



Planning and Regeneration Service

Minerals Local Plan



London Borough of Redbridge

Minerals Local Plan

September 2012

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Chapter 1

Setting the Scene

1.1 Introduction

- 1.1.1 The purpose of this Minerals Local Plan is to provide a sound planning policy basis for the future of minerals extraction and recycling in Redbridge by:
- Proposing measures to safeguard mineral resources to ensure their future availability and to meet the apportionment target set for Redbridge in the London Plan.
 - Seeking to maximise the contribution of minerals development to the economy and environment of London.
 - Addressing the potential adverse impacts of minerals development, including recycling operations, on people and the environment.
- 1.1.2 Following its adoption it will form part of the wider Redbridge Local Plan which includes a number of previously adopted Development Plan Documents (DPDs):
- The Core Strategy (adopted March 2008)
 - Borough Wide Primary Policies (adopted May 2008)
 - Development Site with Housing Capacity (adopted May 2008)
 - Development Opportunity Sites (adopted May 2008)
 - Ilford Town Centre Area Action Plan (adopted May 2008)
 - Gants Hill District Centre Area Action Plan (adopted May 2009)
 - Crossrail Corridor Area Action Plan (adopted September 2011)
 - Joint Waste Plan (adopted February 2012)
- 1.1.3 Along with the Mayor of London's London Plan, the policies and site specific proposals in the adopted DPDs form the basis for decisions on all types of planning applications in the borough. The Minerals Local Plan will be especially relevant to applications for new minerals developments and to applications for other types of development which could impact on the borough's safeguarded minerals reserves.
- 1.1.4 The Minerals Local Plan has been prepared according to the requirements of the Planning and Compulsory Purchase Act 2004. and the Town and Country Planning (Local Development) (England) Regulations 2012

1.2 Background

- 1.2.1 There has been ongoing consultation and engagement about the Minerals Local Plan with key external stakeholders, such as the local extractive industry operator Lafarge, the London Borough of Havering, the custodians of Borough Crown Land, Smith Gore Chartered Surveyors and London Aggregate Working Party (LAWP). Discussions have also continued internally with relevant Council Service Areas.
- 1.2.2 These discussions, combined with background research, enabled the Council to publish an Issues and Options Report on the Minerals Local Plan for consultation purposes in June and July 2010. This spelt out the basic facts and figures and the broad issues facing the future of minerals development in Redbridge and possible policy options for addressing them. The report was accompanied by a Scoping Report for the Sustainability Appraisal, which is a process used to test emerging policy proposals against agreed environmental, social and economic objectives. The Scoping Report also listed the evidence on which the background research was based.

- 1.2.3 Since the Issues and Options Report was published, a new version of the London Plan was adopted in July 2011. The replacement plan lowers the aggregates target for the whole of London from 1 million to 700,000 tonnes per annum. The Redbridge apportionment of this has been lowered to 100,000 tonnes per annum.
- 1.2.4 Having considered all the representations on the Issues and Options Report, the findings of the Sustainability Appraisal and the implications of the much lower London Plan apportionment, the Council prepared a Pre-submission Minerals Local Plan, which was subject to consultation from December 2011 until February 2012. It spelt out the key objectives for minerals development in Redbridge and proposed a number of planning policies to help achieve those objectives, which was independently examined following submission to the Secretary of State in March 2012

Chapter 2

Policy Context

2.1 Introduction

2.1.1 The production of the Minerals Local Plan took place within an established framework of national, regional and adopted local planning policies on minerals. The final Local Plan must be consistent with these policies and so it is important to consider what they say.

2.2 National Policy

2.2.1 The National Planning Policy Framework (NPPF) published in March 2012 sets out a number of national policies grouped under the following headings:

- Minimising or avoiding adverse environmental impacts.
- Survey – to know the extent of reserves, those which have planning permission and any reserves of waste which could serve as an alternative to primary extraction.
- Safeguarding – to define and protect Minerals Safeguarding Areas so that alternative land uses do not sterilise the ability to extract known reserves.
- Protection of Heritage and Countryside – to protect designated sites and wider areas of woodland and agricultural land from negative environmental consequences of minerals extraction.
- Supply – to identify minerals of regional importance and identifying sources of supply, with an emphasis on local sourcing.
- Bulk Transport – to move minerals by rail, sea or waterway where feasible.
- Environmental Protection – to protect the environmental character of surrounding rural and urban land.
- Efficient Use – to encourage efficient use of minerals, especially by minimising waste and recycling waste.
- Restoration – to ensure appropriate rehabilitation and use of worked out sites.

2.2.2 In relation to aggregates (the only mineral reserve being worked in Redbridge) there are a number of ancillary objectives. These include a process for the Mayor of London to apportion to Minerals Planning Authorities (i.e. those Local Planning Authorities producing minerals) targets for aggregates production based on the technical advice of Regional Aggregates Working Parties. Minerals Planning Authorities must seek to provide for these apportionments and identify specific sites and/or areas of search for minerals where there is insufficient capacity in known sites. They should have a land bank with planning permission capable of sustaining supply for at least 7 years for aggregates and 10 years for crushed rock.

2.2.3 As a result of the Government's Localism Act, Regional Planning Bodies outside London have been abolished. However, this does not affect the London Plan and the Mayor of London will be able to use his own discretion with regard to how minerals extraction in London should be planned, including any apportionment to individual boroughs. This is discussed further in the next section.

2.2.4 National and Regional Guidelines for Aggregates Provision in England, 2005 to 2020 sets out the national and regional guidelines for aggregate provision in each of the English regions for the period 2005 – 2020. The latest guidelines were published in June 2009 recommend the provision of 18 million tonnes for London over the period 2005 to 2020. This translates to 1.2mtpa.

2.3 Regional Policy

- 2.3.1 The regional policy context for minerals in Redbridge is provided by the London Plan, a new version of which was adopted and published in July 2011. It recognises London's need for a supply of minerals to support growth, including sand and gravel, crushed rock, marine sand and gravel and recycled and alternative materials. It also recognises that there are only small reserves of aggregates in London, and that most of the aggregates used for construction in London come from other regions.

Policy 5.20 Aggregates

Strategic

- A) The Mayor will work with all relevant partners to ensure an adequate supply of aggregates to support construction in London. This will be achieved by:
1. encouraging re-use and recycling of construction, demolition and excavation waste within London
 2. extraction of land-won aggregates within London
 3. importing aggregates to London by sustainable transport modes.
- B) The Mayor will work with strategic partners to achieve targets of:
- a) 95 per cent recycling/re-use of construction, demolition and excavation waste by 2020
 - b) 80 per cent recycling of that waste as aggregates by 2020
- C) London should make provision for the maintenance of a landbank (i.e. seven years' supply) of at least 5 million tonnes of land won aggregates throughout the plan period until 2031.

LDF Preparation

- D) LDFs should make provision for the maintenance of a landbank (i.e. seven years' supply) of at least 5 million tonnes of land won aggregates throughout the plan period to 2031 by a landbank apportionment of:
- a) at least 1.75 million tonnes to LB Havering
 - b) at least 0.7 million tonnes to LB Redbridge
 - c) at least 1.75 million tonnes to LB Hillingdon
 - d) at least 0.7 million tonnes to LB Hounslow
- E) Mineral planning authorities in London should:
- a) identify and safeguard aggregate resources in LDFs
 - b) support the development of aggregate recycling facilities, subject to local amenity conditions.
- F) To reduce the environmental impact of aggregates, LDFs should;
- a) ensure that appropriate use is made of planning conditions dealing with aftercare, restoration and re-use of minerals sites following extraction
 - b) safeguard wharves and/or railheads with existing or potential capacity for aggregate distribution
 - c) minimise the movement of aggregates by road and maximise the movement of aggregates via the Blue Ribbon Network
 - d) develop policies that support the protection and enhancement of aggregates recycling facilities.

- 2.3.2 A key advisory body to both the Department for Communities and Local Government (DCLG) and the Mayor of London is the London Aggregates Working Party (LAWP). The working party comprises an equal number of representatives from the aggregates industry and the local authorities, together with representatives from recycling, agriculture, the Port of London Authority, English, Welsh and Scottish Railway, DCLG, and the Mayor.

- 2.3.3 The role of LAWPs is to monitor the supply and demand for aggregate - including assessing the potential for supply of secondary and recycled materials, reserves (land bank) of primary aggregate and to advise the Mayor on the inclusion of aggregates policies in the London Plan. The LAWPs meet approximately three times a year.

2.4 Local Policy

- 2.4.1 Strategic Policy 5 Employment of the Redbridge Core Strategy (2008) aims to provide employment by (among other things) "Securing important mineral deposits for long-term extraction to supply the needs of the construction industry and provide jobs".
- 2.4.2 Policy E7 Minerals of the Borough Wide Primary Policies (2008) provides for the safeguarding of known resources and sets out criteria for consideration of planning applications for minerals extraction and restoration of sites once deposits are exhausted:

Policy E7 Minerals

The Council will safeguard known Mineral Reserves (as shown on the Proposals Map) by refusing development that prejudices the extraction of resources.

Where excavation is proposed, high environmental standards for extraction will be expected. Planning permission will be granted where applications have an acceptable impact having regard to:

- 1) The extent of the total extraction area, the active extraction area and phasing of development.
- 2) The nature of and phasing of restoration including details of fill material and after-use proposals.
- 3) The siting, design and impact of any plant or equipment.
- 4) The transport of extracted minerals.
- 5) Protection for and drainage of both ground and surface water.
- 6) For agricultural land, a comprehensive agricultural appraisal together with details of management and supervision of restoration and aftercare.
- 7) Hours and days of working.
- 8) A comprehensive nature conservation appraisal and strategy.
- 9) A comprehensive archaeological appraisal and strategy to provide mitigation of any adverse archaeological effects, appropriate to the importance of the archaeological remains.
- 10) No adverse effect on public safety.
- 11) The potential direct and indirect impact of all activities on any neighbouring land, buildings and use. In the case of neighbouring residential properties, the effect on amenity will be given particular consideration and where appropriate, an exclusion zone will be required between the site boundary and any activity therein.

- 2.4.3 It is important to remember that these local policies have continuing application and it is not necessary for policies in this Minerals Local Plan to repeat what they say. Rather, the policies in the Minerals Local Plan provide additional detail or deal with issues that were not fully considered when the existing policies were adopted.

Chapter 3

Challenges for the Minerals DPD

3.1 Introduction

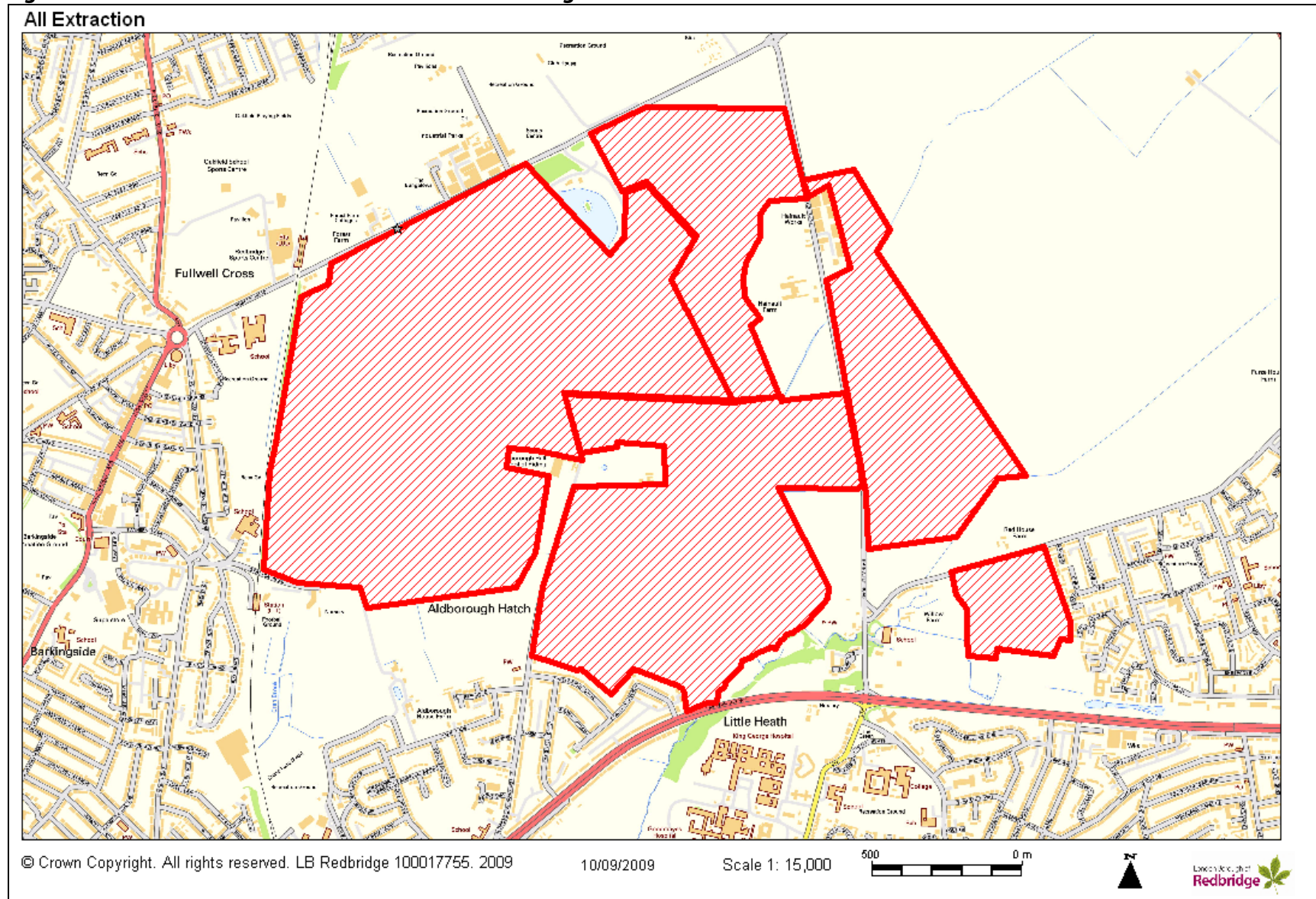
- 3.1.1 This chapter sets out the key challenges facing the future of minerals production in Redbridge. Identifying these challenges sets the scene for the overall objectives and specific minerals policies of the following chapters.
- 3.1.2 Minerals extraction in Redbridge has a long history, and is centred around the Fairlop and Aldborough areas in the north east of the borough on Council owned land, formerly used for cereal farming. Leases for sand and gravel extraction were granted to PT Reid Limited in 1959 and 1965, beginning in the west of the Green Belt at the Fairlop/Fairlop Plain area (1959) and then moving east across the Green Belt to Fairlop Country Park, Fairlop Waters and Aldborough Hall (1965).
- 3.1.3 Minerals extraction on this land took place between 1959 and 1983, with various parcels of land being restored and transferred for recreational use under new leases from the Council (see map 4 below). Minerals extraction also occurred around the Hainault House area to the south of Billet Road (north of Eastern Avenue) during this time.
- 3.1.4 All aggregates production in Redbridge now comes from the Fairlop quarries operated by Lafarge. Since 1985 these have yielded some 4 million tonnes of sand and gravel. It was expected by the operator that 250,000 tonnes of deposits would be extracted annually but production in recent years has mostly fallen short of this. The average annual rate of production for the years shown in Table 1 below is about 162,000 tonnes.

Table 1: Tonnages of aggregates extracted in Redbridge

Year	Tonnes of aggregates extracted
2003/04	126,000
2004/05	117,000
2005/06	166,000
2006/07	262,000
2007/08	189,000
2008/09	160,000
2009/10	111,000

- 3.1.5 Figure 1 below shows the total extent of land that is known to have been quarried for minerals in the modern history of Redbridge.

Figure 1: All former minerals extraction areas in Redbridge

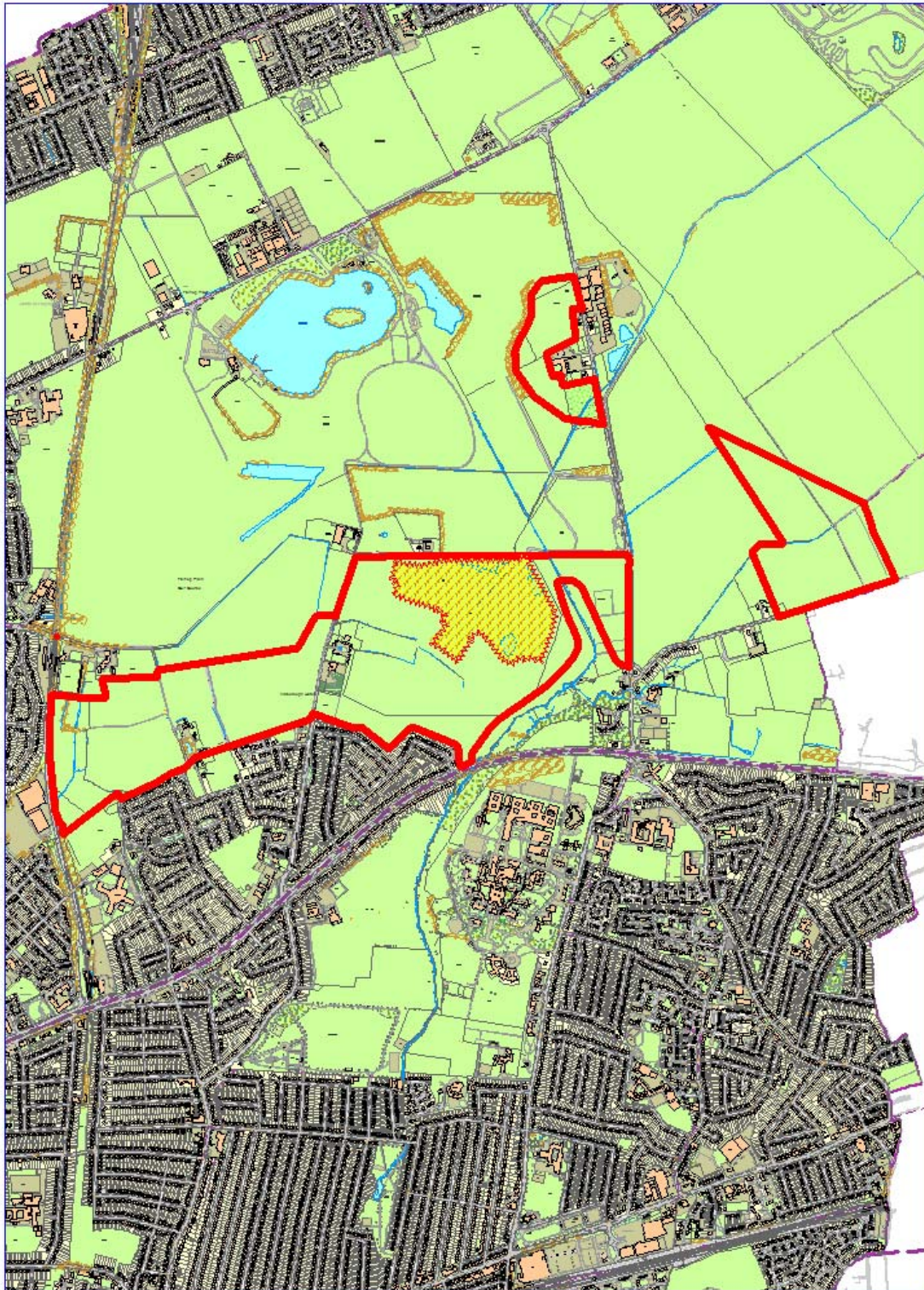


3.2 The Challenges of Meeting the Redbridge Apportionment

- 3.2.1 London Plan Policy 5.20 Aggregates apportions Redbridge 100,000 tonnes per annum of the London wide target for aggregates production. However, there is less than 100,000 tonnes of sand and gravel remaining with planning permission in the existing quarrying operations in Redbridge.
- 3.2.2 There are further areas that have been tested and shown to contain viable resources at Aldborough Hatch, north of Aldborough House Farm and at Hainault Farm to the west of Hainault Road. These resources total around 1,070,000 tonnes of sand and gravel. They do not have planning permission, although they have been safeguarded in the Redbridge LDF and shown as such on the LDF Proposals Map (Policies Map) as adopted in 2008 and set out in Figure 2 below. A key challenge for this Plan is to review these safeguarded areas and consider additional areas where justified by updated evidence and dialogue with stakeholders. There may also be a number of buffer zones around previously exploited areas that may yield further supply.
- 3.2.3 Consequently, there are more than sufficient known reserves to sustain production at the Redbridge apportionment of 100,000 tonnes per annum for the 7 years required by national and London Plan policy, but the overwhelming majority of this supply does not benefit from planning permission. The actual land bank of reserves with planning permission is almost exhausted and amounts to only a few months of production. If all known reserves received planning permission and were exploited they would satisfy the Redbridge apportionment for only another 10 or 11 years, but London Plan says Redbridge should make provision for its apportionment until 2031.
- 3.2.4 There are no other tested and proven resources of sand and gravel in the borough that can currently be considered as viable for extraction. British Geological Survey (BGS) data suggests the presence of a large expanse of natural deposits across the borough. Figure 3 below shows drift geology within the Redbridge borough based on BGS mapping data. The large areas of pink on the map show formations of sand and gravel. It is clear from this map that there are large areas of natural resources within the borough but almost all of that resource has been sterilised by urban development and is no longer available for extraction.

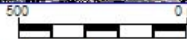
Figure 2: Areas of minerals reserves protected on the LDF Proposals Map (Policies Map) (red boundary lines)

Areas of land shown as safeguarded minerals reserves on the LDF proposals map



20/05/2011

Scale 1: 17,000

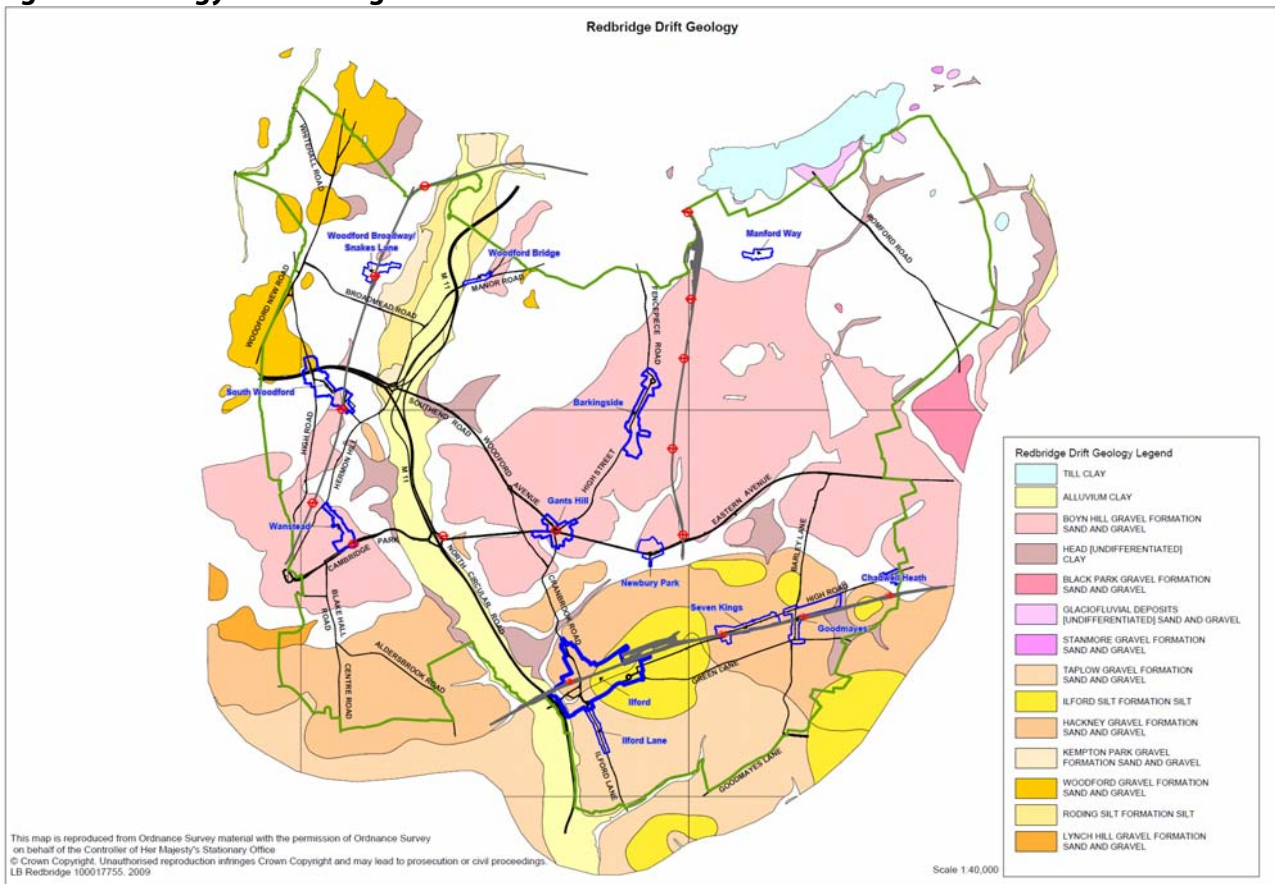


Redbridge

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- 3.2.5 Although about one third of the area of Redbridge is open space, a great deal of this land is subject to other policy constraints (e.g. Sites of Special Scientific Importance and protected open space) which effectively rules out minerals development. Most is also Green Belt land, but under the terms of Government guidance, minerals extraction is an appropriate use in Green Belt because it is only a temporary activity. Many pockets of open land are simply too small and too embedded in existing urban areas for extractive industry to be feasible.
- 3.2.6 Realistically, any further mineral extraction in the borough is likely to occur in the Aldborough and Hainault areas in the north east, where extraction has taken place for over fifty years. These areas remain the most appropriate and the only remaining options for minerals development within the borough because of the reasons and constraints outlined above.

Figure 3: Geology in Redbridge



- 3.2.7 Three obvious challenges arise in relation to the Redbridge apportionment:
- 1) The need to bring forward planning applications for existing known aggregate reserves so that the 7 year land bank requirement is satisfied.
 - 2) The need to find new reserves so that the apportionment is maintained up to 2031 (or at least for as long as it realistically can be maintained).
 - 3) To meet the second challenge without quarrying land subject to other major policy constraints or compromising the amenity of nearby residential areas.

3.3 The Challenge to Recycle

3.3.1 In order to ensure a sustainable supply of aggregates, national policy gives priority to using recycled aggregates over excavating new supply. London Plan Policy 5.20 says that the Mayor will work with strategic partners to achieve targets of 95% recycling of construction, demolition and excavation waste by 2020 and 80% recycling of that waste as aggregates by 2020. It should be noted that these are targets across the whole of London. The Mayor has not set them as explicit targets for each borough.

3.3.2 Until recently there was no local mechanism to ensure that construction, demolition and excavation waste is recycled, rather than going to landfill. That has now changed because the Joint Waste DPD (adopted February 2012) produced by the boroughs of Redbridge, Havering, Barking and Dagenham and Newham contains Policy W1 Sustainable Waste Management which among other things can:

...require the reuse of construction, excavation and demolition waste during new developments, such as the Thames Gateway, with onsite recycling and use of recycled aggregate wherever possible...

3.3.3 Redbridge does not currently have any facilities to allow the large scale off-site recycling of construction, demolition and excavation waste, but given the impact the above policy is likely to have on recycling, it is reasonable to expect growing demand for such facilities. Consequently, a challenge for this Local Plan is to make a greater contribution towards recycling of construction, demolition and excavation waste by providing for recycling facilities to deal with it.

3.4 The Challenge of Transporting Minerals Sustainably

3.4.1 The London Plan emphasises the need to minimise haulage of minerals by road. Rail, waterways (the "Blue Ribbon" Network in London) and sea transport are the main alternatives. The reasons behind this are fairly self-evident. Transporting more minerals by train, barge and ship will reduce the number of heavy trucks using the roads, with benefits for road safety, traffic flow, neighbourhood amenity, pollution reduction and greenhouse gas minimisation.

3.4.2 However, in Redbridge extracted minerals have always been transported by road, and this is very unlikely to change as there are no nearby rail freight loading facilities or dockside wharves from which material could be transported. Seven Kings Water is part of the Mayor's Blue Ribbon Network and does pass through the Fairlop quarry sites, but it is a very minor waterway and certainly not a navigable stream. The challenge in Redbridge then is to make haulage by road as sustainable as it can be.

3.5 The Challenge of Restoring Land

3.5.1 Restoration of the land to a high environmental standard at the conclusion of extractive operations is a key concern of national, London Plan and local plan policy. This does not necessarily mean recreating what was there before. While much of the existing quarry land in Redbridge was formerly used for agriculture, re-establishing farming now may not be viable. Worked out quarry pits provide good opportunities to enhance nature conservation and provide outdoor recreation facilities for the community. There are numerous good practice examples around the country. The challenge of restoration therefore is not simply to restore soil profiles and leave the land clean, it is also to make the most of opportunities for alternative uses that will contribute to community and environmental well being.

Chapter 4 Overall Vision and Objectives

4.1 Strategic Vision for Minerals Development in Redbridge

4.1.1 The Council's approach to minerals policy is being guided by the following strategic vision:

The borough's reserves of minerals will be developed in a sustainable manner to support the construction industry and create jobs for at least the next 20 years, while protecting local amenity and the wider environment. Restoration of minerals sites will leave them in a better condition than before quarrying began and deliver new conservation and recreational assets for the community. As the finite Redbridge reserve dwindles, recycling of construction, demolition and excavation waste will reduce the need for new primary supply.

4.2. Principle of Sustainable Development

4.2.1

Policy SD1: Principle of Sustainable Development

When considering development proposals the Council will maintain a positive approach that reflects the presumption in favour of sustainable development as expressed in the National Planning Policy Framework (NPPF). The Council will always work proactively with applicants and local operators to resolve issues and find solutions which mean that proposals can be approved wherever possible, in order to secure development that improves the economic, social and environmental conditions in the borough.

Planning applications that accord with the policies in this Local Plan (and, where relevant, with policies in neighbourhood plans) will be approved without delay, unless material considerations indicate otherwise.

Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the Council will grant permission unless material considerations indicate otherwise – taking into account whether:

- Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or
- Specific policies in that Framework indicate that development should be restricted.

4.3 Objectives of Minerals Policy in Redbridge

4.3.1. This section outlines the overall objectives of the Council to help ensure that minerals extraction contributes in a positive way to the sustainable development of the borough. The objectives respond to the Council's strategic vision for minerals development and to the major planning challenges listed in the previous chapter.

1. Identify and safeguard sites with potential for sustainable extraction of aggregate minerals so as to meet or exceed the borough's apportionment of aggregates production in London to 2031.

2. Ensure planning permission is granted for planning applications to secure at least a 7 year land bank of aggregates at the annualised rate of apportionment.

3. Limit the impact of minerals transportation on the road network and the wider environment, including the wider archaeological and historic environment.

4. Maintain high environmental standards for all minerals extraction given planning permission in the borough.

5. Ensure high standards of land restoration to maximise biodiversity and habitat values and provide wider benefits to the community.

6. Maximise recycling of waste materials with the aim of pushing recycling towards the top of the minerals extraction hierarchy, with a view to increasing supply of secondary aggregates.¹

¹ *The concept of a minerals hierarchy is not one used in Government planning policy guidance, and should be viewed in Objective 6 only as a means of expressing the Council's approach to the recycling of waste materials as secondary aggregates. It essentially means increasing the volume of recycled waste material annually so that secondary aggregates progressively increases in volume in comparison to other forms of extracted materials, particularly primary aggregates, with the aim of it eventually becoming greater in volume.'*

Chapter 5

Policies for Meeting the Objectives

5.1 Apportionment

Policy M1: Meeting the Redbridge Apportionment

The Council will seek to meet or exceed its minerals apportionment of 100,000 tonnes of aggregates each year until 2031. It will also seek to maintain a land bank of sites with planning permission sufficient to meet the annual apportionment for at least 7 years. In pursuit of this, the Council will:

1/ Safeguard for minerals extraction, all land in Schedule 1 and shown on the Safeguarding Map (Figure 4) as Minerals Safeguarded Land.

2/ Subject to Policy M2, grant planning permission for minerals extraction on land listed in Schedule 1 and shown on the Safeguarding Map as Preferred Areas of Extraction.

3/ Support minerals exploration on land listed in Schedule 1 as Areas A, B and C and shown on the Safeguarding Map as Minerals Search Areas. Should exploration reveal the presence of deposits capable of making a viable contribution to the Redbridge apportionment, the Council will grant planning permission for minerals extraction subject to Policy M2.

4/ Subject to Policy M4, refuse planning permission for uses or buildings on or in the proximity of Minerals Safeguarded Land which could prejudice the exploitation of mineral deposits on such protected land.

5.1.1 **Justification**

The LDF Proposals Map (Policies Map) adopted in 2008 shows Minerals Safeguarded Land. Some of this land has now been quarried, while other areas of land with proven or potential deposits have since been identified. The first purpose of this policy is to bring the Proposals Map (Policies Map) up to date in light of this information by identifying all Minerals Safeguarded Land (MSL) in accordance with MPS1. The policy then distinguishes between two types of Minerals Safeguarded Land as discussed below.

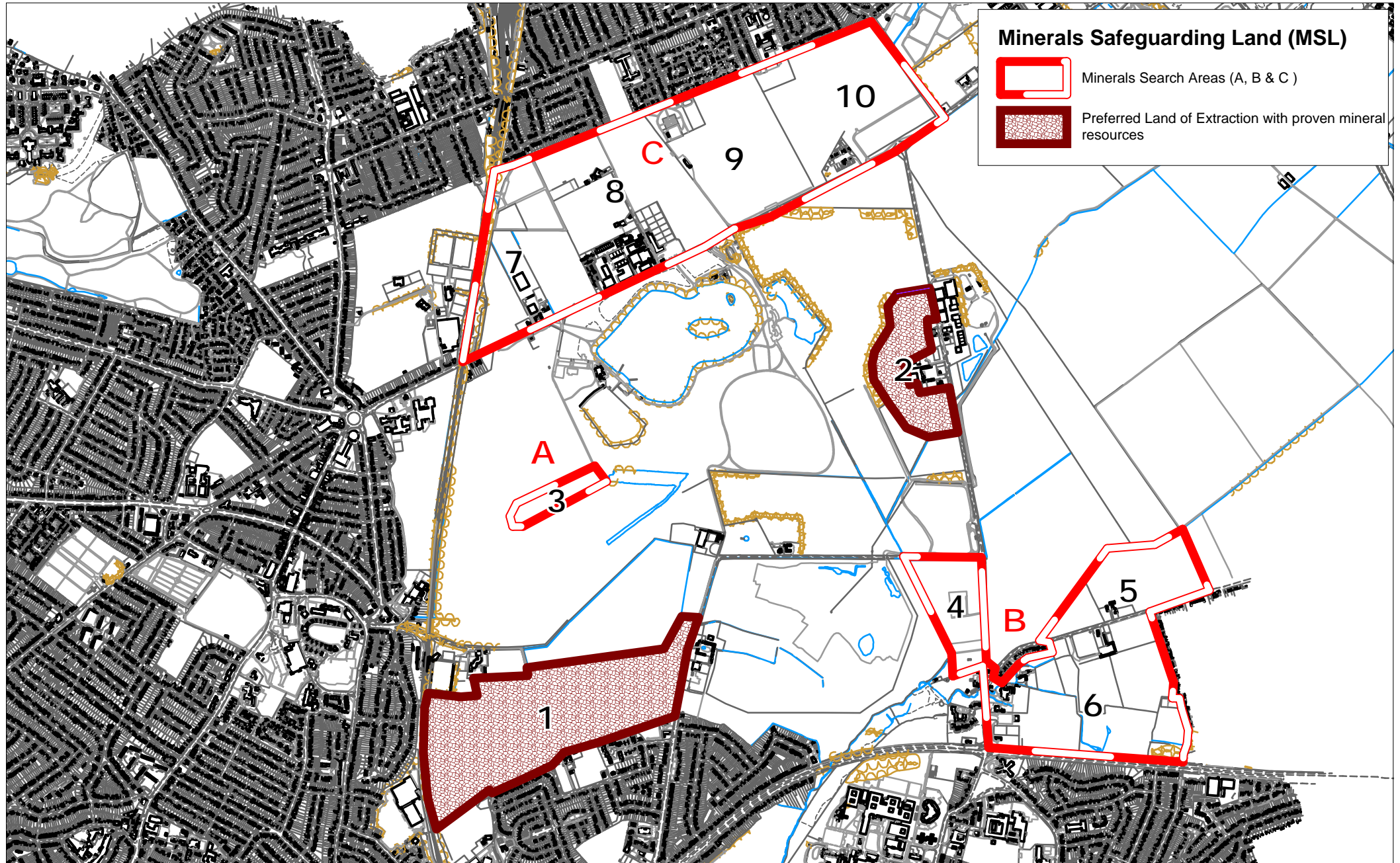
5.1.2 **Preferred Areas of Extraction (PAE):** These are areas with proven, substantial recoverable reserves sufficient to demonstrate a minimum 7 year land bank. They are also relatively unconstrained by existing land uses and the granting of planning permission is expected to be straight forward, subject to appropriate environmental controls. This designation should give mineral operators confidence to advance planning proposals for extraction.

5.1.3 The Council expects the local minerals operator to submit a planning application for minerals extraction on the PAE at Aldborough Hatch Farm, in the near future. This land has proven reserves of 900,000 tonnes of sand and gravel and would be sufficient on its own to establish the 7 year land bank. The PAE at Hainault Farm has proven reserves of 320,000 tonnes of sand and gravel. Together these sites can supply 100,000 tonnes of aggregate annually for the next ten years.

5.1.4 **Minerals Search Areas (MSA):** These are areas where the presence of significant minerals reserves is indicated by British Geological Survey mapping, but where deposits have not actually been confirmed through bore-hole test drilling. Some of these sites currently host uses and buildings which may be difficult to relocate or are subject to substantial policy hurdles, such as the protection afforded to allotments by Borough Wide Primary Policy CR2 Allotments.

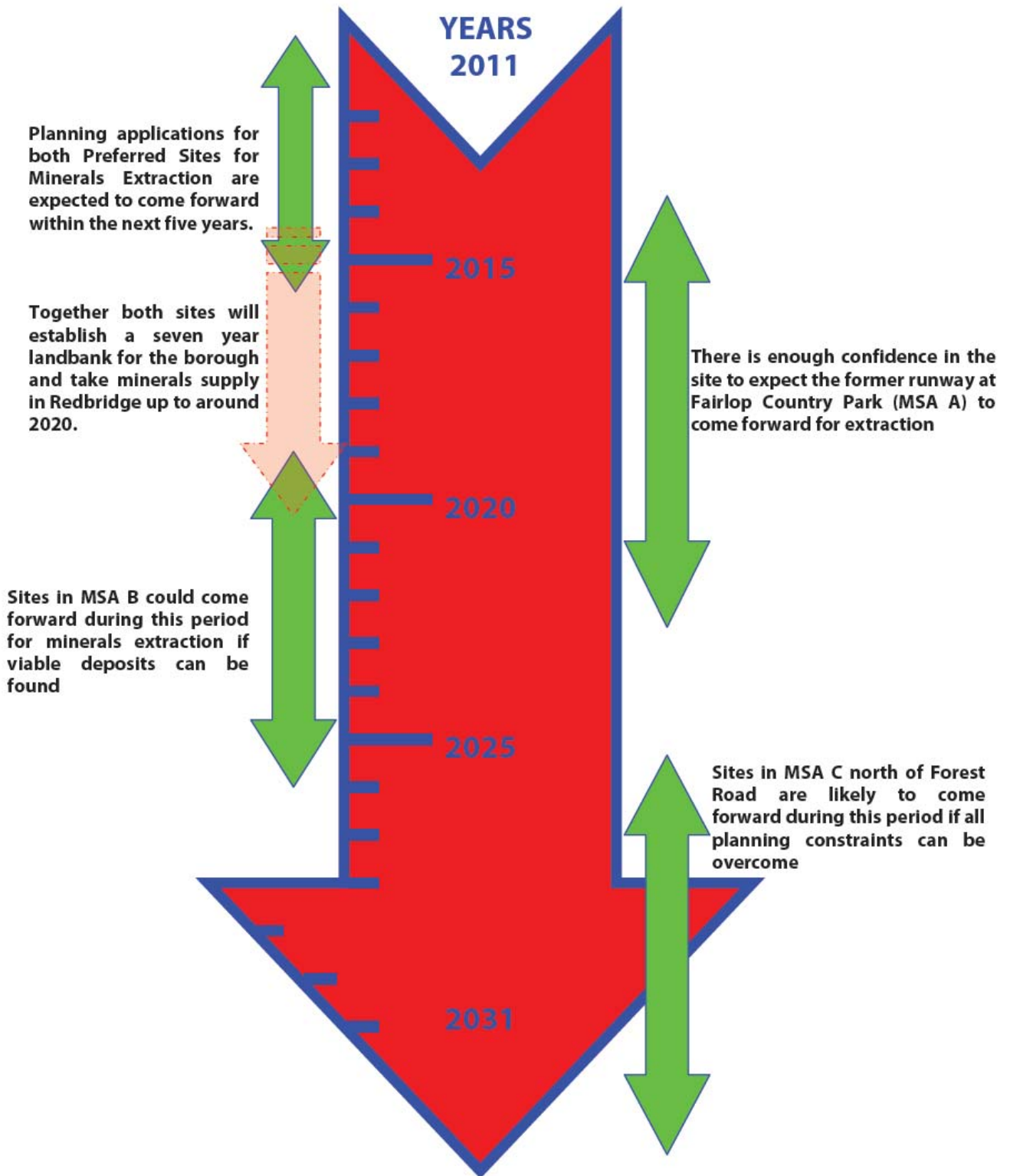
- 5.1.5 The operator has some confidence that 150,000 tonnes of deposit exist in Search Area A (the former runway). Estimates are only available for part of Search Area B and suggest perhaps 600,000 tonnes. Area C has been estimated to contain perhaps 3.3 million tonnes in total. Consequently, they have unproven collective potential to deliver over 4 million tonnes, allowing the annual apportionment to be delivered well beyond 2031.
- 5.1.6 More detailed maps delineating the boundaries of each Preferred Area of Extraction and each Minerals Search Area are provided at Appendix A. The Issues and Options Report on the Minerals Local Plan had included land occupied by the Oakfields Sports Ground and Redbridge Sports and Leisure Centre to the north of the Fullwell Cross round-about as a further Minerals Search Area. However, this was deleted on the recommendation of the Sustainability Appraisal as the site is physically separated from the remainder of the Minerals Safeguarded land by the London Underground Central Line embankment and is embedded in the urban area where quarrying operations may have unacceptable environmental impacts. A recent review of Green Belt land in Redbridge has suggested that the site is not meeting its purposes as Green Belt and it will be considered for release in a forthcoming review of the Core Strategy. If that occurs, it may be subject in whole or part to redevelopment for housing or community facilities.
- 5.1.7 There is no certainty that all Minerals Search Area reserves will be proven (Schedule 1 discusses this). Even if reserves are proven, planning permission would not be expected in the short term due to the need to relocate existing uses and satisfy other policy constraints. Some sites may never receive planning permission. Nevertheless these areas have been included to safeguard all potential commercial reserves as far as practicable and to support future exploration and recovery of resources where feasible.
- 5.1.8 Finally, the policy provides the power to implement safeguarding by refusing applications for uses which could effectively sterilise the land for minerals extraction. This would apply to buildings or uses directly above the mineral deposit, thus physically preventing its extraction. It may also include environmentally sensitive uses (e.g. residential housing or schools) nearby, which would make it difficult or impossible to establish extractive industry because of objections due to amenity impacts (noise, dust etc.) and safety concerns.
- 5.1.9 **Implementation**
This policy will primarily be implemented through the development management process. However, it will also provide a basis for direct discussion between Council representatives and the local minerals operator with a view to bringing forward applications for the Preferred Areas of Extraction and for undertaking exploration of the Minerals Search Areas. The Fairlop Gravel Working Party is a ready made forum for such discussions. An indication of how sites are currently expected to be delivered over time is provided at Figure 4.

Figure 4: Safeguarding Minerals Safeguarding Land (MSL)



Schedule 1: Safeguarded Sites with Minerals Resource Capacity	Site & Area	Type of Site
<p>Aldbrough Hatch Farm – This key site is already safeguarded on the LDF Proposals Map (Policies Map). It has been bore-hole tested by the local minerals operator and the estimated sand and gravel yield is 900,000 tonnes which could satisfy the Council’s entire seven year land bank requirement, subject to planning permission being granted.</p>	<p>No. 1 32.81ha</p>	<p>Preferred Area for Mineral Extraction</p>
<p>Hainault Farm – This site has also been safeguarded on the LDF Proposals Map (Policies Map). It has been bore-hole tested by the local minerals operator and contains an estimated 320,000 tonnes of sand and gravel. It currently lacks planning permission. Combined with the Aldborough Hatch Farm site, it would allow the Council to meet its apportionment to at least 2020.</p>	<p>No. 2 14.44ha</p>	
<p>Former Runway at Fairlop Country Park – This site has not been bore-hole tested but the operator has made a confident estimate of 150,000 tonnes of reserves. It currently lacks planning permission. It would allow the Council to meet its apportionment and land-bank targets when sites 1 and 2 are predicted to be close to exhaustion.</p>	<p>No. 3 2ha</p>	<p>Mineral Search Area “A”</p>
<p>Hainault Road Active Allotment Land – Although this site is already safeguarded on the LDF Proposals Map (Policies Map) it was left as a buffer zone. It is being used for allotments which benefit from strong LDF policy protection. The site has not been bore hole tested and there is no estimate of the potential resource. It is a medium to long-term prospect as a Minerals Search Area.</p>	<p>No. 4 6.30ha</p>	<p>Mineral Search Area “B”</p>
<p>Red House Farm – This site has not been bore-hole tested but was safeguarded on the LDF Proposals Map (Policies Map) because the 2004 Quarry Production Association (QPA) assessment indicated the presence of 600,000 tonnes of aggregates. Since then operator expectations have been lowered due to bore-hole tests on adjacent sites. Nevertheless it should be designated a Minerals Search Site so that the extent of the reserve can be proven.</p>	<p>No. 5 10.72ha</p>	
<p>Area around Willow Farm – Bore-holes on adjacent sites indicated that mineral depths decreased in the direction of Willow Farm. Further investigation would give a better indication of whether there are workable mineral resources and accordingly it has been designated a Minerals Search Area. The operator has indicated that this area may already have been worked and then landfilled. According to Council mapping part of this area was excavated between 1965 and 1975 by PT Reid Ltd, but the data is not entirely reliable and the area could contain viable deposits.</p>	<p>No. 6 27.76ha</p>	
<p>Fullwell Cross Allotments & Forest Farm Cottages - This site is constrained by its current uses which include active allotments and residential use. LDF Policies CR2 ‘Allotments’ and H1 ‘Housing Provision’ both resist the loss of these land uses unless under special circumstances.</p>	<p>No. 7 16.41ha</p>	<p>Mineral Search Area “C” No sites in MSA C have been bore-hole tested but under the QPA assessment of 2004 they were estimated to have reserves of 3.3 million tonnes of aggregates. Because of current land use constraints, these sites are longer term prospects for minerals development after 2020.</p>
<p>Hainault Sports Ground & Pavilion and Playing Fields – This site is constrained by its current uses which include recreational facilities and sports playing fields protected by LDF Policy CR3 ‘Sport, Leisure and Cultural Facilities’.</p>	<p>No. 8 25.32ha</p>	
<p>Hainault Recreation Ground – This site is constrained by its current uses which include recreational facilities and sports playing fields, which are protected by LDF Policy CR3 ‘Sport, Leisure and Cultural Facilities’.</p>	<p>No. 9 18.9ha</p>	
<p>Hainault Playing Fields & Caravan Site – This site is constrained by its current uses which include recreational facilities, sports playing fields and a caravan site protected by LDF Policies CR3 ‘Sport, Leisure and Cultural Facilities’ and H3 ‘Travellers and Gypsy Sites’.</p>	<p>No. 10 21.92ha</p>	

Figure 5: Indicative Phasing of Minerals Sites



5.2 Wider Policy Compliance

Policy M2: Minerals Safeguarded Land

Areas of land allocated in Schedule 1 and shown on the Safeguarding Map as Minerals Safeguarded Land (MSL), are suitable for minerals exploration and extraction provided planning applications:

- Satisfy LDF Planning Policy E7 Minerals, other planning policy constraints (where they occur), particularly in relation to Sites of Nature Conservation Importance, Allotment Land, Green Corridors, Protected Open Space and areas with Conservation or Historic Interest as shown on the LDF Proposals Map (Policies Map), and land to which Policy E5 'Flooding and Water Quality' applies.

Are submitted with a comprehensive Environmental Impact Assessment (EIA) that demonstrates how environmental impacts of the proposed minerals development may be contained within acceptable limits.

5.2.1 Justification

Policy M1 establishes a general presumption in favour of minerals development on Preferred Areas of Extraction and in Minerals Search Areas (subject to exploratory testing demonstrating a viable resource). However, before granting planning permission, the Council needs to be satisfied that operations will be carried out in an environmentally acceptable and sustainable manner and that the interests and amenity of occupiers of the land and neighbouring properties are protected.

5.2.2 For instance, the Willow Farm site (site 6, MSA B) is close to Little Heath School, a special needs school for children with a wide range of disabilities. The assessment of any application for minerals development would need to carefully consider the likely impact on the children of noise, particulate emissions and airborne dust, since some of them suffer from hearing and respiratory conditions. Unless the Council was fully satisfied in relation to such issues it would refuse the application.

5.2.3 Consequently there is a range of other policies which may apply to individual applications and in all cases an EIA will be needed. These other policies would apply anyway as they are part of the adopted local plan and an EIA is required by law. Nevertheless, the Council believes that these matters should be made explicit in the Minerals Local Plan, so that the full extent of issues involved in planning assessments is made clear to all.

5.2.4 With regard to the impact of minerals extraction on the local water table, new applications for minerals operations should demonstrate that they will be compliant with the Thames River Basin Management Plan (TRBMP), and where necessary a Water Framework Directive (WFD) Assessment should be submitted with all new planning applications for minerals operations. Minerals operators are advised to engage with the Environment Agency (EA) at the earliest possible opportunity in the planning process to ensure that the requirements of the WFD are understood. Consideration should also be given to the Council's Strategic Flood Risk Assessment (SFRA).

5.2.5 Implementation

This policy will act as a guide to developers preparing planning applications and be implemented through the development management process.

5.3. Buffer Zones

Policy M3: Buffer Zones

The Council will encourage developers to extract further minerals deposits from 'Buffer Zones' around areas previously excavated, where local amenity can be safeguarded and the environmental impact minimised.

5.3.1 Justification

Some of the Minerals Safeguarded Land in Schedule 1 contains buffer zones established through former planning approvals to separate mineral workings from nearby uses that would otherwise have been vulnerable to noise, dust and disturbance. These buffer zones can also include bunds and overburden. However, in light of the dwindling supply of aggregates, it is necessary to reconsider the extent of these zones and whether best practice excavation techniques could allow the recovery of at least some of the resource without undue impacts on neighbours or the environment generally. This should be demonstrated through an Environmental Impact Assessment (EIA) for any additional excavation works. Where surface water bodies are present in a buffer zone, a Water Framework Directive (WFD) assessment should be conducted, and the EIA should look at the risk to ground and surface water from development in the buffer zone.

5.3.2 Indeed, there are some good reasons to believe that reconsidering buffer zones for extraction may be preferable to excavating new greenfield sites. Buffer zones can take up large areas of land within reach of existing plant equipment, are typically part on an established minerals resource and have the potential to make an important and cost effective contribution to supply.

5.3.3 There are currently no estimates with regard to the volume of mineral deposits these buffer zones might yield and the zones themselves need to be clearly identified. However together they may encompass a large area of land and could potentially yield a considerable tonnage.

5.3.4 Land formerly used for minerals extraction should be reclaimed at the earliest opportunity in order to avoid it falling into negligence (see section 143 of the National Planning Policy Framework (NPPF)), and some buffer zone areas are due for restoration in the short to medium term. Consequently, there is a need to explore this issue now. If exploited in a very carefully considered and environmentally acceptable way, buffer zones may make a significant contribution to the Redbridge apportionment.

5.3.5 Implementation

Buffer zones were originally established through the planning process itself to protect neighbours' amenity and the health of the wider environment. Therefore implementation of this policy will require in the first instance discussions between the minerals operator and Council representatives to establish whether some or all of the resource may be recoverable without jeopardising the purpose for which the buffer zones were established. Should this appear feasible and planning applications come forward, the policy would be implemented through the normal development management process. When proposals for excavation works come forward the Environment Agency should be engaged with at the earliest possible stage.

5.4. Prior Extraction

Policy M4: Prior Extraction

On Minerals Safeguarded Land (MSL) the Council seeks the extraction of the mineral deposit, prior to other types of development taking place. Where minerals have not been extracted, the Council will refuse planning applications for other uses unless:

1. The use is on a strictly temporary basis that is unlikely to delay the practical commencement of extractive operations, or
2. Where alternative sites are not feasible the developer has demonstrated either:
 - That the MSL does not contain a commercially viable minerals resource, or
 - The overriding community need for the proposed development on that site outweighs the need for the mineral resource.

5.4.1 Justification

The purpose of safeguarding is to prevent mineral deposits being sterilised (i.e. rendered unobtainable) through the development of incompatible land uses on the mineral site or nearby. The NPPF encourages the prior extraction of minerals before alternative uses are permitted and the policy does this. (The flow chart at Appendix B shows the general approach to handling planning applications for non-minerals development). However, there will be circumstances where this does not occur and the policy provides the Council with the power to deal with these, starting with a presumption that such proposals should be refused, but also allowing for some exceptions.

5.4.2 Where temporary uses are proposed and there is no obvious minerals operator interest in a site or likelihood of such interest within the lifetime sought for the planning permission, it would be unreasonable to refuse it on safeguarding grounds. Consequently, the policy allows for this exception to the general presumption against non-minerals development.

5.4.3 The Minerals Search Areas are regarded as likely to hold reserves, but in most cases there has been no bore-hole testing to prove their existence. In the event that a development proponent conducts their own testing and is able to demonstrate that a Minerals Search Area does not host commercially viable reserves, it would not make sense to continue to safeguard the land for minerals development and the policy wording acknowledges this.

5.4.4 Finally, safeguarding minerals is just one of a number of priorities in the overall LDF land use strategy and sometimes a balance has to be struck between competing priorities. There may be circumstances where reserves are present, but an alternative land use is proposed for which there is an even greater community need. Examples of such alternative uses are housing schemes which would make a strategic contribution to meeting the borough's housing target and essential community facilities such as schools which are identified in the Redbridge Community Infrastructure Plan.

5.4.5 Given that all Minerals Safeguarded Land falls within the Green Belt, this would be a major additional policy hurdle for alternative uses such as housing. If such proposals come forward and other policy concerns are satisfied, the Council will make a decision which weighs the contribution the particular mineral reserve could make to the borough's apportionment against the need for the alternative use. Developer proponents would be expected to demonstrate that there were no feasible alternative sites.

5.4.6 **Implementation**

This is a development management policy to be implemented through pre-application advice and the formal development assessment process.

5.5. **Recycling**

Policy M5: Recycling

The Council will encourage the recycling of construction, demolition and excavation waste so as to reduce the consumption of primary aggregates. Policy W1 of the Joint Waste DPD enables the Council to impose conditions to require such waste to be recycled where planning permission is required for the development. Subject to compliance with other relevant policies, the Council will grant planning permission for facilities to recycle construction, demolition and excavation waste on Minerals Safeguarded Land where planning permission has been granted for minerals extraction.

5.5.1 **Justification**

Given that the supply of readily excavated aggregates is a finite resource and that construction, demolition and excavation waste is a major contributor to the problem of landfill, recycling such waste as an alternative to using primary aggregates is a highly sustainable approach to minerals supply. This approach is strongly supported by the Government in the NPPF and London Plan Policy 5.20 Aggregates which aims for 95% recycling/re-use of construction, demolition and excavation waste by 2020; and 80% recycling of that waste as aggregates by 2020.

5.5.2 Such waste recycling can sometimes occur with mobile equipment provided on the development site, but this is not always possible, in which case waste material must be transported to a purpose built recycling facility where the material is crushed. There are currently no minerals recycling facilities in Redbridge. It is not necessary for every borough to host such facilities, as long as adequate facilities are available across London, but it is important that the Council takes a positive approach where applications come forward because waste policy jointly adopted by the London boroughs of Redbridge, Havering, Barking and Dagenham and Newham is likely to stimulate demand.

5.5.3 The impacts of such recycling facilities are of a similar type and order of magnitude to quarrying operations (e.g. heavy machinery and truck movements creating noise, dust and disturbance). Consequently, on sites which already host minerals extraction, recycling of construction, demolition and excavation waste should normally be regarded as a complementary land use.

5.5.4 In the past the local operator has been keen to incorporate recycling plant equipment into its overall operations and had submitted a planning application in 2006 (ref: 2230/06) to that end. While that application was refused, the policy should give minerals operators some confidence that future permission will be issued for recycling facilities on active quarry sites, as long as the Council is satisfied with the overall level of environmental control. All new planning applications for recycling facilities must be accompanied with an Environmental Impact Assessment (EIA), and when proposals for recycling facilities come forward the Environment Agency (EA) should be engaged with at the earliest possible stage.

5.5.5 **Implementation**

This is a development management policy. It cannot oblige minerals operators to bring forward proposals for recycling facilities (and indeed if there are adequate facilities within easy reach of Redbridge there may be no need for them to do so). However, in the event that sufficient demand arises, it will provide some confidence that there are sites in Redbridge where these activities are acceptable in principle.

5.6. Transport

Policy M6: Road Improvements

The Council will work with local operators to explore options for road improvements and better access to and from new minerals sites in Redbridge to promote sustainable and efficient transportation of minerals. In particular, options for improved access to the A12/Eastern Avenue will be explored for applications for new plant sites in the Aldborough Hatch area.

Prior to granting planning permission for new minerals extraction the Council will require s.106 or s.278 agreements to secure identified improvements where these applications will have an identified impact on the highway network in addition to existing operations.. Green Travel Plans and Transport Assessments will also be required to accompany new applications to show how the impact of heavy road haulage and use of private cars by staff is to be minimised.

5.6.1 Justification

Although national and London Plan policy promotes the transport of minerals by rail, waterway and sea, these are not options in Redbridge. The borough has no dockside wharves and there are no navigable waterways near the Minerals Safeguarded Land. There is no likelihood of a rail link being developed to serve the borough's relatively small mineral reserves, nor would securing land for a new rail corridor be feasible.

5.6.2 The policy is therefore realistic and seeks to improve the existing haulage roads where possible. Forest Road is the main entrance to the existing quarrying operations, but alternative (shorter and more direct) access routes may be preferred for future development, especially when Aldborough Hatch Farm comes forward. There is also a range of potential improvements such as the widening of local roads and lanes which could improve traffic conditions for haulage operators and local residents. The policy provides a basis for the Council to insist minerals operators pay for such improvements through section 106 of the Town and Country Planning Act (1990) and/or section 278 of the Highways Act (1980).

5.6.3 The requirement for Green Travel Plans and Transport Assessments is standard for major developments and will be used to limit the impact of heavy vehicle traffic as far as practicable. These matters would likely be considered as part of the Environmental Impact Assessment accompanying any application.

5.6.4 Implementation

Planning officers will work alongside the local operator and colleagues in the Highways and Engineering Service to identify the optimal access arrangements for haulage vehicles to, from and on new minerals operations. These discussions, particularly where they concern access to the A12/Eastern Avenue, will need to take place in consultation with Transport for London, which is the Highway Authority for that road.

5.6.5 S.106 and s.278 agreements would be negotiated in parallel with the planning approval process and ideally agreed prior to submission of a planning application. A Transport Assessment would be required to accompany a planning application and a Green Travel Plan would be required as a condition of approval.

5.7. Plant Location

Policy M7: Plant Location

The Council will grant planning permission for new minerals operations which locate plant equipment as close as feasible to key transportation routes, minimise on-site haulage through conveyor belt technology where feasible and maximise separation distances from residential properties and other sensitive uses. This is particularly important for Minerals Search Area C to the north of Forest Road.

5.7.1 Justification

It makes sense to locate plant equipment close to key transport routes to reduce vehicle journeys across the site and thereby minimise the production of dust and noise. Using conveyor technology to replace truck haulage on site can assist this. The approach would need to be adapted to the specific landscape features of the site and precise locations of the mineral deposit and neighbouring uses. The policy recognises this by using the word "feasible".

5.7.2 In the case of Minerals Search Area "C", the main access route is Forest Road along the southern boundary, while the northern boundary adjoins residential areas. It makes doubly good sense to apply the policy here so as to minimise environmental impacts on residents.

5.7.3 Implementation

This policy provides the basis for pre-application discussions with minerals operators to consider optimum locations for plant equipment in light of the specific characteristics of each site and surrounding land uses.

5.8. Environmental Management

Policy M8: Environmental Management Systems (EMS)

When granting planning permission for new minerals developments, the Council will impose conditions requiring the operator to adopt an Environmental Management System (EMS). The content of the EMS will be agreed with the Council. It must outline measures to address environmental impacts identified in the EIA submitted with the application and may contain the following elements:

- Corporate environmental policy/ organisational commitment
- Community consultation and involvement
- Objectives and targets (e.g. for noise and dust)
- Environmental management programme
- Documentation and records
- Operational emergency procedures
- Responsibility and reporting structure
- Training, awareness and competence
- Regulatory and legal compliance and environmental performance review audits
- Emissions performance monitoring
- Procedures that safeguard existing infrastructure including water mains and sewers

The minerals development shall be conducted in accordance with the operating procedures and targets of the EMS. A copy of the performance monitoring report shall be submitted annually to the Council.

5.8.1 **Justification**

An Environmental Management System (EMS) is an environmental approach to operations built into a company's working method, based on and part of its daily routine. The EMS helps companies focus their attention on their own environmental performance and the impact of their operations. It can be used to measure a company's operations in light of environmental performance indicators, and can aid good operational practice.

5.8.2 **Implementation**

The Council would establish a requirement for an EMS as a condition of planning approval. It would be for the operator to prepare and implement it. In the event that the annual performance monitoring report disclosed serious breaches of the targets set in the EMS, the Council could take enforcement action by issuing a Breach of Condition Notice.

5.9. **Restoration and After-Use**

Policy M9: Priorities for Restoration and After-Use

The Council's priority objective for restoration and aftercare of former minerals land is the promotion of nature conservation as an end in itself, or in tandem with agriculture or open space sport/recreation. Restoration strategies should support national, regional and local biodiversity priorities as expressed in:

- The UK Biodiversity Action Plan.
- The Royal Society for the Protection of Birds (RSPB) Minerals Restoration Potential (MRP) Project. Where sites are identified as capable of supporting priority habitat creation or prove to be capable of achieving RSPB objectives, the aim should be to restore those sites in line with MRP Project habitat priority levels.
- The Mayor of London's Biodiversity Strategy and London Plan Policy 7.19 Biodiversity and Access to Nature.
- The Redbridge Biodiversity Action Plan.

5.9.1 **Justification**

This policy sets the Council's priority objectives for restoration of minerals land. By encouraging nature conservation on sites of previous minerals extraction local authorities across the country have shown how these areas can bring about significant environmental, social and economic benefits for local people. Examples include the RSPB reserve at Old Moor in the Deane Valley which attracts more than 65,000 visitors annually and the 975ha former quarry at Needingworth, Cambridgeshire².

5.9.2 Some former minerals quarry land in Redbridge has been restored to agricultural use. Although returns from farming urban edge land may be very marginal, the Council would support agriculture at least on those parts of sites with less critical environmental values. Much former minerals land in Redbridge has also been restored for wildlife and open space and recreational uses. These include footpaths, bridal ways, reed beds, riding schools, football pitches, sailing and angling clubs and golf courses. There have been some nature conservation initiatives on land previously used for minerals extraction and more are planned. Nature conservation and sport/recreation can go hand in hand as appropriate uses of open space.

5.9.3 An important consideration for restoration of Minerals Safeguarded Land in Redbridge is that all such land lies in the Green Belt. As a temporary activity National Planning Policy Framework (NPPF) Green Belts allows for minerals extraction to take place, but post-extraction restoration

² *Nature After Minerals: how mineral site restoration can benefit people and wildlife.* RSPB (Nov 2006)

must re-establish the openness of the land and its ability to meet its purposes as Green Belt. Nature conservation, outdoor sport and recreation and agriculture are all capable of doing this.

5.9.4 The Royal Society for the Protection of Birds has created a Geographical Information System model as part of the Minerals Restoration Potential (MRP) Project, which began in January 2005 and is funded by Defra. The model assesses all active minerals sites in England for their potential to support UK Biodiversity Action Plan priority habitats. Minerals sites at Fairlop in Redbridge are considered to have the potential to create priority level 1 habitats. Priority levels are based on the proximity of sites to existing fragments of the same habitat, and assume that:

...habitat created closer to an existing fragment is more likely to be colonised by habitat-specific plants and animals than that which is further away. A priority level 1 habitat is one that could be successfully created on the site, and the site is adjacent to (within 50m of) a fragment of the same habitat. Colonisation by habitat specific species will be instant or very rapid once the habitat is in condition.³

5.9.5 The Mayor of London and Redbridge Council also have biodiversity strategies which can be used to guide the restoration of minerals land for nature conservation. The Redbridge operator (Lafarge Aggregates Ltd) is currently the guardian of two national nature reserves as well as being active in the management of 34 sites of special scientific interest and so has a good track record for this type of restoration.

5.9.6 Habitat creation may be less expensive for the minerals operator than restoration to agriculture or recreation, but nature conservation does not normally offer a direct income stream to the end user. Funding options for long term management could include:

- Financial support from the operator (as part of a section 106 agreement)
- Landfill Communities Fund
- Environmental Stewardship (agri-environment scheme).

5.9.7 All new restoration strategies should consider groundwater resources and flood risk management. They should also support and be in line with the Thames River Basin Management Plan (TRBMP). Restoration schemes could be used as an opportunity to implement the mitigation measures set out in the TRBMP in order to improve affected water bodies status. An 8 metre wide (riparian) buffer zone is required to be left free from development on any watercourse as expressed in LDF Policy E5.

5.9.8 **Implementation**

Restoration strategies involving return to agriculture uses, sport and leisure, or multiple post-extraction uses involving both options and nature conservation uses will be required by conditions attached to the granting of planning permission.

³ RSPB *Nature After Minerals* website <http://www.afterminerals.com/projectinfo>

5.10 Funding

M10: Funding

The Council may require developers to enter into section 106 agreements for post-extraction restoration and aftercare of quarry sites:

- For the statutory 5 year period
- For a longer period where justified by the nature and complexity of the performance or characteristics of the approved scheme.

The Council will also investigate long term funding options for all end uses, including:

- Financial support from the operator (s106 agreements)
- Landfill Communities Fund
- The Environmental Stewardship Scheme

5.10.1 Justification

This policy provides the Council with an explicit power to require minerals operators to help fund restoration and aftercare of sites. The key requirement of the operator will be to restore the land to an agreed state and to this end the section 106 agreement may require a bond or bank guarantee to allow the Council to undertake the work in the event that the operator defaults. However, there may be occasions where it is appropriate for the operator to make a contribution to aftercare, or even to play an on-going guardianship role. An example may be where the land is restored for a use such nature conservation that does not directly generate income.

5.10.2 Natural England administers the Environmental Stewardship Scheme, which provides funding to farmers and other land managers to deliver effective environmental management. The key objectives of the scheme are to:

- Conserve wildlife (biodiversity)
- Maintain and enhance landscape quality and character
- Protect the historic environment and natural resources
- Promote public access and understanding of the countryside
- Protect natural resources³³

5.10.3 Appendix C includes more information on how areas safeguarded for minerals extraction could be restored once operations cease and on potential sources of funding. Not all the minerals sites have been included in this table either because they are known sites that have long been considered by the Council or they have specific uses that will be re-established following minerals extraction.

5.10.4 Implementation

Discussions regarding funding options for restoration and land uses following minerals operations have always taken place when planning applications for minerals extraction have been submitted. Depending on the suitability of the scheme for particular funding regimes, as well as s.106 contributions, planning officers will discuss funding options with colleagues in Nature Conservation (who have made successful funding bids for nature conservation initiatives in the borough), as well Highways and Engineering and Natural England.

Chapter 6 Monitoring Arrangements

6.1 Authorities' Monitoring Report

- 6.1.1 As set out in the Town and Country Planning (Local Development) (England) Regulations 2012, Redbridge publishes an Authorities' Monitoring Report (AMR) which records the effectiveness of local plan policies in achieving their stated aims and recommending corrective action if policies appear to be failing. To do this the AMR contains a set of indicators, targets and milestones that allow the performance of policies to be measured.
- 6.1.2 The AMR already has an indicator for the tonnage of aggregates produced annually in Redbridge so that performance against the apportionment target of 100,000 tonnes annually may be measured.

6.2 Monitoring Arrangements Specific to the Minerals DPD

- 6.2.1 In addition to the total tonnage of aggregates extracted, a number of other monitoring tasks will be carried out to assess the performance of policies in this plan. The full range of performance measures and targets specific to minerals is listed below:

Performance Measure	Target
Total tonnage of aggregates extracted each year	Minimum of 100,000 tonnes.
Total proven remaining supply	Sufficient to allow 100,000 tonnes annual extraction until 2031 (e.g. in 2011 that would be 100,000 tonnes x 20 years = 2 million tonnes).
Total proven supply with planning permission	Minimum of 700,000 tonnes (i.e. annual extraction target X 7 years).
Planning permission granted for minerals extraction at Aldborough Hatch Farm (Site 1)	September 2012
Planning permission granted for minerals extraction at Hainault Farm (Site 2)	September 2013
Nature conservation/outdoor sport and recreation aftercare strategy agreed as part of site restoration proposals	All minerals extraction planning permissions
Noise	Any target agreed and reported as part of site specific Environmental Management System.
Dust	Any target agreed and reported as part of site specific Environmental Management System.
Regular Redbridge participation in London Aggregates Working Party.	Redbridge is represented at every London Aggregates Working Party meeting.
Recycling 'Percentage of recycling/re-use of Construction, Demolition and Excavation Waste.	Target: 95% by 2020'.

- 6.2.2 Redbridge Council representatives meet the local minerals operator regularly through the forum of the Fairlop Gravel Working Party (FGWP). This allows key issues relating to the monitoring and performance of this plan to be discussed and corrective actions identified where necessary. The

FGWP is attended by Council Members and Development Control officers, Council Civil Engineers from the Council's Highways and Engineering Service, and officers from the Council's Property Service.

- 6.2.3 The issues discussed include a monthly engineer's report updating the working situation on minerals sites, including average sales and tonnage per week; the planning position and monitoring of the site areas, whether active or in restoration or aftercare phases. The reports also cover the environmental performance of the local operator, considering specific issues such as rainfall and its effect on the height of water bodies (lakes); any issues with work carried on tipping of inert material as infill, and the average amounts being tipped daily. There are also reports on negotiations for lease terms on future extraction sites; reports on any temporary permissions for sites; monitoring carried out by the Council employed Clerk Of Works attending the site to monitor day-to-day operations etc. This is a good forum that brings together all the relevant interested parties, whereby monitoring issues expressed in the Minerals Local Plan can be discussed and implemented.

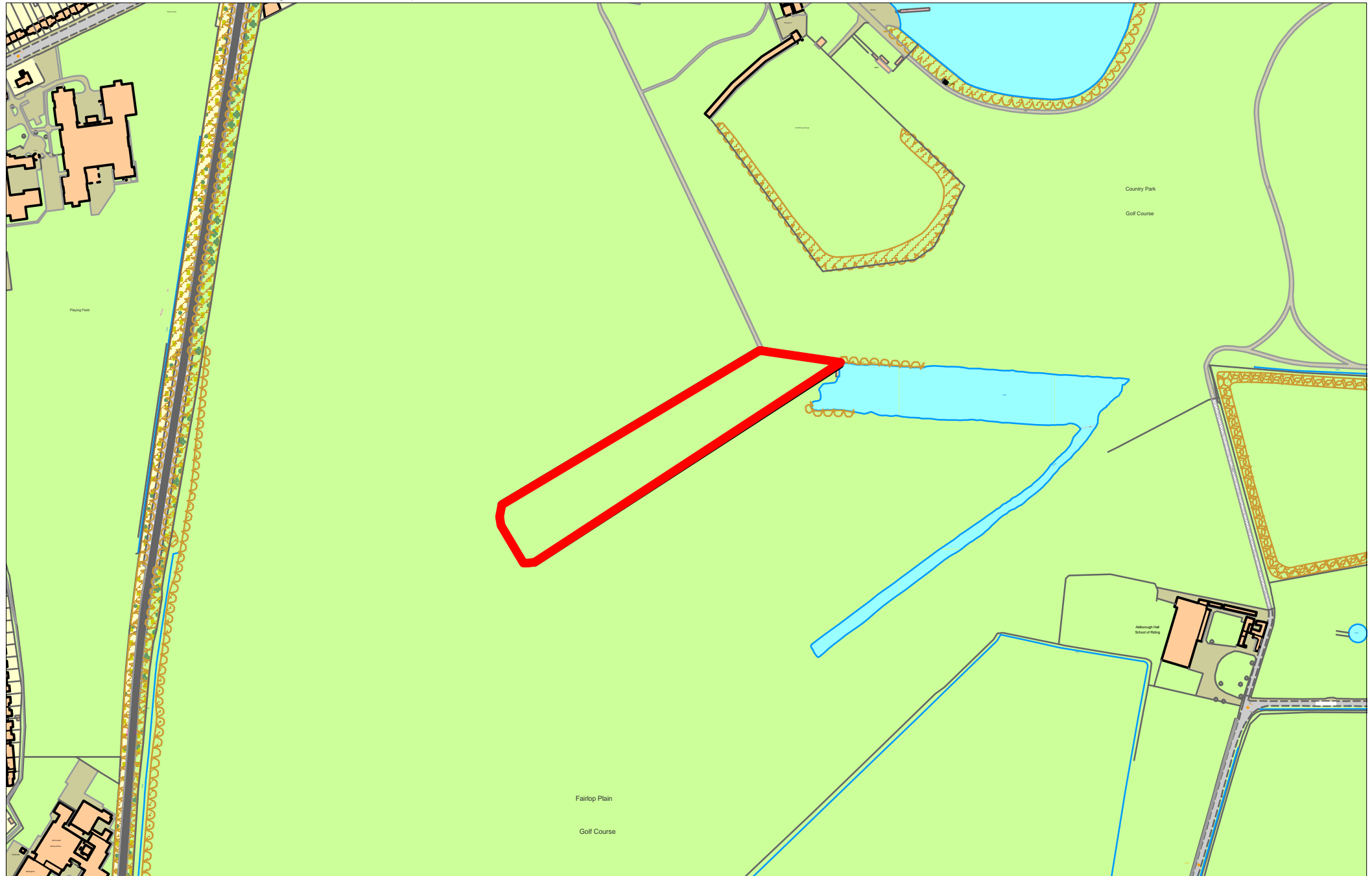
Site 1 - Preferred Area for Minerals Extraction: Aldborough Hatch Farm



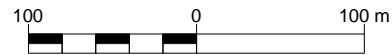
Site 2 - Preferred Area of Minerals Extraction: Hainault Farm



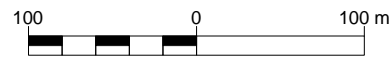
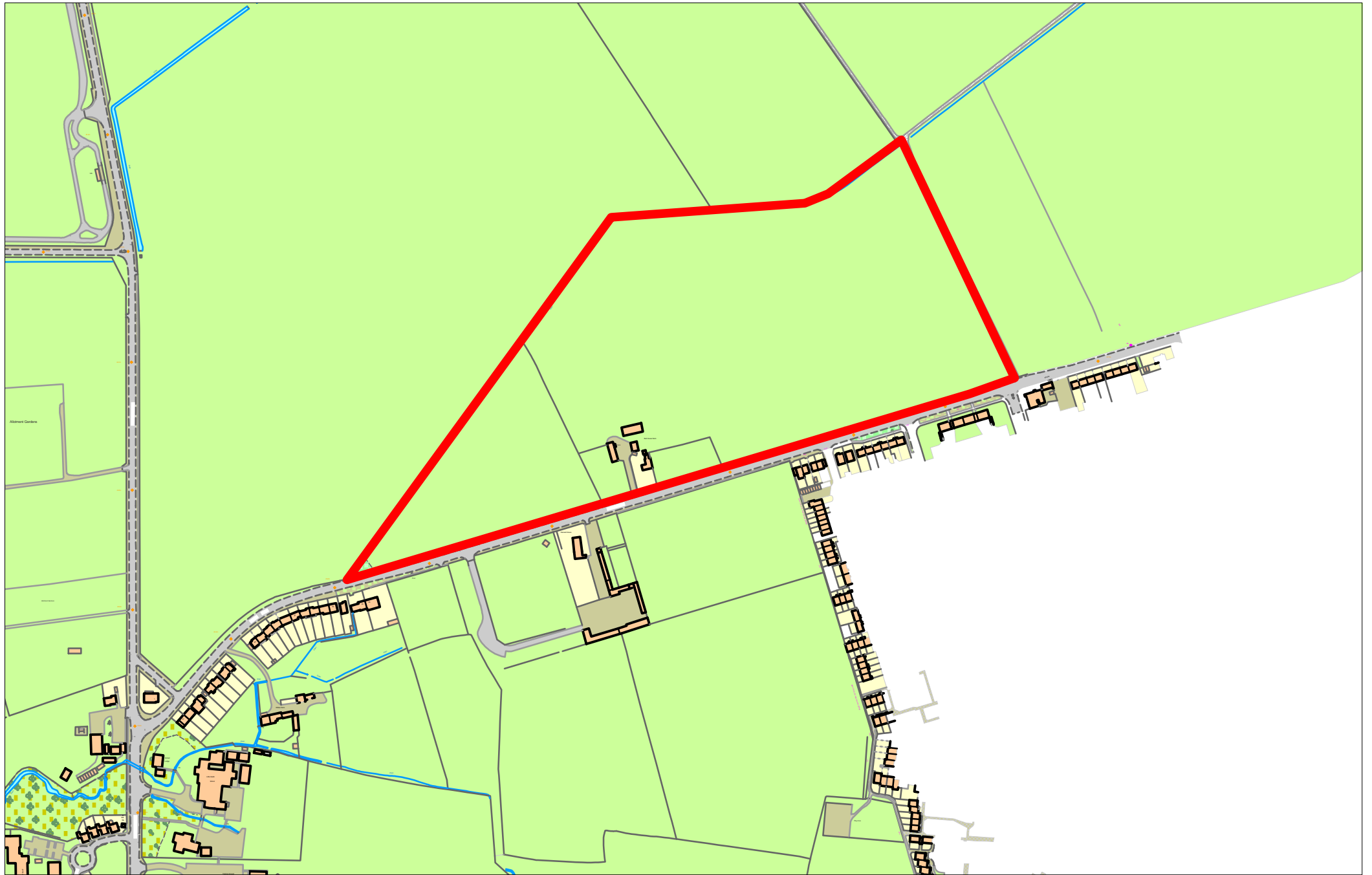
Site 3 - MSA A: Former Runway Site at Fairlop Waters



Site 4 - MSA B: Hainault Road Active Allotment Land



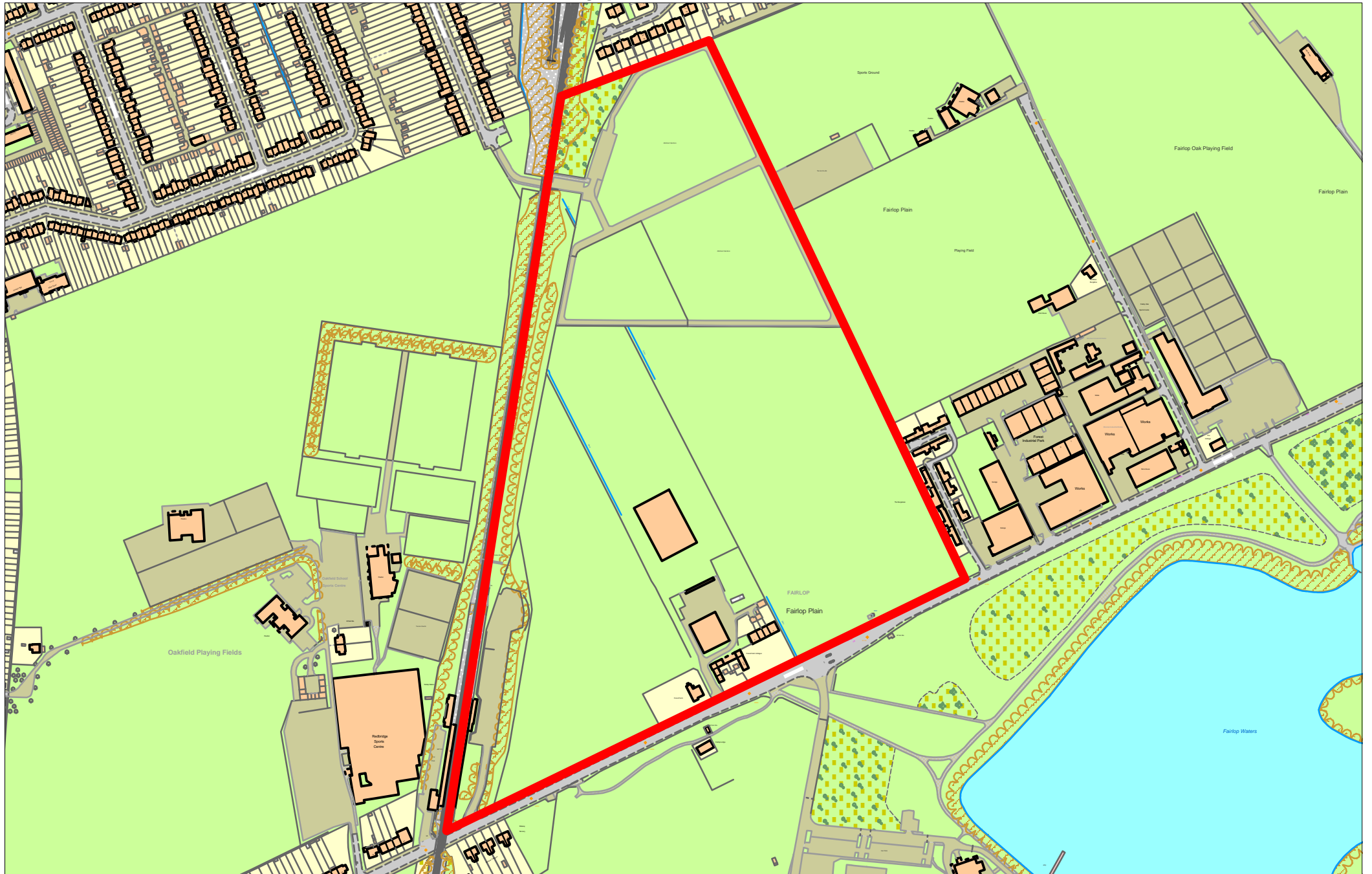
Site 5 - MSA B: Red House Farm



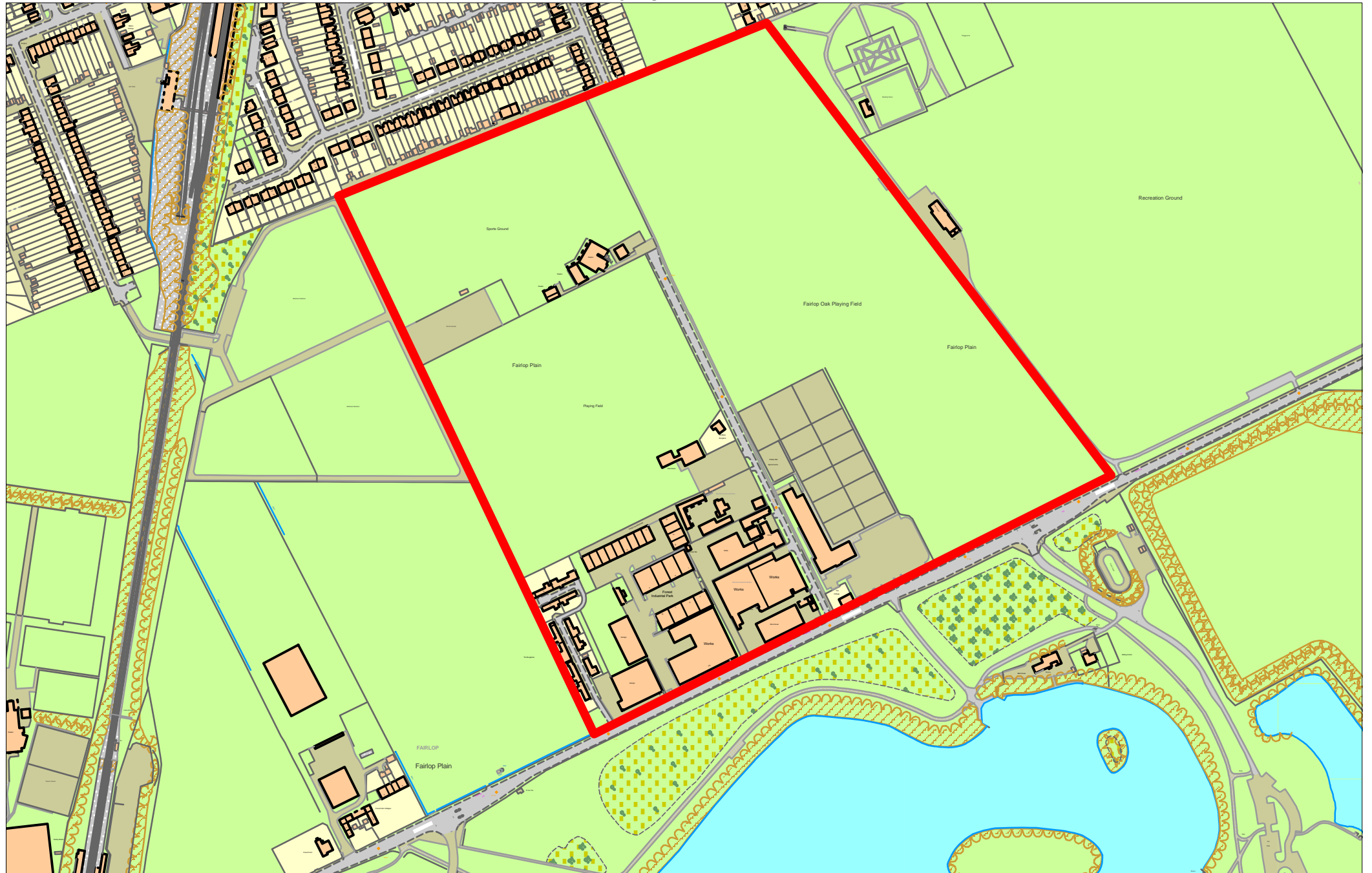
Site 6 - MSA B: Area around Willow Farm



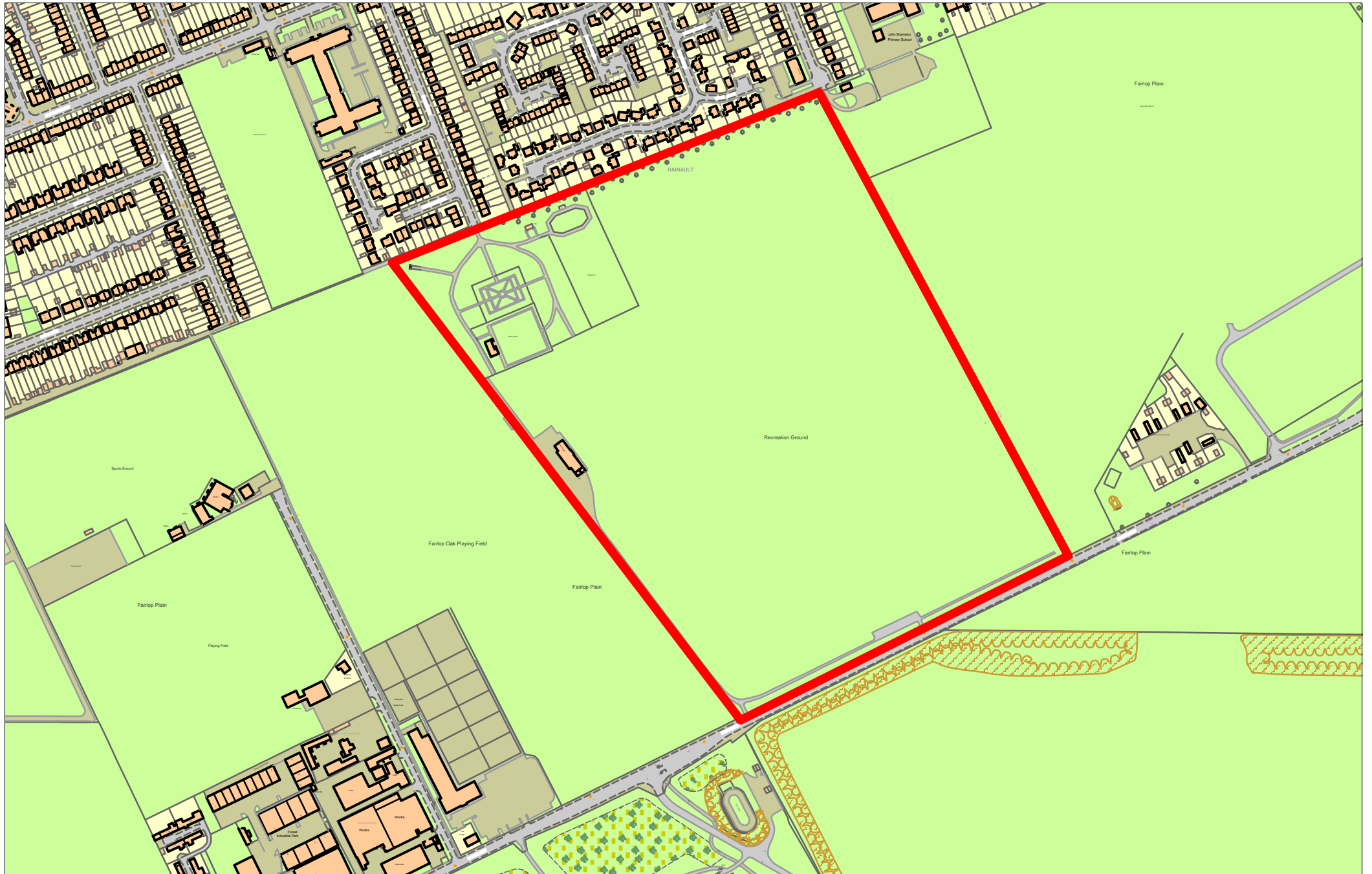
Site 7 - MSA C: Fullwell Cross Allotments and Forest Farm Cottages



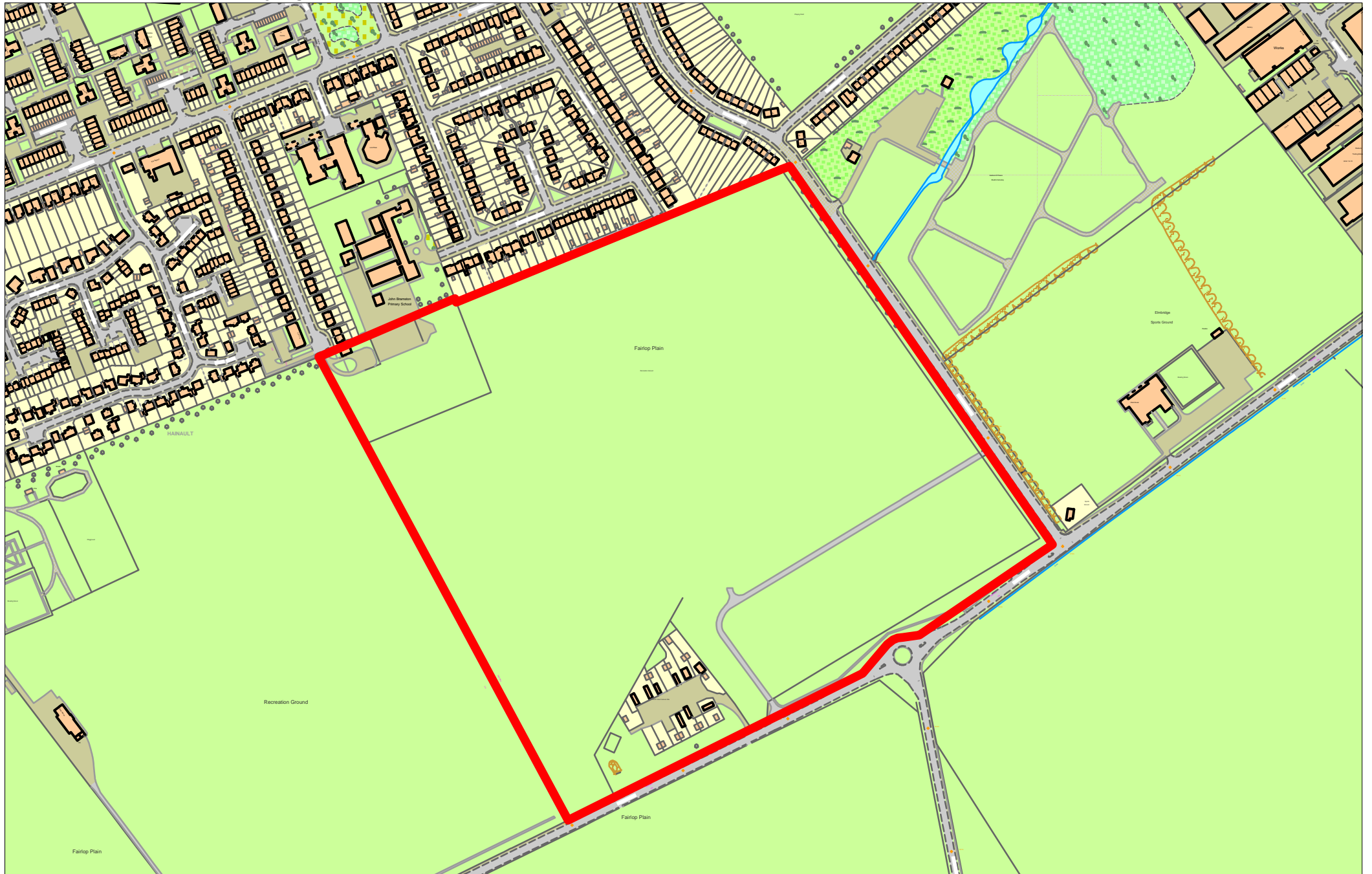
Site 8 - MSA C: Hainault Sports Ground & Pavillion and Hainault Playing Fields



Site 9 - MSA C: Hainault Recreation Ground

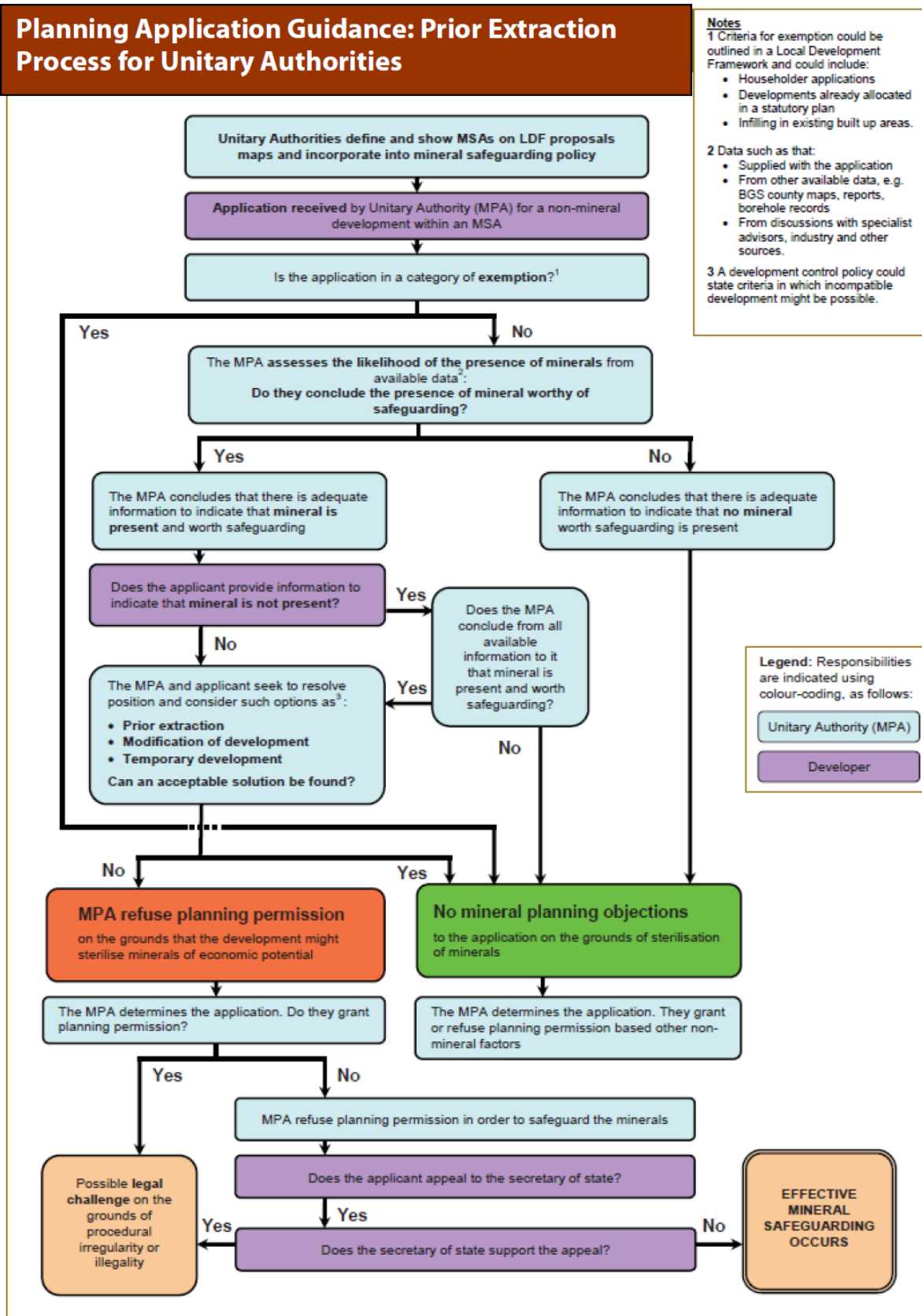


Site 10 - MSA C: Hainault Playing Fields & Caravan Site



Appendix B: Prior Extraction flow chart

Planning Application Guidance: Prior Extraction Process for Unitary Authorities



Source: 'A guide to mineral safeguarding in England' (October 2007): British Geological Survey (BGS) (Natural Environment Research Council)

Appendix C: Restoration and Funding Opportunities

Site no	Minerals Development Site Location	Site Description	Priority Habitats/Species	Cost/Funding
3	Former Runway at Fairlop Country Park	The undisturbed location makes this site an ideal for nature and conservation projects. The former runway is surrounded by a golf course and would be good location as a bird conservation area as several wading species are already present on the Fairlop quarry site.	Standing open waters (Priority 1) - Reedbeds. Include national BAP species such as Narrow Small reed (<i>Calamagrostis stricta</i>)	The NatureSave Trust Heritage Lottery Fund- Thinking about biodiversity
4	Hainault Road Active Allotment	Reinstate 100% of the allotment area in alignment with strategic policy 9 and CR2 borough wide primary policy. 99% occupancy is achieved across all 68 plots. Include any plant species which may enhance wildlife, introduce bat/bird boxes if possible.	Introduce wildflowers including Essex BAP plant species e.g. Oxlip (<i>Primula elatior</i>) and Hog's Fennel (<i>Peucedanum officinale</i>)	
5	Red House Farm	Reintroduce farming on the land with buffer zones of unmanaged grassland to help increase wildlife. Include any plant species which may enhance wildlife and hedgerows where possible.	Hedgerows London BAP habitat unmanaged Acid Grassland	Natural England - Energy Crops Scheme Heritage Lottery Fund- Thinking about biodiversity
6	Area around Willow Farm	This large site could accommodate a combination of farming land and nature conservation plans. Energy crops could be grown for biomass production in the borough. Hedgerows could also be introduced to help increase species biodiversity amongst a monocrop. Leaving buffer zones for wild flowers and plant species to flourish provides habitats for breeding birds. Could incorporate a water body or pond to create habitats for amphibians and invertebrates. It may also increase the range of feeding sites for the wading bird species already present in the Fairlop area.	Standing open waters (Priority 1) - Reedbeds. Wet woodland. Possibility of re-introducing otters (similar to the Amwell Quarry, Hertfordshire)	Natural England - Energy Crops Scheme Heritage Lottery Fund- Thinking about biodiversity

Site no	Minerals Development Site Location	Site Description	Priority Habitats/Species	Cost/Funding
8	Fullwell Cross Allotments	Reinstate 70% of the allotment area in alignment with strategic policy 9 and CR2 borough wide primary policy. As only 69% occupancy is achieved across 125 plots, the remaining 30% of land can be dedicated to wildlife enhancement. Include long grassy areas to encourage invertebrates. Also introduce BAP plant species to work towards achieving UK BAP targets.	Introduce long grassy unmanaged areas Introduce Essex BAP plant species e.g. Oxlip (<i>Primula elatior</i>) and Hog's Fennel (<i>Peucedanum officinale</i>)	
8	Forest Farm Cottages	Combination of existing community farms (e.g. Forest Farm Peace Garden) with agricultural farming. As the site is large incorporating crops for energy production e.g. Miscanthus could be a viable way to gaining government funding.	Elephant's Grass (<i>Miscanthus giganteus</i>)	The Energy Crops Scheme offers grants to growers to establish the crops. Local Food Grants – Scheme for growing food locally
9	Hainault Sports Ground & Pavilion	Restore 100% of recreational activities. To encourage wildlife on this site, small areas of long grass can be left Including long grassy areas to encourage invertebrates. Also introduce BAP plant species to work towards achieving UK BAP targets	London BAP habitat unmanaged Acid Grassland Including London BAP species such as: Harebell (<i>Campanula rotundifolia</i>) Heath Bedstraw (<i>Galium saxatile</i>)	
10	Hainault Recreation Ground	Restore recreational activities with areas designated for wildlife gardens and visitors information. Also a buffer strip of 2-3 m could be introduced along the north of the site against the row of trees lining the site. This could provide shelter and feeding opportunities for mammals and birds in the area. Introduce bat/bird boxes where possible.	London BAP habitat unmanaged Acid Grassland Including London BAP species such as: Harebell (<i>Campanula rotundifolia</i>) Heath Bedstraw (<i>Galium saxatile</i>)	

Site no	Minerals Development Site Location	Site Description	Priority Habitats/Species	Cost/Funding
11	Hainault Playing Field & Caravan Site	<p>Disturbance on this site will be greater than others due to people living on site. So conservation zones will be limited due to noise and access across the site.</p> <p>Restore recreational activities and introduce buffer zones of unmanaged grassland along areas of the site.</p>	<p>London BAP habitat unmanaged Acid Grassland Including London BAP species such as:</p> <p>Harebell (<i>Campanula rotundifolia</i>) Heath Bedstraw (<i>Galium saxatile</i>)</p>	<p>The NatureSave Trust Heritage Lottery Fund- Thinking about biodiversity</p>

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