

**Management proposals for a historic  
garden site at Grotto Wood, Roxford,  
Hertingfordbury, Hertfordshire**

**centred on NGR: TL 301 105**

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**Report to Groundwork Hertfordshire & SQ Environmental**

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### **Summary statement**

Grotto Wood, Roxford, Hertingfordbury, is a small wood of about 1.75 hectares (4.32 acres) in the Lea valley in Hertfordshire. It is about 1.5km SW of the village of Hertingfordbury, and contains the substantial earthwork remains of a formal garden of possible late 17<sup>th</sup>- or 18<sup>th</sup>-century date. Gravel extraction and waste disposal has taken place to the west of the wood, and this area has since been restored. Extraction, waste disposal and progressive restoration is currently taking place to the NE of the wood. Concern has been expressed over the potential impact of these activities on the historic site in Grotto Wood. This led to an earthwork survey being carried out in 1995 by C K Currie, followed by the presentation of the report for publication in *Hertfordshire Archaeology*. More recently Groundwork Hertfordshire, on behalf of SQ Environmental, have approached the author to make an assessment of the present site that will include management recommendations for the long-term preservation of the site and for its access and presentation to the public. The work was carried out by C K Currie of CKC Archaeology for the client.

The assessment of the site is included in a separate report.

Proposals for the sustainable management of the site are put forward in this report. These include tidying the site up, consolidating the earthworks, and making them more accessible to interested members of the public. It is hoped that it will prove viable to manage the woodland as a coppice. The possibility of designation of the earthworks as a Scheduled Ancient Monument is discussed, and it is recommended that such proposals be supported in conjunction with the management proposals put forward in this report.

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## **Management proposals for a historic garden site at Grotto Wood, Roxford, Hertingfordbury, Hertfordshire (centred on NGR: TL 301 105)**

### **1.0 Introduction**

Grotto Wood, Roxford, Hertingfordbury, is a small wood of about 1.75 hectares (4.32 acres) in the Lea valley in Hertfordshire. It stands on near the top of a ridge about 200m north of the River Lea, formerly in an open countryside of fields, dispersed farmsteads and small woods. Gravel extraction and waste disposal has taken place to the west of the wood, and this area has since been restored. Extraction, waste disposal and progressive restoration is currently taking place to the NE of the wood, and is mainly shielded from site by screening mounds. The quarry is not immediately apparent when approaching the wood from the south or SE, where the farmland appears to remain largely unaltered.

The wood is about 1.5km SW of the village of Hertingfordbury, and contains the substantial earthwork remains of a formal garden of possible late 17<sup>th</sup>- or 18<sup>th</sup>-century date. Concern has been expressed over the impact of the quarrying activities on the historic site in Grotto Wood. This led to an earthwork survey being carried out in 1995 by Currie (1995), followed by the presentation of the report for publication in *Hertfordshire Archaeology* (Currie forthcoming). More recently Groundwork Hertfordshire, on behalf of SQ Environmental, have approached CKC Archaeology to make an assessment of the present site that will include management recommendations for the long-term preservation of the site and for its access and presentation to the public. The work was carried out by C K Currie and Sybil Wade for CKC Archaeology on behalf of the client.

### **2.0 Summary assessment of the site as a historic feature**

A detailed assessment of the site has been reported on elsewhere in C K Currie and S Wade, *An assessment of a historic garden site at Grotto Wood, Roxford, Hertingfordbury, Hertfordshire*, unpublished client report, 2001. This report supercedes the earlier report by Currie (1995). A summary of the conclusions are given below.

The earthworks in Grotto Wood are a fine example of an unusually well-preserved small formal garden. Although associated with Roxford manor house, a minor country residence, they could not be seen from the house. They do not appear to have provided significant views or vistas back to the house, either. The principal feature of the gardens seems to have been a grotto at its southern end. This is now marked by a large, but irregular, crescent-shaped mound just beyond the lowest of the three ponds. At the other extreme (north) of the garden is a large formal mound from which excellent views of the garden and the valley of the River Lea could once be obtained.

Two points seem to make this garden unusual, besides the fine state of preservation of the earthworks. These are the distance that it was located from the house, and the late date that it seems to have been admired. Although it is possible the garden was begun in the later 17th century, it was probably created in the early years of the 18<sup>th</sup> century. However, it does not receive any salutary notices until the second half of the 18th century, when formal gardens were supposedly out of fashion. The site is therefore one of a growing

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body of formal gardens that may have still been developed and admired at a time when garden historians once considered they would have been despised.

### **3.0 Strategy**

This report has set out:

1. To assess the impact of the waste-disposal site on the wood and its landscape, and to offer suggestions for mitigation.
2. To make recommendations for future management
3. To discuss how public access to the site may be best approached, and how the site may be presented to the public.

The work was carried out by making visits to Grotto Wood to assess the present condition of the site and its landscape. This was aided by Sybil Wade, a landscape architect, who has worked with CKC Archaeology on a number of historic designed landscapes. A reappraisal, in the light of the new requirements, was made of the existing historical research undertaken in 1995. This has been issued as a separate report.

### **4.0 Management proposals**

#### **4.1 Perceived threats**

The archaeological and historic interest in Grotto Wood is currently suffering from dereliction. Most of the damaging factors being applied to the internal part of the site result largely from neglect. The potential for damage to the earthworks is identified as:

1. Damage from unmanaged tree roots, in particular invasive sycamore saplings and elder.
2. Damage from burrowing animals.
3. Damage from fallen trees, particularly around pond edges.
4. Excessive leaf detritus is seriously silting up the ponds, and making them ecologically restricted.
5. Nettles and brambles growth has become excessive in recent years, obscuring the earthworks as currently known, and possibly hiding other discrete features.
6. Elm suckering is threatening to overwhelm the outer bank and ditch.
7. There is a possibility that nearby quarrying may ultimately affect the spring that feeds the ponds.

The site is also being affected by external factors:

1. Some rubbish is being blown into the wood from the nearby waste disposal site, causing it to look unsightly.
  2. The excavation of the quarries around the site has partly divorced the site from its overall landscape, but it is understood this is temporary, pending ongoing restoration. This detachment is mainly on the north side, and the earthworks created to shield the quarry from sight have encroached close to the outer boundary of the wood, but it is understood that it is a requirement of the planning permission that these will be removed as restoration operations proceed.
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3. The possibility of further quarrying to the east, west and south of the wood would have a far more serious affect on the site as it would threaten to divorce it from the Roxford manorial site for which it was once a part. There is also a possibility that other features associated with the landscaping of Roxford manor could exist in the fields to the SE of the site. These have been largely undistrurbed by ploughing and other activities. Provisionally observations here suggest that further, less impressive, earthworks may exist here acting as an important link between the earthworks in the wood and the original moated site. It is understood that SQ Environmental does not own the land to the SE of the wood. The Company has confirmed that it does not intend to carry out extraction or waste disposal operations on the land that it does own to the south of the wood.

## **4.2 General management proposals**

The following suggestions are put forward as possible solutions to the above perceived threats:

### **4.2.1 Ecological and tree survey**

Before any work commences on site, it is necessary to undertake both an ecological assessment of the site and a measured survey of the trees within the wood. The ecological assessment will be used to identify any conflicts of interest between the requirements of the wood as an archaeological and historical site, and existing ecological interest therein, including the presence of protected species. It should be stressed that the importance of this site has been identified in the archaeological and historical interest it contains, and, at the moment, this would seem to be paramount. The ecological assessment should be undertaken strictly on the principle that deviation from the recommendations given for the benefit of the archaeological and historical interest should only be made where matters of significant ecological interest are concerned.

Following the completion of the ecological assessment, a measured tree survey will be required. This will be need to accurately record the trees prior to work commencing, and to note the exact position of material to be retained and of that to be removed.

### **4.2.2 General unsightliness**

The problems arising from the vegetation of the wood can be dealt with under this heading. Both the condition of the earthworks and their perception by the visitor could be improved by a careful tidying up of the wood (taking care not to be too excessive) and the instigation of a sustainable management programme.

#### **4.2.2.1 Removal of undergrowth.**

The removal of selected bramble, nettles, elder and other vegetation that would be termed 'undergrowth' could do much to improve the visual perception of the site. This would also arrest some of the lesser root damage being caused to the earthworks. Making them more visible could further aid their interpretation as there may be lesser earthwork forms that have been missed in the initial survey of 1995. Although this was undertaken when the undergrowth was at its least extent, the cover in places was still considerable.

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The removal of this material should ideally be undertaken manually. It has been suggested that a small tracked dumper might be used, but this author is not at ease with this proposal, because tracking around the site could damage not only the earthworks, but fragile archaeological layers indicating garden layout in the flat areas on the site where parterres and less dramatic features, such as plant beds, existed. Vehicles used to remove the cut material should be stationed outside the wood, and material taken by hand to specified loading points there.

The solution to this problem is possibly the least controversial requiring discussion here. First the undergrowth that needs to be removed entirely from the site needs to be identified. This will certainly include all bramble, nettle and elder on the earthworks, but other scrubby material yet to be identified may also need to be removed. In particular, much of the scrub on the spiral mount requires removal. Once this has been achieved it is possible that a reappraisal of the earthworks will be required. Elder roots should not be grubbed out as this will damage the earthworks. Instead they should be treated or ground to prevent regrowth.

Some consideration should be given to the re-use of the removed material. If possible the plant material should be taken to a recycling depot with a view to having it reduced down as garden compost.

#### **4.2.2.2 Removal of sycamore**

The removal of some larger invasive plant material will be the next requirement in the tidying process. This will consist of the removal of most of the sycamore that has grown in or along the line of the ponds. Most of this comprises young growth. This will require removal using mechanised saws operated by qualified tree surgeons. Where mature sycamores exist in healthy condition it may be necessary to consider whether they can be left standing. It has been suggested that, for practical management, it might be better to remove all the sycamore to prevent further seeding. If necessary, this would not be objected to, and the decision on this can be left with the client. However, it should be noted that clearance of mature trees could cause invasion by other unwanted species. If such clearance is undertaken, the resultant situation should be closely monitored.

As far as possible, this material should be removed manually without bringing vehicles into the wood. The guidelines given for the removal of the lesser undergrowth should be followed. Also consideration should be given to the disposal of the removed material, both as recycled compost, and as wood that can be reused in some form. Even advertising for local people to take it away for burning on domestic fires is preferable to burning it needlessly in a waste tip. Alternatively, it can be left stacked in a suitable spot in the wood, away from the earthworks (both along the line of the ponds and the perimeter path), where it might provide a habitat from wildlife.

Sycamore stumps should not be grubbed out as this could damage the earthworks. Instead they should be treated or ground to prevent regrowth.

#### **4.2.2.3 Removal of dead wood**

The next stage of the tidying process is the removal of the fallen mature trees from the site. This is problematic as they are large and heavy, and it is difficult to imagine their

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removal without mechanised assistance of some kind. The heavy tracked vehicles required to remove this material could cause considerable damage to the earthworks and any fragile archaeological levels in the flatter areas between (as in point 1). This work should not be carried out until all the undergrowth and sycamore have been removed from site.

It is possible that some areas of dead wood may be of particular ecological interest. Dead wood needs to be removed where it is overlying earthwork features or where the trees have fallen into the ponds. However, should the ecological survey identify areas of exceptional interest outside of these areas, some discussion will be required concerning which dead wood ought to stay. Leaving some dead wood *in situ* could help encourage floral and faunal diversification.

Any dead trees still standing should be identified. These should be reduced in height to minimise risk of tree throw, and left standing as havens for wildlife. Care should be taken to ensure any such trees are made as safe as possible to prevent accidents to members of the public visiting the site. Stumps should not be pulled out as this could damage the earthworks. Instead they should be treated or ground to prevent regrowth.

The management may need to take specialist advice from machine operators to determine how the removal of dead trees can be best achieved. The following guidelines for machinery will need to be followed:

**i) Contractors** - Silvicultural activities in woodland are not always undertaken by the owner, tenant or manager, but by outside contractors or forestry operators. The following guidelines are for those who are actually carrying out the works' management in the woodland, usually timber contractors. It is recommended that these guidelines are included in a simple contract of work, or are issued to contractors before commencing work.

**ii) Marking out of working areas within a wood** - the area to be worked should be clearly defined. The boundaries should where possible follow woodland boundaries, tracks, wood-banks or the boundary of a previously worked area. Where this is not possible, the boundaries should be clearly marked using tape or marks painted on retained trees.

Areas of archaeological interest (e.g. earthworks) and ecological importance (e.g. wet flushes) should be marked out both on the ground and on a management map so that they are avoided. Mark using sticks and flags placed on the outer boundaries of the feature, and not on or in the middle of earthworks.

**ii) Extraction** - Access to the working site should be along clearly defined routes, agreed with the contractor, avoiding archaeological and ecological areas of interest.

Extraction of dead timber should be in dry or frosty conditions and would normally be expected to occur in summer months, with the timber and cordwood stored neatly and safely. Routes of extraction must avoid sites of archaeological and ecological interest. Where routes are damaged during operations, the contractor shall reinstate the surface where required by and to the satisfaction of the owner. Where any watercourse including ditch and drain becomes obstructed by the contractor's operation it shall be cleared within one week of receiving instructions to do so from the owner.

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It is possible that some of the dead wood can be cut up and moved to a location away from the earthworks, and left to rot *in situ*.

#### **4.2.3 Retaining species diversity**

The outer bank of Grotto Wood is of some species diversity, and this should be maintained. The bank will require some general tidying and trimming of dead wood. It is possible that a partial reinstatement of the hedge on the outside of the wood might be attempted, although if this requires the planting of new plants this could cause damage to the archaeology of the outer bank. The elm suckers colonising the ditch and far bank could become a problem, and may need to be cleared back to the boundary hedge at some future date.

Mechanised cutters (ie those pulled by tractors) should not be used on this boundary, although chain saws for removing dead wood is permissible.

There are also other areas of species diversity identified in the assessment report (Currie & Wade 2001). Where these are outside of the main earthwork areas, retention of identified species could be encouraged.

#### **4.3 Archaeological management**

The management proposals put forward here for tidying up the site and suggesting the implementation of sustainable management should not be confused with restoration. It is considered that only by reacting positively to the site that we can ensure the good preservation *in situ* (as far as possible) of the archaeological remains. It is not proposed to try to reconstruct any of the features described by 18<sup>th</sup> century commentators. In fact the reverse is required, and it should be stated that restoration of any of the built structures that once stood in or on the earthworks should not be attempted under any circumstances for the foreseeable future. Ill-thought out and damaging garden restorations have been too much a feature of the later 20<sup>th</sup> century (eg Currie 1996), and the practice should be discouraged unless special circumstances arise (Currie 1992, Currie & Locock 1992), and these are not applicable here.

It is further stressed that the management of Grotto Wood needs to be sustainable otherwise it could be better to leave well alone. The management will need to make a commitment to sustaining the site over the long term. Although initial clearance and survey costs could be relatively high, management thereafter might be fairly light. Local people, with possible encouragement from the Hertfordshire Gardens Trust, should be encouraged to form a 'Friends of Grotto Wood' to help with the maintenance. Such schemes have been shown to be successful where used by the Hampshire Gardens Trust, and often only require one or two days concerted effort each year.

- i) Following the tidying up of the site, the layout of the known earthworks may be clarified, and new lesser features identified. In particular the line between the mount and the grotto along the ponds should be kept clear so that the original vista can be appreciated. Although it is hoped that damage to the earthworks will not occur during the tidying, the possibility should be considered. It may
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therefore be necessary to undertake a revised earthwork survey. This should include the identification of any damage.

- ii) Should the earthworks be damaged, either during the tidying up process or later, the damage should be made good using appropriate materials. Once undergrowth etc has been removed, grass seed should be sown on the earthworks to stabilise them. There are a number of solutions to more serious damage, including the laying of inert protective matting, such as Greenfix Type 13, prior to reinstatement (Berry 1994, 47-8)
  - iii) Burrowing animals are a problem on all earthwork sites, but account will need to be taken in the management proposals of any protected species already present within the wood. It is possible that the removal of cover might act as a partial deterrent to their activities (Thackray 1994, 104), but this should not be relied upon. Rabbits in particular should be discouraged, and active measures sought to reduce their numbers on the site (Barclay 1994; Agricultural Development and Advisory Service 1988). Should the problem be considered serious, the areas worst affected can be treated by laying anti-rabbit netting, such as Wyretex Fabric Type 8 (Berry 1994, 49; Haygarth 1994, 158-9), allows grass sward to grow between the mesh yet effectively prevents them burrowing into earthworks. It is suggested that a layer of Wyretex might be considered as cover for the mounds at both ends of the site until a grass sward or other suitable vegetation has established itself.
  - iv) It is suggested that the raised walk around the outside of the site is kept clear of vegetation. However, this should not include the outer boundary hedge on the outside of the walk, or any mature trees growing on it.
  - v) The ponds are currently heavily silted through the deposition of (mainly sycamore) leaf detritus. This is a fairly recent occurrence as Patience Bagenal (pers. comm.) can remember when the ponds were used for skating in winter. This has led to the ecology of the ponds becoming restricted. It is considered that it would be beneficial to carry out work on them to try to create a more varied ecology, possibly one that will sustain fish as described by Dick in the 18<sup>th</sup> century (op cit). Much of this detritus and silt can be removed causing minimal damage to the archaeology of the ponds, but it needs to be done with care if this is to be achieved.
  - vi) In order to carry out (v), samples of the silts need to be taken for analysis. It is considered that this may not prove to be particularly helpful as the type of archaeological information required from the ponds may no longer be present. In nearly all cases the only information obtainable from pond silts dates from the time when the pond was neglected (eg Currie 1990). While in use they were normally cleaned out regularly, thereby removing the evidence. Nevertheless, it is imperative that the work is undertaken to check this otherwise silt removal should not be carried out.
  - vii) The method used for the removal of the silt should be carefully considered. The fragility of the archaeology requires a viable method that does not require heavy machinery inside the wood. Should it be decided to undertake this work, it needs
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to be carried out with the minimum of movement from the machinery. It is essential that special tracking is installed for the machinery to operate on, with the excavator unloading into a dumper truck that enters and leaves the site by a single route. The silt should be temporarily dumped outside the site, making sure that slurry does not wash downhill into channels leading into the River Lea, and thus endangering fish stocks by deoxygenation.

- viii) There is a possibility that continued quarrying in the vicinity could affect the supply of water to the ponds in Grotto Wood. This needs to be monitored. Methods for monitoring the water table on archaeological sites are available and are discussed by Matthew Davis (1996) of Hunting Land & Environmental Ltd. Monitoring equipment could be installed near the spring source (believed to be at the north end of the upper pond).
  - ix) Any changes in water quality should be monitored in the ponds to ensure that the ecological habitat is not being polluted. The water quality in the ponds is currently monitored by SQ Environmental, as part of the waste management licence for the Southfield Wood landfill site. It is understood that no adverse impact on the quality of the water has been identified since the landfill operations commenced. The Company state that water quality monitoring will continue throughout the operational and post closure period of the landfill site, as this is a requirement of the waste management licence.
  - x) Should the water table and quality remain relatively stable, and provisions for the cleaning out and reinstatement of the ponds prove viable, it may prove possible to keep fish in the ponds. The most likely fish to have inhabited the ponds in historic times is the common carp. Any stocking of fish should be undertaken strictly on the understanding that active management of the stock would not be viable, and they would have to be left to their own devices.
  - xi) SQ Environmental carries out regular litter picking around the Wood but, as a result of this report, the Company has increased the frequency of litter picking around the Wood.
  - xii) There is an old wooden caravan in Grotto Wood by the middle pond. This is a reasonably well preserved feature, possibly of 19<sup>th</sup>-century date. It has clearly been brought on to the site for pheasant management. It has iron wheels and was clearly horse-drawn. It could make an attractive feature. Rather than tow it away for scrap, it is suggested that it is restored, made safe, and left as a feature. However, its load bearing capacity is unlikely to make it suitable for internal access by visitors. It might serve for placing an information board on the outside, in which case, it might be better positioned near the entrance to the wood.
  - xiii) No archaeological site should be treated in isolation. There is a need to relate Grotto Wood with its historic landscape. The link with the landscape to the south is very important, as the garden earthworks were managed historically from Roxford manor, 150m to the SE. Recent fieldwork has suggested that some earthworks survive in the fields between the old moated site (now abandoned) and Grotto Wood. This link needs to be maintained, and any connecting earthworks preserved.
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- xiv) A measured survey of these earthworks would be useful and further research could be undertaken into their link with Grotto Wood.
- xv) Aerial photographs in the National Monuments Record Centre, Swindon, Wiltshire, seem to show that there had been cropmarks of an unidentified type immediately to the north of Grotto Wood (NMR TL 3010/1-4, 14-15). This area was subject to a detailed archaeological evaluation in 1994, carried out by the Hertfordshire Archaeological Trust. Investigative works involved the excavation of 40 trial trenches and revealed the presence of a ditch that may be an old field boundary. No other archaeological features were found.
- xvi) A full listing of all management products mentioned in this section, plus other varieties that may be of use can be found in Haygarth (1994).

## **4.4 Woodland Management**

### **4.4.1 Introduction**

Once the tidying of the woodland and the consolidation of the earthworks has been undertaken, the wood should be managed as a mixed species woodland with coppices, retaining those mature trees that have survived, subject to safety constraints. The following guidelines are those recommended by Surrey County Council. They were written by Dr Nicola Bannister for the Council, and are adapted into management recommendations written by this author for Areas of Special Historic Landscape Value (ASHLV) in that county (eg Currie 1999; 2000). They are adapted here to take account of the local conditions in Grotto Wood.

The client will need to consider the value of the coppicing rights. This is unlikely to be great, and it may be more effective to offer these rights to an environmentally-friendly operator, who would undertake to perform certain general management tasks in return for free use of the coppicing rights. For example, the regular cutting back of undesirable undergrowth could be part of the contract between the woodman and the client. As well as keeping the site tidy, this would discourage rabbits and other vermin.

### **4.4.2 General woodland management**

- i) Any woodland management in Grotto Wood needs to treat the preservation of the earthworks as a priority. Any woodland management techniques used should minimise disturbance to the earthworks and other archaeological remains.
  - ii) Locate access routes away from archaeological sensitive areas. Once the wood has been tidied up, motorised vehicles should not enter the wood for routine management purposes, and should only be given access in situations of extreme emergency. Coppice management and removal of spires should be by non-mechanised means.
  - iii) Before commencement of any work within a wood, identify and mark out the areas of archaeological interest and inform those working of these areas.
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- iv) The regeneration of standards should be from trees brought on from natural regeneration. Species and density of standards should be in keeping with the traditional composition of the woodlands. Regeneration should be restricted strictly to locations away from earthworks and archaeologically sensitive areas.
  - v) To maintain and encourage a diverse fauna some dead wood may be left in areas of invertebrate interest, particularly in areas of wet hollows (but not in the ponds), but only if this does not conflict with the archaeological interest.
  - vi) Avoid taking machinery over banks, along old trackways, and over known archaeological sites even in emergency situations.
  - vii) Keep scrub growth on features to a minimum by cutting back initially (and if necessary spot treat strips with herbicide) rather than pulling up or grubbing out. Thereafter it is better to pull out any seedlings that occur on an annual basis. Cutting encourages sycamore to coppice, and this should be avoided on earthworks where possible.
  - viii) When replanting, again avoid archaeological sites and also any pollards (which require light and a 'free, unimpeded' crown to flourish).
  - ix) If any remedial repair work is required on any archaeological area within the wood a full archaeological record of the state of the damage, and the extent and method of repair should be undertaken.
  - x) Boundary marker trees on wood-banks should be retained and where possible re-stubbed or pollarded. If the existing tree is too old then a new individual of the same species should be managed as a replacement. If possible this should be propagated from the old tree. This will maintain the continuity of the old boundary.
  - xi) The control of pest species such as grey squirrel and deer may be necessary. However, the use of herbicides and pesticides in the woods should be avoided where possible. If it is deemed necessary in areas with potential high nature conservation interest then consultation with English Nature is recommended. Elsewhere spot treatment using recommended tree and shrub materials should be undertaken. (This statement does not exclude herbicides, it merely urges caution in using them.)
  - xii) The wood should not be used in future for the breeding or keeping of birds for shooting (eg pheasants). It is recommended that all traces of pheasant feeding areas are removed, and the practice discontinued. However, there would be no objection to managed shooting in the wood or its vicinity provided it did not involve the active encouragement of these birds therein.
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#### 4.4.3 Species specific management

- i) All remaining large mature trees should be left standing (oak, ash, hornbeam).
- ii) The large old sycamore stool and its stems may be retained for historical value if considered practical (but see above, section 4.2.2.2). Other sycamores can be removed by methods indicated above.
- iii) Suckers of English Elm cleared back to the boundary hedge, but left in the hedge itself to act as a reservoir for when the Dutch Elm Disease declines. Since these elms are connected at their roots specialist advice should be sought for the best way to kill encroaching suckers without wiping out the entire stock. The Huntingdon Elms within the site should be retained where possible.
- iv) Retain field maple and wild cherry. The cherry will sucker to form clumps, and will need to be thinned occasionally to achieve healthy trees. Note that the cherry is fairly light-demanding and in the long term should be encouraged on the edge of the wood where it will do better.
- v) The yews should be retained where possible, except for the part fallen yew in the north pond. This should be removed.
- vi) Additional coppice may be planted as required, preferably propagated from existing plants. It should be noted that it would be wrong to assume the original woodland was entirely hazel coppice. The evidence discussed above suggests that hornbeam was coppiced here in the past. It is suggested that the coppice composition includes a good percentage of hornbeam.
- vii) Elder should be largely cleared from the site, leaving only a proportion on the wood edge for its wildlife value.
- viii) Willow scrub and hawthorn can be left. Bramble and nettle can be left in selected areas away from the earthworks for their wildlife value, but should be removed entirely from the earthworks.
- ix) The *Cornus* can be left except on the mount and other archaeological features. They are of wildlife value, but will require controlling from time to time as they spread.

#### 4.5 Access and education

An important reason for preserving archaeological sites is for educational purposes (English Heritage 2000, *passim*). In order for them to educate, the public need access. There has been public footpaths around Grotto Wood for as long as historic records exist for the site. These need to be maintained. Should they need to be diverted, this should only be a temporary measure, and the rights should be reinstated as soon as the quarries are restored. The questions of access and the provision of educational facilities are discussed here.

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i) There is a need to retain access to Grotto Wood. At present this only allows the public to walk past the wood, but not to enter it. Once the site has been tidied up, the management should consider making entry to the wood permissive.

ii) Access to the wood should be via the SE corner. This was the historic entrance, and it survived as such until after 1995. This has now been blocked off and the ditch extended across the entrance. It is suggested this is re-opened, by making an unobtrusive bridge over the ditch.

iii) Access to the site should be promoted by using public rights of way from the east (ie St. Mary's Lane). This would involve using Bridlepath No.2 (passing Roxford Farm and Leaside Cottage) and Footpath No.3 (running north from BR2). Although access from Water Hall can not be prevented, this should not be promoted.

iv) Considerable thought needs to be given to public access, as earthwork sites are highly favoured by teenagers riding motorcycles and BMX bikes. This, and similar activity, has proved to be highly damaging to a number of earthworks nationwide (eg Frodsham 1994, 64; Streeton 1994, 9). This type of visitor needs to be actively discouraged, and some form of impediment needs to be installed to discourage them from entering the site, as it will be highly suitable to their destructive activities once tidied of obstructive undergrowth. It is suggested that the outer bank of the site is fenced, and the gate into the site made to admit pedestrians only. They have even been known to use chainsaws to cut through barriers to gain access. It is therefore suggested that the barriers should be got up as soon as possible before these vandals have time to discover the site's potential.

v) The site should be signposted from St Mary's Lane on the two footpaths noted above. These signs should be simple so as not to attract undesirable visitors and vandals. It should state 'Grotto Wood historic site' and no more. This should be sufficient for any genuinely interested member of the public. The management does not want to turn the wood into a major tourist attraction, merely reserving it as a low-key site for intelligent and inquiring people to visit in small numbers.

vi) A laminated notice board should be discretely sited at the entrance. This should be made of vandal-proof materials as far as possible. It should contain a short description of the site, a note on the ownership, and a request to respect the site on the left hand side. On the right hand side should be a plan of the earthworks, with four or five of its most important features marked. The information should be simple and to the point, and should avoid any complex narrative or conjecture.

vii) Further, more detailed, information must be given on boards attached to the outside of the wooden caravan. This should be made safe, complying with Health and Safety regulations. The information on the caravan should be presented on vandal-proof boards on the walls. This should include a note about the caravan, which is an interesting historic feature in its own right. The boards should give an address that the more interested public can contact for further information. It is possible that the management should produce a short guide book that can be obtained for a modest (subsidised) price on receipt of a stamped addressed envelope. It is not considered viable to leave leaflets in the wood itself, even in waterproof containers.

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viii) The caravan should have a sign on it in large letters stating 'Welcome to Grotto Wood'. Although not foolproof, such signs can disarm the less persistent vandals, and keep the displays in good condition longer. The management should recognise that vandalism of the visitor facilities are inevitable.

In the first year of being opened to the public, it would be worthwhile to send a member of staff to visit the site regularly (once a week) to check for vandalism. This could coincide with the removal of litter blowing in from the waste disposal site. A presence from the management, plus that from the woodman, if regular in the first year or so, may set the precedent with potential vandals that discovery is a possibility. This could help discourage them.

ix) Once the quarry and waste disposal site has been restored, and SQ Environmental no longer maintains a permanent presence on the site, there will be a need to consider how the management of the site should be maintained. There are two possibilities that spring immediately to mind. The first is to donate the site to the local council, or another appropriate body, on condition that they maintain the management. The second is to set up an independent trust, which would be responsible for the management of the site. This would be feasible if a secure source of funding for the Trust could be demonstrated.

x) It is considered that it would be an aid to sustainability of the site if the earthworks could obtain some recognised status. The best option for this site is for it to be designated as a Scheduled Ancient Monument (SAM) by English Heritage. It is understood that English Heritage is presently considering this status for the site. The earthworks are well-preserved, and are a fine example of a smaller formal garden of the lesser gentry. Such sites have been largely ignored in favour of the grander country houses, and as Turner (1992) has stated, there is an urgent need to recognise that these rare sites will help to strike a balance in our perception of garden and designed landscape history.

SAM status should be viewed positively. Although it can result in constraint on the owner, it also recognises 'the public responsibility to help private owners', and care can be encouraged through the receipt of grant aid in certain cases (English Heritage 2000, pt 4, 9-11). Should SAM status be confirmed, Scheduled Monument consent will be needed for some of the work outlined in this report.

## **5.0 Conclusions**

Proposals for the sustainable management of the site are put forward. These include tidying the site up, consolidating the earthworks, and making them more accessible to interested members of the public. It is considered that water monitoring is required as a preliminary to the possible desilting and reinstatement of the ponds. Should it prove viable it may be possible to stock the ponds with fish, and manage the woodland as a coppice.

The possibility of designation of the earthworks as a Scheduled Ancient Monument is discussed, and it is recommended that such proposals be supported in conjunction with the management proposals put forward in this report.

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## 6.0 Copyright

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## 7.0 Acknowledgements

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## **Appendix: Guidelines for the management of archaeological sites: general principles and legislation**

### **1.0 Introduction and general principles**

#### **1.1 Introduction**

The Guidelines given here are adapted from those laid down by Surrey County Council for land in their management. These Guidelines were written in their draft form by Dr Nicola Bannister, and have been adapted by the present author with regard to their relevance to the Grotto Wood site.

It should be noted that the Guidelines given here are of a general nature. The reader is referred to the main text for specific recommendations that apply to individual parts of the site.

#### **1.2 General principles**

The purpose of any Archaeological Management Guidelines is to provide the basic recommendations for the preservation of archaeological features and the conservation of the historic landscape in question. These guidelines have been drawn up from published material, and the authors' experience. Although the guidelines are for archaeology, where possible they have been integrated with objectives for any nature conservation interest there may be within the estate. The guidelines are to be used as appropriate according to the characteristics of the land, and have been tailored to suit these individual requirements.

The client should realise that any guidelines given in this report represent best practice. In some cases practical usage of the land may not allow these high standards to be fully implemented. The writer recognises the practical limitations of the guidelines in certain circumstances. However, the client is urged to try to attain these standards whenever possible. If they can not be maintained, advice should be sought from the Archaeological Section of Hertfordshire County Council for methods of mitigating the impact of any damaging operations.

The **Key Management Guideline** for any archaeological feature or site is *to minimise the amount of disturbance*. Physical disturbance can be either man-induced such as through development, forestry such as planting and harvesting, or agricultural practices such as cultivation or outdoor pig-rearing. Similarly insidious activity such as burrowing into extant earthworks by rabbits and the like, or through root action by trees and shrubs; the latter is often the result of neglect or abandonment of positive land management. Chemical disturbance to stratified deposits occurs through drainage, root action and chemical applications (e.g. fertilisers and pesticides).

How a site or feature is managed depends upon its form or structure, but the main rule to remember is to minimise the disturbance both during any management action and afterwards; for example when removing tree and scrub growth from a barrow, and preventing any subsequent erosion of the profile by access or water.

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## **2.0 Statutory protection of archaeological sites that may become relevant to Grotto Wood**

### **2.1 Ancient Monuments Legislation**

The Ancient Monuments and Archaeological Areas Act 1979 (AMAA Act 1979) provides the statutory protection for archaeological sites of national importance. The Act defines a monument as:

- a) any building, structure or work, whether above or below the surface of the land, and any cave or excavation;
- b) any site comprising the remains of any such building, structure or work or of any cave or excavation, and
- c) any site comprising, or comprising the remains of, any vehicle, vessel, aircraft or other movable structure or part thereof which neither constitutes nor forms part of any work which is a monument as defined within paragraph (a) above; and any machinery attached to a monument shall be regarded as part of the monument if it could not be detached without being dismantled. (Section 61 (12)).

The AMAA Act 1979 also distinguishes between a monument as above and an ancient monument which is a Scheduled Ancient Monument (SAM); and any other monument which in the opinion of the Secretary of State for Culture Media and Sport (with English Heritage acting as the adviser to the government on heritage matters) is of public interest by reason of the historic, architectural, artistic or archaeological interest attaching to it (Section 61 (12)).

Selection of monuments of national importance for England is based on criteria published in Annex 4 of the *Planning Policy Guidance: Archaeology and Planning* (PPG 16) (DoE 1990). These criteria are indicative rather than definitive. The AMAA Act 1979 does not allow for the protection of the setting of monuments. It was thought that this was best achieved through the local planning process.

The National Heritage Act 1983 established the Historic Buildings and Monuments Commission for England (English Heritage) whose prime duties are:

- a) to secure the preservation of ancient monuments and historic buildings situated in England.
- b) to promote the preservation and enhancement of the character and appearance of Conservation Areas situated in England.
- c) to promote the public's enjoyment of, and advance their knowledge of, ancient monuments and historic buildings situated in England and their preservation.

With regard to (a), English Heritage have taken a number of sites of high archaeological and historical importance under their direct management as English Heritage Guardianship Sites (both Wales and Scotland have their own equivalents). Many of these

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were taken over from the Ministry of Works, but they are being added to from time to time. (Where appropriate some of these Guardianship Sites have been transferred more recently to the care of local authorities, a development that has not always been popular.)

The Monument Protection Programme (MPP) undertaken by English Heritage was begun in 1986. It was designed to review and evaluate the existing information on known archaeological sites, to identify those of national importance and which should be protected by law. If a monument is deemed of national importance it is placed on the 'Schedule' and protected by the AMAA Act 1979. The MPP is also reviewing scheduled sites to ensure that they fit the criteria for national importance.

Land use activities affecting a Scheduled Ancient Monument require consent from the Secretary of State. These are activities which result in the demolition, destruction or damage to the SAM and includes archaeological excavations: also repair, tipping or making alterations to a SAM; any flooding or tipping on land on, in or under a SAM. However some land use activities are exempt. Namely agriculture, forestry and horticultural works providing that this was the normal land use of the previous five years. This exemption does not include major ground disturbance operations, such as drainage, sub-soiling or tree planting.

Field Monument wardens are appointed by English Heritage to visit scheduled sites on a regular basis to inform landowners of their existence, and to offer advice on the best form of management for the monument.

The AMAA Act 1979 allows for grants for management agreements for monuments (whether scheduled or unscheduled), relating to the ongoing surveillance and management, including shrub management, pest control and fencing. Capital grants are available to owners that include consolidation of masonry structures.

The management of archaeology within the planning framework is detailed in the *Planning Policy Guidance 16* (DoE 1990).

## **2.2 The Treasure Act, 1996**

It is an offence to use a metal detector in a protected place (i.e. on a Scheduled Monument, one in Guardianship, or in the ownership of the Secretary of State, or a local authority, or in an area of archaeological importance). It is also an offence to remove any object of archaeological or historical interest found using a metal detector from a protected site without consent from the Secretary of State.

The Treasure Act came on to the statute books in September 1997, following the drawing up of a Code of Practice between users of metal detectors, landowners and the archaeological community (Department of National Heritage 1997). It replaced the previous legislation on what was known as treasure trove. The new act strengthens the law on treasure trove. Objects other than coins that contain at least 10% by weight of gold or silver, and are at least 300 years old will be deemed Treasure. All coins more than 300 years old, and found in hoards will be deemed treasure, as well as all objects found in clear archaeological association with items that are Treasure will be deemed to be Treasure whatever they are made of. Advice on the exact changes to the law made by the Treasure Act should be sought should the need arise.

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Deliberate concealment of Treasure, and failure to report finds to the County Coroner will be liable to 3 months in prison, or a fine up to £5000 or both.

### **2.3 Hedgerow Regulations**

In June 1997 new regulations were introduced giving statutory protection to certain types of hedgerow (Howard 1998). Permission is now required before certain types of hedgerow can be removed, either in whole or part. It is strongly advised that expert opinion is sought before any changes, other than cutting, to hedgerows are made.

These regulations apply to hedgerows that:

- i) marks a historic parish boundary.
- ii) incorporates a Scheduled Ancient Monument.
- iii) incorporates an archaeological feature recorded in the County Sites and Monuments Record (SMR).
- iv) is wholly or partly within an archaeological site recorded in the County SMR and is associated with that site.
- v) marks the boundary of a pre-1600 AD estate or manor recorded in the SMR or held at a Record Office.
- vi) is visibly related to a building or feature of a pre-1600 AD estate or manor.
- vii) is recorded in a document at a Record Office as an integral part of a pre-Enclosure field system.
- viii) is part of, or is related to, a building or feature associated with a substantially complete pre-Enclosure field system.
- ix) is part of, or is related to, a building or feature associated with a pre-Enclosure field system, and that system is identified in a local planning authority document as a key landscape characteristic.

### **2.4 Other Landscape Designations**

These include Areas of Outstanding Natural Beauty (AONBs); Areas of Great Landscape Value (AGLV), Green Belts and historic parks and gardens on the English Heritage Register of Historic Parks and Gardens. The latter may become relevant to Grotto Wood in the future. These are a list of historic parks and gardens considered to be of merit. They are based on similar criteria to Listed Buildings, and are designated Grade I, Grade II\* and Grade II. It should be recognised that this designation is mainly for planning guidance, and has no statutory legislation attached.

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