

THE LEECHWELL, TOTNES



SCHEDULE OF WORKS

for

REPAIRS AND MAINTENANCE

for the

Leechwell Garden Association and Totnes Town Council

Bosence & Co
July 2014

A. THE PROJECT

A1 Works of repair and maintenance at The Leechwell, Leechwell Lane, Totnes. The well is located 350m south-west of St Mary's Church and is a Scheduled Ancient Monument, a medieval holy well recorded from at least the mid-15th century.

The well measures approximately 3 metres by 4.5 metres, bounded on two sides by high retaining walls, on one side by a free standing stone wall to separate it from the lane, and is open on the fourth side (the North East side).

A2 Employer. The Employer will be the Leechwell Garden Association and Totnes Town Council, who have coordinated funds for this project and for a further project to repair the Bathing/Immersion Pool that is downstream from the Well, now also in their care.

A3 Surveyor and Architect. This Schedule of Works is prepared by Bosence & Co., specialists in masonry repair and conservation to historic buildings (principal Oliver Bosence MA DipBldgCons(RICS)).

A4. Documents. This Schedule of Works taken together with the location map extract from the Land Registry dated 1976.

All works and materials necessary to complete the scheme must be taken for, whether detailed in or implied by the drawings and the specification.

A5 The Site.

Public access to the site is normally allowed, and so all precautions for public safety must be taken, together with appropriate security measures to prevent unauthorized access to any area needing protection during the course of the works

A6 Services. There are no mains services at this site, however if electricity is needed (eg for submersible pump) then this may be obtained by agreement from Mr David Mitchell of Leechwell Cottage.

A7 Health and Safety. The Contractor is to ensure the safety and welfare of all employees and sub-contractors on site, and the safety of any passers-by. Risks arising from the nature of the works must be properly assessed and managed.

The project requires the use of lime-based mortars; the site is somewhat inaccessible (at least for vehicles), and mobile phone signal may be poor or non-existent, therefore adequate provision for communications and for first aid and emergency treatment must be made.

B. THE CONTRACT

B1 The chosen Contractor will be engaged by exchange of letters, and will complete the works as described in the Documents (A4). Applications for payment to be monthly, or at other times by agreement.

C. CONDITIONS

C1 Project Planning. With the Tender, each Contractor is to state the length of programme required, in weeks, to complete the works.

The chosen Contractor will submit a detailed programme of works before commencing on site, this to be approved by the Contract Administrator/CA.

Progress of the works to be monitored and discussed at fortnightly site meetings, or at times to be agreed.

C2 Insurance. Contractor to show current 'All-Risks' Certificate of Insurance before commencing on site, and this insurance to include Public and Products liability cover up to £2,000,000.

During the works, any event whatsoever which may be the subject of an insurance claim must be advised in writing to the CA/Employer.

The Employer also to declare current insurance cover for the property.

C3. Health and Safety. Further to A7 above, the chosen Contractor to allow for all measures to comply with current legislation and working rules relating to the Health and Safety and Welfare of all personnel.

This is a non-domestic project, but because of the small scale of the work it will not be Notifiable to the Health and Safety Executive. However it will still be subject to the general regulations applicable to Health, Safety and Welfare at work.

C4. Security. This site is normally fully accessible to the public, and as far as possible this free access must be maintained. The public must be protected from any hazards associated with the work and the site and surrounding pathways must be kept clear and accessible at all times.

It is unlikely that any items of value will have to left on the site outside working hours and it is anticipated that the Contractor will remove all equipment and materials and the end of each working day.

Repair work such as pointing to masonry should be protected with damped hessian and no wet lime mortar should be left exposed on site.

C5. Conduct on Site.

Conduct of all personnel on site and in the surrounding pathways to be professional and courteous at all times.

The use of site radios to be only by agreement with the Employer, and such agreement is not to be assumed by the contractor. The use of personal audio equipment may be restricted by considerations of health and safety, and this must be considered in the contractors policy statement.

The site areas and the surroundings to be kept clear of waste material and litter of all kinds, and all waste and potential pollutants to be disposed of in a legal and proper manner, and with due care for the environment.

C6. Care of existing structures.

Contractor to take responsibility for the condition, stability and integrity of the existing structures, particularly with regard to their age, condition, materials used in original construction, and historic significance and interest.

Failure to take due care will be considered a failure of contractual duty.

All personnel must understand that failure to follow the Specification and the Schedule of Works, is likely to constitute an illegal change to a Scheduled Ancient Monument, and any such change can lead to legal action against the Contractor or the Employer.

Any damage, equally, will be considered to be an illegal change and every effort must be made to avoid damage. A renewed element of a building (to repair damage) will have lost its historic value/interest.

D BATS

D1. Bats are a protected species. If bats are found, the Contractor MUST advise the Contract Administrator/Employer immediately, and must divert any continuing works away from the bats. Any accidental or deliberate injury or disruption to bats is an offence, and carries a fine.

English Nature will be called upon to advise on how to proceed.

E. FINDS

E1 Any finds, items of value or of archaeological interest must be reported immediately to the CA/Employer, and must not be moved until authority to so do has been received.

F. THE WORKS

F.1 Scope of works.

The South West wall of the well closes and retains a chamber with a natural cavern beyond, where the water falls. The chamber is accessible only through the removable grill, which measures 600 x 650mm. The water level in the chamber must be sufficient to allow the water to flow out of the three spouts, into the three granite troughs.

The floor of the chamber is puddled with clay, and this has now eroded or washed away to the extent that water now passes through the base of the wall in several places rather than just the three spouts.

The base of this wall has a full length sill or bench with slate copings, approx 250mm/10" deep.

The three granite troughs are set within the cobbled floor of the well, with a gulley visible on two sides, and the third side probably the same but presently covered with silt. The gulley leads to the outflow culvert which in turn takes the water down to the Immersion Pool in Leechwell Garden.

The retaining walls on the SW and NW sides are between 4 and 6 metres high and are in moderate to fair condition only. The SW wall in particular, while lower, has substantial established growth along the top such as hazel which in time will extend its roots into the wall topping. The NW wall, it can be seen from the 1888 O.S. map once formed the wall of a building at the higher level, part of the property described as Westhill Bridge (hence its extra height).

The scope of the works is to clean out and re-puddle the clay floor to the chamber; to repair as necessary the inner face of the chamber wall to prevent leakage through the wall; to check and repair the pipes through the wall; to rake out and repoint where needed the base of the wall forming the bench; to clear all silt and debris from the floor of the well and into the outfall culvert, to allow the well to drain fully. There will be a contingency sum for further repairs and repointing generally to the three walls, to be directed on site, but it is anticipated that funds will not extend to repair or to removing the heavy vegetation on the SW wall.

F.2. Chamber repairs.

- a. Remove access grill and allow to refit securely at the end of each working day.
- b. Reach into chamber with mattock/spade/rake as needed, and form a central gully to the full depth of clay or silt, and install submersible pump. This may be run from the mains supply at Leechwell Cottage by agreement with Mr David Mitchell. With the pump running, remove the remainder of the clay or silt and cart away.

c. Clean off the inside face of the chamber wall now exposed, and check for condition: there may be failed mortar joints or pointing, or it may be that the leakage through the wall results from the failed clay floor, and this water is rising through the wall from its base.

Allow to repair pointing and render (Mortar Mix no. 1, see Appendix I) to this area, max 300mm x 1800mm.

- d. Examine the pipe or spout construction on inside face. Any repairs to these to be extra and by agreement only.

Provisional Sum No 1: repairs, £100.00

Identify a local source of clay suitable for puddling. Ball clay from Kingsteignton (Messrs Watts Blake and Bearne) is a possible supply, but certainly in earlier times a nearer source would have been used.

Provisional Sum No 2: supply clay £100.00

- e. With the pump running, pack the clay first against the inside or nearest wall of the chamber, then working towards the rear and centre, finishing approx 1200mm from the wall, where the chamber narrows:



rear of chamber

The finished level of the puddling will be by agreement with the CA/Employer, but is likely to be level with the floor of the cavern beyond, and will be below the level of the spouts through the wall.

The total depth of clay is not known, but is likely to be not more than 200mm, which is the difference in levels between the water level inside the chamber and the cobbled floor of the well.

F.3. Base of SW wall, or bench.

- a. Remove vegetation and clean wall face with stiff bristle brush and with brass or stainless steel wire brush as necessary to determine condition, and report to CA/Employer.
- b. By agreement with CA/Employer, rake out and repoint selected areas or mortar joints as required, the rates for this to be shown in tender form, using Mortar Mix no 2 (see Appendix I). This item may include repair to the spouts.

Provisional Sum No 3: pointing, repairs £250.00

F.4. Floor of well.

Clear all silt and debris from the floor of the well and into the outfall culvert and cart away, leaving the well floor to drain fully. This may require rodding into the culvert, as far as necessary to move any build up of silt. Brush all cobbles clean with a stiff

bristle brush, and report condition to CA/Employer. Any repairs to be by agreement.

Provisional Sum No 4: cobble repairs £250.00

F.5. Walls

a. Allow to remove all vegetation from walls to a height of 3 metres, this to include the wall topping of the East wall. Identify areas or items of failed mortar or stone and report to CA/Employer.

b. By agreement apply rates from tender form to carry out repairs and repointing.

Provisional Sum No 5: pointing, repairs £250.00

F.6 Signboard. New information board to be supplied by Employer, to be fixed to agreed position at well. This will be of timber construction. Allow to position, drill and plug into masonry, and screw fix with stainless steel or brass screws. Allow to plug/fill/finish surface of board as necessary, to leave board secure and properly finished.

F.7. Completion. At the completion of the works the site is to be left clean and clear of any debris, to the satisfaction of the CA/Employer and all masonry repair must be complete including any necessary period of tending/curing of mortar.

APPENDIX I

Mortar Mixes.

(Subject to advice from statutory bodies such as English Heritage)

Mix No 1, to be used for repairs on the inside face of the chamber only. This work will be under water continuously in normal use.

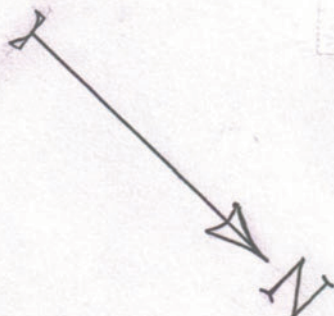
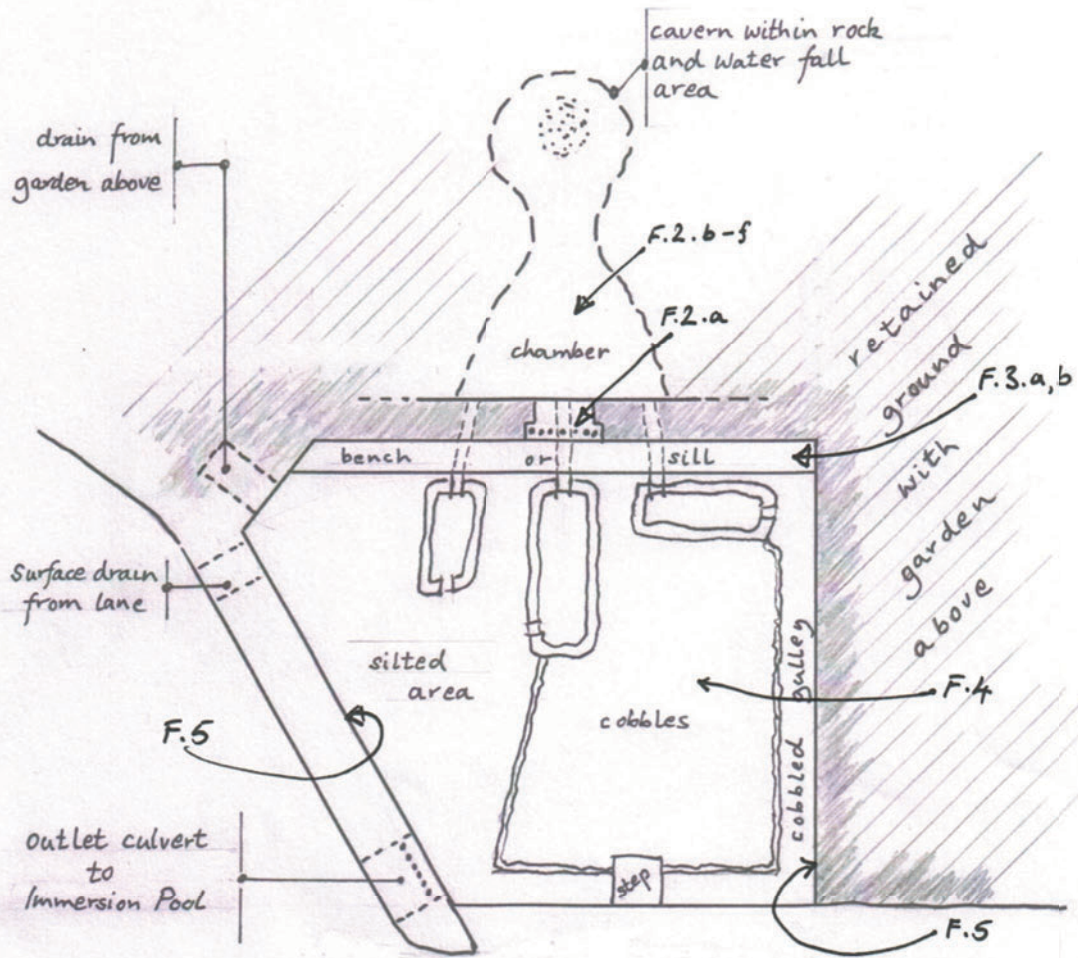
St Astier hydraulic lime, NHL 3.5: 1 part (or equivalent approved)
Chard Junction coarse sand: 2.5 parts (or equivalent approved)

Mix No 2, to be used for all repointing and masonry repair work to face of well.

Putty lime (min 3 months old): 1 part
Chard Junction coarse sand: 3 parts
Buff brick dust (medium): 5 - 10%

Brick dust may be obtained from The Bulmer Brick and Tile Co., Sudbury, Essex.
Telephone 01787 269232, or via Cornish Lime Company at Bodmin.

APPENDIX II



THE LEECHWELL

TOTNES, DEVON.

MONUMENT NO. 34875

PLAN AT 1:50 scale

To show repair and maintenance work proposed for
Leechwell Garden Association

Bosence & Co
May 2014

To locate items in Schedule of Work only. Do not scale from this drawing

APPENDIX III : FORM OF TENDER

WORKS TO THE LEECHWELL,

FOR

LEECHWELL GARDEN ASSOCIATION AND TOTNES TOWN COUNCIL

Please state your availability in weeks from date of receiving order

Please state your proposed period of works on site, in weeks

State your lump sum tendered for priced items F2a to F6 inclusive shown on the Schedule of Works supplied:

£

(amount in words:)

(excluding the 5no Provisional Sums shown, totalling £950.00)

Please provide schedule of rates as follows:

Craftsman: cost per hour £

Labour: cost per hour £

%age addition for Plant or Materials,
supplied under Provisional Sum

(These figures to be used for any variations or additional works, subject to agreement)

NAME OF CONTRACTOR.....

SIGNED..... Please print name:

POSITION

APPENDIX IV

Suitable Contractors.

The small scale of this project requires that the contractor is based locally, otherwise transport and travel costs would be disproportionate.

The following are contractors with good experience of working with lime mortars and with historic buildings:

1. Bruce Kirby, Littlehempston, tel 01803 762136 or 07941 171302
2. Jan Guest, Totnes, tel 01803 868737 or 07870 160260
3. Dan Forrester, Totnes, tel 01803 862488 or 07875 592086