



## Roof Condition Survey Final Report

**Jonathan Williams**

Stardens, Tewkesbury Road, Newent, Gloucestershire, GL18 1LG

7<sup>th</sup> May 2021

### **Alpine Property Group Ltd**

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## Introduction

Alpine Surveys were requested to undertake an Aerial Survey of the 1800's Gothic style property. The property was added to the original 1600's property in the 1840's. A similar extension was added to the opposite side at the same time. In 1952 the property was converted into three dwellings. In the 1980's the assessed property was severely damaged by a fire, which destroyed the interior and the roof. We understand the main structure was fairly undamaged and evidently saved.

We understand that during the more recent history, the property has had various uses over the years, including a country club.

The property surveyed is now converted into various apartments. We understand that some rectification works are planned, such as the renovation of the chimney stacks.

The survey was instructed to assess the remainder of the roof and tower structure, in order to understand the existing condition, and to allow the recommendations for rectification to be confirmed.

## Client & Property Details

Client	Jonathan Williams	Survey Date	Jonathan Williams
Address	Stardens, Tewkesbury Road, Newent, Gloucestershire GL18 1LG		
Surveyor	Mark Dobson		
Instruction	Assess the condition of the roof, chimney and tower structures.		

Use of Property	Domestic	Property Style	Bungalow
Occupants	N/A	Number of Floors	3
Listed Building	Yes – Grade 2	Conservation Area	No
Approximate Year of Construction	!600, Extended in 1840, and converted in 1952		
Wall Construction	Solid Stone	Roof Construction	Slate – Attention Required

### Historic Information

As previously stated, there was a fire in the 1980's, which caused considerable internal damage, and severe damage to the roof. This resulted in an internal reconstruction, and likewise roof construction.

**The Tower:**

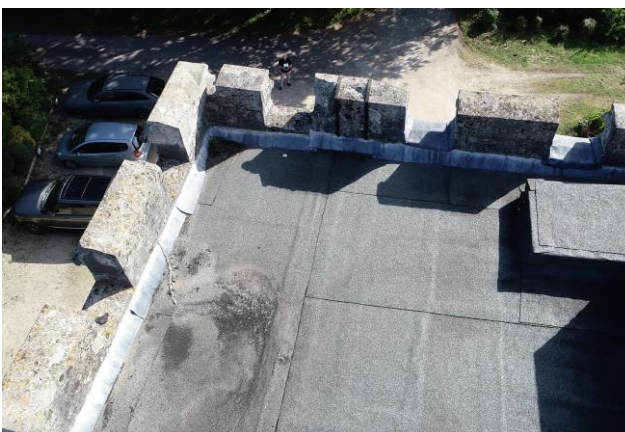
The stone-built tower was found to be in a poorly maintained and deteriorated state. The chimney stacks will be detailed later in the report. Constructed of local stone and limestone, we found that the limestone was very much weathered, damaged and eroded, with open joints that will increase the level of moisture and water penetration into the structure, and loose pieces that were broken away adjacent to the chimney stack. This moisture will migrate down through the structure as experienced internally. We also noted damage to the parapet capping stone, although we do not see this to be an issue.

We found that although the lead flashing within the crown was acceptable, the lead liners were missing in five of the Embasures (cut outs in the parapet walls), therefore exposing the stone, and increasing the risk of moisture absorption. As far as was visible, we found that the felt roof coating was in an acceptable condition, although the pointing of the lead flashing over was deteriorated in places.

The corner decorative head stones were found to be eroded, but currently acceptable with regard to moisture ingress.









## Ridge & Hip Tiles

We found that to the rear of the property where the two ridges meet the sloping hip, the tiles were defective, and the joining point has been filled with cement mortar, as opposed to the correct tiles being used. The ridge tiles at this point have been replaced. When the mortar between the tiles, or the bedding beneath the tiles becomes deteriorated, there is an increased risk of movement in the tiles, resulting in a hazard, and an increased risk of moisture penetration into the structure.

We also noted that the pointing of the ridge tiles was deteriorated, and in places missing, and we suspect that there will be points where the ridge tile bedding will be deteriorated, and in turn the tiles loose. This could obviously not be confirmed by an aerial survey.



## Chimney Stacks

We found that all of the chimney stacks were deteriorated, and we understand that they are planned to be renovated in due course.

We noted that they have all received cement flashing across the crown of the structure. The cement was found to be cracked and deteriorated. The cracks will increase the risk of moisture penetration into the crown of the stacks, which in turn will migrate down through the structures. We noted that there were cracks in a few of the pots, which will also increase the risk of moisture penetration.

The brick and stonework were found to be deteriorated across all of the structures, to the extent that in places the brickwork was spalled and deteriorated, the pointing was missing, and that there was vegetation growing out of the structures. This level of deterioration will also increase the risk of moisture penetration into the structures, which as previously stated will migrate down through the structures.









## Elevations

We found that across the elevations the pointing was very much deteriorated, to the extent that in places it was missing. We also noted that multiple stones were spalled, which is the result of moisture absorption, and possible freezing and expansion during cold periods.

There were evident open joints within the stonework, especially around the crown of the tower, where we also noted a vertical fracture in the rear corner stone.

This level of deterioration will much increase the level of moisture penetration into the structure, in turn increasing the risk of internal damp issues





## Windows

To the rear of the property, we noted that the frames of the triangular windows were poorly maintained and deteriorated. They appeared to be rotten, however we were unable to safely assess the full extent of the deterioration.





### Recommendations

We recommend that the following works are undertaken, in order to rectify the current issues. Prior to any works commencing, we recommend that approval is obtained from the local LBO Listed Building Officer. In addition, please note that any works undertake on the party line such as the rear stacks, will fall under the Party Wall Act, and the correct notices should be issued, and the correct approvals obtained.

1. We recommend that an experienced stonemason is engaged to rectify the deteriorated stonework as detailed. We recommend that where fractured or damaged the stone is replaced. We also recommend that where deteriorated or weathered by more than 20%, the stones are also replaced.
2. We recommend that the deteriorated pointing is raked out of the relevant stone and repointed using a lime-based mortar. The deteriorated pointing of the lead flashing within the crown of the tower should be raked out and replaced using a lime mortar.
3. We recommend that where no applied, lead is installed to protect the Embrasures where missing.
4. Although we understand that the renovation of the chimney stacks is planned, we recommend the following.
  - The deteriorated, defective or cement-based flaunching should be replaced across the crown of the stacks using a cement / lime mortar. The cement adds water resistance, and the lime flexibility. At this time, we recommend that any damaged or cracked chimney pots are replaced.
  - Any bricks found to be spalled, eroded by more than 20%, damaged or cracked should be replaced.
  - Any deteriorated or hard cement-based pointing should be raked out with care and replaced using a lime-based mortar.
5. The defective ridge tiles and mortar should be replaced to the rear of the property where detailed. The tiles should be bedded on a suitable lime mortar. The deteriorated pointing between the ridge or hip tiles should be replaced using a lime mortar. Any ridge or hip tiles with existing deteriorated mortar bedding should be bedded on replacement lime mortar.
6. We recommend that any deteriorated pointing across the elevations is raked out with care and repointed using a lime-based mortar. Any bricks or stone found to be spalled, eroded by more than 20%, damaged or cracked should be replaced.
7. The triangular window frames to the rear should be assessed and if deteriorated as detailed, they should be replaced using suitable and approved frames.