

WINCHESTER CITY
AND ITS SETTING

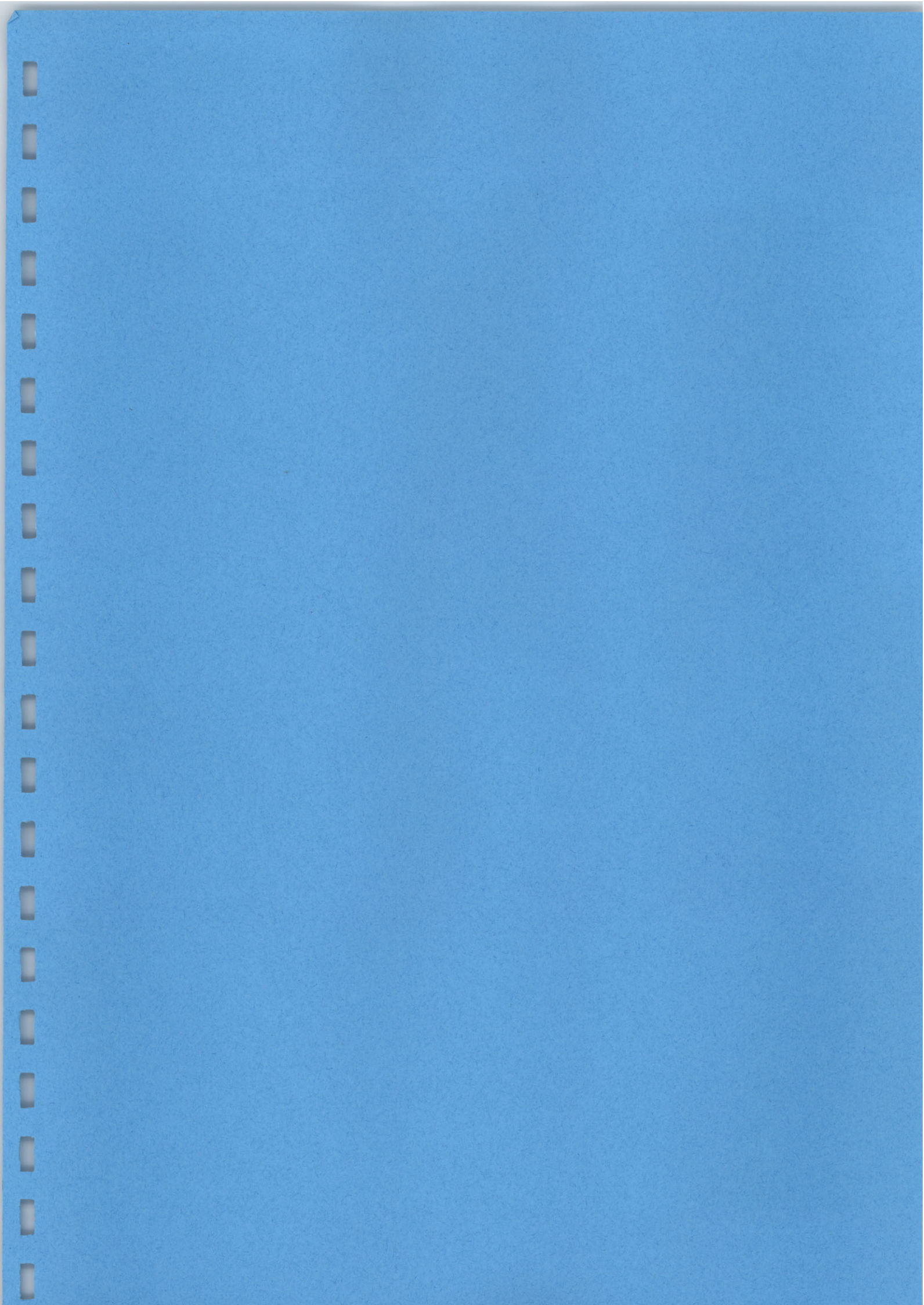
STAGE 1 REPORT

APPENDICES

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APPENDIX 1

ARCHAEOLOGY

Introduction

This paper describes the archaeological aspects of the 'Winchester and its Setting Study' undertaken by Wessex Archaeology on behalf of Landscape Design Associates for Hampshire County Council.

The aims of the Study as set out in the Consultant's Brief prepared by Hampshire County Council are:

To identify the ... attributes of the historic city and its setting, and the contribution they make to its special character and sense of place

To identify and delineate the boundary of the historic setting to Winchester City

To define those characteristics which are essential to the historic fabric of the city and its setting and approaches and its relationship to the wider countryside.

Three stages of identification, evaluation and assessment were proposed. Stage One was to involve the 'identification and evaluation of the characteristics of Winchester City and its setting including existing issues, pressures and capacity guidelines'.

Stage One was to comprise predominantly a data gathering exercise leading to the preparation of a report presenting the following information:

A factual description of the archaeological resource

The identification of the most important archaeological features, including either those recognised through statutory protection (i.e. Scheduled Monuments) or those in Wessex Archaeology's opinion considered of particular importance

The identification and interpretation of those aspects of the archaeological resource which are key to the 'specialness' and 'essence' of Winchester as an historic city

In view of the limited timescale available for this stage of the study, the large size of the study area and the high number of known archaeological sites within it, a methodology was devised that would provide the basic information required. This methodology is described below.

Method Statement

The Study Area

This paper addresses the archaeological resources of Winchester and its setting up until the Norman Conquest (AD 1066). The Norman, medieval and later history is addressed in Appendix 2. The Study Area employed is that shown on the map supplied to Wessex Archaeology by Landscape Design Associates. It runs from SU 4424 in the south-west corner to SU 5437 in the north-east corner, and includes the City of Winchester, surrounding suburbs and chalk downland, the Itchen Valley and areas of woodland such as Itchen and Micheldever Woods.

Baseline Data

The baseline data for this study has been accumulated from three principal sources:

The Hampshire County Sites and Monuments Record (SMR), the Winchester District SMR and the Winchester Urban Archaeology Database (UAD). Data was taken from the three sources and plotted to show the distribution patterns of sites and findspots of different periods so far recorded within the Study Area. The information has been plotted on a series of transparent overlays at 1:25,000 scale. This information has been supplemented from published sources.

The Hampshire SMR is a computerised database of known archaeological sites and findspots compiled and maintained by Hampshire County Council. It includes some sites within the Winchester District area, and within the City. A computerised coversearch of the area undertaken by Hampshire County Council produced a list of more than a thousand records of all periods. A paper copy was presented to Wessex Archaeology. Medieval and post-medieval records were stripped out, and the records were edited so that, for example, where objects of different material types but of the same period found at the same location had been assigned an individual number on the SMR, a single entry was used for the project database. If elements represented different periods, separate entries were maintained.

The Winchester SMR is also a computerised database of known archaeological sites and findspots maintained by the Winchester Museums Service and encompassing the Winchester District Area. A coversearch produced a paper list of c. 750 records. Again medieval and post-medieval records were removed as were any corrupted records or obviously erroneous records.

The third database, the Winchester UAD, is also compiled and maintained by the Winchester Museums Service. It comprises GIS-based computer records with additional computerised datafiles. The first stage of the Winchester UAD was completed by December 1997 and the second stage, a formal academic assessment is underway, with an intent to produce a final report on the development of management policies for Winchester's archaeological resource (Whinney 1997, 3). A printout of the UAD, which contains vast numbers of records, was not deemed practicable for this project. The UAD concentrates on the historic core of the City, which the other two databases largely avoid. Evidence for the historic core of the City has been acquired largely from published material.

The historic core of Winchester has been the subject of considerable archaeological research, which is the subject of an on-going publication programme.

No attempt has been made to show the SMR numbers on the distribution maps, which can only be used as a broad interpretative tool. The distribution maps of sites clearly show that there is considerable but not complete overlap between the Hampshire County Council SMR and Winchester City SMR. They also show an inherent bias in the system of archaeological research and recording.

The dates of the archaeological periods referred to in this report are given in Table 1.

Period Precis

Introduction

The topographic setting of Winchester has been shown by Scobie (1995-1996) to have been an important factor in the location and development of the city from the prehistoric period onwards. It is located on a crossing point or ford of the River Itchen, which utilised a raised area above the floodplain. As might be expected in an area with a river ford and access to different local environments, river floodplain and surrounding chalk downland, there is ample evidence that Winchester and its surrounds is rich in the material remains of past human activities. The landscape history of the area is made understandable through the study of archaeological remains, many of which are of regional and national, as well as local significance.

Earlier Prehistoric

The archaeological remains recovered for the very early prehistoric periods are of types which are unlikely to be visible in the landscape today, being mainly small objects rather than monuments. The utilisation of any one area may have been periodic rather than continuous reflecting a less settled way of life, which relied on hunting and gathering prior to the development of agriculture. However such remains reflect the exploitation by humans of natural resources within the Study Area. Temporary encampments may have been made in this period within the Study Area, but little evidence for this has so far been discovered.

The Palaeolithic saw the first appearance of people in what is now the British Isles probably not before c. 250,000 years ago. Palaeolithic remains comprise principally worked stone implements, and debris. Palaeolithic implements have been recovered from Kingsworthy, from just west of Micheldever / Itchen Wood and from the south of the area at Twyford, and at Colden Common south of the Study Area.

During the Mesolithic (8500 – 4000 BC) there is some evidence that people may have started to influence the natural environment. During this period the chalk downland was probably a largely wooded landscape, although there is limited evidence for woodland clearance and the creation of 'glades' perhaps for settlement, or to encourage browsing animals such as cattle and deer, or to encourage the spread of a more diverse vegetation. The rich and varied natural resources of the valley of the River Itchen and its marshy, floodplain environment, would have been attractive to the people of the time. The river provided water, fish and fowl and a means of communication and transport. The woodland and undergrowth on the margins of the floodplain provided fuel, shelter, and cover for wild animals.

Most Mesolithic material has been recovered by fieldwalking, or during the archaeological investigation of sites of a later date. Due to the variable nature of the physical survival of different archaeological materials over long periods, the most commonly recovered material of the Mesolithic period is flint, utilised for tool-making.

Within the Study Area, Mesolithic material is more widespread than the Palaeolithic. It has been recovered from Compton Down and Twyford at the southern end of the study area, from west and north of Bushfield towards the centre of the area, from the higher ground to the east of Winchester (Deacon Hill and Cheesefoot Head) and from the north at Lunways Inn adjacent to the Basingstoke Road.

The Neolithic period is the one in which farming and pottery were introduced to Britain. During the Neolithic period farming techniques may have resulted in small scale and periodic deforestation of the local downland, the first major environmental impact by mankind in the area. Small plots of land rather than formalised fields, may have been tilled for cereals to supplement wild resources. It is also the first period in which monuments were built and which may still be visible in the landscape today. The earlier Neolithic is known for its burial mounds and ceremonial or settlement sites called causewayed enclosures, whilst the later Neolithic is known for henge monuments. In the Study Area there is an apparent lack of large ceremonial monuments but there are communal burial monuments or long barrows. These include Scheduled Monuments such as those at Worthy Grove (Scheduled Monument No. 586) or West Hill Road South Wonston (Scheduled Monument No. 175), and two more at South Wonston.

In addition to relatively isolated burial monuments and surface finds of artefacts, there is evidence for Neolithic settlement such as that at Bottom Pond Farm, which is located south-east of Morestead, between two known long barrows at the south of the study area. Additional material has been located at Twyford and Shawford in the south of the area, east of the Easton Lane interchange near Winnall Cottage Farm / Shoulder of Mutton Farm, and at Martyr Worth in the Itchen Valley.

Bronze Age

By the early Bronze Age (2400 – 1500 BC) the landscape was increasingly open, although there remains little firm evidence for formalised fields. The increasing level of cultivation had encouraged the movement of soils down into the floors of dry valleys on the downland and may have resulted in the thinning of soils on some ridge tops. By the middle Bronze Age (1500 – 1100 BC) the downland was probably intensively cultivated and covered with a patchwork of fields, set within structured field systems. There was probably large scale, managed and systematic farming of the downland.

The archaeological remains of the Bronze Age which may be visible in the landscape include the characteristic burial monuments called round barrows, which were often sited on higher ground so as to be visible from a distance, and frequently occur in groups. These can occur as standing mounds but many have long been subject to ploughing, and so may now be visible only on aerial photographs. They are the most numerous prehistoric monuments to be seen in Hampshire. There are round barrows on Magdalene Hill Downs (SU 500294) east of Winchester City. Other barrows are still to be found or have previously been recorded at Kings Worthy, Sparsholt, Twyford, Owslebury, Olivers Battery, Chilcomb, Compton, and Wonston. An example of an Early – Middle Bronze Age round barrow was excavated in advance of the recent M3 extensions on Twyford Down.

Early fields known as 'Celtic' fields can date from the Bronze Age although they are also associated with later periods. These fields are regular in shape and generally of similar sizes. On downland slopes they are often defined by lynchets which result from soil movements and accumulations at field edges. Despite later agricultural activities which erode them, lynchets are sometimes a visible feature in the landscape. Field systems are preserved within the Study Area including those on Teg Down (ref: UAD) and Twyford Down. Other features of the period are linear features known as ranch boundaries, which may demarcate territory. An example of a 'ranch' boundary is found on Worthy Down.

Settlements sites are also to be found within the Study Area. As these sites are generally known from buried features such as storage pits or postholes which are all that remain of post-built structures such as houses, they are generally found through their association with other features such as burial monuments or field systems. Surface finds of worked flint, pottery or other finds can also be indicative of settlement. Within the Study Area, Early Bronze Age occupation is recorded from North and South Winnall Industrial Estate, Middle Bronze Age occupation was recorded during investigations in advance of the M3 Motorway at Easton Lane / Winnall Down, Late Bronze Age post-built structures and pits and field systems were investigated at Twyford Down. A further Late Bronze Age settlement is recorded at Alresford Road (west of city) (ref: UAD) and further Bronze Age occupation evidence has been recovered from Winnall Allotments (Harrison, 1991, 5).

In addition there are occasional finds of distinctive Bronze Age metalwork recovered as surface finds, and isolated burials such as an inhumation recorded in the Winchester High Street Zone (Ref: UAD). The distribution maps partially reflect the intensive use of the chalk downland, but also reflect areas of large-scale recent archaeological interventions in advance of roads, housing and industrial developments.

Iron Age

The remains of the Iron Age are generally more substantial and widespread than in earlier periods, with certain characteristic monuments, such as hillforts, still visible and important features in the landscape. During the Iron Age a dispersed but relatively high population with a developed and controlled agricultural system was in place on much of the chalk downland. There were many rural settlements comprising farmsteads with 'Celtic' field systems, linear ditches and trackways. Many of the sites are not visible as earthworks but have been identified from aerial photographs and other surveys.

Many settlements were enclosed. Some are known from their shape as 'Banjo' enclosures, several

of which are found 'on the chalk plateau north of the Itchen and on the high chalk downland south-east of Winchester' (Schadla-Hall 1977, 29). Such sites may have continued in use into the Roman period. 'Banjo' enclosures have been recognised at Woodhams Farm Kings Worthy, Pitt Down Hursley, Bridgets Farm in the Itchen Valley and Micheldever Wood. Square or rectangular enclosures have been recorded at Hursley, Twyford Down, Headbourne Worthy, Abbots Barton, Chilcomb, Olivers Battery. Circular or oval enclosures have been recorded at Twyford Down, Sparsholt, in the Itchen Valley, Owslebury, Kings Worthy, Chilcomb, Headbourne Worthy.

Other settlement sites are recorded at Kings Worthy, Owslebury, Chilcomb, the Itchen Valley and Headbourne Worthy. Iron Age settlements are recorded at Winnall Down, and Winnall Industrial Estate (North and South), Twyford Down, (Iron Age /Romano-British settlements), Bridget's / Burntwood Farms (later replaced by a Roman settlement with streets), Teg Down enclosure at the Royal Winchester Golf Club (Ref UAD), and at Stanmore 46/28 (ref. UAD).

It is from the Middle Iron Age that there is evidence for substantial human activity in the area now occupied by Winchester itself. During this period a defended (ditched) enclosure known as Oram's Arbour was established. It was very large, with multiple entrances and was located on the lower valley side rather than high on the slopes as a hillfort would be. Only a small proportion of the area within the enclosure has been excavated, however it is believed that the site may have been used for controlling access to the ford across the River Itchen (Whinney 1994). It is noteworthy that the site appears to have been largely contemporary with the hillfort of St. Catherine's Hill (see below). During the Late Iron Age Oram's Arbour appears to have been largely abandoned but the ditch remained a feature in the landscape.

Further Middle Iron Age evidence from the City area includes a site at Bereweke Avenue adjacent to Barton Farm (unpublished), a holloway (routes) from Oram's Arbour towards the river and another along what is now Hyde Street. In the north-west part of the City a number of houses/buildings have been found (UAD) and further structures are recorded at Staple Gardens and Southgate Street (UAD). A ditched enclosure is recorded at Firmstone Road (UAD). It is assumed that Oram's Arbour was a focal point for activities because of its location and defended nature. It was probably one of several significant locations, although the exact relationships between sites and indeed types of sites are not yet clear.

On the surrounding downs were a number of hillforts. These monuments were large defensive enclosures which were normally sited in 'topographically dominant situations'(Schadla-Hall 1977, 27). Their exact role is not clear although it is suggested that they functioned as central places in agricultural territories (Hampshire County Council 1984,7) and fulfilled 'a social and economic and possibly ceremonial role in the context of the surrounding area' (Schadla-Hall 1977, 27).

The Middle Iron Age hillfort known as St. Catherine's Hill because of the medieval chapel to St. Catherine which once stood on its summit, lies on a steep sided hill to the south of the City of Winchester across the Itchen Valley and water meadows. It is an example of a univallate hillfort (it has a single bank and ditch) which encloses approximately 9ha. The main construction work is dated to c. 400 BC and it was occupied until c. 100 BC (Morgan Evans 1987, 10)

The St. Catherine's Hill complex is of National significance. (The complex also includes important later elements such as the medieval chapel, a post-medieval maze and associated post-medieval earthworks to the north). The site also has considerable amenity value. It is no longer cut off from the city by the former A33 Winchester Bypass, following the removal and subsequent landscaping of that road after the conclusion of the M3 extension works. Estimates and visitor surveys in the past have shown that very significant numbers of people visit St. Catherine's Hill each year (Morgan Evans 1987) and a note was made of potential erosion problems. The site is under the care of the Hampshire Wildlife Trust who have implemented a programme of scrub removal and maintain a grazing regime to keep the aspect of the hill open. Information boards have been placed at public access points around the hill. A walk from

Winchester across the water meadows by Garnier Road to and up the hillfort, is recommended by the Winchester Group of the Ramblers Association (1994, Walk no 10)

Other local hill forts include the Scheduled Monument of Merdon Castle at Hursley west of Winchester. This is a probable univallate hill fort (Williams-Freeman 1915, 255-9), although badly damaged by the construction by later monuments (a Norman keep built by the Bishop of Winchester and a later church). Norsebury Ring is another univallate hillfort located four miles north of Winchester. It is also a Scheduled Monument albeit heavily ploughed. Oliver's Battery is a further Iron Age hillfort. Another Scheduled Monument (SM 82), it lies on the south-western outskirts of Winchester, across the Itchen Valley from and almost opposite St. Catherine's Hill.

Romano-British

It is only since the Roman City was founded (soon after AD 43) that a single clear focus of activity emerged in the area. Winchester or *Venta Belgarum* meaning the 'market place (civitas) of the Belgae', lies in the east of a Roman canton which included most of Hampshire. It comprised part of the territory of the pre-Roman Atrebates (in the east) and in the west part of that of the Dobunni (Rivet 1964). It is the only civitas that cannot yet be traced back to a thriving large Late Iron Age settlement or to a vicus which had developed outside a Roman fort. No evidence has yet been recovered for an early Roman fort, although limited finds and some buildings (St George's Street) of the period have been located. The apparent absence may be due to the likelihood that such a fort may have been sited on higher ground, possibly that occupied now by the later castle (Wacher 1995, 291).

Control of the ford would have been important. Roads which linked the City with the other Roman towns and allowed efficient military communications and trade were established. Five principal roads out of the city have been identified (although the roads to north and west are better defined than those to south and east). Significantly the roads from the north and west were aligned on the entrances of Oram's Arbour, the eastern defences of which were slighted in order to construct the early Roman town's defences and street plan. The roads from the town comprise those to Silchester (the modern Basingstoke Road), Mildenhall and Wanborough (the modern Andover Road), Old Sarum (the modern Sarum Road), Bitterne (the modern B3335), and Wickham and Chichester (modern Morestead Road). These roads are clearly recognisable within and outside of the current street plan of the City.

The Roman town comprised a defended urban settlement with a planned street layout and civic buildings. Importantly they diverted the course of the River Itchen and began a drainage system which enabled previously marshy ground around the higher islands of land in the river floodplain to be utilised. Winchester became the fifth largest town in Roman Britain. These changes however happened gradually throughout the Roman period. In the later Roman period the town was in decline and by AD 450 all signs of urbanism gone.

The initial earthwork defences with timber gateways were replaced with walls, later built over in the medieval period, but the layout is still captured in the plan of modern Winchester. The later occupation of Winchester continued to be concentrated within the walled area until relatively recent times, but almost from the outset there was some extra-mural activity and some 'suburbs developed'. The planned street layout of Winchester has been reasonably well defined by excavation, and the outline of the Roman defences are preserved in the present day road patterns, although little of the walls remain. The present High Street preserves the line of a Roman route. The likely sites of forum / basilica have been identified. The blocks between the streets (*insulae*) at the west end of the town are small and narrow whilst at the eastern end on the floodplain they form larger units. Earlier Roman buildings are fairly scattered throughout the town. They include the probable site of the temple and have been recorded in Lower and Middle Brooke Streets, High Street, Jewry Street (towards the north gate). Later Roman buildings include the Forum and various town houses around the Cathedral Green.

A number of cemetery sites have also been located outside the walled town. The northern cemetery has been particularly well investigated. It lay in the northern suburbs (along) Bereweek Road between the Silchester and Andover Roads. Evidence for it has been recovered in Swan Lane, Victoria Road, Hyde Street and Lankhills. A western cemetery utilised the former Oram's Arbour linear ditch, which contained many neonatal burials (Scobie pers. comm.). An eastern cemetery is less well-defined having been recorded through some excavating at Chester Road. It is probably later Roman.

During the Roman period when Winchester was a regional capital, there were many and varied other settlements (many with contemporary burial grounds) in the Study Area. It is likely that many of these were providing supplies to Winchester. Roman villas are numerous around Winchester (within the study area these include Itchen Abbas (SU 52 34) Woodham's Farm Kings Worthy (SU 48 33), Owlesbury (SU 53 23) two sites just to the west at Sparsholt SU 43 31 and 42 30 and Twyford (Scott 1991 81-88).

There are also other types of settlement sites. In the Itchen Valley, a number of Roman sites are located at c. 1 km intervals along the north side of the valley, set back about 1km from the river (Fasham 1991, 78). 'It has long been suspected that the string of villages along the upper Itchen Valley are the river-side successors of a series of small farms, villages and perhaps even a small town which occupied the south facing slopes of the upper Itchen Valley during the Iron Age and Romano-British periods (Fasham 1991, 78).

Saxon

Evidence suggests that following the collapse of the Roman Empire Winchester suffered a decline, and partial abandonment. In Winchester during the 5th to mid 7th centuries AD the drainage system established by the Romans fell into disrepair and the Itchen may have in part returned to a natural course (Scobie 1995c, 1996). There was some Saxon occupation, however, and buildings included a mid-seventh century church on the site of the Old Minster (Biddle 1976, 306), workshops, and industrial sites. Cemetery evidence has also been recovered (Scobie 1995c, 3). It seems likely that prior to the 9th century AD the Saxon roads probably re-utilised the Roman grid layout with some slight alignment changes and were not planned but grew organically (Scobie pers. comm.). Documentary evidence suggests that the Bishopric of Wessex was transferred to Winchester in the mid 7th century, probably partly encouraged by the survival of the defences of the former Roman town. While Winchester emerged as an important royal and ecclesiastical centre from the mid-7th century AD onwards, the extent and nature of occupation within the defences is unknown but was probably not 'urban'.

Documentary evidence has suggested that Winchester confirmed its growing importance during the 9th and 10th centuries after Alfred made Winchester the first capital of England. The laying out of a new gravelled street grid, albeit orientated on the gates leading into the Roman town, in the later 9th century AD, the plan that essentially survives today, represents the re-commencement of the urban character of the City as a planned Saxon *burh*. Physical evidence for a royal palace has not yet been recovered. It is possible that it lies under the present cemetery at Cathedral Green. The city itself grew in size and importance from the 9th century to the 12th century although its influence and importance gradually declined after this date.

A number of important religious buildings were established in the town. They included an abbey of Benedictine nuns in the town centre founded c. AD 900. The Nunnaminster, later known as St Mary's Abbey, was an important royal monastic house, and although nothing now stands of it, the site has been located by excavation at Colebrooke Street (Scobie 1997, 2). Hyde Abbey was founded in 1110 AD but only a small amount of 14th century gatehouse remains (Burgess 1991, 8). The present Winchester Cathedral has its origins in the founding of a religious house in the 640s. This was replaced by a new Minster in the 1070s – the building that survives (although much altered) today. The remains of the palace cum castle of Henry of Blois, Bishop of Winchester, are located at Wolvesley in the east of the City.

There is relatively little direct evidence for early (pagan) Saxon settlements in the vicinity of Winchester. However pagan Saxon cemeteries have been found and it is likely that their associated settlements must have been nearby. Their apparent absence is most probably explained by continued occupation of the sites, or by their being buried by deep valley deposits. A number of pagan Saxon cemeteries have been identified in the upper reaches of the Itchen Valley. A number of the settlements around Winchester can be traced back with documentary references to the Saxon period (the Saxon Chronicles (SC)) or to early Norman period (Domesday Book (DB)). They include Abbots Worthy (Kingsworthy) DB / SC; Avington (Itchen Valley) DB/SC; Barton (Abbots Barton) DB; Chilcomb DB/SC; Compton DB; Easton (Itchen Valley) DB/SC; Headbourne Worthy DB; Itchen Abbas DB; Littleton Morestead (Owslebury) DB; Sparsholt DB and Twyford DB / SC. Relatively rare excavated settlement evidence includes that from Abbots Worthy with a probably contemporary cemetery at Worthy Park. A further cemetery is known at Itchen Abbas.

Churches with Saxon origin or Saxon features are found at Chilcomb (Church of St Andrews), Compton (All saints Church), Sparsholt (Church of St Stephen), Headbourne Worthy (Church of St Stephen) and Hursley (Hursley Church).

Conclusions

The City of Winchester and its surrounding areas are particularly rich in archaeological monuments of local, regional and national importance. The Scheduled Monuments are shown on dwg no. 1059LP/14. The archaeological distribution maps are only a partial reflection of the archaeological potential as detailed work along line of M3 has shown. The route of the M3 Motorway can be clearly distinguished by the large number of sites along its route. This is because it was the subject of intensive archaeological research prior to and during its construction. The apparent absence of sites or findspots in other areas may well be a reflection of a lack of opportunities for research rather than a true lack of archaeological deposits.

The character of Winchester is defined by its position in the topography of the area. In that sense the visitor to Winchester is overlooked by the surrounding high ground of the chalk downlands, which probably contain most of the significant earlier prehistoric, Neolithic, Bronze Age and Iron Age remains. During those periods, prior to the establishment of Oram's Arbour, focal events of the local populations lives – as set into the landscape by their funerary monuments and settlements, mainly occurred on higher ground. It should be noted however, that the activities on the higher ground could only have been sustained by the presence of the River Itchen and the utilisation of the natural resources found on its floodplain.

A number of prehistoric monuments, settlements and field systems survive as earthworks on the downland surrounding the City of Winchester. By the Bronze Age, most of these sites were constructed, used and abandoned in a predominantly open and cultivated landscape. While the landscape in the vicinity of Winchester was heavily utilised in the Bronze Age, however, there is no indication that the area was especially selected and preferred from other areas of the chalk downland for settlement, farming or burial. A number of the long barrows and round barrows around the City are Scheduled Monuments and of national importance but these features do not relate to a central place focussed on the subsequent site of Winchester unlike, for example, the prehistoric landscape around Dorchester, Dorset, which was a territorial focus from the 4th millennium BC onwards.

The central role of the Winchester area was established in the Middle Iron Age with the construction of Oram's Arbour, a large ditched enclosure whose valley-side location commanded a major ford and crossroads. The type of enclosure is unique in the region and its strategic location may place it at a tribal and territorial centre for the area of central Hampshire (Whinney 1994). For these reasons the enclosure must have been a major determining factor in the subsequent location of the early Roman town in the first century AD. While the enclosure is not a Scheduled Monument nor is any element of it visible as an earthwork today, Oram's Arbour is an

exceptionally important monument in the development of Winchester. Today the location of the monument is partly marked by the open space of Oram's Arbour and by the alignment of the Roman roads to the west and north gates of the Roman town which passes through the enclosure's entrances.

The univallate hillfort of St. Catherine's Hill, unlike Oram's Arbour, is a Scheduled Monument, survives as a prominent earthwork, is highly visible and a dominant landscape feature, although its relevance to the development of Winchester is not as great as that of Oram's Arbor.

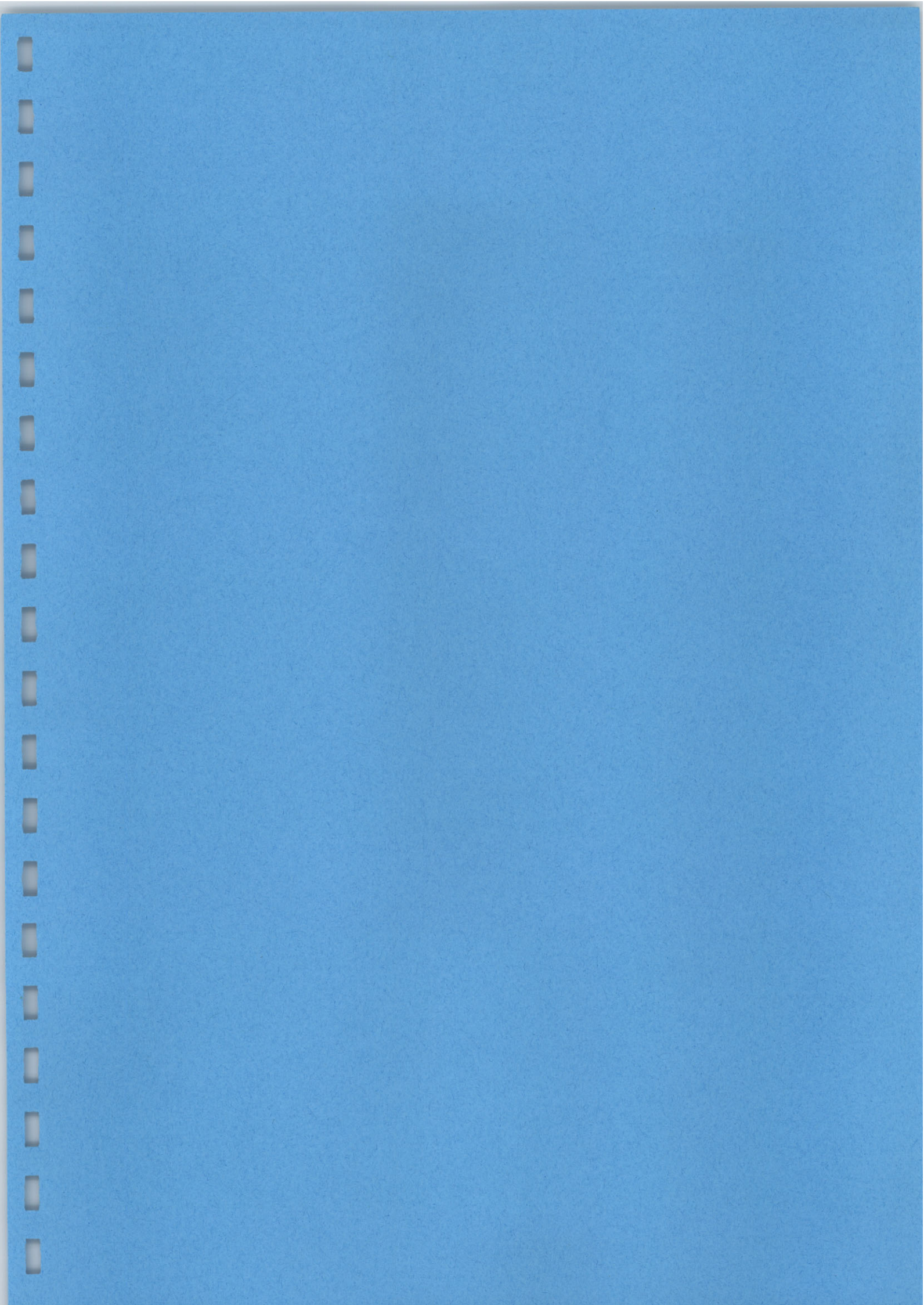
While there is currently limited evidence for the character and nature of settlement within Oram's Arbour, the foundation of the Roman town of *Venta Belgarum* represents the first urban settlement at Winchester. The town was a cantonal capital, regional centre and the most important Roman settlement in central southern Hampshire. Very little of the remains of the Roman town are visible as upstanding features or monuments within the present City. The most significant legacy of the Roman town is the line of the defences which were subsequently re-used, modified and re-established within the late Saxon and medieval town and which continue to be fossilised within the current street plan of the City. In addition the principal gateways into the Roman town to the west, east, north and south have continued to condition the location of the main routes into the City up to the present day. In addition the alignment of the Roman roads leading from the City to the north, west, east and south are preserved within the current road plan and in particular the roads to the north, east and west are striking features within the hinterland of the City.

With the demise of the Roman town in the 5th century AD, urban occupation may not have continued into the early post-Roman period. The survival of the defences of the Roman town encouraged the church authorities to establish a bishopric at Winchester in the mid 7th century, although the nature, extent and character of occupation up to the 9th century has not been established.

An urban centre was re-established at Winchester in the last decades of the 9th century with the laying out of a planned street grid, the responsibility of Alfred and possibly his older brothers, within the framework of the Roman defences. It is this street plan rather than that of the Roman town, which is preserved within the current plan of the City of Winchester. The survival of an almost entire planned street plan from the late 9th century to the present day is exceptional and its preservation is highly desirable and essential.

In summary, the principal archaeological components of Winchester prior to the 10th century AD are as follows:

- The strategic location of Oram's Arbour at an important crossing point and crossroads and its influence on the location of *Venta Belgarum* and roads leading to the Roman town.
- The visual dominance of the Iron Age hillfort of St. Catherine's Hill rather than its direct association with the development of Winchester.
- The Roman diversion of the River Itchen and associated water management which enabled the utilisation of marshy, marginal land.
- The line of the defences and of the major roads leading from the Roman town which survive within the currently plan of the City and its hinterland.
- The location of the gateways leading into the Roman town which have influenced and continue to influence the location of routeways into the Roman, Saxon and medieval city.
- The planned street grid of the late 9th century which survives within the present street plan and is considered of national importance.



APPENDIX 2

HISTORY

Introduction

This appendix describes the historic, cultural and social development of Winchester from 1066 to the present day. It has been undertaken by David Jacques of the Institute of Advanced Architectural Studies, University of York.

Prosperity 1066-1300

Winchester had been 'the ancient capital of England', the principal seat of the Kings of Wessex. At the Norman Conquest in 1066 it was probably, at about 8,000 in population, England's fourth city in size after London, York and Lincoln. It was already a major ecclesiastical centre, the seat of the Bishop of Winchester, and by 1000 AD the City contained the Old Minster, the New Minster, Nunnaminster, and the bishop's palace at Wulf's Eye (or Wolvesey), all in the south-east sector within the walls.

The Normans wanted to outshine the Saxon minsters, and Bishop Wakelin started construction on an enormous new cathedral by 1079. Dedication was in 1093 to St Swithun. Meanwhile Nunnaminster was rededicated as St Mary's Abbey, and substantial building works took place there too. The New Minster community moved outside the north gate to establish Hyde Abbey about 1110.

The highest point of ecclesiastical glory was achieved by Henry of Blois, King Stephen's brother, who was bishop from 1129 till 1171. His works included the expansion of Wolvesey Palace, rebuilt mainly 1125-50, to make it the greatest Romanesque house in England. He also, in about 1135, founded Hospital of St. Cross where a moated garden was surveyed in 1401. Under his bishoprick, in about 1160, the Winchester Bible, the greatest treasure of the cathedral library, was illuminated. The enormous wealth of the bishops at this period was consolidated by the establishment of The Soke in 1231. These were areas in the southern and eastern suburbs under the jurisdiction of the Bishop and which provided large rents.

Successive kings had just as profound an influence on the standing of Winchester as the bishop. Eager to impress on his new subjects that there was a new power in the land, William I quickly threw up a castle at the south-west corner of the walled city in 1072. The castle housed the Treasury which was maintained there till about 1150. Royal officials and moneyers dominated town society at this time.

In parallel with the building of the cathedral, William I also built a huge and magnificent Royal Palace just west of it. In 1141, however, the Royal Palace was destroyed in a dispute between Henry of Blois, and Matilda, King Stephen's contender for the throne. Tenements were then constructed on its site.

The castle was reconstructed by Henry II from 1155 and made more habitable. He was keen on hunting, and had a 'Hawkeye' just north of the castle, outside the city walls. He imprisoned Queen Eleanor there in the 1170s. The symbolic importance of Winchester was not forgotten, and Henry II's son, Richard the Lionheart, was crowned in the cathedral in 1189. Henry III was born at Winchester Castle in 1207. During his reign from 1216 to 1272 he often visiting Winchester. The keep was rebuilt in 1222 and other great works to the defences of the castle followed. The Roman city walls were substantially rebuilt or strengthened in the C13. The Great Hall was built within the castle enclosure 1222-36. He held a Parliament in it in 1261.

Henry III granted a charter in 1227 that promised a perpetual mint at Winchester, but nevertheless closed it in 1243, resulting in the disappearance of the moneyers. However he clearly still had affection for it, for he chose to be buried in the cathedral at his death in 1272.

Winchester's continuing position as an important royal and ecclesiastical centre in Norman and Plantagenet England was enough to sustain a large population for two and a half centuries following the Conquest. A large influx of Normans which swelled the population was noticeable following the Conquest. Indeed about 1110 it had about 10,000 people, making it, temporarily, larger than York or Lincoln. Suburbs grew to the north, south and east outside city walls. The city as a whole came to be served by 57 parish churches.

City charters are known to have been granted from about 1150, confirming ancient privileges and determining town government. The 'gild merchant' was the body of merchants that governed the city, and by 1200 it had appointed a Mayor and had a seal.

By about 1150 the Royal officials and moneyers had been joined by both Christian and Jewish goldsmiths and moneylenders. Food traders, shoemakers and tanners were also numerous and there was textile working in The Brooks area. The clergy formed the largest occupational group. There were a number of markets, for corn, animal and wood on the High Street, and St Giles Fair was held on the Downs east of the City in the C12 and C13. Milling had taken place on the Itchen since Saxon times. Durngate Mill, a corn mill, stood at the north-east corner of the city wall by 1213. In the C13 two mills were given by Henry III to the corporation.

Henry III's interest in the city maintained its economy, but the closure of the mint in 1243, reverses during the Baron's War of 1263-7 and other factors led to general unrest which was apparent from about 1250. The Jews were envied enough to need protection in an uprising of 1264, but all Jews expelled from England by Edward I in 1290. During the C13 and C14 the population wavered between 8,000 and 10,000. This was a decline relative to other cities, and Winchester may have ranked about sixth towards 1200. The city was slowly emptying, whilst the suburbs were expanding.

Decline 1300-1550

Under Edward I the castle was no longer a favoured royal residence and it was used more as a prison. During a Royal visit to the castle in 1302 it went up in smoke, after which it was not fully repaired. Thereafter, whenever the Royal entourage passed through Winchester, it generally stayed at Wolvesey Palace. The ancient status of Winchester was remembered, despite the decline of the City. Parliament met in Winchester in 1393, and Henry VI chose to be married at the cathedral in 1402. Prince Arthur, Henry VIII's elder brother, was christened in Winchester in 1486. The Round Table, which had been constructed around 1290, was painted in 1522 with symbols of the Tudor dynasty. Mary I and Philip of Spain were married in the cathedral in the 1550s. On the ecclesiastical front, the only remarkable new structure was the St Cross brothers' lodgings, built in the early C15 for Cardinal Beaufort's retainers.

The city had lost its position as a financial centre, and decline would have been quicker had it not been a wool staple town between 1326 and 1353. It was an obvious location, with extensive sheep runs on the chalkland to the east and west. The wool and cloth industry brought some relief, and encouraged the cloth finishing industry which centred itself down the lower High Street. The City must have felt itself wealthy enough to be in danger when there were threats of French invasions in 1338, for the walls were extensively renovated at that point.

The calamity of the Black Death in 1348-50 led to a sudden and long-term decline in population. Many properties within the walls were converted to gardens, or else turned into drying grounds used by the fullers in the clothworking industry. The Peasant's Revolt of 1381 had many townsfolk as its ringleaders, amongst which several from Winchester were prominent, no doubt frustrated by the city's economic decline. In 1382 land was obtained for Winchester College, a pointer to the availability of land following the Black Death. Its courts were erected between 1387 and 1401.

Clothworking was in a state of flux by 1400. Withdrawal of the cloth industry from the city to the countryside was causing much loss of work. In 1417 the population was about 7,500 and falling. The dire condition of the city was complained of in 1440 when a petition claimed that 11 streets were almost depopulated, 997 houses empty, 17 churches without incumbents, etc. However there was no relief and in 1524 the population had dropped to about 3,000, no more than a large market town.

The dissolution of the monasteries brought about the sale of Hyde Abbey, St Mary's Abbey, friaries and other religious houses, most of which then passed into the hands of local gentry and the city government.

Clothworking continued to decline, and tailors and hosiers sought protection from rural craftsmen in 1566. By 1581 only 11 of the 100 richest persons in Winchester still were involved in the making or retailing of cloth. Fulling continued, as there was a fulling mill as late as 1631.

Stability and regeneration 1550-1800

The city's population had no further to fall by 1550, and apart from the bishop and cathedral, it became a backwater that had lost its pretension to greatness. Modest and pragmatic stewardship by the corporation and MPs ensured that it suffered a minimal number of further vicissitudes. It consolidated its position as a market centre for the surrounding district and served the ecclesiastical authorities and the college. In 1588 the city obtained a Charter of Incorporation. The main trades in 1581 were retailing, food and drink trades, leatherworking and metal crafts. The population rose somewhat to about 6,000 in the early seventeenth century.

By 1618 there were the beginnings of a primitive system of water meadows at Bishopstoke on the Itchen. The idea developed into the extensive water meadows seen north and south of Winchester later in the century. Those north of the city belonged to Hyde Abbey and those to the south to the bishop. The northern ones were controlled at Durnford Mill, and the 'drowning' of the water meadows was an important duty of the miller. By this time too, it is clear that large areas of the downs surrounding Winchester were enclosed into arable fields, probably by private agreement.

The Civil War of the early 1640s was temporarily a disaster, involving the destruction of goods, carts and horses. The Castle was demolished 1651 by Oliver Cromwell. In the 1640s the population fell to under 5,000 following destruction and plundering in Civil War, though it climbed back up to nearly 6,000 by 1665. The Plague of 1666 immediately plunged it back down to about 4,000, where it stayed for over a century.

This low population did not mean that the City was still in great poverty. The number of fine houses and buildings built in the period after the Civil War show that Winchester was viewed as a pleasant, if thinly populated, county town where one could live well. Some buildings arose out of the destruction of the Civil War. Hence the new bishop's palace was built at Wolvesey 1662-84, and houses were built for clergy in the cathedral close. Amongst the private houses was Eastgate House, built by Sr Robert Mason in 1665.

Above all there was Charles II's brief interest in Winchester following his visit to the horse races in 1682. His architects drew up plans for a new Classical castle, and the Surveyor-General acquired 342 acres (138 Ha.) intended for a park. Work stopped at Charles's death in 1685, but Winchester had once again been given a fillip by Royalty. It became the meeting place for the numerous landed gentry of the county. The number of inns increased and in 1676 there were 76 licensed victuallers. In 1686 Winchester had stabling for 1,000 horses, one of only 6 English provincial towns that could boast this. 90 shops and 20 large houses were identified for land tax in 1704. Queen Anne sponsored a guildhall in 1714.

Winchester continued its modest success in serving the district as a market centre. The cheese market grew to become a major annual event. No doubt hoping to expand Winchester's position as a trading centre, some of its citizens in 1664 promoted a Bill for an Itchen Navigation allowing boats up the valley as far as Winchester, avoiding mills. The works over 10 miles were to include

improving parts of the river, improving irrigation channels and new cuts, as well as several locks and Blackbridge Wharf just below the mills in Winchester. The promoters took an inordinate amount of time to complete in about 1710. The cuts also had the functions of improving winter irrigation and reducing the risk of summer flooding in the hay meadows.

The main greenspace within the walls were the Cathedral close with its walks and the garden of Eastgate House, then owned by Henry Penton. About 1720 this was given a garden which utilised the brooks for a long canal. A print by the Buck brothers of 1736 showed the City from St Giles's Hill.

The City walls and gates had become redundant, and they were dismembered in stages. North Gate collapsed under the weight of a christening party in 1756, and this and the south gate were removed in 1771, partly because they were ruinous, and partly because they restricted the sizes of wagons that could enter the city. In 1768 the Corporation further ordered the demolition of Eastgate. That left Westgate, Kingsgate and, for the time being, most walls.

Expansion 1800-2000

In the early nineteenth century the City was in a state of transition. The historic and literary associations continued. Jane Austen died in the city in 1817. John Keats was inspired by the water meadows to write the poem 'To Autumn' in 1819. Anthony Trollope was provoked by the corrupt appointments and abuses of income at St Cross to write *The Warden* (1855). At the same time, though, Winchester was developing as a minor industrial centre. A silkmill employing 300 existed by 1800, and before long six mills were found on the Itchen: Durngate Mill, Abbey Mill, City Mill, Wharf Mill, College Mill, and St Cross Mill. At least Durngate Mill, Wharf Mill and College Mill were for flour, and Winchester's position as a centre for corn and milling was reinforced when the Corn Exchange was opened in Jewry Street in 1838. Breweries were established after 1850.

In their new entrepreneurial spirit, the Corporation regarded the remaining City wall as an impediment to development, and saw no need for it to be retained. The section north of Westgate was removed in 1824, that north of the Brooks in the late 1830s. By the 1840s, only a fraction of the historic walling survived, the best and most entire surviving section being that around the grounds of Wolvesey Palace.

The coming of the Southampton Railway gave a new boost to commerce. A massive cut was necessary in order for the line to pass west of the castle, but it opened in 1839, with the station near where the north-west corner of the city walls had been. One effect was a sudden surge of construction of working class housing. The Brooks area was thus developed in 1840. Another effect was the demise of the Itchen Navigation, which took its last barge in 1869. The College had been paying £20 per annum for the privilege of bathing in the navigation, but after closure it used the navigation for rowing.

In the middle years of the century the City began to acquire the institutions of a modern urban area and county town, mostly on high and healthy ground at West Hill, on the far side of the railway line. The Winchester Cemetery Company established a cemetery on West Hill by Act of Parliament in 1840. A new gaol was designed in a spoke configuration and opened in 1850 to replace that on site of Hyde Abbey. The County Police Station was built east of the gaol. The Diocesan Training College had been founded in 1840, but was given a building on West Hill in 1862. The Royal Hampshire County Hospital, designed by the famous architect William Butterfield, was built on West Hill in 1864-8.

The surge of building, of both houses and institutions, provided the citizens of Winchester with much work, to complement the older functions of an ecclesiastical and provincial centre. In 1859 there were 120 hotels, inns and taverns, 31 bakers, 27 grocers, 27 shopkeepers, 25 butchers, 33 bricklayers, 40 booksellers, 57 insurance offices, 10 banks. Lawyers, clergy and army officers were also well represented. The City's population had risen greatly from the 1790s, when there may have been only 4,000. Numbers rose to 6,000 in the 1800s, 11,000 in the 1840s, and was to rise to 22,000 in the 1900s.

The second half of the nineteenth century was a time of continued expansion, though less feverishly so. A period of tidying-up and consolidation was called for. The neo-Gothic new Guildhall, suggesting civic pride, was erected in the Broadway in 1873. The unsatisfactory sanitary conditions on the low parts of the City were a concern, and led to the construction in 1875 of a sewage pumping station at Garnier Road. This sent the City's sewage up onto St Catherine's Hill where sewage beds were set out on the northern slopes. A recreation ground was established at Danemark in the latter part of the century. A private nursery garden was established by Edwin Hillier in 1874 on West Hill adjacent to the County Gaol. This business prospered greatly under Hillier and his sons and became known particularly for its trees and shrubs.

The Great Western Railway opened its Didcot, Newbury and Southampton Junction line east of the City centre in 1885. The railways offered Winchester a future as a tourist destination. Picturesque views and various romantic histories of the City fed the demand, and led to significant numbers of tourists late in the century. The cathedral cemetery was tidied up by the removal of gravestones after 1882. A thousand years since the death of King Alfred in 898 provided an excuse for a promotional celebration of the history of the City. This actually took place in 1901, and the occasion was marked by the statue of King Alfred by Thorneycroft. Winchester Museum was opened in the Square in 1903.

Hampshire County Council was created in 1888, and needed offices. Space was found in various buildings by West Gate. Soon after, in 1894, new barracks, called Peninsula Barracks, were created following a fire that severely damaged Charles II's palace.

The last years of the nineteenth century and the first few of the next saw the beginnings of spacious suburbs to the north and south of the city. Those of the 1890s along the Stockbridge Road towards Weeke consisted largely of detached houses in spacious gardens, and there was a tennis and croquet club. There were denser suburbs along the Worthy Road, and the St Cross Road. The architect, G.H. Kitchin, converted a farmhouse at Compton End, and formed a notable Arts and Crafts garden round it (1901-14). Winchester Golf Course occupied Teg Down to the west by the 1900s. Multiple stores arrived in Edwardian times, eg. Boots in 1903.

After the First World War the building of suburbs resumed. The council estate at Stanmore won national acclaim when its plans were displayed at the Wembley Exhibition of 1922 as a model estate. Hockley Golf Course was formed on Twyford Down in the 1920s. Woolworth's was opened in 1929 and Marks and Spencer in 1935. By this time motorised traffic in the City's narrow streets was highly congested, causing a bottleneck on the main road to the docks in Southampton. There were various widenings of roads and then a bypass, one of Britain's very few dual carriageways, was constructed in 1937 around the base of St Catherine's Hill. Winchester bypass is the supposed model for German autobahns. The area was visited by German highway engineers researching designs during the reconstruction of their county following WWII.

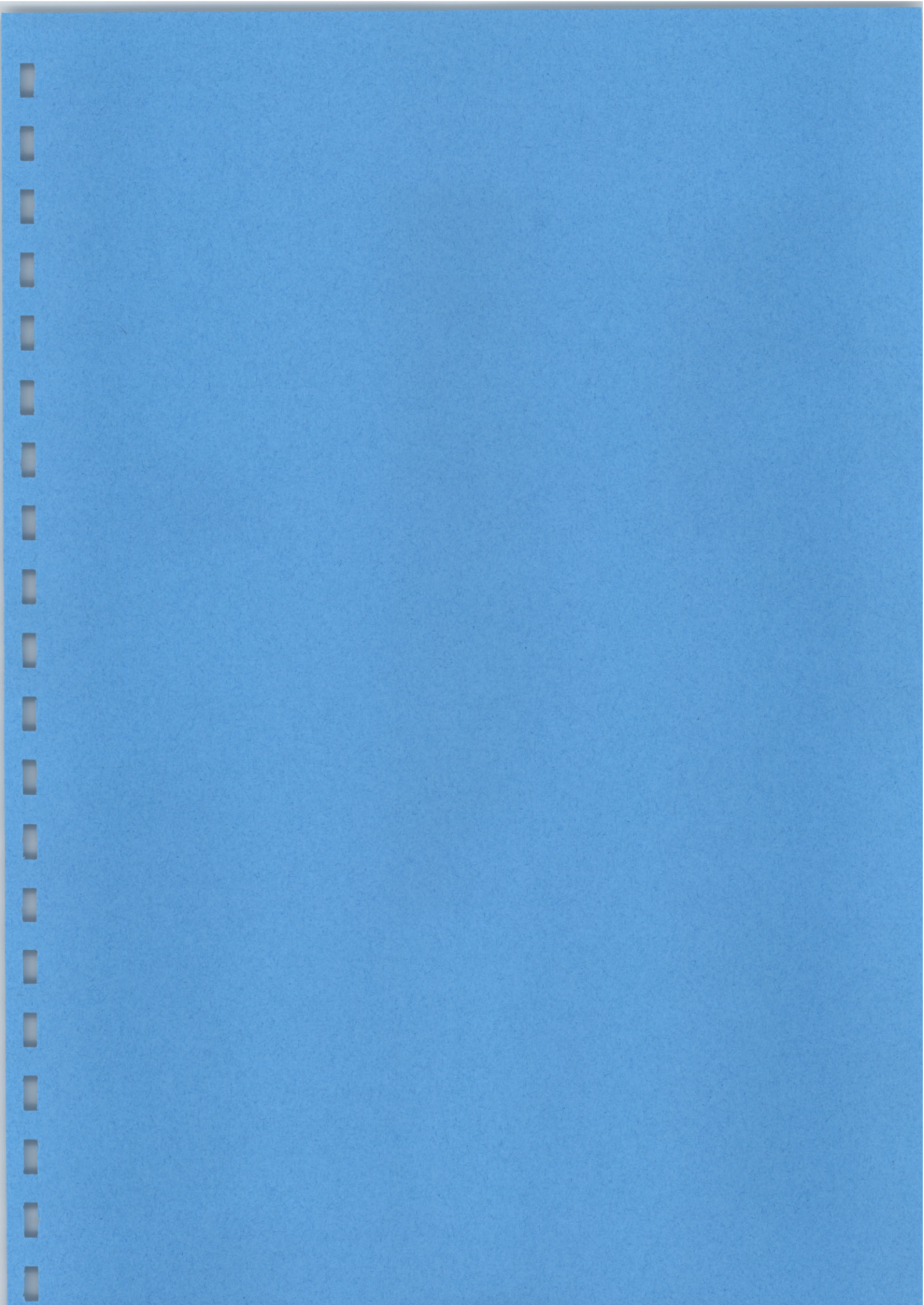
Apart from the spread of the suburbs, the fields of Compton Down were selected for a military camp at Bushfield, in the 1930s. This was widely regarded as a scar on the landscape. Meanwhile sheep grazing was in decline, as was clear from the scrub invasion of St Catherine's Hill after the Second World War. Hillier's acquired ground for arboreta outside Winchester to become the greatest tree and shrub nursery in the world by the 1960s, and renowned for its manual which listed every known variety.

Within the City, the new County Hall, designed in the 1930s was at last built in 1959 and called the Queen Elizabeth Court when opened. The Queen Elizabeth County Court buildings followed, and afterwards a particularly undistinguished extension to the county council buildings. Public buildings in Winchester were redeemed by the Hampshire Record Office opened in 1993.

The suburbs to the north, called Harestock, had expanded by 1960 to fill a large bowl of land with a fringe of mature planting. To the south-west the area around Oliver's Battery was developed by 1990, followed by a Sainsbury's. These suburbs raised the population of the city to 30,000. The average citizen was prosperous, and many started to commute as far away as London.

Conservation was a theme of the 1990s. A long running dispute concerned proposals for a deep cutting to the east of St Catherine's Hill, through part of Twyford Down, to take the M3. This was resolved in favour of construction, and in 1994 work began, destroying some archaeological sites. On the other hand they also included the removal and backfilling of the bypass lying between St Catherine's Hill and the City. The area was then subject to a conservation plan that involved significant areas of shrub clearance. Shrub clearance also took place on part of the 'Clarendon Way', on a section at Badger's Farm called Whiteshute Ridge. The work to form a chalkland walk received a Hampshire County Council conservation award in 1995.

Within the City the County Council and the Hampshire Gardens Trust promoted an imaginative reconstruction of a medieval garden, Queen Eleanor's garden, behind the Great Hall, in 1986. This was followed in 1995 by Dean Garnier's garden just west of the cathedral, where planting was to a Victorian palette.



APPENDIX 3

1 The Nature Conservation Resource

1.1 Introduction

- 1.1.1 The semi-natural habitats of the area around Winchester are particularly diverse. The three main habitats which are present are:

The River Itchen and associated disused water-meadows;

Chalk grassland and mixed chalk scrub;

Ancient woodland.

A summary of the nature conservation resource is given in Table 1, and the important features are discussed more fully below. One of the most important features of the City is the way in which semi-natural habitats penetrate right into the heart of the urban area, and this is highly valued by local residents, as well as being an important feature for the movement of wildlife from one site to another.

1.2 The Itchen Valley

- 1.2.1 The Itchen Valley is the most extensive area of semi-natural vegetation within Winchester. The River flows from north to south through the historic centre of Winchester, and species-rich water meadow provide an important landscape setting for many of the city's historic buildings, including Winchester College and the St. Cross Hospital.

- 1.2.2 The River Itchen is of international importance for its wildlife and has been submitted as a candidate Special Area of Conservation by English Nature. The River Itchen cSAC has three main features of importance:

it is a prime example of floating vegetation of *Ranunculus* of plain and submountainous rivers, a priority habitat listed in Annex I of the Habitats directive;

it is the most important area in Hampshire for otter (Rosann Sparshott, pers. Comm.), a priority species listed on Annex IIa of the Habitats Directive;

it supports important populations of two priority species listed on Annex IIA of the Habitats Directive, white-clawed crayfish *Austropotamobius pallipes* and southern damselfly *Coenagrion mercuriale*.

- 1.2.3 The Itchen Valley includes the following SSSIs:

River Itchen; SSSI/cSAC;
Itchen Valley (Cheriton - King's Worthy) SSSI;
Itchen Valley (Winchester Meadows) SSSI;
Itchen Valley (Winnall Moors) SSSI.

Their boundaries are shown on the base maps.

There is also one wet grassland SINC in the Itchen Valley, just west of Easton. There are parts of the valley which are not included in the SSSI/SINC network, but which contribute to the overall value of the valley for wildlife. These include a number of small watercourses, areas of damp improved grassland and scrub.

- 1.2.4 The River Itchen is one of the larger Wessex chalk streams, and is a very fine example of an English chalk river. The river runs through an area of soft, permeable rock which allows rainfall to percolate through and form vast aquifers. There is little surface water run-off and floods are rare. The river is fed by chalk springs near Cheriton, and the flow of water is relatively stable, the water of high quality and great clarity, rich in nutrients and constant in temperature. The river's vegetation is dominated by higher plants, and the aquatic flora is exceptionally species-rich with many of the typical chalk-stream plants present in abundance. The river is also rich in invertebrates and supports diverse populations of aquatic molluscs.
- 1.2.5 The chalk-stream community is dominated by brook water-crowfoot *Ranunculus penicillatus* ssp *pseudofluitans*, lesser water-parsnip *Berula erecta*, fool's water-cress *Apium nodiflorum* and blunt-fruited water-starwort *Callitriche obtusangula*. In the deeper middle to lower reaches river water-dropwort *Oenanthe fluviatilis*, unbranched bur-reed *Sparganium emersum* and various pondweed *Potamogeton* species all become more frequent. Other characteristic chalk-stream species include opposite-leaved pondweed *Groenlandia densa*, mare's-tail *Hippuris vulgaris* and horned pondweed *Zannichellia palustris*. The banks support tall emergent vegetation dominated by lesser pond-sedge *Carex acutiformis*, reed canary-grass *Phalaris arundinacea* and reed sweet-grass *Glyceria maxima* with great willowherb *Epilobium hirsutum*, meadowsweet *Filipendula ulmaria*, purple loosestrife *Lythrum salicaria* and yellow loosestrife *Lysimachia vulgaris*.
- 1.2.6 There are extensive areas of species-rich grassland in the Itchen valley and these are mostly notified as SSSIs or SINCs. The soils of the valley include alluvium, peat and tufa and these, combined with the network of ridges and drains associated with the disused water-meadow system, result in complex mosaics of dry grassland, rush pasture, fen meadow, flood pasture and swamp communities. The most species-rich communities are the fen meadow and flood pasture communities associated with the moist calcareous soils of the former water meadows. The water meadows were formed and maintained in the 17th to 19th centuries to assist the drainage and irrigation of riverside grassland. Irrigation of the meadows during January and February would advance the growing season and provide early grass growth for sheep which were folded on the downs in the winter months. The operational water meadows were probably relatively species-poor and have become more diverse ecologically since their abandonment.
- 1.2.7 The fen meadow community is dominated by a mix of grasses together with species such as water mint *Mentha aquatica*, fen bedstraw *Galium uliginosum*, marsh bedstraw *Galium palustre*, greater bird's-foot trefoil *Lotus uliginosus*, marsh horsetail *Equisetum palustre*, wild angelica *Angelica sylvestris*, common fleabane *Pulicaria dysenterica*, marsh lousewort *Pedicularis palustris*, ragged robin *Lychnis flos-cuculi* and meadowsweet *Filipendula ulmaria*. Many species of the flood pasture community occur in the fen meadow community, but the main distinguishing features are the abundance of marsh marigold *Caltha palustris*, water avens *Geum rivale*, carnation sedge *Carex panicea*, brown sedge *Carex disticha* and carpets of mosses. Many of the species which occur in the meadows are characteristic of unimproved grassland. Among the more interesting are adder's-tongue *Ophioglossum vulgatum*, betony *Stachys officinalis*, bogbean *Menyanthes trifoliata*, common sedge *Carex nigra*, marsh arrowgrass *Triglochin palustris*, marsh valerian *Valeriana dioica*, pepper saxifrage *Silaum silaus* and southern marsh orchid *Dactylorhiza praetermissa*.
- 1.2.8 The river valley is of considerable importance for birds. Kingfisher, grey wagtail and little grebe occur very widely. Tall vegetation and scattered scrub supports significant populations of reed and sedge warbler, and the formerly rare Cetti's warbler is becoming widely established in similar habitats. Other breeding birds of note include water rail, tufted duck, pochard and shoveler. The Itchen valley was an important site for breeding birds of wet grassland such as snipe, redshank and lapwing, but numbers have declined in recent years. Passage species which use the river margins

include common and green sandpiper. The grassland of the river valley is an important hunting area for barn owl, which breed in farm buildings along the edge of the valley.

- 1.2.9 The valley is of especial importance for two mammals, otter and water vole. The upper and mid-river provide much suitable habitat for otter, and their numbers were enhanced in 1993 through release of captive bred animals. Otters use the underground section of the river, through Winchester City Mill for dispersal. Water vole populations have declined nationally and reductions in the strong populations on the River Itchen have also been noted.
- 1.3 Unimproved chalk grassland
- 1.3.1 Unimproved chalk grassland is particularly concentrated on the scarp slopes to the south-east of the city. The most important site in relation to the City of Winchester is St. Catherine's Hill SSSI, which lies immediately to the south-east of the City, and provides extensive views across Winchester and the Itchen valley. The site is managed by the Hampshire Wildlife Trust. The SSSI comprises chalk grassland and scrub occupying the spur of St. Catherine's Hill and an adjoining dry valley. The thin rendzina soils of the slopes and summit of the Iron Age hill fort support a species-rich sward dominated by sheep's fescue *Festuca ovina* with thyme *Thymus polytrichus*, salad burnet *Sanguisorba minor* and rock-rose *Helianthemum nummularium* with a range of other chalk-loving herbs such as carline thistle *Carlina vulgaris*, horseshoe vetch *Hippocrepis comosa*, clustered bellflower *Campanula glomerata*, kidney vetch *Anthyllis vulneraria* and autumn gentian *Gentianella amarella*. There is a rich orchid flora containing strong populations of frog orchid *Coeloglossum viride* and autumn lady's-tresses *Spiranthes spiralis*, as well as smaller populations of other characteristic downland species. The adjoining dry valley supports taller grassland dominated by upright brome *Bromopsis erecta* and meadow fescue *Festuca pratensis* with tall herbs such as wild carrot *Daucus carota*, perforate St John's-wort *Hypericum perforatum*, wild basil *Clinopodium vulgare* and betony *Stachys officinalis*. Rarer species which occur include a substantial population of the nationally scarce bastard toadflax *Thesium humifusum* and isolated juniper *Juniperus communis* bushes. The butterfly fauna is rich and includes the locally distributed chalkhill blue *Lysandra coridon*.
- 1.3.2 Cheesefoot Head SSSI is more isolated from the City, being located about four kilometres to the east, but is an important landscape feature on the approach along the A272 road. The site comprises an extensive area of species-rich chalk grassland around a horse-shoe shaped dry valley. The sward is dominated by fine grasses with a rich herb complement including dwarf thistle *Cirsium acaule*, autumn gentian *Gentianella amarella*, small scabious *Scabiosa columbaria*, dropwort *Filipendula vulgaris*, kidney vetch *Anthyllis vulneraria* and cowslip *Primula veris*. Less common species include clustered bellflower *Campanula glomerata*, horseshoe vetch *Hippocrepis comosa*, fragrant orchid *Gymnadenia conopsea*, frog orchid *Coeloglossum viride* and southern marsh-orchid *Dactylorhiza praetermissa*. There is a vigorous population of juniper amongst mixed scrub at the western extremity of the site. The site supports a colony of the rare and declining Duke of Burgundy butterfly *Hamearis lucina*.
- 1.3.3 Chalk grassland is also present on many of the steeper scarp slopes to the south-east of Winchester, and more locally on a number of sites to the north-west of the City. The majority of the remaining areas of species-rich chalk grassland in Hampshire are designated as Sites of Interest for Nature Conservation (SINCS), and there are fifteen chalk grassland SINCS in the study area. Details of the these sites are summarised in Table 2. The chalk grassland communities are similar to those found on the SSSIs, but are generally less species rich, and have fewer rarities. The best areas of grassland are dominated by species such as sheep's fescue *Festuca ovina* and upright brome *Bromopsis erecta*, with a wide range of associated herbs such as rock-rose *Helianthemum nummularium*, salad burnet *Sanguisorba minor*, cowslip *Primula veris*, bird's-foot trefoil *Lotus corniculatus*, thyme *Thymus polytrichus*, eyebright *Euphrasia officinalis* agg., lady's bedstraw *Galium verum*, harebell *Campanula rotundifolia*, fairy flax *Linum catharticum*, common spotted orchid *Dactylorhiza fuchsii* and autumn gentian *Gentianella amarella*. More localised species include clustered bellflower *Campanula glomerata*, squinancywort *Asperula cynanchica*, knapweed

broomrape *Orobanche elatior*, dropwort *Filipendula vulgaris* and fragrant orchid *Gymnadenia conopsea*. Yew Hill, Worthy Down and Magdalen Hill Downs have the richest calcicole flora, including the nationally scarce bastard toadflax *Thesium humifusum* from all three sites, and round-headed rampion *Phyteuma orbiculare* from the latter two. Magdalen Hill Down and Yew Hill are now being managed by the British Butterfly Conservation Society, who have cleared much scrub, with an increase in the richness of the flora and butterfly fauna.

1.4 Ancient woodland

1.4.1 Ancient woodland is present in the outer perimeter of the study area, and is a particular feature of clay-with-flints soils to the west of the city. The most important of the ancient woodlands is Crab Wood SSSI, which is about four kilometres west of the city centre. The eastern part of the site is also designated as a Statutory Local Nature Reserve. The wood is dominated by oak *Quercus robur* over old hazel *Corylus avellana* coppice mostly neglected since the end of the second world war. Over the last twenty years a recoppicing programme has begun. The ground flora is a fine example of a former coppice on clay with flints and is dominated either by bluebell *Hyacinthoides non-scripta* or dog's mercury *Mercurialis perennis*. Particular species of interest include Solomon's-seal *Polygonatum multiflorum* and lily-of-the-valley *Convallaria majalis*. The butterfly fauna is rich and includes purple emperor *Apatura iris*.

1.4.2 There are five additional ancient woodlands within the study area, all of which are designated as SINC's. Details of these sites are given in Table 2. Three of the woodlands are located to the west of the City, and two to the east. The woodland vegetation is generally dominated by oak with hazel coppice, with a ground flora dominated either by bluebell *Hyacinthoides non-scripta* and bramble *Rubus fruticosus* agg or dog's mercury *Mercurialis perennis*. A wide variety of species characteristic of ancient woodland are present including wood spurge *Euphorbia amygdaloides*, sweet woodruff *Galium odoratum*, yellow archangel *Lamiastrum galeobdolon*, wood millet *Milium effusum*, Solomon's seal *Polygonatum multiflorum*, primrose *Primula vulgaris* and wood speedwell *Veronica montana*. Shroner Wood, located to the north-east of the city, adjacent to the M3, and supports additional species such as nettle-leaved bellflower *Campanula trachelium*, pignut *Conopodium majus*, wood melick *Melica uniflora*, and *sanicle europaea* which are associated with calcareous clay soils.

1.5 Sites of local importance

Many areas outside the SSSI and SINC system are of some value for wildlife, and of importance to local people. The short time available for consultation made it impossible to identify all areas of value. However, the following were highlighted by the Hampshire Wildlife Trust and the nature conservation discussion group :

The Cathedral Precincts and St. Cross, where ancient masonry not subject to heavy restoration and cleaning supports nationally important lower plant populations, predominantly lichens;

The combination of mature trees and buildings in the older areas of the city, such as the Lord Mayor's Gardens, Chapel Lane and Middle Road, which can support important bat populations and support an unusual form of ivy broomrape, *Orobanche hederæ* forma *monochroma*;

Mature trees, particularly beech, and associated wide grass verges, which line many of the routes into the city. Colonies of white helleborine *Cephalanthera damasonium* are associated with these verges, and are often cut as part of routine verge maintenance.

MoD land e.g. Bushfield Camp, Chilcomb Ranges, which support areas of semi-improved chalk grassland and scrub.

1.6 Species

- 1.6.1 A Biodiversity Action Plan for Hampshire is currently in preparation. The priority species identified in the plan which occur in the study area are listed in Table 3. The majority of these priority species occur within sites which are notified as SSSIs or designated as SINC's on habitat grounds. However, there is a group of species which is not site specific, being associated with habitat features which are more widespread. Skylark, stone curlew and brown hare are associated with farmland, normally predominantly arable in nature. The rarest of these species is stone curlew, which is most likely to occur on the thin chalk soils to the south-east of the city. Barn owl can be found where there are good areas of rough grassland, and may occur throughout the river valley. Pipistrelle and other species of bats use buildings as roosts, but rely on parks, gardens and other areas of open space, preferably with a mix of mature trees and grass, for foraging. Surveys have shown that the Cathedral and the surrounding areas are of importance for bats.

Table 1 Summary of the nature conservation resource in the study area, together with key threats

	Sites	Key habitats and vegetation types	Important species	Threats	Sensitivity
River Valley (Itchen Valley)	<p><u>cSAC</u> River Itchen</p> <p><u>SSSIs</u> River Itchen Itchen Valley (Cheriton - King's Worthy) Itchen Valley (Winchester Meadows) Itchen Valley (Winnal Moors)</p> <p><u>SINCs</u> River Itchen Meadows</p>	<p><u>Chalk river</u> A17 <i>Ranunculus penicillatus</i> ssp <i>pseudofluitans</i> community <u>Swamp communities</u> S5 <i>Glyceria maxima</i> swamp S7 <i>Carex acutiformis</i> swamp S28 <i>Phalaris arundinacea</i> tall fen <u>Fen meadow</u> M22 <i>Juncus subnodulosus-Cirsium palustre</i> fen meadow <u>Flood pasture</u> MG8 <i>Cynosurus cristatus-Caltha palustris</i> grassland</p>	<p><u>Plants</u> Stream water-crowfoot <u>Mammals</u> Otter Water vole <u>Birds</u> Redshank Snipe Lapwing Kingfisher Reed warbler Barn owl Water rail <u>Invertebrates</u> Soldier flies (Stratiomyidae) White clawed-crayfish Southern damselfly</p>	<p>Water abstraction; Pollution, primarily from sewage works discharges; Fish farming; Agricultural changes, leading to intensification in some areas and neglect in others; Public access.</p>	Very high
Chalk grassland	<p><u>SSSIs</u> St. Catherine's Hill Cheesefoot Head</p> <p><u>SINCs</u> Yew Hill Worthy Down Royal Winchester Golf Course/Teg Down Flowerdown, Littleton</p>	<p><u>Unimproved chalk grassland</u> CG2 <i>Festuca ovina</i> - <i>Avenula pratensis</i> grassland CG3 <i>Bromopsis erecta</i> grassland CG6 <i>Avenula pubescens</i> grassland <u>Unimproved neutral grassland</u> MG1 <i>Arrhenatherum elatius</i> coarse grassland</p>	<p><u>Plants</u> Bastard toadflax Early gentian Field fleawort Musk orchid Round-headed rampion <u>Invertebrates</u> Chalkhill blue</p>	<p>Fragmentation; Lack of grazing; Public access (locally).</p>	Moderate to high

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	Whiteshute Ridge Shawford Down Kingsworthy Cutting Hockley Golf Course Cockscomb Hill Twyford Waterworks Meadow Easton Down Deacon Hill Magdalen Hill Down Morestead Down Deacon Hill West	MG5 <i>Centuarea nigra</i> - <i>Cynosurus cristatus</i> grassland <u>Chalk scrub</u> W21 <i>Crataegus monogyna</i> - <i>Hedera helix</i> scrub, <i>Viburnum</i> <i>lantana</i> sub community	Small blue Duke of Burgundy		
Ancient woodland	<u>SSSI</u> Crab Wood <u>SINCs</u> Northwood Park Farm Woods Burnt Wood Shroner Wood Worthy Grove Little Grove	<u>Ancient woodland</u> W8 <i>Fraxinus excelsior</i> - <i>Acer</i> <i>campestre</i> - <i>Mercurialis perennis</i> woodland W10 <i>Quercus robur</i> - <i>Pteridium</i> <i>aquilinum</i> - <i>Rubus fruticosus</i> woodland	<u>Plants</u> Bluebell <u>Invertebrates</u> Purple emperor	Decline of coppicing.	Moderate to low
Arable		Field margins	<u>Birds</u> Skylark Stone curlew? <u>Mammals</u> Brown hare	Agricultural intensification especially loss of winter stubble.	Locally high
Urban		Old stone buildings and walls especially around the Cathedral Mature trees	<u>Mammals</u> Pipistrelle bat	Development, especially alterations to important roost sites and loss of feeding areas.	Moderate

Table 2 Summary of SSSIs and SINCs within the study area

No. on map	Site name	Grid reference	Status	Key habitats	Key species	Ownership	Other interests
1	River Itchen	SU439153 to SU589274, SU563353 & SU599324	SSSI cSAC	Chalk river: Flood pasture Fen meadow Swamp	<u>Invertebrates</u> Fine-lined pea- mussel Southern damselfly White-clawed crayfish Soldier flies (Stratiomyidae) <u>Fish</u> Bullhead Brook lamprey <u>Birds</u> Cetti's warbler Kingfisher Snipe Redshank Lapwing Barn owl Water rail <u>Mammals</u> Otter Water vole	Private	Internationally important game fishery Public access along Itchen Way
2	Crab Wood	SU431295	SSSI part Local Nature Reserve	Ancient woodland	<u>Plants</u> Bluebell Solomon's Seal Lily-of-the-valley <u>Invertebrates</u> Purple emperor	Hampshire County Council	Nearest ancient woodland with public access Historical documentation dates it to at least 16th

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							Century
3	Northwood Park Farm Woods	SU443327	SINC	Ancient woodland	<u>Plants</u> Bluebell Solomon's Seal	Private	
4	Yew Hill	SU448263- SU445265	SINC	Chalk grassland	<u>Plants</u> Bastard toadflax		Managed as a nature reserve by the British Butterfly Conservation Society
5	Little Grove	SU454350	SINC	Ancient woodland		Private	
6	Worthy Down, The Gallops	SU455353	SINC	Chalk grassland	<u>Plants</u> Round-headed rampion Bastard toadflax	Private	Section 39 Management Agreement with HCC
7	Worthy Grove	SU 456351	SINC	Ancient woodland		Private	
8	Royal Winchester Golf Course (Teg Down)	SU457295	SINC	Chalk grassland: NVC types CG2a;CG3a;CG6a		Private	Golf course.
9	Flowerdown, Littleton	SU462318	SINC	Chalk grassland		Ministry of Defence	
10	Whiteshute Ridge	SU467276	SINC	Neutral grassland NVC type MG1		Private Public Authority	
11	Shawford Down	SU470250	SINC	Chalk grassland NVC types: CG3a, CG3d		Hampshire County Council	Public access
12	Itchen Valley (Winchester Meadows)	SU478274	SSSI	Flood pasture Fen meadow	<u>Plants</u> Narrow-leaved marsh-orchid	Winchester College	Part of the site is managed as a nature reserve.

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							Important landscape setting for historic buildings such as St. Cross
13	Kingsworthy Cutting	SU483335	SINC	Chalk grassland		Public authority	Well used by local population.
14	St. Catherine's Hill	SU484274	SSSI	Chalk grassland Juniper scrub	<u>Plants</u> Bastard toadflax <u>Invertebrates</u> Chalkhill blue	Winchester College. Hampshire Wildlife Trust reserve agreement.	Key landscape feature Archaeological significance: Iron Age hill fort, plague pits, maze. Important for quiet recreation
15	Hockley Golf Course	SU485266	SINC	Chalk grassland NVC types: CG3a, CG6a		Private?	Golf course.
16	Itchen Valley (Winnall Moors)	SU490308	SSSI	Flood Pasture Fen meadow	<u>Birds</u> Snipe Redshank Lapwing Reed warbler	Hampshire Wildlife Trust Winchester City Council	Managed as a nature reserve by the Hampshire Wildlife Trust.
17	Cockscomb Hill	SU493242	SINC	Chalk grassland NVC type: CG2a		Private	
18	Itchen Valley (Cheriton to kings Worthy)	SU 493320 - SU 577327	SSSI	Flood pasture Fen meadow	<u>Birds</u> Lapwing Redshank Reed warbler	Mostly private?	
19	Twyford	SU494248	SINC	Chalk grassland		Private	Ancient monument

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	Waterworks Meadow						
20	Easton Down	SU495316	SINC	Chalk grassland		Private	
21	Deacon Hill West	SU 496276	SINC	Neutral grassland Chalk grassland NVC types: CG3a, CG6a		Private	
22	Magdalen Hill Down	SU505294	SINC	Chalk grassland NVC Types: CG3a, MG1	<u>Plants</u> Bastard toadflax Round-headed rampion <u>Invertebrates</u> Chalkhill blue Small blue	Private	Managed as a nature reserve by British Butterfly Conservation Society. Important landscape feature on A31 eastern approach to Winchester.
23	Burnt Wood	SU506361	SINC	Ancient woodland: NVC W10	<u>Plants</u> Solomon's Seal	Private	
24	Morestead Down	SU507263	SINC	Chalk grassland		Private	
25	River Itchen Meadows	SU507322 SU508325	SINC	Flood pasture			
26	Deacon Hill (Chilcomb Down)	SU512278	SINC	Chalk grassland NVC types: CG2b, MG1		Private	
27	Shroner Wood	SU520355	SINC	Ancient woodland: NVC W8/W10	<u>Plants</u> Bluebell Solomon's Seal	Private	

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28	Cheesefoot Head	SU530279	SSSI	Chalk grassland Juniper scrub	<u>Invertebrates</u> Duke of Burgundy	Private	Landscape feature on eastern approach to Winchester. Focal point on South Downs Way.
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Table 3 Species listed in Hampshire Biodiversity Action Plan which occur in study area

Species	Status	Sites	Habitat	Other information
<i>Dactylorhiza traunsteineri</i> Narrow-leaved marsh-orchid	Nationally scarce	Itchen Valley (Winchester Meadows) SSSI	Damp grassland	A species of wet, base-rich fens and flushes.
<i>Gentianella anglica</i> Early gentian	BAP Short List Nationally scarce Schedule 8 WCA EC Annex IIb, IVb	Cheesefoot Head SSSI	Chalk grassland	On sparsely vegetated base-rich parched grasslands. Numbers fluctuate from year to year. Endemic to England. Last recorded 1954.
<i>Herminium monorchis</i> Musk orchid	Nationally scarce	St Catherine's Hill SSSI	Chalk grassland	Grows in short turf, especially on steep slopes.
<i>Phyteuma orbiculare</i> Round-headed rampion	Nationally scarce	Worthy Down SINC Magdalen Hill Down SINC	Chalk grassland	Confined ancient calcareous grassland in the southernmost counties of England.
<i>Thesium humifusum</i> Bastard toadflax	Nationally scarce	St Catherine's Hill SSSI Worthy Down SINC Magdalen Hill Down SINC Yew Hill SINC	Chalk grassland	A hemiparasite, found in short species-rich chalk grassland
<i>Pisidium tenuilineatum</i> Fine-lined pea-mussel	BAP Short List RDB3	River Itchen SSSI		
<i>Austropotamobius pallipes</i> White-clawed crayfish	BAP Short List Schedule 5 WCA EC Annex IIa	River Itchen SSSI		Numbers have been reduced as a result of crayfish plague. Now mostly confined to upper reaches, although may re-colonise downstream.
<i>Coenagrion mercuriale</i> Southern damselfly	BAP Short List EC Annex IIa RDB 3	River Itchen SSSI	Streams and ditches	Breeds in base-rich runnels and streams, and water-meadow ditches. Currently occurs to the south of the

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				study area, but could return.
<i>Alauda arvensis</i> Skylark	BAP Short List		Arable Chalk grassland	
<i>Burhinus oedicnemus</i> Stone curlew	BAP Short List EC Annex I		Arable	One pair may breed to the south-east of the city. Ideally needs spring-sown cereal to nest in.
<i>Arvicola terrestris</i> Water vole	BAP Short List	River Itchen SSSI	River banks	Numbers declining nationally, and within the Itchen, possibly as a result of mink predation.
<i>Lepus europaeus</i> Brown hare	BAP Short List		Arable	
<i>Lutra lutra</i> Otter	BAP Short List Schedule 5 WCA EC Annex IIa IVa	River Itchen SSSI	River and secluded river banks	Numbers were boosted in 1993 following introduction of captive bred stock. Mostly found in the upper reaches although they do travel through the City.
<i>Pipistrellus pipistrellus</i> Pipistrelle bat	BAP Short List Schedule 5(b) WCA EC Annex IVa	Cathedral precincts	Buildings	

