

CHILWORTH GUNPOWDER MILLS CONSERVATION AREA APPRAISAL

Study and Character Appraisal

Text only version. Approved as Supplementary Planning Guidance by the Executive Committee in July 2008. The document is currently in the process of being prepared for publication with the inclusion of maps and illustrations.

**GUILDFORD BOROUGH COUNCIL
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Chilworth Gunpowder Mills Conservation Area Appraisal

Contents:

- 1. Introduction**
 - 1.1 Conservation Areas
 - 1.2 Purpose and Objectives of a Conservation Area Character Appraisal
 - 1.3 Chilworth Gunpowder Mills – location and boundary
 - 1.4 Planning Designations
 - 1.4.1 Landscape Designations
 - 1.4.2 Historic Built Environment Designations
 - 1.5 Locally Listed Buildings
 - 1.6 Buildings of particular merit

- 2. Historical Development**
 - 2.1 Early Development
 - 2.2 The influence of the water network
 - 2.3 19th Century development
 - 2.4 20th Century

- 3. Character Appraisal**
 - 3.1 Topography, views and vistas
 - 3.2 Use and Activity
 - 3.3 Character Areas
 - 3.4 Materials, textures, colours and detailing
 - 3.5 Open spaces, trees and footpaths

- 4. Issues and Threats**
 - 4.1 Issues and Threats – Built environment
 - 4.2 Issues and Threats – Landscape, trees and nature conservation

- 5. Opportunities and Enhancements**
 - 5.1 Opportunities
 - 5.2 Enhancements

- 6. Appendices**

Appendix 1: Mapping

Appendix 2: bibliography and references

Appendix 3: sources of further information

Appendix 4: Criteria for local listing.

1. INTRODUCTION

1.1 CONSERVATION AREAS

The Civic Amenities Act of 1967 provided the original legislation allowing the designation of “areas of special architectural or historic interest” as conservation areas, whose character should be preserved or enhanced. It is the quality and interest of an area, rather than that of individual buildings, which is the prime consideration in identifying a potential conservation area. This concept has developed and is now enshrined in the Planning (Listed Buildings and Conservation Areas) Act 1990. Section 69 of the Act provides a local planning authority with powers to designate conservation areas, and to periodically review existing and proposed conservation areas. Section 71 requires local authorities to formulate and publish proposals for the preservation and enhancement of their conservation areas. Section 72 specifies that, in making a decision on an application for development in a conservation area, special attention shall be paid to the desirability of preserving or enhancing the character and appearance of that area.

1.2 PURPOSE AND OBJECTIVES OF A CONSERVATION AREA CHARACTER APPRAISAL

Government policy on conservation areas and historic buildings generally is set out in Planning Policy Guidance Note 15 (PPG15). This defines why Character Appraisals are necessary. It states that the purpose of a Character Appraisal is to “clearly identify what it is about the character or appearance of the area which should be preserved or enhanced, and to set out the means by which that objective is to be pursued”, and it is hoped that the “clear assessment and definition of an area’s special interest and the action needed to protect it will help to generate awareness and encourage local property owners to take the right sort of actions for themselves” (para 4.9)

The aim of the character appraisal is to:

- Improve the understanding of the history and historical context of this area in Chilworth
- Generate awareness of exactly what it is about the conservation area that makes it of “special interest” (as this is not all immediately obvious)
- Provide residents and owners with a clear idea of what should be cared for and preserved
- Provide residents and owners with a clear idea of what enhancements could be made to the conservation area
- Provide Guildford Borough Council with a valuable tool with which to inform its planning practice and policies for the area

1.3 CHILWORTH GUNPOWDER MILLS – Location and boundary

The site of the former Chilworth Gunpowder Mills lies approximately 3Km to the south-east of Guildford town centre. Chilworth is the most westerly of four villages situated along the Tillingbourne valley, and relative to the other villages, is fairly

recent in its evolution. At the beginning of the eighteenth century the settlement comprised just two buildings, the Old Manor House at the southern end of Blacksmith Lane, and a cottage on the site of the Percy Arms public house. The greatest concentration of structures was along the river valley representing the powder and paper mills, and on the lower slopes of St Martha's Hill to the north-east of Chilworth Manor.

At the beginning of the 19th century the settlement had hardly altered and despite the coming of the railway in 1849 the village had expanded little by the end of the century. The only additions during the nineteenth century had been a school, a row of terraced houses opposite the Percy Arms, and a pair of semi-detached houses at the end of Blacksmith Lane. By the beginning of the Second World War, however there had been considerable suburban development between the Percy Arms and Blacksmith Lane and both sides of the road were lined with bungalows and houses. In addition, many houses had also been built within the former powder works boundary. The expansion continued in the post war period when the Halfpenny Close estate was built off Blacksmith Lane.

To the north, the village is dominated by the steeply rising slopes of St Martha's Hill and at its summit the medieval church of St Martha's (greatly altered by Henry Woodyer in the mid 19th century). On the southern side, the valley rises more gently towards Blackheath and Wonersh. The wide valley floor of the Tillingbourne is an important east-west route and carries the A248 Dorking Road (formerly known as Sample Oak Lane) and the nineteenth century Guildford to Redhill railway line. The development of the through route eastwards to Albury appears to be a relatively modern creation, for in the early eighteenth century the main line of the road swung southwards towards Blackheath, on a road that retains the name Sample Oak Lane. At this time, a lane led from the Percy Arms to the mills around Postford Pond, but not beyond.

The powder works are laid out in the valley of the river Tillingbourne which rises at Friday Street, about 10km (6 miles) to the east of Chilworth; from Chilworth it flows westwards for a further 3Km (1.9 miles) until it meets the River Wey at Shalford, itself a tributary of the River Thames. The watercourses not only provided the powder works with power and a means of internal transport, but also determined the layout of the factory.

As the Tillingbourne passes through this section of its valley between Albury and Chilworth, it is fed by a number of natural springs. Several ponds have been created over time, initially to allow watercourses to flow into the agricultural land allowing controlled flooding at specific times to encourage early grass growth. These waterbodies then fed into a man-made leat called New Cut which runs through the gunpowder mills site and along with the Tillingbourne, provides the main structure of the works. Much of the early ditch and watering system is still evident throughout the area, particularly in the area behind The Percy Arms. The influence of the water network on the layout of the area as it stands is to be expanded upon.

The draft boundary of the conservation area has been drawn to take in the entire scheduled site which extends from Blacksmith Lane in the west, in a generally north-easterly direction towards but not including Postford. The cottages at Postford Mill and Mill Reach have been included within the proposed conservation area although they are not scheduled and not part of the Gunpowder Mills. The scheduled boundary at this point takes in the entire expansion of the site from the 1860s to the First World War.

From Postford in the east, the boundary follows the southern and northern boundaries of the gunpowder works along the base of the Tillingbourne valley in a south-west direction. The northern boundary passes south of Longfurrow Farm and south-west where it crosses Lochner Lane and runs westward along the northern boundary of the gunpowder works. At the packhorse bridge, the boundary turns north-west towards the drive leading to Chilworth Manor. The boundary then follows the drive westward where it picks up Blacksmith Lane. Where Blacksmith Lane takes an abrupt southern turn, the boundary of the conservation area continues westward to take in Halfpenny Corner and Chilworth Old Mill. The boundary then takes a southerly direction just north-west of Meadow Cottage and runs along its western boundary in a southwards direction to where it meets Old Manor Lane to the south of Magazine Cottages. Old Manor Lane then forms the southern boundary until it reaches Blacksmith Lane where the boundary then travels north again to the boundary of the gunpowder works south of West Lodge. At this point the first draft conservation area boundary followed the southern boundary of the scheduled site all the way to Postford. Following the consultation this boundary has now been amended to include the fields and watercourses south of the boundary of the scheduled ancient monument. It now runs along the rear of properties on Dorking Road, north of Lockner Farm and includes the watercourses to Postford Mill.

1.4 PLANNING DESIGNATIONS

1.4.1 Landscape Designations

The entire proposed conservation area is designated as Green Belt. Much of the area (shown on the planning designations map to follow) is designated as part of the Surrey Hills Area of Outstanding Natural Beauty (AONB) designated in 1958 and is thereby of national landscape importance, subject to rigorous protection. In addition, most of the conservation area which was once under industrial use is designated as Area of Great Landscape Value (AGLV) and is recognised as of County importance. The north eastern end of the conservation area from Longfrey eastwards at Colyer Hanger is designated as Site of Scientific Interest (SSSI) including ancient woodland supporting nationally rare woodland stand-types and acid grassland and scrub.

1.4.2 Historic Built Environment Designations

The significance of industry along the Tillingbourne is recognised through the designation of a Scheduled Ancient Monument (SAM) and Areas of High Archaeological Potential (AHAP) (shown on the planning designations map to follow). The latter is a non-statutory County Council designation affording no extra protection but highlighting the potential for discovery of significant archaeology to be found. The combination of these designations aim to protect the archaeological remains both above and below ground from reckless or accidental damage.

Much of the land to the west of Blacksmith Lane is designated as AHAP since it is known that the gunpowder industry and its predecessors were established in this area. Many of the buildings originating from those industries remain but since they have been continuously occupied, have either been placed on the statutory list of buildings of special architectural or historic interest, or are totally unprotected. Buildings which are occupied cannot be scheduled as ancient monuments under current rules.

A number of listed buildings are included within the boundary of the conservation area. These are all shown on the Conservation Area Appraisals map.

1.5 LOCALLY LISTED BUILDINGS

At the time of compiling this Character Appraisal, no buildings had been “Locally listed”. These are buildings, which do not meet the national listing criteria but do have important local significance and are worthy of protection. The appraisal has resulted in a number of nominations for recognition of local listing and these will be addressed in future work to be undertaken and included in the recommendations under s. 5. Opportunities and Enhancements of the Appraisal.

1.6 BUILDINGS OF PARTICULAR MERIT

As well as listed and locally listed buildings, there are a number of other buildings within the proposed Chilworth Gunpowder Mills Conservation Area which make a positive contribution to the character and appearance of the area. These Buildings of Particular Merit have been identified during the survey process and as recommended in Planning Policy Guidance Note 15 (PPG15), are recorded on the Conservation Area Appraisal maps. As with listed and locally listed buildings, there is a general presumption in favour of their retention. Any application for the demolition and replacement of a Building of Particular Merit will therefore need to be accompanied by a reasoned justification as to why the building cannot be retained, similar to that required for a listed building.

2. HISTORICAL DEVELOPMENT

2.1 EARLY DEVELOPMENT

Whilst the Tillingbourne Valley is probably best known for its gunpowder milling history, records of milling corn, and fulling can be traced to the Domesday Book of 1086. Nine mills pre-dating 1500 can be identified, and many others sprung up in the same area from the sixteenth century onwards.

Gunpowder manufacture was first established in the area by the Evelyn family and by the beginning of the seventeenth century the Evelyn family held the contract for the supply of gunpowder to the Ordnance Office. The manufacture of gunpowder was a royal monopoly but the Evelyn family was also permitted to sell powder to private customers.

One such customer for gunpowder was the East India Company but due to shortages caused by the preparation for war with Spain, the company decided to manufacture its own powder bringing it into direct conflict with the Evelyn family’s monopoly. By 1626 it had managed to obtain a licence to manufacture gunpowder and established its production site at Blacksmith Lane where there had already been a corn mill, a fulling mill and a wire mill. The mills cost £1,000 to establish by 1628. Despite having sold £7-8000 worth of powder to the King in 1629, the East India Company ceased production and leased the site to Edward Collins for a short period to produce powder. His licence was soon withdrawn however, and manufacture ceased altogether until 1635 when the powder monopoly passed from the Evelyn family to Samuel Cordwell and George Collins. In order to increase capacity considerably to supply the King, Cordwell and Collins borrowed £2,000 from the King to considerably expand the works to the west of the original mills on what was later referred to as the Lower Works. A survey of 1677 refers to seven incorporating mills in this area. In addition, an entirely new site, the Upper Works, was set up to the east at Postford

Pond comprising 6 incorporating mills. However, the King built up a debt of £4,000 to Cordwell and the monopoly collapsed allowing anyone to manufacture gunpowder.

Cordwell became the main supplier of gunpowder to parliament throughout the Civil War. Manufacture of powder continued under the Cordwell family until shortly after his death and his son's death in around 1649. Taken over by another group, the gunpowder mills site was again expanded into the site now known as the Middle Works and a new millrace now known as 'New Cut' was dug. Manufacture continued into varying degrees until the death of its company chief, and owner of the manor of Chilworth, Vincent Randyll in 1673.

The suggested stages of expansion between 1626 and 1654 are shown in sketch maps (reference *Damnable Inventions* page 12) and a detail of John Seller's map of Surrey, c.1679. (Reference *Damnable Inventions* page 17). By this time the basic layout of the mills and watercourses at Chilworth, as it can still be seen today, was complete.

By 1677 gunpowder production at Chilworth resumed, stimulated by conflict with France. The works were then leased to Sir Polycarpus Wharton, who greatly expanded the works in order to carry out contracts for the Board of Ordnance but the government was notoriously bad at paying bills, and eventually found himself in dispute with the Ordnance about the settlement of accounts. Throughout his ownership the mills were beset with financial problems and he was eventually thrown into debtor's prison by 1710

Gunpowder production at Chilworth again declined after Sir Polycarpus left Chilworth. The Upper site at Postford was abandoned altogether and the Lower Works were converted to papermaking. Decline continued through the 18th century and much of the nineteenth. Only the Middle Works continued to produce gunpowder and it was not until the late nineteenth century that they expanded to become a site of national importance again.

The owner of the Manor of Chilworth, Morgan Randyll had become heavily in debt through his political career as MP for Guildford and sold the estate in 1720 the director of the South Sea Company. When it failed his assets were seized, including the estate and in 1723 were sold to the Sarah Duchess of Marlborough. On her death the estate passed to John Spencer, her grandson, and remained in the Spencer family until 1796 when it was sold to Edmund Hill, a gunpowder maker from Hounslow. Various other ownerships followed until it became part of the 6th Duke of Northumberland's estate where it remained until it was sold at auction in 1922.

In the mid eighteenth century, the Lower Works had been converted to paper mills. In 1791, Charles Ball from a Northamptonshire paper making family, took over the Chilworth Paper Mills in association with Captain Wilcocks, with whom he worked until 1793. At this time he set up a new paper mill at nearby Albury, using a former corn mill. In the first decade of the nineteenth century two new paper mills were built at Postford Pond. To the south of Dorking Road he also built Postford Hill, now Postford House. One mill was sited at the head of Postford Pond and the other to its north below what is now known as Waterloo Pond. From 1803, Hugh Rowland, worked the Chilworth Great and Little Paper Mills on Blacksmith Lane. The Great Paper Mill was powered by a breast-shot waterwheel 17ft (5.2m) in diameter and 8ft (2.4m) wide. The Little Paper Mill was powered by an overshot wheel 17ft (5.2m) in diameter and 7ft (2.1m) wide. The mills were either brick and tiled or boarded and tiled. In the early 1820s Hugh Rowland had also taken over working of one of the Postford mills, but by the end of the decade was bankrupt. The Little Paper Mill

appears to have gone out of use by the 1830s. Subsequently the mill was demolished but its drying house was converted into a pair of cottages, **The Old Cottage** and **Rose Cottage** which survive today. The Great Paper mill was reopened by the London printing firm Unwin Brothers. The factory continued in business until it was destroyed by fire in 1895 and its site now forms part of the garden of **Old Mill House**.

2.2 NINETEENTH CENTURY DEVELOPMENT

In 1819 the gunpowder mills were leased to John Sharp who was later joined by his brother Thomas and his son Samuel and the company traded under the name J T & S sharp. The quantities of powder sent up to London were recorded in the Wey Navigation records, and they show an increase during the Crimean War (1854-56), and beyond, into the 1860s when it is believed that the mills became powered by steam.

The gunpowder works remained in the Sharp family until 1881 when they were sold to Charles Marcus Westfield and at the time was one of 28 gunpowder mills working in Britain. In 1885, he sold the works to the newly formed Chilworth Gunpowder Company and became one of its directors. The company had become a limited company with a share holding of £100,000 meaning that large sums of money became available for investment in the works. At the same time, the increased size of military ordnance demanded an enormous increase in the propellant charge. This promoted considerable development challenges to the powder makers who developed prisms of gunpowder and the later technological innovation of 'brown' or 'cocoa' powder which was invented by German powder makers, Heidemann and Duttenhofer. In the early 1880s Heidemann and Duttenhofer were invited by the British government to instruct the Royal Gunpowder Factory at Waltham Abbey in the production of prismatic powder and brown powder. In 1885 Chilworth Gunpowder Mills Limited was formed to manufacture brown powder specifically for the British government and the colonies. Four of the board members were either board members or directors of German powder works, which had in turn, links with the giant armaments firm Krupp and to the Nobel companies.

In addition to cocoa powder, by the late 1880s the Chilworth Gunpowder Company had also developed what was described as 'Chilworth Special Powder' for use in quick firing guns, indicating close links between the armaments manufacturers and the powder maker. Under the leadership of the new company the works was extensively remodelled, becoming the second major supplier of gunpowder to the British and colonial governments, second only to the Royal Gunpowder Factory Waltham Abbey. The transformed works was so successful that further extensions were necessary through the 1880s and into 1890. In 1888 it was recorded that the Dove Brothers of Islington, had built a new factory and magazines at Chilworth to the value of £2,095. Full production of brown powder was achieved in 1886 and the company continued to introduce new technological innovations to the site including suspended edge-runner gunpowder mills which greatly increased the amounts of powder to be milled at any one time. Another technological innovation was the introduction of cam presses which produced a superior prismatic powder in 1886, two years before they were introduced at Waltham Abbey.

With new innovations in the development of powder, came new standards and the need for considerably more exacting testing. It was probably at this time that a new test range was established to the north of **Longfrey**, comprising a hollow which probably housed the target. Testing was also carried out of the raw materials and during thirteen different stages during the manufacture of powder. In addition to the

new brown powders the company continued to manufacture a variety of other military and sporting powders. For the construction of the necessary buildings, the company imported rolled steel channels from Germany and the 1885 gunpowder incorporating mill still on site today, a number of beams marked 'Burbach 1884' show the earliest recognised surviving rolled steel channels in the country. A Prussian army captain Otto Bouvier oversaw production. By 1891, he was resident with his wife and six children at the Old Manor House, Chilworth Road. (photo)

As one of the largest employers in the area, with a work force of 300-400 people, many of who were ex-servicemen, the powder works played a prominent part in community life and took pride in itself as a benevolent employer. The powder works contributed jointly with the Unwin's printing works on Blacksmith Lane to the construction of the Greshambury Institute in Chilworth village for the benefit of their workforces. It survives and is now St Thomas's church.

In common with most other powder works the company provided little accommodation for its workforce. The Old Manor House, formerly known as Powder Mill House, at the southern end of Blacksmith Lane, was often the residence of the owner or manager of the Powder mills. The original date of this much-altered house is unknown, although above the north doorway is a date stone of 1609. To the west of this house is a row of cottages, known as Magazine Cottages, which were probably constructed during the 1880s.

2.3 TWENTIETH CENTURY DEVELOPMENT

Innovation continued across Europe and the search for smokeless powders resulted in the erection of the first private cordite factory in the country at Chilworth. This was built to the east of the original main factory area, to the east of Lockner Farm Road, on the valley floor below **Longfrey**.

Notwithstanding the exemplary nature of the Chilworth factory, the manufacture of explosives was still a dangerous business and on 12th February 1901 the black powder corning House was destroyed by an explosion, resulting in the deaths of six workmen.

The outbreak of the First World War in August 1914 created an unprecedented and unplanned demand for explosives of all kinds. Chilworth's main products were propellants and various types of gunpowder. To boost production new buildings were required and in 1915 it was proposed to increase cordite production by the construction of an extension to the existing cordite section to be known as the Admiralty Cordite Factory, and a few buildings were also added to the 1890s Smokeless Powder Factory. This factory covering 9 hectares (22 acres) was laid out in fields to the north of Lockner Farm and to the west of Postford Mill.

Following the armistice of November 1918, there was a massive over capacity in the industry. On 16 June 1920, the Chilworth Gunpowder Company informed all of its employees by letter that the works were to close, and at the end of the month the company was put into voluntary liquidation. By 1922, the land on which the powder works stood was sold by auction as part of a wider sale by the Duke of Northumberland. The factory was divided up into 3 lots, the western raw materials area, the central section including the former Middle Works between Blacksmith Lane and Lockner Farm Road, and the cordite factories to the east. On closure many of the buildings were probably fired, the most effective way of decontaminating former explosives buildings. However some of the buildings were converted to dwellings,

forming the core of a small community. Many of these buildings were either constructed from, or roofed by corrugated iron, which gave rise to the local name of "Tin Town". The last of these buildings was eventually abandoned in 1963 after which they were completely cleared.

2.4 The Second World War

After the start of the Second World War, and following the evacuation from Dunkirk, it was feared that an invasion was imminent. A plan was quickly prepared to protect the 'coastal crust' through a series of defences design to hamper and delay any invading forces. If this line was broken bands of defended stop lines were to be created to further impede German advance. Where possible, the stop lines were placed to take advantage of natural and manmade features, such as river valleys, canals and railway lines. These were further strengthened by the construction of pillboxes, anti-tank blocks and other defences. The principal anti-tank line was known as the General Headquarters Reserve Position or GHQ Line. One arm of this countryside system stretched from Bristol to the south of London; to the south of Guildford it followed the northern escarpment of the Tillingbourne; part of it passing through the powder works site.

The Tillingbourne valley was ideally suited to delay any advance from the south, with steeply rising high ground to the north and the leats of the former gunpowder works providing further obstacles. Responsibility for construction of the fixed defences in this area was given to John Mowlem Ltd. Initially the Army wanted standard hexagonal Type 24 shellproof infantry pillboxes, but Mowlems argued that a circular pillbox using metal shuttering would be quicker to construct. Internally, they were designed to be identical to the standard hexagonal Type 24 pillboxes. Mowlems constructed about twenty of these drum shaped pillboxes along the River Wey and Tillingbourne valleys.

In the eastern area of the former factory the pillboxes are standard brick faced hexagonal Type 24 infantry pillboxes. Two are sited along the track leading to Longfrey, commanding the ground to the south. Another is dug into the earthwork traverse of a former factory building and a fourth is sited to the west of the site of Albury Mill on the inner angle of a leat. Blacksmith Lane could be obstructed by an anti-tank block which was covered by a now demolished fortified position in the southern end of a shed adjacent to Powdermills Cottage. At the eastern end of the site anti-tank blocks, which have also been removed, also barricaded Mill Lane but one block does survive on the Lockner Farm Road (photo). This obstruction was covered by a pillbox to the northeast and to the northwest by a Home Guard Section Post.

2.5 POST-WAR

By the 1950s the central part of the powder works, between Blacksmith Lane and Lockner Farm Road, was owned and administered by Guildford Rural District Council. Once the remaining houses in 'Tin Town' were emptied and the tenants rehoused, the buildings were demolished and extensive tree planting took place. One of the few buildings to escape demolition was the Expense Magazine which was made available to Chilworth and District Old People's Welfare Committee for the storage of firewood. Not only had virtually all the 'tin Town' properties been cleared by 1964, but to the east of Blacksmith Lane, a new estate, Halfpenny Close, had been built and a detached house, Longfrey Cottage built on the northern side of the track leading to Longfrey. The central area of the works belonging to Guildford Rural District council became a public open space. Around 1980, a large fishpond was

excavated to the east of Blacksmith Lane in a field which by the 1960s we know as Waterworks Field. After Local Government reorganisation in 1974, Guildford borough Council took on the responsibility for the middle part of the powder works. In the early 1990s they funded the consolidation of the 1880s incorporating mills. More recently, the council funded the restoration of the 'Packhorse Bridge' over the Tillingbourne.

3. CHARACTER APPRAISAL

The character of the Chilworth Conservation Area is the product of a combination of the following:

- Topography, views and vistas
- Use and activity
- Character areas
- Materials, textures and colours
- Open spaces, agricultural activity, trees and footpaths
- Water environment
- Special features

3.1 TOPOGRAPHY, VIEWS AND VISTAS

The proposed conservation area lies within the Tillingbourne valley and encompasses land on either side of the river and artificial leats. The land rises sharply to the north of the Tillingbourne, up to *** metres on the slopes of St Martha's Hill and at its summit is the medieval church of St Martha which can be seen from the western extremity of Chilworth Village and from other vantage points particularly along the Dorking Road. From within the conservation area, the church is not easily glimpsed due to the heavily treed nature of the landscape, but the impression of the steep valley side to the north is distinct. The valley side is much flatter on the southern side between the river and the railway line, only very gently rising toward Blackheath and Womersley. The wide valley floor of the Tillingbourne is an important east-west route and carries the A248 Dorking Road (formerly known as Sample Oak Lane) and the Guildford to Redhill railway line. The boundary of the conservation area however, is tightly drawn around the extent of the disused Gunpowder Mills/factory site and is bounded by agricultural fields to the north and south.

Whilst views along the Tillingbourne are very much restricted due to the heavy tree coverage, the western end of the conservation area opens out a little into fields adjacent to Meadow Cottage, but views from these fields are also curtailed by surrounding tree cover. To the east end of the conservation area, the valley floor rises gently up towards Postford Mill and is in more open agricultural use with tree cover restricted to directly adjacent to the two main Tillingbourne streams and at the edge of Colyers Hangar at the northern and eastern boundary. This entire side of the conservation area lies within the Surrey Hills area of Outstanding Natural Beauty and Colyers Hangar is a site of special scientific interest.

3.2 USE AND ACTIVITY

The core, central part of the conservation area is within passive recreational use being comprised mainly of public open space. All use as a factory has long since ceased and there is an overwhelming quietness to the place. However, within this central area is located the ***fishing pond which attracts a low level of vehicular activity.

On the western side of the conservation area, there is a mix of residential development comprising the remaining buildings of the Lower Works and paper mills, plus more recent development surrounding the Old Manor House. This development is very low density and the area remains peaceful and relatively undisturbed by traffic. Post war housing development on the east side of Blacksmith Lane is not included in the conservation area.

Opposite West Lodge at the entrance to the public open space is a yard currently used for mixed light commercial and some residential use. This is on land previously occupied by the Lower Works. The commercial use of the Lower Works buildings is very low key and due to the no-through road and physically restricted nature of the space, activity intrudes very little into the quiet, peaceful atmosphere of the conservation area. At the entrance to this yard, the natural quiet is mostly broken by the sound of the water passing through the culverts which cross the causeway which carries Blacksmith Lane. The southern culvert was last used to power the Hambledon Rural District Council pumping station which can still be seen within the grounds of Waterworks Cottage but which is now disused. At this point, water falls a couple of metres and the sound of rushing water is pervasive.

Within the public open space, there is little human activity apart from occasional walkers. Sounds from the activity at the fishpond can occasionally be heard but generally the atmosphere is almost silent barring birdsong and the sound of tree movement in high wind. The water flows very slowly and gently in this area and its movement is barely audible.

On the eastern most section, the character is again very peaceful with very little impact from the handful of residential properties located on the boundaries of the conservation area.

3.3 CHARACTER AREAS

Chilworth Gunpowder Mills Conservation Area divides into 3 character areas based on a combination of the historical layout of the site and its current uses. Each character area exhibits similar landscape features and the different character is determined mainly by the buildings and man made structures, rather than by topography and landscape features although these naturally play a part.

The character areas are:

- The Lower Works;
- The public open space
- Upper Works and Postford.

For the boundaries of each character area, please refer to map in the Appendices at the rear of this document.

3.3.1 Area 1: The Lower Works

- To the west of Blacksmith Lane bisected towards its northern extreme by the Tillingbourne river.
- Relatively flat land south of the Tillingbourne; gently rising to the north.
- Appears surrounded by trees on the north and western sides
- Buildings restricted to directly adjacent to Blacksmith Lane, Redwood Grove and Old Manor Farm and fronting Old Manor Lane

- Many existing buildings date back to earlier industrial use including the Paper Mills and later Powder Works.
- Probably the oldest building in this character area is Meadow Cottage at the westernmost boundary of the area directly adjacent to the river. This cottage is of sixteenth and seventeenth century timber framed construction and is accessed on foot only. Set within meadow land.
- To the west of the causeway which carries Blacksmith Lane across the valley floor, were the sites of the corn and fulling mills which pre-dated the powder works. Later, in 1603 a wire mill was established to the west of the causeway and a new millrace was dug, and this is marked by the earthwork scarp to the north of The Old Cottage and Rose Cottage.
- Wire mill leat was subsequently used by the Little Paper Works until about 1830 when it went out of use and the leat was partly filled.
- The two streams of the Tillingbourne converge at a point northwest of Rose Cottage and west of Blacksmith Lane by approximately 80m.
- Chilworth Old Mill - description
- Halfpenny Cottage – description
- Brick foundations, remains of walls and earth scarp in the vicinity of Waterworks Cottage and Chilworth Old Mill, mark the only remains of the former paper mill and printing works
- Waterworks Cottage – Probably built in the late nineteenth century with early twentieth century extension on the west side. Within the grounds to the south of the main building is the brick pump house with a mono-pitch roof.
- The Old Cottage and Rose Cottage date from early eighteenth century and were combined originally to form the drying house for the Little Paper Mills.
- Immediately to the north of the cottages, alongside the southern bank of the stream, short lengths of brick footings may indicate a buried building.
- To south of these cottages survivals of the gunpowder factory where the preparation and refining of the ingredients of gunpowder took place include the Saltpetre Refinery (now in light industrial use), Charcoal House (now offices and studio), a brick store and the Factory Office and Laboratory (now in residential use) These buildings all still exhibit much of their original architecture and factory architecture.
- The Tile House – description to be included
- A scattering of small indistinctive houses is located between the Tile House and Old Manor House. Low density with ornamental gardens. A group of very mature redwood trees stand amongst, and clearly pre-date some of these properties. These are likely to have been once in the grounds of the Old Manor House.
- The Old Manor House is located at the junction of Blacksmith Lane, and Dorking Road. Distinctive Dutch gables. Date not known but considerably extended in 1885 when owned by the Chilworth Gunpowder Company. Occupied by Captain Otto Bouvier the German Factory Manager in the 1891 census.
- The house has a datestone of 1609 over the north doorway but this would seem at odds with the history of the site and the architecture of that time.
- To the west of Old Manor House along the line of the old road now known as Old Manor Lane, is a row of cottages known as Magazine Cottages built during the 1880s for accommodation for workers in the powder factory.
- Entire character area is characterised by re-used buildings dating back to the peak manufacturing era of the powder works, and man made brick and earthwork vestiges of the factory site.

3.3.2 Area 2: The Public Open Space

- This character area is located directly to the east of Blacksmith Lane and extends eastwards along the length of the public open space to the track at the eastern end where the land is crossed by Bridleway no. 252 known locally as Downs Link or Lockner Farm Road
- The wet deciduous woodland that has developed over the site of the gunpowder factory dominates this entire section.
- Numerous watercourses, leats, and streams which have been managed for centuries. The natural tendency for the Tillingbourne, on the northern half of the valley bottom, is to meander, but this has been partly controlled by canalisation and the creation of fixed bridging points.
- A bridge is to be found at the eastern extreme of this character area carrying vehicles to Longfurrow Farm in the east and an earthwork causeway leading westwards.
- At the north western corner of this character area, on the south side of Halfpenny Lane is a row of cottages. There is evidence that there was a building on this site since the early nineteenth century or earlier. The building is currently split into two separate dwellings, Chilworth Cottage to the west and Kingfisher Cottage to the east.
- Associated with these cottages is a small freestanding outbuilding that backs onto Blacksmith Lane. At its southern end was a fortified Second World War defence position, or pillbox, which commanded the lane to the south although the remains of this are no longer visible.
- Towards the western end of the character area can be found the “Packhorse Bridge” – an ironstone bridge of late medieval or post-medieval origin which was restored by the Council in 2001. A track carried over this bridge leads northwards roughly along the line of the present field boundary and leads towards Chilworth Manor. This is likely to be restored and enhanced in the near future, subject to final agreement between the owner of Chilworth Manor and the Parish Council.
- On the southern side of the valley the Tillingbourne stream has been carefully engineered in the past to form what is known as “New Cut”. This was probably dug as early as the 1650s. It sits slightly above the valley bottom and was designed to act as the header leat, providing water to power the mills of the Middle Works. It would have originally been wide enough to carry numerous shallow punts which carried raw materials and finished product from one part of the factory site to the other, but has been narrowed in the recent past by The Environment Agency in an effort to speed up the water and stop silting up.
- New Cut is also bridged at the northern end of Footpath number 578 known locally as “Vera’s Path”. Directly adjacent to the east of this utilitarian footbridge, is the remains of a swing bridge. Built in 1888, this bridge carried a branch of the works’ tramway to Chilworth and Albury station. Constructed of part timber and part iron, it pivoted to allow punts to pass through.
- Vestiges of the tram line remain in the undergrowth and can be seen along some of the footpaths in this character area.
- The remains of many factory buildings are to be found in amongst the undergrowth. Some have been totally uncovered and some are undergoing archaeological exploration and recording. Significant remains include a row of edge runner mill stones, the remains of steam incorporating mills, two expense magazines and further six-bay incorporating mills constructed of mass concrete and brick, amongst others.
- The area of the factory site is completely designated as Scheduled Ancient Monument except for West Lodge which is located outside the factory gates at Blacksmith Lane on the western end of the character area.
- Access to the Middle Works was gained via the gates next to West Lodge, a small late nineteenth century building, which was originally a small single storey gatehouse. Likely to have been built in response to more exacting safety

requirements of the 1875 Explosives Act. During the 1920s a brick extension was added to the east to create a small bungalow. This building is now listed and in residential use.

- Adjacent to the north is a double leaf iron gate through which entry to the gunpowder works was, and still is, made.
- Travelling eastwards from West Lodge along the track are the remains of a variety of brick buildings, some with extensive remains above ground, and some only visible because of the remains of their footings or ground floors. All are itemised in the English Heritage Survey Report 2003 by Wayne D Cocroft. The majority of these remains stand on land north of the New Cut and south of The Tillingbourne.
- This area is generally tranquil in character with noises only emanating from movement in the fishing pond area or Chilworth Manor. The area is relatively dark being overshadowed by the heavy tree canopy except for areas where sunlight breaks through gaps in the tree cover.
- Scattered amongst the remains of buildings and processing structures, are Chilworth Mounds. These are individually created soil mounds which are held together using corrugated iron in a ring to retain the soil within. These mounds also assist in protection from blast.
- The sound of running water pervades this area and is a characteristic.

3.3.3 Area 3: Upper Works and Postford

- This area is entirely comprised of privately owned land, most of which is affected by Ancient Scheduled Monument status. Reference should be made to “Chilworth Gunpowder Works, Surrey by Wayne D Cocroft (English Heritage) for details of specific buildings remaining on site.
- A quiet rural area.
- Further information to be provided

3.4 MATERIALS, TEXTURES, COLOURS AND DETAILING.

There are a variety of materials used within the conservation area and a range of architectural styles amongst the residential properties. Where remains of buildings forming part of the gunpowder industry remain, these have continuity in style and use of material depending on the age of the building.

- Concrete render over brickwork – Gunpowder Magazines, incorporating mills, Mixing house etc
- 19th century red/brown brickwork - eg old factory office, Magazine Cottages, Old Manor House
- Some decorative use of yellow stock brick.
- Clay tiles roofs
- Slate roofs particularly west of Blacksmith Lane.
- Some corrugated iron roof material or replacement with modern profiled steel.
- Cast iron rainwater goods
- Timber window framing using either small pane windows or leaded glazing
- Tile hanging using clay tiles
- Some gauged brickwork with decorative specials
- Bargate stone in isolated areas eg Packhorse Bridge. Some walls adjacent to Blacksmith Lane

3.5 OPEN SPACES, TREES AND FOOTPATHS

The Chilworth Conservation Area provides a large area of open space within its core. This provides a soft, rural feel to the area particularly as it is complemented by a

backdrop of semi wooded, steep hillside to the north which rises up to St Martha's Church. The management of the woodland forming the public open space needs to strike a balance between allowing nature to slowly colonise the area without being allowed to totally engulf the remaining vestiges of the mills layout.

A main spinal path with more minor paths coming off at intervals currently traverses the public space. The main footpath is very informal in character. It is firm under foot but covered in leaf mould and reminiscent of rural woodland paths. Other paths leading from this are simply well trodden tracks formed in the undergrowth. Some of these paths lead across the woodland.

Outside the public open space there are few formal footpaths. Residential and mixed use roads such as Redwood Grove and Old Manor Lane, have no pavements and road surfaces are shared. Pavements exist within the residential area just outside the conservation area at Halfpenny Close. Blacksmith Lane has no formal paving.

4. ISSUES AND THREATS

4.1 Issues and Threats – The Built Environment

These issues really only affect the areas of housing and mixed use at the extreme west of the conservation area and extreme east near Postford Pond. Since the middle section of the area is either public open space or rural farmland/pasture, there is little prospect of infill and few buildings already in existence. However the following issues apply to the entire built environment.

Adaptations and conversions

The special architectural and historic character of the area has been, and continues to be eroded by infill development and alteration and adaptation of the original gunpowder mills buildings for further use. In many cases, it would appear that the origins of the building, and hence its significance to the historic interest of the area had not been recognised at the time of alteration or conversion.

Demolitions and Removals

In addition, small structures which would not readily be considered as buildings, have, and continue to be destroyed also for similar reasons that their significance was not recognised at the time. Such structures can vary widely but might include brick or concrete made structures associated with the control of waterways and drainage, or remains of World War II defences, or part of the industrial processing amongst others.

New Developments

Generally the area is currently relatively unspoilt. The boundary has been tightly drawn particularly in the western extreme to discount buildings not associated with any of the Gunpowder History and which have been built since the 1930s. It is important to avoid further infill which might detract from the existing buildings in terms of size and bulk or use of insensitive materials.

Highway Works

Much of the character of the area comes from the fact that there are few urbanising influences such as pavements, kerbs and street lighting. Temptation to introduce

such measures along with any infill developments should be considered carefully and with sensitivity to avoid having an adverse impact on the conservation area.

Other Roads and pathways

Pathways not associated with the highway, and private roads should be sensitive to the character of the area. It is essential that full consultation with the local authority Design and Conservation Officer should be carried out prior to the installation of new paths or roads. Sensitivity towards the rural character of the area should be given when considering resurfacing or upgrade of the existing footpaths or bridleway. The choice of material could

4.2 Issues and Threats – Landscape, Trees and Nature Conservation

Landscape

Much of the landscape included within the conservation area is already protected either as Area of Outstanding Natural Beauty (AONB) or Areas of Great Landscape Value (AGLV). The AONB is a designation indicating the importance of the landscape on a national level and is subject to rigorous protection from development. The AGLV is of county importance and current adopted policy in the Guildford Borough Local Plan 2003 requires that development within this area should have regard to the conservation and enhancement of the existing landscape character.

The AGLV status is likely to change in the future following the reassessment of the County and local policy. It is likely that the area within the conservation area which is currently covered by AGLV designation, will be upgraded to AONB without the need for further assessment.

Protection from development is therefore not the priority for this issue. It is more likely that the quality of the landscape could suffer from neglect or wrong management practices.

Insert of extract from landscape character appraisal to be included here.

Trees

Much of the character of the area owes its origin to tree coverage. Trees within character area one are mainly confined to boundaries of residential plots and field boundaries. Blacksmith Lane appears to have a sylvan character due to the numerous young trees lining the road at the base of gardens. One or two mature trees remain which indicate much earlier plantings. Removal of such plantings to install new boundary treatment, paving or parking spaces will urbanise the character.

5. OPPORTUNITIES AND ENHANCEMENTS

5.1 Opportunities

- To continue the work already undertaken in recognising those buildings that may be suitable for local listing and to provide a formally agreed list.
- To continue to encourage and support the work of the Chilworth Gunpowder Mills Group to promote the protection, conservation, study and management of the site in the future

5.2 Enhancements

- To support the ongoing programme of sensitive restoration of historic structures some of which are already included in the Council's Minor Capital Works Programme.
- To continue a programme of tree management in consultation with Parks and Countryside, the Forestry Commission and best practice.
- To promote sensitive access and interpretation of the industrial history of the site for visitors whilst maintaining the existing low key visitor facility primarily for walkers

Appendix 1: Mapping

Appendix 2: Bibliography and References

Appendix 3: Sources of further information