

WASC 2145
WBI 566

① Conservation Management
Plan Vol. 2

- Quinan Stone

[See LF]

(Full Volumes

- see WANDA)

② VISION STATEMENT

ROYAL GUNPOWDER MILLS

WALTHAM ABBEY

CONSERVATION MANAGEMENT PLAN
VOLUME 2: GAZETTEER

№4
PRESS HOUSE
1879

JULY 2008

TURLEYASSOCIATES

1. INTRODUCTION



- 1.1 The Royal Gunpowder Mills is a historic explosives manufacturing complex near Waltham Abbey, Essex. It comprises some 350 recorded historic structures and remains, of which around 150 are substantial standing structures.

Site Designations

- 1.2 The entirety of the site is located within the Royal Gunpowder Factory Conservation Area, and the majority is designated as a Scheduled Ancient Monument. In addition, 20 of the buildings on site are statutorily listed: one at Grade I, eight at Grade II* and eleven at Grade II. These designations were put in place in 1994-7.

Ownership and Management

- 1.3 The site was in the ownership of the Ministry of Defence until 1997, at which point the ownership and administration of the site transferred to the current owners, the Royal Gunpowder Mills Trust. The Trust is a charitable body whose remit includes making the site more widely accessible to the public. The site is managed and run, on behalf of the Trust, by the Royal Gunpowder Mills Foundation.
- 1.4 Funding raised in the late 1990s - including funds raised by the development of some land at the far south of the site and a HLF grant of £6.3million - enabled the site to be partially opened to the public and for a select number of key buildings to be restored.
- 1.5 Since 2001 the southern part of the site, focused on Queensmead, has been open to the public on weekends and bank holidays during the summer. With the northern part of the site being accessible only by organised tours on a 'land train'. Events related to the Trust's remit are occasionally held on Queensmead.

Conservation Management Plan

- 1.6 This Gazetteer forms an Appendix to the Conservation Management Plan prepared by Turley Associates in XXX 2008. The main report considers the overall importance of the Royal Gunpowder Mills site, as well as its future needs and potential. The purpose of the Gazetteer is to focus in on individual structures on the site, highlighting any repair works required and considerations for re-use.
- 1.7 The Gazetteer considers all of the standing structures on site, as well as some other key remains, identifying for each: its history, function, condition, significance and principles for future management.

2. METHODOLOGY



Information Gathering

- 2.1 In order to complete this Gazetteer, a number of site visits were carried out and relevant textual sources consulted. References to these sources are noted throughout the report.

Significance

- 2.2 The Assessment of Significance for each structure was carried out with reference to guidance laid out in the Heritage Lottery Fund's *Conservation Management Planning* (2008), as well as English Heritage's *Conservation Principles, Policies and Guidance* (2008). These reports identify a range of heritage values to be taken into consideration when assessing significance, and suggestions on how these values may be enhanced through regeneration.
- 2.3 In the case of industrial heritage, it may be expected that the special interest of a building will primarily relate to its individual historic function and its functional inter-relationship with other buildings on the site. Structural, technological, cultural and social values will also be relevant. Architectural design can contribute to the interest of a some industrial buildings, but would rarely be identified as a principal factor.
- 2.4 The significance classifications assigned to the individual structures at Royal Gunpowder Mills reflect not only their contribution to the understanding of the historic development and function of the RGM site, but also, where relevant, their contribution to the understanding of the national and international explosives manufacturing industry. A list of the classifications is provided on the right.
- 2.5 Existing heritage designations are taken into account where relevant, but are not used as an automatic determinant of significance.

Management Guidelines

- 2.7 The Management Guidelines take into account the significance, use, condition and designations of each structure, in order to identify urgent works, further investigations required and opportunities for potential enhancement or alteration.

Significance Classifications

Highly Significant

The structure is *integral* to the understanding of the functions and historic importance of the Royal Gunpowder Mills;

The structure is of *strong importance* to the understanding of the national or international explosives manufacturing industry.

Significant

The structure *contributes substantially* to the understanding of the functions and historic importance of the Royal Gunpowder Mills;

The structure is of *some importance* to the understanding of the national or international explosives manufacturing industry.

Some Significance

The structure makes *some contribution* to the understanding of the functions and historic importance of the Royal Gunpowder Mills.

Neutral

The structure *neither contributes to, nor detracts from*, the understanding of the functions and historic importance of the Royal Gunpowder Mills.

Detracts

The structure makes a *negative contribution* to the understanding of the functions and historic importance of the Royal Gunpowder Mills.

12. QUINAN STOVE AND ANCILLARY STRUCTURES

Description

- 12.1 This entry encompasses the Quinan Stove building [22a], located in the north-western part of the site, and its associated structures: the two single-storey traverses ('Chilworth Mounds') to the south and west [22a/1 and 22a/2] and the site of the former Fan House to the north [22a/3] (see map on right).
- 12.2 The Quinan Stove is a long, single-storey u-shaped building with a barrel-vaulted roof. It is of precast concrete construction, with a steel and wire mesh frame rendered with a thin layer of concrete, then finished with a coat of bitumen. Each elevation has a series of iron-framed windows, those on the north, south and west elevations being narrow 10-light windows, and those on the principal east elevation being larger 25-light windows. The roof structure is only loosely tied to the walls (a safety precaution to limit damage in the event of an explosion). Three double-door entrances with iron-framed windows/fan-lights above are spread out along the east elevation. Additional single-door accesses are located at the ends of the main bay and the side extensions, allowing the building to be accessed from all elevations.
- 12.3 Internally, the western half of the Quinan Stove is divided into 15 bays, separated by concrete partition walls extending approximately half the width of the building. Each bay is lit by two windows in the west elevation. There is a pipe through the west wall into each bay at low level. The walls throughout the interior are coated in painted calico.
- 12.4 The two single-storey traverses comprise tapered compacted earth walls, revetted with bitumen to help hold the structure in place and then covered with a layer of corrugated iron. The structures are strengthened with angle irons at the corners and flat iron rails to the sides.
- 12.5 The Engine/Fan House is now lost and its site marked only by brick and slate rubble, plus a section of building plinth.



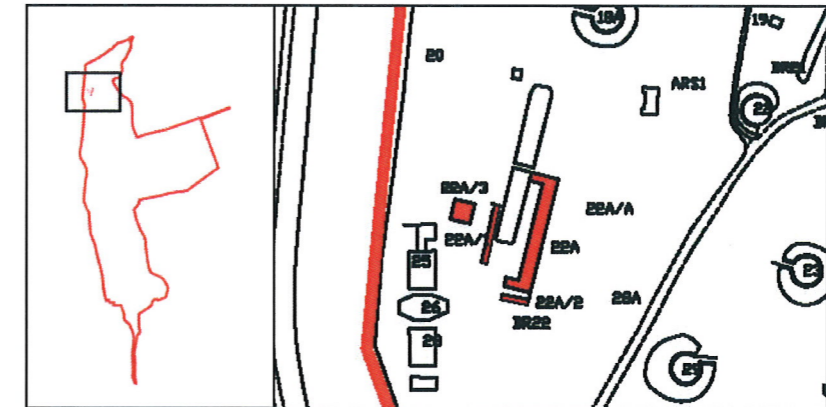
The Quinan Stove and one of its traverses (left)



The interior of the Quinan Stove, with its series of drying bays (left), showing the now degraded condition of the interior

Historic Use

- 12.6 The Quinan Stove, traverses and the Fan House were all built as a single complex in 1936. At this time the government already anticipated further military conflict (WWII) and was secretly upgrading its munitions facilities, including the Royal Gunpowder Mills.
- 12.7 The Quinan Stove, a modern replacement for the more traditional rounded drying stove (as seen throughout the site), was preferable for its ability to dry higher volumes of guncotton quickly (the drying process was expensive), as well as for its improved safety record. It had already been tested with great success by its inventor KB. Quinan at H.M. Munitions Factory Gretna during WWI, though that site has since been dismantled in the 1920s.
- 12.8 Previous drying stove systems had blown warm air into a single large chamber, where large batches of gun cotton were laid out for drying. This involved almost constant heat generation within the stoves and risked over-drying (superdrying) of some parts of the batch, making the product less stable.
- 12.9 The Quinan Stove on the other hand worked on the basis of simultaneously drying smaller batches of gun cotton within multiple individual bays, with gun cotton spread out in thin layers so that hot air could pass through the material. This enabled more rapid drying and minimised the problems of destabilisation, as there was less opportunity for heat to accumulate within the material (cooler air could be pumped into the bay, as well as hot) and drying times could be tailored to individual batches to avoid superdrying. The circular metal 'baskets' used to hold the gun cotton during drying, which were attached to the pipe in each bay, are no longer in situ.



- 12.10 The hot air for drying the gun cotton was generated in the Fan House, located to the west of the Quinan Stove (behind the larger of the traverses). The traverses themselves provided blast protection for the surrounding buildings in the event of an explosion within the Quinan Stove. The particular form of traverse used in this complex was known as a 'Chilworth Mound', its design being based on examples at the Chilworth explosives works, Surrey. The new cut from the Millhead Stream which served the Quinan Stove (to the west) was used for transportation of the gun cotton by boat, with goods transferred from the building to boats via the doorways in the end bays.
- 12.11 The Royal Gunpowder Mills' Quinan Stove appears to originally have been intended as the first of many such structures to be constructed on the site, though in the end no others were. Instead it was used as a test case for the design of stoves constructed in new factories elsewhere in the country and, as such, attracted much interest from government offices and other British explosives works.



The larger 'Chilworth Mound' traverse, west of the Quinan Stove

K. B. Quinan (1878-1948)

Kenneth Bingham Quinan, is widely attributed with transforming the British munitions industry in the early-20th century.

An American-born self-taught chemical engineer, Quinan began his professional career under the tutelage of his uncle W. R. Quinan, an explosive expert who had been involved in the American Civil War. International renown came in the early-1900s when, having travelled to South Africa with his uncle to establish an explosives factory for Cecil Rhodes' DeBeers mining corporation, K. B. set about developing the explosives factory at Somerset West into the second largest in the World. Shortly afterwards he began experimenting with new techniques for improving the nitroglycerine process.

In 1915, one year into the First World War and following a munitions shortage scandal, the British Government turned to Quinan for help and appointed him Head of the Explosives Supply Department for the British Army. His role was to design and oversee the construction of munitions factories to supply the military, the most greatest of which was Dumfriesshire in southwest Scotland (named Gretna). Here he employed his own patented guncotton drying stove building, known as the Quinan Stove. It was highly successful and by the end of the First World War total output of cordite was at 57,000 tons.

Quinan's work towards the war effort of WWI was widely acclaimed once it ended, with The Times stating "it would be hard to point to anyone who did more to win the 1914-1918 war than KB Quinan." Following the war Quinan returned to South Africa, after which Gretna and his other sites were mostly dismantled. His innovative Quinan Drying Stove was employed at a handful of new factories during WWI, but now few examples, if not only that at Royal Gunpowder Mills, now remain.

Condition

- 12.12 The Quinan Stove is in relatively poor condition, resulting from extensive water ingress. Its metal window frames are now corroded and warped and no glazing remains. The external bitumen covering to the roof and walls has failed in places, notably at joints, allowing water ingress both inside the building and to the structural steel frame. The corrosion of this frame has in places resulted in the expansion of metal elements, 'blowing' the concrete skin from the frame.

Rainwater goods are either missing or damaged, as are most entrance doors. Internally, the calico wall and roof covering is substantially peeling.

- 12.13 Condition surveys show that the building must now be made weather tight to prevent further corrosion of the structural frame and ultimately the failure and collapse of the building. The metal windows, due to the extent of corrosion, cannot be repaired and will require replacement.
- 12.14 The Chilworth Mound traverses appear to be structurally sound, though the iron frames have some patches of rust and the corrugated iron sheeting has become split in places. There is extensive vegetation growth to both traverses, with a strong risk that roof growth could affect structural integrity at a later date. The site of the Fan House is now marked only by a plinth and rubble.

Heritage Designations

- 12.15 The Quinan Stove, the two traverses and the remains of the Fan House all form part of the Scheduled Ancient Monument and Conservation Area.
- 12.16 None of the structures within this entry are statutorily listed. However, the Quinan Stove is classified by English Heritage as a 'Building at Risk'.

Assessment of Significance

- 12.17 The Quinan Stove and its ancillary buildings, as part of the preparations for WWII manufacture, form part of the last phase of concerted development to take place at the Royal Gunpowder Mills.



Detail of the Quinan Stove, showing its corroded metal windows, damaged entrance doors and the failure of the bitumen covering

- 12.18 Though unlisted, the Quinan Stove itself is of notable historic interest for several reasons. Firstly, for its association with K. B. Quinan, one of the most significant figures in early-20th century explosives industry, and with his technological innovations in the chemical manufacturing process. Secondly, because though its construction and design was not directly overseen by Quinan, it was regarded at the time as a test template for the creation of other similar facilities for WWII munitions manufacture. Thirdly, as a rare, if now not unique, surviving example of its type. And fourthly, for its structural interest as an early example of the application of pre-cast concrete construction to industrial buildings. The Quinan Stove is therefore classified as **Highly Significant**.

- 12.19 The Chilworth Mound traverses, in particular that adjacent to the Quinan Stove [22a/1], are of interest for their contribution to the understanding of the original Quinan Stove complex, in particular the dangers associated with the chemical process. They also form part of the large group of traverses on site. In their own right however, they do not substantially contribute to the understanding of the Royal Gunpowder Mills site. Traverse 22a/1, because of its contribution to the setting of the Quinan Stove, is therefore classified of **Some Significance**. Traverse 22a/2, which is not as visually connected with the Quinan Stove, is classified as being of **Neutral Significance**.

- 12.20 The Fan House is no longer extant and in its current form (largely rubble) neither contributes to, nor detracts from, the understanding of the site. The remains of the Fan House are therefore classified as being of **Neutral Significance**.

Management Guidelines

- Quinan Stove and Chilworth Mound Building 22a/1 to be retained in situ. Traverse 22a/2 may be retained, but there may be scope for removal if sufficient benefits were identified.
- In the short-term, Quinan Stove to be urgently made weatherproof in order to prevent structural collapse.
- In the longer-term, metal frame structure to be consolidated and repaired. In addition, cast concrete and bitumen layers, internal calico wall covering, metal frame windows and glazing, and timber doors to be repaired or replaced as necessary.
- Traverse 22a/1 to be consolidated, as well as 22a/2 if retained.
- Quinan Stove to ideally be made accessible to visitors and re-used in a manner which contributes positively to the appreciation of the Royal Gunpowder Mills site.

21. REMOTE ACCUMULATOR TOWER

Description

- 21.1 The Remote Accumulator Tower (L136) is a square three-storey brick tower located just south of the historic lock linking the high and low water level water systems at the north end of Queensmead (see map on right).
- 12.2 The building's design is simple, but incorporates some architectural detailing: stepped elevations; a brick band entablature with vertical corbelled header strips; and a rounded brick arch to the southern entrance within which stands a pair of timber and beaded panelled doors. These features reference Italianate architecture and reflect, in a simpler manner, the architectural treatment of a number of buildings around the east and south sides of Queensmead. The roof is flat and constructed of concrete.

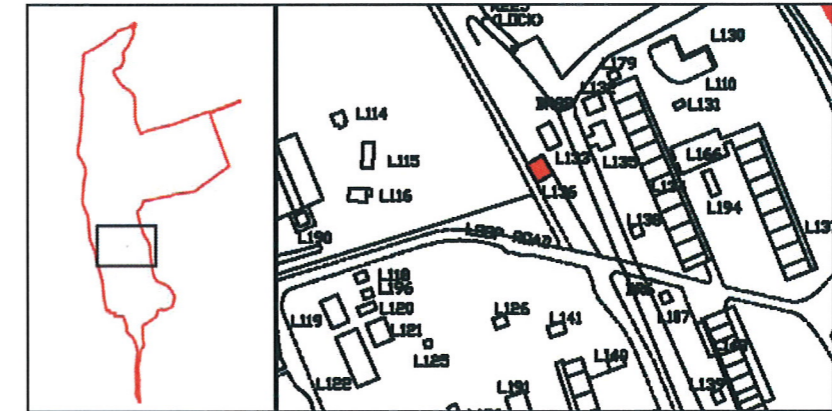


The Remote Accumulator Tower

- 12.3 There is fenestration at first and second floor levels on the south (main) elevation, and at second floor level only on the other elevations. There are two different window types: at the second floor there are 12-light crittal-framed windows with concrete lintels and red brick cills; whilst at first floor on the south elevation the windows are larger picture windows with side lights and blue brick cills. A stone plaque at first floor level on the south elevation is inscribed 'RGPF VR 1879'. Iron hooks, telegraph insulators and fuseboxes are fixed to the building.
- 12.4 Internally, there are three storeys, with the space remaining largely open, except for a narrow partitioned area on the north side of the building on each floor, within which the staircase is located. There is a stone flag floor at ground floor. At first and second levels the floor comprises concrete planks on steel beams, with painted or lino finish. No machinery remains.

Historic Use

- 12.5 Built in 1879, the Remote Accumulator Tower was constructed to reinforce the site's power supply.
- 12.6 Previous to this, hydraulic power had been generated within towers located at the centre of the Incorporating Mills themselves (as can be seen in the design of surviving examples to the south). This format, which located both power-generation and processing in one place, raised the risk of explosions. Otherwise, machinery was powered by water wheel (as at the 1850 Gunpowder Press House - 103 & 104)
- 12.7 The construction of a number of new Press Houses on the site in 1879, such as Press House No. 4 to the north, required a corresponding increase power supply. This led to the construction of 'remote' accumulating towers such as L136, which had the ability to generate additional power, as well as store and re-distribute that created in the Incorporating Mill engine towers.
- 12.8 Internally, the Accumulator Tower would have originally accommodated large pieces of machinery, including a weight-loaded ram and a large water tank. Water would have been pumped into the tower from the nearby canal by a steam engine, raising the ram, which then moved downwards to create hydraulic pressure. This hydraulic power was then distributed throughout the site by metal pipes, in particular operating the various presses just to the north.
- 12.9 In 1945 the Remote Accumulator Tower was taken out of use and its machinery removed to allow the building to be converted into offices. Today the Tower it is a nature observation point.



Condition

- 12.10 The Remote Accumulator Tower has recently undergone conservation and repair works, and is therefore in generally good condition both internally and externally.

Heritage Designations

- 12.11 The Remote Accumulator Tower forms part of the Royal Gunpowder Factory Conservation Area and the designated Scheduled Ancient Monument. It is also Grade II* listed.

Assessment of Significance

- 12.12 The Remote Accumulator Tower's interest lies primarily in its contribution to the understanding of the historic changes which took place at the Royal Gunpowder Mills in the mid- to late-19th century, a period which saw great expansion and technological change at the Royal Gunpowder Mills. In particular, for its contribution to the understanding of the increasing use and growing importance of hydraulic power to the development of the site. Architecturally, it is of minor interest, principally because of its relationship to the 'Italianate' design of other buildings around Queensmead.

Management Guidelines

- Remote Accumulator Tower to be retained in situ.
- Building to continue to be used in a manner which enhances the visitor experience of the site.

BELFAST	028 9023 5435
BIRMINGHAM	0121 233 0902
BRISTOL	0117 989 7000
EDINBURGH	0131 225 1717
GLASGOW	0141 248 9233
LEEDS	0113 386 3800
LONDON	020 7851 4010
MANCHESTER	0161 831 1300
SOUTHAMPTON	023 8072 4888

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ROYAL GUNPOWDER MILLS

WALTHAM ABBEY

VISION STATEMENT

Nº4
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ROYAL GUNPOWDER MILLS

THE SPIRIT OF PLACE

The Spirit of Place

The 'spirit of place', relates to a location's distinctive atmosphere or special quality.

It is a concept that has been used to identify places of cultural resonance throughout history, drawing upon the Roman tradition of 'Genius Loci', a guardian spirit of places associated with the promotion of intellectual contemplation.

In short, 'the spirit of place' can be used to describe locations that are deeply memorable or evocative in terms of their landscape, architecture and experience.

Royal Gunpowder Mills is such a place, as testified by the reactions of those who visit the site and the passion of those who care for it.

The existing spirit of Royal Gunpowder Mills, and the opportunity to maintain and enhance it for future generations, is at the heart of our vision for the site.

Site Plan



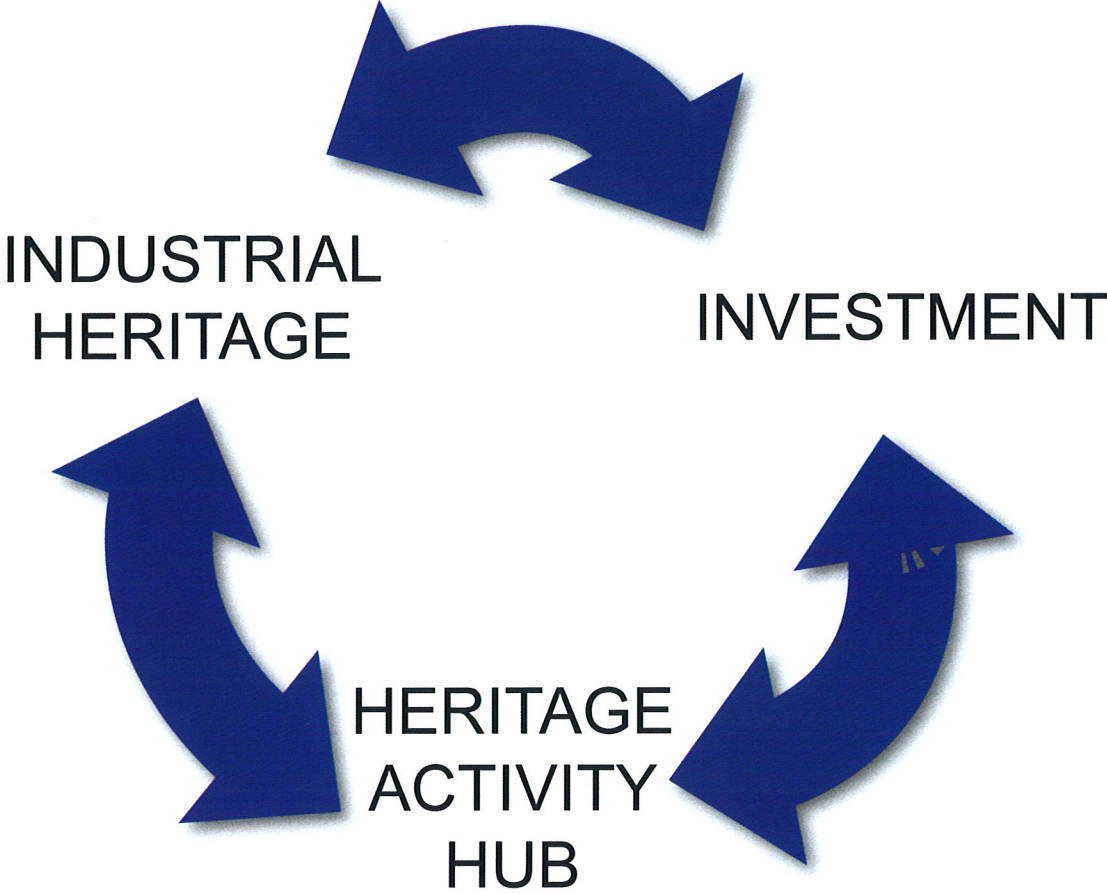
A Lasting and Self-Sustaining Vision

Three key aspects need to be addressed to create a lasting and self-sustaining vision for Royal Gunpowder Mills: funding, amenity and stewardship. In order to achieve this, the vision will concentrate on the following key principles:

- restoring the unique heritage of Royal Gunpowder Mills;
- enhancing the access and importance of Royal Gunpowder Mills;
- managing the future self-sustainability of Royal Gunpowder Mills; and
- consolidating the vision and partnerships of Royal Gunpowder Mills.

The 'Virtuous Circle' illustrated on the opposite page sets out the principles which will ensure the lasting legacy and viability of Royal Gunpowder Mills.

The Virtuous Circle





Three Elements

What is the spirit of Royal Gunpowder Mills that makes it unique? Many things of course, but there are three elements that stand out. They are:

- landscape;
- water; and
- heritage

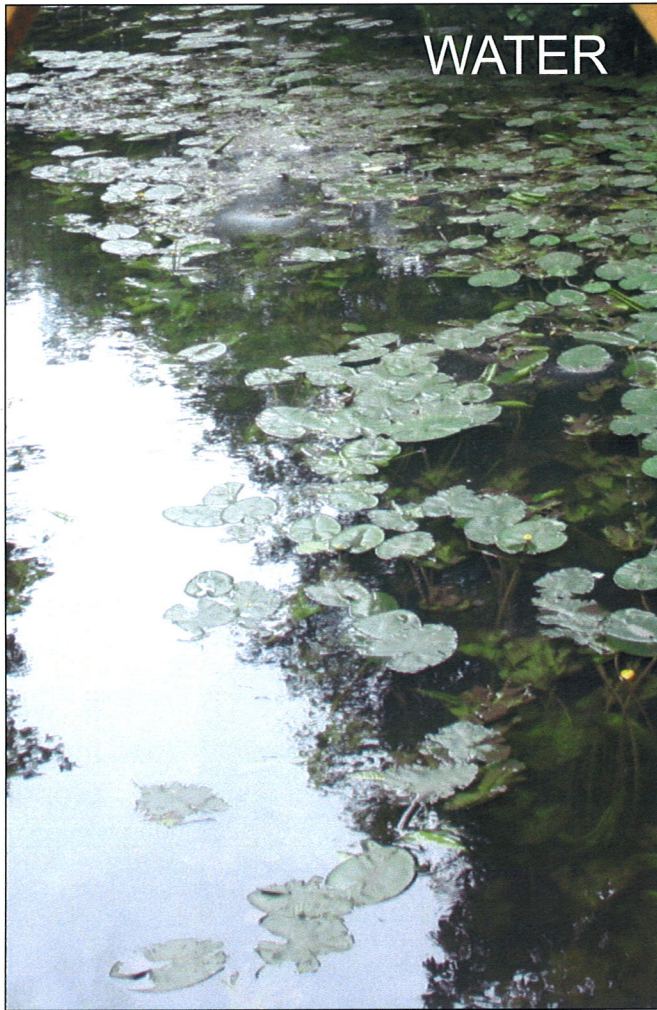
Taken together, the synergy of these three elements provides an enormous potential for regeneration and design and a lasting legacy for Royal Gunpowder Mills. They provide Royal Gunpowder Mills with a unique 'spirit of place'.

Over the next pages the three elements are analysed to establish their contribution to the identity and character of the Royal Gunpowder Mills.

LANDSCAPE



WATER



HERITAGE





Landscape


The landscape within and surrounding Royal Gunpowder Mills provides a complex and sensitive setting that is full of environmental richness and diversity. The landscape ranges from open managed countryside on the higher ground to wooded areas and wet marshland areas within the base of the Lee Valley.

Yet this landscape presents challenges because of Green Belt, Local Wildlife Site and Site of Special Scientific Interest (SSSI) designations. The Royal Gunpowder Mills site also falls within the boundary of the Lee Valley, a protected corridor that stretches from Ware in Essex/Hertfordshire to the Docklands area in East London.

It will be essential to retain and enhance the existing landscape as part of any future proposals.



Key - Landscape and Ecology

-  Site boundary
-  Green Belt
-  SSSI
-  Local/County Wildlife Reserve
-  Lee Valley Park boundary

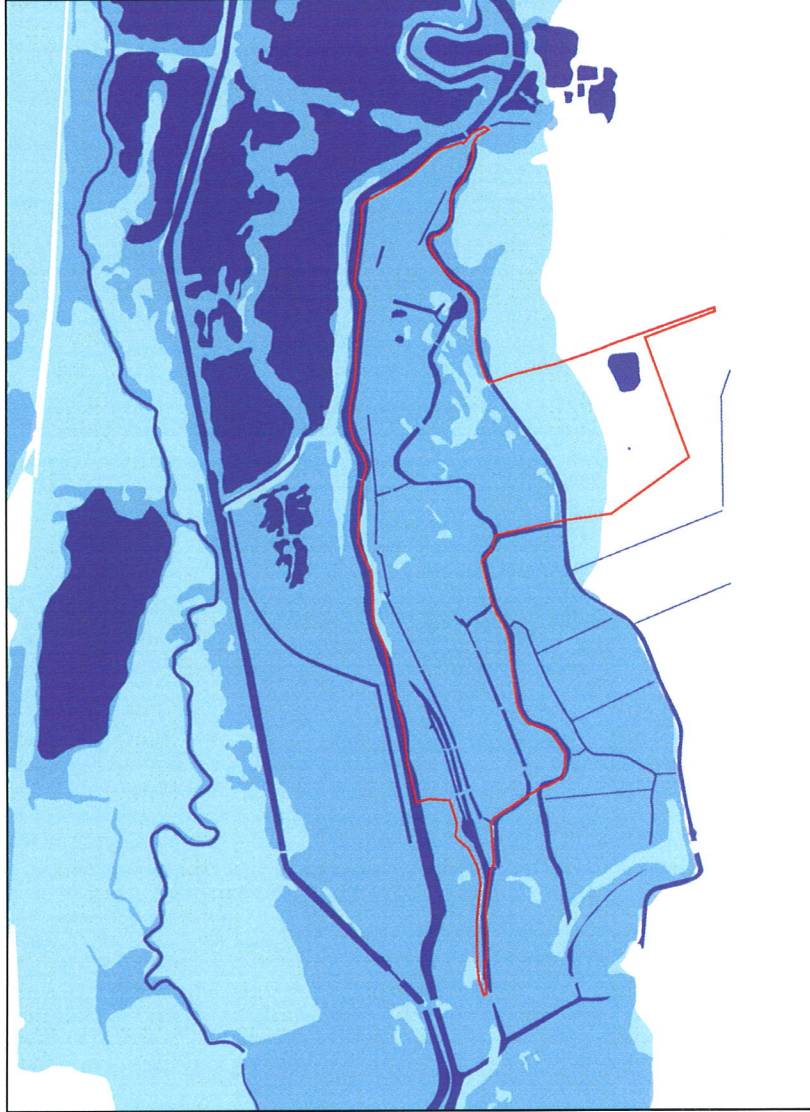
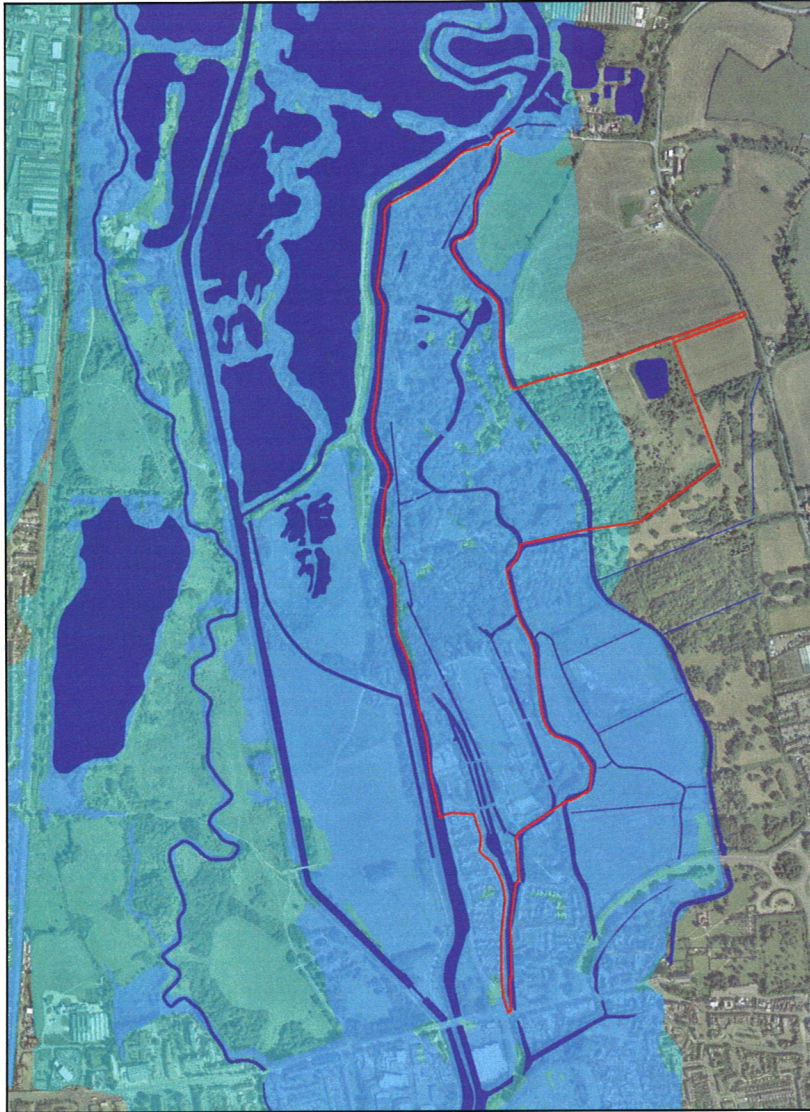






Water

The presence of water has been key to the original establishment and long term viability of Royal Gunpowder Mills. There is a historic grid of water bodies, including rivers, streams, canals and lakes both in and around the site. These provided essential power to the site and enabled explosives to be moved through and out of the site in a sensitive manner.

Currently, the water bodies within the site add to its scenic quality and natural habitats. Those surrounding the site tend to be used more actively, for example for canoeing and fishing. The existence of water within Royal Gunpowder Mills provides further opportunity for the future regeneration of the site primarily because of its amenity value.

However, the water environment also poses a constraint to future development of the site in terms of the risk of flooding.



- Key - Hydrology
-  Site boundary
 -  Waterbody
 -  Flood Zone 3
 -  Flood Zone 2







Heritage

Royal Gunpowder Mills provides a unique insight into the heritage of explosives manufacture and development. This is manifested in buildings, structures and the landscape. As well as a physical legacy, the site is also of social and cultural significance because of its role in the military history of our nation.

The site has several heritage designations including Scheduled Ancient Monument, Conservation Area and listed buildings. These designations need to be understood and respected to maximise the potential of the site.



Key - Heritage

-  Site boundary
-  Scheduled Ancient Monuments
-  Conservation Area boundary
-  Listed Buildings

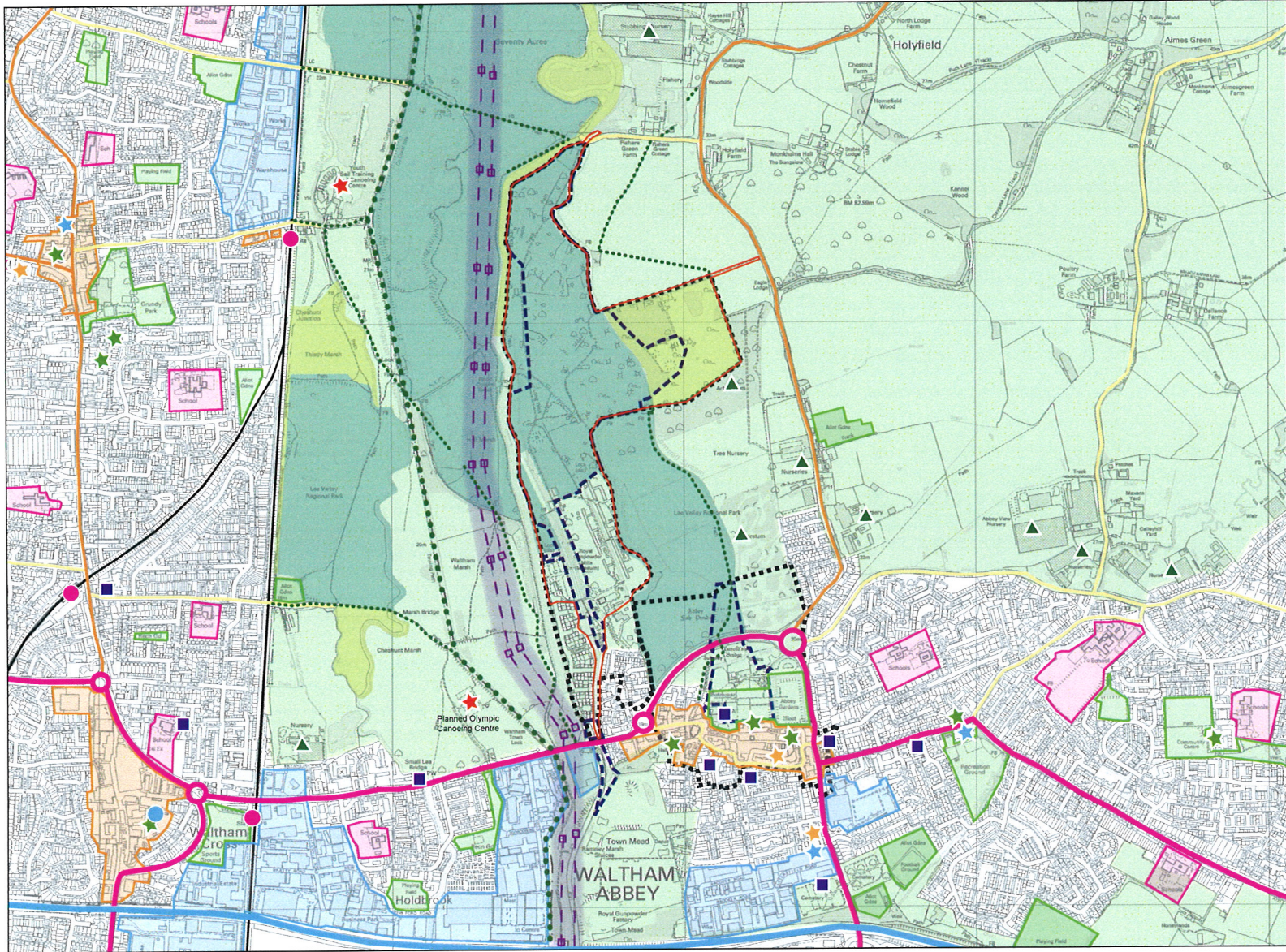




























Local Context

The diagram on the opposite page analyses the context surrounding Royal Gunpowder Mills. It illustrates the site's proximity to the movement network of the railway stations, road infrastructure and public rights of way as well as land use analysis, highlighting nearby town centres and local community facilities.

It also shows key constraints such as the power lines running close to the site and brings together the range of policy designations that affect the site.

Other notable features are the Olympic venue to the west of the site and the prevalence of arboretums and nurseries in the area.



-  Site Specific Policy HC16
-  Nursery / Arbotrium
-  Watersports Centre (Existing/Planned)
-  Community Facilities (Libraries/Halls/Post Offices)
-  Hospital / Ambulance Station
-  Fire Station
-  Police Station
-  Place of Worship
-  Railway Station
-  Bus Station
-  Motorway
-  A Road
-  B Road
-  Minor Road
-  National Trail
-  Other Significant Footpath
-  Railway Line
-  National Grid Power Lines & 30m buffer zone
-  Conservation Area
-  Scheduled Ancient Monument
-  Metropolitan Green Belt
-  Site of Special Scientific Interest
-  County or Local Wildlife Site
-  Urban Green Space / Recreation Facility
-  Employment Area
-  Town or Local Centre
-  Schools



ROYAL GUNPOWDER MILLS

ARCADIA

Arcadia

The page opposite shows Thomas Cole's 'The Arcadian or Pastoral State' (1835), part of a series of five paintings by the English born painter depicting the rise and fall of an imaginary city. This second painting in the series reflects an idealised pre-urban ancient Greece, with 'Arcadia' being the ideal state.

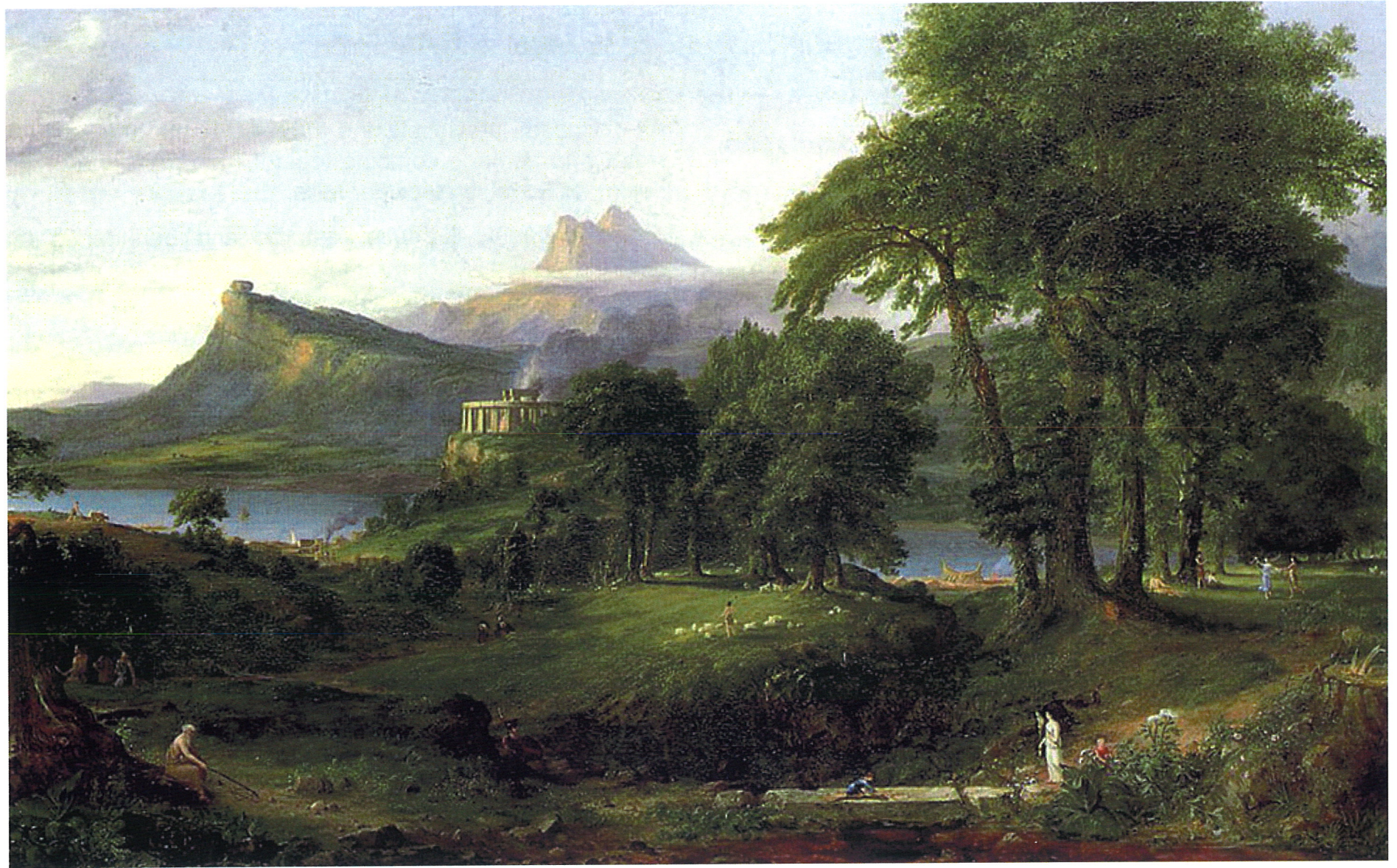
Arcadia represents buildings set in landscape as opposed to the more urban notion of buildings structuring and enclosing landscape. It also represents individual architectural expression and privacy through design and layout.

Thus the concept of Arcadia is ideally suited to any proposals for the future development and enhancement of Royal Gunpowder Mills: perpetuating the existing character of scattered development within a green setting and the retention and celebration of a wooded and natural landscape.

The following pages demonstrate how the theme of Arcadia will be promoted throughout the site.

'A picturesque approach to landscape design as typified by the layouts of parks of great houses in the 18th century'

(Essex Design Guide)



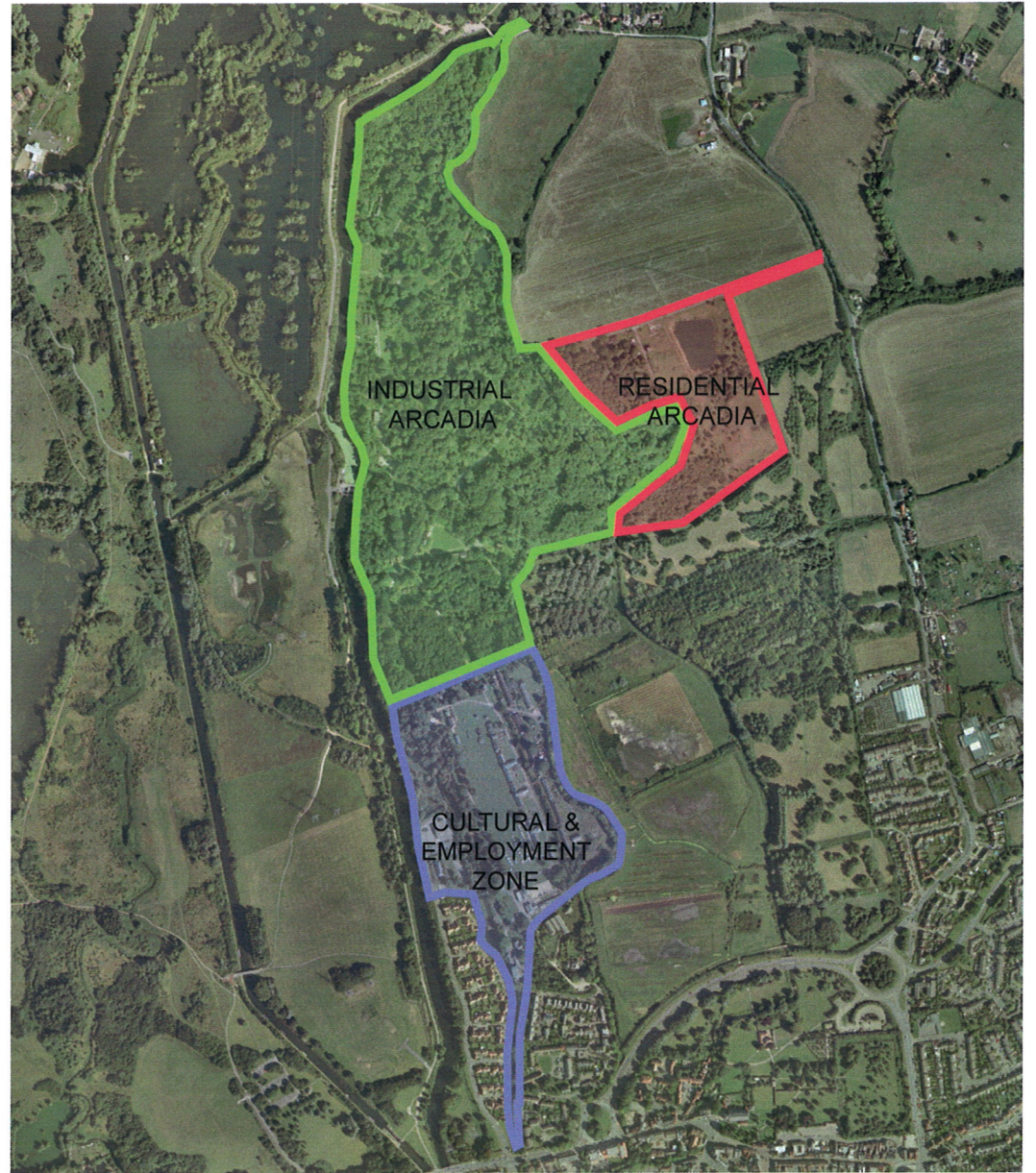


Character Areas

As discussed previously, the three elements of landscape, water and heritage combine together to create the unique setting of Royal Gunpowder Mills.

These elements produce features and boundaries that naturally sub-divide into three complementary character areas:

- Industrial Arcadia;
- Cultural and Employment Zone; and
- Residential Arcadia.







Industrial Arcadia

This character area is located within the central and northern area of Royal Gunpowder Mills. Remains of buildings and structures are set within a mature landscape setting, providing a romantic landscape of picturesque decay.

The vision for this area will be to:

- restore;
- renew;
- manage; and
- consolidate.

There is also an aspiration to open this area up more widely to site visitors and to encourage greater interaction. This is considered on the following pages.

-  Water bodies
-  Industrial / heritage feature





Arcadia Interpreted

The plan on the opposite page illustrates an enhanced visitor experience for Royal Gunpowder Mills. It indicates key paths, nodes and landmarks the visitor meets as he or she moves through the site, all of which focus on historic structures or routeways.

On the ground, visitors will be able to choose their route around the site depending on the time available or their personal interests. Trails may help interpret the different processes which took place on the site (e.g. the 'gunpowder trail' and the 'chemical trail') or highlight nature and ecology. Buildings and structures will be experienced at different proximities; some being accessible and others glimpsed through the trees.

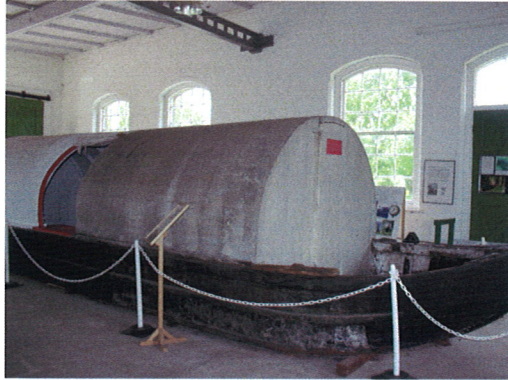
-  Water bodies
-  Industrial /heritage feature
-  Landmark structure
-  Node
-  Pathways












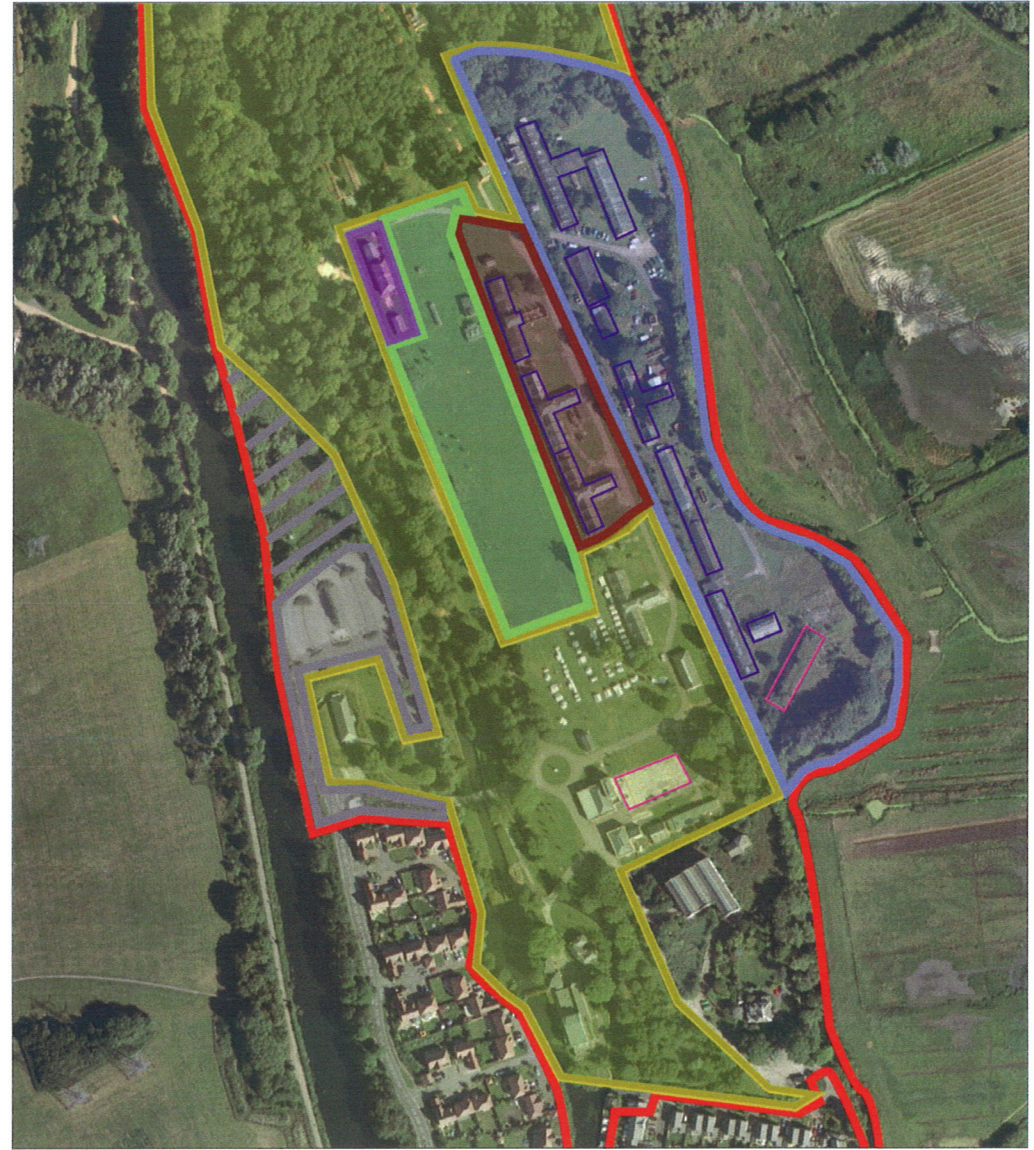
Cultural and Employment Zone

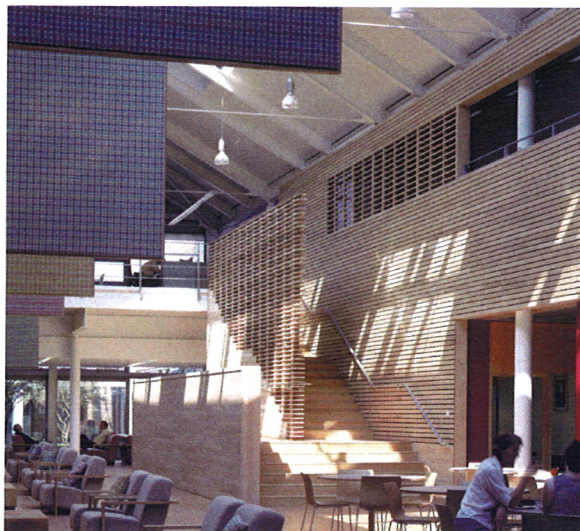
This character area is located within the southern part of the Royal Gunpowder Mills site. Here the buildings are in relatively good condition and are set within a well managed and more open landscape. Some of the buildings are safe to access and are currently being used to interpret the cultural history of the site.

The vision for this area will be to promote activity. In order to achieve this, there is an aspiration to make all of the buildings structurally sound and open them up for either visitor or business use.



-  Visitor centre & interpretation
-  Commercial/business
B1 & B2
-  Creative business/
Conservation workshops
-  Community space, events &
corporate hospitality
-  Site shop
-  Car park
-  Possible car park extension
-  Restoration opportunity
-  Development opportunity





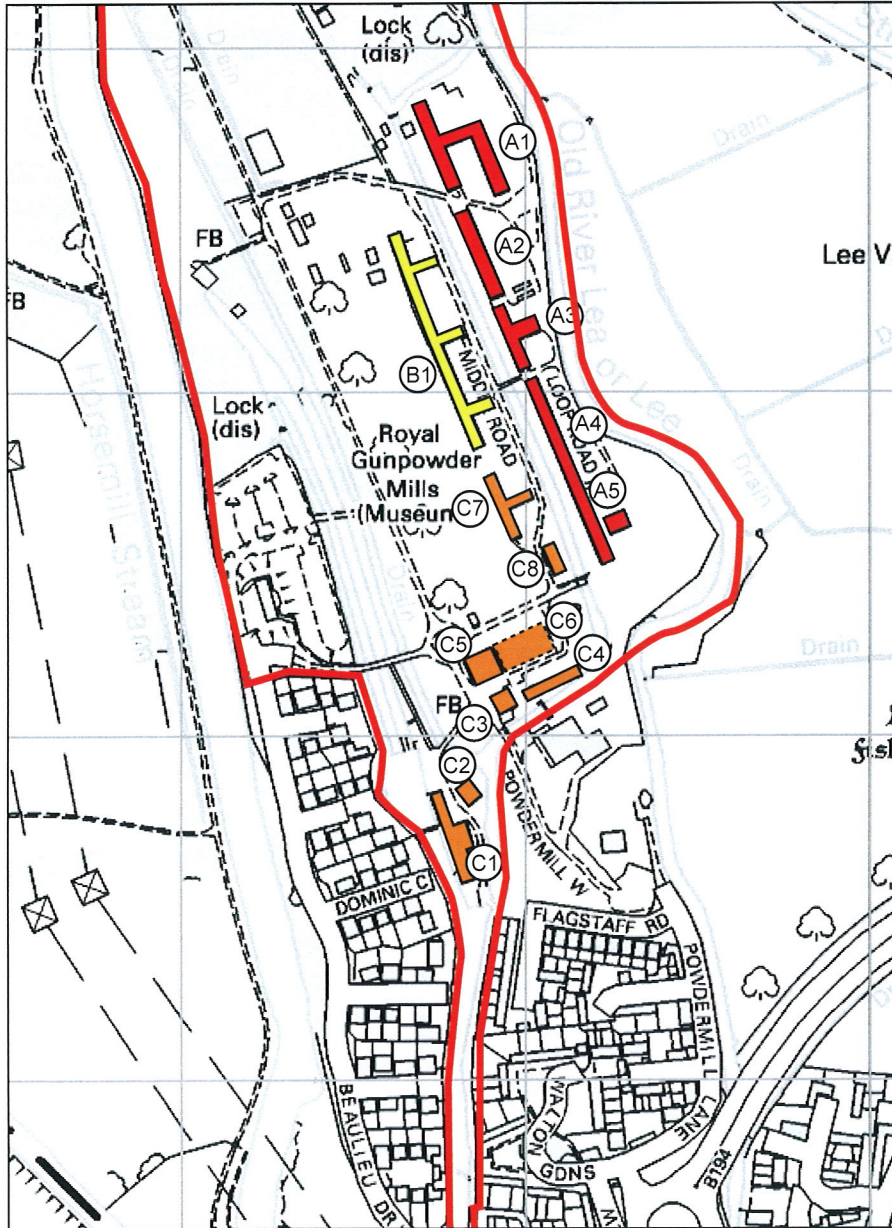
Employment

Within the cultural and employment zone there is an aspiration to re-use and restore existing buildings. This is particularly appropriate within the 'Eastern Flank' area. Here the restored buildings could provide a mixed-use community-based centre, providing spaces for interpretation, employment and research.

The plan and table on the opposite page illustrates the potential types of employment for this area, which include:

- Business and Commercial Zone;
- Creative Business Zone; and
- Visitor and Interpretation Zone.

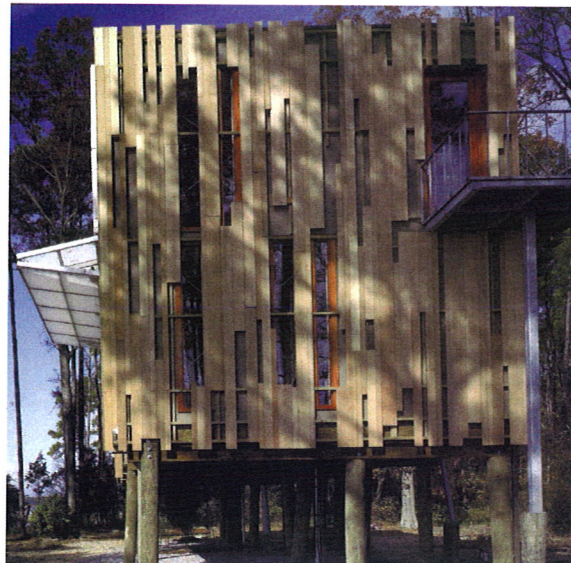
Any restoration or development will be sensitively and sustainably designed.



A: Business / Commercial Zone	Building No	GEA sq m	GEA sq ft
	A1	1,322	14,230
	A2	683	7,352
	A3	627	6,749
	A4	1,251	13,466
	A5	157	1,690
	Total	4,040	43,486

B: Creative Business Zone	Building No	GEA sq m	GEA sq ft
	B1	1,830	19,698
	Total	1,830	19,698

C: Visitor / Interpretation Zone	Building No	GEA sq m	GEA sq ft
	C1	713	7,675
	C2	148	1,593
	C3	215	2,314
	C4	310	3,337
	C5	388	4,176
	C6	462	4,973
	C7	192	2,099
	C8 (proposed)	803	8,643
	Total	3,231	34,810



Residential Arcadia

This character area is located within the eastern area of Royal Gunpowder Mills (New Hill). This area is the only area of the site which falls outside the flood zone.

The sketches opposite come from the 'Essex Design Guide', published in 1997 and seen as a seminal and influential urban design work in advising on residential layouts.

The vision for this area will be to promote an Arcadian setting through:

- retaining and enhancing key elements of the landscape setting;
- preserving and improving key ecological habitats; and
- protecting and conserving key historical structures.

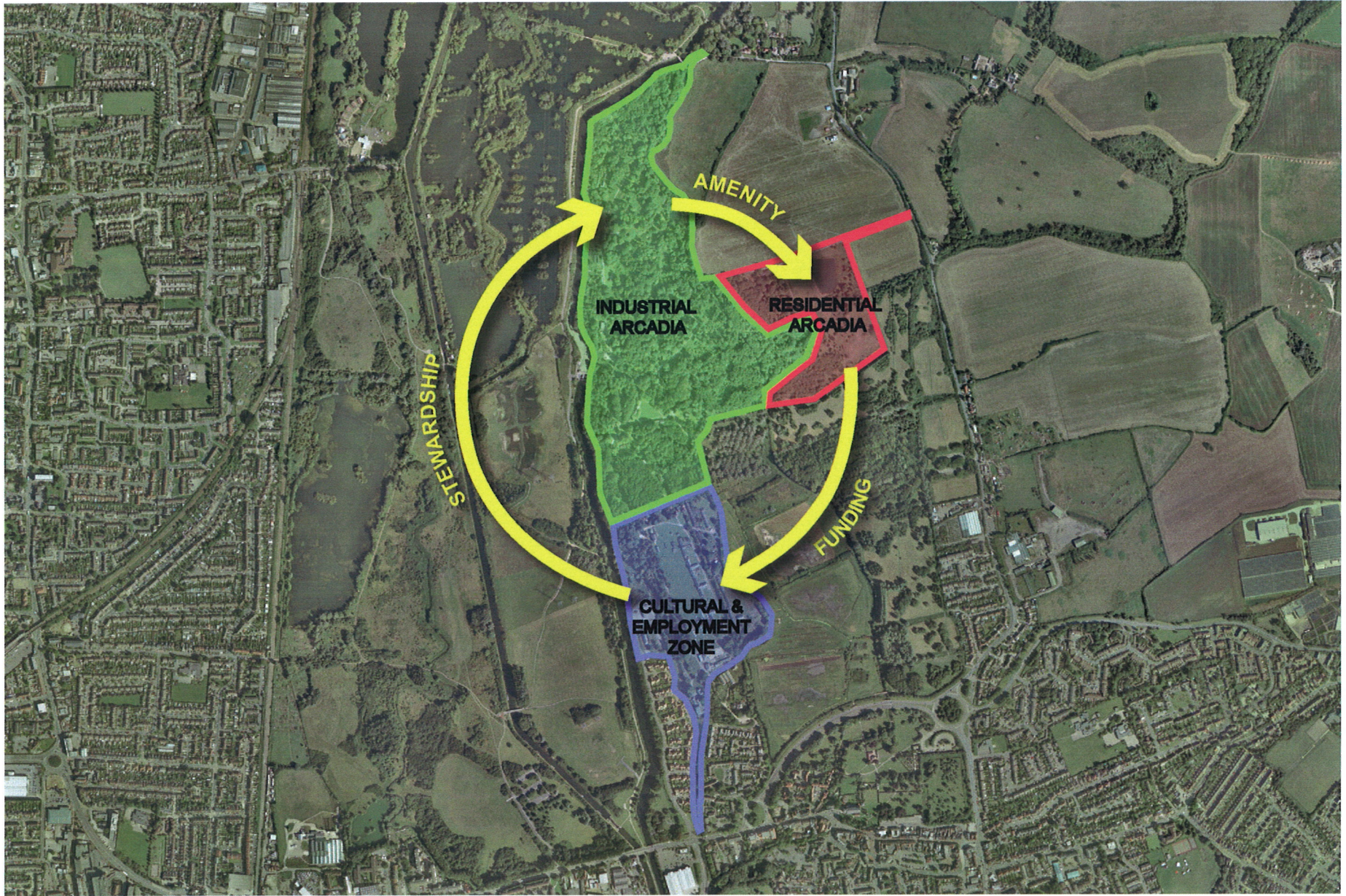
As with the employment area, any new buildings in the area will be sensitively and sustainably designed.



Funding, Amenity and Stewardship

The relationship between the character areas is fundamental to the future self-sustainability of the Royal Gunpowder Mills.

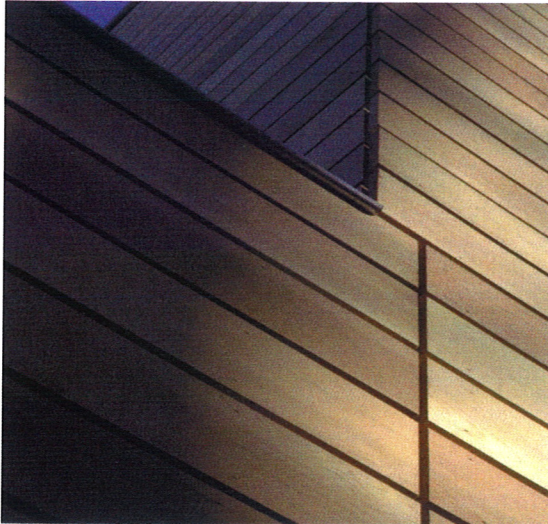
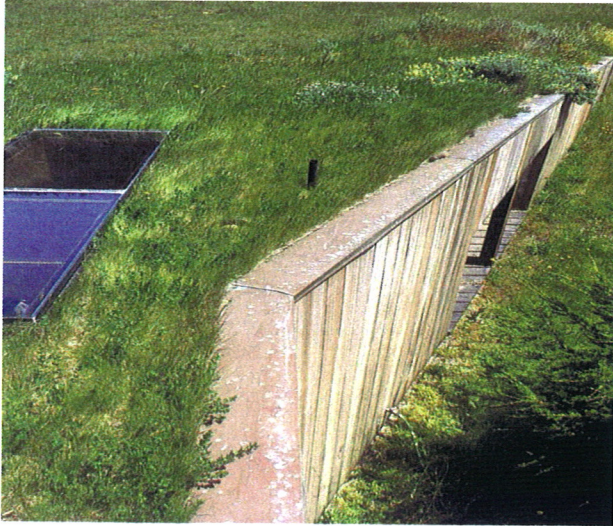
Through sensitive restoration and additional development, value will be generated to realise the site's potential and conserve its historic legacy.





ROYAL GUNPOWDER MILLS

SUSTAINABILITY



Sustainability

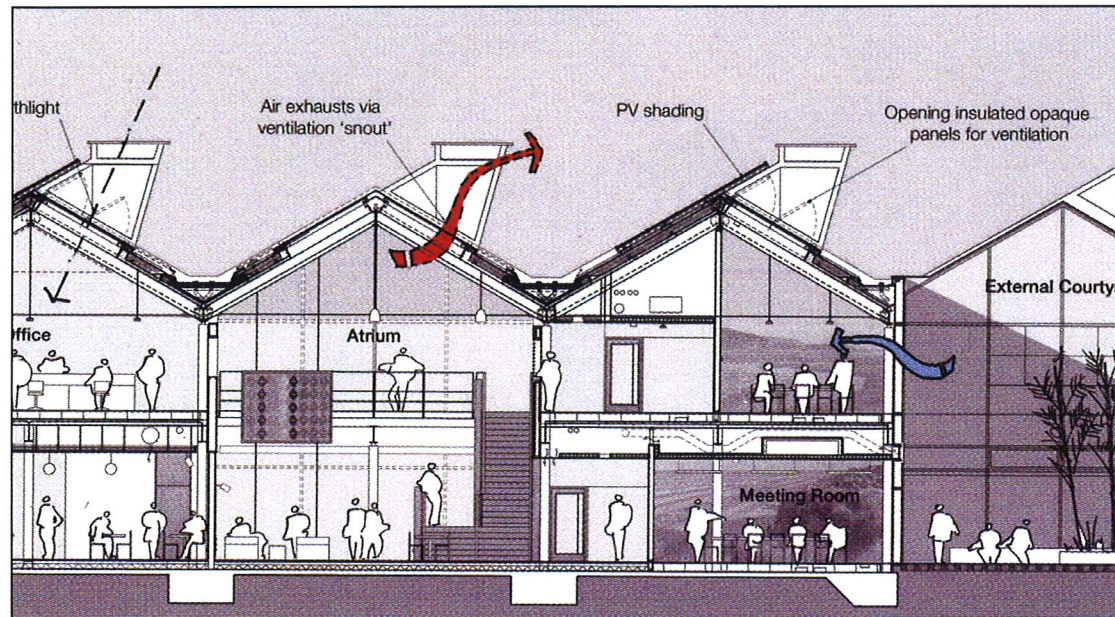
A key part of the vision for any development proposal within the site is for it to have sustainable and low carbon principles.

Any new buildings will strive to meet the 2016 challenge and reach a Sustainable Homes Code 'Level 6'. This will be achieved by:

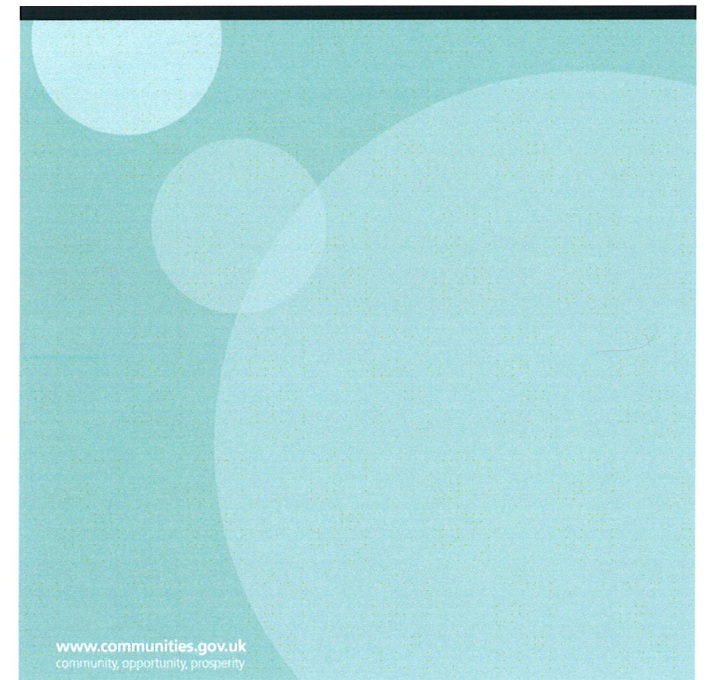
- integrating the development within the landscape;
- harnessing the energy that the site can offer;
- promoting world-class architecture; and
- sourcing local and regional sustainable construction materials.

Table 2: Code Levels for Mandatory Minimum Standards in CO₂ Emissions

Code Level	Minimum Percentage reduction in Dwelling Emission Rate Over Target Emission Rate
Level 1 (★)	10
Level 2 (★★)	18
Level 3 (★★★)	25
Level 4 (★★★★)	44
Level 5 (★★★★★)	100
Level 6 (★★★★★★)	'Zero Carbon' Home



The Code for Sustainable Homes
Setting the standard in sustainability for new homes



www.communities.gov.uk
 community, opportunity, prosperity



Cheshunt
Waltham Abbey

1/2 mile.
2 miles

Fishers Green

1/2 mile

Burne
oydon

2 1/4 miles
5 3/4 miles

ROYAL GUNPOWDER MILLS

PROCESS,
PARTNERSHIP AND PASSION



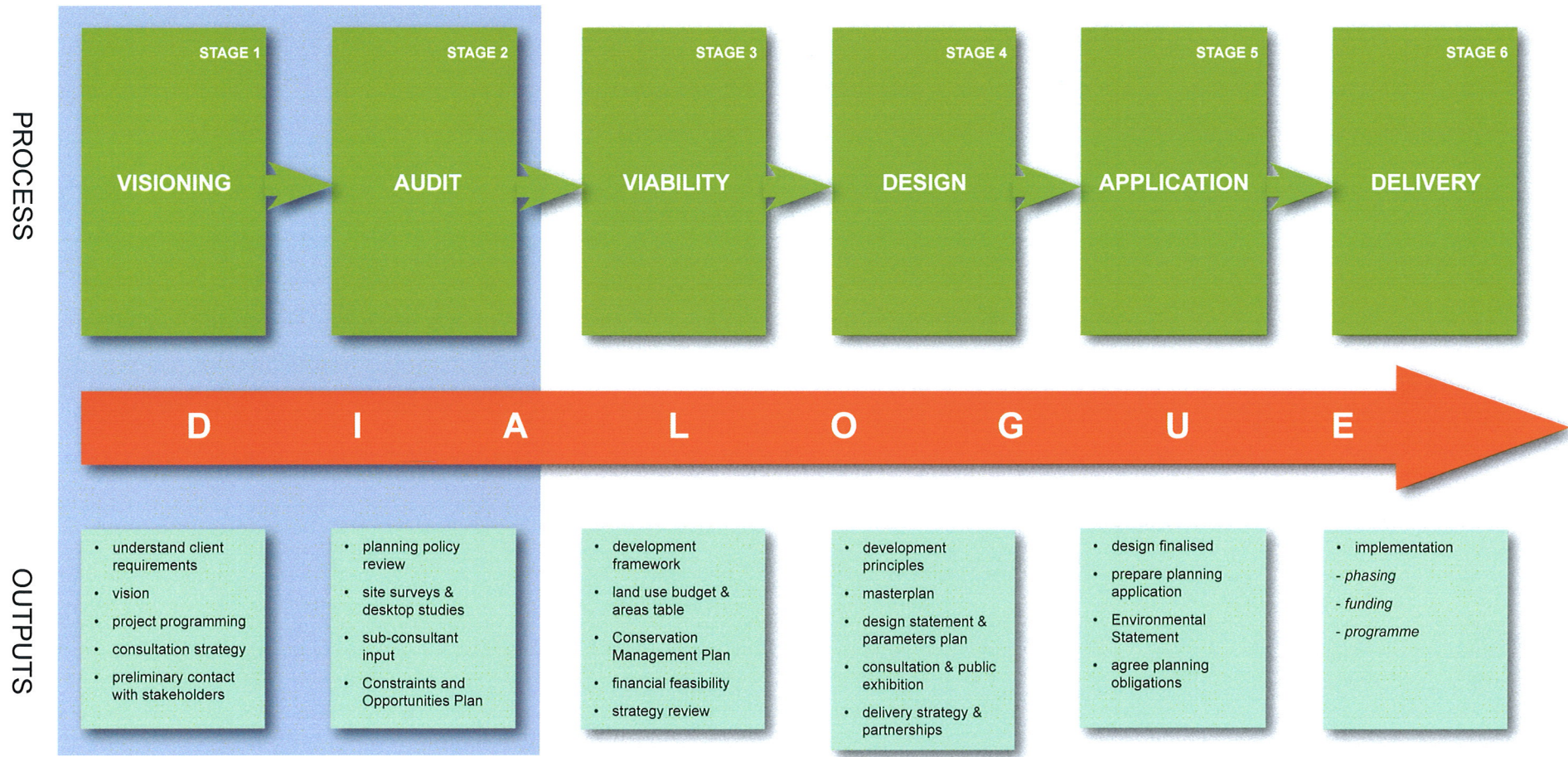
Process, Partnership and Passion

This Vision Statement is the first stage in a more comprehensive masterplanning project for the Royal Gunpowder Mills (as illustrated opposite).

In due course it will be tested against detailed constraints and opportunities analysis. All ongoing work will be based on:

- thorough analysis;
- effective consultation;
- robust design; and
- comprehensive review

We look forward to now working in partnership with the Royal Gunpowder Mills Foundation and Trust to help fulfil this Vision and to realise the full potential of the Royal Gunpowder Mills site.





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