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ENERGY AND CLIMATE CHANGE
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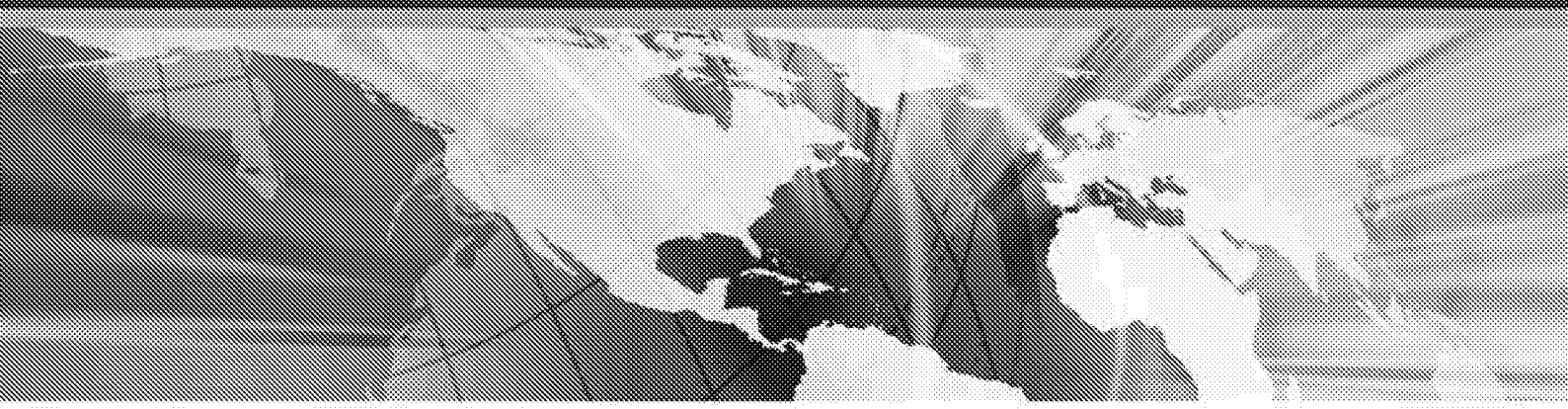

LAND ALLOCATION LTD

PROPOSED DEVELOPMENT AT LAND OFF YAPTON LANE, WALBERTON

MINERAL RESOURCE ASSESSMENT

JULY 2021

wardell armstrong

ARUN DISTRICT COUNCIL WA/80/21/OUT

Wardell Armstrong
Sir Henry Doulton House, Forge Lane, Etruria, Stoke-on-Trent, ST1 5BD, United Kingdom
[redacted]

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LAND ALLOCATION LTD

PROPOSED DEVELOPMENT AT LAND OFF YAPTON LANE, WALBERTON

MINERAL RESOURCE ASSESSMENT

JULY 2021

PREPARED AND APPROVED BY:

Stephen Barry — Technical Director and Chartered Mineral Surveyor [redacted]

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Appendix 3: Policy M9 Safeguarding Minerals

DRAWINGS TITLE

ST18464-001 Superficial geology

ARUN DISTRICT COUNCIL WA/80/21/OUT

EXECUTIVE SUMMARY

This report has been prepared to support a planning application by Land Allocation Ltd for proposed development on land off Yapton Lane, Walberton. The site has been reviewed in relation to the mineral safeguarding policies of the West Sussex Joint Minerals Local Plan.

The site comprises approximately 7.6 ha of agricultural land. Published geological maps for the area indicate that the superficial geology on the site comprises a river terrace sand and gravel deposit and a head deposit. The sand and gravel deposit is safeguarded for its potential to contain sharp sand and gravel. There is also a head deposit on the site, but this is not a safeguarded mineral resource. The solid geology comprises the London Clay Formation and is not a safeguarded mineral resource.

However, using borehole data from the site, it is clear that in fact there is no sand and gravel present on the proposed development site. The borehole logs indicate that the head deposit continues onto the western part of the site and that it is underlain by clay and marlstone rather than sand and gravel. Consequently, as there is no safeguarded mineral resource on the site, mineral sterilisation cannot occur and the site therefore meets the requirements of criterion 1 of the mineral safeguarding Policy M9 Safeguarding Minerals, so the proposed development would be acceptable in a Mineral Safeguarding Area.

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1 INTRODUCTION

1.1 This report has been prepared in accordance with instructions from Land Allocation Ltd to prepare a Mineral Resource Assessment report in support of a planning application for proposed development on land off Yapton Lane, Walberton. The site boundary is shown edged red on the attached plan at **Appendix 1.** The site comprises approximately 7.6 ha of agricultural land and the site is bounded by agricultural land to the north, east and south, and by Yapton Lane (B2132) and residential properties to the west.

2 SITE GEOLOGY

2.1 Geologically, a distinction is made between "superficial deposits" and "solid geology". Superficial deposits such as sand and gravel are found at, or close to, the surface. The solid bedrock beneath the superficial deposits is called the "solid geology".

Superficial deposits

2.2 The British Geological Survey (BGS) online map shows that most of the site is covered in a river terrace sand and gravel deposit, as shown on drawing ST18464-001. The sand and gravel deposit is safeguarded for its potential to contain sharp sand and gravel. There are five boreholes present within the site boundary, and two just outside the boundary, as shown on drawing ST18464-001. The borehole logs are attached at **Appendix 2**. The borehole logs show that in fact there is no sand and gravel present on the site. All seven borehole logs show that beneath the topsoil and subsoil there is brown clay, sometimes referred to as brickearth, followed by marl stone. The brown clay and marl stone are not safeguarded mineral resources as they have no commercial value. On the eastern part of the site there is a thin strip of head deposit, which is a mixture of poorly sorted clay and silt. The head deposit is not a safeguarded mineral resource.

Solid Geology

2.3 The British Geological Survey (BGS) online map indicates that the site is underlain by the London Clay Formation, which comprises clay, silt and sand. It is not a safeguarded mineral resource.

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3 MINERAL SAFEGUARDING GUIDANCE AND POLICY

Guidance

3.1 West Sussex County Council has produced a Draft Minerals Safeguarding Guidance document, which states that a mineral resource assessment should be proportionate to the size of the site and "may include consideration of other locations for the development that are outside the Mineral Safeguarding Area".

Policy

3.2 The relevant mineral planning policies are contained in the West Sussex Joint Minerals Local Plan (MLP), which was developed by West Sussex County Council and South Downs National Park Authority. It was adopted in July 2018 and is due for review by 2033. The MLP has been designed to set out West Sussex County Council's vision, objectives, strategy and policies for the supply of minerals.

3.3 "Policy M9: Safeguarding Minerals", which is attached at **Appendix 3**, states that soft sand (including potential silica sand), sharp sand and gravel, brick making clay, building stone resources and chalk reserves are safeguarded against sterilisation. Proposals for non-mineral development within the Mineral Safeguarding Areas will not be permitted unless:

(i) Mineral sterilisation will not occur; or

(ii) It is appropriate and practicable to extract the mineral prior to the development taking place, having regard to the other policies in this Plan; or

(iii) The overriding need for the development outweighs the safeguarding of the mineral and it has been demonstrated that prior extraction is not practicable or environmentally feasible.

Compliance with adopted safeguarding policy

Criterion (i)

3.4 The safeguarded mineral resource on the proposed development site is sharp sand and gravel, which can be found within river terrace sand and gravel deposits. However, there is no sand and gravel present on the proposed development site. All seven borehole logs, which are attached at **Appendix 2**, indicate that the head deposit continues onto the western part of the site, and that it comprises brown clay (brickearth) and marlstone instead of sand and gravel. Since there is no safeguarded sand and gravel on the site, mineral sterilisation cannot occur and consequently the proposed development is compatible with mineral safeguarding policy.

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4 CONCLUSIONS

4.1 The proposed development is in a mineral safeguarding area for sharp sand and gravel and a sand and gravel deposit is mapped as being present on the site. However, using the borehole data from the site, it is clear that there is no sand and gravel present on the proposed development site. The boreholes logs indicate that the head deposit continues onto the western part of the site and that is underlain by clay and marlstone instead of sand and gravel. As there is no safeguarded mineral resource on the site, mineral sterilisation cannot occur. The site therefore meets the requirements of criterion 1 of the mineral safeguarding Policy M9 Safeguarding Minerals, so the proposed development would be acceptable in a Mineral Safeguarding Area.

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APPENDICES

ARUN DISTRICT COUNCIL WA/80/21/OUT

Appendix 1: Site Location Plan

ARUN DISTRICT COUNCIL WA/80/21/OUT

The scaling of this drawing cannot be assured

Revision		Date	Drn	Ckd
A	Site boundary amended	21.05.2021	AS	-

SITE BOUNDARY
Area = 7.6 Hectares

SITE LOCATION PLAN

ARUN DISTRICT COUNCIL WA/80/21/OUT

0 10 20 30 40 50 60
metres

Project
Walberton
Sussex

Drawing Title
Site Location Plan

Date	Scale	Drawn by	Check by
02.10.2020	1:1250@A2	JC	-

Project No	Drawing No	Revision
CAL020920	MP - 01	A

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Appendix 2: Borehole Logs

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BORE HOLE LOG

HOLE NO.: 2.

Log Ref. 1243

Held at Halberton

SU90NE 64 981-058

9972 0616

Ordnance Plot No.

Water Struck at Nil ft. ins. Rest Water Level ft. ins. after hours

COMMERCIAL IN CONFIDENCE

Description of Material	From ft.	From ins.	To ft.	To ins.	Depth of Seam ft.	Depth of Seam ins.	Total Depth ft.	Total Depth ins.
Top Soil.	0	- 0	1	- 0	1	- 0		
Sub Soil. Brickearth	1	- 0	3	- 0	2	- 0		
Brown Clay + Stone.	3	- 0	7	- 0	4	- 0		
Hard + Stone.	7	- 0	20	- 0	13	- 0	20	- 0

REMARKS

Sketch Plan

Samples taken at

(1) ft. ins. (2) ft. ins. (3) ft. ins. (4) ft. ins.

(5) ft. ins. (6) ft. ins. (7) ft. ins. (8) ft. ins.

ARUN DISTRICT COUNCIL WA/80/21/OUT

BORE HOLE LOG

HOLE NO. 3

Log Ref. 1244

at Halberton -

SU90NE 65 981-058
9992 0603
OD = 16m

Ordnance Plot No.

Water Struck at Nil ft. ins. Rest Water Level ft. ins. after hours

COMMERCIAL
IN CONFIDENCE

Description of Material	From ft. ins.	To ft. ins.	Depth of Seam ft. ins.	Total Depth ft. ins.
Top Soil.	0 — 0	1 — 0	1 — 0	
Sub Soil. brickearth	1 — 0	4 — 0	3 — 0	
Brown Clay & Stone.	4 — 0	8 — 0	4 — 0	
Marl & Stone. LC	8 — 0	20 — 0	12 — 0 +	20 — 0

REMARKS

Sketch Plan

N

Samples taken at

(1) ft. ins. (2) ft. ins. (3) ft. ins. (4) ft. ins.
(5) ft. ins. (6) ft. ins. (7) ft. ins. (8) ft. ins.

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BORE HOLE LOG

HOLE NO. 4

Log Ref. 1245

at Haberton

SU90NE 66-981-058

9994 0587

OD+ 15·5m

Ordnance Plot No.

Water Struck at 16 ft. 0 ins. Rest Water Level ____ ft. ____ ins. after ____ hours

COMMERCIAL IN CONFIDENCE

Description of Material	From ft.	From ins.	To ft.	To ins.	Depth of Seam ft.	Depth of Seam ins.	Total Depth ft.	Total Depth ins.
Top Soil.	0	0	1	0	1	0		
Sub Soil.	1	0	3	0	2	0		
Brown Clay. Gritstone	3	0	8	0	5	0		
Marl stone & Stone	8	0	16	0	8	0		
Marl & Stone.	16	0	20	0	4	0	20	0

REMARKS

Sketch Plan

Samples taken at

(1) ____ ft. ____ ins. (2) ____ ft. ____ ins. (3) ____ ft. ____ ins. (4) ____ ft. ____ ins.

(5) ____ ft. ____ ins. (6) ____ ft. ____ ins. (7) ____ ft. ____ ins. (8) ____ ft. ____ ins.

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BORE HOLE LOG

Log Ref. 1246

HOLE NO. 5

SUSONE 67 SW-D58

1983 OS46

OS-N 15.5 m

COMMERCIAL IN CONFIDENCE

Ordnance Plot No.

Water Struck at 17 ft. 0 ins. Rest Water Level ____ ft. ____ ins. after ____ hours

Description of Material	From ft. ins.	To ft. ins.	Depth of Seam ft. ins.	Total Depth ft. ins.
Top Soil.	0 — 0	1 — 0	1 — 0	
Sub Soil & Brown Clay & Stone.	1 — 0	3 — 0	2 — 0	
& White Marl & Stone	3 — 0	8 — 0	5 — 0	
	8 — 0	20 — 0	12 — 0	20 — 0

REMARKS The Stone content is good. 20% Stone, Marl is white in all the holes bored so far.

Sketch Plan

Samples taken at

(1) ____ ft. ____ ins. (2) ____ ft. ____ ins. (3) ____ ft. ____ ins. (4) ____ ft. ____ ins.

(5) ____ ft. ____ ins. (6) ____ ft. ____ ins. (7) ____ ft. ____ ins. (8) ____ ft. ____ ins.

WA/8921/OUT

BORE HOLE LOG

Log Ref. 1247

HOLE NO. 6

at Glaberton

SU90NE 68 984-058

9784 0604

COMMERCIAL
IN CONFIDENCE

Ordnance Plot No.

Water Struck at 19 ft. 0 ins. Rest Water Level ____ ft. ____ ins. after ____ hours

Description of Material	From ft.	From ins.	To ft.	To ins.	Depth of Seam ft.	Depth of Seam ins.	Total Depth ft.	Total Depth ins.
Top Soil.	0	— 0	1	— 0	1	— 0		
Sub Soil. Bitbed	1	— 0	3	— 0	2	— 0		
Brown Clay & Stone.	3	— 0	8	— 0	5	— 0		
Brown Clay some Stone.	8	— 0	10	— 0	2	— 0		
Marl & Stone.	10	— 0	20	— 0	10	— 0	20	— 0

REMARKS

Sketch Plan

N

Samples taken at

(1) ____ ft. ____ ins. (2) ____ ft. ____ ins. (3) ____ ft. ____ ins. (4) ____ ft. ____ ins.

(5) ____ ft. ____ ins. (6) ____ ft. ____ ins. (7) ____ ft. ____ ins. (8) ____ ft. ____ ins.

BGS/A/80/21/007

BORE HOLE LOG

Log Ref. 1248

HOLE NO. 7

at Islalleston

SU90NE 69 981-058
9993 0603

COMMERCIAL
IN CONFIDENCE

Ordnance Plot No.

Water Struck at Nil ft. ins. Rest Water Level ft. ins. after hours OD + m 15 m

Description of Material	From ft. ins.	To ft. ins.	Depth of Seam ft. ins.	Total Depth ft. ins.
Top Soil.	0 - 0	1 - 0	1 - 0	
Sub Soil	1 - 0	3 - 0	2 - 0	
Brown Clay & Stone	3 - 0	8 - 0	5 - 0	
Gravel Marl & Stone Good % of Stone.	8 - 0	20 - 0	12 - 0 +	20 - 0

REMARKS

Sketch Plan

Samples taken at

(1) ft. ins. (2) ft. ins. (3) ft. ins. (4) ft. ins.

(5) ft. ins. (6) ft. ins. (7) ft. ins. (8) ft. ins.

British Geological Survey

BORE HOLE LOG

Log Ref. 1249

HOLE NO. 8

Alberton.

SUPONE TO 381-058

97N8 0589

COMMERCIAL
IN CONFIDENCE

Ordnance Plot No.

Water Struck at 17 ft. 0 ins. Rest Water Level ____ ft. ____ ins. after ____ hours

Description of Material	From ft. ins.	To ft. ins.	Depth of Seam ft. ins.	Total Depth ft. ins.
Top Soil.	0 — 0	1 — 0	1 — 0	
Sub Soil.	1 — 0	3 — 0	2 — 0	
Brown Clay & Stone	3 — 0	6 — 0	3 — 0	
Marl & Stone. Good % of Stone.	6 — 0	13 — 0	7 — 0	
Marl LC	13 — 0	17 — 0	4 — 0	
Marl & Stone WBC	17 — 0	19 — 0	2 — 0	
Chalk. ? Town	19 — 0	20 — 0	1 — 0	20 — 0

REMARKS

Sketch Plan

Samples taken at

(1) ____ ft. ____ ins. (2) ____ ft. ____ ins. (3) ____ ft. ____ ins. (4) ____ ft. ____ ins.
(5) ____ ft. ____ ins. (6) ____ ft. ____ ins. (7) ____ ft. ____ ins. (8) ____ ft. ____ ins.

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Appendix 3: Policy M9 Safeguarding Minerals

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Gault formation clay, which supplies Pitsham brickworks, will not be safeguarded in its entirety because it is only extracted in small quantities and not economically significant.

Sandstone (building stone)

6.9.11. In West Sussex, sandstone is only used on a small scale for local projects. If the character of historic buildings is to be maintained, supplies of new matching stone are needed for repair and for new construction. The Hythe Formation, Horsham Stone, Ardingly Sandstone and Cuckfield Stone are included in the MSA for stone matching purposes (excluding urban areas). Safeguarding the most important building stones will ensure that they are available for the repair of historic buildings in the future. The Strategic Stone Study provides a database of the most significant building stone types and which quarries they were sourced from.

Oil and Gas

The precise extent of oil and gas resources in West Sussex is unknown. Sterilisation of oil and gas resources is not likely to occur due to the depth at which it takes place, and the ability to use horizontal drilling. Existing onshore hydrocarbon exploration, appraisal and production facilities will be safeguarded from proximate development (see Policy M10).

Policy M9: Safeguarding Minerals

(a) Existing minerals extraction sites[44] will be safeguarded against non-mineral development that prejudices their ability to supply minerals in the manner associated with the permitted activities.

(b) Soft sand (including potential silica sand), sharp sand and gravel, brick-making clay, building stone resources and chalk reserves[45] are safeguarded against sterilisation. Proposals for non-mineral development within the Minerals Safeguarded Areas (as shown on maps in Appendix E) will not be permitted unless:

- **(i) Mineral sterilisation will not occur; or**
- **(ii) it is appropriate and practicable to extract the mineral prior to the development taking place, having regards to the other policies in this Plan; or**
- **(iii) the overriding need for the development outweighs the safeguarding of the mineral and it has been demonstrated that prior extraction is not practicable or environmentally feasible.**

[44] The existing minerals extraction sites which are safeguarded by Policy M9 are listed in the Annual Monitoring Report

[45] Chalk reserves specified in the Annual Monitoring Report will be safeguarded.

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6.9.12. In order to ensure that consultation takes place between the County and District planning authorities a Mineral Consultation Area (MCA) has been defined. The MCA, which is published separately from the Minerals Local Plan, covers the same area as the MSA but also includes safeguarded minerals infrastructure. The MSA is to be included in District and Borough Council Local Plan Policies Maps. The MCA is a mechanism intended to ensure that consultation takes place between county and district/borough planning authorities in two-tier authority areas when mineral interests could be compromised by non-minerals development, especially in close proximity to a known mineral resource. District and Borough Councils will be required to consult the Authorities on proposals for non-mineral development in the MCA. Further explanation is provided in separate guidance on safeguarding.

6.9.13. Where non-mineral development is proposed, developers may be required to carry out investigation work to ascertain whether economically viable mineral resources are present and whether prior extraction is practicable. The results of this work should be reported in a 'Minerals Resource Assessment' that is submitted with any application (for more detail see separate guidance on safeguarding). For the Authorities to raise no objection to the non-mineral development, they will need to be satisfied that either minerals sterilisation will not occur (either because the mineral resources are not economically viable or that an appropriate and practicable level of prior extraction can take place) or because there is an overriding need for the development.

6.9.14. Pre-application discussions are encouraged to ensure that minerals safeguarding is considered at the earliest opportunity. Separate guidance has been published that explains further how safeguarding will work in practice.

6.9.15. MCAs will also include other infrastructure such as wharves, railheads, hydrocarbon production facilities, concrete batching plants and asphalt plants (see Policy M10). A list of safeguarded facilities is maintained in the Annual Monitoring Report.

Implementation and Monitoring	
Actions	*Key Organisation(s)*
Record all planning permissions for non-mineral development in the safeguard areas	WSCC, SDNPA, District and Borough planning authorities
Measure/Indicator	*Trend/Target*

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DRAWINGS

ARUN DISTRICT COUNCIL WA/80/21/OUT

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CLIENT	DRG No	SCALE	DATE
LAND ALLOCATION LTD	ST18464-001	1:5,000 @ A4	21/07/2021
PROJECT	**DRAWN BY**	**CHECKED BY**	**APPROVED BY**
LAND OFF YAPTON LANE, WALBERTON	BVC	SDB	SDB

DRAWING TITLE

SUPERFICIAL GEOLOGY

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STOKE-ON-TRENT
Sir Henry Doulton House
Forge Lane
Etruria
Stoke-on-Trent
[redacted]

BIRMINGHAM
Two Devon Way
Longbridge Technology Park
Longbridge
[redacted]

BOLTON
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Aspinall Way
Middlebrook
[redacted]
Tel [redacted]

BRISTOL
Desklodge
2 Redcliffe Way
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BS1 6NL

BURY ST EDMUNDS
6 Brunel Business Court
Eastern Way
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16 Cathedral Road
Cardiff
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CARLISLE
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Burgh Road Industrial
Estate Carlisle
[redacted]

EDINBURGH
Great Michael House
14 Links Place
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36 Park Row
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