



SOLVING CHIMNEY PROBLEMS

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Job Reference: 2022136ii

Wednesday, June 29, 2022

Dear Zi Ken

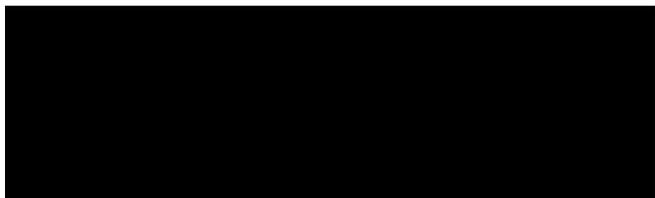
Ref: Rossley Manor, London Road, Cheltenham. GL54 4HG

Further to the visit by Tom please find following a copy of our report in relation to the flues at Rossley Manor.

Also included with this report are proposed costs for the possible relining work to the flues if required.

If you have any questions please do give me a call or drop me an email.

Yours sincerely



Edward Turner

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CCTV Inspection
at
Rossley Manor
London Road, Cheltenham. GL54 4HG



Recordings and Images

All recordings made and images taken during the survey will be held on file for at least 12 months from the date of this report and can be downloaded from the following link:

<https://www.dropbox.com/s/wi7ibbepp326ppi/2022136.zip?dl=0>

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1. Drawing Room 1



Outline

Open Fire
Length of Flue

1380mm x 1530mm
7.9m approx.

Chimney fan fitted at head of the flue, make and model unknown.

CCTV Inspection

All times shown relate to the time stamped in the bottom right corner of the recording.

<u>Time</u>	<u>Description</u>
08:42:24	The CCTV camera is entering through the fireplace opening and is facing/travelling upwards into the flue. The fireplace has a large cut stone lintel and wooden mantel with two cut stone jambs/legs. The rear is backed by bare red brick masonry and a large cast iron back plate.

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- 08:43:01 There is a small section of creosote that has run down the rear of the fireplace.
- 08:43:16 The top of the chimney outlet can be seen, shown as a small circle of light. This gives an indication of how straight and unobstructed the flue is.
- 08:43:40 The CCTV camera has entered the base of the flue, measuring 1120x512mm. Due to the large size of the flue this gives a poor view for the CCTV camera. The Flue is in an original unlined condition.
- 08:44:21 There are loose carbon waste deposits lining the flue wall.
- 08:44:37 There are creosote deposits lining the flue wall.
- 08:45:23 The mortar joint has failed and receded into the masonry creating a significant hole.
- 08:46:25 There is an original, wrought iron hang nail in the flue wall. This is 3000mm from the base of the flue.
- 08:47:12 The flue wall is broken and uneven with large depressions and cavities in the masonry.
- 08:48:35 There is a deposit of creosote on the flue wall.
- 08:52:07 The CCTV camera has reached the top of the flue measuring 7910mm in length. There is a type of electronic fan installed on the exterior of the chimney stack.

Conclusion

Although it is reported that the flue has been recently swept there are still significant deposits of tar and creosote in the flue wall. This will require properly clearing prior to any future lining or re-use of the flue.

The condition of the flue is unlined, and the original masonry and mortar joints are exposed. These are failing in areas and therefore it is recommended that the flue is relined with a suitable liner for safe re-use.

Currently there is a chimney fan fitted to the head of the flue. However the size of the flue in the external chimneystack is such that the fireplace should draw naturally without the aid of a fan. It is our belief that the fan was fitted at the flue was restricted as it passes through the capping at the head of the flue. Therefore if this fan is removed, and the capping altered for a suitable liner there is a very good probability the fireplace will draw naturally.

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2. Drawing Room 2



Outline

Open Fire
Length of Flue

1472mm x 1189mm
8.0m approx.

CCTV Inspection

All times shown relate to the time stamped in the bottom right corner of the recording.

<u>Time</u>	<u>Description</u>
09:44:31	The CCTV camera is entering through the fireplace opening and is facing/travelling upwards. The fireplace has a red brick masonry rear and sides with a large cast iron backing plate. There is an oak support lintel and large flag stones used for the hearth.

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- 09:45:33 The bottom right side of the fireplace/flue has signs of structural movement. The blockwork is loose and can easily be pulled out with some masonry missing already.
- 09:45:44 The top of the chimney outlet can be seen, shown as a small circle of light. This gives an indication of how straight and unobstructed the flue is.
- 09:46:01 The CCTV camera has entered the base of the flue, measuring 1450x600mm. Due to the large size of the flue this gives a poor view for the CCTV camera. The Flue is in an original unlined condition.
- 09:46:35 The flue wall is broken, uneven and showing signs of age-related wear. There are creosote deposits on the flue wall throughout this whole area.
- 09:48:09 There is an original, wrought iron hang nail in the flue wall. This is 3050mm from the base of the flue. This is the same height as the Drawing Room 1 flue.
- 09:49:23 The flue outlet is significantly reduced in size compared to the dimensions of the flue. estimated at 350x350mm.
- 09:54:16 The CCTV camera has reached the top of the flue outlet with the CCTV camera measuring 8020mm from the ground floor level.

Conclusion

Although it is reported that the flue has been recently swept there are still significant deposits of tar and creosote in the flue wall. This will require properly clearing prior to any future lining or re-use of the flue.

The condition of the flue is unlined, and the original masonry and mortar joints are exposed. In areas there is loose masonry that will need to be removed or stabilised before any remedial work is undertaken. Once this is done it is recommended that the flue is relined with a suitable liner for safe re-use.

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3. Sitting Room



Outline

Open Fire
with reducer
Length of Flue

927mm x 1340mm
843mm x 1340mm
7.8m approx.

CCTV Inspection

All times shown relate to the time stamped in the bottom right corner of the recording.

<u>Time</u>	<u>Description</u>
10:36:39	The CCTV camera is entering through the fireplace opening and is facing/travelling upwards. The fireplace has a red brick masonry rear and sides in a herringbone design. There is a large cast iron backing plate. The fireplace surround and mantel have historic smoke staining. There is a reducer installed on the fireplace

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- opening, this is to aid in the draw of the fireplace by reducing the opening measurements of the fireplace.
- 10:37:40 The top of the chimney outlet can be seen, shown as a small circle of light. This gives an indication of how straight and unobstructed the flue is.
- 10:37:42 The flue is unlined and in an original condition, The flue dimensions reduce to 277x277mm. There are multiple small creosote deposits visible on the flue wall.
- 10:39:27 The flue wall is showing signs of age-related change and deterioration. There is a build-up of carbon waste on the flue wall.
- 10:41:29 There is a build-up of carbon waste and creosote on the flue wall.
- 10:42:22 The CCTV camera has reached the top of the chimney outlet. Measuring 7810mm from the ground floor level. There is a rotary stainless-steel cowl installed used to aid in the draw of the fireplace.

Conclusion

Although it is reported that the flue has been recently swept there are still significant deposits of tar and creosote in the flue wall. This will require properly clearing prior to any future lining or re-use of the flue.

The condition of the flue is unlined, and the original masonry and mortar joints are exposed. There is visible damage to this structure over the length of the flue and therefore it is recommended that the flue is relined with a suitable lining process before the flue is reused.

At the head of the flue there is a 200mm dia pot and rotating cowl fitted. This pot and cowl arrangement is too small for the existing opening size and is the probable cause of the visible spillage from the open fire. It is therefore recommended that these are removed, and the head of the flue opened up back to its original size. There is a high probability that if this is done, in conjunction with a large diameter liner the fireplace will draw naturally.

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4. Dining Room



Outline

Open Fire
Length of Flue

948mm x 1345mm
9.2m approx.

CCTV Inspection

All times shown relate to the time stamped in the bottom right corner of the recording.

<u>Time</u>	<u>Description</u>
11:12:31	The CCTV camera is entering through the fireplace opening and is facing/travelling upwards. The fireplace has a red brick masonry rear and sides in a herringbone design. There is a large cast iron backing plate.
11:12:40	There is a flat wrought iron bar installed for a support lintel.

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- 11:12:55 The flue is unlined and in an original condition. The flue dimensions reduce to 427x389mm.
- 11:13:13 The top of the chimney outlet can be seen, shown as a small circle of light. This gives an indication of how straight and unobstructed the flue is.
- 11:15:05 There is a build up carbon waste and detritus deposits on the flue wall. Very little of original masonry flue can be seen through the build-up of waste.
- 11:18:27 The CCTV camera has reached the top of the chimney outlet, measuring 9170mm from the ground floor level The masonry is exposed over this section with recessed mortar joints. The top of the flue outlet has a stainless-steel mesh installed to stop bird access into the flue. There is nothing to reduce water ingress into the flue.

Conclusion

Although it is reported that the flue has been recently swept there are still significant deposits of tar and creosote in the flue wall, which made the inspection of the flue difficult. These deposits will require properly clearing prior to any future lining or re-use of the flue.

The condition of the flue is unlined and the original masonry and mortar joints. Where visible at the head of the flue, are exposed. There is visible damage to this structure, and it is assumed the condition is the same over the remaining length of the flue, and therefore it is recommended that the flue is relined with a suitable lining process before the flue is reused.

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5. Library



Outline

Open Fire
with reducer
Length of Flue

844mm x 1340mm
622mm x 1340mm
8.2m approx.

CCTV Inspection

All times shown relate to the time stamped in the bottom right corner of the recording.

<u>Time</u>	<u>Description</u>
12:21:54	The CCTV camera is entering through the fireplace opening and is facing/travelling upwards. The fireplace has a red brick masonry rear and sides in a herringbone design. There is a large cast iron backing plate. There is a glass fireplace reducer installed, this is to aid in the draw of the fireplace by reducing the opening measurements of the fireplace.

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- 12:22:03 There are 255mm diameter clay liners installed into the masonry flue. The age of the clay flue liners is unknown.
- 12:22:14 The connection between the base of the flue liners and the gather is heavily damaged with a clear breach to the exterior of the flue liners.
- 12:22:39 Severe damage to the connection between the base of the flue liners and the gather.
- 12:25:14 The mortar joint connecting the two liner pieces has failed and fallen away.
- 12:26:23 The mortar joint is poor and receding, although still intact.
- 12:26:39 The mortar joint connecting the two liner pieces has failed and fallen away.
- 12:27:05 The mortar joint is poor and receding, although still intact.
- 12:28:49 The clay liners do not run the full length of the masonry flue and so is only partially lined.
- 12:30:51 The CCTV camera has reached the top of the chimney outlet. Measuring 8120mm from the ground floor level. The top of the flue outlet has a stainless-steel mesh installed to stop bird access into the flue. there is nothing to reduce water ingress into the flue.

Conclusion

The flue is currently lined using 225mm i/d clay liners. these liners are poorly installed with gaps visible between the liners. the liners also do not extend to the head of the flue, leaving an unlined section at the head.

The liners are too small for the existing fireplace and will cause the fire to spill, even with the glass reducer in place.

It is therefore recommended that the existing liners are mechanically removed, which would leave a void approx. 275mm in dia. This void could then be lined with a larger diameter liner. However even with a flue diameter of 275mm there is a risk that the fire will spill, and a chimney fan may have to be considered.