back to the 1800s	Fixing the damp will create an environment that's no longer hazardous to human health and improve the longevity of the building.	Some original material, lime plaster etc will be lost in the process because the damp has caused it to deteriorate and detach itself from the walls and the only way the brickwork and timber studwork behind it can dry out is for it to be removed.	Where the lime plaster and gypsum plaster is coming away from the wet walls it will be removed by hand so as to not cause damage to the original brickwork and oak studwork behind it. The walls will then need a substantial amount of drying out time while other external causes are fixed - roof, gutters, chimney, leaking pipes, ground level too high etc.
5. Insulate external walls	To create a more energy efficient home by insulating the interior of the external walls	Studwork would be attached to the original fabric of the building	By insulating the external walls it will stop the house losing heat through the single skin brick walls and create a much more energy efficient home	The studwork will hide some of the original walls.	Natural products will be used to create a breathable insulated barrier on the interior of the external walls. Wooden studwork lined with wool insulation and then boarded with celenit wood wool boards which will then be plastered in lime.

Proposed Work	My objective	Significance of affected fabric	Assessing beneficial impact	Assessing harmful impact	Proposed solution
6. Remove stone fireplace	Remove the 1979 stone fireplace that was installed by the previous owner. It was connected to the old radiators and was the only form of heating at one time but no longer worked so we want to replace it with an eco-design log burner which will be a more environmentally friendly option compared to using an open coal fire.	There was originally an old stove under the large oak mantle which was used for cooking and heating the house in the early 1800s. The stove was removed by the previous owners in 1979 in order to build the stone fireplace in its place.	Better for the environment and more energy efficient	- Nothing of the original buildings materials will be affected by the removal of the 1979 fireplace.	Information from the previous owners brother who installed the stone fireplace explained that it had no structural influence and would easily be removed brick by brick. This would then clear the space ready for a log burner to be installed.



Proposed Work	My objective	Significance of affected fabric	Assessing beneficial impact	Assessing harmful impact	Proposed solution
7. Central Heating	To create a warm and dry family home	Original brickwork and materials from the early 1800's	A new energy efficient boiler will provide a regulated temperature throughout the house which will benefit the occupier and help to keep the house warm and dry.	A small amount of original materials will be affected by the installation of new central heating pipework	Install a new central heating system so that the house can be kept at a constant temperature throughout, this will help eliminate cold spots and further damp developing. As a future family home a central heating system is a necessity for the comfort of the residents as well as the building itself. The boiler will sit in place of where the old immersion tank was, and new central heating pipes will run discreetly through the insulated walls, thus hardly affecting the original material of the building and sitting discreetly within those walls.
8. Electrical rewire	Rewire the house to make it safe and in line with current regulations	The walls have areas of the original material, lime plaster from the 1800s.	Rewiring will make the house electrically safe and up to current electrical requirements	Some original material may be affected in the rewiring process.	An electrical inspection has confirmed that it's unsafe and needs a full rewire. The old fuse box replaced and new wires will be prominently fed up and through the attic and down through the insulated external walls and then to different areas of the room. The routes for these would be planned to fit within the areas of walls that are having to be replastered, thus hiding any cables.

Proposed Work	My objective	Significance of affected fabric	Assessing beneficial impact	Assessing harmful impact	Proposed solution
9. Repair the internal walls	Make good of the walls by removing all damp plaster and replacing with new lime plaster.	Gypsum plaster on top of original lime plaster	By using lime plaster instead of the modern gypsum plasters that were added on top of the original lime plaster it will allow the building to flex and breathe again like it was originally intended to do.	Loss of the original lime plaster on the walls	Remove all areas of plaster that are falling off and beyond repair and expose the damp brickwork and oak beams, allow sufficient time for them to dry out completely using heat and dehumidifiers before treating the wood for worm infestation and then finally replastering with lime plaster and horse hair.
10. New plumbing system	Fit a new bathroom and plumbing system that works efficiently and has less pipes protruding from the building.	Original brickwork to the rear of the property (late 1800s/early 1900s)	By removing the old bathroom suite and pipework all which was leaking and destroying the surrounding materials it will improve the appearance, usability and life span of the building.	The original plasterboard and gypsum plaster will be affected and the original wooden floorboards that have extensive water damage and holes will have to be replaced because they are beyond repair	The bathroom has a hole in the roof, major damp issues and leaking sink, bath and toilet. The wooden floorboards under the bath destroyed by water. Removal of the suite and restoration of the floor with reclaimed victorian floorboards, repair damaged walls and ceiling a necessity before installing a new plumbing system and bathroom suite. The bath, toilet and sink to be situated in the previous positions.

Proposed Work	My objective	Significance of affected fabric	Assessing beneficial impact	Assessing harmful impact	Proposed solution
11. Groundwork - drains	Replace broken clay drains and merge 2 manholes into one	Possibly the original clay drains that were installed when the rear extension was built.	Create better drainage, better for the surrounding environment because there will be no waste leaking and overall a much tidier appearance.	Loss of original drainage system materials	A groundworks team will remove all the old drainage system, remove extra unused drains and combine remaining drain pipes into one single manhole. This will create a more hygienic efficient system and stop further waste leaking into surrounding substrate. Combining the 2 manholes into one will also create a tidier appearance.
- Lower the ground level & lay a new patio	Lower the ground level to stop moisture penetrating the utility room walls	Concrete which is attached to the original outer brickwork of the building	It will stop the penetrating damp and further deterioration of the wall. And overall create a much tidier appearance outside.	The concrete doesn't date back to the original construction of the rear extension but there is evidence to show that it was there before the previous owners purchased the property in 1979.	A groundworks team will remove the large mass of concrete to a level that's 150mm lower than the floor in the utility room. Removal of the concrete will stop water penetrating the brickwork which is causing the wall to be wet inside, once the brickwork has dried out and the deteriorated mortar joints repointed, the brickwork will be able to be repainted in breathable paint. A drainage border and a new patio will be laid with a decline angle so that water runs away from the house and into eco drains that will filter the water into a soakaway in the garden.

Note* There was some pre-work done that isn't listed in the summary table above which was the removal of all the old carpets and fitted furniture that was all badly affected by damp, woodworm and rot. I don't have many of these early photographs unfortunately, my phone broke in January and I lost all my photos up until that date which was devastating not only for personal reasons but because I was documenting the whole project from the beginning. The only pre-works photos of the inside that I was able to retrieve were a couple that I'd sent to a friend for advice and luckily they still had them. Hopefully these photos paint a picture of the general condition of the whole building before work began.

BATHROOM -



OFFICE -



The walls were damp and soft, you could push your fingers into them with no force. The plasterboard on the ceiling had a large swell to the right of the room which unfortunately you can't see in this photo.

UTILITY ROOM -



The photo to the left shows the wall inside the built-in cupboard. This wall was so wet you could pull lumps out of it. It had been filled with stuff and kept closed for who knows how many years and the smell was awful.

DETAILED BREAKDOWN OF THE PROPOSED & COMPLETED WORKS

1. Repair leaking roof / 2. Replace Broken Gutters / 3. Repair leaking chimney & repoint any deteriorated mortar joints

*Note I have grouped these 3 together because they were all done at the same time by the roofing contractors.



The roof was one of the most important areas to tackle in the beginning because until we had it watertight we were unable to dry out the inside and at this point it was the height of winter so it was imperative that we stop further damage from happening. The front and the back roofs both leaked but the back was by far in the worst condition. It was deformed, had broken slates throughout and it's own little forest growing within.



Several roofing contractors surveyed the job and all of them gave the same report that there was possibly 60% salvageable tiles on the front and virtually nothing from the back. On inspection inside the attic of the front of the roof it showed soaking wet timbers, rotten roof battens and dripping wet chimney breast.



It's quite hard to see the full extent in these images but the far wall is the chimney breast and it was so wet and black and slimy like it had been under a waterfall for years.

In the photo above you can see the old white rafters that are the pitch of the first roof of the original 1800s building and the dark brown wet timbers from the current pitched roof.

The vaulted ceiling in the back bedroom (photo to the right) and bathroom had visible holes through the plasterboard ceiling where water ran/dripped through every time it rained. The full extent of leaking areas was revealed when the ceiling was removed and revealed more holes than I could count.





All of the roof battens were visibly sodden and rotten along with one of the roof rafters to the far left of the room (shown in the image above) which was crumbling away.

It was a similar story in the bathroom, all of the battens were rotten as well as the oak beam wall plate which was so soft it came away in your fingers and was offering no support to the roof.



The chimney was starting to lean, had holes in between the bricks, mortar joints disintegrated, and many holes around the base allowing water to pour straight into the attic.





The gutters were cracked and broken and allowed water to pour down the face of the building in many areas.



OBJECTIVE

The roof was one of the most important areas to tackle first and quickly, if there had been one or two holes then perhaps temporary repairs could have been done but the deterioration was vast and to be left any longer fighting against all the elements would have caused unnecessary further damage. I contacted the conservation office several times via email and phone between January and March and explained the urgency of the work needing done but unfortunately due to staff shortages I had no responses from anyone. I was then forced into a difficult situation, I chose to do as much research as possible into the restoration of old buildings and start the remedial works whilst I continued to request a response. My objective right from the beginning was only to repair and restore everything in a sympathetic manner, losing as little of the original fabric as possible and to bring out any original features that have been lost in modern repairs. In relation to the roof, the main objective was to keep the original roof structure and avoid replacing old roof timbers, we knew there would be a loss of slate but intended to save as many of the original slates as possible.

ACCESS

There was no issue with access to the roof, with roadside parking and all materials were easily unloaded into the front garden or taken through the house to the back of the property.

METHOD

- Scaffolding was erected
- Tiles were removed saving any that could be reused.
- Roof was stripped of rotten battens front & back
- The rotten rafter in the back bedroom was replaced with new air dried oak.
- The rotten oak wall plate in the bathroom was replaced with a new air dried oak wall plate.
- New tandalised roofing battens were fitted
- Breathable felt was fitted to the roof battens
- The roof was re-tiled using the slates that were saved and the rest were reclaimed welsh slate which matched the original slates

- The chimney was raked out and repointed using nhl 3.5 lime mortar and new lead flashing was added to the base of the chimney as well as along the meeting point of Cintra's rear roof with Kew Cottages rear roof.
- Removal of all debris.

DEVIATIONS

During the stripping of the roof, the idea of adding a small conservation velux window was circulating. The inner staircase and upper hallway was always in darkness and the idea of injecting some natural light into that area seemed like such a beneficial addition and it made sense that if it was to be done then whilst the roof was stripped would be the perfect and least disruptive time to do it.

EVALUATION

The work was completed to a high standard in the least destructive manner, only the materials that were completely deteriorated and not safe for use were discarded. I'm thankful that almost all of the rafters were salvageable, we only had to replace one and it's a shame that the full length of the wall plate in the bathroom had to be replaced but this was one of most damaged areas. It's still got it's wonky pitch line and the reclaimed Welsh slate blends perfectly with the original tiles and the adjoining Kew Cottage and

Thankfully none of the chimney bricks needed replacing, it was just all the mortar that needed raking out and repointing with lime mortar in keeping with original materials.. The old chimney pot was broken and not safe to be left up there so that was also replaced with a reclaimed pot.

The gutters were replaced like for like with black UPVC and they sit discreetly under the eaves and there's no visible change in the appearance from the previous ones, except these ones work efficiently.

I'm really pleased we chose to go ahead with the small velux window, although it was a wild card and not in the original plan, it transformed the hallway and staircase which is now flooded with natural light. It was only that it was being positioned within the back roof not the front that I went ahead with the installation and also because Kew Cottage has had them approved at the rear, although theirs are much larger and not the conservation ones.



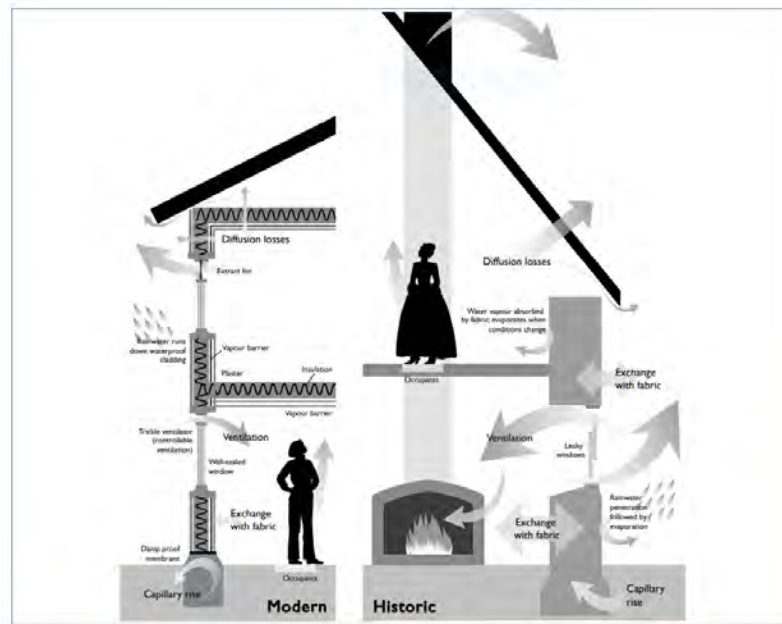




4. DAMP REMEDIAL WORK/ 5. INSULATE EXTERNAL WALLS / 9. REPAIR THE INTERNAL WALLS

The damp was a widespread problem throughout the whole building, my first attempt was to employ a ‘damp expert’ which after having paid for a survey and being told that a simple injection of damp rods into all the mortar joints around every room downstairs would solve the problem I quickly realised that not all ‘experts were experts! So I spent many weeks researching how to tackle damp issues in old buildings and realised there wasn’t a one method that fixed it, it was going to be a culmination of many factors and each one needed to be remedied at it’s source.

Condensation and zero breathability were two factors that were obviously a problem, Cintra, once a simple home with the the old sash windows that let drafts through, an original chimney that allowed air to escape through, outer brickwork painted in breathable limewash and inner walls covered in breathable lime plaster and an exposed red quarry tile floor. Over the years it had been slowly sealed up with secondary glazing and UPVC at the rear, carpets covering the floors, none breathable paints on the exterior and the lime plaster covered with plasterboard, layers of gypsum plaster and cement. Any moisture that came from within had nowhere to go and anything that entered from the outside also had nowhere to go and along with the neglect and deterioration of the building and plumbing it resulted in one suffocated damp mess.



<https://cadw.gov.wales/sites/default/files/2021-02/Teaching%20resources%20-%20Understanding%20traditional%20%28pre-1919%29%20and%20Historic%20buildings.pdf>

ROOM	PROBLEM AREAS	POSSIBLE CAUSES	REMEDY
Bathroom	- Damp Ceiling, black mould, holes, paint peeling (Plasterboard)	- Movement of roof tiles - Roof tile damage - Condensation	- Adjust tiles - Replace damaged tiles - Maintain a regulated temperature with good ventilation
	- Walls, damp patches, black mould, paint peeling (Gypsum & Plasterboard)	- Dampness penetrating exterior brickwork - Condensation from lack of ventilation - Moisture from the leaking roof travelling down the walls	- Repoint old mortar joints and repair damaged brickwork - Maintain a regulated temperature with good ventilation - Repair the roof
	- Floor, wet, soft cracking and crumbling (Mixed Wood Floorboards)	- Leaking sink - Leaking toilet - Leaking bath - Leaking pipework	- Replace all defective items/pipework then allow the wooden floor to dry out completely. Once dry assess the safety of the water damaged boards and replace any that are no longer weight bearing.

Once the carpet was lifted the extent of the water damage was clear and all the leaking pipes were located. The damaged areas had been subjected to water for a long time causing areas of floorboards to turn completely black, soft and slimy to the touch, and the worst area was under the bath, when pressed my arm almost went through it.

Once all the wall tiles were removed, any damp area on the walls were cleaned with bleach and left to dry out. There was no lime plaster present, only gypsum plaster which was firmly adhered to the walls and plasterboard stud wall around the door and bath.



ROOMS	PROBLEM AREAS	POSSIBLE CAUSES	REMEDY
Bedrooms & upstairs hallway	- Ceiling, damp patches, black mould, peeling paint (Effected material - Plasterboard)	- Movement of roof tiles - Roof tile damage - Condensation	- Fix the roof - Replace damaged tiles - Maintain a regulated temperature with good ventilation
	- Walls , woodchip hanging off walls, air pockets in the plaster where its come away from the brickwork, salts forming on walls, wood rot - (Effected materials - Lime plaster, gypsum plaster, plasterboard)	- Dampness penetrating exterior brickwork - Condensation from lack of ventilation - Moisture from the leaking roof & chimney running down the walls	- Repoint old mortar joints and repair damaged brickwork - Maintain a regulated temperature with good ventilation - Repair the roof & chimney - Remove wet plaster that's coming away from the walls, allow it to dry out then replaster in lime.



ROOMS	PROBLEM AREAS	POSSIBLE CAUSES	REMEDY
Living room & Office	- Walls, damp damaged plaster, heavily repaired with multiple layers of gypsum and other materials (Lime plaster, Rotten skirting boards)	- Leaking pipes - Ground level outside too high - Modern plasters on top of lime - Lack of ventilation / Condensation	- Replace / Replace pipes - Lower ground level and repair any damaged bricks & mortar joints - Remove loose damp plaster - Heat the rooms whilst using dehumidifiers to dry it out
Kitchen & Utility room	- Kitchen - damp areas mainly along the bottom of the walls and also large areas behind cupboards. - Utility - flaking bubbling paint, crumbling bricks and mortar joints, large damp areas of gypsum plaster	- Water penetrating exterior brickwork from high ground level - Condensation from lack of ventilation - Moisture from the leaking bathroom plumbing	- Lower ground level outside and repoint old mortar joints and repair damaged brickwork - Maintain a regulated temperature with good ventilation - Remove any areas of crumbling plaster - Fix the bathroom plumbing - Heat the rooms whilst using dehumidifiers to dry it out

Every wall in each bedroom had problem areas with huge patches of lime plaster that was damp and detached from the walls, other areas had lime plaster that had been repaired with gypsum and that was all separating and areas by windows with the lime plaster was breaking away from the timber beneath it. The damp smell was intense and there were large plumes of damp patches up the side of walls and ceiling caused by too much moisture and lack of ventilation.

OBJECTIVE

To remove all the necessary damp material that has detached itself from its original source and is no longer serving its purpose and can't be re-attached, repaired or restored. Allow all the damp areas to dry out, repair any depleted mortar joints with lime mortar suitable for ageing historical bricks, sand away all rotting areas of wood and treat for wood rot and woodworm infestation where needed. Replace all of these with lime plaster and horse hair. This was historically added to base / scratch coat of lime plaster to give extra strength and minimise cracking. This was used in the lime plastered walls in Kew Cottage next door so I wanted to replicate that method to keep both buildings as similar as possible.

Lime plastering is breathable, which means it allows moisture to evaporate through the surface rather than trapping it inside the wall or ceiling voids. This makes lime mortars ideal for older structures that may have issues with mould or mildew growth behind existing finishes such as paint or wallpaper. Lime plasters are also flexible and durable enough to withstand movement within an old building without cracking or breaking away from its substrate (the structural material supporting them).

Lime mortar helps to keep buildings dry, extending their life span and reducing maintenance costs. If you're not using lime mortar in your restoration project, you need to consider how much money you'll be spending on repairs further down the line. Don't be a victim of extensive damage that could have been prevented using lime mortar earlier on.

Lime mortar is a great choice for heritage buildings. It's easy to source and prepare, breathable, durable and can last for thousands of years.

<https://www.oldhousestore.co.uk/why-use-lime-mortar-in-old-buildings/#:~:text=Lime%20plastering%20is%20breathable%2C%20which,such%20as%20paint%20or%20wallpaper.>

METHOD

- Carefully remove damaged plaster by hand using a scraper as leverage, make sure no further damage is caused to surrounding materials.





It's quite difficult to see in the photos but the lime plaster was no longer attached to the brickwork on almost all of the walls in the front 2 bedrooms and some of the hallway,, a lot of it had gypsum and cement layers on top of the lime which I'm assuming would have removed its breathability and possibly caused the lime plaster to sweat because there was nowhere for the dampness to release.

You should never skim over lime plaster with gypsum plaster. Gypsum is not a breathable building material like lime. This will cause many issues relating to trapped water. Commonly, when lime has been skimmed over with non-breathable materials, water gets trapped and will damage the gypsum skim. Eventually, this can cause the skim coat to crack and delaminate from the wall, putting you back at square one.

<https://limeplanet.co.uk/can-you-apply-gypsum-plaster-over-lime-plaster/>

All of the bricks and wooden framework that was in contact with external walls and the roof rafters etc were all wet, moisture had travelled down from the leaking roof & chimney into these areas.

The scale of the job grew as we went along, the irreparable damage that the moisture and other plasters on top of the lime had done to the walls meant that all the walls went back to brick, apart from a couple of areas in the hallway where the base coat of lime plaster was still adhered to the brickwork so these areas were left.



Front main bedroom

LEFT: The bricks and the wood in the top right corner of the wall and the wood that lead to it was all very damp, wood rot and wood worm.

RIGHT: The whole of this wall was damp, the worst area at the top as you can see how wet it is. The lime plaster had been skimmed over with gypsum



and further repairs, then woodchip, lining paper and then a type of thin polystyrene wall paper. All of which was probably done in an attempt to cover up the damp patches but only made things worse.



LEFT: The chimney breast was one of the worst areas on this wall, it was so wet that the lime plaster was just falling away from it.

RIGHT: This wall which is now an internal wall would have been the original back of the house. You can see the roof slopes down to meet it and from inside the attic you see where the original roof comes down to meet this wall. At first this was a mystery as to why it was so wet, it was general only the external walls upstairs that had the damp issues. As you can see in the photo, the top half of the wall was very damp, there were also areas of white and dark spores. It was because water had been leaking down from the roof/attic timbers and into this wall.



Front Small Bedroom

Same issues as main front bedroom



Back Bedroom

The back of the house was the extension, the date of this unknown but the materials different to the front of the house. The back bedroom, bathroom, kitchen and utility room didn't have the same issues as the front of the house, the plaster wasn't falling off the walls, there was no lime plaster evident, only gypsum on brick and plasterboard in areas.





The dampness on these walls, caused by condensation, but predominantly coming from the badly leaking roof which I evidenced earlier in this document.

Despite all the damp, the plaster itself was all firmly adhered to the walls, there was no need for removal. The walls were cleaned down with bleach and left to dry out.



Upstairs Hallway



This was the situation with the wall in the hallway which backed onto the small front bedroom. The lime plaster had been skimmed over with gypsum and in some areas plasterboard was attached on top. There was no attachment of the original lime to the wooden laths beneath anymore and the lime plaster was billowing from the wall and splitting in areas.

RIGHT - Here is the other side of the hallway which backs onto the staircase. The top layer of plaster was coming away but the base/scratch coat seemed fairly attached to the bricks underneath and we planned to keep any areas like this and when the lime plastering was done they would be floated and skimmed preserving the original underneath.



STAIRCASE



Apart from the utility room, this was one of the wettest areas of the whole house, the wall that was under the bathroom and that joined the utility room. The staircase treads were spongy when you walked on them, the wood was damp to the touch and the moisture meter readings off the scale. This is a central area of the house so for it to be the wettest was confusing to begin with until we discovered the cause of the damp in the bathroom which was mainly from the leaking pipes. This then explained why this wall was so wet because all of the water had been travelling through the wooden floor down this wall. It had woodchip on it but had detached itself completely and was falling off in strips and underneath that which you can see here was

bubbling paint/salts and extremely soggy plasterboard. This was all removed and we hope that this would allow the wall to dry out.

Unfortunately after 2 months of drying out time it wasn't drying out like the other areas of the house were and because the internal timber structure of the building was all connected, the oak beams that were in contact with the staircase weren't drying out either and those were connected to the adjoining walls in the livingroom & Office.





LEFT - This is the opposite side of the staircase, the wall was extremely wet and you can see the dampness in the wood. Which had no reason to be so wet, there was no leaky water pipes above it, the wall was drier the higher up you went so it had to be coming from below or from something that was attached to it.

The staircase was in such bad shape and not safe due to the rot so our joiner removed it and it confirmed our suspicions.





It was soaking wet under there, perhaps difficult to see the extent in these photos because the removal kicked up a lot of dust but it was so wet. The floor, the brickwork and all the wood you could break bits away in your hands and there was a lot of fungus.

My joiner fitted a temporary ladder/staircase so that work could continue and all the space to dry out, which within a week we already started to see progress, all the surrounding wood in the walls began to dry.

After a couple of months drying out, the broken areas of wall were repaired using loose bricks that were found under the staircase

that looked to be of a similar age. Conserv non-hydraulic lime mortar was used.

Non-hydraulic lime mortar is most suited to soft / low density building materials or masonry in poor condition that is prone to decay, crumble, scale or flake and where conservation is the principal requirement.*

<https://www.lime-mortars.co.uk/b2c/lime-mortar/non-hydraulic/coarse-stuff/25kg>

RIGHT - Brickwork freshly repaired.



ABOVE - A before and after of the repaired brickwork during the drying out process, the lime mortar lightens in colour as it dries.



ABOVE - This is at the bottom of the stairs and is where the bottom step sat in, it was sat directly in contact with soil. The wood must have drawn up any moisture from below and it completely baffled me why it would have been done like this. This wouldn't have been the original staircase from the first part of the build in the early 1800's because this is located in the extended part of the house in the kitchen but is still very old and I have no idea how it lasted as long as it did with these foundations. Perhaps the moisture in the soil wasn't enough to cause too much of a problem until recent years when the bathroom plumbing has been leaking, the water has travelled down the walls, into and under the staircase and had nowhere to go except which resulted in widespread decay.

UTILITY ROOM

This room was a major concern, every wall was wet, almost from top to bottom. The walls were black with mould, which isn't visible in these photos because these were taken after I'd bleached all the walls down. At that stage I was hoping that the plaster wouldn't need to be removed but we soon realised that they were beyond touching up so the gypsum render was removed and the corner cupboard removed to help that corner dry out. I couldn't understand why it was so wet in there, poor ventilation wouldn't have helped but after the discover of what was under the staircase we realised it was a continuation of the spread of water damage coming from the bathroom and down the staircase for a long period of time that had caused such a build up of moisture.





All of the render was removed and the walls began to dry out after the staircase was also removed. All apart from the external wall, which remained unchanged -



Once the concrete was removed and the ground level lowered outside, it began to dry out a little but not a lot.



ABOVE - This was after the concrete was removed, it revealed that there was some strange brickwork, bricks were sticking out of the wall and they were in the exact same shape as the damp patch inside.

We left it to dry out for about a month using heat and dehumidifiers but there was little change and every time it rained the damp patch was back to square one so I knew the next stage was to do something about the protruding brickwork outside which was obviously drawing water in.



The protruding bricks were cut away using an angle grinder and the whole area underneath the window was raked out where needed and repointed using nhl 3.5 lime mortar.



This fixed the problem, the wall inside started showing signs of drying out within a week and was completely dry after about 6 weeks.



KITCHEN

This is the only photo of the kitchen I have from the beginning, but like the utility room, I'd forgotten to take a photo before I cleaned all the mould from the walls, cupboards and floor, I was initially hoping to spruce up the kitchen units and keep them but that was before I realised how much damp there was behind them.



It was one of the least problematic rooms overall, but the kitchen units were extremely outdated, fitted in the late 1970's by the previous owner and were now rotten with mould coming from the back of them. So they had to be removed, mould cleaned off them and then left to dry out before skimming over the walls to tidy them up and then fit new kitchen units in a similar layout to what was there before. Again, we weren't going for any dramatic changes, our sole intention was to tackle the damp, restore anything we could and end up with an energy efficient warm family home.



Some of the plasterboard was removed from the ceiling for electrical cables to run through.

LIVING ROOM & OFFICE

This was a very damp room, the smell was putrid, we thought this was just coming from the carpet and soft furnishings but even with those removed it didn't improve.

Woodchip and plaster was bubbling and crumbling.

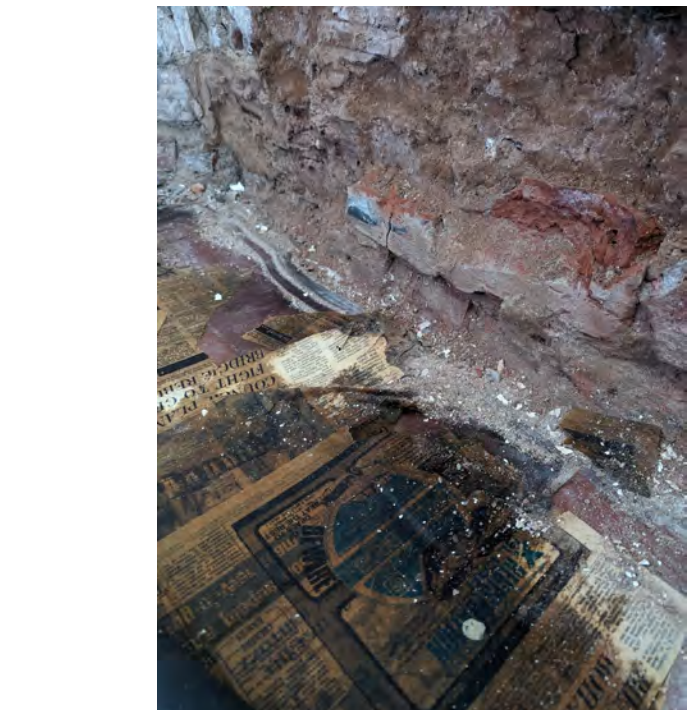




The loose and crumbling plasters were all removed along with areas of modern plasters that had been used by previous owners during re-wiring and repairs. We also removed the hollow late 1970's doors and doorframes which were all rotting away at the bottoms to create a more open-plan layout, following the same design as Kew Cottage next door.



The office was in real bad shape, the previous owner had used it for practising on his drums and had installed a stud wall as soundproofing so this had to all be removed as well as the sagging plasterboard ceiling which had 2 layers of plasterboard as well as a skim and then the stipple paint and it just fell away when we pressed it.





In the photo above of the office, if you look at the far wall, apart from the window wall, this was the wettest part of the room. You can see all the dark patches on the wood and brickwork. Again, a mystery to begin with because it was the centre of the house and nowhere near any outside walls or leaky pipes. But after the issue with the staircase was discovered we were able to follow the path of dampness along the connecting timbers as it travelled into the adjoining rooms. And once the staircase was removed and that area dried out, so did everywhere else.

The window wall didn't dry out when all the damp plaster was removed, it wasn't until the ground level at the front of the house was lowered, the broken render that was trapping moisture behind it and allowing plant roots to penetrate through was removed and all the deteriorated mortar joints repaired, then the wall began to dry.



Once the wall inside was showing visible signs of drying out the render was replaced with a new lime render to protect the brickwork from the elements.





Once this has completely dried out it will be painted with a breathable masonry paint from Earthborn paints. It was originally painted in black but I can't find a breathable black masonry paint. Many are deemed breathable but their ingredients go against that claim. Until I find a breathable black paint I will paint the new render in white to match the rest of the building.

Is Silicate Masonry Paint available in black, or can you mix bespoke Silicate Masonry Paint shades?

We are unable to mix very deep shades such as black in our [Silicate Masonry Paint](#) finish. This is because the high level of colourant needed to achieve dark colours would compromise the breathability and technical properties of the paint.

6.REMOVING THE STONE FIREPLACE

Lee Wright Plumbing & Heating were hired to remove the stone chimney in preparation for the log burner to be installed. It was a careful procedure of chiselling to removing each piece of stone and break it down.



Originally we'd hoped that we could keep the brick exposed but it was in such bad shape that we decided to lime render over the top and then attach Tudor brick slips and finish by pointing it in lime.



WOOD TREATMENT

All of the oak that was going to be left exposed was sanded and areas with wood worm were treated. I researched lots of products that could be used to nourish and protect the wood and eventually settled on this one because it was a beeswax mix and was made to use on the restoration of old beams.

Cambridge Traditional Products Timber Reviver is a timber care product that stabilises, revitalises and enriches old wooden beams, leaving them with a warm and natural glow. It will not significantly change the colour of the wood. One of the reasons timber ages is that it dries out. Timber reviver was developed on request by a specialist builder working on listed buildings. It was developed specifically for Tudor beams, but it can be used for wood restoration on any old wood that looks 'tired'. Turpentine carries the beeswax into the wood. Since old beams are usually rough in texture, or have a riven surface, Timber Reviver is a 'heavy duty' wood restoration and timber care product, created to cope with wood in a distressed condition.

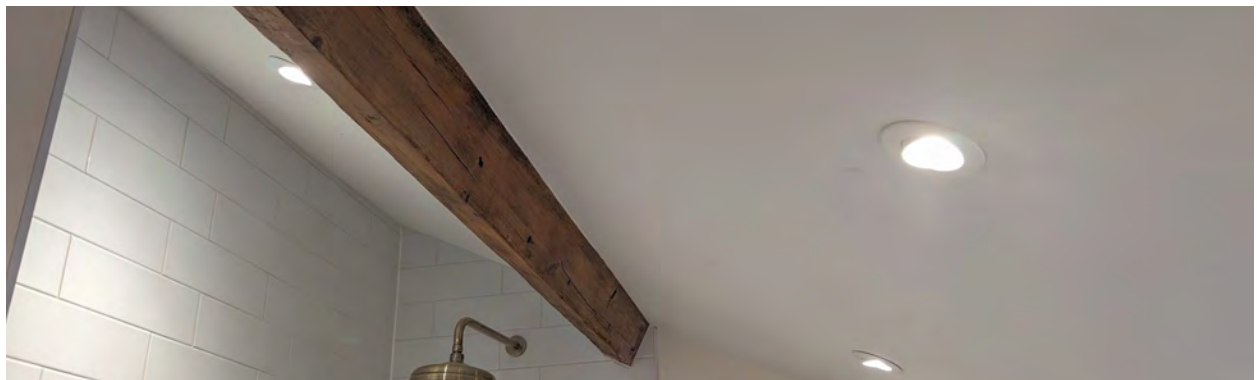


Restore original beams, windows and 'tired' wood: Hidden within historic buildings are original timber beams that were once hand selected by master craftsmen. In the days before steel fabrication, carpenters spent hundreds of hours fashioning, shaping and carving wooden beams by hand. In respect of this heritage, we make a high quality natural solution for wood restoration and timber care, rather than a modern synthetic product. Timber reviver is a natural product that feeds and cares for wood and helps restore old beams to their former glory. Perfect for situations where polishing with a cloth is impractical:

For decades our Traditional Beeswax Furniture polish has been enhancing the beauty of old wooden furniture. Timber reviver uses the same key ingredients of beeswax and turpentine but comes as a solution to be applied by brush rather than cloth, making it easy to apply to rough or textured surfaces.

<https://www.homecareessentials.co.uk/product/cambridge-traditional-products-timber-reviver-5-litre>

On the wooden floor in the bathroom and the wood that wasn't oak, the supporting beam through the back bedroom/bathroom and the beams in the kitchen, I sanded them down and applied Fiddes Hard Wax Oil in English Oak. I had tested out many samples of different wood oils and stains but this was the closest match I could get so that it all resembled the oak throughout the rest of the building. It's also very hard wearing, protects against spills and doesn't crack, flake, peel or blister so it seemed like a good choice for the bathroom floor.





This was the worst part of the bathroom floor, under the bath where it had been leaking for a long time, the boards that were beyond restoration had to be cut away.

We purchased some floorboards that had been in a Victorian linseed oil mill from Tomlinson Reclamation Yard in Nantwich. They were heavily saturated in oil and it was a lengthy process to clean them up using a wire brush, scraper and sander but it was worth the effort because the wood underneath had been preserved beautifully because of all the oil.



These were then fitted in place of the broken ones, the rest of the wooden floor was a jigsaw of random shaped pieces of oak and other wood so it was difficult to get a perfect match but with it being under where the bath was going to be, the aesthetics of it didn't matter too much, strength and durability was the most important.



And once they were all sanded and oiled they actually blended in really well.

