COED CADW
WOODLAND
TRUST

Marl Hall Woods

Management Plan
2017-2022

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MAPS

THE WOODLAND TRUST

INTRODUCTION

The Trust's corporate aims and management approach guide the management of all the Trust's properties, and are described on Page 4. These determine basic management policies and methods, which apply to all sites unless specifically stated otherwise. Such policies include free public access; keeping local people informed of major proposed work; the retention of old trees and dead wood; and a desire for management to be as unobtrusive as possible. The Trust also has available Policy Statements covering a variety of woodland management issues.

The Trust's management plans are based on the identification of Key Features for the site and setting objectives for their management. A monitoring programme (not included in this plan) ensures that these objectives are met and any necessary management works are carried out.

Any legally confidential or sensitive species information about this site is not included in this version of the plan.

PLAN REVIEW AND UPDATING

The information presented in this Management plan is held in a database which is continuously being amended and updated on our website. Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.
Please either consult The Woodland Trust website www.woodlandtrust.org.uk or contact the Woodland Trust (wopsmail@woodlandtrust.org.uk) to confirm details of the current management programme.

There is a formal review of this plan every 5 years and a summary of monitoring results can be obtained on request.

WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland.

Our strategic aims are to:

- Protect native woods, trees and their wildlife for the future
- Work with others to create more native woodlands and places rich in trees
- Inspire everyone to enjoy and value woods and trees

All our sites have a management plan which is freely accessible via our website www.woodlandtrust.org.uk. Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

In addition to the guidelines below we have specific guidance and policies on issues of woodland management which we review and update from time to time.

We recognise that all woods are different and that the management of our sites should also reflect their local landscape and where appropriate support local projects and initiatives. Guidelines like these provide a necessary overarching framework to guide the management of our sites but such management also requires decisions based on local circumstances and our Site Manager's intimate knowledge of each site.

The following guidelines help to direct our woodland management:

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene when there is evidence that it is necessary to maintain or improve biodiversity and to further the development of more resilient woods and landscapes.
2. We establish new native woodland using both natural regeneration and tree planting, but largely the latter, particularly when there are opportunities for involving people.
3. We provide free public access to woods for quiet, informal recreation and our woods are managed to make them accessible, welcoming and safe.
4. The long term vision for our non-native plantations on ancient woodland sites is to restore them to predominantly native species composition and semi-natural structure, a vision that equally applies to our secondary woods.
5. Existing semi-natural open-ground and freshwater habitats are restored and maintained wherever their management can be sustained and new open ground habitats created where appropriate.
6. The heritage and cultural value of sites is taken into account in our management and, in particular, our ancient trees are retained for as long as possible.
7. Woods can offer the potential to generate income both from the sustainable harvesting of wood products and the delivery of other services. We will therefore consider the potential to generate income from our estate to help support our aims.
8. We work with neighbours, local people, organisations and other stakeholders in developing the management of our woods. We recognise the benefits of local community woodland ownership and management. Where appropriate we allow our woods to be used to support local woodland, conservation, education and access initiatives.
9. We use and offer the estate where appropriate, for the purpose of demonstration, evidence gathering and research associated with the conservation, recreational and sustainable management of woodlands. In particular we will develop and maintain a network of long-term monitoring sites across the estate.
10. Any activities we undertake will conform to sustainable forest management principles, be appropriate for the site and will be balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

SUMMARY

This public management plan briefly describes the site, specifically mentions information on public access, sets out the long term policy and lists the Key Features which drive management actions. The Key Features are specific to this site – their significance is outlined together with their long (50 year+) and short (5 year) term objectives. The short term objectives are complemented by a detailed Work Programme for the period of this management plan. Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. A short glossary of technical terms is at the end. The Key Features and general woodland condition of this site are subject to a formal monitoring programme which is maintained in a central database. A summary of monitoring results is available on request.

1.0 SITE DETAILS

Site name:	Marl Hall Woods
Location:	Llandudno Junction
Grid reference:	SH799788, OS 1:50,000 Sheet No. 115
Area:	11.96 hectares (29.55 acres)
Designations:	Ancient Woodland Site, Site of Special Scientific Interest, Special Area of Conservation

2.0 SITE DESCRIPTION

2.1 Summary Description

Marl Hall Woods is a delightful ancient semi-natural woodland with stunning displays of rare and beautiful wild flowers in the spring and summer and dazzling autumn colour. Its prominent location provides great views across the Conwy Valley and a range of historical features adds further interest to the visitor experience.

2.2 Extended Description

Marl Hall Woods occupies a prominent limestone outcrop overlooking Llandudno Junction and the Conwy estuary. It is mainly ancient woodland, dominated by oak, ash, yew and elm, with a diverse array of native shrubs, including hazel, elder, spindle, spurge laurel and wild privet. Marl Hall Woods are well known locally for the fantastic spring flowers, beginning in February with the snowdrops and followed by drifts of pungent wild garlic in April. The evidence of the wood's history, however, remains evident: as part of the grounds of Marle Hall, the wood saw ornamental planting of various exotic trees, including larch, horse-chestnut, Norway maple and lime, followed more recently by beech and sycamore. Garden features such as an old well, limestone steps and the foundations of a walled garden are still to be seen in the lower wood. Since 1985, the Trust has been working to restore this ancient woodland and control invasive garden species such as cotoneaster and holm oak.

Along the cliffs are significant areas of species-rich calcareous grassland which support a high diversity of vascular plants including a number of unusual, Nationally Scarce species such as spiked speedwell and Nottingham catchfly. In early summer, these clifftop viewpoints are carpeted in an array of colourful wildlflowers.

Marl Hall Woods is designated as part of the Creuddyn Peninsula Woods Special Area of Conservation and is a Site of Special Scientific Interest, both for the quality of its woodland and for the grassland and associated species that it supports.

The wood is popular with local residents and there is an extensive network of paths (including one public footpath). Off-road parking and information panels are provided. Excellent views are afforded from the upper woodland. The hall itself is now an Outdoor Education Centre for Warwickshire County Council, from whom the Woodland Trust has leased the wood since 1985. The centre uses the woodland for various activities and maintains an orienteering trail on site.

The site lies adjacent to Bodysgallen Hall estate, with its mixture of pasture, parkland and ancient woodland habitats, being well connected to other woods in the local landscape.

The key features of the site are:

Ancient Woodland Site
Semi-Natural Open Ground Habitat - namely limestone grassland.
Connecting People with Trees and Woods

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

By bus

A frequent bus service 5/X5 travels between Llandudno and Bangor / Caernarfon via Llandudno Junction railway station. Other services visiting Llandudno Junction include 9 (Llangefni - Bangor - Llandudno) and 19 (Betws y Coed - Llanrwst - Llandudno); while local services include 12 to Rhyl and 73 to Llandudno. A local service bus stop is located close to the westernmost entrance to the wood.

By train

The nearest railway station is at Llandudno Junction, almost 1km to the south. To walk to the woods, cross Conwy Road outside the station and turn right. After less than 100m turn left into Marl Drive and follow this road in a northerly direction until it eventually runs parallel with the A470 and reaches a junction on the right to a roundabout on the A470. At the roundabout cross the A470 (take care - this is a very busy road) and go straight on into Marl Lane. After 50m cross Marl Lane to a minor entrance into Marl Hall Woods, or continue another 300m to the main entrance at the wood's car park.

For further information on public transport, contact Traveline on 0871 200 2233 or visit traveline.org.uk

By car

Marl Hall Woods are located at the edge of Llandudno Junction on the eastern side of the Conwy estuary, opposite the medieval town of Conwy. Exiting the A55 North Wales expressway at junction 19, take the A470 northwards towards Llandudno. Follow for just over 1.5km and on reaching the next roundabout, turn right into Narrow Lane and continue for 100m before bearing left into Marl Lane. After a further 150m the entrance to the wood's car park will be seen on the right.

By foot

The site can be accessed via a number of public footpaths from the town.

3.2 Access / Walks

Marl Hall Woods are accessible to a wide range of visitors and there is a designated parking area for up to 10 cars at the main entrance on Marl Lane. A surfaced trail suitable for the less-abled runs for the first 300m from the main entrance (including a wheelchair-accessible kissing gate) through the lower wood, allowing less agile visitors to access some of the best areas for spring flora on a short, straight walk.

Utilising the public footpath which crosses the site to the north-west and the permissive path which runs down to the road by Marle Hall itself (both accessed through kissing gates), it is possible to make a short, fairly easy circuit from the bus stop or from nearby housing estates. Some sections of path may be slippery when wet, but steps have been installed to help on the more difficult sections.

The upper wood can be accessed directly on foot from the public footpath via a stile and up a steep path with sections of stone and timber steps. The terrain within the upper wood, although containing some flatter sections, is generally more challenging than the lower wood. Paths tend to be natural surfaces of earth, stone and grass, and caution is advised during wet conditions as they can become very slippery. Many sections also have uneven surfaces with rocky outcrops and protruding roots.

The only other entrance into the upper woodland is a permissive access stile into the grounds of Bodysgallen Hall which links to a public right of way. A circular walk is suggested on the information panels and in the site leaflet. It is reasonably level but with some steeper sections, and encircles the perimeter of the upper woodland off which it is possible to visit the open grassland above the cliffs in the south-eastern corner of the site. As you would expect, there are beautiful views over the Conwy estuary and to the mountains of Snowdonia from this area, but care should be exercised in the vicinity of the cliffs.

The site is easily accessed from Llandudno Junction or Bryn Pydew via public footpath. A visit to the wood can be combined with a longer walk, for example around Bodysgallen Hall, up to the nearby obelisk, or taking in Coed Bron Garth near Mochdre, which has a stunning bluebell display in spring.

4.0 LONG TERM POLICY

The woodland at Marl Hall Woods will support a diverse mix of native trees and shrubs, notably oak, yew and elm (with, it is to be hoped, remaining ash trees), supplemented by a range naturalised species of planted origin such as lime, aspen, horse-chestnut, beech, maple and sycamore. There will be a well-developed shrub layer comprising natives such as hazel, spindle, spurge-laurel, holly, elder and Ribes spp.. The quantity of deadwood, particularly standing deadwood, will increase over time, while mature trees will be retained to senescence wherever possible. Invasive non-native species, particularly holm oak, cherry laurel and cotoneaster will be absent. Typical ash-woodland ground flora will remain frequent throughout the wood and will not be constrained by the formation of a heavily-shading canopy (e.g. beech): the spring display of wild garlic, snowdrops, bluebells, wood-ruff, dog's mercury and Arum will continue to be a spectacular seasonal moment. As a restored plantation on ancient woodland site, management intervention will mainly be limited to managing negative influences such as invasive species and essential safety work.

The current area of limestone grassland will be actively maintained. It will remain species-rich, supporting the range of Nationally Scarce vascular plant species currently present, with coarse vegetation and scrub only occasional. The grassland margins will be coppiced periodically to provide transitional habitat and prevent excess shading. In early summer, a visit to the main viewpoint will be rewarded by a varied carpet of colour.

Marl Hall Woods will be an attractive place for visitors and will be valued both by locals, many of whom will make regular repeat visits, and by the wider community. Visitors will come to the woods to enjoy quiet recreational activities such as walking (with or without dogs and children), orienteering and wildlife watching, or to participate in seasonal events. Families will feel that the wood is a safe and inviting space to play, learn or explore. Visitors will be aware of the Woodland Trust and are likely to support our campaigns or as members. Third party groups will continue to make use of the woods for educational activities. A small team of volunteers will work with the public and help keep the wood tidy and well-presented.

5.0 KEY FEATURES

The Key Features of the site are identified and described below. They encapsulate what is important about the site. The short and long-term objectives are stated and any management necessary to maintain and improve the Key Feature.

5.1 Ancient Woodland Site

Description

The woodland is now dominated by a mix of native and naturalised species - notably ash, oak and sycamore with locally abundant yew and scattered young elm - and is largely ancient in origin, evidenced by a diverse ground flora (notably snowdrop and wild garlic) and mix of shrub species (including limestone specialists such as spurge-laurel, spindle and privet). Once part of the grounds of Marle Hall, the woods were subject to much ornamental planting (with species such as horse-chestnut, lime and Norway maple: there is some suggestion that this planting replaced earlier management in parts of the site as coppice with standards), later supplemented by the addition of beech, larch and sycamore under an FC licensed planting scheme. Thinning operations in 2003-04 removed much of the planted larch and other exotics from the upper levels of the wood and the wood is now considered restored, with native or naturalised species dominating both the canopy and understorey, although a wide range of planted species may be found throughout the wood, particularly where the formal hall gardens once stood.

Some areas to the south of the wood may be secondary in origin: a mix of largely native shrub and tree species have colonised areas around the base of a former quarry and now resemble ancient semi-natural woodland in composition.

Significance

Ancient woodland is among the UK's most bio-diverse and at the same time scarcest habitats, occupying just 2% of all land use in the UK. Ancient woodland ecosystems build over many hundreds of years and are therefore irreplaceable. Ash woodland is a key feature of the site's SSSI designation. Both upland mixed ashwood (W8d/e/f) and lowland mixed deciduous woodland (the site has attributed of both woodland types) are Section 7 priority habitats in Wales. The woodland types present are also a reason for the site's inclusion in the Creuddyn Peninsula Woods SAC (Tilio-acerion forests of slopes and ravines/ Taxus baccata woodland for the British isles (W13)). Nationally Scarce vascular plant species such as ivy broomrape occur.

Opportunities & Constraints

The woodland is naturally developing a more semi-natural structure over time: natural regeneration is abundant and flora typical of ancient semi-natural woodland is abundant at the site, with increasing volumes of deadwood. The species diversity should allow the woodland to adapt in a resilient fashion to environmental change and the presence of planted beech, sycamore lime, horse-chestnut, yew and Norway maple may actually be an opportunity, in some ways, ensuring some continuity of canopy cover and providing some alternative habitat for insects and epiphytic lower plants which are highly or partially associated with ash.

Management access is limited, reducing the viability of larger silvicultural operations. The popularity of the wood for recreation is also a constraint on intervention and will necessitate periodic tree safety work along the maintained path network, however, it will still be possible to retain standing deadwood in many parts of the wood.

Factors Causing Change

The most imminent threat to the composition of the woodland - particularly those habitat types singled out in the SSSI/SAC designations - is the arrival of ash dieback. While there are few trees currently symptomatic, the disease is likely to have an obvious impact upon the extensive young to early mature ash component in both canopy and understorey. Dutch elm disease is still present and affects most elms upon reaching a certain maturity, although elm is producing seed and suckers and occasionally persists to canopy height.

It is possible that densely shading species such as beech and sycamore could increase their dominance and reduce ground flora diversity through shading in future, however, current regeneration comprises a mix of species. Grey squirrels are present and are likely to target beech and sycamore preferentially.

Invasive species, notably holm oak, are present and there are seed sources on adjacent land. If left unmanaged, these could increase to the detriment of native trees and ground flora.

Recreational activity can put pressure on areas of the wood, particularly uncontrolled fires, vandalism of trees and the erosion caused by new desire lines.

Long term Objective (50 years+)

The woodland at Marl Hall Woods will remain dominated by a diversity of predominantly site-native tree and shrub species, notably oak, yew and elm (with, it is to be hoped, remaining ash trees), supplemented by a range naturalised species of planted origin such as lime, aspen, horse-chestnut, beech, maple and sycamore. There will be a well-developed shrub layer comprising natives such as hazel, spindle, spurge-laurel, holly, elder and Ribes spp. The quantity of deadwood, particularly standing deadwood, will increase over time, while mature trees will be retained to senescence wherever possible. Invasive non-native species, particularly holm oak, cherry laurel and cotoneaster will be absent. Typical ash-woodland ground flora will remain frequent throughout the wood and will not be constrained by the formation of a heavily-shading canopy (e.g. beech): the spring display of wild garlic, snowdrops, bluebells, wood-ruff, dog's mercury and Arum will continue to be spectacular seasonal moment.

Short term management Objectives for the plan period (5 years)

Invasive species such as holm oak and cherry laurel will be rare and will be controlled before they cast any significant under-storey shade/ can reproduce.

Woodland condition, in particular the impacts of ash dieback on woodland composition, will be monitored on at least a five-yearly basis. There will be no expansion of the current footprint of the path network, with minimal desire line formation: the extent of ground layer cover must remain over 50% with frequent ash-woodland flora. Detrimental impacts such as campfires will ideally decrease or at least be contained to their current scope. Standing and fallen deadwood should be retained wherever safe to do so. Non-native species will not comprise more than 20% of regenerating saplings.

5.2 Semi Natural Open Ground Habitat

Description

Species-rich unimproved calcareous grassland of three NVC communities (CG1, CG2 and CG6) is located in three primary south-facing glades running along the upper edge of a prominent rocky outcrop/ quarry face (cpt 1e). The sward is characterised by a short, sometimes open, turf with frequent to abundant sheep's fescue, crested hair-grass, meadow oat-grass, salad burnet, wild thyme, mouse-ear hawkweed and common rock-rose. A number of Nationally Scarce species have been recorded, including:
- Dwarf mouse-ear Cerastium pumilum
- Hoary rock-rose Helianthemum oelandicum ssp. Incanum
- Hutchinsia Hornungia petraea
- Ivy broomrape Orobanche hederae
- Juniper Juniperus communis
- Nottingham catchfly Silene natans
- Spiked speedwell Veronica spicata ssp. Hybrid
- Spring cinquefoil Potentilla neumanniana (= P. tabernaemontani)
- Stinking hellebore Helleborus foetidus

Scrub occurs around and within the grassland areas including many native species such as hawthorn, blackthorn, wild privet, juniper, dog-rose and sessile oak. Non-native species are also occasional including holm/evergreen oak and cotoneaster.

Significance

Notably species-rich calcareous grassland - a national priority habitat with the UK and Wales Biodiversity Action Plans and of interest in a European context: calcareous grassland and the plant assemblage are among the SAC and SSSI features. Several Nationally Scarce vascular plant species occur and the habitat is likely to be of high value to invertebrates possibly including notable species (grayling butterfly has been observed, for instance). The open ground also constitutes a significant landmark above the town of Llandudno Junction and the grassland affords an excellent viewpoint for visitors, overlooking the Conwy valley.

Opportunities & Constraints

Management access is limited and this, combined with the high level of dog walking usage, precludes routine grazing of the grassland areas other than by wild rabbits, the population of which tends to fluctuate unpredictably. The terrain means that rope access work could be required on steeper slopes should invasives establish. Holm oak and cotoneaster have proven apparently resistant to some methods of glyphosate application and the terrain also means that locating all bushes is difficult.

Invasive species control may require co-operation with neighbours to be fully effective.

Factors Causing Change

Scrub encroachment and increased shading is almost inevitable, particularly in the two smaller glades where rabbit presence is limited, without management intervention. Invasive species such as holm oak and cotoneaster may frequently re-invade from neighbouring sites. Localised damage may result from occasional camp fires.

Long term Objective (50 years+)

The current extent of short sward unimproved calcareous grassland (approximately 1.8ha) will be maintained. It will remain species-rich, supporting the range Nationally Scarce vascular plant species currently present, with coarse vegetation and scrub only occasional. The grassland margins will be coppiced periodically to provide transitional habitat and prevent excess shading. When the condition of the SSSI/ SAC feature is assessed by the statutory body, it should be deemed in favourable or improving condition. In early summer, a visit to the main viewpoint will be rewarded by a varied carpet of colour.

Short term management Objectives for the plan period (5 years)

Invasive species such as cotoneaster will be rare and will be controlled, mainly by the targeted application of herbicide in later summer. Coarse vegetation will be occasional and kept in check by an annual programme of strimming/ raking and, where feasible, autumn grazing by close-shepherded Hebridean sheep. Coppiced areas to the margins of the three glades will be cut before the regrowth reaches head height to prevent re-establishment of shaded conditions. A gorse stand will be maintained in the larger glade as cover for rabbits but the edge of the gorse will not expand into the short sward grassland areas.

The grassland will be monitored annually in late June/ early July. The sward across at least half of the current grassland glades should remain below 20cm. The species mix, although abundance and species records may fluctuate naturally a little year on year, should include a range of typical and Nationally Scarce limestone grassland species, particularly those species with recent and frequent records such as spiked speedwell, hoary rock-rose, ivy broomrape and Nottingham catchfly.

5.3 Connecting People with woods & trees

Description

The woodland is understandably popular with a local audience: it is easily accessible from Llandudno Junction and boasts seasonal interest, fantastic viewpoints with great vistas over Conwy Castle and the northern slopes of the Carneddau, historical features (an old well, formal garden, steps and caves) and a varied network of circular paths. A survey in 2004 indicated that the site attracted 15,000 visits per annum, the majority being local people, with a large number using the site for dog walking. Other current user groups include the adjacent Marle Hall Outdoor Education Centre, who maintain an orienteering trail and occasionally using the site for walks, environmental activities and abseiling under the terms of the wood's lease to the Trust. Occasional educational visits and club use (e.g. orienteering groups) occur. While mature walkers appreciate the views, there would appear to be a significant number of local families using the wood for recreation.

The site is on the outskirts of the largest conurbation in Conwy, with approximately 80,000 people living within about 20 minutes drive. There is a small but significant Woodland Trust bluebell wood nearby at Mochdre (Coed Bron Garth), which has sometimes been linked with Marl Hall on guided walk events in Spring and Autumn. The wood is adjacent to the National Trust/ Historic House Hotels site at Bodysgallen and about 5 minutes drive from the RSPB Conwy reserve. It is close to the popular tourist towns of Conwy and Llandudno.

There is a small car park (with capacity for up to 8 cars) at the south-eastern corner of the wood, from which a level section of surfaced path, created for 'less able access' and accessed by a wide kissing gate, runs for about 300m through the lower wood to the old well where it meets a steep (in places muddy) public footpath linking the A470/ Llandudno Junction to Bodysgallen estate. From these routes, a number of maintained permissive routes (and informal desire-line trails) allow walkers to enjoy circular walks on un-surfaced earth paths, often involving flights of steps which were installed in 2013-14 to address steep/ slippery path sections. There are a total of five formal public entrances to the wood, two of which also provide management access. As at 2017, three of these are via gate or squeeze gap, however the two in the upper area of the wood are via stiles. There are interpretation panels located by the car park and upper public footpath entrances, describing a promoted route. Stone carvings (designed in conjunction with the local school) and two 'leaf' benches were installed along this route in 2013-14 as part of a funded project and a leaflet - now out of print - was produced and distributed locally.

A ladderboard is located on the roadside but its placement does not help its visibility from the road approach. Welcome and exit signage is in place at most other entrances, although it is sometimes subject to vandalism, as is any infrastructure around entrances and car parks, which includes a council-maintained bin near the main entrance.

The car park has had to be locked overnight on occasion due to flytipping, unauthorised camping and other misuse. The Trust has a regular programme of litterpicking at the site and has often had to replace damaged infrastructure. Recurring issues with graffiti and litter contribute to making the entrance ways look rather less inviting than is ideal. Camping and fire-setting are perennial problems, particularly in popular clearings within the wood. There have been occasional incidences of unauthorised mountain biking/ trail building, although this is sporadic.

Occasional events have recently been held in the wood, including guided walks, Art in Nature days

and a summer fayre event, which have attracted mainly local families. Local schools were previously keen to be involved, however, they had concerns about crossing the A470 on foot and are limited by transport costs.

There is currently a volunteer Woodland Warden who assists with patrolling, litter control and communicating with visitors.

Significance

Marl Hall Woods is an important local amenity for Llandudno Junction, being the closest publically accessible green space (and free to visit). It offers a good degree of diversity and year-round interest despite its relatively small size. The site showcases many of the special ecological features of the Creuddyn Peninsula woods and has particular botanical interest.

The site's accessibility - and visibility - from the A470 do lend themselves to promotion of the site to both a very local and a wider audience, especially given the sites proximity to the popular North Wales coast. Although a relatively small site, it is diverse and offers routes of varying degrees of challenge, appealing to a potentially wide range of audiences.

Opportunities & Constraints

Opportunities:
There is an opportunity to work more closely with the outdoor centre facility next door on events, recreational use e.g. of the orienteering trails and occasional youth volunteer work days. The orienteering trail, for instance, would appeal to both groups and older families seeking absorbing activities for children 12+.

The wood offers a relatively accessible venue for hosting of family and seasonal events, with particularly impressive spring and summer wildflower displays. Guided walks are also effectively promoted in the region by Cerdded Conwy, with the wood being well connected to the wider path network.

Local people clearly value the site and do act as 'eyes and ears' to report problems. Increased usage and investment in the presentation of the site (e.g. improved visibility in and out of the car park) may help to deter unwanted activities. Direct engagement with local youth may help to address some of the misuse that currently occurs.

There is an opportunity to communicate the special features of the site to residents and visitors more widely on the North Wales Coast and to encourage visitors to become supporters of the Trust. The local population is currently increasing, with new potential local visitors moving into the area.

Constraints:
The site is designated as a SSSI/ SAC and is ancient woodland, therefore development of physical infrastructure should be limited to the current footprint and minor changes may require consent. There should be no negative impact from recreational activities on the special ecological features.

There is a history of vandalism, fire-setting and other misuse, therefore a risk that the lifespan of new infrastructure may be limited.

The terrain in the upper wood precludes any further development of easy access trails and access to the cliffs themselves should not be promoted for safety reasons.

Warwickshire County Council retain the freehold and rights of access over the site for climbing and orienteering.

Parking at the site is limited, so alternative transport/ parking may need to be sought in order to facilitate larger events.

Currently the car parking is not readily visible from the road, which could deter first time visitors (however, roadside signage will require planning and advertising consent).

Factors Causing Change

An increased orienteering activity or desire line formation could cause erosion and damage to the ground flora if not managed. Funding for access work in the region is currently rather limited, with the reduction in funding pots such as landfill which have previously been used to support visitor infrastructure development. There may be competition with other bodies/ attractions locally who are seeking visitors/ supporters. Llandudno Junction and its surrounding settlements are expanding in size, with several new developments and school facilities having been build in the immediate vicinity in very recent times, therefore the potential audience for the site appears to be increasing (including the audience within walking distance of the wood). Increased misuse is, however, a risk. Youth work programmes and schemes such as Arson Reduction - that would be obvious partners in countering antisocial activity - may be suffering from under-funding.

Long term Objective (50 years+)

Marl Hall Woods will be an attractive place for visitors and will be valued both by the local community, many of whom will make regular repeat visits on foot (or by car) to the wood, and by the wider community of residents and visitors who may make one-off trips or attend occasional seasonal events. Visitors will come to the woods to enjoy quiet recreational activities such as walking (with or without dogs and children), orienteering and wildlife watching. Families will feel that the wood is a safe and inviting space to play, learn or explore. Visitors will be aware of the Woodland Trust and are likely to support our campaigns or as members. Third party groups will continue to make use of the woods for educational activities.

Misuse will decrease and the wood will be well-presented, with a minimum of litter and vandalism. A small team of volunteers will help the Trust to maintain the wood's appearance and to engage with visitors, helping out as Woodland Wardens, Guided Walks leaders or with public events.

Short term management Objectives for the plan period (5 years)

The entrance infrastructure and signage at the wood will have a significant 'facelift' over the coming plan period. This will include improvements to the surface and visibility into and out of the car park; re-location of and additional signage to help visitors locate the main entrance; replacement of wooden welcome signage and gates where tired/ poorly presented. Barriers to access will be reduced, with the two remaining stiles being replaced with wooden kissing gates and the public footpath at the town entrance upgraded from its current waterlogged state.

The information panels will be replaced at the end of their life, during the coming five years.

By end 2020, Marl Hall Woods, as one of three welcome sites in Conwy, will be promoted by way of a cluster booklet of themed walks/ activities, encouraging family and educational usage and family membership. The theme of the Marl Hall trail could be 'Orienteering' (involving a refresh of the existing orientation markers managed by Warwickshire's OEC).

There will be annual family-oriented events to coincide with the main seasonal 'moments' of spring and summer (spring wildflowers, summer picnics), allowing the Trust to connect to both the local and first time family visitors, as well as occasional volunteer-led guided walks appealing largely to a mature audience. Visitors will be inspired to value trees and woods and to support our work. Over 350 people will engage with the Trust in this way over the coming five years.

We will work in collaboration with the neighbouring centre and other partners, in particular looking at opportunities for young people to engage with woods and trees and possible joint projects such as improving/ promoting orienteering facilities or teaching appropriate wood-craft skills to local youth, in a effort to reduce anti-social behaviour such as vandalism and littering.

If the Green Tree Schools initiative becomes available in Wales during the coming five years, this will be promoted to schools within walking distance of the wood.

We will recruit at least one other volunteer to work in a public engagement role in the region. Our Woodland Warden will continue to support us in maintaining the wood's visitor welcome.

By December 2018, the wood will be included in a visitor survey to gather baseline data on visitor numbers and profile of our top sites in Wales. Over the five years/ or until a repeat survey is undertaken, the proportion of visitors aware of the Trust and its work should ideally increase, with a small increase in visitor numbers overall.

The negative impacts of public access and misuse will be monitored and significant incidents recorded. There should ideally be a decrease in issues such as vandalism and fire-setting, assisted by youth engagement efforts. Damage and littering that do occur will be managed promptly as part of a regular cleansing regime under the Estate Management Contract. Paths and entrances will be maintained to standards as set out in the EMC Specifications.

6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By

APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	1.60	Sycamore	1960	High forest	Mostly wet ground/exposed site, Sensitive habitats/species on or adjacent to site	Connecting People with woods & trees	Site of Special Scientific Interest, Special Area of Conservation
This ancient woodland area to the northwest of the site was planted in the early 20th century with a number of exotics, including Norway maple, lime, horse chestnut, sweet chestnut, hybrid poplar, oak species, pine and larch. A second phase of planting in 1960 has resulted in an area now dominated by sycamore and planted beech. However, some older planted trees remain and some natives are present, such as oak, ash, wych elm and occasional yew. There is a sparse understorey comprising elder, wych elm, young sycamore, dogwood, hawthorn, and privet. The ground flora has evidently changed over the preceding decade, with ivy receding and Ramsons becoming dominant. Also present are hart's-tongue fern, common nettle, false-brome, male-fern, wood melick, dog's mercury and ransoms. Ivy broomrape (Nationally Scarce) occurs. A small stream arises from a spring and flows through the northern part of the sub-compartment.							
1b	1.70	Sycamore	1960	High forest	No/poor vehicular access within the site, Sensitive habitats/species on or adjacent to site, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Connecting People with woods & trees	Site of Special Scientific Interest, Special Area of Conservation
Ancient woodland below the cliffs was heavily planted with beech in 1960, which has since been thinned. Abundant sycamore is also present. A good number of native broadleaves, particularly cherry, ash and elm are also represented in the canopy. There are very occasional large mature (planted) specimens such as sycamore, ash, lime and horse chestnut. The field layer is dominated by ivy with frequent Dog's mercury, ash seedlings and hart's tongue fern. Closer to the track there are patches of Ramsons. Spurge laurel, false-brome and lord's-and-ladies are occasional (W8). There is a moderate shrub layer, mainly of young elm, cherry, ash, sycamore and yew, with occasional spindle, holly and blackthorn. There are occasional exotics, mainly Holm oak regeneration.							

1c	0.50	Mixed broadleaves	1980	High forest	No/poor vehicular access to the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Connecting People with woods & trees	Site of Special Scientific Interest, Special Area of Conservation
Steep slopes to the south and east of the quarry dominated by relatively young naturally regenerating sycamore, ash, wych elm, oak, hawthorn and occasional holm oak. Japanese larch is occasional. Ivy dominates the field layer with frequent false-brome, spurge laurel and dog's mercury (W8) and patches of species-rich calcareous grassland in open areas. The woodland to the east of the quarry is starting to mature, however the woodland below the quarry has been coppiced in the past and is more scrubby in character.							
1d	6.20	Oak (sessile)	1920	High forest	No/poor vehicular access to the site	Connecting People with woods & trees	Site of Special Scientific Interest, Special Area of Conservation
Woodland to the east of the site situated above the limestone cliffs and including an area of limestone pavement: after thinning of the crop in the 1960s, coupled with further timber extraction under the supervision of the Woodland Trust, the area is now largely a mixed oak and ash woodland with some sycamore, beech, yew and scattered larch and pine. Young yew, holly, beech and sycamore are frequent in the shrub layer and among tree regeneration. Elm is abundant, both young trees and in the canopy. There are areas of limestone pavement within the zone: these areas tend to comprise young yew woodland, largely excluded from plantation by virtue of its substrate. Dense shade means that the ground and field layer here are limited, mainly to mosses and ferns, with some ivy and Dog’s mercury to the margins. Spurge laurel is also occasional. Overall, the ground flora is patchy but more diverse than in the lower wood, with abundant ivy, dog's mercury and hart's-tongue fern and frequent false-brome, sanicle, common dog-violet, wood avens, herb robert, wood melick, male-fern, polypody, primrose and spurge laurel (W8). Privet, Ramsons, Wood anemone and scattered bluebell are also present. Nationally Scarce ivy broomrape and stinking hellebore occur. Bramble is locally abundant.							
1e	2.00	Other		Non-wood habitat	Management factors (eg grazing etc), Site structure, location, natural features & vegetation	Connecting People with woods & trees	Site of Special Scientific Interest, Special Area of Conservation

Species-rich unimproved calcareous grassland (and associated scrub) on and above the cliffs to the south and west of the site. The compartment comprises a primary grassland zone near to the quarry, maintained as open ground largely by rabbit grazing, and smaller glades along the cliff top to the north west, maintained largely by manual scrub control to remove woody growth from the short sward areas and marginal coppicing to reduce shading of these areas. The grassland supports a high diversity of vascular plants including several Nationally Scarce species (see key feature description). The compartment also contains area of coppiced and regenerating scrub and gorse. Scrub species are also scattered throughout the grassland including bramble, gorse, wild privet, blackthorn, sycamore, ash, hawthorn, dog-rose and holm oak (re-growing from cut and treated stumps). A single spreading juniper bush (Juniperus communis communis) occurs in one of the smaller glades. A central pocket of secondary woodland is present within the larger grassland zone. There is an excellent view from the summit across the Conwy Valley.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2018	1b	Thin	0.20	115	23

GLOSSARY

Ancient Woodland

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

Ancient Semi - Natural Woodland

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

Ancient Woodland Site

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

Beating Up

Replacing any newly planted trees that have died in the first few years after planting.

Broadleaf

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

Canopy

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

Clearfell

Felling of all trees within a defined area.

Compartment

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

Conifer

A tree having needles, rather than broadleaves, and typically bearing cones.

Continuous Cover forestry

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

Coppice

Trees which are cut back to ground levels at regular intervals (3-25 years).

Exotic (non-native) Species

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

Field Layer

Layer of small, non-woody herbaceous plants such as bluebells.

Group Fell

The felling of a small group of trees, often to promote natural regeneration or allow planting.

Long Term Retention

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

Minimum Intervention

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

Mixed Woodland

Woodland made up of broadleaved and coniferous trees.

National vegetation classification (NVC)

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

Native Species

Species that arrived in Britain without human assistance.

Natural Regeneration

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.

Origin & Provenance

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

Re-Stocking

Re-planting an area of woodland, after it has been felled.

Shrub Layer

Formed by woody plants 1-10m tall.

Silviculture

The growing and care of trees in woodlands.

Stand

Trees of one type or species, grouped together within a woodland.

Sub-Compartment

Temporary management division of a compartment, which may change between management plan periods.

Thinning

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

Tubex or Grow or Tuley Tubes

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

Weeding

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established. Either by hand cutting or with carefully selected weed killers such as glyphosate.

Windblow/Windthrow

Trees or groups of trees blown over (usually uprooted) by strong winds and gales.