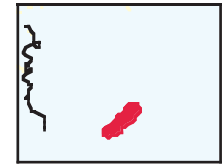


APPENDICES

Appendix A

Chiltern Character Area No: 110 – taken from the Character Map of England and the Countryside Character Assessment Volume No 7 – South East and London published by the Countryside Commission/English Nature (now Natural England) in 1999.



Chilterns

Key Characteristics

- Chalk hills and plateau with a prominent escarpment in many places, and extensive dip slope with numerous dry valleys.
- Remnants of chalk downland on the escarpment and valley sides. Extensive areas of downland invaded by scrub.
- The most extensive areas of beech woodland in the country on the plateau, and 'hanging' woodlands in the valleys.
- Enclosed and intimate landscapes of the valleys contrasting with the more open plateau top and extensive views from the scarp to the clay vale below.
- Small fields and dense network of ancient hedges, often on steep ground. The agricultural landscape often dominated by hedges, trees and small woodlands.
- Many surviving areas of semi-open common land on the plateau.
- Scattered villages and farmsteads, some of medieval origin, displaying consistent use of traditional building materials including flint, brick, and clay tiles.
- Network of ancient green lanes and tracks including the Ridgeway which links numerous archaeological sites and settlements.
- Frequent grand country houses and designed landscapes occupying prominent positions on sloping valley sides.

Landscape Character

The Chilterns rise to just over 900 feet and stretch from the Thames in Oxfordshire across Buckinghamshire and Hertfordshire to Bedfordshire. The area includes the lower-lying substantial settlements of Luton, Dunstable, Hemel

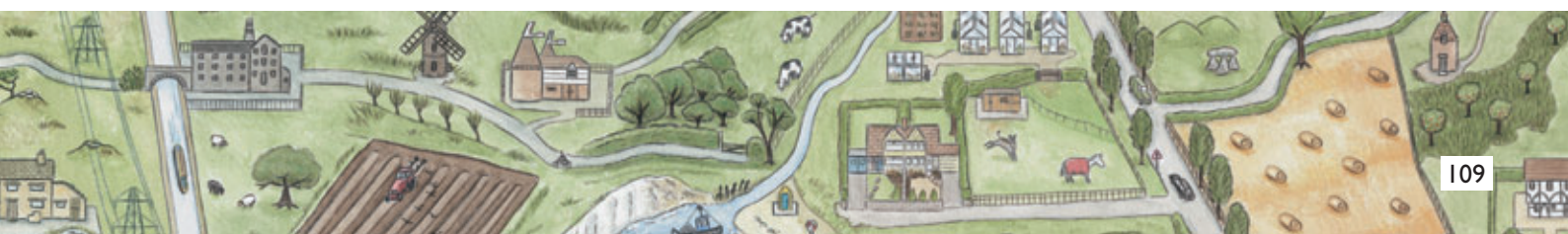
Hempstead, Berkhamstead, Chesham, Amersham and High Wycombe, as well as a section of the M40 and M1 motorway corridors. The Chilterns rise above Aylesbury Vale to the north, abut the East Anglian Chalk to the north-east and slope into the Hertfordshire Plateaux and River Valleys, and the Thames Valley to the south-east. The Berkshire and Marlborough Downs form the western boundary to the Chilterns.



JEFF PICK/COUNTRYSIDE AGENCY

Chalk streams with their associated waterside landscapes remain an important, if localised, landscape feature. Most of the chalk streams are affected, to some degree, by decreased flow.

The hills are formed by an outcrop of Chalk, overlain by clay with flints, up to a depth of four metres on the north-western side of the London basin. The Chalk strata have been tilted to create a dip slope that rises so gently towards the north-west that it generally has the character of a plateau. However, it ends abruptly in a steep scarp slope which forms the more dramatic north-western face of the Chilterns above Aylesbury Vale. The plateau is cut by a series of through-valleys that divide it into roughly rectangular blocks with many branching dry valleys further dividing these blocks and thereby creating a varied mix of landscapes. As well as the distinctive landform, the scarp is

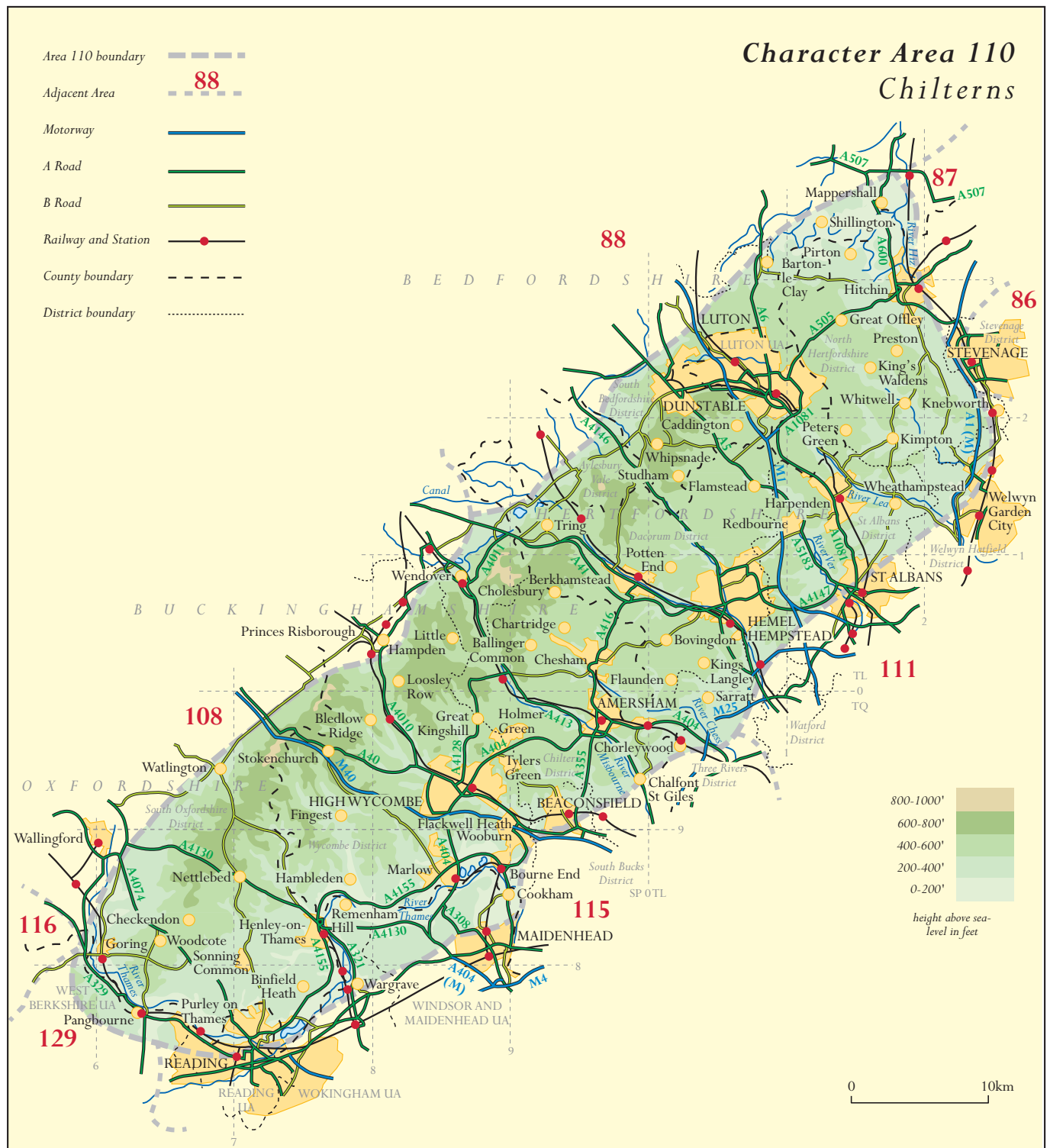


characterised by fragmented and occasionally substantial areas of unimproved chalk grassland with a uneven texture and colour. The influences of the underlying Chalk are apparent in the smooth, rounded sides of the numerous valleys that incise the dip slope. Most of the valleys were formed by glacial melt water but a small number of them support spring-fed streams. In recent years they have all been affected by drought and some by over abstraction. There are many coombes and dry valleys hidden away in the folds of the hills, sometimes giving rise to bournes (streams which flow intermittently).

The extensive areas of woodland dominated by beech on the plateau and the 'hanging' woodlands of the Chalk valleys are

a characteristic feature of the area and make the Chilterns one of the most wooded lowland landscapes in England. Beech was selectively encouraged by management because of its value in the 18th and 19th century furniture industry. Today, the extent of the woodland and the grandeur of the 'cathedral-like' beech woods in particular, dominate the landscape and distinguish the Chilterns from other chalk landscapes such as the more open Berkshire and Marlborough Downs immediately to the south-west of the area.

The south-western boundary is formed by the river Thames as it flows past Wallingford, Henley and Marlow. Although part of the Chilterns, this belt of countryside is dominated by the river and its floodplain rather than by the Chiltern Hills.





MARTIN TRELAWNEY/COUNTRYSIDE AGENCY

The escarpment, with its distinctive form, varies in character from the wooded scarp and gentler landform of the west, to the steep dramatic grassland scarp of the north east.

The escarpment varies in character with the more wooded scarp and gentler landform of Oxfordshire giving way to the more dramatic steep grassland scarp face of Buckinghamshire to the north-east. Sheep grazing is common on the improved chalk grasslands with remnants of species-rich pasture on the steeper valley slopes and scarp face. Scrub is invading chalk downland following cessation of large scale sheep grazing earlier this century and the effects of myxomatosis on rabbits more recently. Much of the largest area of surviving species-rich chalk grassland has been designated as an SSSI or National Nature Reserve. Many of these valuable sites are in public ownership.

Towns and villages of medieval origin are found throughout the Chilterns, the oldest are located in valleys with reliable water supplies. Most of these ancient villages boast Norman churches, village greens and ponds. From the mid-19th century, scattered linear villages have developed on the

plateau, usually around commonland. During the 20th century there has been large-scale development along major road and rail corridors, typified by development along the Metropolitan line from the 1930s onwards. The result is that most Chiltern villages have grown rapidly during this century and house styles from the previous 300 years can be found in most of them.

Designed parklands and large gardens associated with grand historic houses make a dramatic contribution to the local landscape. The designed woodlands, tree clumps, parkland trees, lime avenues, houses and related buildings are distinctive in the Chilterns landscape and often occupy prominent positions on sloping valley sides. Designed landscapes such as Shardeloes, Tring Park, West Wycombe Park, Wycombe Abbey, Park Place, Remenham and Ashridge demonstrate the 18th century design of Bridgeman, Brown and Repton for which the Chilterns are particularly renowned.

Overall, the area has a predominantly quiet and prosperous farming character. The beech woods, the distinctive relationship between the Chalk scarp and the clay vale below, and the traditional villages are all significant characteristics of the landscape. When perceived from the extensive network of sunken lanes and tracks the landscape often feels hidden, enclosed and ancient. This give the Chilterns its special sense of place.

Physical Influences

The Chilterns are formed by chalk, which creates the smooth rounded forms so typical of downland scenery. The chalk is exposed along the steep escarpment and along valley sides throughout the area. The dip slope is overlain



SIMON MELVILLE/ENGLISH NATURE

The Chilterns escarpment includes substantial areas of species-rich chalk grassland and scrub creating uneven texture and colour.

by clay with flints which supports extensive woodlands, medium-grade farmland and even remnant heath.

The valleys were primarily formed by glacial melt waters and are now dry. The main rivers are the Wye, Gade, Ver, Bulbourne, Chess and Misbourne. The Wye flows directly into the Thames whilst the others flow into the river Colne before joining the Thames. Small brooks known as 'bournes' flow in several valleys, fed by springs which periodically dry up.



STEVE RODRICK/CHILTERNAS AONB

A network of sunken lanes, known locally as hollow ways, are found on both the plateau and valley bottoms helping to link scattered settlements and woodlands.

Historical and Cultural Influences

The area has been continually influenced by human settlement since early Palaeolithic times. Neolithic clearance of woodland for agriculture and the development of an important Roman communications network established a settlement pattern still evident today and set the scene for the emergence of a distinctive wood-based industry and agricultural change in medieval times.

The earliest archaeological evidence of human activity in the area comes from Caddington where extensive flint working sites dating from the early Palaeolithic period (125,000 - 70,000 BC) have been discovered. Evidence of flint implements are common and widespread from the Mesolithic period (10,000 - 4,000 BC). The local importance of flint from the Chalk is still evident in today's landscape with the use of flint with brick in the walls of buildings and garden boundary walls.

The Neolithic period (4,000 - 2,000 BC) saw a dramatic period of landscape change when the introduction of agriculture to Britain led to the widespread clearance of woodland from much of the Chalk escarpment and river valleys. During this period and into the Bronze Age (2,000 - 750 BC) the Icknield Way was in use as a trackway along the scarp of the Chiltern hills and is associated with evidence of burial mounds on the adjacent higher ground. Evidence from the Iron Age (750 BC - 43 AD) confirms the developing importance of the Icknield Way as a major

line of communication and demonstrates the territorial nature of this period in the history of the Chilterns. Earthworks of former defensive hillforts and dykes to control trade are found along the scarp and also along the Thames Valley to the south. Their presence also probably defined tribal boundaries in the area.

The appearance of the landscape during the Roman period (43 AD - 410 AD) may not have been radically different to that of the Chilterns in the early 19th century. Small towns linked by a system of roads, a mosaic of small fields interspersed with large blocks of woodland, rough grazing on what was then the marginal plateau soils and a more intensively farmed arable landscape on the lighter soils of the valley bottoms. The pattern of settlement as we know it today evolved during this period with many late Iron Age farmsteads developing into Roman masonry villas distributed at regular intervals along the spring line and river valleys. These developed into small towns linked by a system of roads including the establishment of Watling Street and Akeman Street, two major lines of communication that became the A5 London to Dunstable and the A41 St Albans to Aylesbury roads. The presence of extensive areas of woodland provided the charcoal necessary for the emerging iron slag industry which was one of the earliest non-agricultural industries to exist in the Chilterns.

The period from the 5th century through to the Tudors saw a major change in the agricultural land use of the Chilterns. From the early 5th century onwards farmers in the Chilterns returned to subsistence agriculture as a result of the collapse of their markets and a reduced population due to the depredations of the Saxons. Marginal fields on the plateau were abandoned or maintained as rough grazing and, as a result, woodland cover saw an increase during this period. The landscape, as indicated in Domesday Book, appeared to be similar to that of today. The woodlands have never been cleared to the same extent as other areas and the current cover of approximately 20 per cent remains a high figure by UK standards. The Oxfordshire Chilterns has a woodland cover exceeding 30 per cent. The boundaries of woodlands are known to have changed significantly, reflecting constantly fluctuating agricultural and forestry economics.

Settlements were predominantly scattered in farmsteads and hamlets, a pattern still found in the Chilterns today, although much of the land on the plateau had still not been reclaimed for cropping. As the population increased, the pressure on the land led to an expansion in agriculture indicated by the creation of strip lynchets on steeper slopes. New farms and settlements were established on the plateau and new small fields were carved out of the extensive common woods that covered the ridges and allocated to a particular tenant.

Buildings and Settlement

The most notable feature of the vernacular buildings, both in villages and elsewhere, is the consistent use of materials especially the flints that occur in both the Chalk strata and the overlying clay-with-flints. In many places, flint is combined with brick both in the walls of older buildings and in the boundary walls around gardens. Most vernacular buildings also have tiled roofs, with the tiles often having been made from local iron-rich clay. Thatch has been used less, with notable concentrations in the Oxfordshire part of the Chilterns. The use of brick, flint and tiles is particularly characteristic of many of the historic farmsteads. The oldest farm buildings are commonly characterised by large timber-framed barns clad with black, horizontal weather boarding, brick and flint gable walls, which sometimes incorporate vertical ventilation slits and an owl hole. The consistent range of traditional building materials used in different combinations throughout the area contributes greatly to the distinctiveness of the landscape.

Settlements are linked by a network of ancient, commonly sunken lanes, some running straight along valley bottoms or ridge-tops while others wind up the scarp or valley sides. The sunken lanes pass through woodland, creating an enclosed landscape with an over-arching canopy of trees. On plateau areas and in some valleys the lanes can be lined with species-rich ancient hedges, the height and dense nature of which offer only limited views into the fields beyond. Much of the wider landscape is 'hidden' from the user of these lanes.

Along the loop of the river Thames, the towns of Marlow, Henley and Cookham expanded greatly in the 19th century. River frontages are characterised by ribbon development of summer homes.

Land Cover

Woodlands are a significant and characteristic feature in the landscape and occur throughout the area. Broadleaved trees dominate the Chilterns woodlands and include the grand beech woods and wooded commons of the plateau and the hanging woodlands of the scarp and valleys. It is the extent of woodland in general, and of the beech woods in particular, which distinguishes the Chilterns area from other chalk landscapes which are often more open in character. The unnaturally high incidence of beech owes its presence to the furniture making industry. A considerable amount of ancient woodland with a much greater variety of trees and shrubs, including oak, birch, holly, hazel on the more acid plateau and ash, wych elm, field maple and cherry on the escarpment. The favourable growing conditions for cherry helped to support widespread orchards, especially in the central part of the Chilterns. These orchards are no longer commercially managed and are now disappearing rapidly.

Juniper heath also survives in some places and very rare natural box woods can be found on the scarp. The woods also add significantly to the ancient feel of the landscape and to its intimate and hidden character.

The Chilterns are dominated by Grade 3 soils which are capable of growing cereals but with limited yields. The result is a mixture of dairying and sheep and arable farming. The mixture at any one time depends upon the economics of each type of farming. More recently, set-aside has become a notable landscape feature.

The type of crops grown are generally winter wheat and barley. Spring sown crops are now rare so there is little winter stubble which has consequences for many bird species formerly characteristic of the Chilterns.

The Chilterns landscape is dissected by transport corridors which run across rather than along the escarpment. Major roads, railway lines and canals are a major feature within the area the majority of which tend to follow the arterial valleys (the M40 is a clear exception). The Thames valley at the western end of the Chilterns is dominated by the river with its associated floodplains.



STEVE RODRICK/CHILTERNAS AONB

The extensive areas of ancient woodland, secondary woodland and plantations make the Chilterns one of the most richly wooded lowland landscapes in England.

The Changing Countryside

- New commuter housing development and expansion of settlements by infilling leading to erosion of the traditional Chiltern's building style and adverse changes in the overall character of settlements. Recent developments on the edge of scarp-foot historic market towns are particularly intrusive. Suburbanisation through small scale but inappropriate development design.
- New road construction and road 'improvements' are a significant pressure on the small scale road network of the area.
- Intensification and changes in agricultural practice including the loss of characteristic chalk grassland on escarpment and valley sides because of scrub invasion and a cessation in

traditional sheep grazing regimes. The loss of winter stubble means that fields are now green in the winter months. Increasing number of new crops appearing.

- Cumulative effect of localised removal of field hedgerows and an associated lack of appropriate hedgerow management. The reduction in the quality of hedgerows is considered to erode the character of many Chiltern valleys.
- Increase in horse-related land uses and development of new golf courses on former agricultural land.
- Elements of ancient countryside within the Chilterns, such as narrow winding lanes, organic field patterns and mature tree specimens, are particularly vulnerable to change.
- Remnants of parkland within the agricultural landscape are gradually disappearing.
- Increasing number of telecommunication masts on the skyline.

Shaping the Future

- The character of the transitional landscape between town and countryside needs attention.
- Management of popular recreational landscapes and sites would avoid environmental damage or deterioration.
- Schemes to re-establish characteristic chalk grassland at suitable locations, and to conserve those areas that remain, should be considered.
- Appropriate management would improve the quality of existing woodlands.

- Management and restoration of wooded commons would re-establish acid grassland.
- Landscape features which are remnants of ancient countryside including characteristic hedgerow patterns, old trees and lanes need positive management and conservation.
- The design of future development should reflect and help restore and reinforce a typical Chilterns character.
- Public transport, green lanes and quiet ways might be promoted to encourage people to visit the countryside without their cars.
- Many historic parklands are in need of conservation and management.

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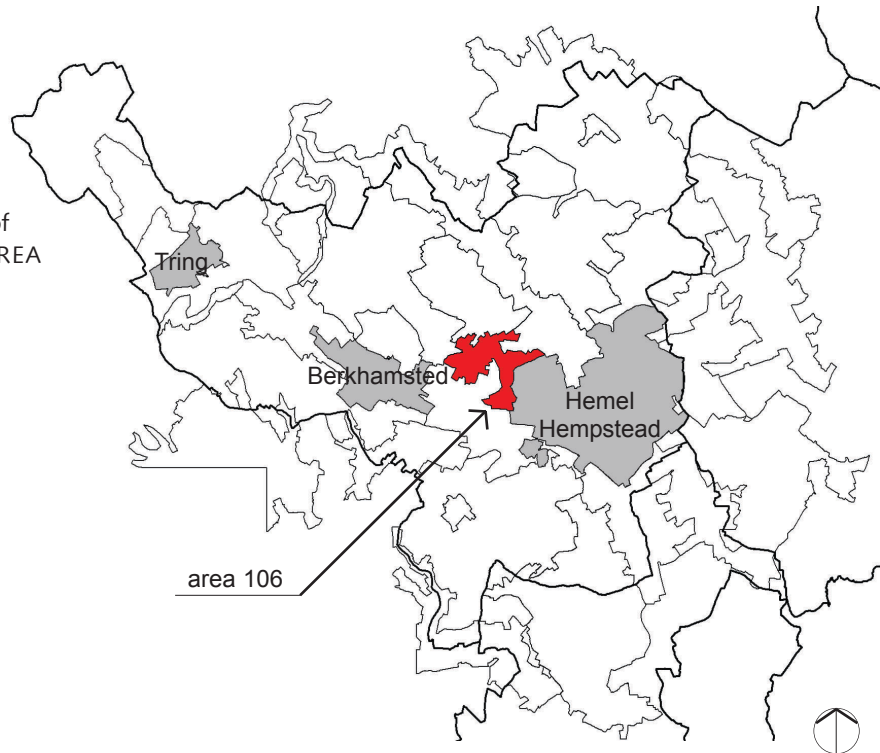
APPENDICES

Appendix B

A copy of Character Area 118 – Lower Bulbourne Valley and Area 120 – Little Heath Uplands, taken from the Dacorum Landscape Character Assessment May 2004.

District Map showing location of LANDSCAPE CHARACTER AREA

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 100018935 2004



LOCATION

This character area covers part of the settled plateau to the west of the Gadebridge area of Hemel Hempstead. It includes the settlement of Potten End and lies to the east of the Ashridge Estate.

LANDSCAPE CHARACTER

The character of this area is influenced by the residential fringes of Hemel Hempstead, creating an urban edge quality to the plateau. The land is predominantly farmed for arable crops with horse paddocks clustered around the farms and houses. The upland gently undulates and the irregular and sub regular field patterns are Intermittently visible. The effect of the landscape management on the character of this area contrasts with the neighbouring Ashridge Estate to the west. For example there is evidence of the loss of field boundaries as fields have increased in size for the intensification of agricultural on the plateau. Little Heath to the south of Potten End is a remote part of

the Ashridge Estate. Here the character becomes more intimate with narrow country lanes and wooded dells.

KEY CHARACTERISTICS

- urban fringe influence
- arable farming
- isolated farms and pasture fields
- contained views

DISTINCTIVE FEATURES

- covered reservoir
- Bingham's Park and former rare breed centre
- late medieval cottages
- Little Heath Pit - geological SSSI



- Enclosed pasture (A.Tempany)

PHYSICAL INFLUENCES

Geology and soils. The bedrock geology is Upper Chalk overlaid with plateau drift. Areas of the chalk bedrock are exposed at the head of the valleys and clay-with-flints elsewhere. The soils are stagnogleyic paleo agrillic brown earths. They comprise fine silty over clayey and fine loamy over clayey soils, with slowly permeable subsoils and slight seasonal waterlogging. There are some well drained clayey soils over chalk which are variably flinty and quite acidic, (Batcombe and Hornbeam 2 associations). Little Heath is a geological SSSI.

Topography. Generally, the topography is that of a gently undulating upland plateau, with some more pronounced undulations in the area of Little Heath Common which is punctuated by numerous small gravel dells.

Degree of slope. The average slope ratio is 1 in 38.

Altitude range. 125m towards Shrub Hill Common; 170m at Little Heath.

Hydrology. There is little surface water apparent, apart from ponds at Little Heath, and the ancient village pond - Martin's Pond - at Potten End.

Land cover and land use. Land cover was historically common land, although much of this has subsequently regenerated to secondary woodland. The remainder is now either mixed open farmland or occupied by Potten End village.

Vegetation and wildlife. Vegetation is largely secondary oak woodland, with remnant copses of oak, hornbeam and ash as well as the considerably more common place and characteristically silver birch. Old grasslands are few in the area, such as at Rumlbers Farm and are generally species poor. Some large old hedges remain. There are no recorded species of note.

HISTORICAL AND CULTURAL INFLUENCES

The woodlands at Little Heath are ancient common land, associated with the Ashridge Estate (managed by the National Trust) and now regenerating secondary woodland. Within these woodlands are 'dells' which were caused by gravel digging on the common. The former open heathland has reverted to birch wood with bracken and brambles.

Geologists have dug in the dells and found that there is a deposit of rounded flint 'pebble gravels' above the chalk making this area a distinctive feature on the plateau.

Field Patterns. The field pattern is essentially irregular with a sinuous field boundaries to a number of fields. Elsewhere the enclosure is generally post 1950's and 60's prairie fields. The fields are small to medium in size and are generally clearly defined by hedgerow boundaries, or in the centre of the area around Little Heath, by blocks of woodland.

Transport pattern. The area is traversed by a number of B roads and minor lanes the latter being both sinuous and slightly sunken.

Settlements and built form. The village of Potten End, is indicative of a long established settlement, being relatively small in scale and characterised by low key expansion of large houses set behind tall hedges. The village of Potten End is centred around an ancient village green, with a large pond and some vernacular buildings. The church and primary school, although relatively modern early 20th century buildings, are interesting brick structures with a strong Dutch influence.

OTHER SOURCES OF AREA-SPECIFIC INFORMATION

Pevsner N: Buildings of England - Hertfordshire

English Nature: SSSI notification

VISUAL AND SENSORY PERCEPTION

The area is only locally visible from outside due to its plateau location and being concealed by the woodlands of Ashridge and the commons / secondary woodland at Little Heath. The village of Potten End provides further enclosure. The village green and Martin's Pond provide an attractive focus to the area while Little Heath has a locally confined character.

Rarity and distinctiveness. This landscape character is not uncommon in Hertfordshire, however it is made more unusual by its distinctive features that include the SSSI of Little Heath Pit and remote pockets of the Ashridge Estate.

VISUAL IMPACT

The impact of the built development at Potten End in the centre of the area is evident although the development itself is low key. Despite the proximity and size of Gadebridge beyond the eastern boundary of the area, the impact of this built development is minimal due to the presence of mature hedgerows along its edge which provides seasonal and very effective screening.

ACCESSIBILITY

Accessibility is good with paths connecting the residential settlement with the neighbouring countryside. Access to the SSSI and National Trust Land at Little Heath is good and the area is well used for recreation.

COMMUNITY VIEWS

This area is of some regard (D); "as a walker and dog walker I value the open spaces and green areas" (2169).

LANDSCAPE RELATED DESIGNATIONS

- AONB (south west corner)
- Landscape Conservation Area (Piccotts End- north east corner)
- Landscape Conservation Area (Potten End-south west extent)
- Geological SSSI: Little Heath

CONDITION

- Land cover change:* **localised**
- Age structure of tree cover:* **mature**
- Extent of semi-natural habitat survival:* **scattered**
- Management of semi-natural habitat:* **good**
- Survival of cultural pattern:* **interrupted**
- Impact of built development:* **moderate**
- Impact of land-use change:* **low**

STRENGTH OF CHARACTER

- Impact of landform:* **insignificant**
- Impact of land cover:* **apparent**
- Impact of historic pattern:* **apparent**
- Visibility from outside:* **locally visible**
- Sense of enclosure:* **partial**
- Visual unity:* **incoherent**
- Distinctiveness/rarity:* **frequent**

CONDITION	GOOD	Strengthen and reinforce	Conserve and strengthen	Safeguard and manage
	MODERATE	Improve and reinforce	Improve and conserve	Conserve and restore
	POOR	Reconstruct	Improve and restore	Restore condition to maintain character
		WEAK	MODERATE	STRONG
STRENGTH OF CHARACTER				

STRATEGY AND GUIDELINES FOR MANAGING**CHANGE: IMPROVE AND CONSERVE**

- utilise ancient hedge and field boundaries for the most appropriate location for woodland restoration and expansion
- encourage the reversal of habitat fragmentation and the creation and improvement of habitat links to create eco-corridors
- promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats
- promote hedgerow restoration and creation throughout the area to provide visual and ecological links between existing and proposed woodland areas. Pattern to follow historic field boundaries where possible. Restoration measures to include; coppicing, laying, replanting and gapping up
- promote crop diversification and the restoration of mixed livestock/arable farming where possible
- to provide new uncropped or grass field margins to link areas of wildlife importance and/or existing and proposed rights of way
- promote the use of traditional field enclosure where land is converted to equestrian pasture
- where hedgerow removal is deemed to be unavoidable, replacement planting should use locally native species of local provenance to maintain local distinctiveness
- ensure that the surroundings of converted and new buildings are designed and maintained to be in keeping with their agricultural surroundings by ensuring that 'Garden' details are be screened from view where possible and native species are used for hedging and tree planting to the perimeter
- hard detailing should be kept to a minimum, with an emphasis on the use of natural materials such as gravel for drives etc. rather than concrete or paviers
- promote the retention and restoration of existing orchards and the creation of new orchards. Encourage the use of traditional varieties of fruit and minimise the use of herbicides and pesticides
- conserve and enhance the distinctive character of traditional settlements and individual buildings by promoting the conservation of important buildings and high standards of new building or alterations to existing properties, all with the consistent use of locally traditional materials and designed to reflect the traditional character of the area
- maintain and develop the traditional pattern of roadside verges as a local feature and a wildlife resource. Where development is likely to affect verges and damage is unavoidable, development should include details of protection of the remaining verge and replacement of its nature conservation value within the proposed scheme. This is particularly important where verges include hedgebanks, sunken lanes, ditches and hedges
- the planting and pollarding of trees adjacent to highways should be encouraged
- promote awareness and consideration of the setting of the AONB, and views to and from it, when considering development and land use change proposals on sites adjacent to the AONB
- a co-ordinated approach to the provision of access and recreation opportunities, car parking, land management, site interpretation etc should be encouraged between neighbouring communities. To include Little Heath
- encourage the restoration of open heathland and heathland planting where possible on the plateau.
- where possible, areas of chalk grassland should be encouraged to coincide with the outcrops of chalk at the heads of the valleys
- support a strategy to limit built development within the area and the visual impact of development that may affect the area from outside, including Hemel Hempstead
- Martins Pond, Potten End (A.Tempany)



APPENDICES

Appendix C

Extracts from the "Report accompanying the Outline Plan for Hemel Hempstead" published by Hemel Hempstead Development Corporation 1949.

APPENDICES

Appendix C: Extracts from the "Report accompanying the Outline Plan for Hemel Hempstead" published by Hemel Hempstead Development Corporation 1949.

REPORT

accompanying the

OUTLINE PLAN

for

HEMEL HEMPSTEAD

submitted to the Minister of Town & Country Planning



HEMEL HEMPSTEAD DEVELOPMENT CORPORATION 1949

*Report on the Outline Plan for Hemel Hempstead submitted
to the Minister of Town and Country Planning by the
Hemel Hempstead Development Corporation*

" this master plan, though its major principles must not be lightly changed, should be **under** constant detailed revision as knowledge grows and requirements change."

Final Report of the New Town Committee.

HEMEL HEMPSTEAD DEVELOPMENT CORPORATION

Table of Contents

	<i>Page</i>		<i>Page</i>
I. TERMS OF REFERENCE	4	XII. INDUSTRY	13
II. OUTLINE OF TASK... ..	4	XIII. HOUSING AND THE RESIDENTIAL AREAS	
III. OUTLINE OF PROPOSALS... ..	4	1. <i>General Disposition</i>	14
IV. SIZE	5	2. <i>Dwellings...</i>	15
V. SOCIAL AND ECONOMIC STRUCTURE	5	XIV. TOWN CENTRE	15
VI. MAIN ZONING	5	XV. DEMOLITION	16
VII. DENSITIES	6	XVI. OPEN SPACES	17
VIII. LANDSCAPE TREATMENT... ..	6	XVII. SOCIAL LIFE, RECREATION AND EDUCATION	
IX. USE OF SURROUNDING LAND	6	1. <i>General</i>	18
X. SERVICES		2. <i>Libraries</i>	18
1. <i>Water</i>	8	3. <i>Places of refreshment and hotels</i>	18
2. <i>Gas</i>	8	4. <i>Churches</i>	18
3. <i>Electricity</i>	8	5. <i>Education</i>	18
4. <i>Drainage</i>	9	XVIII. SHOPPING	19
5. <i>Refuse Disposal</i>	9	XX. CEMETERIES	19
6. <i>District Heating</i>	9	XXI. BUILDING PROGRAMME	19
7. <i>Telephone distribution</i>	9	APPENDIX A	20
XI. COMMUNICATIONS		APPENDIX B	23
1. <i>Roads</i>	10		
2. <i>Bridges</i>	11	MAPS	
3. <i>Bus Services</i>	11	CONTOUR PLAN	7
4. <i>Waterways</i>	11	ROADS PLAN... ..	12
5. <i>Airways</i>	11	OUTLINE PLAN	24
6. <i>Cycles</i>	11		
7. <i>Pedestrians</i>	13		
8. <i>Rail</i>	13		

The Board of the Hemel Hempstead Development Corporation

THE RT. HON. LORD REITH, G.C.V.O., G.B.E., C.B.,
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Deputy Chairman.

HORACE DIVE, O.B.E.

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HENRY W. WELLS, F.R.I.C.S.

“ of the groups and societies to which men and women are attached, perhaps the most important, next to the family, is the local or geographical community”.

Final Report of the New Towns Committee.

1. TERMS OF REFERENCE

THE Development Corporation, established in March 1947, was directed to develop the designated area at Hemel Hempstead, increasing the existing town of 22,000 inhabitants to one of a balanced population of 60,000.

2. OUTLINE OF TASK

1. The development is fundamentally conditioned by its being a major extension of an existing town and by the topography of the site. The area now developed is 1,100 acres; the designated area 5,910. 6,977 individuals were, in July 1948, engaged in manufacture, 3,871 in services. There are 351 shops.

2. The setting is typical of the Chilterns. The area is bisected from north to south by the Gade valley; on the south the Bulbourne flows from the west to its junction with the Gade at Two Waters, after which the united streams turn south-east towards Watford. The valleys are steep and narrow; the plateaux between them rise to 400 feet and are broken up by smaller valleys. The main valley floors are marshy and offer few good building sites. There are opportunities for pleasant landscaping, but there is much land on which it is uneconomic to build.

3. A contour plan is shown on page 7.

4. In synthesising the social, economic and constructional programme on which the plan was to be based, it was impossible to follow any predetermined pattern of development; it was necessary to fill in the gaps in the existing social, economic and physical pattern in such a way as to produce a development with the coherence and balance suggested in the Final Report of the New Towns Committee.

3. OUTLINE OF PROPOSALS

1. This report indicates the conclusions of the Corporation as to the achievement of this result. The Corporation recognises, as was stressed in the New Towns Committee's Report, that "a growing town is a living entity, and its final shape in detail cannot be exactly predicted or prescribed"; what it has produced is "a master plan based on the knowledge and expectations of the planning team, and in particular on careful estimates of the areas likely to be required for all foreseeable purposes."

2. The master plan, in the main, shows what can be done in fifteen to twenty years, and the programme of development is in accordance therewith. But some of the proposals, such as the road pattern, depend on factors so indeterminate that their execution may be much farther off; these uncertainties are met by making generous zoning reservations to meet possible fluctuations in the areas required for the various activities of the town and by making generous provision for road widths which may only be implemented as the need is felt.

3. This plan for Hemel Hempstead has been designed to produce a town, not a group of villages or a suburban sprawl. The principles which have guided its design include a desire to preserve what is useful, attractive or characteristic in the existing town and the need at this stage in national affairs not to waste resources or to become committed to unnecessary or abortive expenditure.

4. While not revolutionary in design the new town will be convenient; it can possess all modern necessary amenities: it will have the beauty found in many English country towns of this size.

5. The ideal of a master plan which can set down in detail the construction of a town over half a century is illusory. A plan for Hemel Hempstead can only hope to fix zones of use and a general communications pattern within which development can proceed towards a coherent whole. It must be sufficiently

rigid that minor fluctuation in interest and opinion over the years will not disrupt it. It must be sufficiently flexible within these limits, that major changes can be met. This the plan now submitted attempts to do.

4. SIZE

In preparing its plan, the Corporation has, of course, followed the instruction that the new town is to be one of 60,000 persons. This in turn determines the size of areas zoned for industry, the capacity of services and particularly the sewage disposal system and the extent of the central area. But a thriving town will create its own pressures which may be difficult to control; variations are to be expected so margins have been provided. The problem is complicated by the continuous industrial development along the Gade valley from Apsley to Kings Langley; further development in this adjoining area must be related to the growth of the new town.

5. SOCIAL AND ECONOMIC STRUCTURE

1. The Corporation, while conscious of the problems implicit in the expression "balanced community", believes that socially the new town should possess a population in which most income and social groups are represented and economically should rest on variety of employment. The present Hemel Hempstead, while not a one-income or one-class town, has a high proportion of female and juvenile labour employed in manufacture. The majority of the employment is non-specialised and wage-rates tend to be low. The Corporation intends to encourage the introduction of those types of industry which will assist in balancing the employment pattern and the social structure of the town.

2. The Corporation is also conscious of the need for securing a mixture of social classes within the town and even within the neighbourhoods. There is not the same danger, as was envisaged in the New Towns Report, of a "one-class town" owing to early construction of minimum standard housing, for a proportion of the existing community is of the middle-income group. Nevertheless, steps have been taken to ensure that larger size houses are available in the first neighbourhood to be developed and in the early contracts. The Corporation will ensure that a variety of dwellings is available in each neighbourhood.

3. A new town is to be self-contained. But a great many residents in Hemel Hempstead travel daily to and from London and the town has many links with neighbouring towns. There are serious difficulties to be overcome if it is to avoid becoming a dormitory settlement.

6. MAIN ZONING

1. The main zones of the plan are conditioned, in part at least, by existing development and by topography. The central business zone could not be moved from its present location without an unwarrantable dislocation of traditions and interests: it is the natural centre of the area. The present industrial zone at Apsley, mostly outside the designated area, must also remain, but a new industrial zone has been planned to the north-east of the town and a further small extension to the north-west may be necessary.

2. The residential areas are selected by the available building land, limited by the existing low density development and the steep slopes of the valleys.

3. These zones are linked by a system of radial and inter-neighbourhood roads which will carry people to and from work, the town centre and the railway. The division of manufacturing industry into two, perhaps three main zones will spread the flow to and from work, while provision is made for some light industry at some of the neighbourhood centres.

7. DENSITIES

1. Existing low density development and the steep slopes on which few houses can be built to the acre, necessitate new construction being mostly at a net residential density of at least 35 persons per acre: the average will then be 31 persons per acre. The gross urban density represents a land use of 3,945 acres at 14.6 persons per acre. The New Towns Committee recommended as a maximum 15 persons per acre on the same basis.

2. The overall density in the designated area is 10.3, but this figure is of little significance since the plan retains 1,844 acres of land for agricultural purposes within the area.

8. LANDSCAPE TREATMENT

1. Hemel Hempstead has a character of its own and at many places there is a happy relation between buildings and open space which the plan seeks to maintain and extend. To this end the open valley at the north end of the town, the grazing on the Moor and the green at Leverstock have been retained. The proposed built-up area has been constricted so as to give that sharper break between town and country which the original town must have had before it spread in the nineteenth century but which is still preserved at the north end of the High Street. Farming will go on in many areas up to the boundaries of the ring road within which the town will extend in a strongly urban pattern, threaded by pathways and parted at the centre by the formal and informal parks and grazing areas which will stretch along the valley from Piccotts End to Two Waters. The central area bounded by Cotterells and Marlowes will eventually provide the formal town park framing public buildings.

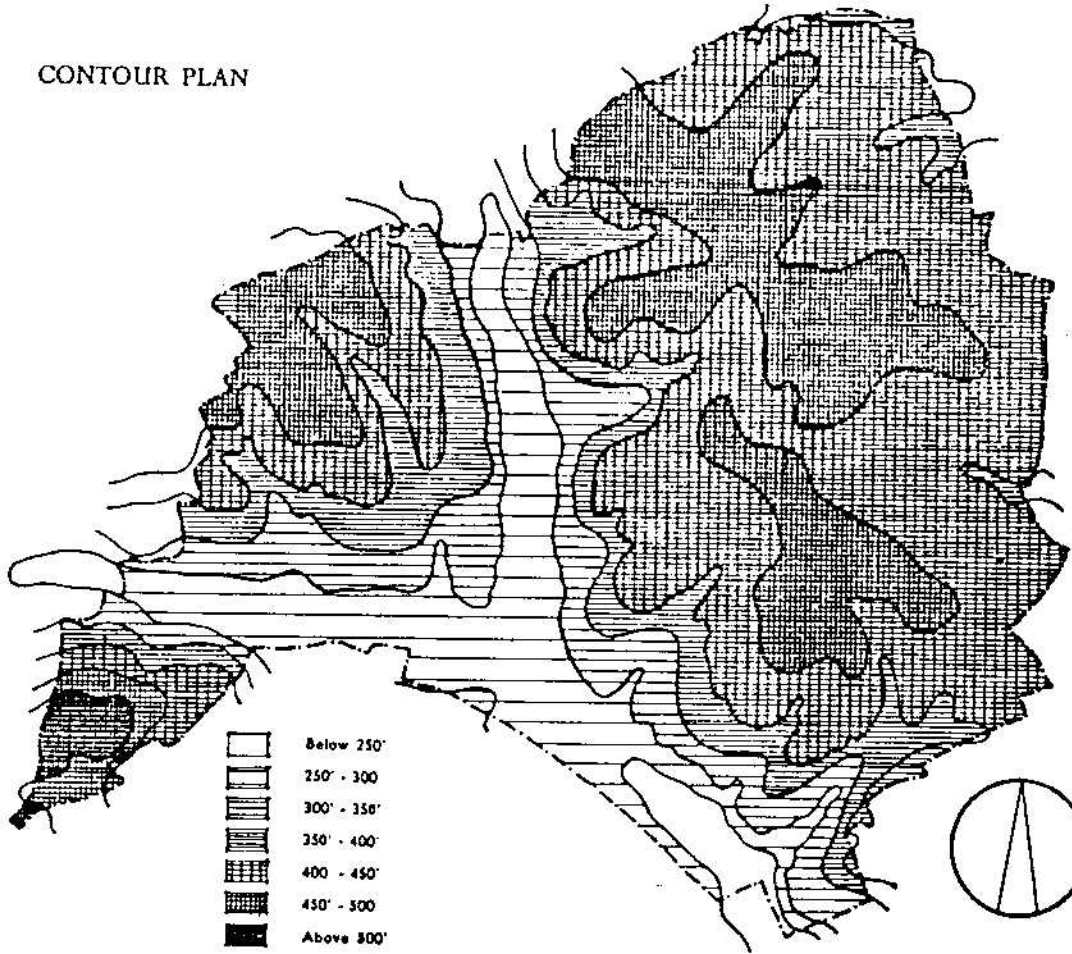
2. The new residential areas will be largely on the high ground, exposed to every wind. Careful consideration has therefore been given to a scheme of windbreaks to ensure such protection as should provide an equable climate. The substance of this scheme, which could only be fully effective if unrelated to other land use, will be established by making the maximum use of existing trees, by encouraging the planting of new trees on private property, by developing special tree belts on suitable sites and by laying down some areas of commercial forestry.

9. USE OF SURROUNDING LAND

1. The agricultural land on the periphery of the town, but within the designated area, should be farmed indefinitely. There are several flourishing market gardens and the Corporation will encourage their development where practicable. Every effort will be made to so rearrange farm holdings that land is used to the best advantage.

2. Hemel Hempstead has had an important watercress industry for a long time, beds lying along the Gade and Bulbourne valleys within the designated area. The expansion of the town means the abandonment of beds below Gadebridge on the Gade and Fishery Lane on the Bulbourne, but alternative sites may be found in the district.

CONTOUR PLAN



HEWLETT-WATKINS DEVELOPMENT CORPORATION

3. The problem of the use of land outside the designated area, but within its area of influence, can only be met by close consultation between the Corporation and the Planning Authority; it is hoped that this will be effective in controlling the pressures likely to be exerted. Particular care will have to be taken to preserve the character of surrounding villages such as Piccotts End, Bourne End, Felden, Bovingdon and Water End, so that they do not become dormitory satellites of the new town. This is as much a landscape problem as one of land use.

10. SERVICES

1. Water

(1) An outline water scheme has been agreed between the Hemel Hempstead Borough Council as water undertakers and the Corporation, based on the design prepared by the Council's Consulting Engineers, Messrs. Sandeman, Kennard & Partners.

(2) It is intended to provide about 4.5 million gallons per day. This is based on an assumed demand of 50 gallons per day per head of population for 60,000 people, together with an industrial provision of 1½ million gallons per day, giving a total of 4½ m.g.p.d.

(3) The scheme provides boreholes and a pumping station for up to 4.5 million gallons per day at Piccotts End, the water to be pumped through a 21" rising main to a reservoir of 3 million gallon capacity at Adeyfield. This will serve the east side of the town by gravity for the low level area and by a boosting station to a water tower of ¼ million gallons capacity at High Street Green. Additional reservoir capacity (5 million gallons) will be provided at Boxted on the west side of the town just outside the designated area boundary, thus ensuring an ultimate storage capacity of 2 days' supply for 60,000 population.

(4) An existing borehole at Piccotts End is capable of supplying water in quantity. A new well has also been sunk at Piccotts End and is being tested.

(5) The existing borehole in Marlowes, from which the present supply is drawn, can, if necessary, be brought into the scheme, its capacity of about 1 million gallons per day being ensured by new pumping plant.

(6) It has been decided to postpone decision on water-softening in view of likely technical developments. A site for softening plant has been reserved adjoining the reservoir at Adeyfield.

2. Gas

(1) The present unsightly gas works would be inadequate by itself for the new population. It is hoped that in the regional planning of the gas industry these works will become redundant and that the supply will be provided from outside.

(2) An outline plan for distribution has been agreed with the Watford Division of the Eastern Gas Board; it is sufficiently flexible to allow for a supply from the existing works until the change-over.

(3) The possible effect of the removal of the Harpenden branch railway line on the supply of coal to the gas works is discussed under XI.8.

3. Electricity

An outline electricity supply and distribution scheme is being agreed with the Eastern Electricity Board; there should be no difficulty in meeting demands as and when required.

4. *Drainage*

(1) *General*

Of the 6,000 acres of the designated area 4,300 drain by gravity to the Gade valley, the remaining 1,700 acres to the north-east coming within the River Ver watershed and development here has been restricted. A further 250 acres outside the area to the west will also drain to the Gade valley.

(2) *Surface water*

(i) Surface water is to be taken into a piped system. Within the area which drains naturally to the Gade valley, it will be taken to the water courses at Two Waters or into storm overflow culverts. The capacity of the river and canal system for large increased storm flows is limited and any contemplated enlargement below Apsley would involve work other than normal canal or river improvement. It is, therefore, proposed to use a worked-out gravel pit below Nas Mills as a storage balancing basin. This will necessitate some works in culverting, etc., outside the designated area.

(ii) In the area within the River Ver watershed to the north-east, surface water will be taken either underground by soakage or by pipes to the Ver.

(3) *Foul drainage*

Foul drainage in the Gade area will drain naturally to the Gade valley: the Ver area involves the additional cost of disposal over the watershed into the Gade valley and schemes for pumping or tunnelling are under consideration. The Colne Valley Sewerage Board's proposed trunk sewer in the Gade valley will take the sewerage from Apsley to the Board's disposal works at Rickmansworth and the Corporation has been informed that it will be ready in 1951. In the interim temporary expansion of the existing Hemel Hempstead sewage farm will cover development until 1951.

5. *Refuse Disposal*

Refuse disposal can most satisfactorily be undertaken by controlled tipping, since the area has many suitable sites.

6. *District Heating*

The possibility of applying a scheme for the new town as a whole has been discussed, but rejected in view of the amount and type of existing development. Serious consideration is being given, however, to schemes for the new industrial area, the town centre, and parts of the residential area. The Ministry of Fuel and Power is already studying a scheme of space heating and hot water service to the central part of the Adeyfield neighbourhood which can be regarded as a pilot scheme to test the practicability of the system.

7. *Telephone Distribution*

The Post Office has agreed to a new exchange in the central area. Main underground duct track will radiate from this central position, following the main radial roads. Distribution throughout the town will be developed from these main feeders and it is hoped to persuade the Post Office to carry the system underground thus avoiding unsightly overhead wiring.

11. COMMUNICATIONS

1. Roads

(1) (The road numbers in this sub-section relate to the diagram on page 12). The road plan assumes that

(i) a new London-Birmingham motor road will be constructed passing $\frac{1}{2}$ mile to the north-east of the designated area;

(ii) the present A.41 will be replaced by a new road on the south side of the railway as part of the Ministry of Transport's proposed Aylesbury radial connecting Aylesbury and London and by-passing Tring, Berkhamsted, Hemel Hempstead and Kings Langley.

(2) (i) The proposed road pattern makes the maximum use of existing roads, which in many cases may have to serve for a considerable time. The plan attempts, however, to meet what the town may require in twenty or more years and the widths quoted indicate reservations in the nature of improvement lines giving adequate scope as traffic demands grow, rather than firm proposals for early construction. In some cases, where such roads traverse open areas not involving demolition, construction could be expedited should this be required by the development.

(ii) The existing A.41, where it passes through the designated area will, when the new Aylesbury radial is available, become a subsidiary road, its chief purpose being an industrial estate road serving the Apsley area. When the proposed new radial is constructed, some of the roads which now connect from the south into the existing A.41 will not have access to the new road. These roads, notably Featherbed Lane and Rucklers Lane, will have over- and under-passes so that they can communicate with the town.

(3) The road structure of the new town can be divided into four categories of use:

(i) roads required primarily for through traffic,

(ii) roads needed for main internal communication,

(iii) through-neighbourhood roads likely to carry bus traffic,

(iv) estate roads.

(i) Roads required primarily for through traffic derive from the town's situation between national arterial roads to the north-east and south. A connection to the London-Birmingham motor road extending from the industrial area on the north-east to Nash Mills will give a link to the Aylesbury radial (Road No. 3). In addition, there is provision for access through the town for the Dunstable road (B.486) which will pass down the Gade valley without traversing the main shopping street to connect with the road system of the Aylesbury radial at Nash Mills on the east and at Boxmoor on the west. (Roads No. 11 and 12). The reservations for these roads vary in width from 80' to 120' according to the estimated traffic value.

(ii) Roads required for main internal communications are in some cases the same as those required mainly for through traffic:

(a) the connection to the proposed London-Birmingham motor road, which will also be the main entrance to the town (Road No. 7);

(b) the road from the Plough to the London-Birmingham connection, which can be used as a radial feeding from Leverstock Green, Adeyfield, the north end of Apsley and Bennetts End (Road No. 5);

(c) Marlowes, which will carry the town centre traffic (Road No. 10);

(d) the section of the ring road from Leverstock Green to Boxmoor through Piccotts

End which will provide for lateral communication between neighbourhoods as well as carrying industrial traffic to the Dunstable Road (Roads 8 and 14);

(e) the road to the south of Apsley which will carry traffic to the town centre from Apsley; provide a route to the town from the industrial extension along the Langley valley; carry traffic from the town which wishes to reach A.41 going south; and be a feeder to the industrial traffic to and from the old industrial area alternative to the old A.41 (Road No. 2);

(f) the road to the south of Boxmoor joining A.41 at Old Fishery. This is the main radial for Boxmoor and Chaulden and enables traffic for the town to reach A.41 going west. (Road No. 15);

(g) the road between the north end of the town centre and the industrial area separating Adeyfield and Highfield neighbourhoods (Road No. 9);

(h) the road required to serve the northern part of the western residential area which will run from the north end of Cotterells to join the ring road (Road No. 13).

(iii) The through-neighbourhood roads likely to carry bus traffic have not yet been defined in detail. General indication is, however, shewn on the Outline Plan. It is proposed that these roads should be 60' wide.

(iv) Estate roads will carry only local domestic traffic.

(4) In many areas the existing road pattern will have to be used for some time before the new ring and radial scheme can be created.

2. *Bridges*

As will be seen from the relevant plan, there is no major construction required; the largest bridge, at Nash Mills, having a span of 120'.

3. *Bus Services*

(1) The proposed main bus station will adjoin the site for the new railway passenger station, next to the present bus garage. There will be an interchange station at the town centre.

(2) The road pattern lends itself to convenient and economical bus routing and the Corporation and the London Transport Executive are satisfied that it will meet all requirements for town and country services.

4. *Waterways*

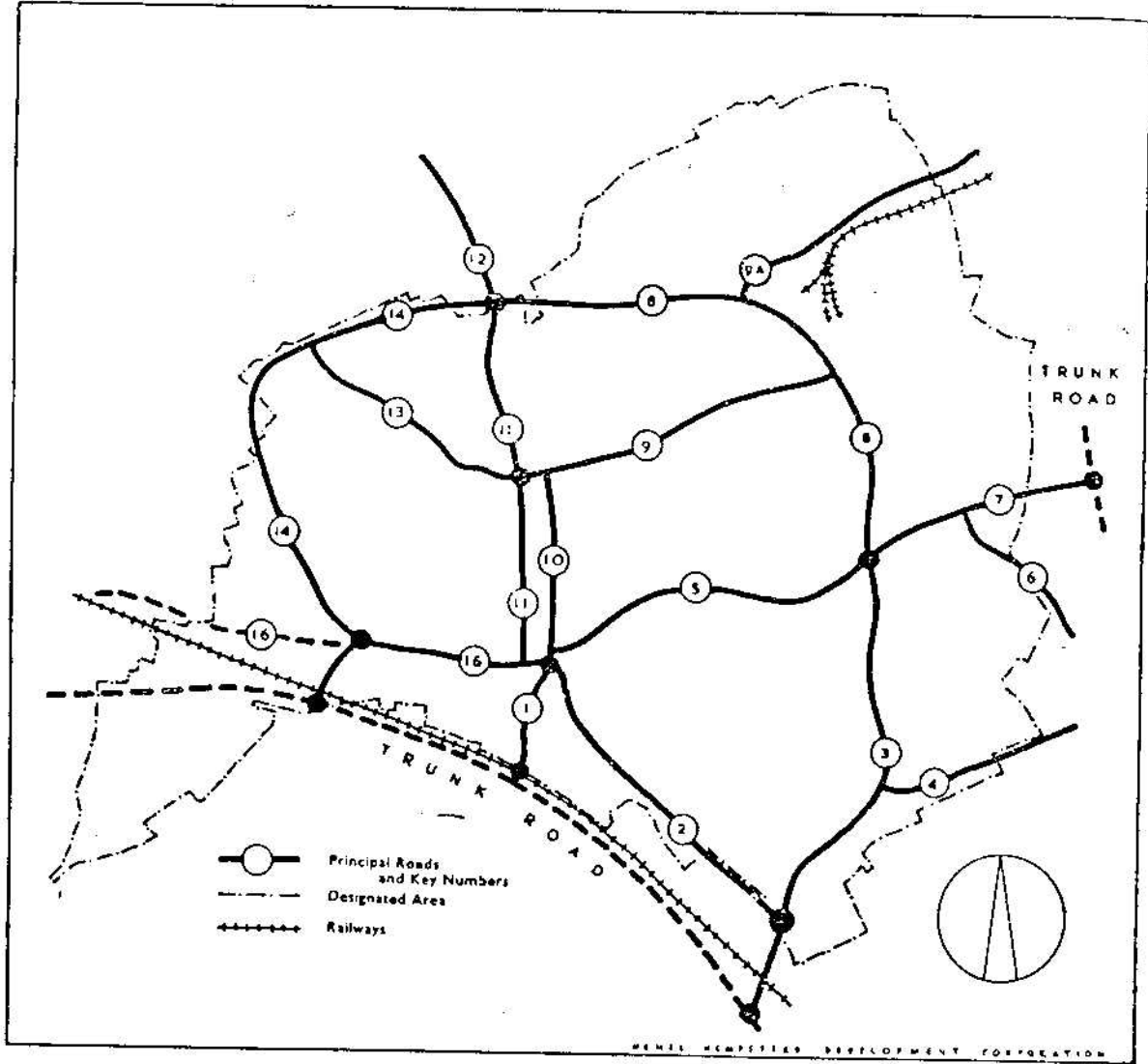
The Grand Union section of the canal will remain a through route. Some wharves to the west of Apsley will be removed, but it is hoped to increase canal use by building new wharves in Apsley. The plan makes an amenity of the canal by public walks and gardens along its banks.

5. *Airways*

Provision for air travel exists in the Ministry of Civil Aviation airfield at Bovingdon and Box Lane connects it with the town.

6. *Cycles*

The principal approach roads and the inner circular roads will have separate tracks where required by the traffic, special underpasses being desirable at some points, e.g. at the roundabout connection near Leverstock Green.



7. Pedestrians

The existing footpath system, where practicable, will be retained. In addition, paths will be provided through the town to provide access from the centre to the perimeter.

8. Rail

(1) The former L.M.S. main line passes along the Gade valley and two stations, at Boxmoor and at Apsley, now serve Hemel Hempstead. A single track branch line from Harpenden passes through the town mainly used to serve a coal depot at Cotterells and the gas works; it carries no passenger traffic.

(2) The plan assumes that the branch line would be severed at Cupid Green and removed between there and the main line. If this were done before the gas works became redundant, it would be necessary to arrange for the temporary supply of coal from the main line. Delay in removal of the branch line need not prevent the realisation of the plan though minor variations in the central area would be necessary. In any event provision is made for a new freight station at Cupid Green to serve the north-eastern industrial area and to handle the distribution of coal.

(3) A site has been provided near the present bus station at Two Waters for a new passenger and freight station to replace the present Apsley and Boxmoor stations.

12. INDUSTRY

1. In July 1948 57% of insured workers were engaged in manufacturing industry. The manufacture of stationery and paper, etc., brushes and timber and tailoring, industries with relatively low wage levels, accounted for 42% of insured workers, while women in these trades were 18% of the total.

2. A further 36% of insured workers were employed in service industry and the remainder, about 7%, are accounted for by agriculture, mining and quarrying.

3. In order to correct this lack of balance there is absolute need to encourage the introduction of industry requiring a high level of skill and to discourage new industries which employ a material proportion of female labour. The following figures show the Corporation's estimate of the make up of the ultimate industrial population which it should endeavour to obtain.

	INDUSTRIAL POPULATION IN HEMEL HEMPSTEAD					
	JULY, 1948		ADDITIONAL FOR NEW TOWN		TOTAL FOR NEW TOWN	
	Men	Women	Men	Women	Men	Women
Service Industry	2,164	1,707	6,379	3,436	8,543	5,143
Manufactures and Agriculture	4,648	2,329	5,159	28	9,807	2,357
TOTAL INDUSTRIAL POPULATION	6,812	4,036	11,538	3,464	18,350	7,500

4. The plan envisages the retention of the belt of industry lying outside the designated area between Apsley and Kings Langley, and the 63.7 acres of industrial area at Apsley. This latter allows for some

expansion of existing industry and the introduction of further factories should this be necessary when the land use of the zone becomes exclusively industrial.

5. It is difficult to assess the size of the area required for industry because

- (1) there may be much variation in the density of workers per acre ;
- (2) the amount of industrial employment will vary according to the level of service industry developed;
- (3) the designated area does not coincide with the industrial region and the major factories employing the present population lie outside it. For the purpose of computing these latter must be regarded as if they were part of the town.

6. In view of this uncertainty the Corporation has allowed a further 213 acres in an industrial zone to the north-east and a reservation of a further 50 acres to the north-west which may be needed to act as a balancing factor between east and west. This latter area should only contain factories of a specialised light industrial type. The amount of new employment in manufacturing industry available to the immigrant population is likely to be lower than might be expected, partly because of the concealed addition to manufacturing industry in the town represented by the Apsley-Kings Langley area and partly because the present town is under-served in comparison with the national average of service industry. If a reasonable balance is to be struck between service and manufacturing industry efforts must be made to encourage the development of the distributive and entertainment trades and office employment.

13. HOUSING AND THE RESIDENTIAL AREAS

1. General Disposition

(1) The plan provides residential areas over the twin plateaux to east and west of the Gade valley. The sharp contours and the main roads condition the shape of the areas into which the plan groups the dwellings; each will have its own service of primary schools, local shops and local amenities. These areas can be called neighbourhoods, if for no other reason than that a single word is required to describe them. The large amount of existing development has also had a major effect on design. This is not surprising since a third of the final population is already living in the designated area and the proposed Apsley neighbourhood, for instance, is little more than a rounding-off of this part of the present town, although the Corporation is taking care to ensure that its plan will not preclude more satisfactory redevelopment in the future.

(2) The acreage and population density of each neighbourhood is shown in Appendix A. The lowest figure is for Leverstock Green. Leverstock Green is intended to retain something of its village character and to contain larger properties to attract the middle-income groups. Two factors will determine the area required for residential development:

(i) the density in the neighbourhoods, which will be affected by the popularity of flats and terrace-houses and the proportion of middle-income groups entering the town and requiring larger plots;

(ii) the density and the timing of redevelopment of the central residential areas, which will largely be governed by opportunity and demand.

(3) Elasticity is preserved by retaining in the plan the Chaulden neighbourhood as a residential reserve which may, in fact, not need to be developed. Although the complete development of the

neighbourhood, if required, would involve an extension of the designated area, the land is more suitable for this purpose than any other within the present site.

(4) The Corporation does not believe that rigid rules can be laid down as to densities, for these are largely controlled by the reactions of economics and public taste. The figures in Appendix A and in the section on densities are useful forecasts, but the need to retain flexibility must be recognised.

(5) The plan indicates the line of the main neighbourhood roads, and these should be regarded as approximations dependent on detailed survey. It shows the neighbourhood centres and the sites of primary schools, these being suggestions for further examination.

2. Dwellings

(1) The Corporation has formed an estimate of the proportions of dwellings of different cost types that will have to be constructed. This is an experimental yardstick to enable development to proceed on a coherent plan and the proportions may be varied as experience dictates. It assumes that there will be four basic types of dwelling for rent or sale. The four types are:

A.	£3,500 and above ...	...	1.6%
B.	£2,100 to £3,500 ...	...	7.1%
C.	£1,400 to £2,100 ...	...	42.6%
D.	up to £1,850 ...	...	48.7%

The C type houses between £1,400 and £1,850 would be for sale only, while the D type houses would be for rent only.

(2) A similar estimate has been made of the proportions of 2, 3 and 4 bedroomed dwellings in categories C and D. The proportions are:

2 bedroom ...	35%
3 bedroom ...	55%
4 bedroom ...	10%

(3) It is not possible to estimate the number of bedrooms in categories A and B, for these will consist largely of properties built to the requirements of individual purchasers.

(4) The Corporation initially assumes that 18% of the new construction will be flats, very largely for the small family units requiring 2 bedrooms or less.

14. TOWN CENTRE

1. The treatment of the central area obviously cannot be so untrammelled as on a virgin site. Hemel Hempstead has all the problems of redeveloping an existing town centre rather than the planning of an actual new town.

2. The plan indicates the area for the various central uses. It is a town plan in that it postulates a pattern at which to aim; but it does not assume that it will be achieved at any particular time. It will be broken down into shorter development plans each covering a suitable period of development. The demolition figures and map demonstrate that the main weight of displacement will be felt in this area, as is inevitable when the centre of a town of 22,000 persons is being redeveloped to serve 60,000. But it must be recognised that these figures relate to a stage of development which will take a considerable time to reach and which is based on estimates of maximum use. The plan for the centre can only be implemented slowly and piecemeal, so that islands of existing property may well remain for considerable periods,

although lying in an area zoned for another use. Similarly, in order to minimise the shock and expense of demolition, the road-widening projects in the centre may take some time to carry out.

3. It is impracticable to extend or redevelop the existing High Street, which should be preserved as a sub-centre, its pleasant character unspoilt. In recent years the commercial centre has tended to move from the High Street to the southern end of Marlowes, probably as a result of the development of new housing areas in Apsley and Boxmoor. This tendency would be strengthened by further development and the plan provides for the town centre to be located here.

4. The plan proposes that the area between Marlowes and Cotterells be redeveloped as a formal park containing the principal public buildings. This park and its buildings will merge happily with the green areas to north and south. Shopping would be provided on either side in the southern half of Marlowes and this would enable redevelopment to take place at the lowest cost and with the minimum amount of dislocation of the existing commercial centre. Much of this redevelopment would in any event be required as part of the road-widening schemes necessitated by the normal growth of the town and particularly affecting Cotterells and Marlowes.

5. Nowhere is the influence of topography more strongly felt than in this narrow valley, already densely developed; and these factors inexorably condition the shape and layout of the centre. It is not intended to develop far up the slopes; the residential areas at the back of Marlowes and the High Street and at the back of Cotterells are retained, but they will be redeveloped in time at a higher density.

6. The area to the west of the High Street and below the market, including the present Town Hall, has been zoned as open space, but it is not intended to enforce the user during the lifetime of the present buildings. When these buildings are removed the lovely St. Mary's Church will be seen from Marlowes and the High Street.

15. DEMOLITION

1. The full realisation of the plan will involve a good deal of demolition. The widening of existing roads will eventually mean the removal of 430 (approx.) properties, including 100 (approx.) shops and commercial premises and the re-siting of 13 industrial buildings. The redevelopment of the central area will mean the displacement of 170 (approx.) properties, including 30 (approx.) shops and commercial premises and the re-siting of 2 industrial buildings. Elsewhere there will be little demolition, but figures cannot be given because many of the neighbourhoods have not been planned in detail. In Adeyfield, as an example, only one farmhouse and some outbuildings are affected other than by roads, and only 3 properties by roads. (Properties within the Apsley industrial area, to the south of London Road, to the west of the gas works, and on the Moor are excluded, for here the normal processes of change will assert themselves and it should not be necessary to redevelop or enforce the use zoning in advance.)

2. In assessing demolition requirements it should be realised that much of it is salutary clearance of poor and decayed property which would have had to be redeveloped in any event. A recent estimate shows that 12.5% or 694 of the existing 6,000 dwellings in Hemel Hempstead are ripe or nearly ripe for condemnation as unfit for habitation; the plan assists this process wherever practicable. Again, a programme of road improvements would have had to be instituted sooner or later in order to avoid traffic congestion and danger points in the existing town: part of the plan is little more than such a programme accelerated to meet the pace of more rapid development.

3. The plan shows what will ultimately be required though some of the proposals may not be fulfilled during the life of the Corporation. The Corporation however, would be doing less than its duty if it did not present a plan which was comprehensive enough to ensure that when the town was completed it would measure up to foreseeable requirements half-a-century ahead.

16. OPEN SPACES

1. Open spaces can be divided into ;

(1) Agricultural land within the designated area (1,422.9 acres). (This will be increased to 1,844 acres if and when the land at present used by private schools reverts to its basic zoning use);

(2) semi-agricultural and grazing land such as the Moor and part of Gadebridge Park (134.9 acres);

(3) private open space including that occupied by private schools at Gadebridge, Lockers Park and Abbots Hill (194.0 acres);

(4) public open space both formal and informal (294.7 acres);

(5) adult playing fields including the site reserved for a stadium (337.7 acres);

(6) children's play space and scrambling grounds (40.2 acres);

(7) school playing fields (329.25 acres).

2. The recommendation in the Final Report of the New Towns Committee that 10 acres per 1,000 of the population should be allocated to open space has been taken as a guide; 672 acres have been allocated to the categories in 4, 5 and 6 above. Of this figure, 337 acres are for adult playing fields; of which 6 acres are within each neighbourhood and the rest is grouped in two reserves on the perimeter of the developed area and will only be brought into use as demand arises. The children's play spaces and scrambling grounds will be dispersed in the residential areas mainly in small plots which would rarely be suitable for development. There is also an allowance of land for public and private tennis courts and bowls in each neighbourhood. A site for an 18-hole course, if required, can be found in the park at Westbrook Hay.

3. The remaining 294 acres of formal and informal public open space is mainly in the town centre, on the Moor and in Gadebridge Park. The semi-agricultural or grazing land on the Moor and in the Gade valley towards Piccotts End will be retained in its present use, and the public will acquire privileges of use similar to those now enjoyed on the Moor.

4. The area to the east of the new main industrial zone has been hatched on the plan to indicate that agriculture will continue, but that there may be an overspill of industrial use which does not involve foul drainage or much surface water drainage. Only a small part of this area is likely to be required.

5. A site for a stadium for spectacular sports is reserved on part of the present sewage disposal works, which will be redundant after 1951, but which may take some years to revert to a condition suitable for redevelopment. The Corporation has made no special plans for the area but will await the evidence of public demand.

6. It will be seen that Lockers Park and Gadebridge Park, now used for private schools, have been hatched on the plan to indicate that the basic zoning of the areas will not be applied while their present use continues.

7 Some areas of the Moor are shown as open space, but some of the buildings should remain providing they do not constitute a serious threat to amenity. It will only be possible to decide the future of each property after careful consideration of the individual circumstances when improvement is undertaken.

17. SOCIAL LIFE, RECREATION AND EDUCATION

1. General

As has been stated elsewhere, the present town is deficient in service industry and what follows therefrom in the lack of social amenities. The Corporation is anxious at the earliest opportunity to start developing, in the central area, buildings which will fill this want. The first necessity is for a medium sized hall for meetings, dances and other social gatherings. There are two cinemas in Hemel Hempstead, both of comparatively small size. The Corporation envisages the completed town supporting two and possibly three large cinemas, depending on its sphere of influence. It is hoped that one large new cinema may be built during the early years of development.

2. Libraries

Provision is made for a central library at the centre, probably with small branches in neighbourhood centres.

3. Places of refreshment and hotels

There are now 52 full, partial and off-licences, including two small hotels. The Corporation would like to see at least one large hotel in the town centre and an adequate provision of new licences in the new housing areas, which may involve some re-allocation of existing licences. The whole problem, clearly, will have to be discussed with the authorities set up under the new Licensing Act.

4. Churches

The Corporation has had preliminary discussions with the Beds. and Herts. Churches Joint Planning Committee as to the allocation of sites for new places of worship. Adequate land is available for the needs of the different denominations which will be met as detailed planning proceeds.

5. Education

(1) The Corporation has had discussions with the Hertfordshire County Council on the provision of schools and general agreement has been reached on the major uses. Owing to the difficult topography of the area and the large amounts of land required for the purpose, secondary schools have been provided partly on grouped sites, as on the western side of the town, and partly as individual schools, as at Adeyfield. In general, modern secondary schools will serve three areas:

- (i) Apsley, Bennetts End and Leverstock Green — one five-form entry school;
- (ii) Adeyfield, Highfield and part of the Town Centre — one three form-entry school in Adeyfield and one four-form entry school in Highfield.
- (iii) Boxmoor, Warners End, Chaulden and the rest of the Town Centre — two four-form entry schools.

(2) Two three-form entry grammar schools, one already existing at Heath Lane, and the other to be built at Bennetts End, will share the town between them. The existing grammar school may later be re-sited in a grouped site with the two modern schools serving the western area.

(3) It is proposed that a three-form entry technical school to serve the whole town will be accommodated in the existing Corner Hall School, which would be adapted for the purpose.

(4) Primary schools will be provided within the neighbourhoods, each to serve approximately 5,000 of the population.

(5) Land has been provided for nursery schools on the basis of 1 per 1,400 of the population.

(6) Sites for a County College and a College of Further Education are available in the town centre. Though the latter may be subsidiary to the main college at Watford, owing to the necessity of economy in equipment and staff, it should be capable of providing a reasonable range of technical training co-ordinated with the needs of local industry; and it should cover the humanities.

18. SHOPPING

1. The plan assumes that 480 shops will be required, of which 240 will be in the neighbourhoods, on the basis of 40 per 10,000 of population. 240 will be needed for the town centre, with an approximate frontage of 4,800 ft. These figures are preliminary estimates to be varied as necessary by experience; the Corporation will ensure that a margin of land is available in shopping areas to meet possible future needs.

2. Hemel Hempstead, as has been pointed out, is now under-serviced; it is within 10 miles of two vigorous commercial centres at Watford and St. Albans. For this reason it will be important to develop the central area quickly so as to counteract any tendency on the part of the new population to go outside their own centre for entertainment or shopping.

3. The present town has 351 shops, mainly small independent ventures, and the Corporation faces a considerable problem in re-organising the existing shopping pattern so as to cause the minimum of dislocation to traders who may require to be re-located.

20. CEMETERIES

The existing cemetery above Cotterells Hill will be retained, but in view of its proximity to residential areas no extension is envisaged. A new site at Leverstock Green in pleasant surroundings giving good communication from the town has been reserved for any necessary extension. The Corporation will discuss the possibility of a regional crematorium.

21. BUILDING PROGRAMME

1. The proposed building programme must be related to:

- (1) Available building labour,
- (2) available building materials,
- (3) a balanced growth of population,
- (4) provision of essential services,
- (5) existing building,
- (6) agriculture.

2. A detailed construction programme for the first five years has been prepared, with outline construction programme covering a further 15 years. This is illustrated on the appropriate map. This estimate of a construction period of 20 years is based on an assumed maximum labour force of 3,000 men.

APPENDIX A.

POPULATION

1. *Distribution of existing population* (population from Electoral Roll, October, 1948, with estimate for persons under 21 yrs. added).

Column A: Population within neighbourhoods or town centre to remain.

Column B: Population within definite development areas to be rehoused.

<i>Neighbourhoods</i>						A	B	Totals
Adeyfield ...	...	...	...	...	...	1,498		1,498
Apsley ...	...	...	...	...	...	5,528		5,528
Bennetts End ...	...	...	...	...	...	251		251
Boxmoor ...	...	...	...	...	...	2,758	146	2,904
Highfield ...	...	...	...	...	...	148		148
Leverstock Green ...	...	...	...	...	...	510		510
Warners End ...	...	...	...	...	...	18		18
Chaulden (within designated area)	...	...	...	...	...	147		147
Chaulden (outside " " )	...	...	...	...	...	10		10
<i>Town Centre</i>								
Commercial, Marlowes...	...	...	...	...	...		623	623
" High Street	...	...	...	...	...	314	100	414
Central Gardens and Public Buildings	...	...	...	...	...		751	751
Service Industry ...	...	...	...	...	...		327	327
High density, east of Marlowes ...	...	...	...	...	...	1,452		1,452
" " east of High Street	...	...	...	...	...	1,615		1,615
" " west of Cotterells	...	...	...	...	...	1,533		1,533
Low density, St. Pauls Road	...	...	...	...	...	426		426
<i>Other areas</i>								
Apsley Industrial Area	...	...	...	...	...		1,619	1,619
N.E. Industrial Area	...	...	...	...	...		92	92
London Road (S. side) ‡	...	...	...	...	...		409	409
TOTAL						16,208	4,067	20,275

‡ London Rd. S. side, from gas works west to Swan Inn. Population in this area will remain until the development becomes obsolete and only then will require rehousing.

2. Distribution of new population

A. High density residential development in the town centre: Chaulden neighbourhood excluded.

Neighbourhood	EXISTING		NEW			TOTAL			
	Pop.	Area (acres)	Pop.	Area (acres)	Density	Pop.	Area (acres)	Density	
Adeyfield	1,498	132.4	8,502	242.9	35.0	10,000	375.3	26.6	
Apsley... ..	5,528	237.3	3,630	103.7	35.0	9,158	341.0	26.9	
Bennetts End	251	31.0	5,091	161.0	31.0	5,342	192.0	27.8	
Boxmoor	2,758	123.9	4,970	160.5	31.0	7,728	284.4	27.2	
Highfield	148	17.0	5,040	144.0	35.0	5,188	161.0	32.2	
Leverstock Green	510	58.8	3,490	144.0	24.2	4,000	202.8	19.7	
Warners End	18	4.2	7,098	202.8	35.0	7,116	207.0	34.4	
Total Neighbourhoods	10,711	604.6	37,821	1,158.9		48,532	1,763.5		
<i>Town Centre</i>									
Commercial	314	34.3	186		14.6	500	34.3		
<i>High density</i>									
east of Marlowes	1,452	55.5	2,433		70.0	3,885	55.5		
east of High St.	1,615	31.7	604		70.0	2,219	31.7		
west of Cotterells	1,533	60.9	2,730		70.0	4,263	60.9		
<i>Low density</i>									
St. Pauls Rd.	426	14.3	175	5.0	35.0	601	19.3		
Total Town Centre	5,340	196.7	6,128	5.0		11,468	201.7		
GRAND TOTAL	16,051	810.3	43,949	1,163.9		60,000	1,965.2		

B. Low density residential development in town centre: Chaulden neighbourhood included.

Total Neighbourhoods	10,711	604.6	37,821	1,158.9		48,532	1,763.5		
<i>Town Centre</i>									
Commercial	314	34.3	186		14.6	500	34.3		
<i>Low density</i>									
east of Marlowes	1,452	55.5				1,452	55.5		
east of High St.	1,615	31.7				1,615	31.7		
west of Cotterells	1,533	60.9				1,533	60.9		
St. Pauls Road	426	14.3	175	5.0	35.0	601	19.3		
Total Town Centre	5,340	196.7	361	5.0		5,701	201.7		
<i>Chaulden</i>									
within designated area	147	20.0	3,160	90.3	35.0	3,307	110.3		
outside designated area	10	1.0	4,571	130.6	35.0	4,581	131.6		
GRAND TOTAL	16,208	822.3	45,913	1,384.8		62,121	2,207.1		

SCHEDULE OF LAND USE.

Areas within present Designated Area

	Acres
Central commercial area, including shops, public buildings, banks, warehouses, cinemas, theatres, county college, etc.	71.3
Central residential areas:—	
High density	148.1
Low density	19.3
	167.4
Total acreage of neighbourhoods, including existing dwellings, local shopping, local industry, schools, local playing fields, reservoirs, wind shelter belts and unspecified areas within the designated area	2185.1
Public and private open spaces, including road reserves, water gardens, woods in urban areas and cemeteries within the designated area	702.9
Rural zone within the designated area includes woods outside urban area and area south of London Road on which existing buildings are not to be rebuilt	1597.1
New and existing Industry	722.6
Railways	34.6
Chaulden Neighbourhood within the designated area	149.7
Main road network	279.3
	5910.0

Areas within proposed Extensions

Chaulden Neighbourhood	193.8
Playing fields, rural areas, woods, shelter belts and railway	331.9
Main roads	13.3
	539.0
	6449.0

APPENDIX B

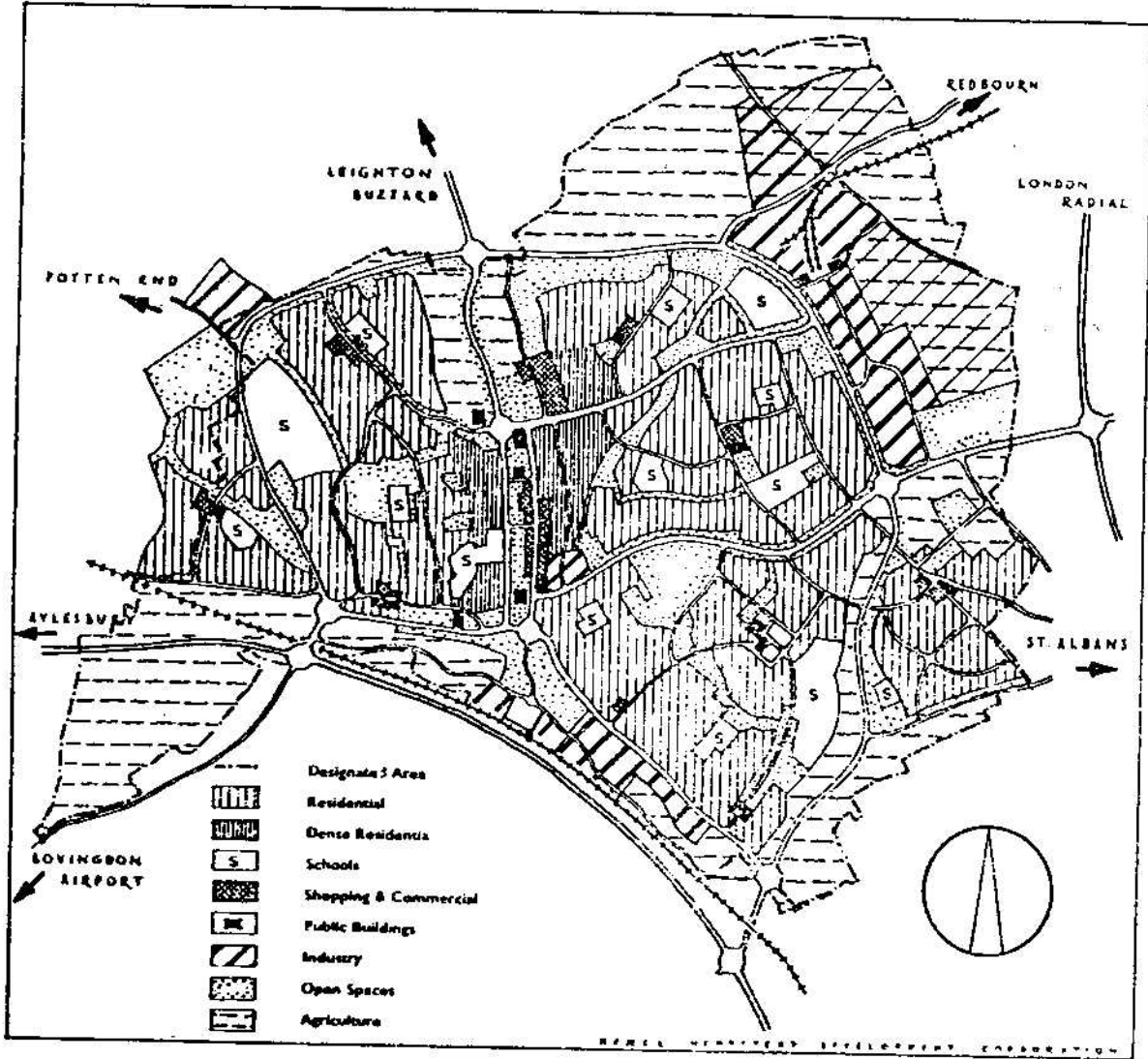
PROVISION OF SERVICES.

Item No.	Description	Unit	Quantities						Remarks
			Existing	Proposed					
				1948-52	1953-57	1958-62	1963-67	Total 1948-67	
1	2	3	4	5	6	7	8	9	10
1	Roads and Footpaths	Miles							
	Trunk		2.0	—	—	—	—	—	—
	Class I		6.0	2.0	4.0	4.0	2.0	—	12.0
	Class II		2.5	1.0	2.0	2.0	2.0	—	7.0
	Class III		3.5	3.0	5.0	5.0	2.0	—	15.0
	Unclassified		34.0	15.0	25.0	25.0	15.0	—	80.0
			48.0	21.0	36.0	36.0	21.0	—	114.0
2.	Parking Places	Yds. S	—	8,000	14,000	14,000	8,000	—	44,000
3.	Bridges	No. Span	6' over 50' span		3/120'	1/80'	1/120'	1/40'	6
4.	Sewers	Miles	44	40	54	48	38	—	180
5.	Water Mains	"	49	40	51	51	58	—	200
6.	Electric Cables	"	60	20	60	50	70	—	200
7.	Telephone Cables	"	27	6	9	9	3	—	27
8.	Gas Mains	"	38	10	40	40	50	—	160

In addition approx. 10 bridges under 30' span may be required.

Mains only.

The Outline Plan.



APPENDICES

Appendix D: Details of Shrub Hill Common Local Nature Reserve, published by Dacorum Borough Council.

SHRUB HILL COMMON NATURE PLAN

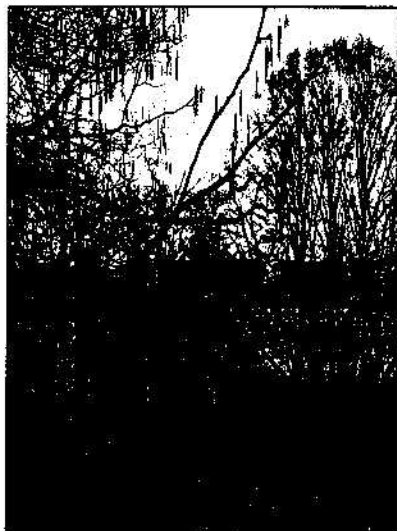
A local nature reserve designation commits the local authority to manage the site for the benefit of wildlife. To do this effectively a management plan is needed. For Shrub Hill Common a "Nature Plan" has been prepared by Dacorum Borough Council, in consultation with local people and wildlife experts, covering an initial period from 1996 to 2000.

The Plan identifies the following main management aims:-

- Management of the grassland by appropriate grazing.
- Control hedgerow growth by cutting back encroaching scrub.
- Coppice former laid hedges in Green Lane.
- General woodland management.

Other important objectives are:-

- Species management
- Study and research
- Education and interpretation
- General access, recreation and site maintenance



Without traditional management hedges can become little more than lines of scattered trees.

THE FRIENDS OF SHRUB HILL COMMON

A group called "The Friends of Shrub Hill Common" has been established. They take an active role in the protection of the site and support the practical work involved in the management process.

If you would like to join the friends or obtain any further information on the management of the common please contact David Smedley on 01442 228744 or the Development Plans Division on 01442 228383. The Shrub Hill Common Nature Plan is available for inspection at the Planning Department Reception at the Civic Centre.







SHRUB HILL COMMON



LOCAL NATURE RESERVE

HABITATS AND WILDLIFE OF SHRUB HILL COMMON

-  Hedgerow
-  Woodland
-  Unimproved neutral grassland
-  Unimproved calcareous grassland

 North



The herb-rich chalk grassland is found on the steeper slopes and supports species such as salad burnet, greater knapweed, wild carrot, fairy flax, lady's bedstraw, rough hawkbit and wild strawberry.

The grassland also contains anthills and supports a number of butterflies including meadow brown, common blue and gatekeeper.

The more neutral grassland on the flatter slopes and valley floor supports grasses such as yorkshire fog, red fescue and common bent, with herbs such as creeping buttercup, yarrow and common sorrel.

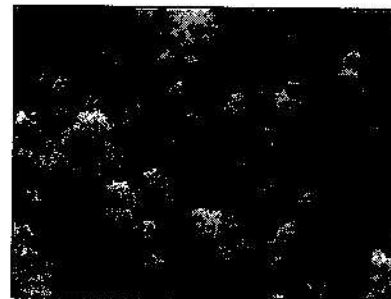
The "Green Lane" which runs along the south boundary of the site has been in existence since pre-Roman times. It is bordered by ancient hedgebanks with hornbeam, hazel and field maple. These were traditionally managed as hedges but have



Meadow Brown butterfly on Greater Knapweed



Common Blue butterfly



Lady's Bedstraw

Chalk pits

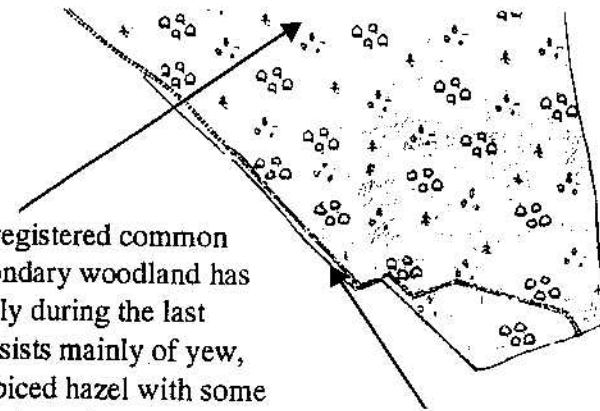
been neglected in the past. It is now necessary to coppice them regularly if the trees and shrubs are to be saved as hedgerows for the future. If this does not happen the hedgerow becomes top heavy and can collapse.



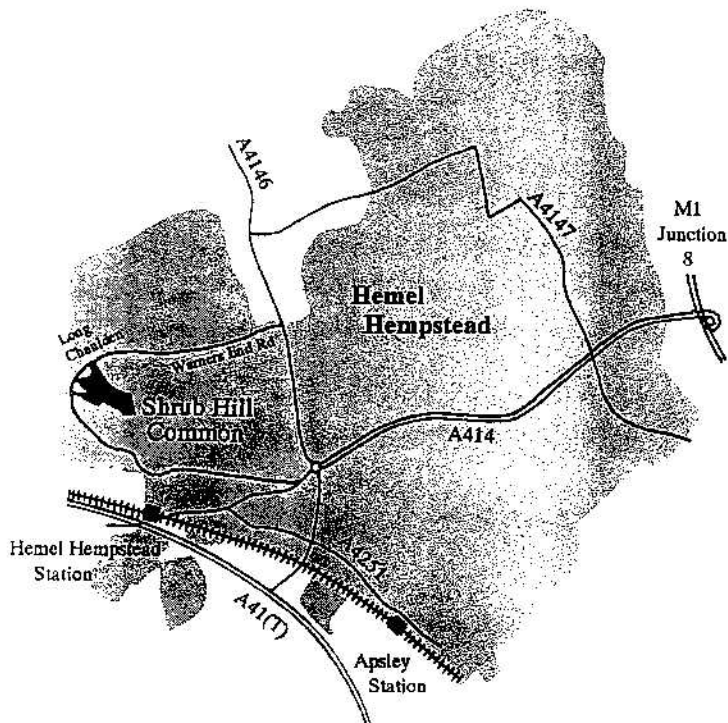
Over-mature hedgerows now border the ancient road.

An old hedgebank and ditch runs northeast to southwest across the common; this ancient feature supports beech, ash, hornbeam, hawthorn, dogwood and a woodland ground flora.

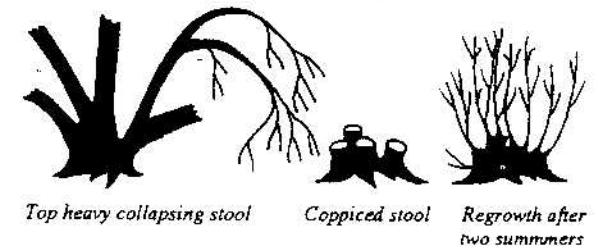
This area is the registered common land, where secondary woodland has developed entirely during the last 100 years. It consists mainly of yew, oak and old coppiced hazel with some ash and field maple, and patches of hawthorn, blackthorn and holly. Many of these species are regenerating successfully. There is a ground flora of lords-and-ladies, dog's mercury, hedge woundwort and sweet violets, except under the yew trees where the ground is bare.



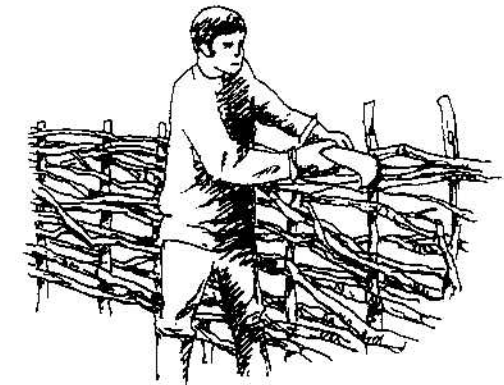
The edge of the southern end of the Green Lane was coppiced by Dacorum Borough Council in the past. This has been largely successful with most stools regenerating well. There will be a need for re-coppicing in the future.



Yew is a particular feature of the woodland



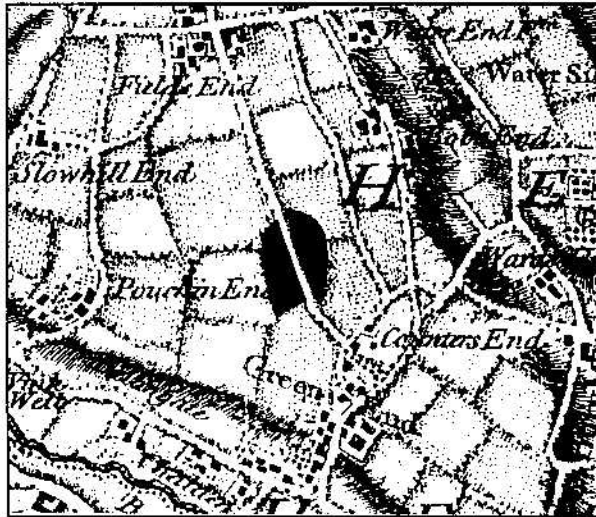
Top heavy collapsing stool Coppiced stool Regrowth after two summers



Coppicing and hedgelaying help maintain wildlife rich hedgerows

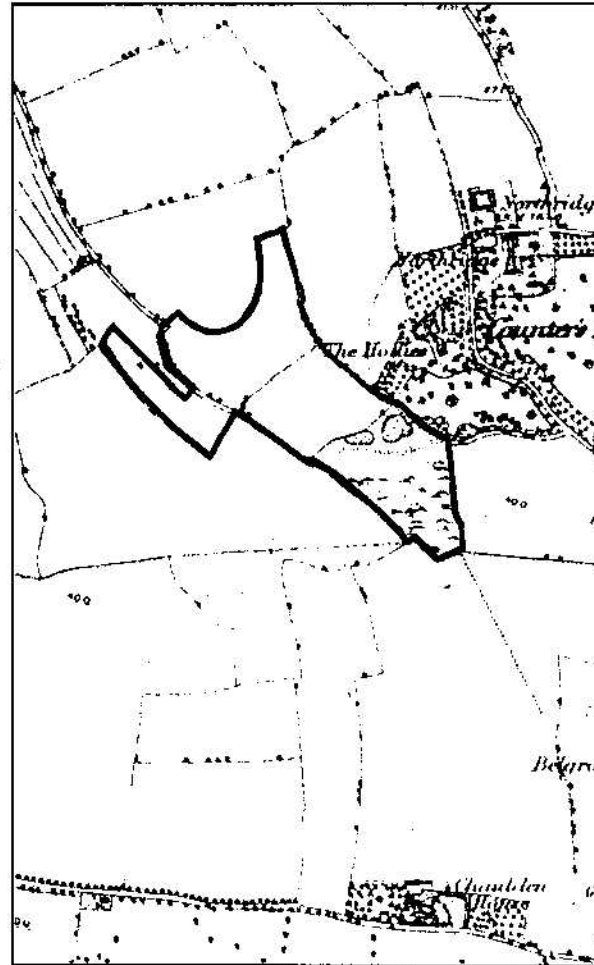
Shrub Hill Common is Dacorum's first Local Nature Reserve. It's status was officially declared on 10 October 1995. The reserve consists of 10.78 hectares of land on the west side of Hemel Hempstead, and is of historical, ecological and recreational value.

The oldest surviving man-made feature of the site is the ancient green lane in the valley bottom. This in fact is an old Roman Road from Boxmoor to Pitstone. The surrounding area has long been used for rough grazing as evidence from historic maps indicates. Over 200 years ago it was important enough to be mapped as a specific area of land within a landscape of enclosed fields.



Map published by Dury and Andrews in 1766. Green highlights an area of rough ground which is almost certainly the common of today.

Over 100 years later, an Ordnance Survey map of 1883 still shows the whole area as fields, rough pasture with chalk pits and a well established network of hedges.



Ordnance Survey 1st edition 6"-1 mile published in 1883. Green outlines the approximate area of Shrub Hill Common L N R today.

The fields were almost certainly grassland and belonged to local farms. However the rough "common" pasture which still survived at the southern end of the site could have been used by a variety of people for grazing livestock, although it was not then named as a common. Chalk was also being dug from the site and probably used for liming the more acid clay-with-flint fields on the higher ground.

Grazing on the southern area must have stopped around the turn of the century or even later, and scrub and woodland rapidly developed. Ironically this was the area officially registered as common land in 1970. Fortunately grazing on the adjacent fields enabled these areas to survive as herb rich grassland. This management needs to continue if their ecological interest is to be maintained.

A habitat survey was undertaken by Herts Environmental Records Centre in 1992. Shrub Hill Common was identified as the most valuable urban wildlife site in Hemel Hempstead, and this led to a Heritage Site designation as part of Hertfordshire's Countryside Heritage Project. Subsequent consultation with English Nature and local residents enabled a management plan to be agreed, after which the Local Nature Reserve status could be declared. This will ensure the wildlife and historic interest of the site will be secured for the local community and also enable future generations to understand and enjoy their heritage.

APPENDICES

Appendix E Landscape and Visual Assessment Methodology.

ASSESSMENT OF LANDSCAPE EFFECTS

Introduction

The assessment has been undertaken in accordance with "Guidelines for Landscape and Visual Impact Assessment (GLVIA) – Second Edition" by the Landscape Institute and Institute of Environmental Management and Assessment (2002) and "Landscape Character Assessment – Guidance for England and Scotland" by The Countryside Agency and Scottish Natural Heritage (2002).

The landscape assessment is concerned with the changes in the physical landscape in terms of elements/features that may give rise to changes in the character of the landscape. Changes may result in adverse or beneficial effects. The assessment is carried out using a combination of desktop research and field survey work to establish the landscape baseline against which changes and consequential effects may be assessed. Sources of baseline information comprise existing data from statutory agencies and local planning authorities, Ordnance Survey maps and other relevant data. The principal landscape elements are recorded, which, depending of their prominence and importance, contribute to the overall character of the area. Typical elements may include topography, land use, watercourses, vegetation, built development and public rights of way. Special values attributed by others, such as landscape designations, are also recorded.

In order to reach an understanding of the effects of development on a landscape resource, it is necessary to consider the different aspects of the landscape, as follows:

- **Elements:** The individual elements that make up the landscape or site, including prominent or eye-catching features such as hills, valleys, woods, trees and hedges, ponds, buildings and roads. They are generally quantifiable and can be easily described.
- **Patterns/ Site Characteristics:** Elements or combinations of elements that make up a particular pattern and contribute to the character of an area / site, including perceptual characteristics such as tranquillity and wildness.
- **Character:** The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape. Character is identified through the process of characterisation which classifies maps and describes areas of similar character.

Assessment of Effects

The assessment includes a combination of objective and subjective judgements. The development proposals are assessed against the baseline information to enable an evaluation of the effects that would occur upon the existing landscape resource.

The landscape effects are defined as the result of the interaction between the sensitivity of the landscape resource to change and the magnitude of change.

SENSITIVITY OF THE LANDSCAPE RESOURCE

Factors that will influence professional judgement when assessing the degree to which a particular landscape type of area can accommodate change arising from a particular development, without detrimental effects on its character would typically include:

- The value placed on the landscape;
- Condition or the physical state of the landscape;
- The nature of existing land uses;
- The pattern and scale of the landscape;
- Visual enclosure/openness of views, and distribution of visual receptors;
- The scope for mitigation, which would be in character with the existing landscape;
- The contribution of the receptor to landscape character;
- The degree to which the particular element or characteristic can be replaced or substituted.

Example appraisal categories are listed below:

Very High	Typically internationally recognised landscape resource of strong landscape structure with many distinct features worthy of conservation.
High	Typically of national recognition and of recognisable landscape structure with some features worthy of conservation; may contain occasional detracting features.
Medium	Typically of designated regional or district recognition or undesignated but value expressed through consensus, demonstrable use or non-official publications. Distinguishable landscape structure. Some or few features worthy of conservation; some detracting features.
Low	Typically of local recognition, undesignated areas identified as having some redeeming qualities, possibly for improvement. Very few or no features worthy of conservation. Weak landscape structure; evidence of degradation; frequent detracting features.
Very Low	Typically areas identified for recovery. Damaged landscape structure; evidence of severe disturbance or dereliction; detracting features dominate.

MAGNITUDE OF CHANGE

The magnitude of change is concerned with the degree of change, and its duration. Change may be adverse or beneficial.

Degree of Change

Example appraisal categories are listed below:

Very High	Total loss or comprehensive enhancement of the landscape resource.
High	Substantial loss or enhancement of the landscape resource.
Medium	Partial loss/alteration or moderate enhancement of the landscape resource.
Low	Slight loss/alteration or slight enhancement of the landscape resource.
Negligible:	Minor loss/alteration or minor enhancement of the landscape resource.

Duration of Change

The duration of the effect depends upon the length of time over which it occurs, i.e.:

Long Term	(more than 5 years)
Medium Term	(1 – 5 years)
Short Term	(less than 12 months)

LEVEL OF EFFECT

The descriptions relating to each category within the following indicative scale are a function of the **sensitivity** of the landscape resource to change and the **magnitude of change**. It should note that the landscape could be beneficial and adverse depending on the development proposals and landscape resource affected.

The table below indicates the evaluation effects on Landscape Resources.

Evaluation of Effects for Landscape Assessment

Magnitude of Change	Landscapes Sensitivity				
	Very High	High	Medium	Low	Negligible
Very High	Major Substantial	Major Substantial	Substantial	Moderate/Substantial	Moderate
High	Major Substantial	Substantial	Moderate / Substantial	Moderate	Moderate / Slight
Medium	Substantial	Moderate/Substantial	Moderate	Moderate / Slight	Slight
Low	Moderate/Substantial	Moderate	Moderate / Slight	Slight	Negligible
Negligible	Moderate	Slight	Slight / Negligible	Negligible	Negligible

It should be emphasised that while the methodology is designed to be robust and transparent, professional judgement is ultimately applied to determine the significance of each effect.

Example landscape assessment categories are listed below:

Substantial Adverse: Typically the landscape receptor is highly sensitive with the proposals representing a high adverse magnitude of change. The changes would be at complete variance with the landscape character and would permanently diminish or destroy the integrity of a valued landscape.

Moderate Adverse: Typically the landscape receptor has a medium sensitivity with the proposals representing a medium adverse magnitude of change.

Slight Adverse: Typically the landscape receptor has a low sensitivity with the proposals representing a low adverse magnitude of change.

Negligible: Typically the landscape receptor has a very low sensitivity with the proposals representing a very low magnitude of change that may be adverse or beneficial although the effect of either change would not be significant.

Neutral: Typically the landscape receptor has a low sensitivity with the proposals resulting in no losses or alterations to the landscape resource.

Slight Beneficial: The removal of some existing incongruous landscape element and/or the introduction or restoration of some potentially valued landscape elements would reflect landscape character and result in some improvements to landscape condition.

Moderate Beneficial: The removal of existing incongruous landscape elements and the introduction or restoration of some valued landscape elements would complement landscape character and improve landscape condition.

Substantial Beneficial: The removal of substantial existing incongruous landscape elements and the introduction or restoration of highly valued landscape elements would reinforce landscape character and substantially improve landscape condition.

SIGNIFICANCE OF EFFECT

The significance of the level of effect has been assessed as follows:

Not significant – Neutral, Negligible, Slight, or Moderate effects

Significant – Moderate/Substantial, Substantial or Major Substantial effects (Areas toned grey above)

ASSESSMENT OF VISUAL EFFECTS

Introduction

The Visual Assessment has been undertaken in accordance with "Guidelines for Landscape and Visual Impact Assessment (GLVIA) – Second Edition" by the Landscape Institute and Institute of Environmental Management and Assessment (2002) and "Landscape Character Assessment – guidance for England and Scotland" by The Countryside Agency and Scottish Natural heritage (2002).

The assessment is concerned with the changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes, and to the overall effects on visual amenity. The appraisal is carried out using a combination of desktop research and field survey work to establish the visual baseline. Sources of information comprise existing data from statutory agencies and local planning authorities, Ordnance Survey maps and other relevant data e.g. aerial photographs. Principal viewpoints, sensitive visual receptors and the approximate visibility of the development proposals are recorded. All photographs are taken with the equivalent 50mm lens in portrait format, typically with five frames per view, which represents the normal breadth of vision. Photographs are taken at eye level, approximately 1.75m above ground level, from public viewpoints. No access to private properties is obtained, and where impact to residential and other private views (e.g. commercial occupiers) is noted this has necessarily been estimated.

Assessment of Visual Effects

The appraisal includes a combination of objective and subjective judgements. The development proposals are assessed against the baseline information to enable an evaluation of the effects that would occur upon the existing views.

*Visual effects are defined as the relationship between the **receptor sensitivity** and the **magnitude of change**.*

RECEPTOR SENSITIVITY

The sensitivity of the visual receptor will be influenced by the following factors:

- Location and the context of the view,
- Characteristics of the view e.g. whether it is continuous or intermittent and static or transient.
- The importance of the view and the activity or expectations of the receptor; Numbers of people affected;
- The popularity of the view;
- Significance of the view in relation to valued landscapes or features.

Example appraisal categories are listed below:

Very High	The most sensitive receptors would typically include users of well used public rights of way whose attention or interest would be focussed on a landscape of acknowledged importance or value. Residential properties that are listed or are located within Conservation Areas would also typically be considered as the most sensitive receptors.
High	Typically receptors may include users of public rights of way whose attention or interest may be focussed on the landscape and occupiers of residential properties with views directly affected by the development.
Medium	Typically receptors may include people travelling through or past the affected landscape along footpaths, in cars along main transport routes or on trains/other transport modes.
Low	Typically receptors may include intermittent views for people travelling through or past the affected landscape in cars along minor transport routes.
Very Low	The least sensitive receptors are likely to be people at their place of work, or engaged in similar activities, whose attention may be focussed on their work or activity and who may therefore be potentially less susceptible to changes in the view.

MAGNITUDE OF CHANGE

The magnitude of change is based on distance and angle of the view and the degree of change. Changes may be adverse or beneficial in nature and it is also relevant to consider the duration of length of time over which the change occurs.

Distance and angle of view

The distance of the viewpoint from the development and whether the viewpoint would focus on the development due to the proximity or whether the development would form one element in a panoramic view is considered. Views are categorised into three ranges depending on the proximity of the viewpoint i.e.:

Close	Less than 1000m (1km)
Medium	Distances between 1 to 2km
Long	Greater than 2 km

The angle of the view in relation to the main activity of the receptor is an important consideration and will vary from direct to oblique.

Degree of Change

The degree of proposed change refers to the loss or addition of features in the view and changes in the composition of the view including the proportion of the view occupied by the proposed development. The extent of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture is also considered. Change may be beneficial or adverse.

Example appraisal categories are listed below:

Very High	Typically the proposals become the dominant feature of the scene to which other elements become subordinate.
High	Typically the proposals may form a visible and recognisable new element within the overall scene and may be readily noticed by the observer.
Medium	Typically the proposals constitute only a smaller component of the wider view, which might not be immediately apparent to the casual observer.
Low	Typically only a very small part of the proposals is discernible and/or they are at such a distance that they are scarcely appreciated.
Very Low	Typically no part of the development would be visible although work or activity associated with it may be discernible e.g. traffic generated on adjacent roads.

Duration of Change

The duration of the effect depends upon the length of time over which it occurs, i.e.:

Long Term (more than 5 years)
 Medium Term (1-5 years)
 Short Term (less than 12 months)

Magnitude of Change: Summary

The categories below apply to both beneficial and adverse changes to the existing view. Example appraisal categories are listed below:

Very High	Typically the proposals form a dominant or immediately apparent feature within the view that significantly affects and changes overall landscape character. Views affected would typically be direct and close range in nature.
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High	Typically the proposals would typically form a visible and recognisable new element within the view that affects and changes overall landscape character.
Medium	Typically the proposals constitute a distinct feature within the view that would not change the existing overall landscape character.
Low	Typically the proposals constitute only a minor component of the wider view, which might be missed by the casual observer or receptor. Awareness of the proposals would not have a marked effect on the overall quality of views.
Negligible	Typically only a very small part of the proposals is discernible and/or they are at such a distance that they are scarcely appreciated. The proposals would have very little effect on views that would typically be long range and/or oblique in nature.

LEVEL OF EFFECT

The descriptions relating to each category within the following scale are a function of the receptor sensitivity combined with the magnitude of change. The categories are indicative of the set of criteria used to determine the level of effect and the visual effects can either be beneficial and adverse depending on the development proposals and the existing view. It should be emphasised that whilst the methodology is designed to be robust and transparent, professional judgement is ultimately applied to determine the level of each effect.

Evaluation of Effects for Visual Assessment

Magnitude of Change	Visual Sensitivity				
	Very High	High	Medium	Low	Negligible
Very High	Major Substantial	Major Substantial	Substantial	Moderate/Substantial	Moderate
High	Major Substantial	Substantial	Moderate / Substantial	Moderate	Slight/ Moderate
Medium	Substantial	Moderate/Substantial	Moderate	Moderate / Slight	Slight
Low	Moderate/Substantial	Moderate	Moderate / Slight	Slight	Negligible
Negligible	Moderate	Slight	Slight / Negligible	Negligible	Negligible

Example visual assessment categories are listed below:

Substantial Adverse	Typically proposed changes would cause a pronounced deterioration in the existing view from highly sensitive visual receptors
Moderate Adverse	Typically proposed changes would cause a noticeable deterioration in the existing view from moderately sensitive visual receptors.
Slight Adverse	Typically proposed changes would cause a minor deterioration in the existing view from visual receptors with a low sensitivity.
Negligible	Typically proposed changes would represent a barely discernible change to the existing view from visual receptors with a low sensitivity. Effects may be adverse or beneficial although either change would not be significant.
Neutral	Typically proposed changes would cause no discernible deterioration or improvement in the existing view.
Slight Beneficial	Typically proposed changes would cause a minor or barely discernible improvement in the existing view.
Moderate Beneficial	Typically proposed changes would cause a noticeable improvement in the existing view.
Substantial Beneficial	Typically proposed changes would cause a pronounced improvement in the existing view.

SIGNIFICANCE OF EFFECT

The significance of the level of effect has been assessed as follows:

Not significant – Neutral, Negligible, Slight, Moderate effects

Significant – Moderate/Substantial, Substantial or Major Substantial effects (Areas toned grey above)