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Hertfordshire Landscape and Visual Sensitivity Study of Potential Mineral Sites

Prepared by LUC
August 2018

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Planning & EIA
Design
Landscape Planning
Landscape Management
Ecology
Mapping & Visualisation

LUC LONDON
43 Chalton Street
London
NW1 1JD
T +44 (0)20 7383 5784
london@landuse.co.uk

Offices also in:
London
Bristol
Glasgow
Edinburgh



Land Use Consultants Ltd
Registered in England
Registered number: 2549296
Registered Office:
43 Chalton Street
London NW1 1JD
LUC uses 100% recycled paper

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1 Introduction

- 1.1 Land Use Consultants (LUC) was commissioned by Hertfordshire County Council (HCC) to carry out a landscape and visual sensitivity assessment of potential mineral sites in the county. The assessment also included the assessment of two existing Preferred Areas, previously defined by HCC. The study is an element of the on-going Minerals Site Selection Study that is being undertaken by LUC. This report sets out the findings of the landscape and visual sensitivity assessment which will form part of the evidence base supporting the new Hertfordshire Minerals Local Plan.
- 1.2 The landscape of Hertfordshire is valued as a natural, historical and cultural resource and includes The Chilterns Area of Outstanding Natural Beauty (AONB), a landscape of national importance, in the north west of the county. Given the significant short term and long term impacts mineral extraction can have on the landscape, there is a clear need to balance demands for securing future mineral resources with that of protecting and conserving the special landscape character and visual amenity of the county.
- 1.3 A site visit was undertaken in May 2016 to a number of operational mineral sites within Hertfordshire to understand the key features of sand and gravel extraction and how this kind of extraction affects landscape and visual amenity. For the purpose of this study it was important to gain an understanding of potential impacts and how they can be mitigated both during operation and through effective landscape restoration.
- 1.4 The following characteristics of mineral extraction can potentially result in adverse impact on landscape and visual amenity:
 - the location of mineral sites within sensitive landscapes, often in flat low lying river valleys;
 - extraction can result in the loss of valued landscape features such as hedgerows, trees and woodland which can degrade the local landscape and result in the loss of local landscape distinctiveness;
 - the formation of temporary silt lakes can change local landscape character;
 - large scale machinery and lighting associated with excavation and on-site processing can result in noise and visual intrusion in the local area;
 - frequent heavy vehicle movements on local roads can disturb rural tranquillity;
 - screen planting associated with mineral extraction sites can change the sense of enclosure of a landscape.

Purpose of the study

- 1.5 The aim of this study is to provide an assessment of the landscape and visual sensitivity to the operational phase of mineral workings of the 23 sites put forward through the Call for Sites process, as well as two Preferred Areas (Areas 1 and 2) previously defined by HCC. This includes an indication as to whether there are opportunities to mitigate potential impacts.
- 1.6 Further guidance on potential mitigation measures which could minimise the effect of development on the landscape and visual amenity (both during extraction and as part of the post extraction restoration) for individual sites will be provided at a later stage once preferred sites for the Minerals Local Plan have been allocated.
- 1.7 A key consideration is the need for the study to provide a transparent, robust and defensible evidence base for the Minerals Local Plan Review. The method of approach to this study is set out in Section 2 below.

Report Structure

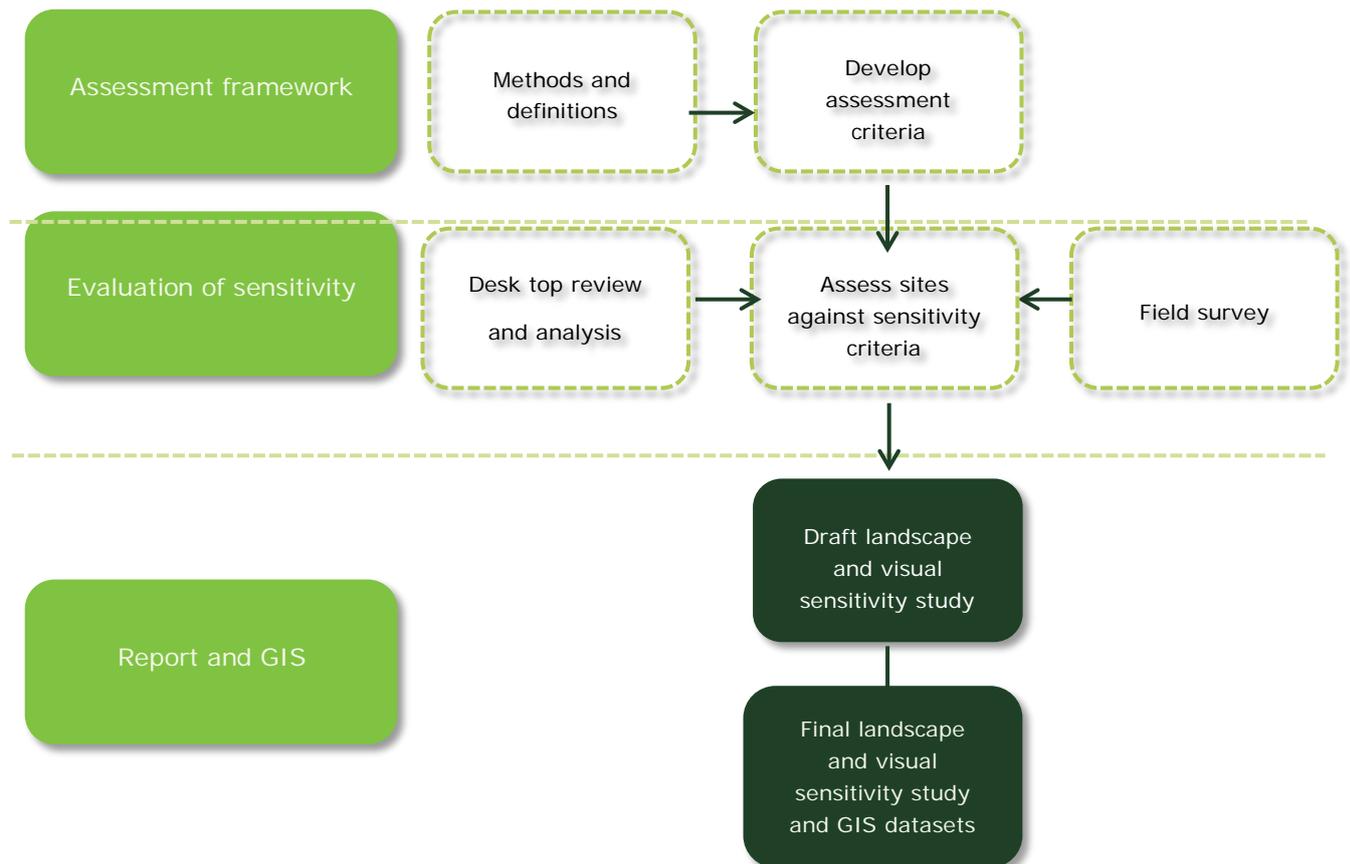
- **Section 2:** Methodology
- **Section 3:** Sensitivity Assessment
- **Section 4:** Conclusion and recommendation

2 Methodology

Project Stages

2.1 The following diagram indicates the main project stages.

Diagram 1: Project stages



Approach to assessing landscape and visual sensitivity

2.2 There is currently no published method for evaluating the landscape and visual sensitivity of different types of landscape to development. The methodology used in this study builds on LUC's considerable experience from previous and ongoing studies of a similar nature and was developed in consultation with HCC. The following documents have informed the approach:

- *Landscape Character Assessment Guidance for England and Scotland Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity* (Scottish Natural Heritage and the former Countryside Agency, 2002) is a discussion paper on landscape sensitivity and capacity.
- *Guidelines for Landscape and Visual Impact Assessment (GLVIA 3)*. The Landscape Institute and the Institute for Environmental Management and Assessment (IEMA) (Third Edition 2013) is the industry standard for landscape and visual assessment.
- *An Approach to Landscape Character Assessment* (Natural England, 2014) is a guide to landscape character assessment.

Landscape sensitivity

- 2.3 Landscape sensitivity is a measure of the resilience of the landscape to change. *Topic Paper 6: Techniques and Criteria for Judging Sensitivity and Capacity* defines landscape sensitivity to a specific type of change or development as follows:

'It should be defined in terms of the interactions between the landscape itself, the way that it is perceived and the particular nature of the type of change or development in question.'

- 2.4 In this study the following definition of landscape sensitivity has been used:

Landscape sensitivity is the extent to which the site in question can accommodate change without adverse effects on wider landscape character

- 2.5 Landscape sensitivity in this study is a relative measurement of the extent to which the character of the landscape is likely to undergo change as a result of proposed mineral workings.
- 2.6 For example, a higher sensitivity site would result in greater adverse impacts on landscape features and character while a lower sensitivity site would be more able to accommodate that change without such adverse effects.

Visual sensitivity

- 2.7 Visual sensitivity is a measure of the potential visibility of the proposed mineral extraction (based on landform and the extent of tree cover) and the nature and number of the people likely to perceive that change.
- 2.8 In this study the following definition of visual sensitivity has been used:

Visual sensitivity is the extent to which the site in question can accommodate change without adverse effects on the visual amenity of people

- 2.9 For example, a higher sensitivity site would result in greater adverse impacts on viewers while a lower sensitivity site would be more able to accommodate the change without such adverse effects on viewers.

Definitions

- 2.10 The study makes a series of judgements about the sensitivity of each individual site to a specific type of mineral extraction (sand and gravel or brick clay) alongside making comment on likely landscape and visual effects. These judgements should be taken as being indicative of the likely effects, and are not intended to be a substitute for detailed consideration of the effects of individual development proposals if required as part of planning applications. These should be addressed on a case-by-case basis as part of defined planning procedures. It is likely that some but not all mineral proposals on these sites will require Environmental Impact Assessment which should include landscape and visual impact assessment.
- 2.11 It should be noted that use of the word sensitivity in this study has been used interchangeably with the word '*susceptibility*' as it is defined in GLVIA 3, in that both focus on sensitivity to change with respect to landscape character, independent of an evaluation of landscape value.
- 2.12 Landscape value, as recognised through landscape or heritage designations may be affected by the development of mineral workings. Mineral extraction sites that are partly or entirely within such designations will be assessed as part of the wider site selection assessment conducted by LUC and therefore discussion of landscape value has not been repeated in this landscape sensitivity assessment.
- 2.13 Heritage designations are not considered in this study but a high level assessment of how they may be affected by mineral workings is considered within the on-going Minerals Site Selection Study that is being undertaken by LUC.

Landscape Assessment Criteria

- 2.14 Both Topic Paper 6 and GLVIA 3 advocate the use of professional judgement and an understanding of landscape character to understand what makes one landscape more or less sensitive than another to particular forms of development. Key to this is an understanding of

which aspects of the landscape are particularly susceptible to the type of development proposed. These include both physical and perceptual characteristics.

2.15 Paragraph 4.2 of Topic Paper 6 states that:

'Judging landscape character sensitivity requires professional judgement about the degree to which the landscape in question is robust, in that it is able to accommodate change without adverse impacts on character. This involves making decisions about whether or not significant characteristic elements of the landscape will be liable to loss... and whether important aesthetic aspects of character will be liable to change'.

2.16 A key step in the study process was to identify and understand the aspects of the landscape which are more likely to be affected by mineral extraction as it is these characteristics which define whether development could potentially be accommodated or not in a particular area.

2.17 The criteria defined in **Table 2.1** are based on LUC's experience and were agreed with the HCC. The criteria relate to landscape character as well as other perceptual aspects, for example naturalness and tranquillity.

2.18 The sensitivity judgement for each site depends on a range of factors and these have been carefully balanced using professional judgement rather than using a rigid scoring system. For example, at one site the traditional perceptual character may have a greatest influence on overall sensitivity, whereas at another site the openness of the site might be the overriding factor that influences sensitivity.

Table 2.1 Criteria for assessing landscape sensitivity to mineral extraction

Landscape character criteria	
Landform	Smooth, gently undulating or flat landforms are likely to be less sensitive to mineral extraction than landscapes with a dramatic landform, distinct landform features or prominent skylines that contribute positively to landscape character.
Land cover pattern and valued features	Sites containing valued landscape features or complex, irregular or historic land cover patterns will have a higher sensitivity than sites with simple land cover and few, or no, valued features.
Perceptual character	Landscapes that are relatively tranquil (due to freedom from human activity and disturbance and having a perceived naturalness) or that have a strong feel of traditional 'rurality' with few modern human influences tend to increase levels of sensitivity to mineral workings compared to landscapes that contain signs of development.
Openness/ enclosure	Landscapes of open and exposed character would have a higher sensitivity to mineral workings due to the lack of visual screening, and lesser opportunities for screening operations without changing character. Conversely, landscapes with a higher degree of visual containment (e.g. due to landform or vegetation) are likely to be less sensitive and have higher potential to screen workings.

Visual Amenity Assessment Criteria

2.19 The susceptibility of different people to change in visual amenity (visual receptors) is mainly a function of their occupation or activity. The *Guidelines for Landscape and Visual Impact Assessment* (GLVIA 3) identifies local residents and people engaged in outdoor recreation or visitors to attractions (whose attention is likely to be focused on the landscape) as the groups of people most susceptible to visual change. For the purpose of this study, the extent and frequency that the site can be viewed at close proximity by more sensitive receptors is considered. Visual receptors less sensitive to change, such as people engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape, people at their place of work where setting is not important to the quality of working life or people travelling through the area by road or rail, are not included.

Table 2.2 Criteria for assessing visual sensitivity to mineral extraction

Visual amenity criteria	
Residential receptors	Sites that contain residential properties or that are visible at close range by residents or local communities (and where views are currently open) are likely to have a higher sensitivity to mineral extraction than sites that do not have residential receptors nearby or whose views are screened by existing vegetation or landform.
Recreational receptors	Sites that are visible at close range by recreational users of footpaths (particularly well-used footpaths or National Trails with views over the site) or are located close to visitor attractions with views of the site (including well visited viewpoints) are likely to be more sensitive to mineral extraction than sites that are remote from recreational routes/sites or are screened from these receptors by existing vegetation or landform.
Key vantage points	Sites that are visible from key vantage points (such as viewpoints marked on OS maps or where facilities such as car parks and picnic tables are provided for the enjoyment of view), and particularly in close proximity, are likely to be more sensitive to mineral extraction than sites that are not visible from key vantage points, or are screened from these locations.

Overall sensitivity

- 2.20 The sensitivity of individual sites and Preferred Areas to mineral extraction was assessed against each of the criteria and graded using a five point sensitivity scale as described in **Table 2.3** below indicating higher to lower sensitivity.
- 2.21 These assessments were then combined and a judgement made on the overall sensitivity of each site and a grade assigned using the same sensitivity scale.

Table 2.3 Definitions of sensitivity

Sensitivity Score	Landscape	Visual
High	<p>Mineral extraction is likely to result in high magnitude or very large geographic spread of effects on landscape features and/ or character.</p> <p>e.g. development is likely to be totally at variance with landform and landcover patterns or likely to destroy, damage or degrade the perceptual and/or physical character of the landscape, or its valued features.</p> <p>The area is likely to be very open and exposed. It is unlikely that impacts can be mitigated without changing landscape character.</p>	<p>Mineral extraction is likely to result in high magnitude adverse effects on visual amenity of viewers, or many viewers are adversely affected.</p> <p>e.g. significant changes in views from recognised viewpoints on National Trails/ well used footpaths or from visitor attractions, or residential properties within the area, adjacent to or with direct views of the site, or likely to affect very large numbers of people/receptor sites.</p> <p>It is unlikely that impacts can be mitigated without changing visual character.</p>
Moderate High	<p>Mineral extraction is likely to result in moderately high magnitude or large geographic spread of effects on landscape features and/ or character.</p> <p>e.g. development is considerably at variance with landform, and landcover patterns; or likely to destroy, damage or degrade some element of the perceptual and/or physical character of the landscape.</p> <p>The area is likely to be open and exposed. Impacts cannot be fully mitigated.</p>	<p>Mineral extraction is likely to result in moderately high magnitude adverse effects on visual amenity of viewers, or many viewers are adversely affected.</p> <p>e.g. some changes in views from recognised viewpoints on recreational routes or sites, or residential properties adjacent to or with views of the site; or likely to affect large numbers of people/receptor sites.</p> <p>Impacts cannot be fully mitigated.</p>
Moderate	<p>Mineral extraction is likely to result in a moderate magnitude or medium geographic spread of effects on landscape features and/</p>	<p>Mineral extraction is likely to result in moderate magnitude adverse effects on visual amenity of viewers.</p>

Sensitivity Score	Landscape	Visual
	<p>or character.</p> <p>e.g. development is noticeably at variance with landform and landcover patterns; moderate adverse impact on the perceptual and/or physical character of the landscape.</p> <p>The area is partially screened. Some impacts likely to be mitigated.</p>	<p>e.g. changes in views from recreational routes or sites, or residential properties with views of the site; or likely to affect a moderate number of people/receptor sites.</p> <p>Some impacts likely to be mitigated.</p>
Low Moderate	<p>Mineral extraction is likely to result in moderately low magnitude or small geographic spread of effects on landscape features and/ or character.</p> <p>e.g. development is slightly at variance with landform and land cover patterns; slight adverse impact on the perceptual and/or physical character of the landscape.</p> <p>The area is likely to be screened to some extent, or impacts can be fully mitigated.</p>	<p>Mineral extraction is likely to result in moderately low magnitude adverse effects on visual amenity of viewers.</p> <p>e.g. Area is partially screened. There are partial/indirect views of the site from residential properties/ recreational routes or sites, or likely to affect small numbers of people/receptor sites.</p> <p>Impacts can be fully mitigated.</p>
Low	<p>Mineral extraction is likely to result in a low magnitude or very small geographic spread of effects on landscape features and/ or character.</p> <p>e.g. development fits with landform, and landcover patterns; very little adverse impact on the perceptual and/or physical character of the landscape.</p> <p>Area may be heavily screened. Impacts can be fully mitigated or mitigation/restoration could improve landscape character or restore degraded elements.</p>	<p>Mineral extraction is likely to result in low magnitude adverse effects on visual amenity of viewers.</p> <p>e.g. There are few residential properties/recreational routes or sites nearby. Likely to affect very small numbers of people/receptor sites.</p> <p>Impacts can be fully mitigated or mitigation/restoration could result in improved views.</p>

Desk Studies

- 2.22 The initial desk-based assessment to evaluate the existing landscape and visual amenity of the study areas was informed by data gathered from the sources of baseline information listed in **Appendix 2**.
- 2.23 Landscape characterisation underpins the approach to landscape sensitivity assessment. The landscape character of the wider study area within which each site is located was considered, drawing on Natural England's National Character Area profiles (NCA) and the existing landscape character assessment (LCA) covering Hertfordshire, the '*Hertfordshire Landscape Character Assessment*' (2005). The LCA formed a suitable baseline for the study although some areas have undergone significant change since the assessment was undertaken between 2000 and 2005, particularly for sites which are located in LCA 31 De Havilland Plain which is listed as 'no longer representative' due to development on the edge of Hatfield. Where relevant, the site sensitivity assessment has relied on information from field surveys rather than written text in individual LCAs. **Figure 2.1** shows the sites assessed in relation to the location of landscape character areas.
- 2.24 The desk top research exercise also included a review of GIS data and mapping, including topography, and historic landscape characterisation. The *Historic Landscape Characterisation County Report for Hertfordshire* (2006) (HLC) has been used to inform an understanding of time depth and degree of change that the landscape has undergone. The combined effect of 20th century development, field boundary loss and modern field boundary creation since 1950 now characterises 57% of landscape in Hertfordshire. The HLC defines degrees of change within each character area from 0 (no change) to 3 (much change). Sites within character areas listed as having no or little change (0 or 1) are noted within the sensitivity assessment tables in **Appendix 1**.

Site and Preferred Area Assessments

- 2.25 Field survey work was carried out in June and July 2016 to test the findings of the desk-based studies. Each site and the surrounding area were visited including key viewpoints.
- 2.26 The emphasis of the work was to:
- test the findings of the landscape sensitivity analysis;
 - test the desk based analysis of intervisibility with residential or recreational receptors;
 - assess the overall sensitivity of the landscape to the mineral working proposal in question.
- 2.27 The site visit considered the following:
- consideration of key features and characteristics of the landscape of the site and immediate surroundings;
 - analysis of the landscape in terms of the characteristics and qualities with a bearing on its sensitivity to the specific mineral working proposal, including intervisibility with surrounding areas and sensitive features present within the site.
- 2.28 The site survey, together with the information and analysis from the desk based work, formed the basis of the assessment, where the sensitivity criteria were applied to each site. Completed assessment sheets are presented in full in **Appendix 1**.

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Figure 2.1: Landscape Character Assessment (LCA index)

Landscape Character Areas

- 001: Maple Cross Slopes
- 002: Heronsgate Heights
- 003: Colne Valley Gravel Pits
- 004: Moor Park Slopes
- 005: Croxley Moor
- 006: Lower Chess Valley
- 007: Sarratt Plateau
- 008: Upper Gade Valley
- 009: Bedmond Plateau
- 010: St Stephens Plateau
- 011: Lower Gade Valley
- 012: Oxhey Golflands
- 013: Oxhey Wood
- 014: Bushey Hill Pastures
- 015: Bushey Swards
- 016: Aldenham Plateau
- 017: Ver / Colne River Valley
- 018: Bricket Wood
- 019: Vale of St Albans
- 020: Shenley Ridge
- 021: High Canons Valleys and Ridges
- 022: Borehamwood Plateau
- 023: Elstree Ridge and Slopes
- 024: Arkley Plain
- 025: Wrotham Park and Bentley Heath
- 026: Hornbeam Hills (Enfield Chase)
- 027: Catherine Bourne Valley
- 028: North Mymms Park and Redwell Woods
- 029: Mimmshall Valley

- 030: Colney Heath Farmland
- 031: De Havilland Plain
- 032: Symondshyde Ridge
- 033: Upper Lea Valley
- 034: Blackmore End Plateau
- 035: Ayot St Peter Wooded Upland
- 036: Upper Mimram Valley
- 037: Datchworth Settled Slopes
- 038: Aston Estate Farmland
- 039: Beane Valley
- 040: Bramfield - Datchworth Sloping Farmland
- 041: Bramfield Wood, Tewin Wood and Datchworth Uplands
- 042: Tewin, Dawley and Lockley Estate Farmland
- 043: Mimram Valley Parklands
- 044: Panshanger Parkland
- 045: Welwyn Fringes
- 046: Hatfield Park
- 047a: Essendon - Brickendon Farmed Slopes - A
- 047b: Essendon - Brickendon Farmed Slopes - B
- 048: West End - Brickendon Wooded Slopes
- 049: Little Berkhamstead Ridge Settlements
- 050: Ponsbourne and Tolmers Parkland Estates
- 051: North Mymms Common and Newgate Street Farmed Plate
- 052: Northaw Great Wood
- 053: Northaw Common Parkland
- 054a: Potters Bar Parklands - A
- 054b: Potters Bar Parklands - B
- 055: Theobalds Estate
- 056: Cheshunt Common
- 057: Thunderfield Ridges
- 058: Wormleybury and Cheshunt Park
- 059: Lea Valley Marshes
- 060: Middle Lea Valley South
- 061: Broxbournebury

- 062: Broxbourne Woods Complex
- 063: Bayfordbury, Brickendonbury and Balls Parkland
- 064: Hertford Heath
- 065: Middle Lea Valley West
- 066: Cole Green and Hertingfordbury Settled Farmland
- 067: Bramfield Plain
- 068: Lower Beane Valley
- 069: Stoneyhills
- 070: Woodhall Park and Watton-at-Stone Slopes
- 071: Benington / Sacombe Ridge
- 072: Munden Valley
- 073a: High Cross Plateau - A
- 073b: High Cross Plateau - B
- 074: Sacombe Park Estate Farmland
- 075: Lower Rib Valley
- 076: Ware Parklands
- 077: Kings Mead and Hartham Common Floodplain
- 078: Great Amwell Ridge and Slopes
- 079: Amwell Floodplain
- 080: Rye Meads
- 081b: Stanstead and Pishiobury Parklands - B
- 083: Hunsdon Plateau
- 087: Middle Ash Valley
- 088: Lower Ash Valley
- 089: Wareside / Braughing Uplands
- 090: Middle Rib Valley
- 091: Upper Rib Valley
- 092: Puckeridge Parklands
- 094: Bunfield Plateau
- 095: Revel End Plateau
- 096: Upper Vea Valley
- 097: Gorhambury Estate
- 098: Verulamium
- 099: Rothamsted Plateau and Kinsbourne Green

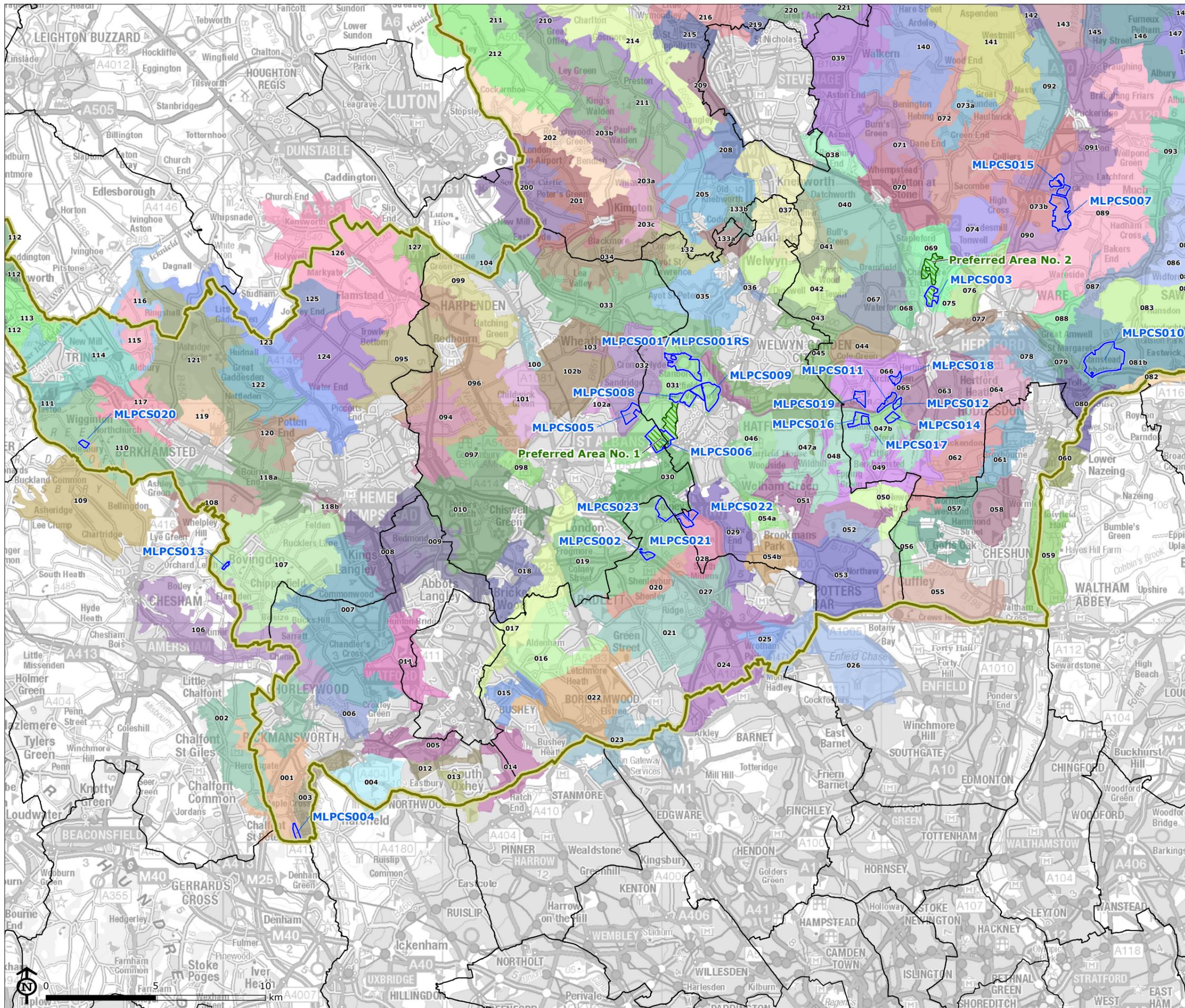
- 100: Harpenden Common
- 101: Childwick Plateau
- 102a: Ayres End Valleys and Ridges - A
- 102b: Ayres End Valleys and Ridges - B
- 103: Nomansland Common
- 104: Thrales End Plateau
- 106: Middle Chess Valley
- 107: Bovington and Chipperfield Plateau
- 108: Bourne Gutter and Hockeridge Bottom
- 118a: Lower Bulbourne Valley - A
- 118b: Lower Bulbourne Valley - B
- 120: Little Heath Uplands
- 121: Ashridge
- 122: Nettleden Ridges and Valleys
- 123: High Gade Valley
- 124: Gaddesden Row
- 125: Beechwood Estate
- 126: Markyate Valleys and Ridges
- 127: Pepsal End Slopes
- 132: Codicote Bottom Arable Valley
- 133a: Danesbury - A - Danesbury Settled Slopes
- 133b: Danesbury - B - Rabley Heath Settled Upland
- 200: Peters Green Plateau
- 201: Kimpton and Whiteway Bottom
- 202: Breachwood Green Ridge
- 203a: Sub Area River Mimram
- 203b: Whitwell Valley - B - North
- 203c: Whitwell Valley - C - South
- 205: Codicote Plateau
- 208: Knebworth Parkland
- 210: Langley Scarp
- 211: Offley / St Paul's Walden



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Figure 2.1: Landscape Character Assessment

-  Hertfordshire County boundary
-  District boundary
-  Site
-  Preferred area



(Please see LCA Index)

Map Scale @ A3: 1:170,000



3 Sensitivity Assessment

- 3.1 The assessment tables are included in full in **Appendix 1** and include a location map and photographs taken during site visits, a summary description of the site or Preferred Area and its location (including sites nearby that could result in cumulative interactions) and an overview of the key qualities of the landscape character area within which the site falls, drawing on the key qualities and guidance set out in the *Hertfordshire Landscape Character Assessment* (2005).
- 3.2 For each site and Preferred Area, an assessment table is used to analyse landscape and visual sensitivity against each of the assessment criteria along with a summary of overall landscape character sensitivity and visual amenity on a five point scale.
- 3.3 The following table provides a summary of the results of the assessment of landscape and visual sensitivity at each of the 23 sites and two Preferred Areas. A judgement of the overall sensitivity of each site is provided by combining landscape and visual sensitivity to produce an average and rounding this up to the nearest score on a five point scale.

Table 3.1 Landscape and Visual Sensitivity Assessment

MLP Site	Name	Landscape Character Sensitivity	Visual Amenity Sensitivity	Overall Sensitivity
CS001	Land at Cromer Hyde Farm	Moderate-High	Moderate-High	Moderate-High
CS002	Salisbury Hall	Low-Moderate	Low-Moderate	Low-Moderate
CS003	Land at Ware Park	Low-Moderate	Low-Moderate	Low-Moderate
CS004	Land at Pynesfield	Low-Moderate	Low	Low-Moderate
CS005	Nashes and Fairfold Farm	Moderate	Moderate-High	Moderate-High
CS006	Hatfield Aerodrome	Low	Low-Moderate	Low-Moderate
CS007	Barwick	Moderate-High	Moderate-High	Moderate-High
CS008	Hatfield Furze Field	Low-Moderate	Low-Moderate	Low-Moderate
CS009	Hatfield Quarry Land Adjoining Coopers Green Lane	Low Moderate	Moderate	Moderate
CS010	The Briggens Estate	Low-Moderate	Low-Moderate	Low-Moderate
CS011	Waterhall Farm Fields	Low-Moderate	Low-Moderate	Low-Moderate
CS012	Waterhall Broad Green	Low-Moderate	Low-Moderate	Low-Moderate
CS013	Harry's Field	Low-Moderate	Low-Moderate	Low-Moderate
CS014	Waterhall Bunkers Hill South	Low-Moderate	Low-Moderate	Low-Moderate
CS015	Plashes Farm	Moderate-High	Moderate	Moderate-High

MLP Site	Name	Landscape Character Sensitivity	Visual Amenity Sensitivity	Overall Sensitivity
CS016	Waterhall Howe Green	Moderate	Moderate	Moderate
CS017	Robins Nest Hill	Moderate	Low-Moderate	Moderate
CS018	Southfield Wood East	Low-Moderate	Low-Moderate	Low-Moderate
CS019	Pipers End	Moderate	Low-Moderate	Moderate
CS020	Roundhill Woods	Moderate High	Moderate	Moderate
Preferred Area 1	Land close to existing Hatfield Quarry	Low	Low-Moderate	Low-Moderate
Preferred Area 2	Land to the north of existing Rickneys Quarry	Moderate	Low-Moderate	Moderate
CS021	Land adjacent to Coursers Farm (North Mymms West)	Moderate	Low-Moderate	Moderate
CS022	Land adjacent to Coursers Farm (North Mymms East)	Moderate	Moderate High	Moderate High
CS023	Warren Farm	Low-Moderate	Low-Moderate	Low-Moderate

3.4 **Figure 3.1** shows the location of the 23 sites and 2 Preferred Areas colour coded by their overall sensitivity rating.

Cumulative Assessment

3.5 This report assesses the overall landscape and visual sensitivity of each site and Preferred Area individually. However as has been noted in the individual assessment in Appendix 1, several sites are located in close proximity to each other, and as a result there is the potential for cumulative impacts on the landscape if any of the sites were allocated and then developed over similar timescales. Potential cumulative issues have been identified and overall sensitivity taking account of these cumulative issues are discussed briefly below but will be assessed more thoroughly should sites be brought forward for development.

Coopers Green Lane Sites

CS001 Land at Cromer Hyde Farm, CS005 Nashes and Fairfold Farm, CS006 Hatfield Aerodrome, CS008 Hatfield Furze Field, CS009 Hatfield Quarry Land Adjoining Coopers Green Lane and Preferred Area 1

3.6 The wider landscape is characterised by existing and restored mineral workings either side of Coopers Green Lane, including the Symondshyde Farm Quarry, Hatfield Quarry and Suttons. An increase in mineral workings in this area has the potential for cumulative effects on the character of the wider landscape.

3.7 Working of sites located to the north of Coopers Green Lane together (CS001 and CS005), which are open and elevated above the level plain on land that gently rises towards Symondshyde Ridge, are likely to give rise to cumulative impacts due to the intervisibility with the plain to the south and villages such as Stanborough and Lemsford and residential areas on the urban edge of St Albans and Hatfield. Mineral extraction on these sites has the potential to decrease the rural quality of the immediate area due to disturbance to the historic field pattern, the loss of valued landscape features, particularly the extensive areas of deciduous woodland, including ancient

woodland. An increase in sites being worked at the same time could further disturb the tranquillity and sense of rural remoteness, as well as the recreational value of the area.

- 3.8 The sense of remoteness decreases south of Cooper's Green Lane due to the presence of the A1(M) as well as the influence of the urban edge of Hatfield and St Albans. Due to the flat landscape the impacts of mineral extraction on sites located within the large open landscape of the extensive De Havilland Plain (Sites CS006, CS008, CS009 and Preferred Area 1) are more easily mitigated by extending the network of woodlands and preserving the existing landscape framework (hedges, ditches and woodland blocks) which will reduce the likelihood of cumulative effects.
- 3.9 The development of sites *CS001 Land at Cromer Hyde Farm* and *CS008 Hatfield Furze Field* together with *CS009 Hatfield Quarry Land Adjoining Coopers Green Lane* to the south of Coopers Green Lane, at the same time, is likely to give rise to cumulative visual impacts on Hatfield Garden Village and Stanborough due to the potential for increasing the general intrusiveness of mineral workings and physically surrounding these settlements.
- 3.10 Potential cumulative impact arising from working sites *CS005 Nashes and Fairfold Farm and CS006 Hatfield Aerodrome together* is limited (despite their proximity, north and south of Cooper's Green Lane respectively) because there is little visual connectivity between the sites and with the existing mineral site at Hatfield Quarry due to intervening vegetation. CS0006 Hatfield Aerodrome is visually contained by the boundary vegetation, vegetation and woodland along Coopers Green Lane screens views to the north.

Lower Hatfield Road Sites:

CS011 Waterhall Farm Fields, CS012 Waterhall Broad Green, CS014 Waterhall Bunkers Hill South CS016 Waterhall Howe Green, CS018 Southfield Wood East and CS019 Pipers End

- 3.11 Gravel extraction already has a significant impact on the local landscape and the opposing valley slopes are characterised by active and restored mineral sites at Water Hall Quarry, Bunkers Hill, Pollards Quarry and Bedwell Park Quarry. Further mineral workings in this area have the potential for cumulative effects on the landscape character of the area.
- 3.12 Although individually these potential sites generally have a low or low-moderate sensitivity extending the number of existing working sites located either side of the Lower Hatfield Road, is likely to give rise to cumulative impacts on landscape character due to the potential for increasing the general intrusiveness of mineral workings within the narrow river valley. Extending the number of operational sites will potentially result in a decrease in the rural quality of the immediate area due to further disturbance to the historic field pattern, the loss of landscape features and a decrease in the rural tranquillity of the valley.
- 3.13 Although the visual impact of individual sites could be partially mitigated by woodland screening that would be in keeping with the local landscape character, cumulative visual impacts may impact local residents due to the high degree of intervisibility between sites across the narrow valley, and there will be potential cumulative visual impacts on receptors using the local network of footpaths with views from higher ground on the valley slopes.
- 3.14 An intensification of mineral workings in this area will also result in greater sequential visual effects along the Lower Hatfield Road due to the increased frequency of views to mineral sites on both valley sides.

Barwick Sites

CS007 Barwick and CS015 Plashes Farm

- 3.15 Due to the undulating topography and narrow valley landform, there is little intervisibility between these two sites and little potential for cumulative visual impacts. However, if the two sites (which are at their closest 600m apart) are worked at the same time there is the potential for some cumulative impact on the landscape character of the Rib Valley due to the increased loss of woodland blocks and disturbance to the rural character of the remote settlements.

North Mymms Sites

CS021 Land Adjacent to Coursers Farm (North Mymms West), CS022 Land adjacent to Coursers Farm (North Mymms East), CS023 Warren Farm

- 3.16 Due to the existing woodland (Frederick's Wood) there is little intervisibility between CS023 Warren Farm and the two sites at North Mymms Park (CS021 and CS022) and so less potential for cumulative visual impacts.
- 3.17 Due to the narrow valley landform, there is a high degree of intervisibility between CS021 and CS022 and with North Mymms Park to the south and potential for cumulative visual impacts on recreational users of the park and the mansion. If these sites are worked at the same time, there is potential for cumulative impacts on the landscape character of the enclosed valley along the River Colne and disturbance to the rural character of the valley, including North Mymms Park, due to the potential loss of woodland copses and mature trees.

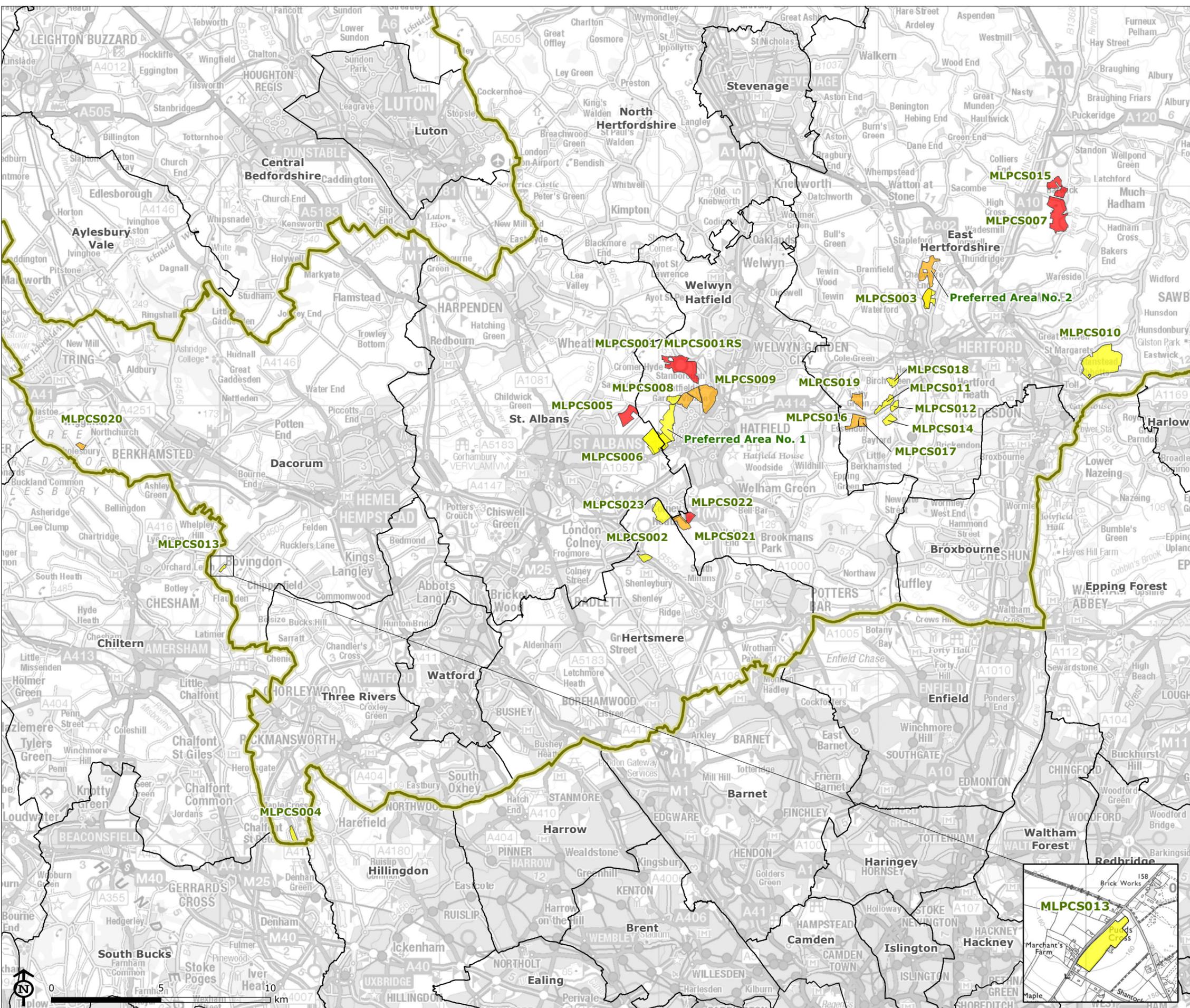
4 Conclusion

- 4.1 The findings of the assessment of sensitivity and capacity of the individual sites are detailed in the site assessment sheets contained in **Appendix 1**.
- 4.2 These are summarised in **Chapter 3** of this report.
- 4.3 The 23 sites and two Preferred Areas are distributed throughout the county but there is a concentration of sites south west of Hertford, along the Lower Hatfield Road (seven sites) and north west of Hatfield, along Cooper's Green Lane (five sites and Preferred Area 1).
- 4.4 Of the 23 sites assessed, eleven sites are assessed to have a low or low-moderate sensitivity to mineral extraction where impacts can be fully mitigated. Preferred Area 1 and MLPCS023 are also assessed as having a low-moderate sensitivity, where impacts can be mitigated.
- 4.5 Five sites (MLPCS009, MLPCS016, MLPCS017, MLPCS019 and MLPCS020) are judged to have a moderate sensitivity to mineral extraction. Mineral extraction on these sites is likely to result in moderate adverse impacts on landscape features and character or on local visual amenity, although some of these impacts are likely to be mitigated. Site MLPCS009 has a moderate sensitivity due to the potential change in views from properties on the edge of Hatfield Garden Village. Similarly mineral extraction on Site MLPCS016 could result in changes in views from properties in the hamlet of Howe Green. Sites MLPCS016, MLPCS017 and MLPCS019, all located in the Lea river valley, retain a strong rural character with valued landscape features which increases their sensitivity to mineral extraction. Site MLPCS20 is located in the Chilterns AONB and retains a tranquil rural character and contains indigenous beach woodland, most of which is ancient woodland. Additionally, Preferred Area 2 is assessed as having a moderate sensitivity to mineral extraction due to the potential change in local landscape character, and loss of valuable landscape features including hedgerows and Ancient Woodland, though there are some opportunities for mitigation. MLPCS022 is also assessed as having moderate sensitivity to mineral extraction to the potential change to local landscape character although there are opportunities for visual mitigation.
- 4.6 Four sites (MLPCS001, MLPCS005, MLPCS007, MLPCS015) are judged to have moderate-high sensitivity to mineral extraction. Mineral development on these sites is likely to result in moderately high adverse impacts on landscape features and character or on local visual amenity which cannot be fully mitigated. These sites share the common characteristic that they are located on elevated land with visual links to the wider landscape. Both Site MLPCS007 and Site MLPCS015, located near the village of Barwick, have a strong rural character with a varied landcover pattern, and are adjacent to extensive areas of ancient woodland. The sensitivity of Site MLPCS005 is increased by its proximity to the edge of St Albans and the potential impact on the visual amenity of residents in the Jersey Farm area. Mineral extraction on Site MLPCS001 is likely to degrade some valued features, such as the ancient woodland contained within the site and potential severance of the visual link along the lime avenue between Benstead's Wood and Brocket Hall. Extraction could not be screened from residential properties in the vicinity of the site without changing the characteristic large scale openness of the area. Additionally MLPCS022 is assessed as having moderate-high sensitivity to mineral extraction due to the adverse impacts on the parkland landscape and local visual amenity and visual links with North Mymms Park which cannot be fully mitigated.

Hertfordshire Landscape and Visual Sensitivity Study of Potential Mineral Sites

Figure 3.1: Overall sensitivity

-  Hertfordshire County boundary
-  District boundary
- Overall Sensitivity**
-  Low-Moderate
-  Moderate
-  Moderate-High



Map Scale @ A3: 1:170,000



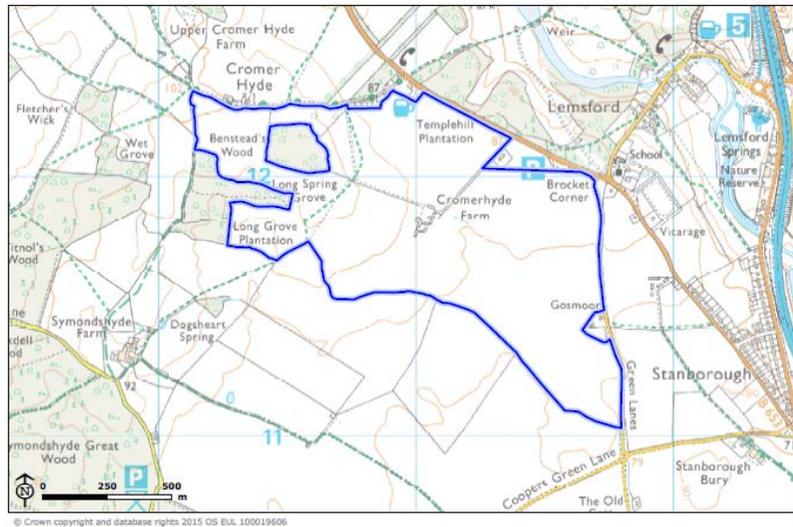
Appendix 1 Site and Preferred Area Assessments

MLP CS001 Land at Cromer Hyde Farm

Site location and context

- 4.8 The site is located in Welwyn Hatfield District, between Welwyn Garden City, Hatfield and St Albans. The site lies approximately 1km west of Welwyn Garden City and immediately west of the linear village of Lemsford. It is bounded by the B653 Marford Road to the north east and small rural lanes, Green Lanes to the east and Cromer Hyde Lane to the north. There are open fields to the south and west. The underlying bedrock is chalk with sand and gravel superficial deposits.

Figure A1.1 Location



Type of operation

- 4.9 Sand and gravel extraction.

Proximity to other sites

- 4.10 The area is characterised by active areas of sand and gravel extraction and the site is located adjacent to the working site at Symondshyde Farm. MLPCS009 is located 150m to the south on

the southern side of Coopers Green Lane and MLPCS008 800m to the south west.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 110 Chilterns / NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA31 De Havilland Plain <i>(small area to the north west of the site in LCA 32 Symondshyde Ridge)</i>

Key Landscape Characteristics (LCA 31 De Havilland Plain) (listed as 'no longer representative'¹)

- an extensive level plain;
- large open arable landscape to the north on high quality agricultural land;
- disused Hatfield aerodrome with associated industrial and commercial development and aeronautical structures;
- parkland and horticultural landscape of Oaklands College;
- existing and restored mineral workings;
- urban-fringe development and glasshouses;
- incoherent and jumbled landscape, particularly to the south and centre.

¹ Where relevant sensitivity assessment relies on information from field surveys rather than written text in the individual LCAs

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*²

- retain the characteristic large-scale openness to the north of the area (which is most unusual for the southern part of the county) but with a restored structure of hedges, ditches and woodland blocks;
- retain long views where possible to appreciate the flat landform;
- promote hedgerow restoration and creation throughout the area to provide visual and ecological links between existing and proposed woodlands. Pattern to follow historic field boundaries where possible. Hedges to include standard trees;
- promote the appropriate management of existing woodland in order to maintain a rich ground flora and the distinction between different management systems, such as high forest and coppice-with-standards;
- promote the planting of new small to medium woodlands, particularly on areas of restored mineral extraction to the centre and south;
- promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats;
- encourage the restoration of ditches and discourage the enclosure of existing open drainage systems;
- provide new uncropped or grass field margins to link areas of wildlife importance and/or existing and proposed rights of way;
- promote the creation of buffer strips along watercourses to prevent pesticide, herbicide and fertilizer run-off and provide habitat for wildlife; encourage their linkage to eco-corridors within the wider landscape;

- promote both the creation of new ponds and the retention/enhancement for wildlife of existing ponds;
- improve the poor existing network of rights of way over the area and develop opportunities for rights of way linkages alongside hedges, streams, water features, arable areas, airfield land and restored mineral workings;
- improve the treatment of screen bunding to the perimeter of and within mineral sites by more sympathetic profiles, heights and the use of green mulches. Provide advanced planting where appropriate to provide a permanent contribution to the landscape framework and focus attention to screen plant within minerals areas;
- develop appropriate management strategies to maintain and improve the mosaic of wildlife habitats areas, including wetland and semi-improved grassland, in association with former mineral extraction sites. Include the continued use of grazing and management by wildlife organisations.

Potential visual receptors

- 4.11 Residents in residential properties located along Cromer Hyde Lane, B653 Marford Road, Green Lanes and around Brocket Corner.
- 4.12 Recreational users of footpath Hatfield O50 and bridleway on Cromer Hyde Lane.



² Hertfordshire Landscape Character Assessment (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.1 MLP CS001 Land at Cromer Hyde Farm Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Flat to gently sloping landform on the edge of an extensive level plain, rising from 80m AOD in the south east to 100m AOD towards the Symondshyde Ridge in the north west. Slightly elevated above the open landscape to the south.			
Land cover pattern and valued features				
	Large scale open arable field pattern with degraded hedgerows structure or fencing. A discrete area of ancient woodland is contained within the site at Benstead's Wood and extensive deciduous woodland borders the site to the north west and north of the B653 Marford Road around Brocket Hall. The fine mature lime avenue from Brocket Hall, which terminates at Benstead's Wood, lies immediately to the north of the site and forms part of the Registered Park and Garden. The Lemsford parish church of St John the Evangelist on the south east boundary of the site is a local landmark.			
Perceptual character				
	Site retains a tranquil rural character, surrounded by open countryside with extensive areas of deciduous woodland. Individual farmsteads and small clusters of properties are scattered close to the site along narrow lanes. Auditory intrusion from the busy B653 Marford Road (which links to Junction 4 of the A1(M), 0.7km to the east) and views to the industrial development on the edge of Hatfield to the south, decreases the sense of remoteness. The wider area to the south is characterised by restored and active mineral workings either side of Coopers Green Lane, including the Symondshyde Quarry immediately south of the site.			
Openness /enclosure				
	Generally open due to the large field structure and slightly elevated position above the level plain. Areas in the north western part of the site have a greater sense of enclosure provided by woodland blocks and boundary vegetation along Cromer Hyde Lane. An intermittent overgrown hedgerow with post and rail fencing lines the boundary of the site following the B653 Marford Road and Green Lanes and provides limited screening.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate-high landscape sensitivity due to the sense of openness and valued features. The site is open, particularly to the south and mineral extraction is likely to degrade some valued features, such as the ancient woodland contained within the site and potential severance of the visual link along the lime avenue between Benstead's Wood and Brocket Hall. Although the ancient woodland could be left untouched, extraction could not be screened without changing the characteristic large scale openness of the area and interrupting the visual link along the lime avenue between Benstead's Wood and Brocket Hall. There may be opportunities to improve degraded hedgerows as part of any mitigation scheme.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Due to a lack of intervening vegetation and the gently rising topography, there are full views of the site and the wider countryside			

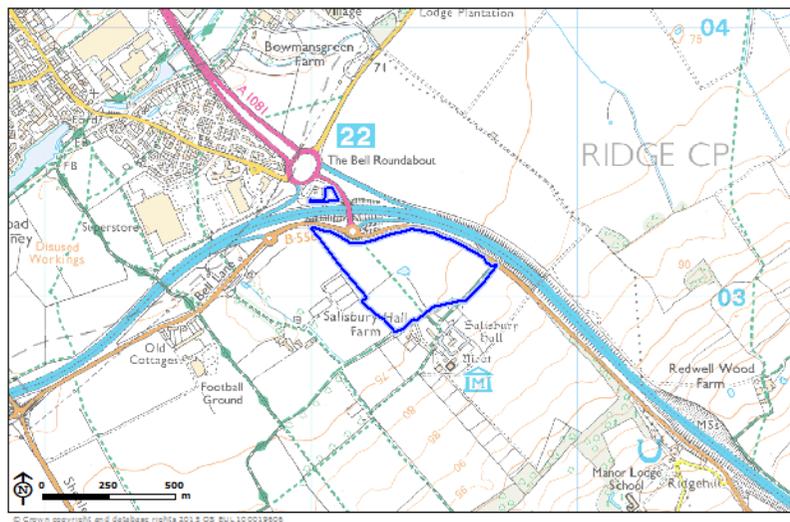
	from residential properties located along Cromer Hyde Lane adjacent to the northern boundary of the site. There will be open views from a residential property adjacent to the site on the B653 Marford Road and another on Green Lanes. Views from the Lemsford parish church of St John the Evangelist and properties at Brocket Corner will be largely screened by roadside trees.				
Recreational receptors					
	There are open views from the footpath (Hatfield 050) which crosses the site and some views from the bridleway on Cromer Hyde Lane when not screened by tree cover along the lane. The site is screened from Brocket Park and Golf Course on the River Lea by woodland to the north east of the B653 Marford Road.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a moderate-high visual sensitivity due to the openness of the site and open views from residential properties adjacent to the site that cannot be mitigated by screen planting without blocking the open views across the wider landscape currently enjoyed by those residents. Mineral workings are likely to be seen by people using the footpath crossing the site and diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team.				

MLP CS002 Salisbury Hall

Site location and context

- 4.13 The site is located in Hertsmere District, 3.5km south east St Albans and 200m south east from the industrial estate on the outskirts of the village of London Colney but separated from it by junction 22 of the M25. The site is bounded by the B556 and the M25 to the north and east and open fields to the south and west. The underlying bedrock is chalk with sand and gravel superficial deposits.

Figure A1.2 Location



Type of operation

- 4.14 Sand and gravel extraction.

Proximity to other sites

- 4.15 There are no other proposed sites in the vicinity of the site.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA19 Vale of St Albans

Key Landscape Characteristics (LCA 19 Vale of St Albans)

- broad shallow basin varying by only 10m;
- extensive views along the Vale and up to Shenley Ridge;
- a predominantly arable landscape with few small or medium copses, and with some grazing on restored land;
- areas of woodland and parkland to north east in association with Tyttenhanger Park;
- active and restored mineral extraction sites along the course of the Colne and at Radlett aerodrome. Mix of wetland restoration and landfill sites;
- institutional parkland landscapes associated with redundant Victorian psychiatric hospitals at Napsbury and Harperbury;
- M25 corridor, overhead pylons and associated urban fringe development;
- new planting associated with the road corridor and adjacent land uses.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*³

- promote the creation of extensive areas of new large scale woodlands to reflect the scale of the area, particularly in the open arable areas and mineral sites away from the river corridor;
- woodlands should cater for public access, conservation and economic productivity;
- woodland planting should provide screening for motorways, roads and intrusive built development at London Colney and Colney Street;
- provide ecological and visual linkage via a substantial network of hedges between woodlands and hedgerow trees;
- ensure that all existing and future mineral and aggregate related operations in the Vale cause minimum visual impact through the careful use of earthworks and planting. Restoration proposals should look for opportunities to maximise biodiversity potential and enhance public access;
- give priority to the continued management and upgrading of restored mineral sites, including improved earthworks profiles, removal of over-mature trees and the introduction of new planting schemes;
- promote the management of semi-natural woodlands, e.g. Coppice Wood and Garden Wood;
- maintain framed views to attractive natural and built features, including Shenley Ridge, Napsbury water tower and All Saints pastoral centre chapel;
- develop the network of rights of way within the area and improve accessibility from local settlements and over major obstacles, e.g. motorways and railways;

- ensure that any new built development is visually integrated into the landscape with minimal impact;
- encourage the promotion of the existing and new tourist and recreational facilities;
- encourage the retention and management of areas of rare arable weed banks including the cornflower;
- protect important wildlife habitats.

Potential visual receptors

- 4.16 Residents of two semi-detached properties on Bell Lane and associated with Salisbury Hall.
- 4.17 Visitors to the de Havilland Aircraft Museum at Salisbury Hall.
- 4.18 Visitors to the Watford and Arsenal Football Club Training Ground adjacent to the western boundary of the site, will have filtered views to the site. However as their activities are less associated with an enjoyment of the landscape, these receptors will be sensitive to change and so they have been excluded from the table below.
- 4.19 Residents of Salisbury Hall and Salisbury Hall Farm.
- 4.20 Recreational user of the footpath (Shenley 027) that runs across the site from Bell Lane to Salisbury Hall and the bridleway (Shenley 013) that runs along the south east boundary of the site



³ Hertfordshire Landscape Character Assessment (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.2 MLP CS002 Salisbury Hall Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY					
LANDSCAPE CHARACTER CRITERIA					
Landform					
	Generally flat across the site at 75m AOD within the broad shallow basin of the Vale of St Albans.				
Land cover pattern and valued features					
	A large open arable field with poor relic hedgerows much replaced by fencing along the B556. A small isolated copse around a pond sits in the middle of the site. Recreational fields border the site to the west and trees associated with Salisbury Hall lie adjacent to the south eastern boundary of the site. A predominantly arable landscape to the south with a large field pattern.				
Perceptual character					
	A disjointed landscape of large arable fields where the M25 corridor, with its associated infrastructure and constant road noise, is the most prominent detracting feature. Commercial buildings on the southern perimeter of London Colney also exert an urbanising influence on the surrounding area.				
Openness /enclosure					
	An open landscape of flat arable fields with views towards the attractive wooded profile of Shenley Ridge to the south, partially screened by trees around Salisbury Hall. The elevated corridor of the M25 corridor encloses the site to the north and east.				
Overall Landscape Character Sensitivity					
	Overall this site is considered to have a low-moderate landscape sensitivity to mineral extraction due to the lack of valued features and proximity to existing built development and ability to mitigate impacts. Impacts could be fully mitigated by further screening and restoration proposals could serve to strengthen the existing degraded landscape pattern and hedgerow structure.				
VISUAL AMENITY CRITERIA					
Residential receptors					
	Residents of the two semi-detached properties on Bell Lane have open views of the site from the back elevation of their properties although due to the generally flat landform these could be mitigated by screening. Views from residential properties associated with Salisbury Hall and Salisbury Hall Farm are mostly screened by intervening trees. There are some views of the site from the upper floors of Salisbury Hall.				
Recreational receptors					
	A footpath (Shenley 027) runs across the site from Bell Lane to Salisbury Hall and users of the footpath have open views of the site. A bridleway (Shenley 013) runs along the inside of the south east boundary of the site (along the driveway to Salisbury Hall), and links to paths running south from Salisbury Hall to Watling Chase Trail and the Hertfordshire Way. Views to the site are screened along the bridleway but extraction will need to be set back from the existing public right of way. Visitors to the De Havilland Aircraft Museum at Salisbury Hall and within 200m of the site are screened by farm buildings at Salisbury Hall Farm and intervening trees. Both groups of receptors are likely to be less sensitive to mineral extraction as these activities are				

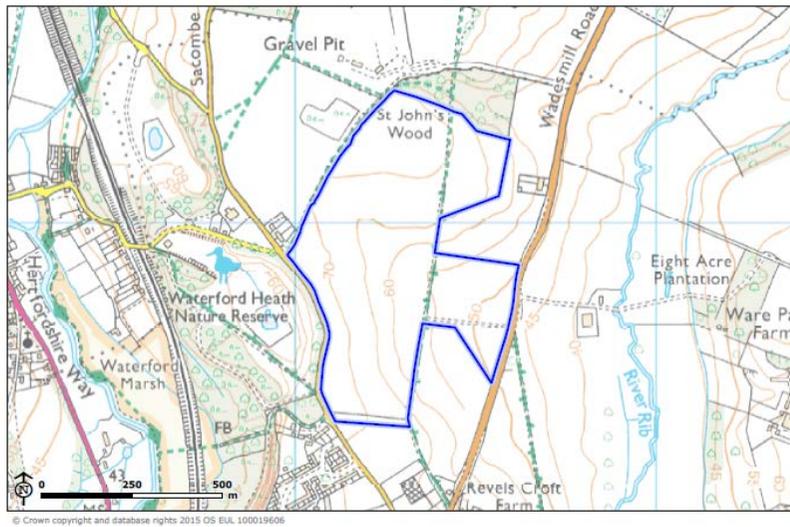
	less associated with an enjoyment of the landscape.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	<p>Overall this site is considered to have a low-moderate visual sensitivity due to the limited number of residential properties in the vicinity of the site, of which only two properties on Bell Lane have open view. These impacts could be mitigated by screening without losing existing visual amenity.</p> <p>Mineral extraction on this site is likely to affect only a small number of people using the footpath across the site. Diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team.</p> <p>Post operation restoration planting could improve the structure and condition of the landscape in the vicinity of the site.</p>				

MLP CS003 Land at Ware Park

Site location and context

- 4.21 The site is located in East Hertfordshire District, immediately north of Bengoe, a suburb of Hertford and 0.75km west of the village of Waterford. The site is bounded by Sacombe Road to the west and Wadesmill Road to the east. There are woodlands (St Johns Wood) to the north and west (Waterford Heath Nature Reserve) and open fields to the east. The underlying bedrock is chalk, overlain with sand and gravel superficial deposits.

Figure A1.3 Location



Type of operation

- 4.22 Sand and gravel extraction.

Proximity to other sites

- 4.23 There are no other sites that form part of this assessment in the area but an existing site to the north. Preferred Area 2 is located directly to the north, and may form an extension of the site although it does not include two small areas to the east of the PRoW that crosses MLP CS003.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA69 Stoneyhills

Key Landscape Characteristics (LCA 69 Stoneyhills)

- gently undulating open arable farmland with woodland;
- small to medium scale;
- few settlements; a few isolated farms;
- regular blocks of woodland of different ages;
- active, disused and restored mineral extraction sites, with mix of field sizes and variety of restoration uses;
- sunken lanes with steep sides, often very narrow and gently sinuous;
- usually treed rather than hedged, or with fragmented hedges and occasional mature hedgerow oak;
- very light soils.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*⁴

- Encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available.
- Encourage the replanting and/or improvement of hedges along historic field boundaries, within arable areas rather than along roadsides, where open verges would reinforce the distinctiveness of this area.
- Support the establishment of new woodlands, especially around existing woodlands where this would create additional habitat and protection. Ensure that new woodland would not damage historic features such as banks and ditches, but use ancient field and woodland boundaries as appropriate
- New woodland planting should be of locally indigenous species only, using seed/plants of local provenance if possible.
- Promote the appropriate management of woodland, whether high forest, coppice, or coppice-with-standards, ensuring that a wide age-range is established, together with a species-rich ground flora.
- Support the establishment of deer management groups.
- Encourage the reversal of habitat fragmentation and the creation and improvement of habitat links to create eco-corridors.
- Ensure that the restoration of exhausted minerals sites is carried out in accordance with agreed restoration plans, amended where necessary to reflect current best practice in maximising nature conservation potential and to ensure that they reflect and enhance local landscape character and distinctiveness.

⁴ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Potential visual receptors

- 4.24 Residents of Bengeo and on Sacombe Road.
- 4.25 Recreational users of Waterford Heath Nature Reserve and the footpaths that cross it in proximity to the site such as Hertford 004 on the western boundary and Hertford 001 that crosses the site.



Table A1.3 MLP CS003 Land at Ware Park Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Gently undulating landform, falling gently from 70m AOD to 50m towards the River Rib which lies 300m to the east of the site.			
Land cover pattern and valued features				
	Large scale arable field bounded by woodland to the north (the ancient woodland of St John's Wood) and to the west (linking to Waterford Heath Nature Reserve) and elsewhere by hedgerows with mature oak trees. The site is located within a wider area of large scale arable farmland with woodland, disturbed by mineral extraction.			
Perceptual character				
	Despite the proximity of the urban edge of Bengoe to the south, the site lies in a rural landscape with a unified character, traversed by narrow hedged lanes with occasional hedgerow trees. The tranquillity is disturbed by the traffic on the Wadesmill Road and other roads running north from Hertford and Ware. The restored Brazier landfill, former Ware Quarry, south of Westmill Road and west of the A602, is noticeable on the skyline to the east.			
Openness /enclosure				
	The site is enclosed by woodland or tall hedgerows along most of its boundaries except to the east where it is open to arable field on the lower valley slopes. Vegetation along Wadesmill Road provides some screening along this boundary but the site is open to the wider river valley to the east.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate sensitivity. Although landscape is gently undulating and the site is largely enclosed, the openness to the east could result in an adverse impact on the unified rural character of the wider river valley. Impacts could be mitigated by further screening and extraction operations set back from the ancient woodland.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Despite the proximity of the urban edge of Bengoe to the south, views of the site from residential properties are screened by existing woodland. Properties at 162-172 Sacombe Road whose back gardens back lie adjacent to the site will have views into the site.			
Recreational receptors				
	A footpath runs north south across the site from the edge of Bengoe to St John's Wood (Hertford 001). Users of the footpath have open views of the site and diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team. Another footpath runs along the west boundary to Sacombe Road (Hertford 004) and from there provides a link to Waterford Heath Nature Reserve. Views to the site are screened by the hedgerow and hedgerow trees between the path and the site.			

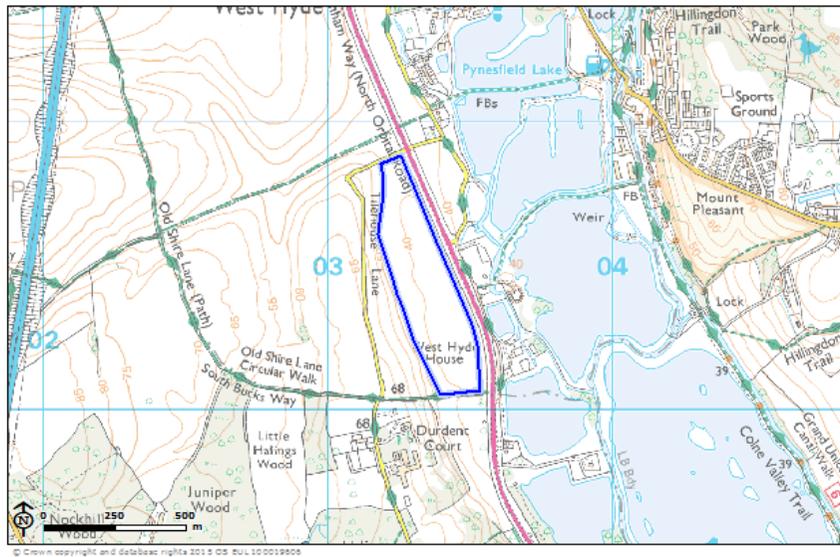
Key vantage points					
	There are no key vantage points in the vicinity of the site. Waterford Heath Nature Reserve is screened by woodland.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate sensitivity due to the fact that residential properties to the south of the site are screened, and views from properties along Sacombe Road and from the footpath along the western boundary could be mitigated by planting.				

MLP CS004 Land at Pynesfield

Site location and context

- 4.26 The site is located in the in the Three Rivers District, approximately 2.5km east of Chalfont St Peter and 1.5km west of Harefield. It is bounded by the A412 Denham Way to the east beyond which is Pynesfield Lake one of the former gravel pits in the Colne Valley. There are open fields to the north and west and woodland beyond Old Shire Lane on the short southern boundary. The M25 lies 1.2km to the west. The underlying bedrock is chalk with clay, silt sand and gravel superficial deposits. The site within The Colne Valley Regional Park.

Figure A1.4 Location



Type of operation

- 4.27 Sand and gravel extraction.

Proximity to other sites

- 4.28 There are no other sites that form part of this assessment in the area. An existing mineral site at Denham Park Farm lies c.700m to the west adjacent to the M25.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 115 Thames Valley
Hertfordshire LCA	LCA001 Maple Cross Slopes

Key Landscape Characteristics (LCA 1 Maple Cross Slopes)

- strong east-facing slopes with snaking dry valleys pushing westwards;
- large arable fields east of the M25 with minimal hedgerows;
- visually prominent urban development on lower slopes and along A412;
- woodland areas concentrated on the slopes of the narrow dry valleys to the west
- M25 major feature on the skyline to the west;
- views from the upper slopes to the east across the Colne valley

Key guidelines within the Hertfordshire LCA ⁵

- promote the creation of a network of new shelterbelts and woodland in the open arable landscape, particularly on the higher slopes in the vicinity of the M25.
- utilise existing woodlands, ancient hedge and field boundaries to identify the most appropriate location for woodland restoration and expansion.
- promote the appropriate management of existing woodland.
- encourage the reversal of habitat fragmentation and the creation and improvement of habitat links to create eco-corridors.
- promote the creation of buffer zones between intensive arable production and important seminatural habitats and the creation of links between seminatural habitats.
- promote hedgerow restoration and creation.
- promote a clear strategy for the visual and noise mitigation of the M25 and A412 and positively integrate these corridors into the local landscape.



Potential visual receptors

- 4.29 Residents in dwellings on Tilehouse Lane to the south of the site and properties along the A412.
- 4.30 Recreational users of South Bucks Way to the north and recreational lakes in the Colne Valley.

⁵ Hertfordshire Landscape Character Assessment (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.4 MLP CS004 Land at Pynesfield Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Set within the wider east facing slope of the Colne Valley, the site is generally flat in the east rising sharply to the west.			
Land cover pattern and valued features				
	Large arable field fringed by mature hedgerows on three sides but open to the west.			
Perceptual character				
	The rural character of the landscape is compromised by its position between the M25 and A412 corridors and the resulting auditory and visual intrusion from the busy road network as well as small scale industrial development along the A412. The HS2 route is scheduled to cross this landscape which will further reduce the sensitivity of the site due to the influence of large scale transport infrastructure on the character of the area.			
Openness /enclosure				
	There are open views across the Colne Valley from Tilehouse Lane which runs along the high valley side on the western boundary of the site. The rising topography screens any views of the site further west towards Old Shire Lane. The eastern half of the site, which is lower on the slope is screened by boundary tree belts along the A412.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate sensitivity to mineral extraction due to the lack of valued features and proximity to existing and potential transport infrastructure. The area is effectively screened by topography to the west and boundary vegetation to the north, south and east. Impacts could be fully mitigated with further screening, particularly along Tilehouse Lane without adversely changing the character of the landscape.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	There will be a very limited visibility from one residential property located on Tilehouse Lane (Durdent Court) to the south of the site, but views will be screened by mature trees on the field boundary. Mature trees along the A412 blocks views from residential properties to the east of the A412. There will be distant and filtered views from residential properties on the opposite valley side in Harefield.			
Recreational receptors				
	The long distance path, South Bucks Way, runs along Old Shire Lane, a sunken lane that lies on the southern boundary of the site but the site is screened by intervening site boundary vegetation.			

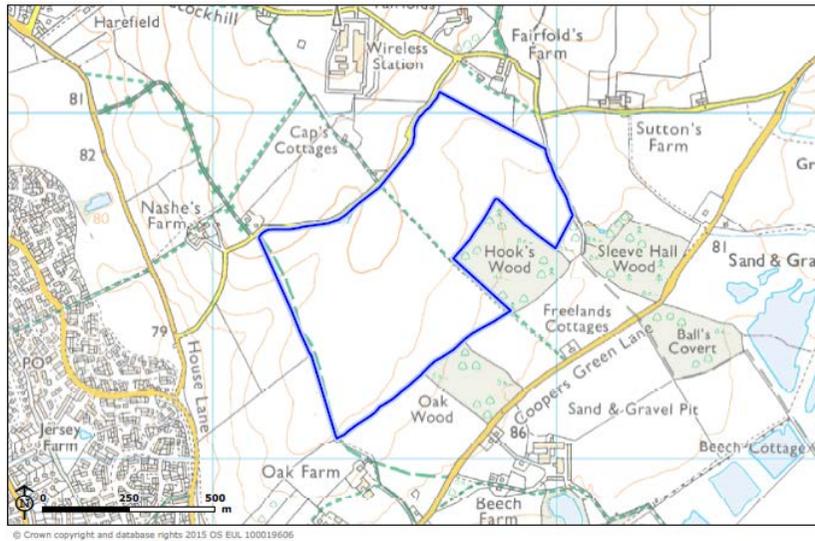
	There is no visibility of the site from the recreational lakes in the Colne Valley Regional Park (Pynesfield Lake/Broadwater Lake) as these are enclosed by woodland.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low visual sensitivity due to the fact that there are very few residential properties in the vicinity of the site and none have open views of the site. There is no visibility from recreational routes or from the lakes in the Colne Valley.				

MLP CS005 Nashes and Fairfold Farm

Site location and context

- 4.31 The site is located in St Albans District, between St Albans and Hatfield, 0.5km from the residential area of Jersey Farms in the north of St Albans. It is bounded by Nashes Farm Lane to the north and lies 200m north west of Cooper's Green Lane. The site is bounded by a mix of open fields and woodlands to the south east. The underlying bedrock is chalk with poorly sorted superficial deposits.

Figure A1.5 Location



Type of operation

- 4.32 Sand and gravel extraction.

Proximity to other sites

- 4.33 MLPCS006 is situated 900m to the south east and MLPCS008 is 1.3km to the east. The area is characterised by active and former areas of sand and gravel extraction along Coopers Green Lane. Preferred Area 1 is situated 1km to the east.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA32 Symondshyde Ridge

Key Landscape Characteristics LCA 32 Symondshyde Ridge

- extensive woodland areas on eastern slopes;
- small settlements and individual properties well assimilated into the landscape;
- large arable fields with relic hedgerows;
- narrow lanes (some sunken) with hedgebanks;
- distant views to south east, west and north.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*⁶

- extend the network of woodlands to the south and west of the area, including plantations to screen the built edge of St Albans, reduce the impact of masts and mitigate the impact of mineral extraction;
- within existing woodlands encourage the replacement of softwoods with indigenous native deciduous communities;
- maintain and extend public access arrangements to woodlands with improvements to car park design and public safety;
- promote the appropriate management of coppice woodland in order to maintain a rich ground flora and the distinction between different management systems, such as high forest, coppice, coppice-with-standards and wood pasture;
- encourage heath habitats within woodlands by creating glades and maintaining open rides;
- promote the expansion of woodland beyond ancient woodland boundaries, especially where this will help in creating habitat links;
- promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats;
- promote hedgerow restoration and creation throughout the area to provide visual and ecological links between existing and proposed woodland areas. Pattern to follow historic field boundaries and/or rights of way and to include additional hedgerow trees;
- promote crop diversification and the restoration of mixed livestock/arable farming where possible;

- promote both the creation of new ponds and the retention/enhancement for wildlife of existing ponds;
- promote the use of traditional hedged field enclosure in place of timber or wire fencing where land is converted to pasture;
- protect the traditional pattern of local lanes, hedgebanks, verges and hedges as a local feature and wildlife resource;
- maintain the peaceful qualities of the area and protect it from active recreation and development.

Potential visual receptors

- 4.34 Residents in isolated properties and farms along Coopers Green Lane (Oak Farm, Freelands Cottages) and Nashes Farm Lane; (Nashe's Farm, Cap's Cottages, Fairfold's Farm) and properties within the Jersey Farm area of St Albans.
- 4.35 Recreational user of the footpath (Sandridge O20) that runs across the site from Coopers Green Lane to Cap's Cottages and links to there to footpaths to Sandridge and St Albans.



⁶ Hertfordshire Landscape Character Assessment (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.5 MLP CS005 Nashes and Fairfold Farm Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	The gently undulating landform is elevated above the surrounding landscape. The site extends across a gentle slope that fall from the Symondshyde ridgeline (250m south east of the Sandridge wireless station) from 100m AOD to 85m on the south eastern boundary, 200m from Coopers Green Lane.			
Land cover pattern and valued features				
	Large arable fields with relic hedgerows some replaced by post and wire fencing. Areas of discrete deciduous woodlands (Oak Wood, Hook's Wood and Sleeve Hall Wood) lie adjacent to the south eastern boundary of the site.			
Perceptual character				
	Despite the proximity of the built edge of St Albans, the site has a predominantly tranquil rural quality. It is bounded by a traditional pattern of narrow lanes which twist across the landform. Scattered individual farms and properties are assimilated into the landscape. The urban edge of St Albans and Hatfield which are visible from within the elevated northern half of the site reduce the sense of remoteness although these are filtered by woodland on the south eastern boundary of the site.			
Openness /enclosure				
	The elevated position of the site and the intermittent hedgerows along the northern boundary of the site with Nashes Farm Lane, gives it an open character. There are long distance views to the south, despite the enclosure provided by the woodland blocks on the south east boundary.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate landscape sensitivity to mineral extraction. Although the site has an open nature, is elevated above the surrounding landscape and the area has a tranquil rural character, some impacts could be mitigated by further screening through an extension of the existing woodland and the landscape structure improved through restoration of the hedgerow network.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	The rising topography across the site and high hedgerows along House Lane will screen views from residential properties on the edge of St Albans adjacent to the western boundary of the site. However, there will be clear views of the western half of the site from properties on higher ground within Jersey Farm towards The Ridgeway. The undulating topography and existing vegetation will block many views from the limited number of isolated farms and cottages in the surrounding lanes to the north and east except for Caps Cottages adjacent to the northern boundary of the site.			
Recreational receptors				

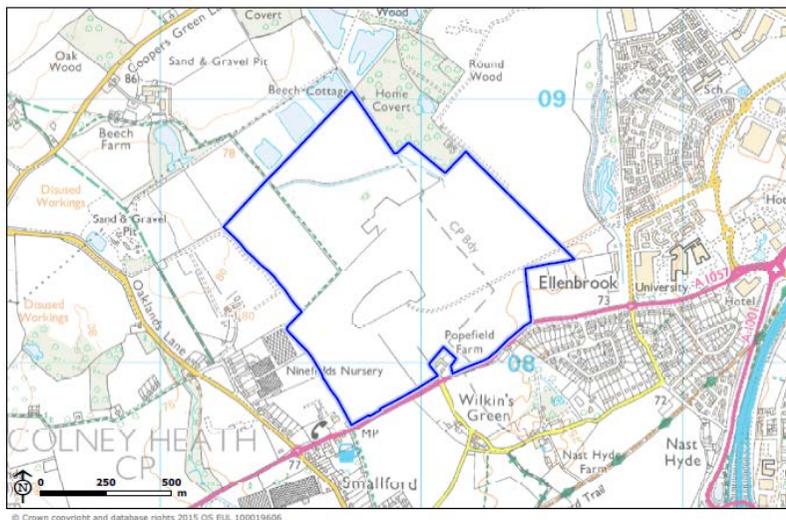
	There will be open views of the site from the footpath (Sandridge 020) that crosses the site and diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall the site will have a moderate- high visual sensitivity due to the impact on the visual amenity of large numbers of residents in the Jersey Farm area of St Albans. Due to the rising topography on the site, these impacts cannot be fully mitigated.				

MLP CS006 Hatfield Aerodrome

Site location and context

- 4.36 The site is located in St Albans District, between Hatfield and St Albans. It is bounded by the A1057 to the south and open fields with dispersed woodland and former sand and gravel workings to the north, west and east. Ninefields Nursery lies on the western boundary. The University of Hertfordshire lies 250m to the east. The underlying bedrock is chalk with poorly sorted superficial deposits. The area forms part of Ellenbrook Fields, part of former Hatfield Aerodrome, a privately owned area made open to the public for recreational use, with a series of permissive footpaths.

Figure A1.6 Location



Type of operation

- 4.37 Sand and gravel extraction.

Proximity to other sites

- 4.38 MLPCS005 is situated 900m to the north west and MLPCS008 and MLPCS009 are 1.3km to the north east. The area is characterised by active and former areas of sand and gravel extraction along Coopers Green Lane. The remaining part of the Preferred Area 1 is located directly adjacent to the north east.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA31 De Havilland Plain

Key Landscape Characteristics (LCA 31 De Havilland Plain) (listed as 'no longer representative'⁷)

- an extensive level plain;
- large open arable landscape to the north on high quality agricultural land;
- disused Hatfield aerodrome with associated industrial and commercial development and aeronautical structures;
- parkland and horticultural landscape of Oaklands College;
- existing and restored mineral workings;
- urban-fringe development and glasshouses;
- incoherent and jumbled landscape, particularly to the south and centre.

⁷ Where relevant sensitivity assessment relies on information from field surveys rather than written text in the individual LCAs

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*⁸

- retain the characteristic large-scale openness to the north of the area (which is most unusual for the southern part of the county) but with a restored structure of hedges, ditches and woodland blocks;
- retain long views where possible to appreciate the flat landform;
- promote hedgerow restoration and creation throughout the area to provide visual and ecological links between existing and proposed woodlands. Pattern to follow historic field boundaries where possible. Hedges to include standard trees;
- promote the appropriate management of existing woodland in order to maintain a rich ground flora and the distinction between different management systems, such as high forest and coppice-with-standards;
- promote the planting of new small to medium woodlands, particularly on areas of restored mineral extraction to the centre and south;
- promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats;
- encourage the restoration of ditches and discourage the enclosure of existing open drainage systems;
- provide new uncropped or grass field margins to link areas of wildlife importance and/or existing and proposed rights of way;
- promote the creation of buffer strips along watercourses to prevent pesticide, herbicide and fertilizer run-off and provide habitat for wildlife; encourage their linkage to eco-corridors within the wider landscape;
- promote both the creation of new ponds and the retention/enhancement for wildlife of existing ponds;

- improve the poor existing network of rights of way over the area and develop opportunities for rights of way linkages alongside hedges, streams, water features, arable areas, airfield land and restored mineral workings;
- improve the treatment of screen bunding to the perimeter of and within mineral sites by more sympathetic profiles, heights and the use of green mulches. Provide advanced planting where appropriate to provide a permanent contribution to the landscape framework;
- focus attention to screen plant within minerals areas;
- develop appropriate management strategies to maintain and improve the mosaic of wildlife habitats areas, including wetland and semi-improved grassland, in association with former mineral extraction sites. Include the continued use of grazing and management by wildlife organisations.

Potential visual receptors

- 4.39 Residents south of the site off Poplar's Avenue and in new development off Oakland's Lane.
- 4.40 Recreational users of the footpath that crosses the site.
- 4.41 Recreational users of the University of Hertfordshire playing fields, adjacent to the eastern boundary of the site, will have filtered views to the site. However as their activities are less associated with an enjoyment of the landscape, these receptors will not be sensitive to change and so they have been excluded from the table below.



⁸ Hertfordshire Landscape Character Assessment (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.6 MLP CS006 Hatfield Aerodrome Landscape and visual sensitivity to mineral extraction

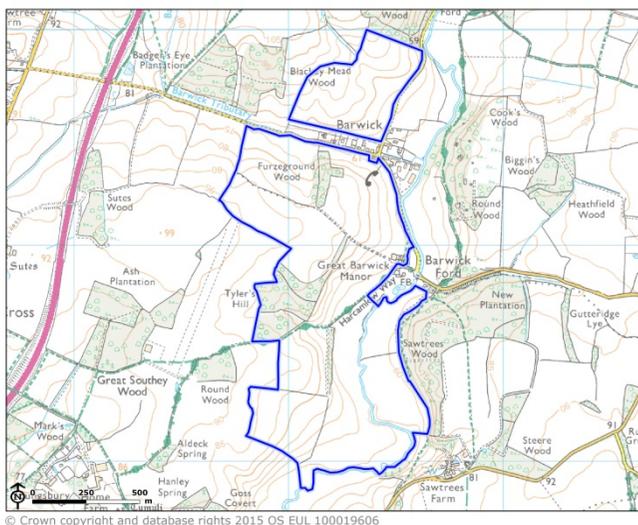
LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Generally flat across the site within an extensive level plain.			
Land cover pattern and valued features				
	Large scale open area with scrub vegetation and no evidence of former field pattern.			
Perceptual character				
	The character of the site is influenced by its former use as an airfield runway and its position on the urban edge of Hatfield. Urban fringe development, including horticultural premises and new residential development along Oaklands Lane lie to the south and south east of the site. The presence of the busy A1057 decreases the sense of remoteness to the south of the site.			
Openness /enclosure				
	The area is flat and heavily screened by vegetation around the majority of the site boundary.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low landscape sensitivity to mineral extraction due to its former industrial use. The area is flat and heavily screened and post operation restoration could improve the existing landscape character.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Views from the small number of properties close to the boundaries of the site are screened by mature trees including properties off Poplar's Avenue, south of the A1057 St Alban's Road West which runs along the southern boundary of the site and a small number of newly built properties on Pasture View off Oaklands Lane which runs along the western boundary.			
Recreational receptors				
	A footpath which crosses the site (Colney Heath 014) will have open views to the site and diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team. A network of informal paths cross the site and are used by local residents.			
Key vantage points				
	There are no key vantage points in the vicinity of the site.			
Overall Visual Character Sensitivity				
	Overall the site will have a low-moderate visual sensitivity due the boundary vegetation which screens views from the small number of residential properties in the vicinity of the site. Impacts can be fully mitigated by additional screening without an adverse impact on visual amenity.			

MLP CS007 Barwick

Site location and context

4.42 The site is located in East Hertfordshire District, 1.5km north east of Ware and c.1km east of the village of High Cross. The site is crossed by the River Rib and the Barwick Tributary. It is traversed by Gore Lane, which crosses the river at Barwick Ford, to the east of the site. Gore Lane passes through Barwick, with part of the site located to the north of this hamlet. The underlying bedrock is chalk overlain with clay, silt and gravel along the river, with sand and gravel on the slopes, and poorly sorted superficial deposits on the higher ground.

Figure A1.7 Location



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Type of operation

4.43 Sand and gravel extraction.

Proximity to other sites

4.44 The site is located in close proximity to MLP CS015 (Plashes Farm), to the north.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 86 South Suffolk and North Essex Clayland
Hertfordshire LCA	LCA090 Middle Rib Valley LCA091 Upper Rib Valley (north and north eastern area of the site) LCA073B High Cross Plateau – B (small area of the site to the north west)

Key Landscape Characteristics (LCA090 Middle Rib Valley)

- undulating narrow valley landform;
- arable production;
- little woodland except Sawtrees Wood;
- hamlets and isolated farmhouses - no significant settlements other than Wadesmill/Thundridge;
- similarity of opposing valley slopes;
- tributary valleys (The Bourne, Barwick Tributary) of similar scale and character to main river valley.

Key Landscape Characteristics (LCA091 Upper Rib Valley)

- undulating valley landform, generally quite open but narrowing towards Standon;
- arable production;
- tributary valleys (Braughing Warren Bourne and Braughing Bourne) of similar scale and character to main river valley;
- extensive woodland (Plashes Wood);
- hamlets and isolated farmhouses, with significant ancient settlements at Standon, Puckeridge and Braughing;
- similarity of opposing valley slopes.

Key Landscape Characteristics (LCA073B High Cross Plateau – B)

- undulating arable upland;
- filtered views out from and along A10;
- limited views elsewhere, filtered by hedgerow vegetation;
- isolated blocks of woodland, some large, especially east of A10;
- ancient buildings in roadside settlements;
- place names with 'green' or 'end' in small, remote settlements;
- irregular or sinuous lanes and field boundaries.

Key Sensitivities, forces for change and guidance within the Hertfordshire LCA ⁹

LCA090 Middle Rib Valley and LCA091 Upper Rib Valley

- intensive agricultural practices prevent the establishment of an ecological and landscape corridor along the Rib, which would provide food, cover and a migratory route for wildlife;

- encourage landowners to establish buffer zones along the watercourses to prevent run-off from herbicides, pesticides and fertilizer and to provide wildlife havens. Where possible, link these buffer zones to the wider landscape via hedges, field margins or woodland;
- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- use ancient wood, hedge and field boundaries, including banks and ditches, to identify the most appropriate location for woodland expansion on the steeper valley slopes;
- use only indigenous species of local provenance wherever possible;
- encourage reversion from arable use to pasture and grassland within the river valley, while retaining arable cultivation on the upper slopes to reinforce this area's distinctiveness;
- encourage landowners and developers to retain and increase ponds and wetland areas to enhance their visual and wildlife functions;
- promote the use of low-density stock grazing as a management technique;
- ensure that local inhabitants are aware of the BAP objective of creating a 'necklace' of inter-connected wetland habitats along the river valley.
- promote the development of natural woodland around large blocks of ancient woodland and ensure that developers and landowners are aware of this BAP objective (Upper Rib Valley only)

LCA073B High Cross Plateau – B

- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- promote crop diversification and the restoration of mixed livestock/arable farming;

⁹ Hertfordshire Landscape Character Assessment (2005) The key sensitivities listed here are selected for their relevance to the site

- encourage woodland planting around existing woodland, where this is in keeping with local landscape character, is on the site of former woodland or can provide an ecological link to other woodlands/habitat;
- ensure that proposed woodland planting will contribute to the local landscape rather than destroying an existing and valued habitat or historic artefact, such as a bank or ditch;
- encourage the reversion of arable to pasture and appropriate management to increase grassland biodiversity;
- encourage the reversal of habitat fragmentation and the creation and improvement of habitat links such as hedges and small woodlands;
- replacement hedges should follow historic field boundaries.

Potential visual receptors

- 4.45 Residents of the hamlet of Barwick, Barwick Ford, Great Barwick Manor, and Sawtrees Farm.
- 4.46 Recreational users of the long distance path, Harcamlow Way and other footpaths that run north south across the site, including Thundridge 011 which runs west of Sawtrees Wood.



Table A1.7 MLP CS007 Barwick Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Short, steep valley slopes, which rise from the river valley at 55m to c.95m AOD on the open upland plateau to the east and west.			
Land cover pattern and valued features				
	A mixture of arable fields and deciduous woodland on the steep slopes, with some pasture along the river valley floor, although in some areas arable cultivation has blurred the distinction between the river and the slopes. A large area of ancient woodland (Sawtrees Wood and New Plantation) is adjacent to the eastern boundary.			
Perceptual character				
	A tranquil and distinctively rural area of remote roadside hamlets and isolated farmhouses, narrow winding river valleys and wooded slopes. A narrow lane winds its way along the river valley between Barwick and Barwick Ford. No impact from built development or transport except for a small industrial estate on the edge of Barwick.			
Openness /enclosure				
	Within the river valleys there is sense of confinement although there are still views up to the surrounding arable fields from the road. There are extensive views from footpaths on the upper slopes.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have moderate-high landscape sensitivity to mineral extraction due to the varied landform and landcover pattern and its sense of tranquillity. Mineral extraction operations are likely to adversely affect the distinctive rural character of the area.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Residents of the hamlet of Barwick, and Barwick Ford, Great Barwick Manor and Sawtrees Farm will have views of the site. The site extends to the north and south of Barwick, potentially surrounding some properties.			
Recreational receptors				
	There will be adverse impacts on recreational users of Harcamlow Way, a long-distance path which passes through Barwick Ford and traverses the site and other footpaths that run adjacent to the site boundary such as the footpath (Thundridge 011) which runs west of Sawtrees Wood and a short footpath at Barwick Ford (Standon 060). Diversion of these footpaths would need to be considered by the HCC Access and Rights of Way Team.			
Key vantage points				
	There are no key vantage points in the vicinity of the site.			

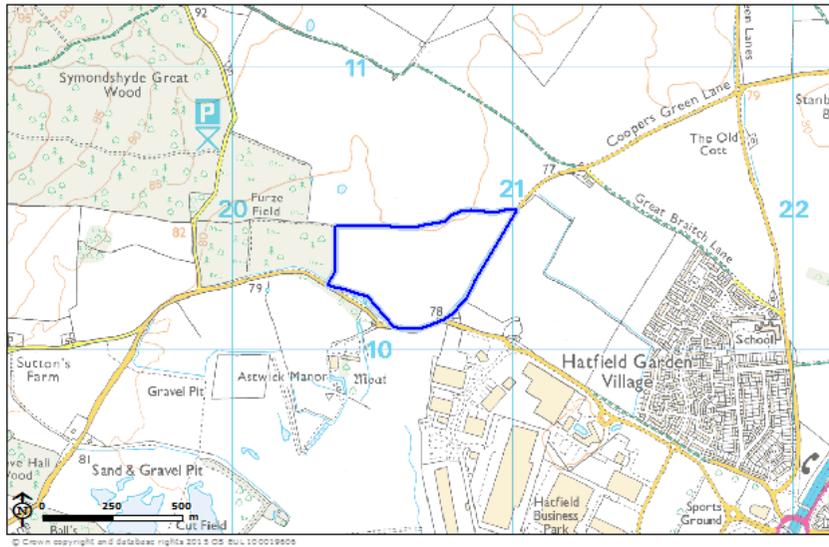
Overall Visual Character Sensitivity					
	<p>Overall this site is considered to have a moderate-high visual sensitivity to mineral extraction due to the numbers of local residents who will have open views of the site and the network of local footpaths that cross or run adjacent to the site. Impacts cannot be fully mitigated without blocking views over the site that are currently enjoyed by residential and recreational receptors.</p>				

MLP CS008 Hatfield Furze Field

Site location and context

- 4.47 The site is located in Welwyn Hatfield District, between Welwyn Garden City, Hatfield and St Albans. The site lies approximately 2 km south west of Welwyn Garden City and 600m north west of Hatfield Garden Village. It is bounded by Coopers Green Lane to the south and open fields to the north and east. Furze Field woodland lies on the western boundary. The Hatfield Business Park lies to the south east of the site, south of Coopers Green Lane. The underlying bedrock is chalk with poorly sorted superficial deposits.

Figure A1.8 Location



Type of operation

- 4.48 Sand and gravel extraction.

Proximity to other sites

- 4.49 The site lies adjacent to MLPCS009 and 850m from MLPCS001. The area is characterised by active and former areas of sand and gravel extraction along Coopers Green Lane. Preferred Area 1 is located directly to the south.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA31 De Havilland Plain

Key Landscape Characteristics (LCA 31 De Havilland Plain) (listed as 'no longer representative'¹⁰)

- an extensive level plain;
- large open arable landscape to the north on high quality agricultural land;
- disused Hatfield aerodrome with associated industrial and commercial development and aeronautical structures;
- parkland and horticultural landscape of Oaklands College;
- existing and restored mineral workings;
- urban-fringe development and glasshouses;
- incoherent and jumbled landscape, particularly to the south and centre.

¹⁰ Where relevant sensitivity assessment relies on information from field surveys rather than written text in the individual LCAs

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*¹¹

- retain the characteristic large-scale openness to the north of the area (which is most unusual for the southern part of the county) but with a restored structure of hedges, ditches and woodland blocks;
- retain long views where possible to appreciate the flat landform;
- promote hedgerow restoration and creation throughout the area to provide visual and ecological links between existing and proposed woodlands. Pattern to follow historic field boundaries where possible. Hedges to include standard trees;
- promote the appropriate management of existing woodland in order to maintain a rich ground flora and the distinction between different management systems, such as high forest and coppice-with-standards;
- promote the planting of new small to medium woodlands, particularly on areas of restored mineral extraction to the centre and south;
- promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats;
- encourage the restoration of ditches and discourage the enclosure of existing open drainage systems;
- provide new uncropped or grass field margins to link areas of wildlife importance and/or existing and proposed rights of way;
- promote the creation of buffer strips along watercourses to prevent pesticide, herbicide and fertilizer run-off and provide habitat for wildlife; encourage their linkage to eco-corridors within the wider landscape;
- promote both the creation of new ponds and the retention/enhancement for wildlife of existing ponds;

- improve the poor existing network of rights of way over the area and develop opportunities for rights of way linkages alongside hedges, streams, water features, arable areas, airfield land and restored mineral workings;
- improve the treatment of screen bunding to the perimeter of and within mineral sites by more sympathetic profiles, heights and the use of green mulches. Provide advanced planting where appropriate to provide a permanent contribution to the landscape framework;
- focus attention to screen plant within minerals areas;
- develop appropriate management strategies to maintain and improve the mosaic of wildlife habitats areas, including wetland and semi-improved grassland, in association with former mineral extraction sites. Include the continued use of grazing and management by wildlife organisations.

Potential visual receptors

- 4.50 Residents in residential properties at Astwick Manor.
- 4.51 Recreational users of Furze Field and Synondshyde Great Wood. Recreational users of the footpath (Hatchfield 041) which runs to the north of the site from Coppers Green Lane to Symondshyde Great Wood.



¹¹ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.8 MLP CS008 Hatfield Furze Field Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Generally flat landform across the site, set on the edge an extensive level plain but contained by a wooded ridge to the west.			
Land cover pattern and valued features				
	Arable field pattern bounded by a remnant hedgerow to the north and overgrown hedgerows with mature trees along Coopers Green Lane to the south. Furze Field, an ancient woodland, lies on the western boundary of the site and links to extensive woodland to the west at Symondshyde Great Wood.			
Perceptual character				
	The rural character of the site is reduced by urban fringe development at the Hatfield Business Park to the south of the site, the busy traffic along Coopers Green Lane and the ongoing mineral extraction at Symondshyde Quarry, which decreases the sense of remoteness.			
Openness /enclosure				
	The wider area is flat and contained by the high hedgerows and hedgerow trees along Cooper's Lane to the south and the woodland to the west which rises to the wooded Symondsyde Ridge.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate landscape sensitivity to mineral extraction due to the flat landform and simple land cover pattern. There could be a slight adverse impact on the perceptual character of the landscape but the area is screened and impacts could be mitigated by woodland screening along the boundary and setting excavation back from the ancient woodland.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	A small number of properties at Astwick Manor are located 200m from the site boundary, south of Coopers Green Lane but views into the site are screened by a woodland belt to the north of the road along the site boundary.			
Recreational receptors				
	A footpath (Hatchfield 041) runs along a track from Coppers Green Lane to Symondshyde Farm, 200m north of the site. Views to the site will be filtered by mature trees along the ditch which marks the northern boundary of the site.			
Key vantage points				
	The site cannot be seen from picnic spots and more elevated positions in Synondshyde Great Wood.			

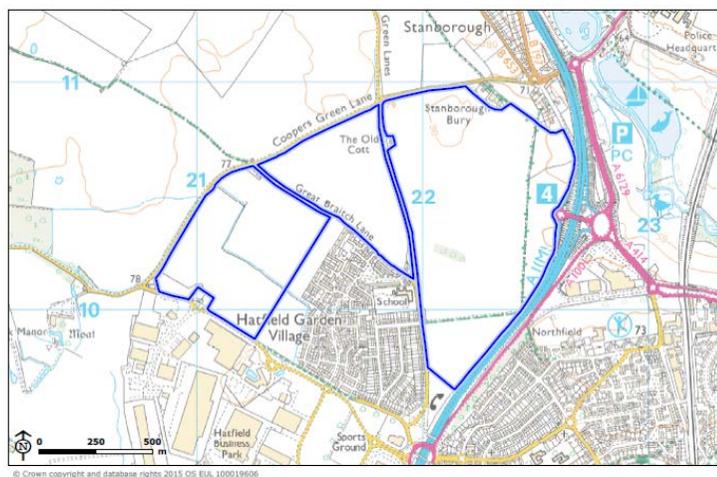
Overall Visual Character Sensitivity					
	<p>Overall this site is considered to have a low-moderate visual sensitivity to mineral extraction due to the woodland along the southern boundary which will screen views from residential properties to the south and trees along the northern boundary which will filter views from the footpath to the north of the site. Impacts could be fully mitigated by screen planting.</p>				

MLP CS009 Hatfield Quarry Land Adjoining Coopers Green Lane

Site location and context

- 4.52 The site is located in Welwyn Hatfield District, between Welwyn Garden City, Hatfield and St Albans. The site lies adjacent to Hatfield and approximately 1.5km south west of Welwyn Garden City. It is bounded by Hatfield Garden Village and Hatfield Business Park to the south and west, the A1(M) to the east and Coopers Green Lane to the north beyond which are open fields. The underlying bedrock is chalk with poorly sorted superficial deposits.

Figure A1.9 Location



Type of operation

- 4.53 Sand and gravel extraction.

Proximity to other sites

- 4.54 It lies adjacent to MLPCS008 and 130m from MLPCS001. The area is characterised by active areas of sand and gravel extraction along Coopers Green Lane. Preferred Area 1 is located nearby to the south west.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA31 De Havilland Plain

Key Landscape Characteristics (LCA 31 De Havilland Plain) (listed as 'no longer representative'¹²)

- an extensive level plain;
- large open arable landscape to the north on high quality agricultural land;
- disused Hatfield aerodrome with associated industrial and commercial development and aeronautical structures;
- parkland and horticultural landscape of Oaklands College;
- existing and restored mineral workings;
- urban-fringe development and glasshouses;
- incoherent and jumbled landscape, particularly to the south and centre.

¹² Where relevant sensitivity assessment relies on information from field surveys rather than written text in the individual LCAs

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*¹³

- retain the characteristic large-scale openness to the north of the area (which is most unusual for the southern part of the county) but with a restored structure of hedges, ditches and woodland blocks;
- retain long views where possible to appreciate the flat landform;
- promote hedgerow restoration and creation throughout the area to provide visual and ecological links between existing and proposed woodlands. Pattern to follow historic field boundaries where possible. Hedges to include standard trees;
- promote the appropriate management of existing woodland in order to maintain a rich ground flora and the distinction between different management systems, such as high forest and coppice-with-standards;
- promote the planting of new small to medium woodlands, particularly on areas of restored mineral extraction to the centre and south;
- promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats;
- encourage the restoration of ditches and discourage the enclosure of existing open drainage systems;
- provide new uncropped or grass field margins to link areas of wildlife importance and/or existing and proposed rights of way;
- promote the creation of buffer strips along watercourses to prevent pesticide, herbicide and fertilizer run-off and provide habitat for wildlife; encourage their linkage to eco-corridors within the wider landscape;
- promote both the creation of new ponds and the retention/enhancement for wildlife of existing ponds;

- improve the poor existing network of rights of way over the area and develop opportunities for rights of way linkages alongside hedges, streams, water features, arable areas, airfield land and restored mineral workings;
- improve the treatment of screen bunding to the perimeter of and within mineral sites by more sympathetic profiles, heights and the use of green mulches. Provide advanced planting where appropriate to provide a permanent contribution to the landscape framework;
- focus attention to screen plant within minerals areas;
- develop appropriate management strategies to maintain and improve the mosaic of wildlife habitats areas, including wetland and semi-improved grassland, in association with former mineral extraction sites. Include the continued use of grazing and management by wildlife organisations.

Potential visual receptors

- 4.55 Residents in properties located in Hatfield Garden Village to the south, properties on the edge of Stanborough and a small number of properties enclosed within the site.
- 4.56 Recreational users of Great Braitch Lane.



¹³ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.9 MLP CS009 Hatfield Quarry Land Adjoining Coopers Green Lane Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Generally flat landform across the site, set within an extensive level plain.			
Land cover pattern and valued features				
	Large scale arable field pattern with remnant hedges within the site but bounded by high hedgerows along the surrounding lanes.			
Perceptual character				
	The rural character of the site is greatly disrupted by urban fringe development along the A1(M) corridor to the east, Hatfield Garden Village and the Hatfield Business Park to the south of the site and the busy traffic along Coopers Green Lane. There is significant auditory intrusion from the A1(M) which borders the site to the east and decreases the sense of remoteness. The wider area is characterised by active areas of sand and gravel extraction.			
Openness /enclosure				
	The area is flat and enclosed by the high treed hedgerows along Cooper's Green Lane which runs along the northern boundary of the site, and Green Lanes and Great Braitch Lane which run through the site. The site is more open to the south east, near the built edge of Hatfield Garden Village. There are long distance views across the landscape towards to wooded ridges to the north.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate landscape sensitivity to mineral extraction due to the flat landform and simple landcover pattern and the levels of existing development along the A1(M) corridor. Although the site is enclosed by high hedgerows along Cooper's Green Lane, impacts could be further mitigated by boundary screening between the site and the edge of Hatfield Garden Village.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Hatfield is separated from the site by the A1(M) but residential properties on the edge of Hatfield Garden Village are located within 75m of the south eastern boundary of the site. These properties have extensive views over the site. The remnant hedge which runs along the site boundary provides only partial screening. A small number of properties lie adjacent to the site on the edge of Stanborough. The Old Cott and Jockey Cottage on Green Lane are enclosed within the site.			
Recreational receptors				
	Great Braitch Lane (not listed as a footpath in District PRoW but in use) crosses through the site and provides a link from Hatfield Garden Village to the footpath north of Coppers Green Lane (Hatchfield 041) and on to Symondshyde Great Wood. There will be filtered views of the site from the Lane.			

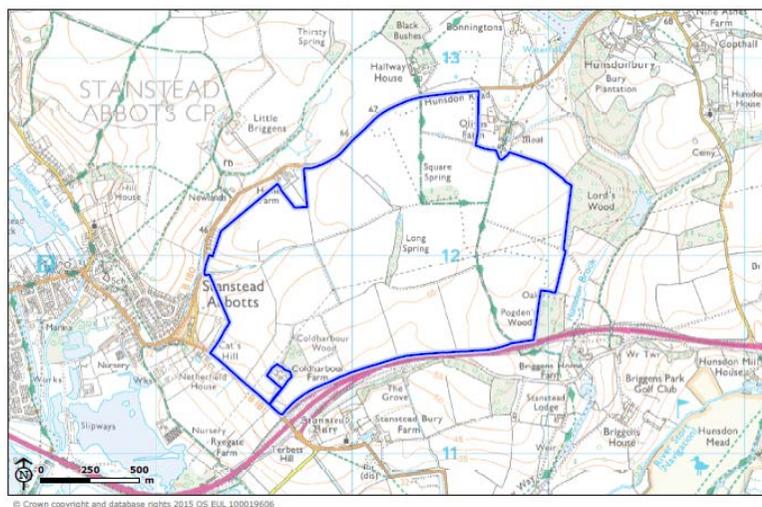
Key vantage points					
	There are no vantage points within the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a moderate visual sensitivity due to the potential change in views from properties on the edge of Hatfield Garden Village. Due to the flat landform, some of these impacts could be mitigated through woodland planting to the north of Hatfield Garden Village.				

MLP CS010 The Briggens Estate

Site location and context

- 4.57 The site is located in East Hertfordshire District, 1.5km east of Hoddesdon and immediately east of Stanstead Abbots. The site is bounded by the A414 to the south and the B181 to the south west and the B180 to the north west and open fields and woodlands to the east. The underlying bedrock is clay silt and sand overlain with poorly sorted superficial deposits with smaller areas of sand and gravel.

Figure A1.10 Location



Type of operation

- 4.58 Sand and gravel exaction.

Proximity to other sites

- 4.59 There are no other sites that form part of this assessment in the area.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 86 South Suffolk and North Essex Clayland
Hertfordshire LCA	LCA81 b Stanstead and Pishiobury Parklands

Key Landscape Characteristics (LCA81 b Stanstead and Pishiobury Parklands)

- parkland: Stanstead Bury, Bonnington, Hunsdonbury and Briggens Park; Eastwick (relic); Gilston Park and former deer park around Sayes Park Farm; Pishiobury;
- large-scale arable farmland with little woodland out of the valleys;
- views of Harlow across river valley with taller buildings nestling in trees;
- change from floodplain to rounded slopes is apparent throughout;
- constant noise from cars and aircraft.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*¹⁴

- ensure that restoration proposals for existing mineral workings are appropriate for the landscape character of this area, such as grassland;
- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- encourage landowners to retain hedges around pasture and resist any change to fences;
- cut back vegetation along Cole Green Way to provide views out and increase biodiversity;
- promote crop diversification and the restoration of mixed livestock/arable farming;
- where possible and practicable, seek the restoration of relic orchards;
- promote the use of reservoirs for water storage and nature conservation interest, rather than groundwater abstraction. Ensure that reservoirs are designed to contribute to local landscape character;
- disseminate information about the landscape, historic and ecological value of veteran and hedgerow pollards and encourage their retention and management.

Potential visual receptors

- 4.60 Residential properties on the edge of Stanstead Abbots, particularly along the B180 Hunsdon Road.
- 4.61 Recreational users of the Harcamlow Way which crosses the site and the footpath to the west of the site (Hunsdon 001).



¹⁴ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.10 MLP CS010 The Briggens Estate Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Gently undulating landform between 55-65m AOD.			
Land cover pattern and valued features				
	Arable farmland separated by high hedges, ditch lines with mature trees or woodland copses (Coldharbour Wood, Long Spring, Square Spring) along field boundaries. More extensive areas of woodland located along the western boundary of the site, either side of Hunsdon Brook at Pogden's Wood and Lord's Wood. Irregular field pattern arranged around the Briggens Park but almost all altered in the 19 th century.			
Perceptual character				
	The site retains a rural character although the tranquillity is disturbed by constant noise from the busy dual carriageway of the A414 to the south. The pylons which traverse the site and views of the urban development in the A10 corridor around Hoddesdon and the Rye House power station decreases the sense of the remoteness.			
Openness /enclosure				
	The site is enclosed by tree belts along the southern boundary with the A414, and woodland along the eastern boundary. The western half of the site is elevated above the surrounding landscape to the north and west by steep banks rising from the surrounding lanes (B181 Roydon Road and the B180 Hunsdon Road). The rising topography along these boundaries provides separation from the village of Stanstead Abbott and the majority of houses along these lanes.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate landscape sensitivity due to the gently undulating landform and its enclosure by both topography and existing vegetation. Impacts could be mitigated by safeguarding valued features within the site such as the existing mature trees and woodland coppices. Post-operation restoration could provide the opportunity to increase the quality of the hedged field boundaries.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Views from the row of terraced houses on B180 Hunsdon Road which back onto the north west boundary of the site will be screened by the steeply rising bank behind the properties. Home Farm, also on the B180, is similarly screened by its lower elevation and intervening vegetation but Olives Farm on the north eastern boundary will have open views of the site from the side of the property. Little Briggens, large detached property located on more elevated ground 600m to the north of the site, has open views across much of the site.			
Recreational receptors				
	The long distance path, Harcamlow Way (Hunsdon 023 / 002 and Stanstead Abbotts 020) crosses the site between Olives Farm and			

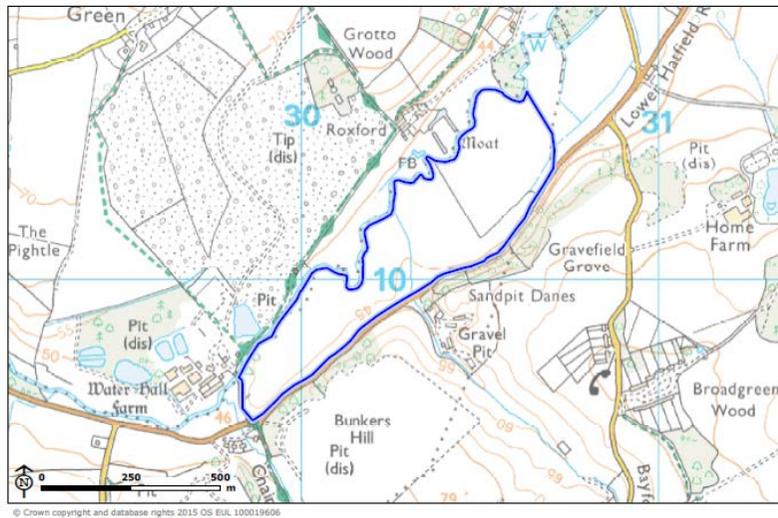
	the A414 and has open views across the eastern half of the site. There are glimpsed views of the site from the footpath (Hunsdon 001) to Hunsdonbury 250m to the west of the site but these are mostly screened by Podgen's Wood and riparian vegetation along Hunsdon Brook.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate visual sensitivity due to the very limited number of properties with open views over the site. These impacts could be mitigated by screening without losing existing visual amenity. Impacts on recreational receptors using the Harcamlow Way could be mitigated by woodland screening or diversion of the footpath, which would need to be considered by the HCC Access and Rights of Way Team. Due to the gently undulating landform, impacts on the visual amenity of residential and recreational receptors could be fully mitigated with woodland screen planting.				

MLP CS011 Waterhall Farm Fields

Site location and context

- 4.62 The site is located in East Hertfordshire District, 2km south west of Hertford. The narrow site is bounded by the B158 Lower Hatfield Road to the south east and the River Lea to the north west. The underlying bedrock is chalk with clay, silt, sand and gravel superficial deposits.

Figure A1.11 Location



Type of operation

- 4.63 Sand and gravel exaction.

Proximity to other sites

- 4.64 The site lies less than 100m from MLPCS012 and 400m from MLPCS014 and in close proximity to MLPCS 016/017/018/019. The area is characterised by active and former areas of sand and gravel extraction along Lower Hatfield Road.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA65 Middle Lea Valley West

Key Landscape Characteristics (LCA 65 Middle Lea Valley West)

- flat pastoral valley of the River Lea, with derelict meadows, scrub and trees;
- open in parts; in others masked by wetland vegetation;
- parkland is a dominant local feature;
- the river is not a dominant landscape feature;
- shallow valley slopes are screened by wetland and associated vegetation.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*¹⁵

- support the Environment Agency's initiative in encouraging a partnership approach to habitat management in the Lee at Bayfordbury;
- encourage habitat protection within the Upper Lee to safeguard the survival and dispersal of notable species, including the barbell;
- ensure that any proposals for development within this area pay due regard to safeguarding its important associated historic and ecological features;
- promote the use of low-density stock grazing as a management technique;
- ensure that any further proposals for mineral extraction in this or adjoining areas avoid areas of historic or ecological importance and are adequately screened from view;
- encourage the development of best-practice guidelines to safeguard existing nature conservation interest in working mineral extraction sites to create suitable conditions for maximising nature conservation potential and to minimise management needs within restored sites;
- ensure that all landowners and developers are aware of the BAP objective of creating a 'necklace' of interconnected wetland habitats along the river valleys;
- resist the targeting of redundant or derelict pasture for development;
- resist development that could lower the water table within river valleys and affect wetland habitats;

Potential visual receptors

- 4.65 Residents on Leaside to the north and the Lower Hatfield Road to the south.

¹⁵ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

- 4.66 Recreational users the long distance footpath Chain Walk (Hertingfordbury 002),



Table A1.11 MLP CS011 Waterhall Farm Fields Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	The site lies on the flat valley floor of the River Lea at c.45m AOD.			
Land cover pattern and valued features				
	Derelict riverside pastoral farmland with scrub and mature trees particularly along the river, bordered by high hedged lanes.			
Perceptual character				
	The narrow river is not a prominent feature in the well-vegetated valley floor but the narrow hedged lanes with no verges and scattered settlements, give the valley a rural feel. However, gravel extraction has a significant impact on the local farmland and parkland and the opposing valley slopes are characterised by active and restored mineral sites at Bunkers Hill and Water Hall Quarry. Constant low-level noise from the heavy traffic adjacent to the site along the B158 Lower Hatfield Road disturbs the tranquillity. Overhead power lines cross the site decreasing the sense of remoteness.			
Openness /enclosure				
	High treed hedgerows along Lower Hatfield Road and vegetation along the river enclose the site which is further contained by opposing valley slopes. The valley is visible from the higher slopes to either side but mostly filtered by trees within the river valley.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate landscape sensitivity to mineral extraction due to the flat landform, the enclosed nature of the site and the proximity to existing mineral extraction sites. Impacts could be fully mitigated by further screening and post-extraction restoration should be used as an opportunity to strengthen the character of the river corridor.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Two residential properties on Leaside, a private road to the north of the river off St Mary's Lane, have partial and filtered visibility of the site, including Roxford House, a designated moated site which lies immediately adjacent to the site. There are partial views of the south west of the site from Waterhall Cottages, across Lower Hatfield Road.			
Recreational receptors				
	Recreational user of Chain Walk, a long distance route (Hertingfordbury 002), runs to the north of the River Lea and along the south west boundary of the site and has intermittent views of the site when there are gaps in the high hedgerows to the south of the route.			
Key vantage points				
	There are no key vantage points in the vicinity of the site.			

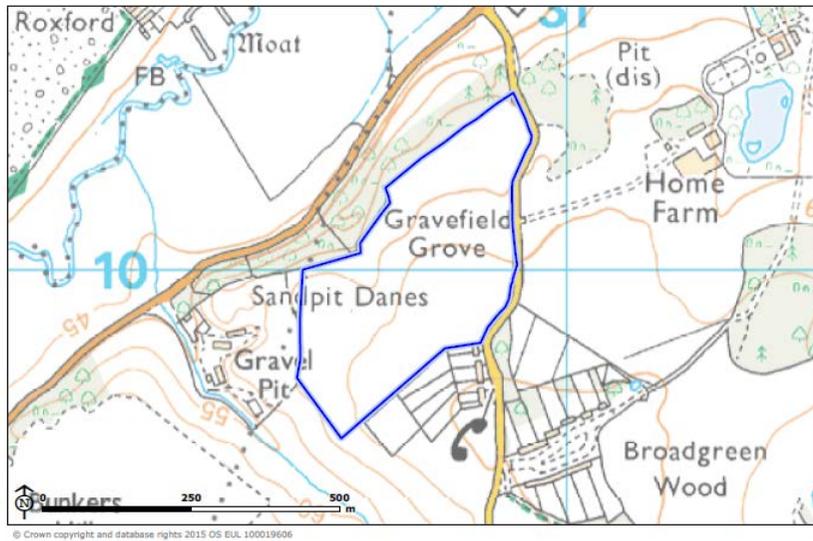
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate visual sensitivity due to the enclosed nature of the site and the limited number of residential properties in the vicinity. Impacts could be fully mitigated by screen planting without adversely changing the visual amenity of viewers.				

MLP CS012 Waterhall Broad Green

Site location and context

- 4.67 The site is located in East Hertfordshire District, 2km south west Hertford. The site is bounded by the Bayford Lane Road to the east and woodlands adjacent to Lower Hatfield Road to the north. The underlying bedrock is chalk with sand and gravel and poorly sorted superficial deposits.

Figure A1.12 Location



Type of operation

- 4.68 Sand and gravel exaction.

Proximity to other sites

- 4.69 The site lies less than 100m from MLPCS011 and 100m from MLPCS014 and in close proximity to MLPCS 016/017/018/019. The area is characterised by active and former areas of sand and gravel extraction along Lower Hatfield Road.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA47b Essendon-Brickendon Farmed Slopes - B

Key Landscape Characteristics (LCA47b Essendon-Brickendon Farmed Slopes - B)

- gently undulating arable slopes between the Lea floodplain and the small arable plateaux and associated steep slopes to the south;
- north facing;
- separated from river valley by B158 just above floodplain
- extensive mineral extraction;
- parkland converted to golf course bisects this area;
- narrow wooded valleys cut back into steeper slopes above.

Key Sensitivities, forces for change and guidance within the Hertfordshire LCA ¹⁶

- no development that would result in permanent damage to the historic landscape fabric of this area will be permitted. This applies particularly to ancient woodland and parkland;
- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- ensure that any future proposals for mineral extraction include restoration proposals that reflect local landscape character, especially in terms of their scale. Restoration could be to grassland or arable, but efforts should be made to re-create the historic hedgerow and woodland pattern;
- ensure that the brooks are managed in such a way as to maintain their ecological interest and biodiversity, i.e. that they are not taken into arable cultivation or mineral extraction;
- ensure that proposed improvements to the landscape within Landscape Conservation Areas will reinforce and contribute to the distinctiveness of the local landscape character, by reflecting the scale and land use of the area;
- golf courses should only be permitted within historic parklands where: i) the original layout and features of the grounds are retained; ii) existing trees are retained and adequate provision is made for their maintenance and management; iii) fairways and greens are designed to complement the historic designed landscape with regard to their location and extent; iv) all new tree and shrub planting either uses species already present within the parkland, in similar designs, proportions and mixes, or uses locally native species where these would be more appropriate; v) a high proportion of the total area should be dedicated to and managed as wildlife habitat, building upon established areas of wildlife interest already present; vi) all new waterbodies should be designed to be either naturalistic or in keeping with historic waterbodies already present; vii) all

(and only) necessary buildings and structures are designed to be in keeping with the primary age of the remaining historic character of the site; viii) a long-term management plan should be submitted with the planning application and adhered to. Plans to be reviewed periodically via meetings of interested parties (liaison groups).

Potential visual receptors

- 4.70 Residents along Bayford Lane, particularly in the hamlet of Broadgreen.



¹⁶ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.12 MLP CS012 Waterhall Broad Green Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	North facing valley slope of the River Lea falling gently from 75m to 55m.			
Land cover pattern and valued features				
	Ancient irregular field pattern which has undergone little change since c.1800. Arable farmland with densely treed hedgerow banks around the eastern boundary of the site along Bayfield Lane and discrete woodlands along the northern and western boundary.			
Perceptual character				
	The site retains a rural character with small groups of isolated houses reached by a sinuous sunken lane which climbs the valley slope to the east of the site. However the tranquillity is disturbed by the noise from the machinery in the Skinners Asphalt site to the west and road noise from the busy B158 Lower Hatfield Road. The Lea valley is locally degraded by extensive mineral extraction in the vicinity of the site, and there are distant views from the site of the restored sites on the north slope of the river valley.			
Openness /enclosure				
	The site is largely enclosed by high treed hedgerows and areas of woodland along Lower Hatfield Road and Bayford Lane and a new plantation between the site and the Skinners Asphalt site. The woodland screens views to the parkland around Bayfordbury Mansion to the east of the site but there are filtered views of the wooded south facing slopes of the Lea valley. The site is open to the south towards the hamlet of Broad Green and the arable fields beyond.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate landscape sensitivity to mineral extraction due to the gently sloping landform, simple land cover pattern and its enclosed nature. The site's proximity to former and operational mineral sites decreases the rural quality of the immediate area. Valued features, such as the historic field pattern should be safeguarded.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Residents of Broad Green (10 in total) on Bayford Lane will have views of the site from the rear of the properties, particularly those residents to the north of the hamlet which lie adjacent to the southern boundary of the site. Other properties in the area, such as Home Farm, 300m to the east of the site, and at Broadgreen Wood, 200m to the south, will be screened by existing woodland.			
Recreational receptors				
	There are no paths that cross the site.			
Key vantage points				

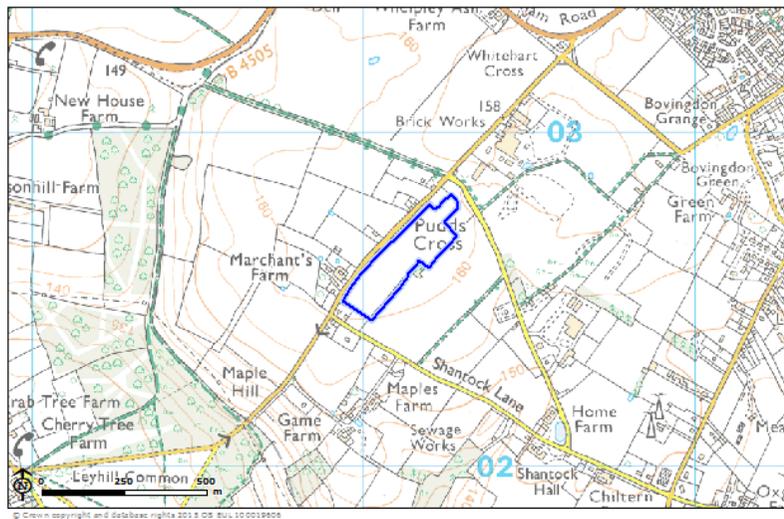
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate visual sensitivity due to the fact that there are few residential properties in the vicinity of the site and only those at Broad Green have open views (which, due to the flat nature of the site could be mitigated by screening without losing existing visual amenity).				

MLP CS013 Harry's Field

Site location and context

- 4.71 The site is located in Dacorum District, approximately 5km south west of Hemel Hempstead and 0.8km south east of the village of Bovington. It is bound by small rural lanes on three sides, Leyhill Road, Shantock Lane and Shantock Hall Lane and open fields to the south east. The underlying bedrock is chalk with clay, silt sand and gravel superficial deposits. The boundary of the Chilterns AONB lies 0.5km to the east of the site at Tyler's Hill.

Figure A1.13 Location



Type of operation

- 4.72 Brick clay extraction.

Proximity to other sites

- 4.73 There are no other sites that form part of this assessment in the area.
- 4.74 Permission has recently been granted for an extension to the existing brick clay works immediately to the south east of the proposed site and mitigation planting undertaken along existing hedgerows around the site.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 110 Chilterns
Hertfordshire LCA	LCA107 Bovington and Chipperfield Plateau

Key Landscape Characteristics (LCA 107 Bovington and Chipperfield Plateau)

- expansive, gently undulating plateau;
- mixed arable and pasture farmland;
- isolated and fragmented woodland cover;
- medium to large fields to east with remote feel;
- settlement pattern comprising a number of villages which spread across the plateau in loose organic forms;
- densely hedged narrow lanes;
- semi derelict feel to large scale redundant or industrial sites;
- few focal points or vistas.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*¹⁷

- encourage the retention of the existing pattern of hedges;
- resist proposals to extend suburban influences from the existing villages or through infill of more dispersed areas;
- promote the retention of the character of local minor roads the by management of hedgerows, hedge banks and verges;
- ensure that built development both in the area or adjacent is integrated through the use of native tree and shrub species and the creation of hedging and/or planting to the perimeter;
- promote awareness and consideration of the setting of the AONB, and views to and from it, when considering development and land use change proposals on sites adjacent to the AONB.



Potential visual receptors

- 4.75 Residents in dispersed farmhouses and cottages along Leyhill Road and Shantock Lane.
- 4.76 Recreational users of footpaths in the vicinity of the site, Bovingdon 006 to the east of the site and another along Shantock Hall Lane and footpaths within the Chilterns AONB.

¹⁷ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.13 MLP CS013 Harry's Field Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Generally flat across the site at 160m AOD within a wider gently undulating plateau. The Chess Valley, a narrow and steep wooded valley lies 300m to the west of the site below Leyhill Common.			
Land cover pattern and valued features				
	Small irregular field pattern of arable fields with a structure of hedgerows and mature hedgerow trees and an isolated copse on the south east boundary. Mitigation planting has been recently planted along the existing hedgerows.			
Perceptual character				
	A small site which is generally rural in character, enclosed by densely hedged narrow lanes and surrounded by wooded countryside with dispersed farmsteads and isolated cottages. However, industrial development on the edge of the large village of Bovingdon along Leyhill Road, including the Bovingdon Brick Works and builders merchant which lies immediately to the north of the site, causes some disruption to the character of the rural landscape.			
Openness /enclosure				
	The site is enclosed by roadside hedges and mature hedgerow trees. There is no intervisibility with the large village of Bovingdon which sits within the plateau east of the site and little visibility across the narrow Chess Valley to the west. The site is elevated above the valley, and the boundary of Chilterns AONB which is located on the east facing valley slope, is visually enclosed thanks to the steep valley sides and extensive woodlands.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate landscape sensitivity to mineral extraction due to flat landform, and enclosure from hedgerows and hedgerow trees. The site's proximity to existing built development also reduces its sensitivity. Valued features such as the hedgerows and mature trees at the perimeter and the small copse that borders the south eastern boundary of the site should be safeguarded.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	There will be a degree of intervisibility from the residential properties located along Leyhill Road adjacent to the north west of the site, though views will be filtered by field boundary vegetation. The four residential properties on Shantock Lane will have direct views as these properties back onto the site although mitigation planting has been planted along the curtilage boundary.			
Recreational receptors				
	There is partial visibility from the footpath/restricted byway (Bovingdon 006) which passes to the east of the site and connects Shantock Lane and Shantock Hall Lane, although the footpath does not appear to be heavily used and is not a long distance route. Mineral workings are likely to be seen by people using the footpath crossing the site and diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team. There is no visibility into the site from a footpath (Bovingdon 008) which			

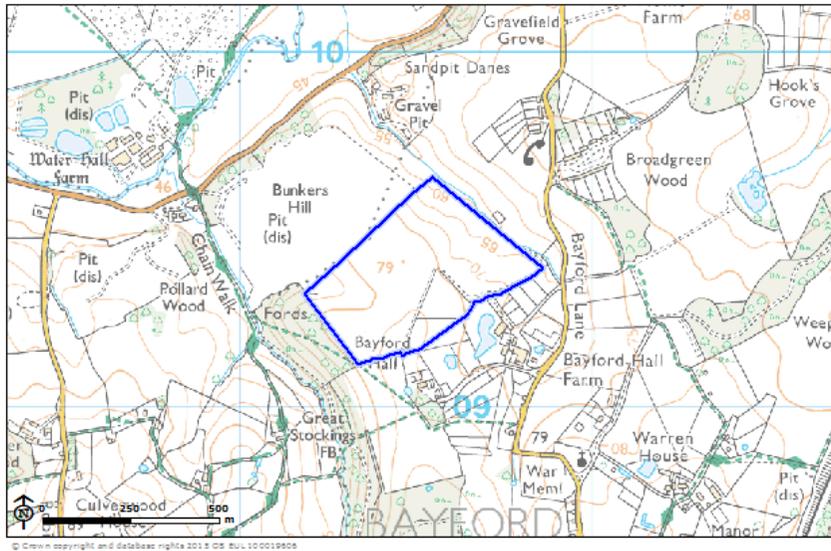
	<p>passes the site to the north east along Shantock Hall Lane and connects to Bovington. The site is not visible from footpaths on Tyler's Hill / Cowcroft Wood within the Chilterns AONB as a result of distance, and the extensive intervening woodlands.</p>				
Key vantage points					
	<p>There are no key vantage points in the vicinity of the site.</p>				
Overall Visual Character Sensitivity					
	<p>Overall this site is considered to have a moderate visual sensitivity due to the fact that there are few residential properties in the vicinity of the site and only those on Shantock Lane have open views. Due to the flat landform these impacts could be mitigated by screening without losing existing visual amenity and mitigation planting has been recently planted along the curtilage boundaries. Due to the generally flat landform, impacts on the visual amenity of residential and recreational receptors could be fully mitigated with woodland screen planting.</p>				

MLP CS014 Waterhall Bunkers Hill South

Site location and context

- 4.77 The site is located in East Hertfordshire District, 2km south west Hertford and 1km north of Bayford. The site is bounded by the Waterhall Bunkers Hill Quarry to the north west and Bayford Hall Farm to the south east. Bayford Wood lies to the south west. The underlying bedrock is clay silt and sand with poorly sorted superficial deposits.

Figure A1.14 Location



Type of operation

- 4.78 Sand and gravel exaction.

Proximity to other sites

- 4.79 The site lies 100m from MLPCS012 and 400m from MLPCS011 and in close proximity to MLPCS 016/017/018/019. The area is characterised by active and former areas of sand and gravel extraction along Lower Hatfield Road.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA47b Essendon-Brickendon Farmed Slopes - B

Key Landscape Characteristics (LCA47b Essendon-Brickendon Farmed Slopes - B)

- gently undulating arable slopes between the Lea floodplain and the small arable plateaux and associated steep slopes to the south;
- north facing;
- separated from river valley by B158 just above floodplain;
- extensive mineral extraction;
- parkland converted to golf course bisects this area;
- narrow wooded valleys cut back into steeper slopes above.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*¹⁸

- no development that would result in permanent damage to the historic landscape fabric of this area will be permitted. This applies particularly to ancient woodland and parkland;
- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- ensure that any future proposals for mineral extraction include restoration proposals that reflect local landscape character, especially in terms of their scale. Restoration could be to grassland or arable, but efforts should be made to re-create the historic hedgerow and woodland pattern;
- ensure that the brooks are managed in such a way as to maintain their ecological interest and biodiversity, i.e. that they are not taken into arable cultivation or mineral extraction;
- ensure that proposed improvements to the landscape within Landscape Conservation Areas will reinforce and contribute to the distinctiveness of the local landscape character, by reflecting the scale and land use of the area;
- golf courses should only be permitted within historic parklands where: i) the original layout and features of the grounds are retained; ii) existing trees are retained and adequate provision is made for their maintenance and management; iii) fairways and greens are designed to complement the historic designed landscape with regard to their location and extent; iv) all new tree and shrub planting either uses species already present within the parkland, in similar designs, proportions and mixes, or uses locally native species where these would be more appropriate; v) a high proportion of the total area should be dedicated to and managed as wildlife habitat, building upon established areas of wildlife interest already present; vi) all new waterbodies should be designed to be either naturalistic or in keeping with historic waterbodies already present; vii) all

(and only) necessary buildings and structures are designed to be in keeping with the primary age of the remaining historic character of the site; viii) a long-term management plan should be submitted with the planning application and adhered to. Plans to be reviewed periodically via meetings of interested parties (liaison groups).

Potential visual receptors

- 4.80 Residents of Bayford Hall and Bayford Hall Farm, south of the site and residents in the hamlet of Broadgreen and Broadgreen Wood.
- 4.81 Recreational users of the long distance Chain Walk to the north west and the footpath that runs due south east toward Bayford hall, adjacent to the south eastern boundary of the site.



¹⁸ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.14 MLP CS014 Waterhall Bunkers Hill South Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY					
LANDSCAPE CHARACTER CRITERIA					
Landform					
	Gently undulating north facing valley slope of the River Lea falling from 80m AOD to 60m.				
Land cover pattern and valued features					
	Arable field with areas of woodlands around the south western boundary of the site and a low hedge to the south east. Listed as having ancient irregular field pattern which has undergone little change since c.1800 in HLC although this seems to have been disturbed by the adjacent quarry.				
Perceptual character					
	The site retains an open rural character with isolated farmhouses and areas of discrete woodland. However the Lea valley is locally degraded in the vicinity of the site by extensive mineral extraction, and there are direct views from the site of the Bunkers Hill Quarry which lies immediately to the north and is the process of restoration. The tranquillity is disturbed by the noise from the machinery in the Skinners Asphalt site to the north.				
Openness /enclosure					
	Boundary spoil heaps and the height of the overtipping in the Bunkers Hill Quarry enclose the lower end of the site to the screen views north but the site becomes more open on the higher slope to the south. Woodland along a tributary of the Lea encloses the site on the western boundary.				
Overall Landscape Character Sensitivity					
	Overall this site is considered to have a low-moderate landscape sensitivity due to gently undulating landform, simple land cover pattern and proximity to restored or active mineral sites which decrease the rural quality of the immediate area. Impacts could be fully mitigated by further screening that would be in keeping with the local landscape character.				
VISUAL AMENITY CRITERIA					
Residential receptors					
	Residents of Bayford Hall and Bayford Hall Farm, both of which are located within 100m of the southern boundary of the site, are screened by the rising topography towards the site and the intervening hedgerow vegetation. Residential properties in Broadgreen Wood, 250m east of the site, are screened by existing vegetation along Bayford Lane. There are views of the eastern half of the site across the tributary valley from residential properties in Broad Green 300m to the north east of the site.				
Recreational receptors					
	No paths that cross the site. Chain Walk, a long distance route lies 150m to the west of the site and the footpath (Bayford 004) runs south east from the Chain Walk to meet the corner of the site just north of Bayford Hall. Views from these footpaths are both screened by Bayford Wood and tall boundary hedgerows.				

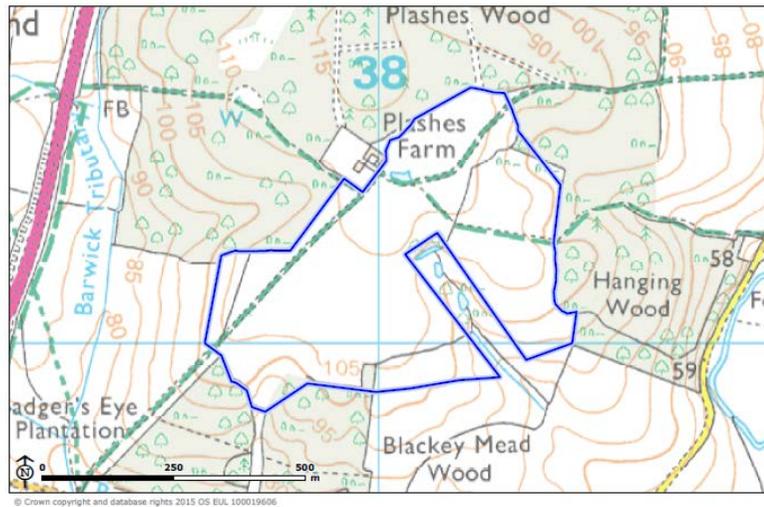
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate visual sensitivity due to limited number of residential properties in the vicinity of the site and the presence of existing screening. Views from properties in Broad Green are more distant and impacts could be mitigated by screening without adversely affecting visual amenity.				

MLP CS015 Plashes Farm

Site location and context

- 4.82 The site is located in East Hertfordshire District, 5km north east of Ware and c.0.7km south east of the village of Colliers End. The site is enclosed by woodland with open arable fields to the south. The site is elevated above the River Rib and its tributary to the east and south west respectively. The underlying bedrock is chalk overlain with clay, silt and gravel along the river, with sand and gravel on the slopes, and poorly sorted superficial deposits on higher ground.

Figure A1.15 Location



Type of operation

- 4.83 Sand and gravel extraction.

Proximity to other sites

- 4.84 The site is located in close proximity to MLP CS007 (Barwick), to the south.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 86 South Suffolk and North Essex Clayland
Hertfordshire LCA	LCA73B High Cross Plateau – B* (LCA 091 Upper Rib Valley – small area to the south nr Blackey Mead Wood)

Key Landscape Characteristics (LCA73B High Cross Plateau – B)

- undulating arable upland;
- filtered views out from and along A10;
- limited views elsewhere, filtered by hedgerow vegetation;
- isolated blocks of woodland, some large, especially east of A10;
- ancient buildings in roadside settlements;
- place names with 'green' or 'end' in small, remote settlements;
- irregular or sinuous lanes and field boundaries.

Key Sensitivities, forces for change and guidance within the Hertfordshire LCA ¹⁹(LCA073 High Cross Plateau)

- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available
- promote crop diversification and the restoration of mixed livestock/arable farming
- encourage woodland planting around existing woodland, where this is in keeping with local landscape character, is on the site of former woodland or can provide an ecological link to other woodlands/habitat
- ensure that proposed woodland planting will contribute to the local landscape rather than destroying an existing and valued habitat or historic artefact, such as a bank or ditch
- encourage the reversion of arable to pasture and appropriate management to increase grassland biodiversity
- promote the appropriate management of coppice woodland to establish and maintain a species-rich ground flora and a distinction between high forest, coppice, coppice-with-standards and wood pasture
- encourage the reversal of habitat fragmentation and the creation and improvement of habitat links such as hedges and small woodlands replacement hedges should follow historic field boundaries
- ensure the implementation an management of the landscape proposals for the A10 bypass reflect the historic character of the settlements along the existing road, the landscape character of the surrounding area and the traditional pattern of fields and hedgerows

Potential visual receptors

- 4.85 Residents of the village of Barwick, and residential properties to the west of the A10.
- 4.86 Recreational users of bridleways that run across the site and link to the long distance path (Harcamlow Way.)



¹⁹ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.15 MLP CS015 Plashes Farm Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	An elevated site which sits at 95m – 110m AOD within a strongly undulating upland plateau. The site sits above the narrow river valleys of the River Rib which meanders from north to south 300m to the east of the site and the Barwick Tributary which runs from Barwick west to the A10 before turning north around the site, c.200m from the site boundary.			
Land cover pattern and valued features				
	Ancient irregular field system with little alteration since c.1800. Arable fields surrounded by extensive deciduous woodland blocks, all of which are ancient (Blackey Mead Wood, Hanging Wood and Plashes Wood). A narrow water course linked by ponds and surrounded by mature trees is enclosed by the site boundary.			
Perceptual character				
	A remote and distinctively rural upland area, which is heavily wooded. There are isolated farms on the plateau and roadside hamlets on the valley floor below the site. The higher slopes offer extensive panoramic views across the undulating landscape. The rural tranquillity of the site is slightly disturbed by the busy A10 which runs north-south, 350m west of the site but this is only visually prominent from the north east of the site.			
Openness /enclosure				
	There is a strong sense of enclosure in the northern half of the site due its elevation above the surrounding landscape and the extensive woodland surrounding it. Where the arable fields extend across the open slopes to the south west towards the A10 and to the south east towards Barwick there are far reaching panoramic views which extend to the London skyline at Canary Wharf.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate-high landscape sensitivity due to the varied landform, historic field pattern and valued landscape features. Mineral extraction is likely to disturb the strong rural character of the site. The impacts could not be fully mitigated.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Due to the rising topography, there will be limited visibility of the site from properties in the hamlet of Barwick, particularly from those properties on the lane running north from Gore Lane. There will be distant views of the west of the site from properties at Collier's Green to the west of the A10 and from individual farms in the same location such as Willowtree Farm and Labdens Farm.			
Recreational receptors				
	Recreational users of the bridleways that run across the site (Standon 041, 043 and 044) from the surrounding woodland and link to the long distance path, Harcamlow Way, which follows the river valley to the east will have open views of the mineral workings.			

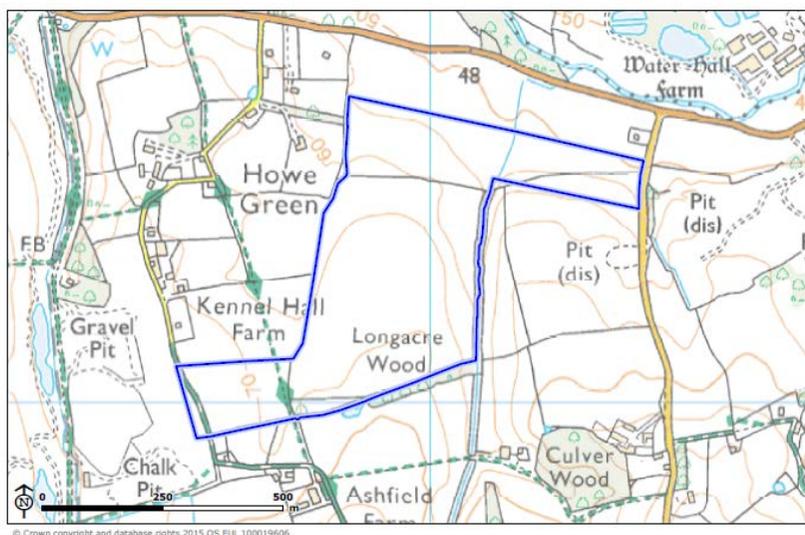
	There will be views of the site from the footpath (Standon 042) which runs from the Barwick Tributary across the A10 to Collier's End. Diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a moderate visual sensitivity due to the due to the openness of the southern half of the site and open views from the footpaths that cross the site. Impacts on the visual amenity of some residents in the village of Barwick could be mitigated by screening to the north of the village.				

MLP CS016 Waterhall Howe Green

Site location and context

- 4.87 The site is located in East Hertfordshire District, 3km south west Hertford, 300m east of the hamlet of Howe Green and 150m south of the Lower Hatfield Road. The site is bounded by Longacre Wood to the south and paddocks to the west, north and east. The underlying bedrock is mostly chalk with clay silt and sand in the south of the site, overlain with poorly sorted superficial deposits and sand and gravel in the north.

Figure A1.16 Location



Type of operation

- 4.88 Sand and gravel extraction.

Proximity to other sites

- 4.89 The site is adjacent to MLPCS017, 300m from MLPCS019 and 430m from MLPCS011. The site is in close proximity to several other potential sites, including MLPCS 012/014/018. The area is characterised by active and former areas of sand and gravel extraction along Lower Hatfield Road.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA47b Essendon-Brickendon Farmed Slopes - B (rising to LCA 48 West End-Brickendon Wooded Slopes)

Key Landscape Characteristics (LCA47b Essendon-Brickendon Farmed Slopes - B)

- gently undulating arable slopes between the Lea floodplain and the small arable plateaux and associated steep slopes to the south;
- north facing;
- separated from river valley by B158 just above floodplain;
- extensive mineral extraction;
- parkland converted to golf course bisects this area;
- narrow wooded valleys cut back into steeper slopes above.

Key Sensitivities, forces for change and guidance within the Hertfordshire LCA ²⁰

- no development that would result in permanent damage to the historic landscape fabric of this area will be permitted. This applies particularly to ancient woodland and parkland;
- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- ensure that any future proposals for mineral extraction include restoration proposals that reflect local landscape character, especially in terms of their scale. Restoration could be to grassland or arable, but efforts should be made to re-create the historic hedgerow and woodland pattern;
- ensure that the brooks are managed in such a way as to maintain their ecological interest and biodiversity, i.e. that they are not taken into arable cultivation or mineral extraction;
- ensure that proposed improvements to the landscape within Landscape Conservation Areas will reinforce and contribute to the distinctiveness of the local landscape character, by reflecting the scale and land use of the area;
- golf courses should only be permitted within historic parklands where: i) the original layout and features of the grounds are retained; ii) existing trees are retained and adequate provision is made for their maintenance and management; iii) fairways and greens are designed to complement the historic designed landscape with regard to their location and extent; iv) all new tree and shrub planting either uses species already present within the parkland, in similar designs, proportions and mixes, or uses locally native species where these would be more appropriate; v) a high proportion of the total area should be dedicated to and managed as wildlife habitat, building upon established areas of wildlife interest already present; vi) all new waterbodies should be designed to be either naturalistic or in keeping with historic waterbodies already present; vii) all

(and only) necessary buildings and structures are designed to be in keeping with the primary age of the remaining historic character of the site; viii) a long-term management plan should be submitted with the planning application and adhered to. Plans to be reviewed periodically via meetings of interested parties (liaison groups).

Potential visual receptors

4.90 Residents of Howe Green.

4.91 Recreational users of the long distance Chain Walk and a bridleway which both cross the site.



²⁰ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.16 MLP CS016 Waterhall Howe Green Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	North facing valley slope of the River Lea falling gently from 70m to 50m.			
Land cover pattern and valued features				
	Ancient irregular field pattern which has undergone little change since c.1800. Improved pasture with degraded structure of hedgerows within the site which is further divided by post and rail fences for horses. An area of woodland, Longacre Wood, marks the southern boundary of the site.			
Perceptual character				
	The site retains a rural character with areas of discrete woodland on its boundaries. The small isolated settlement of Howe Green lies to the west. Sinuous sunken lanes with densely treed hedge banks climb the valley slope to the west and east of the site. Although the wider Lea valley is degraded by extensive mineral extraction, these are locally contained by landform and woodland and views from the site are largely of the wooded slopes north of the River Lea towards Woolmer's Park. It is a tranquil area apart from disruption to the northern part of the site from the busy traffic on the B158 Lower Hatfield Road.			
Openness /enclosure				
	The open valley slope is divided into small fields by low hedges and post and rail fences which allows views across the site towards the linear hamlet of Howe Green to the west. The area is visible from the upper slopes to the north of the river valley but these long distance views are generally filtered by woodland. The site is partially enclosed to the south by Longacre Wood. Hedgerows along the Lower Hatfield Road (150m below the site) and along the north-south running lane to Robin's Nest Hill which adjoins the north east corner of the site, encloses the site to the north and east respectively.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate landscape sensitivity. Although the site is partially open, has a historic field system and has retained its rural character despite the presence of restored or active mineral sites in the wider area, some impacts can be mitigated by further screening to the west and restoration offers opportunities to improve degraded hedgerow structure.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Residents of the linear hamlet of Howe Green to the west of the site have views of the site, mostly from the rear of their properties.			
Recreational receptors				
	Chain Walk, a long distance route (Little Berkhamsted 004) and a bridleway and roadway (Little Berkhamsted 018) cross the site as they run due south from Howe Green to Ashfield Farm.			

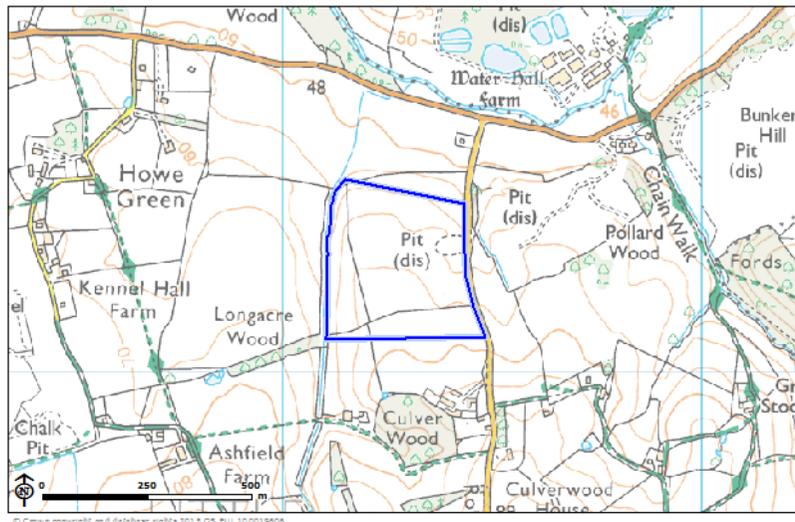
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a moderate visual sensitivity due to the open views from residential properties in Howe Green and the open views from the footpaths that cross the site. These impacts may be partially mitigated through screening. Mineral workings are likely to be seen by people using the footpath crossing the site and diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team.				

MLP CS017 Robins Nest Hill

Site location and context

- 4.92 The site is located in East Hertfordshire District, 3km south west Hertford and 0.5km east of the hamlet of Howe Green and 200m south of the Lower Hatfield Road. The site is bounded by Robins Nest Hill to the east and open fields to the north, west and east. Culver Wood lies 150m south. The underlying bedrock is mostly chalk with clay silt and sand in the south of the site, overlain with poorly sorted superficial deposits with sand and gravel.

Figure A1.17 Location



Type of operation

- 4.93 Sand and gravel extraction.

Proximity to other sites

- 4.94 The area is characterised by active and former areas of sand and gravel extraction along Lower Hatfield Road. The site is in close proximity to several other potential sites, including MLPCS 011/012/014/018/019 and adjacent to MLPCS016 Waterhall Howe Green.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA47b Essendon-Brickendon Farmed Slopes - B (rising to LCA 48 West End-Brickendon Wooded Slopes)

Key Landscape Characteristics (LCA47b Essendon-Brickendon Farmed Slopes - B)

- gently undulating arable slopes between the Lea floodplain and the small arable plateaux and associated steep slopes to the south;
- north facing;
- separated from river valley by B158 just above floodplain;
- extensive mineral extraction;
- parkland converted to golf course bisects this area;
- narrow wooded valleys cut back into steeper slopes above.

Key Sensitivities, forces for change and guidance within the Hertfordshire LCA ²¹

- no development that would result in permanent damage to the historic landscape fabric of this area will be permitted. This applies particularly to ancient woodland and parkland;
- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- ensure that any future proposals for mineral extraction include restoration proposals that reflect local landscape character, especially in terms of their scale. Restoration could be to grassland or arable, but efforts should be made to re-create the historic hedgerow and woodland pattern;
- ensure that the brooks are managed in such a way as to maintain their ecological interest and biodiversity, i.e. that they are not taken into arable cultivation or mineral extraction;
- ensure that proposed improvements to the landscape within Landscape Conservation Areas will reinforce and contribute to the distinctiveness of the local landscape character, by reflecting the scale and land use of the area;
- golf courses should only be permitted within historic parklands where: i) the original layout and features of the grounds are retained; ii) existing trees are retained and adequate provision is made for their maintenance and management; iii) fairways and greens are designed to complement the historic designed landscape with regard to their location and extent; iv) all new tree and shrub planting either uses species already present within the parkland, in similar designs, proportions and mixes, or uses locally native species where these would be more appropriate; v) a high proportion of the total area should be dedicated to and managed as wildlife habitat, building upon established areas of wildlife interest already present; vi) all new waterbodies should be designed to be either naturalistic or in keeping with historic waterbodies already present; vii) all

(and only) necessary buildings and structures are designed to be in keeping with the primary age of the remaining historic character of the site; viii) a long-term management plan should be submitted with the planning application and adhered to. Plans to be reviewed periodically via meetings of interested parties (liaison groups).

Potential visual receptors

- 4.95 Residents of Howe Green to the west of the site and Robins Nest Farm to the south.
- 4.96 Recreational users of the long distance Chain Walk.



²¹ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.17 MLP CS017 Robins Nest Hill Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	North facing valley slope of the River Lea falling gently from 70m to 50m.			
Land cover pattern and valued features				
	Ancient irregular field pattern which has undergone little change since c.1800. Improved pasture with a degraded structure of hedgerows within the site which is further divided by post and rail fences for horses.			
Perceptual character				
	The site retains a rural character with isolated farmsteads and small hamlets. Robin's Nest Hill, a sinuous sunken lane with densely treed hedge banks climbs the valley slope immediately east of the site. Although the wider Lea valley is degraded by extensive mineral extraction, these are locally contained by landform and woodland and views from the site are largely of the wooded slopes to the south and to the north of the River Lea towards Woolmer's Park. It is a tranquil area apart from disruption from the busy traffic on the B158 Lower Hatfield Road			
Openness /enclosure				
	The open valley slope is divided into small fields by low hedges and post and rail fences which allows views across the site. The area is visible from the upper slopes to the north of the river valley but these long distance views are generally filtered by woodland. Hedgerows along the Lower Hatfield Road, 200m to the south and along the north-south running lane to Robin's Nest Hill to the east, enclose the site.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate landscape sensitivity. Although the site is relatively open, has a historic field system and has retained its rural character despite the presence of restored or active mineral sites in the wider area, some impacts can be mitigated by further screening and restoration offers opportunities to improve degraded hedgerow structure.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Residents of the linear hamlet of Howe Green, 600m to the west of the site have views across the valley slope towards the site although these are filtered by remnant hedgerows. Robins Nest Farm, c.150m south of the site, has open views across the site.			
Recreational receptors				
	Chain Walk, a long distance route lies 400m west of the site but views are limited by the topography and hedgerow vegetation.			
Key vantage points				

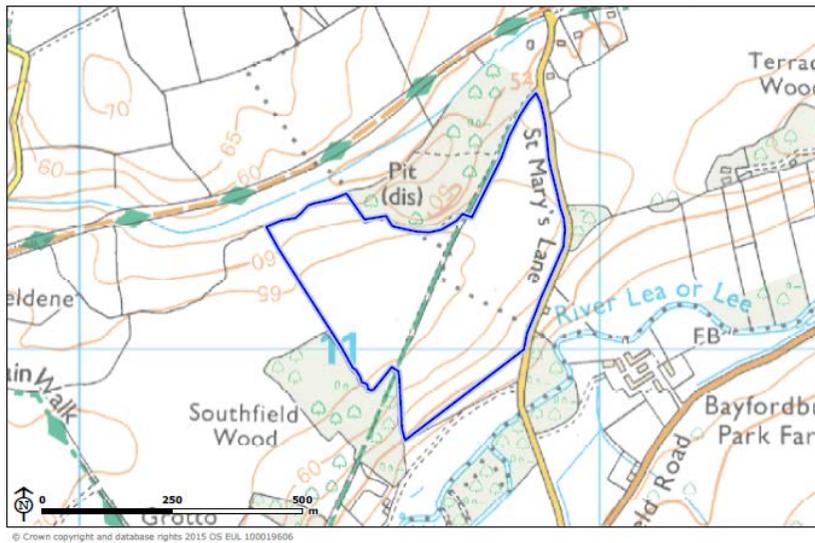
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate visual sensitivity due to the filtered views of the site from residential properties in Howe Green and local footpaths in the vicinity of the site. There is only one residential property in the vicinity of the site with open views towards the site and these impacts could be mitigated by screen planting.				

MLP CS018 Southfield Wood East

Site location and context

- 4.97 The site is located in East Hertfordshire District, 1km south west Hertford and 0.3km south of the village of Hertingfordbury. The site is bounded by St Mary's Lane to the east and Leaside to the south. Woodland runs along the south west and northern boundary and open fields to the north west. The Cole Green Way runs c.100m to the north and the River Lea to the south. The underlying bedrock is chalk, overlain with poorly sorted superficial deposits. The site is situated on a shallow sloping ridge falling from West to East.

Figure A1.18 Location



Type of operation

- 4.98 Sand and gravel extraction.

Proximity to other sites

- 4.99 The site is 300m from MLPCS011 and in close proximity to several other potential sites, including MLPCS 012/014/016/017 and 019. The area is characterised by active and former areas of sand and gravel extraction along Lower Hatfield Road.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA66 Cole Green and Hertingfordbury Settled Farmlands

Key Landscape Characteristics (LCA 66 Cole Green and Hertingfordbury Settled Farmlands)

- small double gravel ridge between two rivers, with a small valley between;
- although focused on Hertford at its eastern end, most of this area is remote and tranquil, despite the presence of the A414 in the north west;
- small variable villages and hamlets, long established and with 20th-century additions, clustered around village greens;
- influence of rivers not apparent, even at confluence.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*²²

- ensure that restoration proposals for existing mineral workings are appropriate for the landscape character of this area, such as grassland;
- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- encourage landowners to retain hedges around pasture and resist any change to fences;
- cut back vegetation along Cole Green Way to provide views out and increase biodiversity;
- promote crop diversification and the restoration of mixed livestock/arable farming;
- where possible and practicable, seek the restoration of relic orchards;
- promote the use of reservoirs for water storage and nature conservation interest, rather than groundwater abstraction. Ensure that reservoirs are designed to contribute to local landscape character;
- disseminate information about the landscape, historic and ecological value of veteran and hedgerow pollards and encourage their retention and management.

Potential visual receptors

- 4.100 Residents of Hertingfordbury.
- 4.101 Recreational users of the long distance path, Cole Green Way and the footpath which crosses the site.



²² *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.18 MLP CS018 Southfield Wood East Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Gently undulating landscape elevated on the northern slope above the River Lea valley. The majority of the site sits at roughly 65mAOD, dipping to 50m towards the River Lea to the south.			
Land cover pattern and valued features				
	Improved pasture with areas of woodland on the northern and south eastern boundary of the site boundary, including the ancient woodland at Southfield Wood and riparian woodland 200m south of the site along the River Lea. The site is bounded to the east by strong hedgerows with a considerable number of mature hedgerow oaks along St Mary's Lane.			
Perceptual character				
	The landscape of the site has a unified character despite disturbance from the landfill site to the north and from mineral extraction along the wider river valley. The site is enclosed by a heavily wooded landscape both along the river valley floor and on the wooded slopes above it. The narrow and winding St Mary's Lane to the east is well hedged. The river 200m to the south is not apparent except for the small blocks of woodland which mark its path.			
Openness /enclosure				
	The site is enclosed by the extensive woodland that surrounds the site and the embankments of the disused railway on the Cole Green Way which blocks views north to the village of Hertingfordbury. The strong hedgerows along St Mary's Lane, which runs down to the River Lea, encloses the site on its eastern boundary. Vegetation along the river blocks views to the south. From elevated positions on the site there are views across the river valley towards Bayfordbury Mansion (part of the University of Hertfordshire) which sits high on the opposite valley side and towards the edge of Hertford to the east.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate landscape sensitivity due to the gently undulating landform, and its elevated and enclosed position above the River Lea. Impacts could be fully mitigated by further screening and setting excavation back from the ancient woodland.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Hertingfordbury lies 250m to the north of the site, but is visually separated from the site by the undulating topography, extensive woodland and the embankment of the Colne Green Way. Houses to the south of the Cole Green Way are enclosed by vegetation. There will be distant views of the site from Bayfordbury Mansion which is located on the opposite slope of the River Lea.			
Recreational receptors				
	There will be open views of the site from the footpath (Hertingfordbury 002) which crosses the site from St Mary's Lane to Southfield Wood. Cole Green Way/Chain Walk is a combined footpath, bridleway and cycle route is heavily vegetated and recreational users will			

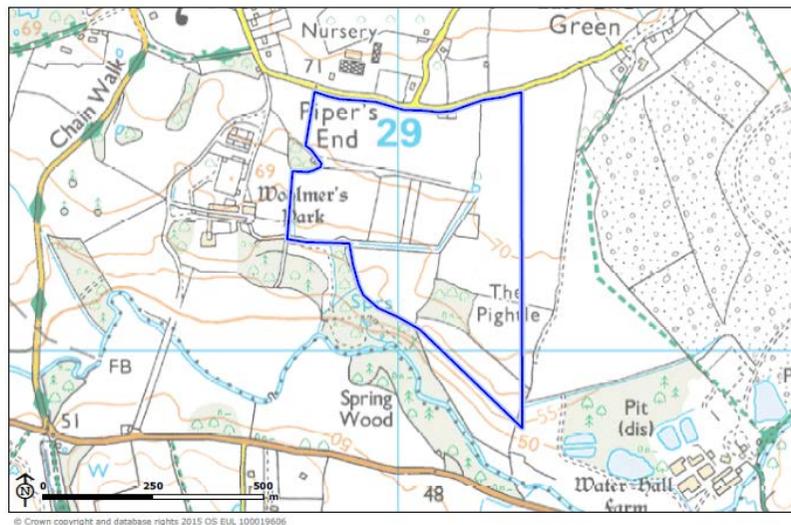
	have limited views into the north of the site.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	This site is considered to have a low-moderate visual sensitivity to mineral extraction. Mineral workings are likely to be seen by people using the footpath crossing the site. Diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team. Other views of the site are limited and could be mitigated by screening.				

MLP CS019 Pipers End

Site location and context

4.102 The site is located in East Hertfordshire District, 2.5km south west Hertford and 60m south of the horticultural nursery on the southern edge of the village of Letty Green. The site is bounded by Woolmers Lane to the north and woodland running along the River Lea to the south. There are open fields to the east and parkland associated with Woolmer's Park lies to the west. The underlying bedrock is chalk, overlain with poorly sorted superficial deposits and a small area of sand and gravel in the centre of the site.

Figure A1.19 Location



Type of operation

4.103 Sand and gravel extraction.

Proximity to other sites

4.104 The area is characterised by active and former areas of sand and gravel extraction along Lower Hatfield Road. The site is in close proximity to several other potential sites, including MLPCS016 and 017 which lie to the south of the River Lea and MLPCS011 to the east.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA66 Cole Green and Hertingfordbury Settled Farmlands

Key Landscape Characteristics (LCA 66 Cole Green and Hertingfordbury Settled Farmlands)

- small double gravel ridge between two rivers, with a small valley between;
- although focused on Hertford at its eastern end, most of this area is remote and tranquil, despite the presence of the A414 in the north west;
- small variable villages and hamlets, long established and with 20th-century additions, clustered around village greens;
- influence of rivers not apparent, even at confluence.

Key Sensitivities, forces for change and guidance within the Hertfordshire LCA ²³

- ensure that restoration proposals for existing mineral workings are appropriate for the landscape character of this area, such as grassland;
- encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available;
- encourage landowners to retain hedges around pasture and resist any change to fences;
- cut back vegetation along Cole Green Way to provide views out and increase biodiversity;
- promote crop diversification and the restoration of mixed livestock/arable farming;
- where possible and practicable, seek the restoration of relic orchards;
- promote the use of reservoirs for water storage and nature conservation interest, rather than groundwater abstraction. Ensure that reservoirs are designed to contribute to local landscape character;
- disseminate information about the landscape, historic and ecological value of veteran and hedgerow pollards and encourage their retention and management.

Potential visual receptors

- 4.105 Residents along Woolmer's Lane and within Woolmer's Park.
- 4.106 Recreational users of the footpath running south from East End Green, to the east of the site.



²³ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.19 MLP CS019 Pipers End Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Generally flat landform elevated on the northern slope above the River Lea valley, which slopes from 74mAOD in the north to 55m in the south of the site at the edge of the woodland along the River Lea.			
Land cover pattern and valued features				
	Playing fields used by the Hertfordshire Polo Club, divided by a remnant hedgerow. An isolated copse, The Pightile, is located in the south east corner of the site. The site is bounded by mature deciduous woodlands along the River Lea (Spring Wood) to the south which link to the woodlands associated with Woolmer's Park to the west (which is listed as a distinctive feature in the Hertfordshire Landscape Character Assessment for LCA 66 although the 18 th century house is screened from the site by woodland). There are high hedgerows with mature trees along Woolmer's Lane to the north.			
Perceptual character				
	The landscape of the site has a unified rural character despite disturbance by mineral extraction along the wider river valley and its position adjacent to the Water Hall Quarry to the east. The site is surrounded by extensive woodland and parkland with winding lanes leading to the small historic villages of Letty Green and East End Green.			
Openness /enclosure				
	The site is enclosed by a heavily wooded landscape both along the river valley below and around Woolmer's Park to the west and by the high hedges and mature hedgerow trees along the winding lane to the north. The river to the south is not apparent, except for the woodland which marks its path, but there are distant views from the site to the wooded north facing slopes above the river.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate landscape sensitivity. Although the area has a unified rural character and some valued features, the well wooded character means impacts on the landscape surrounding the site could be mitigated by effective screening that is in character with the landscape.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	The residents of the two cottages along Woolmer's Lane on the northern boundary of the site and one to the west of the Woolmer's Park estate on the western boundary, will have open views into the site. Residents north of Woolmer's Lane will be screened by the high hedgerows and trees along the lane. The southern edge of the village of Letty Green which is located c.150m north of the site is visually separated from the site by intervening vegetation. Residents of Woolmer's Park, located 100m west of the site, will be screened by woodland.			
Recreational receptors				
	Views of the site from the footpath (Hertingfordbury 001) c.150m east of the site which runs due south from East End Green to the			

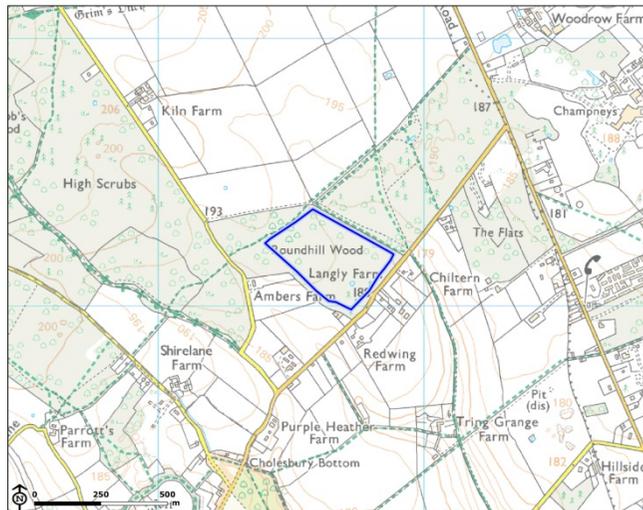
	River Lea will be filtered by intervening hedgerow vegetation.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate visual sensitivity due to the limited number of residential properties in the vicinity of the site and only two cottages that have open views of the site. Due to the flat landform these impacts could be mitigated without losing existing visual amenity with woodland screen planting.				

MLP CS020 Roundhill Wood

Site location and context

- 4.107 The site is located in Dacorum District, 3km south of Tring and c.1km south of the village of Wigginton. Cholesbury Road passes to the south east of the site and Kiln Road is located to the west. This is a woodland site with open fields to the north and south and parkland associated with Champneys to the east. The underlying bedrock is brickclay, overlain with clay-with-flints.

Figure A1.20 Location



Type of operation

- 4.108 Brick clay extraction.

Proximity to other sites

- 4.109 There are no other sites that form part of this assessment in the area.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 110 Chilterns
Hertfordshire LCA	LCA110 Ashlyns and Wigginton Plateau

Key Landscape Characteristics (LCA110 Ashlyns and Wigginton Plateau)

- gently undulating plateau forming part of the Chilterns dip slope;
- numerous estates, associated parkland and estate planting;
- grassland/ley crops;
- suburban fringe of Berkhamsted to plateau edge including sports fields and school buildings;
- extensive mixed woodlands.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*²⁴

- promote the retention of the character of local minor roads by the management of hedgerows, pollarded hedgebanks, (e.g. Shire Lane) and verges. Where part of a hedge has been damaged or removed it should be replanted with a mix of indigenous species;
- support a strategy to limit built development within the area or the impact of development that may affect the area from outside;
- encourage the retention of the existing pattern of hedges and to create new features to further enhance landscape and ecological links between woodlands, using old field boundaries where possible. To include the promotion of hedgerows to provide more permanent boundaries within equestrian pasture;
- promote the appropriate management of woodland in order to conserve and where absent to re-establish a rich ground flora and the distinction between different management systems, such as high forest and coppice with standards. To encourage replanting coniferous plantations with indigenous mixed broadleaves;
- promote the control of pest species where they adversely affect the establishment of broadleaved woodland;
- promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats;
- encourage the recreation and management of former heath areas to the north east by the use of; turf stripping, controlled burning and traditional grazing;
- improve public access arrangements to woodlands with attention to car park design and safety;
- encourage the creation and maintenance of ponds;

- provide facilities to facilitate quiet recreational activities while not adversely affecting the character and quality of the local landscape;
- promote awareness and consideration of the setting of the AONB, and views to and from it, when considering development and land use change proposals on sites adjacent to the AONB.

Potential visual receptors

- 4.110 Residents along Cholesbury Road and Kiln Road.
- 4.111 Recreational users of the footpaths running through Roundhill Wood, including Tring Town 009/010, which are directly adjacent to the site.



²⁴ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.20 MLP CS020 Roundhill Wood Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	A flat to gently undulating upland plateau which slopes from north to south between 190 – 185m AOD. The site forms part of the wider dip slope of the Chilterns plateau.			
Land cover pattern and valued features				
	The site is predominantly ancient woodland (acidic oak and beech woodland) which extends north west beyond the boundary into High Scrubs and Shrubbs Wood. A small part of the eastern corner of the site is not defined as ancient woodland. The landscape to the north and south of the site is an open farmland punctuated by mixed woodland. Land use is both arable and pasture. To the east the tree cover extends to commercial plantations with areas of indigenous beech woodland, with the historic parkland of Champneys beyond, a 19 th century house set in a small formal park.			
Perceptual character				
	The site falls within the Chilterns AONB and the landscape of the site and in the vicinity has a tranquil rural quality. The settlement pattern in the local area is confined to individual farms and large houses except for the village of Wigginton with its ribbon development along Chesham Road. Brick earth has been extracted from within this area of woodland over many years, as evidenced by the numerous hollows. Recent use of the site for 4x4 trials has left wide tracks through the woodland which detracts from the sense of rurality.			
Openness /enclosure				
	Due to the extensive woodland and plateau character, the site is enclosed.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate-high landscape sensitivity to mineral extraction due to the unified rural character of the area and its position in the AONB. Mineral extraction is likely to degrade valued features, such as the ancient woodland contained within the site.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	The residents of the large houses and individual farms to the south of Cholesbury Road immediately south of the site will in most cases be screened by the deciduous woodland south of the road. Views from properties along or near to the boundary of the site, including Wood End Farm to the north of the Cholesbury Road, and Ambers Farm to the west, will have views to the site.			
Recreational receptors				
	There will be open views of the site from two footpaths that pass adjacent to the boundary (Tring Town 009/010), linking through to those in the wider area.			

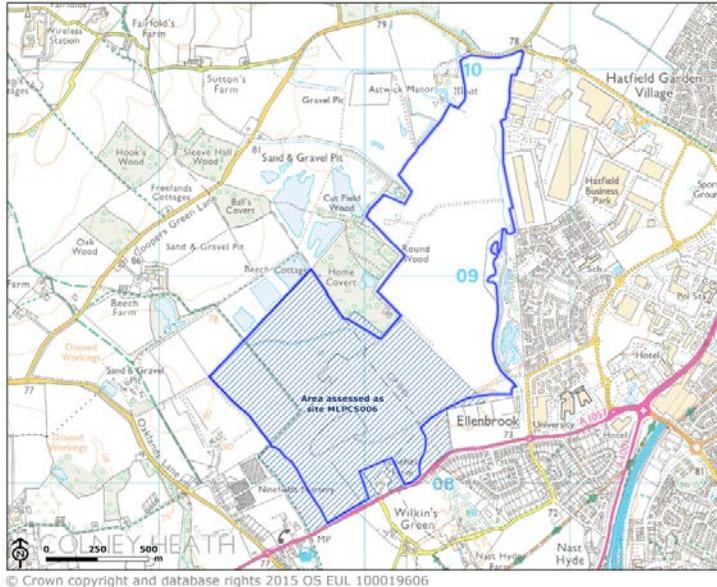
	There will potentially be views from the public footpath along the substantial Iron Age boundary earthwork of Grim's Dyke (Tring Town 013) which runs from west to east c.500m to the north of the site. Diversion would need to be considered by the HCC Access and Rights of Way Team.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a moderate visual sensitivity as mineral extraction will affect people using the network of local footpaths that pass adjacent to the site, and a limited number of residential properties on the site boundary which would have open views to the site. Impacts on residents could be mitigated by limiting the extent of the workings at any one time and retaining tree cover around the site boundary for the life of the extraction to prevent views into the site.				

Preferred Area 1

Site location and context

- 4.112 The Preferred Area is located in St Albans and Welwyn Hatfield Districts, between Hatfield and St Albans. The area is located west of Hatfield Business Park, extending to Coopers Green Lane in the north and the University of Hertfordshire in the south. Former sand and gravel workings are located to the west. The underlying bedrock is chalk with poorly sorted superficial deposits. The area forms part of Ellenbrook Fields, part of former Hatfield Aerodrome, a privately owned area made open to the public for recreational use. It comprises a series of permissive footpaths for use by walkers and cyclists, through an area of open grassland, some of which is grazed by cattle. The south western part of the area is assessed separately as site MLPCS006.

Figure A1 Location



Type of operation

- 4.113 Sand and gravel extraction.

Proximity to other sites

- 4.114 MLPCS006 is located in the south west of the area. MLPCS005 is situated 1km to the west and MLPCS008 and MLPCS009 are located directly to the north and north east respectively. The area is characterised by active and former areas of sand and gravel extraction along Coopers Green Lane.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA31 De Havilland Plain

Key Landscape Characteristics (LCA 31 De Havilland Plain) (listed as 'no longer representative'²⁵)

- an extensive level plain;
- large open arable landscape to the north on high quality agricultural land;
- disused Hatfield aerodrome with associated industrial and commercial development and aeronautical structures;
- parkland and horticultural landscape of Oaklands College;
- existing and restored mineral workings;
- urban-fringe development and glasshouses;
- incoherent and jumbled landscape, particularly to the south and centre.

²⁵ Where relevant sensitivity assessment relies on information from field surveys rather than written text in the individual LCAs

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*²⁶

- retain the characteristic large-scale openness to the north of the area (which is most unusual for the southern part of the county) but with a restored structure of hedges, ditches and woodland blocks;
- retain long views where possible to appreciate the flat landform;
- promote hedgerow restoration and creation throughout the area to provide visual and ecological links between existing and proposed woodlands. Pattern to follow historic field boundaries where possible. Hedges to include standard trees;
- promote the appropriate management of existing woodland in order to maintain a rich ground flora and the distinction between different management systems, such as high forest and coppice-with-standards;
- promote the planting of new small to medium woodlands, particularly on areas of restored mineral extraction to the centre and south;
- promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats;
- encourage the restoration of ditches and discourage the enclosure of existing open drainage systems;
- provide new uncropped or grass field margins to link areas of wildlife importance and/or existing and proposed rights of way;
- promote the creation of buffer strips along watercourses to prevent pesticide, herbicide and fertilizer run-off and provide habitat for wildlife; encourage their linkage to eco-corridors within the wider landscape;
- promote both the creation of new ponds and the retention/enhancement for wildlife of existing ponds;

- improve the poor existing network of rights of way over the area and develop opportunities for rights of way linkages alongside hedges, streams, water features, arable areas, airfield land and restored mineral workings;
- improve the treatment of screen bunding to the perimeter of and within mineral sites by more sympathetic profiles, heights and the use of green mulches. Provide advanced planting where appropriate to provide a permanent contribution to the landscape framework;
- focus attention to screen plant within minerals areas;
- develop appropriate management strategies to maintain and improve the mosaic of wildlife habitats areas, including wetland and semi-improved grassland, in association with former mineral extraction sites. Include the continued use of grazing and management by wildlife organisations.

Potential visual receptors

- 4.115 Receptors to the east of the site include people in the industrial site and the university, as well as residential receptors at properties in between.
- 4.116 Recreational users of the footpaths that cross the site. These footpaths are not Rights of Way, but form part of the Ellenbrook Fields site, privately owned but open to the public.
- 4.117 Recreational users of the University of Hertfordshire playing fields, adjacent to the western boundary of the site, will have filtered views to the site. However as their activities are less associated with an enjoyment of the landscape, these receptors will not be sensitive to change and so they have been excluded from the table below.

²⁶ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.21 Preferred Area 1 Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Generally flat across the area within an extensive level plain, between 75-80m AOD.			
Land cover pattern and valued features				
	Large scale open area with scrub vegetation and no evidence of former field pattern. Several areas, principally to the north west and centre of the site, are currently being allowed to naturally regenerate. An area within the northern part of the site is managed as a hay meadow, while some areas to the south are used to graze cattle. Ellen Brook runs along the eastern boundary of the area, with a number of associated ponds.			
Perceptual character				
	The character of the area is influenced by its former use as an aerodrome, its position on the urban edge of Hatfield to the east, and proximity to former sand and gravel works to the west. The busy A1057 is in near proximity to the south of the site. These modern human influences detract from the more rural elements of the area.			
Openness /enclosure				
	The area is flat and the presence of scrub vegetation helps to screen views across the area. There are some more open or filtered views into the area, for example from residential properties to the east (e.g. from Walker Grove), but ample opportunities exist for the creation of additional screening.			
Overall Landscape Character Sensitivity				
	Overall this area is considered to have a low landscape sensitivity to mineral extraction due to its former industrial use. The area is flat, largely screened and post operation restoration could improve the existing landscape character.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	There are a small number of open or filtered views from a number of properties close to the eastern boundary of the site, however these benefit from some separation by planting associated with Ellen Brook and there are opportunities to implement additional screening, aided by the flat contours of the site.			
Recreational receptors				
	A network of informal paths cross the Ellenbrook Fields site and are used by local residents for walking and cycling. These are permissive paths. There are no Rights of Way which cross the area.			
Key vantage points				

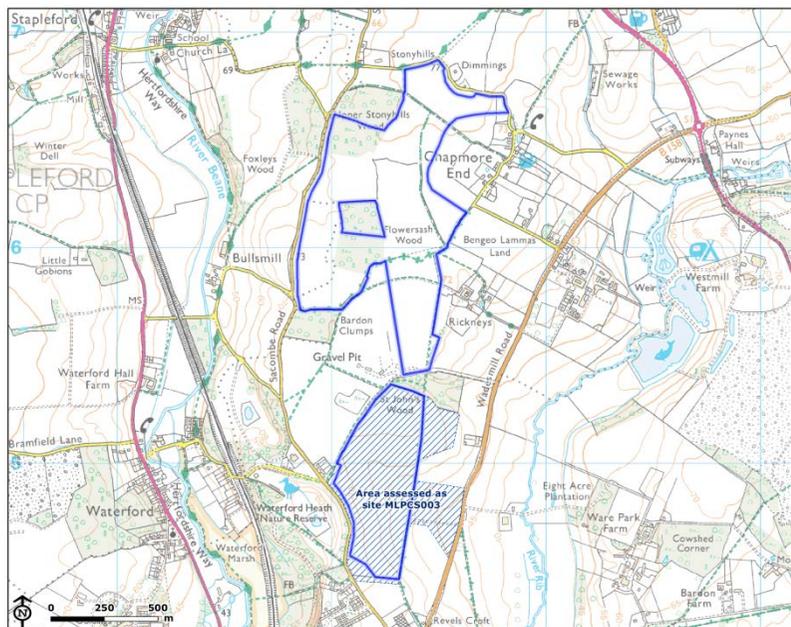
	There are no key vantage points in the vicinity of the area.				
Overall Visual Character Sensitivity					
	Overall the area will have a low-moderate visual sensitivity due to the boundary vegetation which largely screens views from the small number of residential properties in the vicinity of the site. There are a small number of locations with more open or filtered views of the area, however impacts can be fully mitigated by additional screening without an adverse impact on visual amenity.				

Preferred Area 2

Site location and context

- 4.118 The Preferred Area is located in East Hertfordshire District, north of Hertford, and around 1km south east of the village of Stapleford. The small hamlet of Chapmore End is located c. 200m to the east. The area is bounded by Sacombe Road to the east and Stonyhills Road to the north. There are a number of small woodlands both within and adjacent to the area, including Upper Stonyhills Wood, Flowerash Wood, Bardon Clumps and St John's Wood, all of which are areas of Ancient Woodland. The underlying bedrock is chalk, overlain with sand and gravel superficial deposits. PA2 has been assessed in its entirety, but the southern part of the area is also assessed separately as site MLPCS003.

Figure A2 Location



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Type of operation

- 4.119 Sand and gravel extraction.

Proximity to other sites

- 4.120 Site MLPCS003 is assessed separately as it makes up the southern portion of PA2 and includes two small additional areas to the east which are outside PA2. There is an existing gravel pit adjacent to the south west of the area at Rickneys Quarry.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA69 Stoneyhills

Key Landscape Characteristics (LCA 69 Stoneyhills)

- gently undulating open arable farmland with woodland;
- small to medium scale;
- few settlements; a few isolated farms;
- regular blocks of woodland of different ages;
- active, disused and restored mineral extraction sites, with mix of field sizes and variety of restoration uses;
- sunken lanes with steep sides, often very narrow and gently sinuous;
- usually treed rather than hedged, or with fragmented hedges and occasional mature hedgerow oak;
- very light soils.

Key Sensitivities, forces for change and guidance within the Hertfordshire LCA ²⁷

- Encourage landowners to safeguard existing hedges, increase hedged field boundaries, create permanent grass strips around field margins and prevent spray drift, using financial incentives as available.
- Encourage the replanting and/or improvement of hedges along historic field boundaries, within arable areas rather than along roadsides, where open verges would reinforce the distinctiveness of this area.
- Support the establishment of new woodlands, especially around existing woodlands where this would create additional habitat and protection. Ensure that new woodland would not damage historic features such as banks and ditches, but use ancient field and woodland boundaries as appropriate
- New woodland planting should be of locally indigenous species only, using seed/plants of local provenance if possible.
- Promote the appropriate management of woodland, whether high forest, coppice, or coppice-with-standards, ensuring that a wide age-range is established, together with a species-rich ground flora.
- Support the establishment of deer management groups.
- Encourage the reversal of habitat fragmentation and the creation and improvement of habitat links to create eco-corridors.
- Ensure that the restoration of exhausted minerals sites is carried out in accordance with agreed restoration plans, amended where necessary to reflect current best practice in maximising nature conservation potential and to ensure that they reflect and enhance local landscape character and distinctiveness.

Potential visual receptors

- 4.121 Residents of Chapmore End and Crouchfields to the east of the site, as well as the farmhouse at Rickneys. Properties to the north of the site at Stonyhills and Dimmings.
- 4.122 Recreational users of footpaths and bridleways crossing and running adjacent to the area, including Bengeo Rural 002/008/009/011/012/014/022. The Hertfordshire Way long distance footpath passes directly to the north of the area.

²⁷ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Table A1.22 Preferred Area 2 Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Flat to gently undulating landform, between around 55-77m AOD, rising slightly to the north.			
Land cover pattern and valued features				
	A mixed scale of arable fields, as well as some grazing, delineated by intact hedgerows. The area includes parts of two mixed woodlands, Upper Stonyhills Wood to the north west, and Flowerash Wood at the centre, both of which are Ancient Woodland. The area is located within a wider area of large scale arable farmland with woodland, disturbed in places by mineral extraction.			
Perceptual character				
	The area lies in a rural landscape with a unified character, traversed by narrow hedged lanes with occasional hedgerow trees. The tranquillity is disturbed by the traffic on the Wadesmill Road and other roads running north from Hertford and Ware. The restored Brazier landfill, former Ware Quarry, south of Westmill Road and west of the A602, is noticeable on the skyline to the east.			
Openness /enclosure				
	The area is enclosed by woodland or tall hedgerows along the majority of its boundaries, and between each field parcel.. These screening features combined with the flat topography of the area mean it has a high level of visual containment, with the potential for further mitigation screening as required. Vegetation along Wadesmill Road provides some screening along this boundary but there are open views over the wider river valley to the east.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate sensitivity. Although landscape is gently undulating and the site is largely enclosed, the openness to the east could result in an adverse impact on the unified rural character of the wider river valley. Additionally, mineral workings could result in the loss of valuable landscape features including hedgerows and areas of Ancient Woodland. Impacts could only be partially mitigated by further screening and extraction operations set back from the ancient woodland.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Views of the area from properties to the north (Stonyhills and Dimmings), and east (Chapmore End and Crouchfields) are generally well screened by hedgerows and tree groups, however there are likely to be a number of properties from where views are available from upper storeys. There are opportunities to implement additional screening which could mitigate this potential impact.			
Recreational receptors				
	Several Rights of Way cross and run adjacent to this area. Users of the footpath have some open views of the area diversion of the footpaths would need to be considered by the HCC Access and Rights of Way Team. Hedgerows and woodland offer some screening, and additional screening could potentially be implemented to mitigate visual impacts on recreational receptors.			

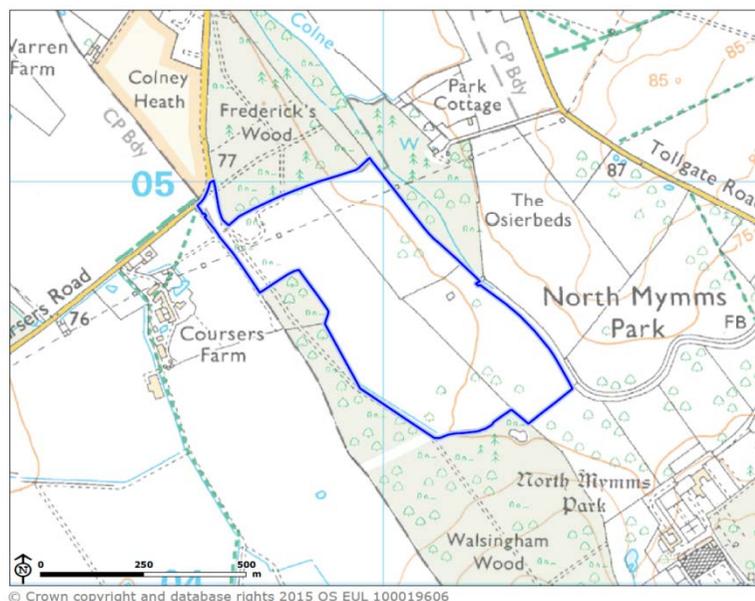
Key vantage points					
	There are no key vantage points in the vicinity of the site. Waterford Heath Nature Reserve is screened by woodland.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate sensitivity due to the fact that view from properties and Rights of Way tend to be screened by hedgerows, tree groups and woodland, and could be mitigated through further planting.				

MLPCS021 Land adjacent to Coursers Farm (North Mymms West)

Site location and context

4.123 The site is located in Welwyn Hatfield District, south west of Hatfield, and around 0.5km south of the village of Colney Heath. The area comprises arable farmland and woodland located within the shallow valley of the River Colne, which runs east of the site boundary. It is bounded by woodland to the north and east and estate farmland, parkland and woodlands associated with North Mymms Park. The underlying bedrock is chalk, overlain with sand and gravel superficial deposits. The northern and eastern edges of the site are also assessed as part of site MLPCS022 (as potential access to MLPCS022).

Figure A1.21 Location



Type of operation

4.124 Sand and gravel extraction.

Proximity to other sites

4.125 Site MLPCS022 is located to the east and MLPCS023 to the west. The site is not located within 250m of any existing mineral sites.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA69 North Mymms Park and Redwell Woods

Key Landscape Characteristics (LCA 28 North Mymms Park and Redwell Woods)

- pastoral parkland with mature trees;
- extensive woodland cover at Redwell Wood complex;
- Elizabethan house set in ornamental grounds;
- estate farmland associated with Home Farm;
- sunken lanes with steep sides, often very narrow and gently sinuous;

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*²⁸

- Prepare and implement a conservation and restoration plan for the historic parkland. Scheme to fully address landscape, historic and ecological issues
- Restore historically appropriate and high-quality boundaries to parkland, e.g. metal estate railings
- Promote recording and management of veteran trees for biodiversity value and visual amenity
- Encourage new planting to maintain structural and age diversity of the parkland trees. Landscape improvements should respect the historic context of existing features and the form and character of the parkland and gardens. Ornamental species should only be used to replace damaged or over-mature specimens, where appropriate
- Within parklands, encourage the reversion from arable to pasture
- Restrict ploughing of grasslands within parklands
- Encourage landowners to retain and increase ponds and wetland areas to enhance their visual and wildlife functions
- Encourage appropriate management measures to benefit the upper reaches of the Colne
- Promote hedgerow restoration and creation throughout the arable areas to provide visual and ecological links between existing and proposed woodland and parkland areas. Pattern to follow historic field boundaries where possible
- Promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats
- Support the Watling Chase Community Forest in the realisation of its objectives for the area
- Promote appropriate woodland management for existing woodlands, including the replacement of softwoods with indigenous native deciduous communities and hedgebank management
- Ensure that a wooded skyline is preserved
- Promote the appropriate management of coppice woodland in order to re-establish a rich ground flora and the distinction between different management systems, such as high forest, coppice, coppice-with-standards and wood pasture
- Promote the expansion of woodland beyond ancient woodland boundaries, especially where this will help in creating habitat links and will not disturb historic features or valuable wildlife habitats
- Establish realistic and attractive countryside management schemes for sites with heathland and acid grassland communities
- Review public access arrangements to woodlands and parkland including low-key but enhanced car parks
- Maintain local patterns of species diversity within woodlands
- Promote the continued use of stock grazing as the preferred management for the parkland

²⁸ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

- Promote crop diversification and the retention/restoration of mixed livestock/arable farming
- Ensure a strong presumption against development within or adjacent to the area and in particular that which could lower the water table within river valleys and affect wetland habitats
- Establish tree-planting measures to minimise the impact of the M25 and A1(M)

Potential visual receptors

- 4.126 Residents of cottages along Coursers Road and those working at Coursers Farm to the west of the site.
- 4.127 Recreational users of the footpath running through North Mymms Park 480m to the east of the area (North Mymms 029).



Table A1.23 MLPCS0021 Land adjacent to Coursers Farm (North Mymms West) Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Flat to gently undulating landform of shallow valley side of the upper River Colne, around 75m AOD.			
Land cover pattern and valued features				
	Medium scale arable field, delineated by wire fencing and some fragmented hedgerows. The area includes mixed woodland and scrub to the north east of the site and some mature in-field trees. A large area of ancient woodland (Cobs Ash and Cangsley Grove) which extends south to ancient woodland at Redwell Woods, is located immediately adjacent to the southern boundary. The area is located within a wider area of mature deciduous woodland, arable farmland and open grazed parkland associated with North Mymms Park.			
Perceptual character				
	The area lies within a parkland landscape with a unified character, traversed only by farm tracks. The woodlands and mature trees are a prominent feature. The rural tranquillity is disturbed by distant traffic noise from the A1 (M) and the M25. The overhead electricity line which traverses the site on a pylon is a detracting feature.			
Openness /enclosure				
	The area is enclosed by woodland along the majority of its boundaries and these screening features combined with the relatively flat topography of the area mean it has a high level of visual containment, with the potential for further mitigation screening as required. However, the area is more open on its eastern boundary resulting in visual connection across the valley towards Tollgate Road and the PRoW (North Mymms 029) which runs south east from the road across the North Mymms parkland.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate sensitivity to mineral extraction. Although landscape is gently undulating and the site is relatively enclosed, the openness to the east could result in an adverse impact on the unified parkland character of the wider valley. Additionally, mineral workings could result in the loss of valuable landscape features including mature trees. Impacts could be partially mitigated by further screening.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Views of the area from properties to the west along Coursers Road and at Park Cottage to the east are well screened by woodland.			
Recreational receptors				
	PRoW (North Mymms 029) runs south east from Tollage Road across North Mymms Park adjacent to this area. The existing woodland offers some screening, although users of the footpath will have partial views of the area. Additional screening could potentially be			

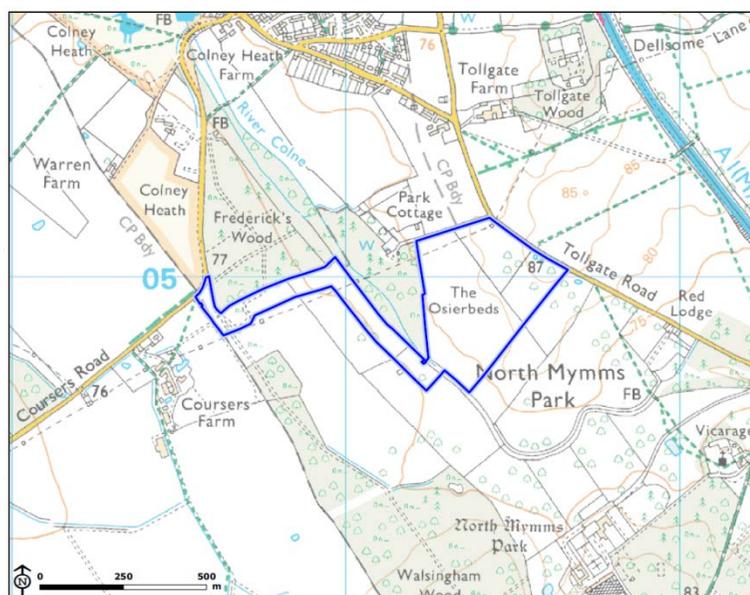
	implemented to mitigate visual impacts on these recreational receptors.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate sensitivity due to the fact that view from properties and Rights of Way tend to be screened by woodland, or could be mitigated through further planting.				

MLPCS022 Land adjacent to Coursers Farm (North Mymms East)

Site location and context

4.128 The site is located in Welwyn Hatfield District, south west of Hatfield, and around 0.5km south of the village of Colney Heath. It comprises arable farmland and parkland and scattered parkland trees within the shallow valley of the River Colne. It is bounded to the north-east by Tollgate Road and to the south by estate farmland, parkland and woodlands associated with North Mymms Park. The underlying bedrock is chalk, overlain with sand and gravel superficial deposits. The strip of land to the west (providing access to the site) is also assessed separately as site MLPCS021.

Figure A1.22 Location



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Type of operation

4.129 Sand and gravel extraction.

Proximity to other sites

4.130 Site MLPCS021 and MLPCS023 are located to the south-west and west. The site is not located within 250m of any existing mineral sites.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA69 North Mymms Park and Redwell Woods

Key Landscape Characteristics (LCA 28 North Mymms Park and Redwell Woods)

- pastoral parkland with mature trees;
- extensive woodland cover at Redwell Wood complex;
- Elizabethan house set in ornamental grounds;
- estate farmland associated with Home Farm;
- sunken lanes with steep sides, often very narrow and gently sinuous;

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*²⁹

- Prepare and implement a conservation and restoration plan for the historic parkland. Scheme to fully address landscape, historic and ecological issues
- Restore historically appropriate and high-quality boundaries to parkland, e.g. metal estate railings
- Promote recording and management of veteran trees for biodiversity value and visual amenity
- Encourage new planting to maintain structural and age diversity of the parkland trees. Landscape improvements should respect the historic context of existing features and the form and character of the parkland and gardens. Ornamental species should only be used to replace damaged or over-mature specimens, where appropriate
- Within parklands, encourage the reversion from arable to pasture
- Restrict ploughing of grasslands within parklands
- Encourage landowners to retain and increase ponds and wetland areas to enhance their visual and wildlife functions
- Encourage appropriate management measures to benefit the upper reaches of the Colne
- Promote hedgerow restoration and creation throughout the arable areas to provide visual and ecological links between existing and proposed woodland and parkland areas. Pattern to follow historic field boundaries where possible
- Promote the creation of buffer zones between intensive arable production and important semi-natural habitats and the creation of links between semi-natural habitats
- Support the Watling Chase Community Forest in the realisation of its objectives for the area
- Promote appropriate woodland management for existing woodlands, including the replacement of softwoods with indigenous native deciduous communities and hedgebank management
- Ensure that a wooded skyline is preserved
- Promote the appropriate management of coppice woodland in order to re-establish a rich ground flora and the distinction between different management systems, such as high forest, coppice, coppice-with-standards and wood pasture
- Promote the expansion of woodland beyond ancient woodland boundaries, especially where this will help in creating habitat links and will not disturb historic features or valuable wildlife habitats
- Establish realistic and attractive countryside management schemes for sites with heathland and acid grassland communities
- Review public access arrangements to woodlands and parkland including low-key but enhanced car parks
- Maintain local patterns of species diversity within woodlands
- Promote the continued use of stock grazing as the preferred management for the parkland
- Promote crop diversification and the retention/restoration of mixed livestock/arable farming
- Ensure a strong presumption against development within or adjacent to the area and in particular that which could lower the water table within river valleys and affect wetland habitats
- Establish tree-planting measures to minimise the impact of the M25 and A1(M)

²⁹ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Potential visual receptors

- 4.131 Residents of Park Cottage, off Tollgate Road, north of the site. Residents and recreational users of Grade 1 listed Elizabethan manor house at North Mymms Park.
- 4.132 Recreational users of footpaths running through North Mymms Park adjacent to the area, including North Mymms 029, 100m south of the site.



Table A1.24 MLPCS0022 Land adjacent to Coursers Farm (North Mymms East) Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	Gently undulating landform of shallow valley side of the upper River Colne, rising from c.75m to 87m AOD.			
Land cover pattern and valued features				
	Medium scale arable and parkland with frequent mature in-field trees and copses, delineated by a mix of estate fencing and post and wire fencing. The area is located within a wider area of open grazed parkland, mature woodland, and arable farmland associated with North Tymms Park.			
Perceptual character				
	The area lies within a tranquil parkland landscape with a unified character, and forms part of the wider setting to North Mymms Park. The scattered mature trees within the area and along the boundary are prominent features. The area is bounded by the rural Tollgate Road and farm tracks and its rural tranquillity is only disturbed by distant traffic noise from the A1 (M) and the M25. The overhead electricity line which traverses the site on pylons is a detracting feature.			
Openness /enclosure				
	The area is enclosed by woodland along the River Colne to the north and west, however, generally this is an open parkland landscape.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a moderate high sensitivity. The openness of the site could result in an adverse impact on the parkland character of the site and the wider unified parkland character of North Mymms Park. Additionally, mineral workings could result in the loss of valuable landscape features including mature trees.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Residents of Park Cottage to the north and residents or recreational users of the Grade 1 listed Elizabethan manor house at North Mymms Park.			
Recreational receptors				
	PRoW (North Mymms 029) runs south east from Tollage Toad across North Mymms Park 100m to the south of the site. Users of the footpath will have some open views of the site. Additional screening could potentially be implemented to mitigate visual impacts on these recreational receptors.			

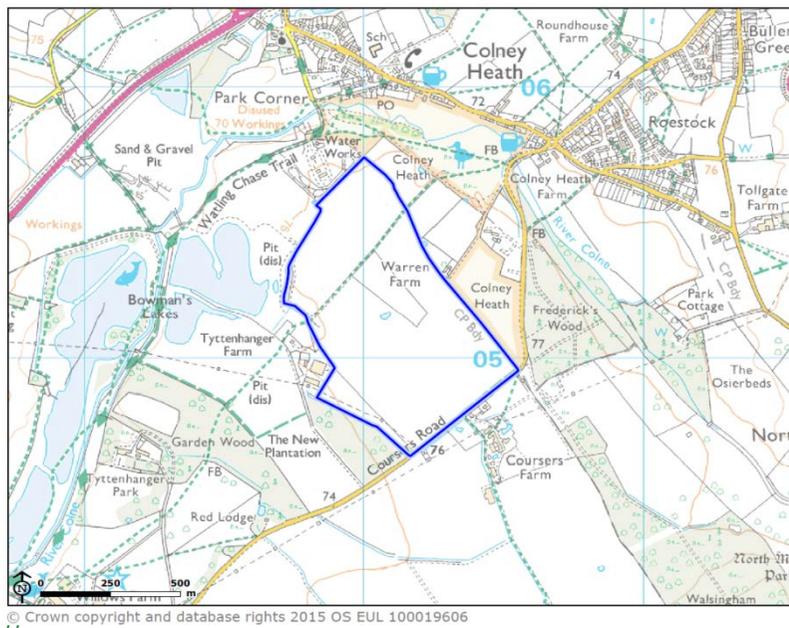
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a moderate-high sensitivity due to the open view from adjacent properties and the local Rights of Way.				

MLPCS023 Warren Farm

Site location and context

- 4.133 The site is located in Hertsmere District, south west of Hatfield, and around 0.2km south of the village of Colney Heath. The site comprises a large arable field and is bounded by Coursers Road to the south. Tyttenhanger Farm is located to the west along with the active and restored mineral workings along the River Colne associated with Tyttenhanger Quarry. The underlying bedrock is chalk, overlain with sand and gravel superficial deposits.

Figure A1.25 Location



- 4.134 Sand and gravel extraction.

Proximity to other sites

- 4.135 Site MLPCS021 and MLPCS023 are located to the east. The site is not located within 250m of any existing mineral sites.

Landscape character

Landscape Character Assessment	Relevant Area/types
National Character Area	NCA 111 Northern Thames Basin
Hertfordshire LCA	LCA19 Vale of St Albans

Key Landscape Characteristics (LCA 28 North Mymms Park and Redwell Woods)

- broad shallow basin varying by only 10m;
- extensive views along the Vale and up to Shenley Ridge;
- a predominantly arable landscape with few small or medium copses and some grazing on restored land;
- areas of woodland and parkland to north east in association with Tyttenhanger Park;
- active and restored mineral extraction sites along the course of the Colne and at Radlett aerodrome. Mix of wetland restoration and landfill sites;
- institutional parkland landscapes associated with redundant Victorian psychiatric hospitals at Napbury and Harperbury;
- M25 corridor, overhead pylons and associated urban fringe development;
- new planting associated with the road corridor and adjacent land uses.

*Key Sensitivities, forces for change and guidance within the Hertfordshire LCA*³⁰

- Support Watling Chase Community Forest in the realisation of its objectives for the area
- Promote the creation of extensive areas of new large scale woodlands to reflect the scale of the area, particularly in the open arable areas and mineral sites away from the river corridor
- Woodlands should cater for public access, conservation and economic productivity
- Woodland planting should provide screening for motorways, roads and intrusive built development at London Colney and Colney Street
- Provide ecological and visual linkage via a substantial network of hedges between woodlands and hedgerow trees. Include links to adjacent areas at North Mymms Park and Redwell Woods
- Encourage the development of a network of small woods ,copses and hedges on the lower slopes of the Shenley Ridge
- Ensure that all existing and future mineral and aggregate related operations in the Vale cause minimum visual impact through the careful use of earthworks and planting. Restoration proposals should look for opportunities to maximise biodiversity potential and enhance public access
- Give priority to the continued management and upgrading of restored mineral sites, including improved earthworks profiles, removal of over-mature trees and the introduction of new planting schemes
- Ensure that the mature 'institutional parkland landscapes' are retained in redevelopment proposals and that public access is encouraged
- Promote the restoration of the wooded farmland and parkland setting of Tyttenhanger Park and the creative incorporation of the restored wetlands for recreation and wildlife
- Promote the management of semi-natural woodlands, e.g. Coppice Wood and Garden Wood
- Maintain framed views to attractive natural and built features, including Shenley Ridge, Napsbury water tower and All Saints pastoral centre chapel
- Develop the network of rights of way within the area and improve accessibility from local settlements and over major obstacles, e.g. Motorways and railways
- Ensure that any new built development is visually integrated into the landscape with minimal impact
- Encourage the promotion of the existing and new tourist and recreational facilities
- Encourage the creation of acidic grassland habitats along the Colne corridor
- Encourage the development of wetland habitats along the River Colne
- Encourage the retention and management of areas of rare arable weed banks including the cornflower
- Protect important wildlife habitats

³⁰ *Hertfordshire Landscape Character Assessment* (2005) The key sensitivities listed here are selected for their relevance to the site

Potential visual receptors

- 4.136 Residents of properties at Tyttenhanger Farm, Warren Farm and Coursers Farm adjoining the site boundary.
- 4.137 Recreational users of PRow (Ridge 004) running west to east from Colney Heath to Tyttenhanger Farm and users of the Watling Chase Timberland Trail adjacent to the area c.300m to the north.



Table A1.25 MLPCS0023 Warren Farm Landscape and visual sensitivity to mineral extraction

LOWER SENSITIVITY < ----- > HIGHER SENSITIVITY				
LANDSCAPE CHARACTER CRITERIA				
Landform				
	A level site within the generally flat and broad vale of the upper River Colne, which meanders around the northern end of the site, within 200m of the site boundary.			
Land cover pattern and valued features				
	Large scale open arable field delineated by post and wire fencing. Mature boundary oak trees are a prominent feature located along the site boundary. The site is located within a wider area of large scale arable farmland disturbed by mineral extraction. There is a locally protected area of lowland heathland and grassland (LNR Colney Heath Common) between the site and the village of Colney Heath.			
Perceptual character				
	This area of arable farmland is bounded by Coursers Road to the south and its rural tranquillity is disturbed by traffic along the road and the distant traffic noise from the A1 (M) and the M25. The overhead electricity line which traverses the site on pylons is a detracting feature. Machinery associated with active mineral sites along the River Colne around Tyttenhanger Park is visible on the skyline to the north west.			
Openness /enclosure				
	The area is open with extensive views from within the site to the south across the flat arable farmland south of Coursers Road and up to the wooded Shenley Ridge. However, woodland copses associated with Tyttenhanger Park beyond the site boundary to the south west and mature boundary trees enclose the site to the west and a shelter belt around the Water Works to the north and the flat topography offers opportunities for screening without changing landscape character.			
Overall Landscape Character Sensitivity				
	Overall this site is considered to have a low-moderate sensitivity. The openness of the landscape to the south could result in an adverse impact on character of the wider area. However, due to its flat topography impacts could be effectively mitigated by roadside screening along Coursers Road and boundary tree belts. Impacts on valuable landscape features including mature boundary trees can also be mitigated through tree protection measures.			
VISUAL AMENITY CRITERIA				
Residential receptors				
	Views of the area from residential properties at Tyttenhanger Farm, Warren Farm and Coursers Farm adjoining the site boundary are screened by existing farm buildings. Views from cottages south off Coursers Road are filtered by roadside vegetation.			
Recreational receptors				
	PRoW (Ridge 004) runs west to east from Colney Heath to Tyttenhanger Farm. Watling Chase Timberland Trail is located c.300m north of the site and there are partial views across the site from this long distance footpath. Users of the footpath have open views of			

	the site and diversion of the footpath would need to be considered by the HCC Access and Rights of Way Team. Due to the flat landform, additional screening could potentially be implemented to mitigate visual impacts on recreational receptors using the Watling Chase Trail.				
Key vantage points					
	There are no key vantage points in the vicinity of the site.				
Overall Visual Character Sensitivity					
	Overall this site is considered to have a low-moderate sensitivity due to the screened views from properties and the potential for visual mitigation of the impacts on the users of the local Rights of Way.				

MLPCS001RS Land at Cromer Hyde Farm

Site **MLPCS001** has been resubmitted following agreements between the local mineral operator (Cemex) and landowner (Gascoyne Cecil Estates) to convey extracted material to the existing Cemex processing machinery at Hatfield Quarr. The area of extraction now using the code **MLPCS0001RS** has not changed and the findings of the original landscape assessment for MLPCS001 of 'moderate high' sensitivity apply.

Appendix 2 References

Hertfordshire County Council (2005) *Hertfordshire Landscape Character Assessment*

Hertfordshire County Council (2006) *The Historic Landscape Characterisation County Report for Hertfordshire*

Landscape Institute and Institute for Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment (Third Edition)*

Natural England (2014) *An Approach to Landscape Character Assessment*

Scottish Natural Heritage and the former Countryside Agency (2002) *Landscape Character Assessment Guidance for England and Scotland Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity*

The Chilterns Conservation Board (2014) *Chilterns AONB Management Plan 2014-2019: A Framework for Action*