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Winchcombe Town Hall
fund raising and
proposed repairs

Drinkwater

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Consulting Structural Engineers

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The Building

Winchcombe Town Hall stands in the centre of Winchcombe, bounded on one side by North Street and on the other by The High Street. At the front there is a small paved area situated on the corner between the two streets and edged with iron railings. The old Town Stocks sit against the wall and there is a gate in the railings leading to the main ground floor entrance.

The building has two wings and is roughly L shaped on plan, the yard area being between the two wings of the building and there are gables facing onto each street. Onto The High Street there is a projecting bay window at first floor level and below this there is a column and beam structure which provides an open area at ground floor level to the side of the small yard. The column and beam structure then return along the side of this wing to meet with the second wing just by the main entrance. There are three openings to each side of the building thus formed by this arrangement.

The building itself is mostly constructed of brickwork over two storeys with stone detailing at quoins and parapets etc. Onto the High Street the column and beam structure consists of reasonably substantial stone columns supporting a deep stone lintel above and there are iron railings between the columns on the High Street side except in the centre where there is an opening leading under to the Tourist Office behind.

Brief

We have been asked to undertake an inspection of the wing which faces onto The High Street, this contains the projecting bay at first floor level and is supported on the stone column and beam arrangement. There is concern over the stability and security of this part of the building which is now showing signs of weathering and cracking in many of the stone elements.

Recent history

During 1997/98 we inspected the building since two concerns were brought to our attention.

The first was the stability of the Town Clock which hangs from cantilever brackets bolted to the gable brickwork. The clock was due for overhaul so the inspection was undertaken to ensure that it could safely be rehung. The second concern was that there was visible cracking to the brickwork around the projecting (stone) bay window and further around the corner into the side wall facing the yard.

Investigations confirmed that the building was suffering from settlement which was found to be due to a combination of saturation of the sand and gravel sub soil, the relatively meagre existing foundations to the columns, and the effect of heavy vehicles constantly mounting the pavement to negotiate the corner.

The works extended to the reinforcing of the gable via a bolted frame into the roof structure to carry the clock, and underpinning of the columns to form pad foundations. Fund raising was organised and sufficient was raised over a period of twelve months which together with a Lottery Fund grant enabled the works to go ahead.

The works were tendered via formal contract to obtain a competitive price and were successfully carried out following which there has been no further movement from this cause.

Current Inspection (2011)

Form of construction

The columns are constructed from several pieces complete with a base plinth and cap at the top onto which the stone lintels sit.

Immediately backing up the stone lintel is an Oak lintel which takes support from the same cap. Above the stone and the Oak is the brickwork to the wall above.

A narrow gap exists between the stone and the Oak backup lintel within which iron bolts can be seen. Whilst the ceiling has not been removed a bracing arrangement with diagonal timbers tying into the back of the Oak lintels can just be determined.

This forms a frame tying into the ring beam at the back of the stone with further bolts visible below the bay window structure to which it is probably tied. The Oak backup very slightly sits higher than the stone lintel facings. An inspection of the building was undertaken in 2011 and the following problems were noted.

1. The stonework band above the support columns is under some stress both vertically and laterally and it is exhibiting advanced weathering. This band is an integral part of the support of the brickwork above and is linked with the bay window structure.
2. It is clear that general weathering is accelerating the deterioration. The original settlement which caused the initial cracking appears to have ceased but water run off from the face of the brickwork and the bay is now filtering through cracks and fissures and freezing is opening them up.
3. There are mostly vertical or slightly angled cracks in many of the lintel stones above the columns and some of the earlier pinning and stitching is becoming visible. The concentration of water along these cracks is causing them to erode and frost in the saturated facework is causing it to recede.
4. The label mould above the stone lintels does not adequately deal with the water run off, due to a combination of factors. The moulding does not project far enough forward to form a reasonable drip and the previous cracking and damage to the moulding has left gaps. There are now established rain channels through the moulding which link directly with the faults in the lintels and these eventually lead further down into the columns below.
5. In particular one of the column caps is now cracked and eroded in line with a rain channel in the lintel above and the constant wetting and drying cycle is now accelerating the demise of the entire cap. This is general continued weathering and not as a result of the repairs in 1997-8 at which time general deterioration had been noted and minor repairs carried out.
6. The return wall which faces the yard (ie onto North Street) and the condition of the

columns and lintels below was found to be very good. There was some historic cracking in the brickwork close to the corner, due to the earlier settlement problems. The wall here is more sheltered and it does not have the problems associated with water run off.

The repair scheme

The repair scheme has to address a number of factors:

1. Reduce the historical intrusion as far as possible.
2. Deal with the water run off/weathering.
3. Provide structural security as far as possible.
4. Be economically viable.

The Town Council has been in negotiations with Tewkesbury Borough Council Conservation Officer and these have resulted in a simple part 'replacement' scheme being the preferred repair solution.

This scheme requires the replacement of failed stone lintels, the cutting in of new sections of label moulding and the replacement of some of the stone caps which are vertically split.

Two columns in particular have suffered from weathering and it would be more economic to replace these now rather than carry the additional cost of re-mobilisation and further pre-tender work for another contract a few years hence.

It is expected that the Oak back up lintel will be mostly sound, due to the air gap between the back of the stone facing and the Oak. If sections of the backup are found to be dilapidated (perhaps at bearings particularly) then relatively straightforward access will be available because the stone lintel will have been removed.

It is expected that no foundation work will be required since the works in 1998 dealt with the settlement issue. If plinth stones require work then they can be redowelled to the new foundations under quite easily.

Some careful detailing to be agreed with the Conservation Officer may allow some improved drip protection to the stonework in order to delay the onset of further weathering and dilapidation to the stonework which has not been replaced.

The nature of the 'replacement' works is such that the building will require to be scaffolded and propped and this will take up the full width of the pavement. In order to limit dust and nuisance from the site the scaffold will need to be fully sheeted and this constriction right in the centre of the town will necessitate the use of traffic lights at the junction for the entire length of the contract.

It is envisaged that there will be two phases to the next stage, to procure funding and necessary approvals and then to undertake the repair works themselves:

Eventually the contract will be let on a formal basis with a JCT building contract, drawings and a specification, the extent being such that a full health and safety plan will also be required. This entails the preparation of a pre tender health and safety document (CDM) together with a health and safety assessment by the main contractor. It would be normal to appoint other professionals to act in certain capacities, perhaps for example Architect, Quantity Surveyor, Engineer and CDM coordinator, however to save fees some of these services will be combined.

The two stage approach here seeks to address this problem as far as is practicable within the means available.

The first stage would normally be to prepare contract drawings showing the structural repair works and this would be an accurate representation of what is to be undertaken. There would also be a specification and a form of contract document based around JCT minor works. It would include prime cost and provisional sums for items such as CDM, scaffolding, traffic lights etc. Close liaison with the Planning Authority and The conservation Officer has already been undertaken and would continue during this phase.

In order to spread costs, part of this first stage has already been undertaken and the works 'pre tendered' with interested contractors so that reasonably accurate costings could be calculated and these have been separately confirmed

The full liability being split as follows:

- 1). Architect fees.
- 2). Quantity Surveyor fees .
- 3). Engineer fees.
- 4). CDM coordinator fees.
- 5). Building Control/Planning fees.
- 6). Contract works which will include the following:
 - a).Preliminaries.
 - b). CDM coordination.
 - c). Insurances.
 - d). The works themselves.
 - e) Scaffolding.
 - f). Traffic management.
 - g). Prime cost and provisional sums.

h). A Contingency.

A costing schedule has been separately provided based on the above and the following notes should be read in conjunction with the schedule.

The above list sets out all of the professional fees which would normally be incurred on a typical project. It is unlikely that an Architect will be required separately since the works are mostly structural and the Engineers drawings will suffice for submission to the planning authority and building control.

In respect of the Quantity Surveyor, some control over expenditure has to be present. The usual way would be to prepare a full bill of quantities against which the contractors would price and against which applications for payment would be assessed.

This is a further level of fee liability which to some extent can be mitigated by the form of contract. Since drawings and a specification will be prepared by the Engineer, this could be extended to include a material and day rate schedule against which the contractors applications could be set. Some fee liability would be incurred but it would represent a saving over a bill of quantities and the appointment of a surveyor.

For CDM we recommend that a CDM coordinator is appointed as this will be the quickest and simplest way forward.

The second phase of the procurement works being the construction phase requires the works to have been competitively tendered, as well as submitted to the local Authority for statutory approvals. Discussions have already been undertaken and it is expected that this will therefore be a formality being completed during the fund raising process once sufficient funds are in place.

Summary

In summary, the works extend to the replacement of dilapidated stone items, in one contract, let on a competitive basis and based on a set of contract drawings and a specification. The works would be inspected as they progress and there will be interim payments and cost control throughout the entire process.

The project is a two stage process with part of the first stage having already been undertaken to establish quantum and allow fund raising to commence. This phase will be completed as funds allow requiring completion of the remaining documentation, submission to the local authority etc so that a full tender enquiry can then be sent out.

This enquiry would be sent out only once funds are sufficient to allow a contractor to be appointed directly, since tender prices will only remain open for acceptance for a few weeks after return.

Jeremy Drinkwater August 2012