

Philips Chartered Surveyors

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BUILDING REPORT

FOR

WATTS CEMETERY CHAPEL & CLOISTER COMPTON, GUILDFORD, SURREY, GU3 1DQ



Client: The Watts Gallery
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1.0 INTRODUCTION

- 1.1 This report has been prepared following instructions received from Mark Bills, Curator of the Watts Gallery.
- 1.2 The aim of the report is to evaluate the general condition of the Watts Chapel and the Cloister and to advise on the issues which are likely to effect the buildings over the forthcoming years.
- 1.3 The report is not intended to identify each and every defect which exists but to provide an overview of the current condition and long-term effects these will have with recommendations for necessary remedial work.
- 1.4 This report shall be regarded as confidential to our client along with their professional associates. It is intended for the use of these parties only and for the specific purposes referred to. No responsibility whatsoever is undertaken or accepted to any third party in respect of any information or advice contained within the report.
- 1.5 The inspection was undertaken over several visits to the Watts Cemetery during March and April 2012. Weather at the time of inspections ranged from overcast to heavy rainfall.
- 1.6 The inspection comprised a non-intrusive visual inspection of the accessible parts of the building from ground level and excludes:-
 - Any assessment of the capacity of structural elements for either present or future use.
 - Plumbing, mechanical and electrical service installations.
 - Health and safety, fire and other statutory matters.
- 1.7 Photographs taken during the inspection are included within Section 8.
- 1.8 This report is based on our visual inspection of the buildings which enables us to comment on the specific matters to which our opinion has been requested; no warranty may be assumed or implied with regard to any item or matter not specifically referred to in the report. No inspection or examination of other matters including the risks or presence of Asbestos containing products has been undertaken or requested.
- 1.9 Enquiries relating to this document should be directed to:
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2.0 METHODOLOGY

- 2.1 The survey was undertaken by visual inspection only and no parts of the buildings were opened-up or uncovered to gain access to hidden parts (other than the removal of the central post lectern).
- 2.2 High level areas were inspected from ground level with the aid of binoculars and full access onto the roof of the Cloister was gained with a ladder from the ground to the rear which is raised adjacent the rear wall.

3.0 SITE DESCRIPTION

- 3.1 Watts Cemetery Chapel stands in its own grounds on Budborrow Hill overlooking the village of Compton, near Guildford, Surrey (Image 1). The Chapel is accessed through a Lych Gate from the road running from the village of Compton to the Watts Gallery (Image 2). There is limited parking in the lay-by along the side of the road against the front boundary brick wall which is topped with iron railings (Image 3). The remaining boundaries are a mix of the original iron railings and other replacement fencing which in many areas is overgrown with hedging, trees and shrubs.
- 3.2 The cemetery ground quickly rises up to a crest of the plot and down again to the far side of the cemetery site. The Chapel stands on its own flattened terrace to the right (western) side of the front slope. The Cloister bounds the left (eastern) side of the cemetery and has been constructed to follow the curved contour of the ground which is a noticeable, unique feature of this building (Image 4).
- 3.3 The cemetery has curved and straight stone set and gravel paths which provide pedestrian access to the buildings and graves. There is no formal provision for vehicles and although the lych gate has double gates the narrow winding paths and slope of the site does not afford access for cars or vans.
- 3.3 The Chapel is Grade I listed and the Cloister is Grade II. The Cemetery site is located in an Area of Outstanding Natural Beauty and within the Compton Village Conservation Area.
- 3.4 The Chapel and Cloister Cemetery were the creation of Mr and Mrs G.F. Watts and were built between 1895 and 1904 by Mary Watts assisted by members of the Compton Village community. The site is unique and well known in its character to illustrate the Arts and Crafts Movement of the time.
- 3.5 The history of the cemetery has been well documented over the last century and there are numerous books and publishing which describe the works of Mr and Mrs Watts. In particular the book by Mark Bills, Curator of the Watts Gallery, entitled 'Watts Chapel, A Guide to the Symbols of Mary Watt's Arts and Crafts Masterpiece' describes and illustrates the decorative symbols formed in terracotta and plasterwork which adorn the building externally and internally.

4.0 THE CHAPEL

4.1 Structure

- 4.1.1 The Chapel is constructed from structural brickwork in the form of a cross with 'buttresses' to each point on the north, south, east and west sides. The walls between the buttresses are curved and the upper sections to these walls project on terracotta corbels supporting frieze panels which are decorative terracotta showing the frieze of love, light, hope and truth (Image 5). The whole structure stands on plinth bricks and within the plinth brick courses a slate damp proof course has been built-in.
- 4.1.2 The Chapel is highly decorated with terracotta features forming part of the structure which have been built into the walls and thus should be considered as fully integrated parts of the structure and not simple façade decoration (Image 6).
- 4.1.3 The building, now being over 100 years old, is showing signs of deterioration and upon close examination numerous defects are now prevalent and require remedial work. One noticeable item is a crack running through the curved brick arch above the entrance door indicating structural movement. It is not possible to ascertain on one visit whether this movement is active or if it has stabilised and we would therefore recommend that this is monitored over a year or so period with the use of a 'tell-tail' (a measuring device used by surveyors to monitor cracks in buildings). Remedial works may be required, depending on the type of movement detected.
- 4.1.4 The condition of the terracotta brickwork and decorative pieces has deteriorated and cracking and spawling (pieces flaking and falling off) can be seen in several areas especially where rainwater becomes concentrated (Images 7, 8, 9, 10 and 11). Inevitably some deterioration will occur, particularly where these decorative items are fragile and exposed to the weather. However, given the building's Grade I listing it will be necessary to ensure that restoration works are programmed and carried out stringently and sympathetically to an exacting specification to match the existing. We would recommend that all terracotta items including deteriorated brickwork and decorative features are repaired and renewed as required as part of an overall external refurbishment project.

- 4.1.5 A main contributory factor to the deterioration of the building fabric externally is the effect of dampness on the building. There are no rainwater gutters on the building and the system of disposal is simply to allow the rainwater to drip off the roof edges onto the brick paviors below. These are set to slight falls to direct the water into small gullies (Image 12). The water splashes onto the paviors and onto the walls of the building and a 'water line' can be seen which attracts green coloured algae growth (Image 13). The problem is further exacerbated by the shading of the trees to the east side, which restricts the sun from drying the building (Image 14). There is a lot of green growth to the elevations indicating that the walls are damp and in many areas to the plinth the dampness has caused deterioration of the brick joints (Image 15). We would recommend that the green algae growth should be removed and all open joints and localised repointing carried out to the brickwork. There are a number of methods to clean buildings in this condition and a non-abrasive method should be employed. Given the fragile nature of the brickwork and terracotta we would recommend that a trial should be carried out using washing techniques with water and brushes which should be undertaken in the summer months to avoid problems associated with cold weather.
- 4.1.6 To provide a long-term solution to the abovementioned damp issues we would recommend two mitigation items. Firstly the trees should be cut back and thinned to allow sunlight through to the building and secondly, a new system to deal with the rainwater run-off should be installed. This could be dealt with in two ways; either new gutters and downpipes should be installed to collect the rainwater, or new gully channels should be provided within the paviors to directly catch the rainwater and avoid it splashing up onto the building. New gutters and downpipes would alter the aesthetics of the building but would be extremely effective in dealing with this issue. New gullies would need careful detailing and these would need to be curved to suit the profile of the external walls but these would be less visually obtrusive. Both options would require listed building consent and careful design but nevertheless they would prevent further deterioration by providing a much more effective means of directing rainwater away from the building.

4.2 Roof

- 4.2.1 The roof of the building is tiled with 'under and over' terracotta tiles with the main roof over the cross having a straight pitched form, whilst the roof sections to the curved side walls are domed which give the building a unique 'rounded' architectural form.
- 4.2.2 We understand that the roof was retiled in 1994 and from the limited view afforded by binoculars from ground level overall the roof looks to be in reasonable order. However, we did note one missing tile to the edge of the roof above the 'Frieze of Truth' which requires replacement (Image 16).
- 4.2.3 We would recommend that a close examination of the roof is carried out with the aid of a mobile elevated working platform (MEWP) particularly with the issues which have been highlighted affecting the cloister's roof. It is likely, as both roofs were retiled at the same time, that there will be issues with the mortar used for the roofing work. It would therefore be prudent to undertake the high level inspection at an early stage and to programme the appropriate remedial works thereafter. The high level inspection should include extended access upto the bell tower for this to be inspected and also a detailed examination of the stained glass windows.
- 4.2.4 Similarly to issues of organic growth to the walls of the building, the roof has moss growth which is quite prevalent to the domed sections of tiling where organic growth can 'hold' onto the tiles. This moss will entrap dampness and as a result the tiles will deteriorate and delaminate especially during freezing weather due to the effects of 'freeze thaw'. We would recommend that, as part of any remedial works, this moss growth is removed and the tiles thoroughly cleaned off.

4.3 Interior

- 4.3.1 The interior of the Chapel is uniquely formed with 'Gesso' plasterwork (a technique of felt dipped in plaster and glue and formed into shape to the vaulted curved ceiling and walls panels) which is highly decorated in 'Tempera' (a paint mixed with coloured pigments and water-soluble binder such as eggs) with symbols and imagery designed by Mary Watts. This creates a striking appearance particularly enhanced by the natural illumination cast by the stained glass from the tall windows formed in each buttress (Image 17 and 18).

- 4.3.2 Generally the plasterwork appears sound, however, upon close examination cracking and defective detailing can be observed which should be monitored and repairs carried out as deemed necessary (Image 19 and 20). Clearly this work should be undertaken by a specialist, conversant in the skills and materials which will match the existing. As part of this work, the plasterwork should be closely examined to check its stability and ensure there still remains a secure attachment to the structure. Depending on the findings of this investigation it may be necessary to provide additional fixings.
- 4.3.3 The floor of the Chapel is formed with oak parquet blocks which are worn as would be expected from over 100 years usage. The floor would benefit from a thorough sanding and resealing.
- 4.3.4 To the centre of the floor there is an oak lectern which is set within a socket in the floor. The base of the support post is severely rotten from the effects of dampness within the floor (Image 21 and 22). It is likely that the parquet flooring has been laid on a bitumen layer in the traditional manner and clearly this is penetrated in this location. We would recommend that localised remedial works are undertaken to provide a waterproof socket and the lectern is repaired to replace the rotten base.
- 4.3.5 The interior of the chapel has numerous fittings such as the stone benches which curve to the shape of the walls (Image 23) together with decorative ironwork and oak doors (Image 24). These items are all original and are showing signs of wear and tear as would be expected for a building of this age. We would recommend that as part of an overall refurbishment programme these are restored and repaired as necessary.

4.4 Services

- 4.4.1 The Chapel has an electrical supply which enters the building on the south side. This serves to provide power to the lights and one internal double socket and one single external socket outlet. The electric meter adjacent to the distribution board is the old fashioned 'wheel' type meter and although the distribution board is relatively modern with mini circuit breakers (MBC's) the installation is old (Image 25). The notice on the distribution board notes the date of the last inspection as 23.01.1998 and the recommended date of the next inspection as 23.01.2001. Distribution is with the use of mineral insulated copper conductor (MICC) as this is fire proof and often specified for important historical buildings.

- 4.4.2 We would recommend that the whole of the electrical installation is checked and tested by a competent electrical engineer and regular testing is carried out thereafter. Depending on the results of testing the existing system may be deemed fit for purpose, however it would be prudent to consider that testing may show faults (MICC is notoriously prone to earth faults) and thus some electrical works will be required.
- 4.4.3 Should the electrical installation be required to extend for additional lighting as an example, the existing system will require upgrading and the incoming main will need checking for capacity. This should be borne in mind if a new scheme of lighting and power is to be designed which would increase the electrical load.
- 4.4.4 The rainwater drainage system for the whole of the cemetery site should be maintained in good working order especially given the issues discussed above concerning rainwater affecting the fabric of the building. We would recommend that the system is surveyed with CCTV equipment to ascertain the internal condition of the pipes. It is likely, given the proximity and growth of the trees adjacent to the chapel, that tree roots may be infiltrating the pipework and should this be the case these should be cut away with specialist drain clearing augers. Should the recommended works to provide rainwater downpipes and gullies be carried out as noted above the surface water drainage system will also require adaptation.

5.0 THE GROUNDS

This survey and report is intended to concentrate on the Chapel and Cloister and is not intended to encompass the grounds. However there are a number of items which are commented upon as follows:

5.1 Lych Gate

The lych gate to the front of the cemetery is an original feature constructed with the Chapel. This is showing signs of deterioration as one would expect of a structure standing for over 100 years and in particular the oak timber framing requires repair where rot has occurred to the joints between the posts and the sole plates (Image 26). The terracotta floor to the lych gate is very worn and consideration should be given to replacing this (Image 27). The tiling to the front right hand side of the roof has been repaired and repointed in recent years but this has been carried out with little consideration to matching to the existing and is so unsightly it should be replaced (Image 28).

5.2 Paths

The paths within the cemetery are in themselves an important feature of the site and add character as they wind their way around the cemetery. They are in various states of condition ranging from reasonable well-laid intact areas to deteriorated and potentially dangerous sections (Image 29). Open-jointed and dislodged stones are prevalent and these represent a serious health and safety issue (Image 30 and 31). We would recommend that all the stone paths are inspected and all unsafe areas are repaired as a matter of priority. Open-jointed paving will inevitably be an issue and potential hazard particularly where joints become quite large and form a trip hazard. We would thus recommend that a programmed to re-bed and re-point all stone cobbles/pavings be instigated. This work should also address issues concerning the displacement of edgings and level-up areas to create a safer pavement generally.

5.3 Boundaries

The boundary fences and walls to the cemetery are in various materials and conditions. The front wall adjacent the road has, in relative recent years, been rebuilt with new iron railings. This has dislodged brickwork adjacent the lych gate which should be re-bedded especially as it is in view at the front of the site (Image 32).

A detailed survey of the boundary and grounds was not undertaken but we can advise that they are in various states of repair and would recommend that a programme of replacement (or repair) is implemented.

6.0 THE CLOISTER

6.1 Structure:

- 6.1.1 The Cloister is constructed from structural brickwork with a solid back wall acting as a retaining wall to the high earth bank behind. The front and ends have brick arches with the front being uniquely formed with inter-bonded brickwork supported on terracotta columns (Image 4).
- 6.1.2 Some minimal cracking is evident to the brickwork indicating general movement which is to be expected for a building of this nature. However there is structural cracking to the front elevation around the arched brickwork to the eaves of the building which will require remedial works (Image 33 and 34). In addition, there is loose brickwork at eaves level where movement has occurred to the roof timbers over time. There are also a number of bricks which have become loose and dislodged which require repair (Image 35). We would recommend that the movement is monitored and as part of a refurbishment project, repairs are carried out which will encompass some rebuilding to localized failed areas.
- 6.1.3 Similarly to the Chapel, the Cloister's brickwork requires careful cleaning to remove the green algae growth which has taken hold over the years and as part of an overall refurbishment project we would recommend that all spawled bricks are replaced with matching bricks in lime mortar together with repointing to failed and open brick joints.
- 6.1.4 The rear wall to the Cloister is water stained indicating water has seeped through from the earth back behind. Upon inspection of the rear it is evident that a water separating and draining layer has been installed (presumably in 1994 as part of the refurbishment project), however this is open along the top edge and is therefore not providing complete protection (Image 36). We would recommend that a correctly detailed lead cover flashing is installed to provide protection along this vulnerable edge.
- 6.1.5 Inspection to the rear of the Cloister revealed a large quantity of tiles and materials which were presumably left over (or over ordered) for the reroofing project undertaken in 1994 (Image 37). These materials should be stored under cover, ideally in a building, to avoid them weathering and thus preserving their life for when they are required.

6.1.6 The floor to the Cloister is formed with terracotta pavers which are worn, cracked and spawling in areas and we would recommend these are repaired where necessary.

6.2 Roof:

6.2.1 The Cloister's roof structure can be viewed from below within the Cloister and is formed with oak beams and posts supporting a fully boarded deck with front a rear pitches and a flat roofed central section. We observed that some of the soft sap wood to the timbers had 'wood worm' and we would recommend that this should be monitored to establish if this is a live active infestation and if necessary this should be treated with a proprietary chemical treatment.

6.2.2 The overall roof structure appears sound and clearly has been repaired as part of the reroofing project undertaken in 1994. However there are indications of movement within the roof structure which have resulted in defects with the brickwork as noted above and we would recommend that some additional 'tie' timbers are installed together with a review of the fixings to the walls which should address the issue of movement more the future.

6.2.3 There are a lot of water stains to the roof timbers indication water leaks through the roof coverings. Some are old and presumably pre date the 1994 reroofing project. However given the condition of the roof coverings we would recommend that inspections should be carried out in wet weather to ascertain if there are current roof leaks.

6.2.4 Access on the roof was gained via a ladder off the high level embankment to the rear of the Cloister. The front and rear roof slopes are covered with 'under and over' tiles similarly to the Chapel and the central area has zinc covered sections interspersed with glazed roof lights (Image 38). The central area drains via lead lined rainwater chutes down the rear roof slope to cast iron gutters and downpipes.

6.2.5 Despite the reroofing project undertaken in 1994 the roof is failing in a number of areas. The zinc and lead work has already had numerous repairs carried out and roofing repair compound can be seen to have been applied (Image 39 and 40). The ridge tiles are badly deteriorated with many delaminating (Image 41). These tiles have been bedded using a poor lime mortar (presumably a weak hydraulic lime

mortar) which has not proved durable and has completely failed (Image 42). The mortar is flaking away as it weathers and in the majority of cases the pointing between the tiles has eroded such that water can enter the joint and percolate down in to the roof (Image 43). Most ridge tiles can simply be lifted off as there is little holding them in place (image 44).

6.2.6 The main tiled roof slopes are sound although there are some missing and cracked tiles which require repair.

6.2.7 The way in which the roof has been designed, with the raised zinc sections and roof lights, affords virtually no access for maintenance and repair and the narrow rainwater drainage channels entrap leaves and debris which hinders the free flow of water off the roof. Despite the Cloister being reroofed in 1994 we would recommend that this should be completely reroofed again but this time, correctly, with the use of properly specified materials and with some redesign so as to produce a durable solution. It is likely that the majority of the 'under and over' roof tiles can be reused and possibly the roof slopes may stay in-situ with only those defective areas being replaced as part of the reroofing project.

7.0 SUMMARY

- 7.1 The survey of the buildings and grounds at the Watts Cemetery has shown that deterioration and wear and tear have taken their toll on the buildings and components such that they are in need of repair and restoration. However, with careful thought as to suitable methods and materials and with a structured programme it will be possible to bring them back into good order and preserve them for further generations.
- 7.2 The main factor for the deterioration of the building's fabric is the effects of weathering, particularly rainwater and dampness issues. The report highlights the need to address how rainwater is disposed, thus removing, as far as practically possible, the cause of the problem. New gullies have been recommended together with the possible solution of providing gutters and downpipes.
- 7.3 The report recommends further investigation to some areas and in particular the provision of a suitable mobile elevated working platform (MEWP) to gain access to the high level areas of the roof and walls (including windows) and further to the inspection of these areas a supplementary report can be considered.
- 7.4 The roofs to the Chapel and Cloister are a main consideration and subject to the above investigation reroofing in whole or part may be required. Access onto the Cloister's roof has revealed that this is in a poor condition despite being reroofed in 1994. Unfortunately, the materials used for the project have not proved durable and premature failure has occurred. The majority of the clay tiles can be reused but this building does now need reroofing.
- 7.4 Testing of the electrical system and underground drainage system has been advised and further to the result of these tests consideration should be given to how these items are suitably dealt with.
- 7.5 The recommended programme of work contained at the rear of the report shows the possible works highlighted from the report and illustrates these over a 10 year period. This shows a total expenditure of £331,500 (+ Vat) but this should be reviewed subject to the findings of the further investigations as recommended in the report.

8.0 PHOTOGRAPHIC RECORD





<i>Image Ref</i>	<i>Description</i>	<i>Note</i>
1		Watts Chapel
2		The lych gate
3		Front wall and iron railings
4		The Cloister





Image Ref	Description	Note
5	 A photograph showing the exterior of the Watts Cemetery Chapel and Cloister. The building features a prominent central gable with a large arched window and is flanked by two tall, narrow towers. The facade is light-colored, possibly terracotta or stone.	View from main entrance path
6	 A close-up photograph of the front entrance door. The door is dark and set within a large, arched opening. The surrounding masonry is made of reddish-brown terracotta blocks, featuring intricate decorative patterns.	Terracotta detailing around the front entrance door
7	 A close-up photograph of a wall section showing spawled terracotta detailing. The wall is composed of light-colored, rectangular blocks. A decorative element, possibly a window surround or a niche, is visible, featuring a complex geometric pattern. A timestamp '25/04/2012 13:00' is visible in the bottom right corner of the image.	Spawled terracotta detailing
8	 A close-up photograph of a spawled terracotta column. The column is made of reddish-brown terracotta blocks and is positioned next to a window opening. The surrounding masonry also features spawled terracotta detailing. A timestamp '25/04/2012 13:00' is visible in the bottom right corner of the image.	Spawled terracotta column to side of window opening





Image Ref	Description	Note
9		Spawled terracotta corbel course to bell tower
10		Spawled brick plinth adjacent to the entrance door
11		Spawled brick plinth
12		Rainwater gully within brick paving Note: previous replacement bricks (non-matching)

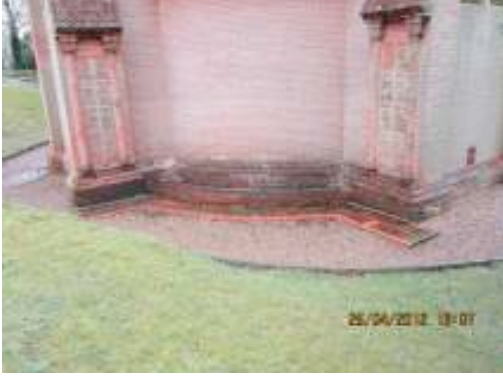



Image Ref	Description	Note
13		Rainwater splashing onto building saturating the brick plinth and creating a 'water line'
14		<p>Trees shield the building preventing drying out by the sun</p> <p>Note: Green algae growth over the façade</p>
15		Dampness causing deterioration of the brickwork with open joints where mortar has fallen out
16		Missing tile to roof edge (centre of picture)

























Image Ref	Description	Note
17		Interior of the chapel (viewing up to vaulted roof)
18		Interior of the chapel
19		Decorative plasterwork requires some specialist repairs
20		Crack to plaster decorative band





Image Ref	Description	Note
21		Rotten oak post to lectern
22		Floor socket the source of dampness
23		<p>Curved stone benches</p> <p>Note: chipped and worn edges</p>
24		Interior view of oak entrance doors

<p>25</p>		<p>Incoming mains electric, meter and distribution board</p>
<p>26</p>		<p>Rot to joint on lych gate</p>
<p>27</p>		<p>Worn floor to lych gate</p>
<p>28</p>		<p>Poorly repaired roof to lych gate</p>

<p>29</p>		<p>Main path</p>
<p>30</p>		<p>Open jointed defective area of paving</p>
<p>31</p>		<p>Loose edging to path</p>
<p>32</p>		<p>Defective brickwork to front wall adjacent the lych gate</p>

<p>33</p>		<p>Cracking to brickwork at the front of the Cloister</p>
<p>34</p>		<p>Crack in close up</p>
<p>35</p>		<p>Dislodged brick</p>
<p>36</p>		<p>Damp proof membrane to rear of the Cloister</p>

<p>37</p>		<p>Stacked tiles to the rear of the Cloister</p>
<p>38</p>		<p>Roof over the Cloister</p> <p>Note: leaves and debris</p>
<p>39</p>		<p>Previous repairs to roof</p>
<p>40</p>		<p>Previous repairs to roof</p>

41		Delaminating ridge tiles
42		Defective mortar
43		Defective mortar
44		Tiles can be simply lifted off