



Mineral Resource Assessment – Stage 1

Land south of Henham Road, Elsenham

Bishop's Stortford, Essex

CM22 6DN

Countryside Partnerships Plc

2094 R01: Issue 1

March 2022



Title Mineral Resource Assessment – Stage 1, Land south of Henham Road, Elsenham, Bishop’s Stortford, Essex CM22 6DN

Prepared for Countryside Partnerships Plc
Countryside House
The Drive
Great Warley
Brentwood
CM13 3AT

Confidentiality, copyright and reproduction Commercially Confidential

This document has been prepared by Green Earth Management Company Ltd in connection with a contract to supply goods and/or services and is submitted only on the basis of strict confidentiality. The contents must not be disclosed to third parties other than in accordance with the terms of the contract.

File reference 2094

Report number R01: Issue 1

Date 5th April 2022

Prepared by Green Earth Management Company Limited
Suite 3, Broomfield Park
Coggeshall Road
Earls Colne
Essex CO6 2JX

	Name	Signature	Date
Author:	A. Laurie		5 th April 2022
Reviewed by:	D. Robson		5 th April 2022
Authorised by:	D. Robson		5 th April 2022

CONTENTS

CONTENTS	1
FIGURES AND APPENDICES	1
1 INTRODUCTION	1
1.1. Project Details.....	1
1.2. Proposed Development.....	1
1.3. Objectives and Scope of Work.....	1
1.4. Methodology	1
1.5. Terms of Reference	2
1.6. Report Limitations and Conditions.....	2
2 SITE DETAILS	3
2.1. Site Setting.....	3
2.1.1. Site Location.....	3
2.1.2. Site Description.....	3
2.1.3. Surrounding Area	3
2.2. Geological Setting.....	3
2.2.1. Published Geology, Hydrology and Hydrogeology	3
2.2.2. Hydrogeological Setting	4
2.2.3. Hydrological Setting	4
2.2.4. Previous Investigation and Ground Conditions	4
3 MINERAL RESOURCE ASSESSMENT	6
3.1. Introduction.....	6
3.2. Planning Framework.....	6
3.3. Local Authority Consultation	7
3.4. Nature of the Mineral Resource.....	7
3.5. Constraints on Practicality of Mineral Extraction.....	8
3.6. Potential Opportunities for Mineral Extraction.....	9
4 CONCLUSIONS AND RECOMMENDATIONS	10
4.1. Conclusions.....	10
4.2. Recommendations.....	10
5 REFERENCES	11

FIGURES AND APPENDICES

Contents	
Figure 1	Site Location Plan
Figure 2	Proposed Development Layout Plan
Appendix 1	Report Conditions
Appendix 2	Historic Borehole Records
Appendix 3	Local Authority Correspondence

1 INTRODUCTION

1.1. Project Details

Green Earth Management Company Limited (GEMCO) was commissioned by Countryside Partnerships Plc. (the Client) to provide a Mineral Resource Assessment – Stage 1 for a site at Land south of Henham Road, Elsenham, Essex, CM22 6DN. A site location plan is presented as Figure 1.

The Mineral Resource Assessment (MRA) was commissioned in support of the Clients development proposal to redevelop the land to residential end use; specifically, to address the requirement for a MRA in the Essex Minerals Local Plan.

Information provided by the Client which has been reviewed during production of this report comprises:

- DAPA, Illustrative Layout Plan, ref. 1669, dated 23 03.2022;
- Countryside Properties Plc., Topographical Survey - Henham Road, Elsenham, Uttlesford, ref. SURV2956, dated 08 March 2021; and
- Wardrop Minerals Management Limited, Mineral Resource Assessment, East of Elsenham, dated December 2017 (for a site some 200 m to the north of Henham Road).

1.2. Proposed Development

It is understood that the proposed development is for residential use comprising approximately 100 residential dwellings with private gardens, areas of open space, landscaping and associated infrastructure, roads and parking in line with current policy.

The proposed development layout is shown in Figure 2.

1.3. Objectives and Scope of Work

The objectives of this Mineral Resource Assessment are to investigate the potential for mineral resources beneath the Site that may be of interest for mining and exploitation.

The scope of work for the MRA has included the following:

- Review existing investigation data for nearby Site;
- Review and provision of geological data, memoirs, borehole records etc.;
- Reporting, provision of a Stage 1 Mineral Resource Assessment report for use by the Client; and
- Provide recommendations for further works if necessary.

All works were undertaken in accordance with current UK environmental legislation and guidance as outlined in Section 1.4. The terms of the agreed scope of work are outlined in Section 1.5.

1.4. Methodology

The methodology of assessment applied in the production of this report is in accordance with the current industry standards and supplementary guidance as appropriate outlined in British Standard (BS) Code of

Practice for Ground Investigations BS5930:2015+A1:2020 (R.2), British Standard Code of Practice for Investigation of Potentially Contaminated Sites BS10175:2011+A2:2017 (R.3), the minerals guidance on the government web-site (R.4) and Pan-European Standard for Reporting of Exploration Results, Mineral Resources and Reserves (PERC) Standard (R.5).

For the purposes of this report the word 'contamination' relates to the statutory definition of contaminated land under the Environmental Protection Act 1990 (R.6), unless otherwise stated.

A list of references used in the production of this report are presented in Section 5.

1.5. Terms of Reference

This report (herein referred to as the "Report"), has been prepared for Countryside Partnership Ltd (herein referred to as the "Client"), for the purposes agreed and in general accordance with the terms and conditions set out in proposal email from Gemco to Carl Glossop Planning Manager, dated 28 March 2022 at 14.25 hrs.

1.6. Report Limitations and Conditions

For the work, reliance has been placed on publicly and privately available data from the sources identified; the sources are not exhaustive, and further information relevant to the Site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.

In addition to the above, GEMCO note that when investigating or developing land, it is important to recognise that sub-surface conditions may vary spatially and over time. Therefore, GEMCO cannot guarantee that conditions other than those discussed in the report do not occur elsewhere on the Site.

New information, revised practices, or changes in legislation may necessitate the re-interpretation of the report, completely or in part.

Further detail regarding report conditions is included as Appendix 1.

2 SITE DETAILS

2.1. Site Setting

2.1.1. Site Location

The Site is located to the south of Henham Road in Elsenham, near Bishop's Stortford, Essex.

The Site was a roughly rectangular shaped parcel of grassed/grazing land, centred on British National Grid (BNG) reference 553967, 226308, to the south of Henham Road, Elsenham CM22 6DN. The Site location is presented as Figure 1.

2.1.2. Site Description

The Site has not been visited as part of this study, however available mapping and photography shows it to comprise one large grazing field bordered by fences, hedges and trees. The Stansted Brook runs along the sites south-eastern boundary. A public footpath is shown to cross the Site. A ditch is present bisecting the southern portion of the site, and proposed to be retained as shown in the Proposed Development Layout (Figure 2).

2.1.3. Surrounding Area

The Site is bounded by Hall Road to the west, Henham Road, the B1051 to the north, the Grade II Listed Elsenham Place house with farmyard, gardens and paddocks to the east and the Stansted Brook vegetated area to the southeast.

The Site as a whole comprised an area of approximately 5.3 hectares (Ha).

2.2. Geological Setting

The information in the following sections has been summarised from a review of online resources and relevant material presented in previous reports.

2.2.1. Published Geology, Hydrology and Hydrogeology

British Geological Survey (BGS) online records shows that the Site is underlain by superficial deposits of Kesgrave Catchment Subgroup sand and gravels in the north of the Site, and Head Deposits of clay, silt, sand and gravel in the southern portion of the Site. The Head Deposits are anticipated to extend beneath the Kesgrave deposits.

The Bedrock at the Site is shown on mapping to be Thanet Formation and Lambeth Group (Undifferentiated) – clay, silt and sand.

Available BGS borehole records show sand and gravel overlying London Clay some 50 m to the north of the site, in a garden of a property on the northern side of Henham Road, borehole ref. TL52NW94. The sand encountered extended from beneath a thin 0.9 m thick layer of topsoil to some 6.7 m depth, and the gravel from this depth to 7.2 m bgl. London Clay bedrock was found beneath this to the full depth of exploration, 8.0 m bgl. Water was struck at 2.7 m bgl.

A second BGS borehole record located at the Old Vicarage some 70 m to the southwest of the Site, beyond Hall Road, encountered Made Ground overlying sand which extended to approx. 6.7 m, which was in turn underlain by clays to 14 m bgl. Underlying the clays were coloured sands and clays thought to be the Lambeth Group, and Chalk bedrock was encountered from approx. 20 m bgl to 33 m bgl, which was the full depth of exploration.

2.2.2. Hydrogeological Setting

The superficial deposits are classified as Secondary Aquifers, specifically the Kesgrave Subgroup as Secondary (undifferentiated) and the Head Deposits as Secondary (A).

The bedrock is classified as a Secondary A Aquifer.

The Site does not lie within an EA groundwater Source Protection Zone.

2.2.3. Hydrological Setting

The Environment Agency online flood mapping identifies that the Site lies within Flood Zone 1. Land and property in flood zone 1 have a low probability of flooding.

The closest surface water feature to the Site is the Stansted Brook which is shown on mapping to run along the south eastern Site boundary.

2.2.4. Previous Investigation and Ground Conditions

Previous intrusive investigation and mineral resource assessment at the nearby Site located some 200 m to the north comprising a programme of trial pitting, infiltration testing and laboratory analysis found that:

- *Trial pits were excavated for ground investigation purposes and some were subsequently replicated for conducting water infiltration tests as part of the drainage design for the site.*
- *The superficial geology includes 3 sequences of material including 2 non-mineral materials and the sand body, with a variable distribution that shows significant changes over relatively small distances in the order of 100 to 200 metres. Underlying bedrock is London Clay;*
- *The only possible mineral identified by the trial pit investigations was in the northwestern part of the proposal site. The northeast corner of the site shows thick overburden of Boulder Clay, whilst the southern roughly half of the site shows 3 metres or more thickness of sand but it is of notably poor quality;*
- *The former sand working to the east of the proposal site is shallow and has an irregular northwestern edge rather than a defined boundary. This is indicative of an excavation process that 'chased' the workable sand until it ran out or deteriorated in quality and the progress of the excavation simply stopped; and*
- *Taken together, the physical investigation data, the laboratory analyses and the evidence of former sand industry preferences makes it quite clear that this proposed housing site does not contain any workable building or concreting sand.*

It should be noted that London Clay bedrock is not anticipated at our Site, although it was encountered at the Site some 200 m to the north. Geological mapping has been reviewed and it is anticipated that this

stratum is absent due to proximity of the Site to the London Basin north-western margin, leaving the underlying undifferentiated Thanet Formation and Lambeth Group deposits as the bedrock at the Site.

3 MINERAL RESOURCE ASSESSMENT

3.1. Introduction

It is proposed to develop the Site for residential end use of approx. 100 residential dwellings with private gardens and areas of open space and landscaping (Section 1.2).

The following assessment has been undertaken with reference to the Essex County Council Minerals and Waste Planning guidance on Minerals and Waste Safeguarding Policy (R.4) and Pan-European Standard for Reporting of Exploration Results, Mineral Resources and Reserves (PERC) (R.5).

The guidance states that if part of the application site is within land designated as a Mineral Safeguarding Area (MSA), the application is subject to Policy S8 of the Essex Minerals Local Plan 2014 (MLP, R.8).

Additionally, it is considered necessary to safeguard existing mineral workings, Preferred and Reserve Sites to prevent the possibility of new incompatible neighbours being established and ultimately restricting their activities. Incompatible/ sensitive development should not be located in such close proximity that it puts constraints or limits upon current or future uses for mineral production. Some existing mineral facilities are defined as 'safeguarded sites' for the purpose of protecting mineral workings and existing mineral reserves, and include the following:

- mineral extraction sites and their associated facilities with planning permission that are currently in active mineral use;
- mineral extraction sites with unimplemented planning permission for minerals extraction (including 'dormant' sites with extant planning permission for mineral extraction that have remained unimplemented for some years); and
- Preferred and Reserve Sites proposed in this Plan for future mineral extraction.

Such areas are called Mineral Consultation Areas (MCAs) and these apply to the safeguarded site itself and extend for a distance of 250 metres outwards from the site boundary of each of these safeguarded sites. MCAs ensure that, should mineral extraction have to take place within and up to the site boundary, that development proposed on adjacent land beyond the site boundary would not prevent or compromise the possibility of mineral resources being extracted in future from land within the site itself.

The proposed development Site is located within a MCA, and as such consultation with the Minerals Planning Authority is required, via Essex Minerals and Waste Planning team as per Policy S8.

3.2. Planning Framework

Policy S8 is linked to the National Planning Policy Framework (NPPF), and states that:

'... Proposals which would unnecessarily sterilise mineral resources or conflict with the effective workings of permitted minerals development or Preferred Mineral site allocation shall be opposed.'

The Site at Elsenham is located within a designated Mineral Consultation Area (MCA), so requires further consideration.

Additionally, the Site is not located within a Waste Consultation Area (WCA), and so there are no waste infrastructure safeguarding implications for the proposed development Site.

Comments from the Local Authority Minerals and Waste Planning Officer are included in Appendix 3 of this report and discussed below.

3.3. Local Authority Consultation

The Minerals and Waste team at Essex County Council was contacted in regard to specific requirements for safeguarding of any potential mineral resource at the Site.

The Site was a parcel of grazing land to the south of Henham Road, Elsenham. The total proposed development site area is approximately 5.3 Ha with residential dwellings located adjacent to the northeast, southwest and north.

The Planning Officer states (Appendix 3) that the site lies within a Mineral Consultation Area for Sand and Gravel. However, commonly a 100 m buffer zone is applied from the façade of any nearby dwelling to the edge of the mineable area. Once this is taken into account, the residual Site is below the 5.0 Ha threshold upon which local resource safeguarding provisions are applied for this mineral.

The officer confirmed that once the buffer zone from existing properties is applied to this site, the residual area is 1.8 Ha, and therefore the site falls below the threshold for which Policy S8 applies, and the area identified does not have any mineral resource safeguarding implications.

It therefore follows that a Stage 2 MRA is **not required** for the Site.

3.4. Nature of the Mineral Resource

This report has conducted a desk-based study of the geology local to the Site, which includes a review of available online mapping data and reports on previous intrusive investigation at a nearby Site provided by the Client. The geological information is summarised in Section 2.2 above.

To summarise, the Site is underlain by superficial geology of the Kesgrave Catchment Subgroup (typically granular) in the northern half, and Head Deposits (typically cohesive) in the southern half of the Site. The Head is anticipated to extend beneath the Kesgrave in the north of the Site. The anticipated bedrock is undifferentiated Thanet Sands and Lambeth Group.

Historic boreholes within some 70 m of the site boundary encountered sands and gravels of approximately 7.0 m in thickness, which are thought to be of the Kesgrave group. It is these granular deposits that are potentially of interest from a mineral resource perspective.

Previous investigation on a site some 200 m to the north of the Site in question encountered sand of some 4-5 m thickness. This sand is part of the same geological formation as that anticipated to lie beneath this Henham Road Site. The sand encountered at the nearby site was deemed of insufficient quality and quantity to merit further investigation from a potential mineral resource perspective, a view that was concurred with by the Local Authority (Appendix 3).

Laboratory PSD (Particle Size Analysis) of samples taken from the granular sand horizon at the nearby site was carried out at sieve sizes that differ from those recommended in current BGS Guidance, so these have not been analysed further for the purposes of this report.

For the purposes of this report, topsoil has been treated as overburden.

A basic assessment of the amount of potential sand and gravel resource beneath the proposed residential development is 16 kilo-tonnes (kT).

The associated volume of overburden would be approximately $2,120 \times 0.9 = 1,908 \text{ m}^3$. These figures are based on the following assumptions:

- The development footprint is 5.3 Ha, and granular material is anticipated to lie beneath 40% of this;
- Thickness of any overburden has been taken to be 0.9 m;
- The thickness of potential granular resource has been taken to be 6.0 m;
- The density of aggregate is 1.62 t/m^3 ;
- A dilution factor of 20% (material lost due to interburden, mining equipment selection etc.); and
- Allowing for exclusion zones of 10% of the area.

Should re-use of site-won aggregate be considered, the volume of material potentially available from construction activities would be in the order of 4kT, which takes into consideration a reduced deposit thickness in line with possible shallow foundation depths in the order of 1.50 mbgl.

There is potential for this site-won material to be utilised on-site during construction, which would potentially reduce costs and contribute to the sustainability of the project. Further evaluation of the aggregate quality along with preliminary mine planning studies would be required to determine viability.

It should be noted that these preliminary calculations are for the proposed development Site as a whole, without considering the 100 m buffer zone potentially required around existing dwellings. If a buffer zone of this magnitude is to be taken into consideration, the area of potential granular deposits underlying the Site would be reduced to zero.

3.5. Constraints on Practicality of Mineral Extraction

There is no information available regarding groundwater at the site, which has technical and therefore cost implications for any proposed mining operation as dewatering may be required. An assessment of these water-related costs has not been made at this stage.

As a walkover survey has not yet been carried out, other potential constraints on mineral resource assessment and future mining have not been considered. It is recommended that a walkover survey is carried out should further investigation of mineral potential be required.

Despite the Site being situated over potentially favourable granular lithologies for mining purposes, given the buffer zone requirements from existing dwellings expressed by the local Planning Officer, it is considered that the site presents limited economic and viable opportunity for sand and gravel extraction.

3.6. Potential Opportunities for Mineral Extraction

Given the above, further discussion on any potential for the extraction of sand and gravel is not considered necessary at this Site. The Site does not have significant potential for mineral to be worked in the future, and a full Stage 2 MRA is not required, as has been confirmed with an officer in the Essex Minerals and Waste Planning team (Appendix 3).

4 CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions

The National Planning Policy Framework (NPPF) requires Local Authorities to encourage the prior extraction of minerals, where practicable, if non-mineral development is necessary.

The Site is underlain by superficial geology of the Kesgrave Catchment Subgroup (typically granular) in the northern half, and Head Deposits (typically cohesive) in the southern half of the Site. The Head is anticipated to extend beneath the Kesgrave in the north of the Site. The anticipated bedrock is undifferentiated Thanet Sands and Lambeth Group.

A preliminary mineral assessment estimated some 16 kT of sand and gravel mineral may be present at the Site.

Potential use of site-won aggregate has substantial sustainability benefits. Additionally, reduction in the amount of material being brought onto site may result in cost savings, as well as potential revenue from sale of exported surplus in-grade and any out of grade materials.

Previous investigation on a site some 200 m to the north of the Site in question encountered sand of some 4-5 m thickness. This sand is part of the same geological formation as that anticipated to lie beneath this Henham Road Site. The sand encountered at the nearby site was deemed of insufficient quality and quantity to merit further investigation from a potential mineral resource perspective, a view that was concurred with by the Local Authority (Appendix 3).

Additionally, comments received from the Minerals and Waste Planning Team at Essex Country Council have confirmed that further mineral resource assessment is not required at this Site, due to the residual size of the proposed development area being less than the MRA 5Ha threshold, after buffer zones around existing residential properties have been taken into account.

4.2. Recommendations

Comment from the Local Authority Minerals and Waste Planning team concluded that once required buffer zones from existing residential areas are taken into account, the residual Site is considered too small to warrant further investigation from a mineral safeguarding perspective.

It is therefore recommended that no further assessment of potential mineral resource is required.

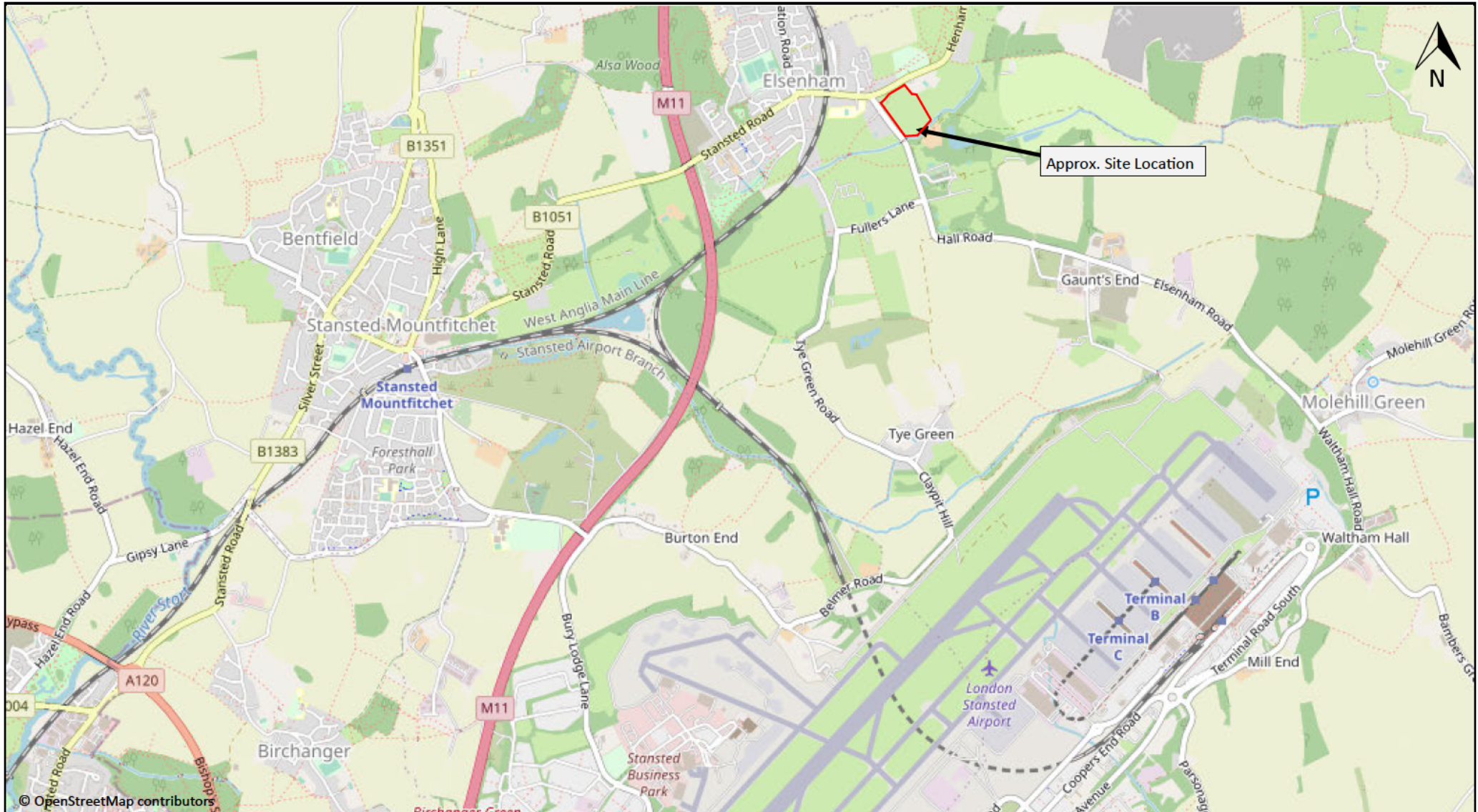
The Client may want to consider utilisation of the sand on-site during construction, which would potentially reduce costs and contribute to the sustainability of the project. Should this be considered, further evaluation of the aggregate quality along with preliminary mine planning studies would be required to determine viability.

5 REFERENCES

- R.1. Wardrop Minerals Management Limited, Mineral Resource Assessment, East of Elsenham, dated December 2017 (for a site some 200 m to the north of Henham Road);
- R.2. British Standard Code of Practice for Site Investigations BS5930:2015+A1:2020;
- R.3. British Standard Code of Practice for Investigation of Potentially Contaminated Sites BS10175: 2011+A2:2017;
- R.4. [Minerals - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- R.5. Pan-European Standard for Reporting of Exploration Results, Mineral Resources and Reserves (PERC) Standard, dated May 2013;
- R.6. Environmental Protection Act 1990: Part IIA, Contaminated Land Statutory Guidance, April 2012;
- R.7. Essex County Council Minerals and Waste Planning, Guidance on Minerals and Waste Safeguarding Policy, dated October 2021;
- R.8. Essex County Council, Policy S8 of the Minerals Local Plan, adopted July 2014.

Figure 1

Site Location Plan



Site:	Land south of Henham Road, Elsenham
Address:	Elsenham, Bishops Stortford, Essex
Post Code:	CM22 6DN
Grid Ref:	TL539263
Title:	Site Location Plan
Client:	Countryside Partnerships Plc.

Date:	March 2022
Scale:	Not to Scale
Drawing:	R01 Figure 1
Drawn by:	RS
Checked by:	AL
Project No:	2094

Legend:
 Approx. Site Boundary



 REMEDIATION SPECIALISTS
GEMCO
 Green Earth Management Co Ltd
 Broomfield Park
 Coggeshall Road
 Essex CO6 2JX
 Tel: 01245 206129

Figure 2


Proposed Development Plan



Base map provided by Client—Ref: dapa_1669_303_01_Layout

Site:	Henham Road, Elsenham	Date:	March 22
Address:	Bishop's Stortford, Essex	Scale:	Not to Scale
Post Code:	CM22 6DN	Drawing:	Figure 2
Grid Ref:	TL539263	Drawn by:	RS
Title:	Proposed Dev. Plan	Checked by:	AL
Client:	Countryside Partnership	Project No:	2094

Legend:

	Site Boundary
---	---------------

REMEDICATION SPECIALISTS

 Green Earth Management Co Ltd
 Broomfield Park
 Coggeshall Road
 Essex
 CO6 2JX
 Tel: 01245 206129

Appendix 1

Report Conditions

Geo-Environmental Site Investigation

This report is produced solely for the benefits of the named Client and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

The report refers, within the limitations of the stated, to the condition of the Site at the time of the inspections. No warranty is given as to the possibility of the future changes of the Site.

The report is based on a visual site inspection, reference to accessible referenced historical records, the physical investigation as detailed, information supplied by those parties referenced in the text, and preliminary discussions with local and statutory authorities. Some of the opinions are based on unconfirmed data and information and are presented as the best that can be obtained without further extensive research. The test results available can only be regarded as a limited but likely representative sample assessed against current guidelines. The impact of our assessment on other aspects of the development requires evaluation by other involved parties.

GEMCO takes no responsibility for conditions that have not been revealed by the borings, or which occur below or between the borings. The possibility of the presence of contaminants, perhaps in higher concentrations, elsewhere on site cannot be discounted. Whilst every effort has been made to interpret the conditions between investigation locations, such information is only indicative and liability cannot be accepted for its accuracy.

Groundwater and ground gas readings taken are those pertaining to the period of the investigation only. It should be noted that groundwater levels may be subject to tidal, seasonal and diurnal changes, whilst ground gas emission rates are affected by atmospheric pressure and groundwater levels.

With reference to ground contamination, whilst the findings detailed within this report reflect our best assessment, because there are no exact UK definitions of these matters, being subject to risk analysis, we are unable to give categorical assurances that they will be accepted by authorities or funds without question as such bodies have unpublished, more stringent objectives. The report is prepared and written for the purposes stated in the report and should not be used in a different context without reference to GEMCO in time, improved practises or amended legislation may necessitate a re-assessment.

The report is limited to the geotechnical and environmental aspects specifically reported on, and is necessarily restricted and no liability is accepted for any other aspect especially concerning gradual or sudden pollution incidents. The opinions expressed cannot be absolute due to the limitations of time and resources imposed by the agreed brief, the nature of the geology and possibility of unrecorded previous use and abuse of the Site and adjacent sites. The report concentrates on the Site as defined in the report and provides an opinion on surrounding sites. If migrating pollution or contamination (past or present) exists, further research will be required before the effects can be better determined.

Appendix 2

Historic Borehole Records



TL52/S1

86

7. The Vicarage. 1897.
288.66 ft. above Ordnance Datum.
Made by G. INGOLD. Communicated by H. G. FEATHERBY
Rest-level of water in 1897, 69 ft. down.

= The Old Vicarage,
now a private house.
owner: H. S. Maclean Tack

		Thickness. Ft.	Depth. Ft.
Made	2	2	2
? Pleist. Drift WRB } 63	Made earth
	Grey sandy loam	5 1/2	7 1/2
	Dark sandy loam	2	9 1/2
	Black sandy loam	8	17 1/2
	Grey sand	4 1/2	22
	[? All Reading Beds, or some Drift ?] Brown clay	13	35
	Loamy sand	2	37
	Dark clay	7	44
	Dark green and red clay	3	47
	Light-green sand	11	58
Yellow and red loam	6 1/2	64 1/2	
Flints	...	65	
U Ch	45	45	110
[Upper] Chalk

letter from Mr. J M
Wilmut Brook,
The Vicarage
Ebenham
31/7/40
No 9509/202

17/12/63 dfo.

Visited. In use - petrol motor O.D c 290 ft.

Sited on 6" - Essex 23 NW/W

24.6.42

500 yds. N.W. of S. Mary's Ch.

Essex N.23 SE/E

Visited :-

disused; engine removed - was formerly in little engine house in front of house; well possibly under drive, but ~~well~~ well encountered there in building operations had water very near surface. Well in back lawn with iron cover - similarly has water near surface.

Published in

A.S. 30/9/59.

'Water Supply of Essex',
page 152

DATA Bank

TL 52 NW/94
Block A

TL 52 NW 94 5384 2636 Elsenham Cross, Elsenham

Surface level +94.8 m
Water struck at +92.1 m
October 1980

Overburden 0.9 m
Mineral 5.8 m
Bedrock 1.3 m+

British Geological Survey

British Geological Survey

British Geological Survey

LOG

Geological classification	Lithology	Thickness m	Depth m
	Topsoil and subsoil	0.9	0.9
Kesgrave Sands and Gravels	a Sand, with a trace of fine gravel in uppermost 1.8 m, discrete clay laminae in parts Gravel: a trace of fine, angular and well rounded flint and phosphatic nodules, with some quartz Sand: medium and fine with a trace of coarse becoming fine with a trace of medium and coarse, subrounded to subangular quartz, with a trace of flint and mica, yellowish brown	4.8	5.7
?Red Crag	b Pebbly sand Gravel: fine and coarse, well rounded with angular flint, with some well rounded quartz and rotted phosphatic nodules and tabular ironstone; and a trace of sandstone, quartzite, igneous and metamorphic Sand: fine and medium with coarse, subrounded to subangular quartz, with some flint and ironstone and a trace of mica, dark yellowish brown	1.0	6.7
London Clay	Clay, silty, faintly laminated, brown	0.5	7.2
	Clay, silty, fine sandy, very dark grey	0.8+	8.0

British Geological Survey

British Geological Survey

GRADING

	Mean for deposit percentages			Depth below surface (m)	percentages						
	Fines	Sand	Gravel		Fines			Gravel			
					- $\frac{1}{4}$	+ $\frac{1}{4}$ - $\frac{1}{2}$	+ $\frac{1}{2}$ -1	+1-4	+4-16	+16-64	+64 mm
a	9	91	0	0.9-1.9	7	41	49	2	1	0	0
				1.9-2.7	13	72	13	1	1	0	0
				2.7-3.7*	13	82	4	1	0	0	0
				3.7-4.7*	8	89	2	1	0	0	0
				4.7-5.7*	4	93	2	1	0	0	0
				Mean	9	76	14	1	trace	0	0
b	5	76	19	5.7-6.7*	5	35	26	15	10	9	0
a+b	8	89	3	Mean	8	69	16	4	2	1	0

British Geological Survey

British Geological Survey

British Geological Survey

COMPOSITION

Depth below surface (m)	Percentage by weight in the 8-16 mm fraction											
	Flint	Quartz	Quartzite	Sandstone	Chalk	Limestone	Fossil debris	Phosph. nodules	Ironstone	Others		
	Ang.	W	R									
a	0.9-5.7	Small sample										
b	5.7-6.7	20	60	7	1	1	0	0	0	7	3	1

British Geological Survey

British Geological Survey

British Geological Survey

Appendix 3

Local Authority Correspondence

From: [REDACTED] - Planning Officer
Sent: 04 April 2022 14:52
To: [REDACTED]
Cc: [REDACTED] - Principal Planning Officer; [REDACTED]
Subject: RE: 2094 Henham Rd, Elsenham - MRS query

Hello [REDACTED]

For the purposes of mineral safeguarding, Policy S8 of the Minerals Local Plan 2014 is applied to proposed development of over 5ha in size within a sand and gravel Mineral Safeguarding Area. Approximately 5.4ha of the proposed development site is within a Mineral Safeguarding Area (MSA) for sand and gravel and is therefore subject to Policy S8.

However, after applying a typical standoff distance of 100m from sensitive development, this reduces the amount of land in an MSA to 1.8ha. I can therefore confirm that the area identified falls below the threshold at which Policy S8 applies and therefore development at this site does not have any mineral resource safeguarding implications. A Minerals Resource Assessment is therefore **not** required.

Thank you,

[REDACTED]

Planning Officer – Minerals & Waste
Planning Service
Place & Public Health

Essex County Council

[REDACTED]

[REDACTED] | www.essex.gov.uk



Please consider the environment before printing this e-mail



From: [REDACTED]
Sent: 28 March 2022 15:30
To: [REDACTED] - Planning Officer [REDACTED]
Cc: [REDACTED] - Principal Planning Officer [REDACTED] Diane Robson
[REDACTED]
Subject: 2094 Henham Rd, Elsenham - MRS query

CAUTION: This is an external email.

Hi [REDACTED],

I hope you are well. I am currently putting together a Stage I Mineral Resource Assessment for a site in Elsenham, nr. Bishop's Stortford, and wondered if you can advise please on what the MRA requirements are for this please? The site is approximately 5 Ha in size, although I notice from online mapping that there are a few houses adjacent, so applying the 100m buffer is likely to reduce the area to <5 Ha, so within the site area limit for requiring a MRA. The proposal is for residential dwellings. Please find attached location and proposed layout plan. Also, any information on mineral safeguarding, MCA or WCA will be much appreciated. I believe an adjacent site (planning ref. UTT/17/3573/OP) did not find any significant mineral potential and similar geology is anticipated at our site.

Many thanks and I look forward to hearing from you soon.

Regards

[REDACTED]
Principal Geologist, GEMCO

(I usually work Mondays, Tuesdays and Wednesdays only)

[REDACTED]
Do you really need to print this email? Think before you print!

IMPORTANT NOTICE:

Green Earth Management Co Ltd
Broomfield Park
Coggeshall Road
Earls Colne
Essex CO6 2JX
United Kingdom
T: +44 1245 206129

[REDACTED]
Registered in England & Wales, Company Registration Number 6125891
VAT Registration Number GB905616922

This message (and any associated files) is intended only for the use of the individual or entity to which it is addressed and may contain information that is confidential, subject to copyright or constitutes a trade secret. If you are not the intended recipient you are hereby notified that any dissemination, copying or distribution of this message, or files associated with this message, is strictly prohibited. If you have received this message in error, please notify us immediately by replying to the message and deleting it from your computer. Messages sent to and from us may be monitored. Internet communications cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. Therefore, we do not accept responsibility for any errors or omissions that are present in this message, or any attachment, that have arisen as a result of e-mail transmission. If verification is required, please request a hard-copy version. Any views or opinions presented are solely those of the author and do not necessarily represent those of Green Earth Management Company Limited.

Essex County Council
Minerals & Waste Planning
County Hall
Chelmsford
Essex CM1 1QH



Uttlesford District Council
Development Management
London Road
Saffron Walden
CB11 4ER

Your ref: UTT/17/3573/OP

Date: 07 August 2019

Dear Sir / Madam,

Application Description: Outline application with all matters reserved except for access for: up to 350 dwellings, 1 no. primary school including early years and childcare setting for up to 56 places, open spaces and landscaping including junior football pitch and changing rooms, access from B1051 Henham Road with associated street lighting and street furniture, pedestrian, cycle and vehicle routes. pedestrian and cycles link to Elsenham Station and potential link to Hailes Wood, vehicular and cycles parking. provision and/or upgrade/diversion of services including water, sewerage, telecommunications. electricity, gas and services media and apparatus, on-plot renewable energy measures including photovoltaics, solar heating and ground source heat pumps, drainage works, sustainable drainage systems and ground and surface water attenuation features, associated ground works, boundary treatments and construction hoardings.

Location: Land to the North West of Henham Road, Elsenham

Thank you for your letter received via email on 15 July 2019 notifying Essex County Council acting as the Mineral Planning Authority (MPA) of the submission of additional evidence in support of the above application.

Having reviewed the Mineral Resource Assessment (MRA) Addendum 2019, the MPA accepts the overarching conclusion that the prior extraction of mineral underlying the application site is not practicable. This conclusion is accepted on the basis that underlying deposits equate to 5ha which is the minimal threshold at which safeguarding provisions apply, and that the material within the deposit is of marginal quality as demonstrated through laboratory testing.

The MPA would however also note the following, although this does not affect its overall conclusion:

- It is suggested in the MRA Addendum that commercial sand and gravel operations need to operate at a yield of 10m³ of sand to 1m³ of overburden. This ratio is not

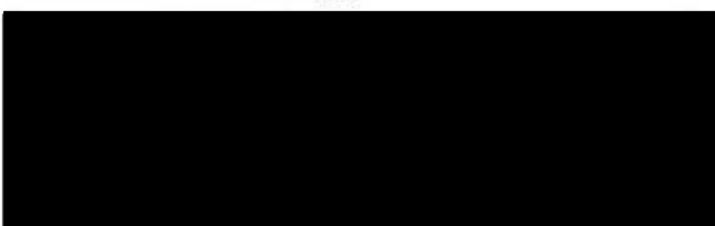
accepted. British Geological Survey criteria as endorsed by the Minerals Products Association state that deposits with a ratio of 3:1 can be economic, and there are numerous sites across Essex operating at ratios significantly less favourable than 10:1.

- It is unclear whether mineral yield calculations are based on batters being created from the edge of the resource or further away such that sufficient depths are realised upon reaching the outer edge of the mineral. There is the potential that the MPA would have asked for clarification had the mineral deposit been of greater extent and/or quality.
- It is unclear why different sieve sizes have been used in the laboratory testing and subsequent reporting in Appendix ii to that presented in the BGS Guidance also presented in Appendix ii.
- The impact of removing existing hedgerows and trees would be a planning judgement weighed against the benefit of the prior extraction of mineral. No commentary is provided with regard to whether the existing hedge and/or trees are protected, whilst the NPPF notes that “When determining planning applications, great weight should be given to the benefits of mineral extraction” (Para 205).

To clarify, whilst the MPA does not agree with all the conclusions made within the MRA Addendum, it considers that sufficient appropriate information has been submitted to justify the overarching conclusion that the prior extraction of mineral is not practicable. On that basis, the MPA removes its holding objection and has no further comment to make on the above application.

I trust that this is of assistance but should you have any queries regarding the content of this letter please do not hesitate to contact me.

Yours sincerely,



Senior Minerals and Waste Planner

