

Woodland Management Report

Kingsmead Parish Council

November 2020



professional woodland management
geospatial, environmental & energy services

1.0 Introduction

- 1.1 This plan been commissioned by Kingsmead Parish Council. Its purpose is to address the management of the woodland corridors flanking the south and west boundaries of Kingsmead garden village in Northwich. The plan spans the five-year period from 1st November 2020 although the Council would prefer a 3-year contract to complete the identified work.

2.0 Background information

2.1 History

- 2.1.1 The Kingsmead area of Northwich was developed in the mid-nineteen nineties as a garden village.

2.2 Description of the woodlands

A major feature of Kingsmead's landscape is a narrow band of woodland planted along its southern and western boundaries. This comprises the two separate blocks of woodland shaded green on the attached plans. Both woodlands connect with older established habitat rich sites either outside or near to Kingsmead's boundaries, and with young established plantations within its boundaries. Because of their linear nature, this plan describes these woodlands as corridors. As such they provide linkage between habitat rich sites and screening and privacy. Footpaths within them connect with other footpaths and tracks both within and outside Kingsmead's boundaries. Although narrow, both corridors make significant contributions to Kingsmead's amenities. However, their narrow linear nature constrains their management. Specifically, it is difficult to carry out work which might be deemed to be detrimental to the privacy and enjoyment of the occupiers of neighbouring houses.

2.3 South Woodland Corridor (Maps 1-3)

- 2.3.1 This was created to screen and reduce sound from the A556, a major trunk road and dual carriageway. Most of the woodland was planted with mixed broadleaves along with Scots pine and larch. Existing trees were also incorporated into the woodland. The result is a woodland comprising a pleasant mixture of upper and lower canopy species.

- 2.3.2 From the Royal Gardens turning into Claremont Close, the woodland is on the same level as the housing with a 2-metre embankment dropping down to the A556. A 2.4-metre-high steel and timber fence was constructed along the roadside boundary. Its purpose was probably to provide screening until the woodland established. The woodland is accessed by a small ride which is wide enough to accommodate vehicles.

- 2.3.3 From Claremont Close to Regency Way, the woodland was planted onto a bund.

- 2.3.4 Following its establishment, the woodland received little management other than some tree pruning, hazel coppicing, and clearance of short lengths along fence lines.

- 2.3.5 There is limited public access in this woodland.

2.4 West Woodland Corridor (Maps 3-7)

- 2.4.1 This wood begins at its southern end as a wide strip and becomes progressively narrower towards its northern most end. It lies between Kingsmead and the River Weaver and serves as a buffer between both. It comprises areas of woodland which predate Kingsmead and post development plantings of oak, cherry, Scots pine and larch.
- 2.4.2 From Woburn Close, a bund approximately 1.2 metres high, runs south. It was planted with mixed broadleaves and conifers.
- 2.4.3 From the southern tip of this woodland a footpath runs along its west boundary and separates it from Poor's Wood, an Ancient Semi-Natural Woodland owned by Cheshire Wildlife Trust. Where this path meets another running east to west from Woburn Close, it continues northwards along the woodland's east boundary. At its north point the woodland meets an area of more open scrubby woodland running into Kingsmead in a south easterly direction. Work in these belts risks damaging their abilities to act as acoustic and visual barriers.

2.5 Other woodland

Woodland also occurs within the developed areas. The two most significant sites are a narrow strip running from the west woodland corridor to the junction of Monarch Drive and Kingsmead (Map 7); and an area of open space and trees on the junction of Kingsmead and St Georges Way (Map9). The woodland connecting with the west woodland corridor follows a stream and provides additional habitat and water protection. Other trees throughout the site form narrow corridors between housing and roads. They provide acoustic and visual screening.

3.0 Objectives of future management

- Maintain and improve both woodlands abilities to reduce noise, light and air pollution.
- Prevent encroachment from the woodlands onto neighbouring properties.
- Maintain and improve the amenity values of both woodlands.
- Maintain and improve the health of both woodlands.
- Maintain and improve the habitats and wildlife corridors within both woodlands.

4.0 Management of the woodlands

- 4.1 The following section must be read in accordance with Tables 1 and 2 and the accompanying plans. The plans show Trees identified as T1, T2, T3 etc; Areas identified alphabetically A-Z, and then AA, AB, AC etc and Groups identified as G4, G5, G6 etc. Areas are discernible areas which can contain both Trees and Groups. Trees are individual trees. Groups contain more than one tree. Tables 1 and 2 both contain the same information. In Table 1, information is ranked according to location. In Table 2, it is ranked according to the year(s) in which it must be done. Work ranked according to years reflects its urgency with immediate having the highest priority. Tables 1 and 2 provide all relevant information including estimates of costs and time. Further management guidance is provided in Appendix A.

4.2 Management of the Southern Woodland

4.2.1 *Hymenoscyphus fraxineus* commonly known as ash dieback, or Chalara, has infected the Ash in this area. The infected trees should be retained for as long as possible. However, their safety must be the over-riding consideration; any trees which pose threats to people should be removed before they die or become unsafe. My experience suggests that trees which appear to be safe can fail. Any large gaps created by their removal should be replanted with the native species identified in Tables 1 and 2. Other areas shall be thinned, pruned and coppiced in sympathy with the management objectives and in accordance with the prescriptions in Tables 1 and 2.

4.2.2 Arisings from thinning and coppicing shall be broken down with a chainsaw to lengths of approximately 300mm. Their decomposition will help to maintain ground flora and soil fertility. Large diameter cord wood shall be stacked in a safe manner. It will provide habitats for insects and invertebrates. Where brash break down is not possible, it shall be chipped and deposited in small piles within the woodland.

4.2.3 The vehicular access within the woodland shall be maintained for future operations. If desired its use as a footpath shall be discouraged.

4.3 Management of the Western Woodland

4.3.1 This woodland has reached an age at which some intervention is required to maintain and achieve its management objectives.

4.3.2 The area at its north end marked AI on the map contains mature alder, ash and willow. It requires thinning to favour the better alder, Scots pine and oak. Thinning should remove Chalara infected ash. At the same time, the hazel, hawthorn and willow which are also present in this area can be coppiced. Thinning will produce merchantable firewood, but vehicular access will be required to make this possible. Other arisings shall be chipped and left on site.

4.3.3 The central area (marked AJ and AM on the map) of the woodland is established dense woodland previously planted onto a bund. It requires thinning to favour the better trees. Hazel stools in this area require coppicing and some of the better trees will benefit from formative pruning. This work should be done sympathetically and over a period of years to maintain a screen between the footpath and the houses. All the brash created can be broken down to lengths of approximately 300mm. Larger diameter cord wood can be stacked in safe piles to create habitat for insects.

4.3.4 An area adjacent to Poor's Wood was not planted; it has gradually been colonised by existing hedgerow species including hazel, blackthorn and hawthorn.

5.0 Management of the Woodland adjacent to Monarch drive and the A533

5.1 This woodland is more mature than many of the others. Its larger trees should be retained where possible. However, because of its location, tree safety is a greater consideration. Accordingly, some trees may have to be felled or coppiced to mitigate risks.

5.2 Chalara infected ash trees should be removed before they die or become unsafe. Open areas created by felling may be restocked with other native woodland species. Other silvicultural work identified in the accompanying schedules should be sympathetic to the health of the woodland, its amenities and the screening it provides.

5.3 Arisings from felling work shall be broken down with a chainsaw to lengths of approximately 300mm. This will benefit ground flora and soil fertility. Large diameter cord wood may be stacked in a safe manner to create habitat for insects and invertebrates, alternatively it may be sold. Where brash cannot be chopped it may be chipped and left in small piles within the woodland. All brash falling into the stream or within 2 metres of it shall be removed and either chipped or spread within the adjoining woodland.

6.0 Management of all woodland areas

6.1 Periodic inspections are recommended to ensure the woodlands present no unacceptable risks to the public and neighbouring properties. Roadside trees may require crown lifting and pruning to ensure their canopies do not obstruct paths and highways. During our inspections none were causing obstructions. The risk presented by Ash dieback (*Chalara*) must also be considered. Trees which show signs of decay must be removed if they threaten people or property. This report identifies all immediate risks, but annual monitoring is required to address the risks presented by ongoing disease and infection.

6.2 Annual maintenance of paths, hedges and open spaces will include flail mowing. Along with other non-emergency forestry operations, hedge cutting should be done outside the nesting season. On sites where wildflowers are to be encouraged, mowing should take place after they have seeded.

6.3 The appended woodland management document provides further guidance and information. It provides information on the management of woodland edges which might be relevant where there is enough depth of woodland to increase habitat and structural diversity.

Table 1 Schedule of work according to location

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Easting	Northing										
365693	371681	1	2-4	T	Oak. Prune 2 low branches over the footpath.						
365706	371670	2	2-4	T	Oak. Prune branches over the footpath.						
365754	371641	A	N/A	A	Narrow woodland strip located on a bund approximately 2.5 high. This will have been planted as part of the original landscaping scheme. The trees are approximately 25 years old. Little work is required. Care needs to be taken to avoid interrupting the screening provided by these trees.						
365765	371636	B	1-4	G	Group of Chalara infected ash. Fell.		13				
365779	371632	C	2-5	G	Small group of Scots pine. Thin to favour the better stems, 7 trees in total remove 3.		1974				
365796	371630	D	2-5	A	An area with lime trees with very little understorey. Plant some shade tolerant shrubs to improve screening. Fell poor oak. Thin Jacquemontii birch.						
365696 365697	371635 371628	3	1-5	G	Group of 2 - Two semi mature ash currently appear healthy monitor for Chalara, fell and re-plant when die back becomes severe.						
365701	371633	E	N/A	A	Area of felled Scots pine. Replant with hazel		36				
365724	371611	4	2-5	T	Mature oak. Prune to remove deadwood, end prune branches closest to nearest house.						
365779	371594	F	2-5	A	Area containing horse chestnut, Scots pine, laurel, holly, birch, hawthorn, ash, oak and whitebeam. Thin and prune to maintain multi layered canopy, and to retain best stems while maintaining visual screen. Remove dead trees and Chalara infected ash.		718				
365745	371606	5	2-5	T	Prune and clean a single multi-stemmed lime.						
365752	371605	6	2-5	T	Coppice lime growing through oak.						
365752	371604	7	2-5	T	Oak. Remove low branch from southern face 800mm from ground level.						
365786	371589	8	2-5	T	Horse chestnut with large low branch on SE face 400mm from ground level, remove limb.						
365791	371587	9	1-2	T	Dead birch. Fell.						
365827	371562	G	2-5	A	Area containing birch with some oak, cherry, ash. Thin to favour best stems remove Chalara infected ash. Prune trees around the monument and over the footpath.		239				
365834	371540	H	2-5	A	Area containing birch, sycamore, field maple, oak, hazel, hawthorn, damson. Thin and prune to favour best trees while maintaining a visual screen. On a bund approximately 1.8m above house ground level.		296				
365828	371523	10	1-2	T	Goat willow next to drive/parking area. Prune heavy branches over car park. Prune neighbouring lime.						

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Easting	Northing										
365821	371483	I	2-5	A	Area of field maple, oak, cherry, Scots pine, sycamore, lime, larch. Thin respacement and prune while maintaining a visual screen. The bund is approximately 2m above house ground level.		823				
365809	371462	J	4-5	A	Area containing a number of dead birches which pose no immediate threat. Fell dead trees and respacement hazel and sycamore self-set trees in 4-5 years' time.		77				
365775	371437	K	2-4	A	A group of 5 cherries, prune to a height of 3-4m. Remove misshapen cherry.		28				
365766	371431	L	1-2	A	Open area. To improve screening from the road plant up with, 20% hazel, 40% holly, 20% laburnum, 20% dogwood. The bund is approximately 3m above the ground level of the houses. Low level canopy plants will give improved visual screening.		82				
365758	371429	11	2-5	G	Two larch, prune to a height of 3-4m.						
365750	371424	M	2-5	A	Hawthorn, hazel and field maple, thicket on bund rising to the northeast. Clean and respacement.		68				
365743	371423	12	1-2	G	Hazel stools coppice, prune over hanging branch on field maple.						
365735	371420	13	1-2	T	Field maple, prune over hanging branches.						
365725 365727	371418 371418	14	1-2	G	Group of 3 birch - Fell two leaning birches, sever ivy off the other.						
365722	371416	15	2-4	T	Ivy covered cherry, fell to release 2 neighbouring oak. Prune oak.						
365726	371410	N	1-5	A	Chalara infected ash. Fell when die back becomes severe. Replant with 60% Oak, 20% field maple, 20% hornbeam.		60				
365720 365722	371412 371413	16	2-4	G	Group of 2 - 2 Hazel stools, coppice. Remove branch off neighbouring leaning field maple.						
365717	371413	17		G	Chalara infected ash. Fell when die back becomes severe.						
365709	371413	18	1-5	T	Large birch (Height 18m, dbh 400mm). Remove large heavy limb from weak fork.						
365698	371397	O	2-4	A	A row of dense hazel coppice (approximately 10 stools). Coppice to retain visual barrier. Remove large over hanging stems. The wood is narrow at this point.		57				
365695	371394	19	1-2	T	Poorly formed birch (Height 16m, dbh 270mm) leaning towards building and driveway, some soil heave in wet ground. Fell. (Has fine oak next to it and a field maple.)						
365684 365690	371398 371398	20	1-4	G	Group of 2 - Coppice two large hazel stools at the front closest to woodland edge, prune any over hanging branches from the adjacent hazel.						
365677	371398	21	2-5	T	Small poorly formed alder fell. Prune alder behind to a height of 6m.						
365677	371391	22	2-5	T	Fell small alder being suppressed by neighbouring trees.						
365674	371384	P	2-5	A	Area of oak, cherry, Scots pine, prune all to a height of 5-6m.		168				

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Easting	Northing										
365661 365665	371389 371395	23	2-4	G	Group of 2 - 2 multi-stemmed field maple formative prune, removing any overhanging branches.						
365656	371383	24	2-4	T	Fell poorly formed alder.						
365654	371382	25	2-4	T	Coppice hazel stool.						
365648	371382	26	2-5	T	Scots pine. Prune to a height of 5m.						
365646	371376	27	2-5	T	Large Scots pine. Prune to a height of 7m.						
365643	371373	28	2-5	T	Oak prune to a height of 6m						
365640	371372	29	2-5	T	Scots pine prune to a height of 6m.						
365630	371361	Q	1-5	A	A group of 5 ash. Fell as die back occurs.		36				
365620	371357	30	1-5	T	Fell smaller of two birch, formative prune oak to a height of 7m.						
365620	371363	31	2-4	T	Coppice 2 of 4 hazel stools.						
365606	371358	32	1-4	T	Prune and reshape collapsed apple tree.						
365590 365594 365598	371353 371354 371355	33	2-4	G	Group of 3 - Coppice 3 hazel stools next to house						
365592 365592	371347 371345	34	1-2	G	Group of 2 - 2 Ash fell both. In poor health and decline due to Chalara. Oak next to the ash should be pruned to a height of 6m.						
365581	371346	35	1-4	T	Fell Chalara infected ash. Fell when die back becomes severe.						
365577	371345	36	2-4	G	Fell birch on house side of oak to aid growth of oak and alder. Prune oak to a height of 7m.						
365566	371344	37	2-5	G	Oak approximately 6m from house, fell along with alder.						
365560	371341	38	1-4	T	Birch, prune NW face closest to nearby building to a height of 7m.						
365557	371338	39	1-4	T	Large birch, prune NW west face near to house to a height of 7m.						
365564	371330	R	2-4	A	Fell 5 ash trees with significant die back. There is sufficient oak and hazel to maintain screening. Damage to understorey will be minimum. Formative prune oak to a height of 5-6m.		111				

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Eastings	Northing										
365530 365532 365535 365539	371325 371326 371328 371330	40	2-4	G	Group of 4 - Coppice 4 hazel stools next to a track. The trees are starting to grow over the track and shade a nearby house. Prune overhanging branches from adjacent stools.						
365527	371309	S	4-5	A	Formative prune oak to a height of 5-6m. Thin birch.		46				
365519	371305	T	1-5	A	Area of ash, thin as die back occurs and enrichment plant with oak and hazel.		54				
365515	371318	41	2-4	G	Coppice 2 large hazel stools next to boundary fence. Prune any overhanging branches from neighbouring stools which may affected regrowth.						
365492	371303	42	2-4	G	Coppice largest of 4 hazel stools and coppice 2 large elder stools.						
365471	371282	43	2-5	T	Formative prune oak to a height of 6m.						
365468	371286	U	1-4	A	Area of chalara infected ash which have been high pruned. 5-8m away from the gable end of a house (Height 16m, dbh 300mm). The area is open, under plant with 20% dogwood, 20% laburnum, 30% holly, 20% oak and 10% birch to replace the ash when they are removed.		658				
365453	371282	44	1-2	G	Coppice large hazel stool between 2 smaller ones.						
365433 365436 365442	371272 371274 371277	45	1-2	G	Group of 3 - Coppice 3 large hazel stools next to house and boundary fence, prune any other over hanging branches from adjacent stools. Formative prune crab apple.						
365428	371260	V	2-4	A	Formative prune oaks to a height of 4-5m. Thin ash with die back.						
365402	371254	46	2-5	T	Prune Scots pine to a height 6m						
365395	371252	47	1-5	A	Area of dense hazel coppice. Re-coppice the larger stools but avoid creating large gaps. Prune any overhanging branches from adjacent stools.						
365390	371250	48	1-2	T	Overgrown mature elder, re-coppice. Fell Chalara infected ash next to fence.						
365381	371246	49	2-5	G	Coppice large hazel stools next to the boundary fence. Prune any overhanging branches from neighbouring stools which may affect regrowth.						
365369	371230	50	1-2	T	Fell dead birch to a safe height.						
365360	371239	51	2-4	T	Coppice large hazel stool.						
365349	371231	52	2-5	T	Formative prune oak to a height of 5m.						
365317	371206	W	1-4	A	Area of dense ash and aspen, thin ash in response to Chalara infection. Respace aspen understorey to encourage species diversity. Coppice elder, prune cherry and Norway maple. Top beech hedge.		1010				

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Eastings	Northing										
365253	371219	X	1-2	A	Small area to the west of the footpath. Laurel hedge has only been maintained on the roadside this will need cutting back on the woodland side. Chalara infected ash will need felling. Formative prune sycamore removing any damaged branches. Raise crown		433				
365084	371292	53	1-2	T	Dead alder. Fell.						
365061	371342	54	2-5	A	Area of large hazel stools, Coppice the larger stools.						
365060 365063	371345 371338	55	2-5	G	Group of 2 - Two poorly formed ash on housing side of the fence, Chalara infected will need felling and replacing when decline becomes severe.						
365056	371351	Y	N/A	A	Area of blackthorn, hawthorn scrub. Coppice.		494				
365036	371378	56	ASAP	T	Large, unbalanced tree leaning towards the houses and footpath with basal decay and Ivy cover. Thinning crown due to Chalara infection. Ownership will need to be established. (Height 27m, dbh 600mm).						
365031 365035	371410 371396	57	1-2	G	Group of 2 - Two large ash with uneven weight distribution towards houses and footpath, one has been marked with orange paint. The trifurcated tree is not badly affected by Chalara, both require monitoring. Fell when die back becomes severe.						
365022	371510	Z	2-4	A	Area with large hazel coppice. Coppice a third of the stools concentrating on the larger stools first. Views will not be affected because of the woodland behind. The stools are being forced to grow in an easterly direction due to the canopies of nearby trees.		657				
365042	371598	58	ASAP	T	Chalara infected ash with fungal bodies, unbalanced crown leaning towards footpath and houses.						
365040	371594	AA	1-2	A	3 large Chalara infected ash (height 25m dbh 600mm). Weight of crown is over the public footpath drive and buildings. Fell. The ownership of the trees needs to be established as they may be owned by Cheshire Wildlife Trust.		78				
365052	371658	59	1-5	T	Chalara infected ash, currently in a relatively healthy condition. Fell when die back becomes severe.						
365058	371668	60	2-4	T	Poorly formed cherry with weak fork, leaning over the driveway. Fell.						
365058	371675	61	2-4	G	Coppice hazel stools leaning east into Ashton close.						
365059 365058	371697 371693	62	2-5	G	Group of 2 - Coppice large hazel stools leaving smaller ones to develop.						
365076	371729	AB	N/A	A	Area of lawn and shrubs.		106				
365102	371814	AC	1-4	A	Area of chalara-infected ash. Fell when die back becomes severe, replant with oak, field maple and birch.		124				
365148	371918	AD	2-4	A	Large area of dense small diameter mixed broadleaves. Thin and respice to favour better stems, while maintaining the screen between neighbouring houses and footpath.		2584				
365120	371832	AE	1-2	A	Area of dead birch reduce to a safe height.		52				
365124	371845	AF	1-4	A	Area of chalara-infected ash, fell as and when die back becomes severe. Replant with oak, field maple and birch		143				

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Easting	Northing										
365137	371885	63	2-5	T	Prune low branches over neighbouring garage to a height of 4-5m.						
365161	371933	64	2-5	T	Cherry. Prune branches over the drive.						
365170	371946	65	2-5	T	Prune crab apple over garden.						
365175	371953	AG	1-4	A	Area of Chalara infected ash, clear fell. Substantial understorey of field maple holly and hazel. No replanting required.		128				
365183	371965	AH	2-4	A	Area of Scots pine thin to favour better stems.		116				
365196	372042	AI	2-5	A	Large area of dense scrub containing, oak, Scots pine, ash, hazel, holly, hawthorn, field maple, crab apple and birch on a slight bund above the footpath. Requires cleaning / respacing and pruning of the taller, better stems.		2097				
365195	372012	66	2-5	T	Coppice field maple next to garage.						
365194	372027	67	1-2	T	Dead Scots pine. Fell						
365198	372031	68	1-4	T	Ash with weight over drive area, fell when die back becomes severe. Prune crab apple.						
365208 365208	372056 372052	69	1-2	G	Group of 2 - Fell dead birch and damaged birch.						
365216	372064	70	1-2	T	Fell dead birch.						
365222	372071	71	1-2	T	Fell damaged cherry.						
365226	372078	72	2-5	T	Prune low over hanging branches on cherry.						
365224	372251	AJ	2-5	A	Large area of semi-mature mixed broadleaves. Thin to favour the better stems. Coppice a third of the hazel stools concentrating on the larger ones first. Fell as much of the ash as possible without leaving any large gaps. Prune the oak to a height of 4m		6453				
365221	372096	AK	2-5	A	Area of Scots pine, field maple and ash. Thin and prune field maple, fell ash.		163				
365208	372112	AL	2-5	A	Thin and prune Scots pine and larch.		156				
365182	372125	73	1-2	T	Damaged goat willow, coppice.						
365206	372141	74	2-5	T	Prune oak and cherry to height of 4-5m.						
365187	372147	75	2-5	T	Oak, prune remove lower branches over the footpath.						
365189	372157	76	1-4	T	Large multi-stemmed Chalara infected ash with stems and branches over the footpath. Will need monitoring, fell when die back becomes severe and the tree is hazardous.						

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Easting	Northing										
365201	372178	AM	1-4	A	Area of Chalara infected ash, fell. Plant gaps with mixed broadleaves.		370				
365214	372168	77	2-5	T	Oak, prune to height 3-4m.						
365216	372172	78	2-5	T	Bifurcated oak, remove the stem over the footpath, prune to height of 4-5m.						
365214	372189	79	2-5	T	Prune oak to a height of 4-5m.						
365219	372205	AN	1-4	A	Area of ash and hazel; fell ash coppice larger hazel stools.		243				
365226	372223	AO		A	Area of alder; thin to favour better stems (firewood).		166				
365239	372239	AP	1-5	A	Hawthorn and damson starting to overhang the path. Prune and coppice hawthorn. Prune damson.		197				
365228	372264	80	2-5	T	Large Goat willow, prune and dead wood.						
365237 365233 365232	372281 372286 372282	81	2-4	G	Group of 3 - Coppice 2 of the goat willow stools in the middle of this group.		454				
365238	372295	AQ	2-4	A	Area of oak and birch prune to a height 3-4m		171				
365239	372291	82	2-4	T	Prune squirrel damaged oak.						
365249	372298	83	2-4	T	Prune squirrel damaged oak.						
365253 365266	372306 372300	AR AS	2-4 2-4	A A	Area of Scots pine. Thin and prune.		61				
365276	372305	AT	2-4	G	A small area of Scots pine and larch. Thin to favour better stems		223				
365274	372314	84	2-4	G	Area of oak, birch, beech, hazel and hawthorn. Thin oak, beech and birch to favour the better stems while retaining the understorey. Prune remaining oak, beech, birch to a height of 3-4m.		39				
365306	372311	85	2-4	G	A group of trees planted as a hedge, consisting of field maple, cherry, hawthorn, holly, hazel. Thin small diameter stems, lift crowns to 4m to clear the footpath.		42				
365335	371920	86	2-4	T	Coppice 4 hazel stools near to the fence, prune any overhanging branches from the hazel stools behind						
365311	372274	AU	4-5-1	G	Fell poorly formed oak leaning over the fence. Fell small leaning birch. Prune larger birch to a height of 3-4m.		82				
365328	372272	AV	5	A	Area of young oak with hawthorn understorey. Thin to favour better oak and prune where appropriate. Maintain the hawthorn understorey		530				
365363	372202	AX	1-5	G	Area of Chalara infected ash. Fell when die back becomes severe. Try to maintain cherry saplings, supplement plant any open areas.		51				

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Easting	Northing										
365336	371912	87	2-5	T	A group of aspens which have grown through and over the fence and play area. Clear fence line trees and prune any overhanging branches.						
365376	372176	88	1-3	T	Fell poorly formed oak leaning over the fence. Fell small leaning birch. Prune larger birch to a height of 3-4m.						
365381	372170	89	2-4	T	A swept birch leaning over the garden wall and garage. Fell.						
365383	372168	90	1-4	T	Coppice hazel.						
365391	372164	91	1-4	G	Chalara infected ash. Fell.						
365394	372166	92	1-4	T	Two Chalara infected ash next to a garage. Fell.						
365401	372179	93	1-2	G	Poorly formed alder with a stem leaning over the footbridge. Remove the stem and all deadwoods.						
365411	372171	94	2-5	G	Two small ashes. Fell when dieback becomes severe.						
365440	372148	95	1-5	T	A group of crack willow coppice. Coppice when they become too large.						
365486	372124	96	2-5	T	Veteran ash with limbs over the school playing field. Monitor, remove any branches over the playing field.						
365490	372087	AY	2-5	A	Cracked willow next to road junction. Coppice when they become too large.		3453				
365512	371952	AZ	2-5	A	Area of mature Alder, crack willow, ash and goat willow with hawthorn understorey. Thin to favour the better stems removing any Chalara infected ash (not large). There is some crack willow next to the school fence line; coppice before they become too large.		447				
365540	371949	BA	2-4	A	Area of Hawthorn, hazel, birch and oak. Thin to favour the best stems and formative prune.		1436				
365548	371932	97	2-4	G	Area of large crack willow next to the road coppice. Fell Chalara infected ash.						
365557	371929	98	2-5	T	Large crack willow stool coppice.						
365568	371933	99	1-4	T	Thin small group of scots pine, prune to a height of 3m.						
365575	371929	100	2-5	G	Large crack willow stool. Coppice.						
365579	371926	101	1-4	T	Chalara infected ash. Fell when dieback becomes severe.						
365590	371921	102	2-5	G	Group of oak. Prune to a height of 3-4m.						
365589	371923	103	1-3	T	Chalara infected ash. Fell.						

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Eastings	Northing										
365599	371923	104	2-5	T	2 Scots pine, prune to a height of 3-4m. Fell oak growing between the two pines.						
365597	371922	105	1-4	G	Chalara infected ash. Fell.						
365472	371837	106	2-4	T	Oak. Prune to a height of 4m.						
365501	371841	107	2-4	T	2 chalara infected ash. Fell.						
365551	371832	108	2-4	T	Leaning birch. Fell.						
365567	371812	BB	2-4	A	Birch growing through railings. Fell.						
365650	371900	109	1-4	T	Leaning goat willow. Fell.						
365666	371913	110	1-4	T	Narrow woodland strip located next to footpath and rising up 2m to driveways and thereby creating a screen. The trees are approximately 10 years old. The area contains oak, ash birch and hawthorn. Remove Chalara infected ash, prune oak to a height of 3-4m.						
365682	371979	BC	2-5	A	Chalara infected multi stemmed ash. Fell when dieback become severe.						
365683	371995	111	2-5	G	Chalara infected ash. Fell when dieback becomes severe.						
365702	372006	112	1-5	T	Small, wooded area containing willow, oak, cherry horse chestnut, ash, blackthorn, elder. Clean, respase and prune. Restock open areas with oak and cherry.						
365707	372006	113	1-5	T	3 oaks around building, prune to a height of 3-4m.						
365802	371986	114	1-5	T	Chalara infected ash. Fell when die back becomes severe.						
365839	371967	115	1-5	T	Chalara infected ash. Fell when die back becomes severe.						
365845	371966	116	1-5	T	Chalara infected ash. Fell when die back becomes severe.						
365861	371957	117	1-5	T	Chalara infected ash. Fell when die back becomes severe.						
365814	372324	118	1-5	T	Chalara infected ash. Fell when die back becomes severe.	0					
365883	372340	BD	2-4	A	Chalara infected ash. Fell when die back becomes severe.		1241				
365857	372397	119	2-4	T	Ash in relatively good health. Monitor						
365875	372422	BE	2-4	A	Blackthorn and hazel scrub. Cut back to the fence line.		1152				

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Easting	Northing										
365875	372424	120	2-4	G	Poorly formed Scots pine next to a birch. Fell.						
365872	372436	121	2-4	G	Goat willow lift crown above fence. Thin some of the smaller stems.						
365872	372447	122	1-5	T	Coppice 50% of the hazel while maintaining the screen.						
365871	372454	123	1-4	G	Coppice 50% of the hazel while maintaining the screen.						
365867	372491	124	2-5	G	Chalara-infected ash. Fell when die back becomes severe.						
365867	372497	125	1-5	T	Fell dead cherry. Coppice large hazel stool behind the cherry.						
365842	372498	BF	2-5	G	Coppice 50% of hazel, remove side limb of oak and prune to 3-4m.		1942				
365866	372505	126	1-5	T	Chalara infected ash. Fell when die back becomes severe.						
365865	372514	127	1-5	T	Orchard stocked with apple and cherry trees. Consider pruning the trees to encourage fruiting and to improve their shape and form.						
365865	372518	128	2-5	G	Chalara-infected ash. Fell when die back becomes severe.						
365869	372536	129	2-5	G	Chalara-infected ash. Fell when die back becomes severe.						
365863	372541	130	2-4	G	Coppice 50% of hazel, prune lower branches of goat willow.						
365370	372555	BH	2-4	A	Thin cherry.		898				
365916	372760	BI	4-5	A	Coppice 2 of 4 hazel stools.		199				
365933	372742	131	1-2	T	Remove tree stake.						
365913	372645	BJ	4-5	A	Young scrub woodland on embankment leading to the rear gardens of houses. Contains oak, ash, horse chestnut, birch, Scots pine, hawthorn and blackthorn. Thin and formative prune.		3368				
365706	372414	BK	2-5	A	Scots pine and birch on 2m high bund. Thin to favour the better stems. Remove approximately 1/3 of the trees prune the deadwood. Fell 3 poorly formed cherry. Leaning over the footpath.		302				
365695	372383	BL	2-5	A	Thin suppressed poorly formed trees. Prune to encourage holly understorey.		104				
365678	372361	BM	N/A	A	Has recently been thinned and pruned.		121				
365582	372262	132	2-5	G	Remove 4 poor larch. Prune Norway maple, remove the branch over the footpath.						

Grid Reference		Tree/ Area ID	Priority Year	Type	Comments	Estimated Time (hrs)	Area m ²	Trees required	Trees cost	Labour cost	Total
Easting	Northing										
365568	372247	BN	2-5	A	Thin to remove dead and poorly formed stems. Under plant with holly, hazel, spindle and dogwood.		211				
365550	372212	BO	2-5	A	Area of trees on a 60cm high bund stocked with aspen, oak, beech, hornbeam, hawthorn and hazel. Remove dead and poorly formed trees, prune low branches over the footpath. Under plant any open areas with holly, dogwood and spindle.		426				
365710	371825	BP	2-5	A	Stretton walk is a narrow strip/hedge next to a small stream with mature/veteran oak with an understorey of hazel, goat willow, holly and hawthorn. Some bramble clearing has been done.		677				
365717	371818	133	2-5	G	Thin/coppice 50% of the hazel removing larger stems.						
365724	371807	134	2-5	G	Thin/coppice 50% of the hazel removing larger stems.						
365730	371793	135	2-5	T	Coppice tall hawthorn next to house.						
365741	371768	136	2-5	G	Goat willow Coppice 2 of 5.						
365129	371575	BQ	2-5	A	Woodland area with mature oak, sycamore and a dense understorey of holly, hawthorn and hazel coppice. Thin and coppice approximately 30%. Prune any branches over hanging the fence. Some coppicing of hazel has already been done. Chip the waste.		898				
365112	371570	137	1-4	G	4 Chalara infected ash. Fell.						
365123	371569	138	1-4	G	2 Chalara infected ash. Fell.						
365118	371536	139	2-5	G	Small group of young Scots pine, oak and cherry thin to favour the better stems.						
365153	371542	140	4-5	G	Fell poor cherry and Scots pine.						

Summary

Year	Trees cost	Labour cost
1-2		
1-3		
1-4		
1-6		
2-4		
2-6		
4-6		
4-6		
N/A		
Total		

Appendix A

Woodland Management

Introduction

This document provides practical woodland management information and explains some of the terminology used by foresters and ecologists. It provides a summary of typical woodland management objectives, methods to achieve them and expected outcomes. Where these are not achieved, it provides an indication of appropriate responses.

Woodland operations

Selective felling

This entails felling an area of woodland but leaving a few of the trees standing. It is done to encourage natural regeneration from seed cast by the remaining trees. It has similarities to the restocking process which might normally occur in a natural unmanaged woodland. For example, areas devastated by wind blow are restocked by seed cast from neighbouring trees. Selective felling increases habitat and biodiversity by disrupting the even age class structure of a woodland.

Removing diseased species (for example, Chalara infected Ash) from a woodland may constitute thinning or selective felling. In general felling creates large gaps in the tree canopy which cannot be closed by the canopy growth of neighbouring trees.

Clear felling

This is the removal of all trees from a site. It frequently has an immediate and dramatic impact within the landscape and has the potential to disrupt ecosystems. These features are not always negative. Clear felling is nearly always followed by replanting (establishment).

Thinning

Thinning reduces the stocking density. Weaker, suppressed, poorly formed and diseased trees are removed. The objective is to favour the remaining trees, provide more growing space for them and increase their value. Increasing standing timber values is not always incompatible with conservation management. Creating conditions under which woodland expenditure matches or exceeds timber income can underpin long term woodland management.

Thinning and selective felling might target non-native species (for example, Turkey Oak, and most conifer species). Ash trees should also be selected for removal if they have Chalara.

Coppicing

Coppicing is best done by hand. Felling cuts should be sloped to allow water runoff. On existing coppice stools, runoff shall also be directed away from the centre of the stool.

Establishment

Trees can be planted in groups of similar species and as singles. Woody shrubs (for example, Dogwood, Hawthorn, Guelder Rose, Holly, Elder, Wild Privet, Wayfaring Tree and Spindle) may be encouraged to develop into thickets which in future may be managed by periodic flailing. The objective is to create screening, habitat, and shelter. These species are usually be planted in same species groups of 3 - 6 plants. Avoid blocks of solid planting near to ride edges. Natural regeneration – the establishment of trees from seed cast by older neighbours can be more cost effective than planting.

Protection

Establishing trees may require protection from rabbit and/or deer browsing. While 60cms spiral guards are effective against rabbits, 1.2m shelters or deer fencing are required to keep deer out of restocking sites. In areas where the objective is to increase biodiversity, for example on selectively felled sites, deer fencing also reduces browsing pressure on regenerating field, herb and shrub layers. It may be possible to provide temporary protection by enclosing areas with plastic deer netting fixed to trees or metal stakes. Mesh to prevent rabbits entering sites can be fixed to deer fencing.

Weeding

Trees and shrubs require weeding for three to five years after establishment. This may be done by applying herbicide to vegetation growing within a 1 metre circle centred on the recently planted tree or shrub. Weeding may be required for several years after planting.

Management of vegetation on ride edges.

Biodiversity along ride edges can be increased by maintaining them as open space and scrub. Half the ride edge vegetation can be flailed every three years and the remaining half every 5 – 20 years. The longer cutting interval allows bramble and other woodland shrub species to colonise these areas. Vegetation should be cut to achieve a sloping profile which rises to the tree canopy from the ride edge. This is illustrated in the image overleaf.

Typical Woodland Management Objectives, methods of achievement and outcomes

Objective	Method of achievement	Expected change	Response if change fails to materialise
Improve biodiversity and health of trees and other plants.	Thinning and selectively felling will increase levels of light reaching the ground and thereby stimulate vegetation in the field, herb and shrub layers. Seed from Ancient Woodland species can lie dormant for many years. Thinning may stimulate its germination. Selective felling on south facing aspects is also beneficial. Plant trees and shrubs from native provenances. Mow established ground vegetation and fail shrub layer vegetation periodically.	Ground flora present, higher levels of light reaching the ground. Avoid opening the canopy too much since this can facilitate bramble growth.	Do not review management for two years to give time for plant colonisation. Consider increasing thinning/selective felling intensity: if too low increase. Consider impact of browsing: if too high, protect areas with rabbit guards, tree shelters (1.2m high) or fencing if deer are present.
Improve biodiversity.	As above, increasing ground flora provides more sources of food and habitat. Increase volume of standing and fallen dead wood. Consider ring barking some standing trees.	Increased habitat	As above.
Control squirrels and other pests	Trapping, shooting and drey-poking to reduce squirrel numbers. Deer control by shooting may be difficult if near to residential areas and people. Increased human activity in the woods may disturb deer and move them to other areas.	Reduced habitat damage	Review/increase controls if baseline surveys show no fall in numbers.
Ensure trees are not hazardous to users of the wood and /or neighbours	Inspect trees and remove any hazards	Reduced hazards	Review competency of inspections increase their frequency. Review instructions to tree surgeons.