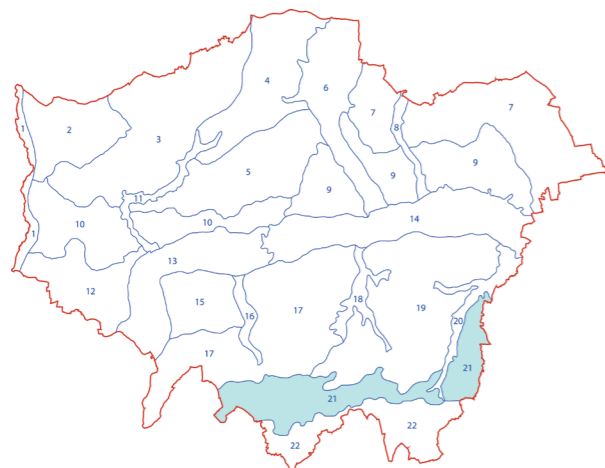


21. Lower North Downs Dip Slope



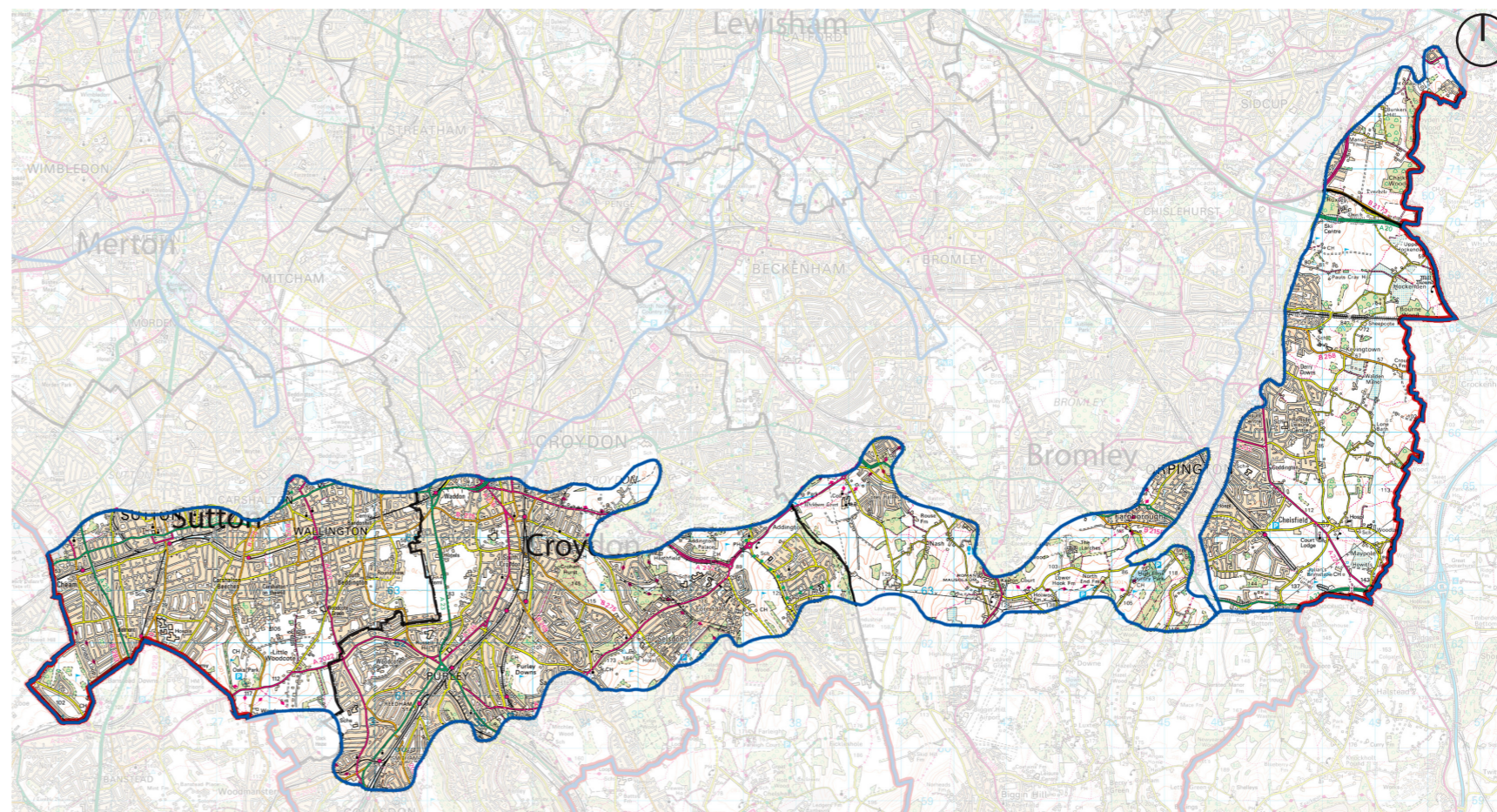
Key plan

Description

The Lower North Downs Dip Slope Natural Landscape Area includes parts of the boroughs of Sutton, Croydon, Bromley and Bexley, stretching east–west along the North Downs, north of the Wooded Chalk Slopes (NLA 22) and south of the South London Clays and Gravels (NLA 17) and the South London Pebbly Sands (NLA 19). This is the lower dip slope of the North Downs and the land rises gently to the south. The upper reaches of the Wandle, Ravensbourne and Cray rivers have cut down through the chalk bedrock to form a series of ridges and valleys along the slope. The areas underlain by chalk have the distinctive concave-convex rolling relief of chalk uplands, with dry valleys and broad, rounded ridges.

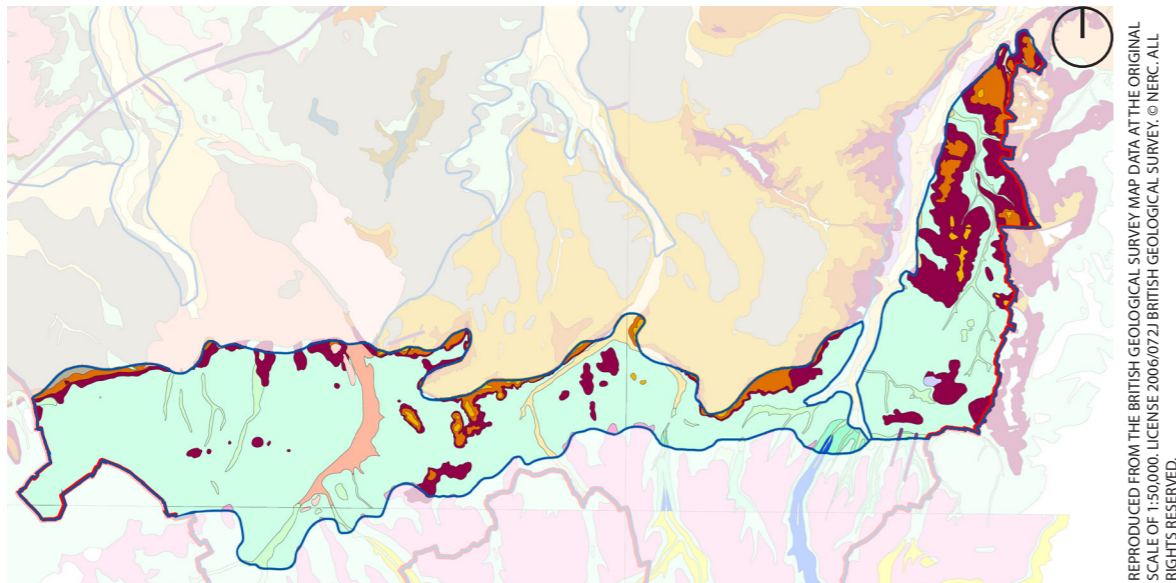
The dip slope is formed from the tilted chalk strata (Lewes Nodular, Seaford and Newhaven Chalk formations) of the North Downs ridge which runs east west to form the southern rim of the London Basin. The chalk continues below all of the London area. There are London Clays and older rocks of the Harwich Formation on the northern fringes of the chalk dip slope. The dominant soils are loams, with deep loams in some of the valleys.

Settlements have evolved along the valleys, which also function as infrastructure corridors for roads and railways. A typical example is

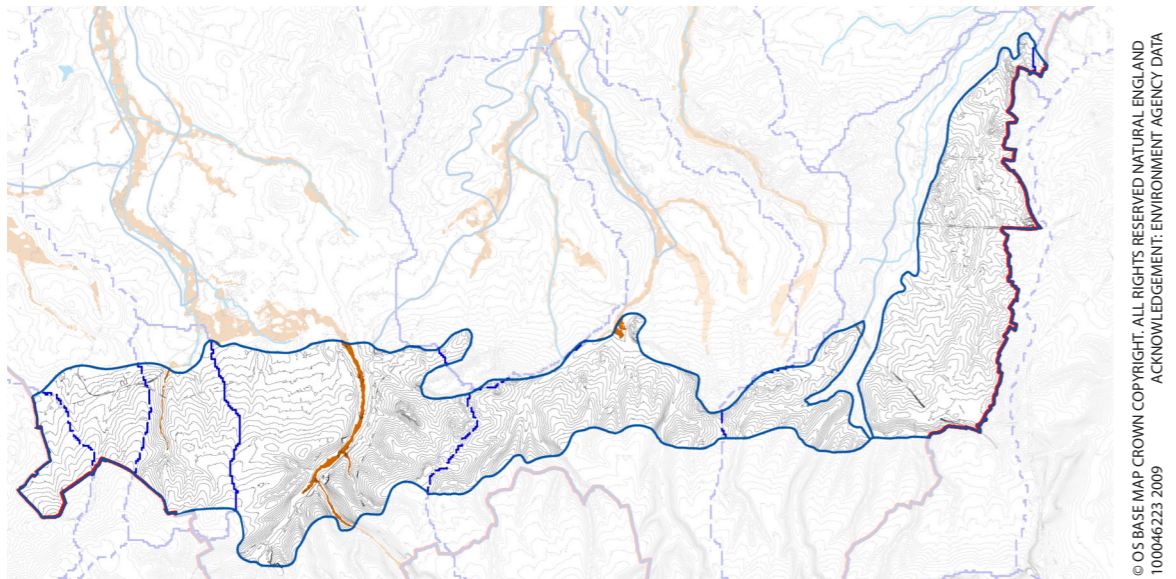


21. Lower North Downs Dip Slope

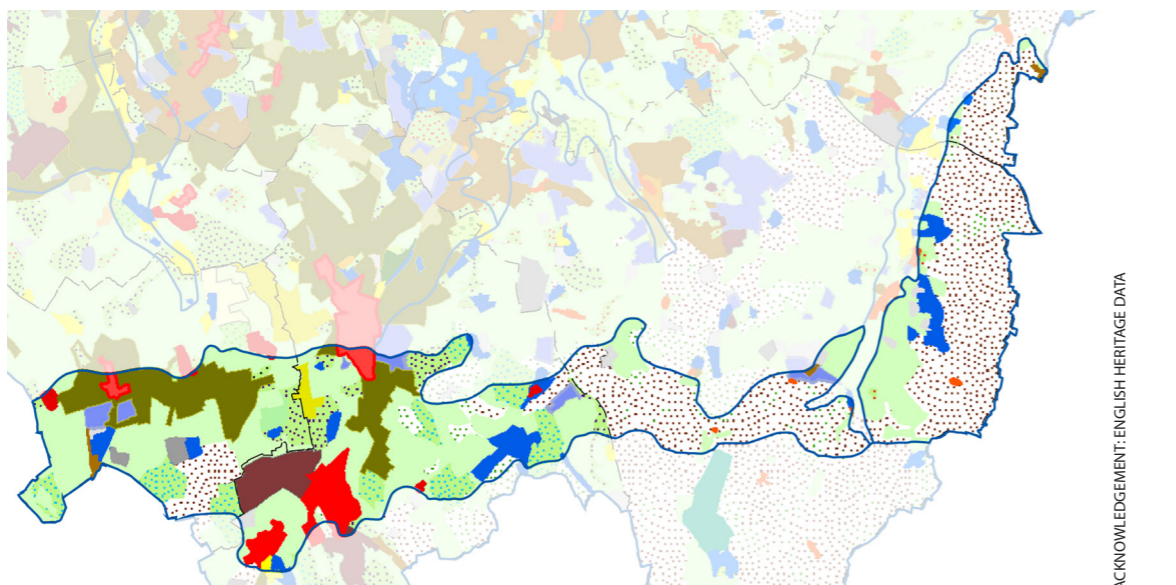
Purley, where the settlement core of Victorian terraces is built around the confluence of tributaries of the River Wandle and several railways. There are areas of fragmented and intense modern residential development in Selsdon/Forestdale, east Orpington and at South Beddington. Open spaces are typically situated on the slopes of the valleys, creating corridors extending from the North Downs towards the London conurbation. The area is predominately farmland with numerous native woodlands and hedgerows and some extensive ancient and semi-natural woodlands at Kevingtown and Huxley.



Geology



Rivers and Topography



Historic Development

Natural Signature and natural landscape features

Natural Signature:

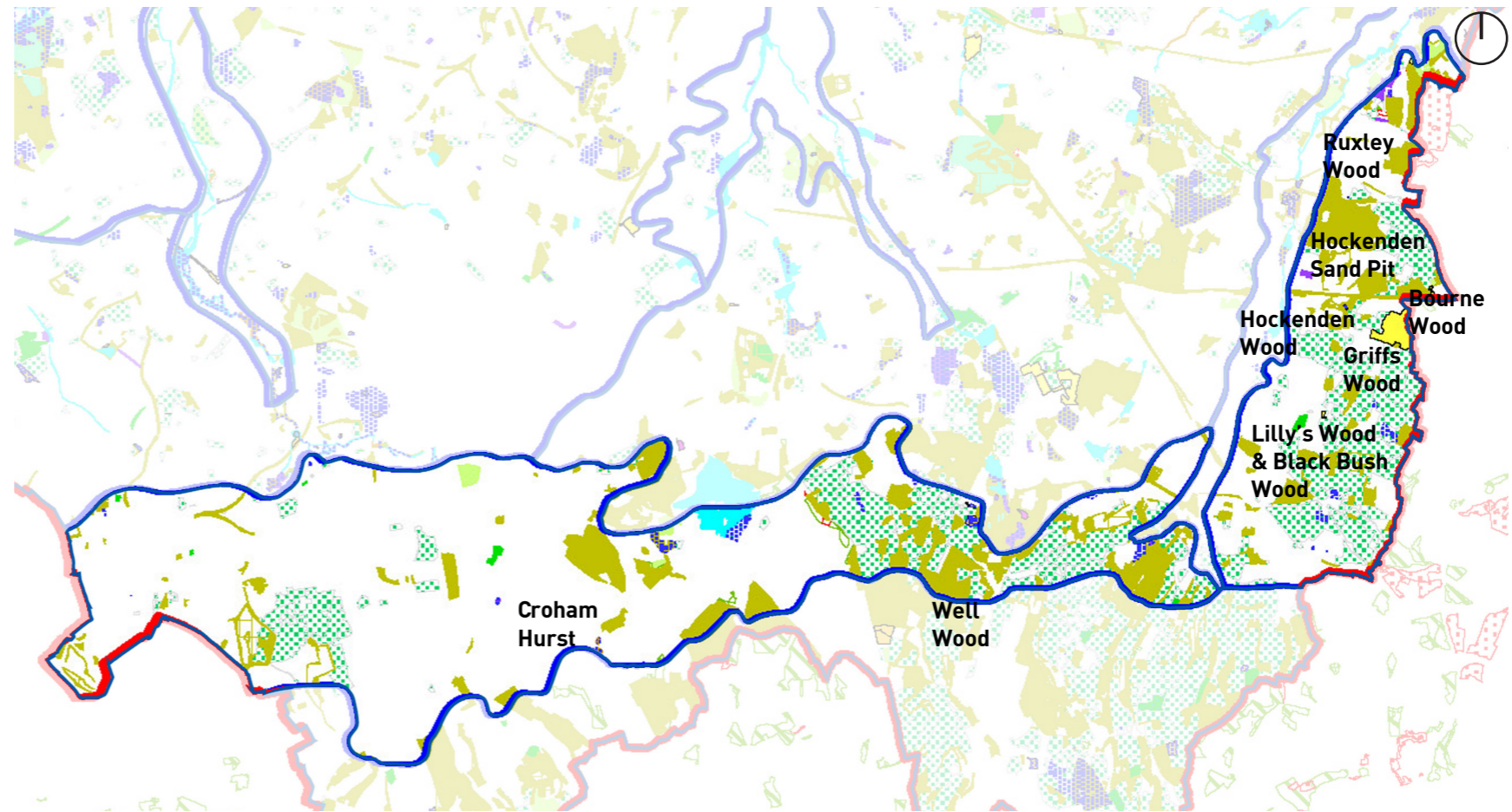
Lower North Downs Dip Slope – A diverse landscape with a transition from heath, scrub and woodland on the lower slopes to more open farmland and scattered ancient woodlands on the rising chalklands to the south.

The Lower North Downs Dip Slope is a transitional landscape, with strong variations in landscape pattern between the heathy land on the lower slopes and the distinctive chalk landscapes on the rising slopes of the North Downs. This transition makes for an exceptionally diverse range of landscape patterns and ecological habitats, with mosaics of heath, grassland, scrub and woodland on the lower slopes grading to rolling, more open farmland with areas of chalk grassland, scrub and woodland on the slopes of well defined dry chalk valleys. Many of the woodlands include fragments of more extensive ancient woodlands and the remnant wooded areas tend to be on steeper ridges with excellent views across South London. Wet flushes and areas of bog and damp grassland are typical at springlines marking the boundary between the chalk and the clays and sands to the north. In addition, solution hollows, as well as man-made dene holes from chalk-mining, have also affected the landscape.

Examples of natural landscape features within the Lower North Downs Dip Slope Natural Landscape Type are:

- **Croham Hurst** – a site of great ecological interest consisting of acid species-poor woodland and heathland. There is more diverse intermediate woodland on lower slopes and species-rich chalk grassland and scrub at the base of the hill. The upper woodland comprises sessile oak and birch with stands of beech. The lower woodland is more species-rich with woodruff, lily-of-the-valley and yellow archangel.
- **Well Wood, Long Shaw and Cooper's Wood** – Well Wood is a large ancient woodland with excellent structure; some is actively coppiced. The canopy is dominated by sweet chestnut, with ash and oak. Most lies on acid soils, although the southern edge is on the chalk. A diverse ground flora includes an abundance of bluebells, and scarcer species such as butcher's-broom, trailing St John's wort and yellow pimpernel, while coppiced areas have a spectacular display of foxgloves in summer. Long Shaw and Cooper's Wood are smaller fragments of ancient woodland, separated from Well Wood by set-aside agricultural fields. Both are mostly outgrown ash/sweet chestnut coppice and appear to have a chalky influence.

- **Lilly's Wood and Black Bush Wood** – A series of small ancient woods to the north of Chelsfield, which are connected by fine, thick hedgerows, comprising of remnant woodland species and surrounded by open farmland. Lilly's Wood is a broadleaved, coppice-with-standards woodland with a canopy of oak, occasional beech, old ash coppice and some wild cherry.
- **Hockenden Wood** – An extensive, well-structured ancient woodland. The canopy consists mainly of replanted sweet chestnut, with a particularly diverse ground flora. A sunken lane in the north of the site is bordered by old coppiced beech and sweet chestnut trees.
- **Hockenden Sand Pit** – A disused sand pit situated towards the eastern end of Cray Valley Golf Course, this has vertical sand cliff faces and smaller more gentle slopes. Approximately 64 sand martin holes are present in the north-west facing cliff; this is the only known breeding colony of sand martins within the Borough of Bromley, and one of the largest in London. Other birds use the adjacent scrub and rough grassland, including linnet and hobby.
- **Griff's Wood** – A sizeable ancient wood, lying mostly on clay but the southern edge is on the chalk. It is mostly outgrown coppice of sweet chestnut, hazel, ash and hornbeam. A rich ground flora includes common valerian and an abundance of moschatel in damp areas, with spurge-laurel on the calcareous soils.
- **Bourne Wood** – Ancient woodland, which includes dense young stands of birch - hazel and areas of older hornbeam-sweet chestnut coppice and stands of willow in damper areas. A wide diversity of plants occurs here, many of which are indicative of long-established woodland conditions, including wood spurge, butcher's broom, and wood and pendulous sedges. There are also several large clearings, one of which contains a rich marshland community, where uncommon London plants include lesser spearwort and ragged-robin.



Natural Habitats & Landscape Key Features

Underlining the natural signature of the Lower North Downs Dip Slope

Key influences

- Rolling landform with rounded profiles.
- Heathland and acid grassland on lower slopes.
- Chalk grassland and scrub on upper slopes.
- Extensive native woodland, particularly on steep slopes.
- Stands of beech and sweet chestnut.
- Extensive views from local ridges across the south London basin.
- Coppice – often coppice with standards.
- Shaws – narrow, winding belts of woodland along streams and small valleys.
- Dense hedgerows enclosing meadows which vary in scale to fit with the landform (larger, rectilinear fields on flatter land).
- Sunken lanes, tracks and driveways leading from the upper Downs to the lower slopes.
- Wet flushes and bogs at the springline on the edge of the chalk.

Design clues

Ideas for place making and shaping future design decisions - how the Natural Signatures for each natural landscape area might be expressed within the wider public realm, through new development and landscape management projects.

- Broad, rounded landforms for embankments, berms and swales.
- Tilted planes retained by seating walls or simple mounds planted with chalk grassland (sites on upper slopes underlain by chalk) or heather (sites on lower slopes underlain by Harwich Formation).
- Native woodland on higher land.
- Winding belts of woodland (or dense hedgerows planted with groups of hedgerow trees) leading from woodlands into adjacent open spaces, roads or areas of built development.
- Well defined pathways – margins defined by rounded embankments, dense hedgerows or a combination of both.
- Stands of semi-mature specimen trees on elevated land – even if planted on artificial mounds.
- Broad, sweeping swales and flood attenuation basins, with asymmetrical profiles – one side shallow; opposite side steep to echo the form of many dry valleys.

Lower North Downs Dip Slope – Key environmental assets

Environmental Asset	Relevant borough	Notes
Croham Hurst	Croydon	Acid species-poor woodland and heaths on hill tops; species rich chalk grassland and scrub at base of hill.
Little Woodcote Wood	Sutton	Sycamore-dominated woodland; ash is regenerating following 1987 storm.
Woodcote Grove Wood	Sutton	Woodland of garden origin indicated by high presence of exotic species of trees and scrub.
Roundshaw Downs	Croydon, Sutton	Mosaic of chalk and neutral grassland of varying quality; located on site of the old Croydon Airfield.
Well Wood, Long Shaw and Cooper's Wood	Bromley	Large ancient wood with excellent structure; actively coppiced; canopy dominated by sweet chestnut; diverse ground flora.
Lilly's Wood and Black Bush Wood	Bromley	Series of small ancient woods connected by native hedgerows.
Ruxley Wood	Bromley	Sizeable ancient woodland; much has been cleared, however, and replanted with conifers; seasonal pond within wood.
Hockenden Wood	Bromley	Extensive, well structured ancient woodland overlying acid soils.
Hockenden Sand Pit	Bromley	Disused sand pit; extensive bird populations – only known breeding colony of sand martin in Bromley and one of the largest in London.
Griff's Wood	Bromley	Ancient woodland lying mostly on clay; mostly out-grown coppiced sweet chestnut, hazel and ash.
Bourne Wood	Bromley	Ancient woodland with diversity of canopy heights and fauna species; several large clearings.