



RUSSELL HOMES LTD

PROPOSED DEVELOPMENT AT STANSTY CHAIN ROAD, WREXHAM

MINERAL RESOURCE ASSESSMENT

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MINERAL RESOURCE ASSESSMENT

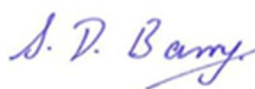
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LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES AND QUARRYING
WASTE RESOURCE MANAGEMENT

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EXECUTIVE SUMMARY

This report has been prepared in accordance with instructions from Russell Homes Ltd, to prepare a “Mineral Resource Assessment” report in support of a planning application for a proposed residential development on land at Stansty Chain Road, Wrexham.

The site lies partly in an area designated under the existing Unitary Development Plan as a Mineral Resource Protection Area and is also allocated as an area for housing development under the emerging Local Plan. However, it is not included within the Mineral safeguarding Area in the emerging plan.

The superficial geology shows that the site is underlain by sand and gravel and boulder clay (glacial till). The solid geology is formed of mudstones and sandstones of the Pennine Lower and Middle Coal Measures Formations. The site is underlain by coal at depth with the southern part of the site being underlain by shallow coal.

The report concludes that although the site contains a resource of sand and gravel which is safeguarded under the existing UDP, it is considered that commercial extraction is not viable due to its size and location and proximity to sensitive properties. This is supported by a review of the allocated site in the emerging Local Plan which indicates that commercial extraction of the sand and gravel is considered unlikely and that the extraction of coal is considered unviable.

It is therefore considered that the resource cannot be considered a resource of national or local importance and that the proposed development complies with the relevant mineral protection/ safeguarding policies contained the adopted UDP.

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1 INTRODUCTION

- 1.1 This report has been prepared in accordance with instructions from Russell Homes Ltd, to prepare a “Mineral Resource Assessment” in support of a planning application for a proposed residential development on land at Stansty Chain Road, Wrexham. The site is shown edged red on the drawing attached at Appendix 1.
- 1.2 The site is located to the north west of Wrexham and covers 21.97ha. It is predominantly agricultural land bisected by Stansty Chain Lane which runs across the area on a north west – south east diagonal. Isolated residential/commercial development lies to the north and in the centre of the site. The site has been allocated in the Emerging Local Plan for housing development.
- 1.3 Part of the site lies within a Mineral Safeguarding Area identified by Wrexham County Borough Council, which is the mineral planning authority (MPA) for the area. Under policy MW9 of the adopted Wrexham Unitary Development Plan 1996-2011 any application for non-mineral development requires a Mineral Resource Assessment to accompany the application.

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 geological plan at 1:50,000 scale indicates that the superficial geology on the site comprises Diamicton (Glacial Till) and glaciofluvial sand and gravel. The exposed sand and gravel lies predominantly in the west of the site and is the safeguarded resource as can be seen on the plan in Appendix 2.
- 2.3 A trial pit survey was carried out in October 2017 as part of the site investigations. Thirteen trial pits were dug to a maximum depth between 2 and 3 metres from the surface. The pits identified deposits of clayey, sand and gravel and sandy, gravelly, clay across the site, under 0.3 to 0.7m of topsoil. In two of the trial

pits, made ground was encountered. Representative examples of the trial pit logs, and the pits location are attached in Appendix 3.

Solid geology

- 2.4 The solid geology of the site beneath the superficial deposits is shown on the BGS 1:50,000 scale online bedrock plan as being mudstones and sandstones of the Pennine Lower and Middle Coal Measures Formations. These beds are not of commercial interest and are not safeguarded.
- 2.5 A Phase I Geo-Environmental Site Assessment of the site carried out in October 2017 identified that there are three shallow coal sub-crops in the extreme south of the site. The three coal sub-crops include the Beta, Gama and Delta seams. These three seams as well as an additional seam (Alpha) are present to the east of the site and appear to dip in a westerly direction therefore being present at depth across the entire site.

3 MINERAL PLANNING POLICY

- 3.1 The Development Plan for the area is the Wrexham Unitary Development Plan (UDP) 1996 - 2011, which was adopted in February 2005. That Plan will be replaced by the emerging "Wrexham Local Development Plan 2013-2028", which is scheduled for Independent Examination by the Planning Inspectorate in September 2019.

Adopted Mineral Safeguarding Policy

- 3.2 The adopted Wrexham UDP 1996-2011 states at Policy MW9:

Protection of Mineral Resources: Policy MW9

Resources of sand and gravel, and clay, will be safeguarded from non-mineral development in order to prevent the sterilisation of unworked mineral deposits. The identification of mineral resource areas gives no presumption in favour of the working of any deposits. Within such areas, non-mineral development will be strongly resisted unless a resource assessment (or other information) is provided to demonstrate that no exploitable reserves exist within the development site. Where non-mineral development which materially prejudices mineral resources is granted planning permission on land holding mineral deposits, provision should be made for the prior removal of mineral deposits.

- 3.3 The policy and the relevant area covered by it are attached at Appendix 4. The boundary of the Protection Area only covers the western part of the site and seems to follow the boundary of the exposed sand and gravel and the diamicton (glacial till) as shown on the superficial geological plan in Appendix 2. The sand and gravel is the safeguarded resource.

Emerging mineral safeguarding planning policy

- 3.4 The Wrexham Local Development Plan 2013-2028 Deposit Version was published in March 2018 and is the subject of an Independent Examination by the Planning Inspectorate in September 2019.
- 3.5 Mineral Safeguarding is addressed by Policy MW1 and a copy of the emerging policy is attached at Appendix 5. The policy states that:

Non-mineral development within Mineral Safeguarding Areas as defined on the proposals map will only be permitted where it can be demonstrated that:

1. *the mineral underlying the site does not merit extraction; or*
2. *the need for the non-mineral development outweighs the need to protect the resource; or*
3. *the mineral can be satisfactorily extracted prior to the non-mineral development; or*
4. *the development is of a temporary nature or can be removed within the timescales within which the mineral is likely to be needed, and*
5. *essential infrastructure that supports the supply of minerals would not be compromised or would be provided elsewhere*

All applications for development in these areas shall be supported by a Mineral Safeguarding Assessment.

Proposals for non- mineral development on allocated sites of 4 ha or more and which are underlain by surface coal or Category 1 sand and gravel shall be supported by Prior Extraction Assessment.

- 3.6 The mineral resources safeguarded by the policy include sand and gravel, limestone, primary and secondary coal, and clay. The Safeguarding Areas are shown on the proposal maps attached to the emerging plan.

- 3.7 The site is shown as an allocation for housing under policy H1 on Map 2 entitled Wrexham and Wrexham Industrial Estate. However, it is not shown as lying within a designated Mineral Safeguarding Area.

4 CONSTRAINTS ON MINERAL DEVELOPMENT AND COMPLIANCE WITH MINERAL SAFEGUARDING POLICIES

Adopted Unitary Development Plan

- 4.1 The Mineral Protection Area as shown on the adopted proposal maps covers only part of the site area amounting to some 10.4ha. It covers the glaciofluvial sand and gravel as indicated on the 1:50,000 superficial geological plan as shown in Appendix 2 and represents approximately 47 % of the overall site area.
- 4.2 The boundary of the Mineral Protection Area effectively divides the protected resource into two distinct areas, one to the north and one to the south. The northern resource area is close to residential and business properties on the western, northern and eastern boundaries of the area. When taking into account environmental standoffs from these sensitive properties and the design and constraints of quarry excavation, the entire northern area is already effectively, indirectly sterilised.
- 4.3 The southern area is constrained by standoffs from the A451 Mold road to the west and the A483 to the east. When taking these standoffs into account, the area available for extraction operations would be approximately 2.5 to 3.0ha.
- 4.4 The setting up of a mineral extraction operation involves significant financial investment and requires the deposit to be of suitable quality and size to support the investment. It is therefore considered that the safeguarded resource is too small to support a commercially viable mineral operation. The resource, therefore, cannot be considered to be a resource of national or local economic importance.

Emerging Plan

- 4.5 The emerging plan has allocated the site as a non-strategic housing allocation – Tier one Primary Key Settlement under emerging policy H1. The proposal maps do not show the site within a designated Mineral Safeguarding Area as defined in emerging policy MW1. Therefore, emerging policies relating to mineral safeguarding do not apply to the site.

4.6 Consequently, as part of the allocation process for housing development, the site has been reviewed in line with background paper BP 11 Minerals (January 2018). The background paper was prepared by the Council to support the Deposit Local Development Plan 2013 to 2028. The purpose of the paper was to explain how the allocations have been developed taking into account the underlying mineral resources across the county borough and how the mineral policies have been developed.

4.7 A copy of the review is attached in Appendix 6 and it concluded that:

The majority of the site is underlain by secondary coal (approximately 20.37 ha) and a small area to the south of the site (approximately 1.6 ha) is underlain by primary coal. Part of the site is underlain by Glaciofluvial sand and gravel (approximately 11 ha). A borehole in this location indicates that the coal which is present is located at depth (17.9 m) and that working it at the surface would not be viable in this location. Prior extraction of the sand and gravel may be feasible although commercial extraction is considered unlikely to be viable due to the distribution of the sand and gravel and the sterilising impact of the A541 to the West.

4.8 In addition, Planning Policy Wales sets out the requirement for LDPs to provide a clear guide to where mineral extraction is likely to be acceptable and to include policies which protect sensitive environmental features and provide environmental and resource protection. Minerals Technical Advice Note 2 also advises that development plans should identify those areas where coal working will not be acceptable.

4.9 In order to achieve both these requirements, Wrexham Council has defined Extraction Exclusion Areas to identify areas where mineral working is unlikely to be acceptable and from which commercial mineral extraction is directed away through the use of a sequential test. The site lies within the extraction exclusions area as shown on Figure 3 of BP11, a copy of which is attached in Appendix 7.

4.10 It is clear that after a review of the allocated site carried out as part of the emerging plan process, Wrexham Council consider that mineral extraction at this site as being unacceptable. The resource, therefore, cannot be considered to be a resource of national or local economic importance.

Prior extraction

4.11 As indicated above, the exploitation of the safeguarded mineral resource is considered not to be commercially viable due to its size and location and proximity to sensitive

properties. However, the review of the site undertaken as part of the emerging plan suggests that prior extraction may be feasible.

- 4.12 Prior extraction of the deposit would significantly reduce the level of the land and make it potentially unsuitable for house building. For example, the lowering of the land makes the site more susceptible to flooding and can potentially cause drainage problems. Prior extraction could also cause substantial delays in the delivery of the allocated development due to the time it would take to extract the resource and restore the land to a state suitable for the allocated use.
- 4.13 It is unlikely that any significant volumes of sand and gravel could be extracted from the site without detrimentally affecting the proposed development. As such, prior extraction is not considered to be feasible.

5 CONCLUSION

- 5.1 Although the site partially lies within a mineral protection area as identified in the adopted Wrexham UDP, the safeguarded resource is considered to be too small to be commercially exploitable. The site also lies outside the mineral safeguarding area as defined by the emerging local development plan, which given its progressed stage, can be afforded weight in the determination of the application. As part of the emerging plan process, the site has been assessed by the council and found not to be suitable for commercial mineral extraction for either sand and gravel or coal. Consequently, the resource cannot be considered to be a resource of national or local economic importance, and it is considered the site accords with mineral safeguarding policies contained in both the adopted UDP and emerging local plan.

APPENDICES

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Appendix 1
Site Boundary

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NOTES

1. DO NOT SCALE FROM THIS DRAWING
2. THIS DRAWING IS TO BE CHECKED WITH ALL OTHER RELEVANT DRAWINGS
3. ANY DISCREPANCIES CHECK WITH SIGNET URBAN DESIGN, IF IN DOUBT ASK
4. DRAWING TO BE USED FOR PURPOSES OF THE ISSUE AND NOTED ON PLAN
5. COPYRIGHT SIGNET URBAN DESIGN

DATE: 17.03.2016

SCALE: 1: 5000 @ A3

REVIEWED BY: MC

PROJECT NO: DRAWING NO: REVISION:

HG3204

SLP01

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SITE LOCATION PLAN

STANSTY CHAIN ROAD

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Appendix 2

Superficial Geology Plan

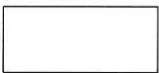
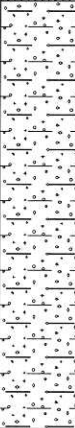
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Appendix 3

Trial Pit Logs

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				Trial Pit Log			Trialpit No TP101 Sheet 1 of 1		
Project Name: Stansty Chain Road				Project No. 11130		Co-ords: 332390.00 - 351620.00 Level:		Date 02/10/2017	
Location: Wrexham				Dimensions (m):		2.5		Scale 1:25	
Client: Russells Construction				Depth 2.00				Logged H. Costigan	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.53			Dark brown slightly gravelly very clayey SAND (Topsoil). Gravel is fine to medium sub-rounded to rounded of sandstone and quartz.		
				2.00			Red brown very clayey GRAVEL with cobbles and boulders. Gravel is fine to coarse sub-rounded of mudstone, sandstone and coal. Cobbles and boulders are sub-rounded of sandstone.		
							End of pit at 2.00 m		
Remarks: Complete.									
Stability: Partially stable.									



Trial Pit Log

Trialpit No

TP106

Sheet 1 of 1

Project Name: Stansty Chain Road

Project No.
11130Co-ords: 332390.00 - 351620.00
Level:Date
02/10/2017

Location: Wrexham

Dimensions
(m):

2.5

Depth
2.10

0.6

Scale
1:25

Client: Russells Construction

Logged
H. Costigan

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.40			Dark brown slightly gravelly very clayey SAND (Topsoil). Gravel is fine to medium sub-rounded to rounded of sandstone and quartz.
				1.16			Red brown clayey gravelly SAND. Gravel is fine to coarse sub-angular to sub-rounded of sandstone and mudstone.
				2.20			Brown sandy clayey GRAVEL. Gravel is fine to coarse sub-angular to sub-rounded of sandstone, coal and mudstone.
							End of pit at 2.10 m

Remarks: Complete.

Stability: Partially unstable.





Trial Pit Log

Trialpit No

TP107

Sheet 1 of 1

Project Name: Stansty Chain Road

Project No.
11130

Co-ords: 332390.00 - 351620.00

Level:

Date

02/10/2017

Location: Wrexham

Dimensions
(m):

2.5

Depth
2.90

0.6

Scale

1:25

Client: Russells Construction

Logged

H. Costigan

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.33			Dark brown slightly gravelly very clayey SAND (Topsoil). Gravel is fine to medium sub-rounded to rounded of sandstone and quartz.
				1.40			Brown red slightly clayey gravelly fine to medium SAND. Gravel is fine to medium sub-angular to sub-rounded of mudstone and sandstone.
				2.90			Brown sandy clayey GRAVEL. Gravel is fine to coarse sub-angular to sub-rounded of sandstone, coal and mudstone.
							End of pit at 2.90 m

Remarks: Complete.

Stability: Partially unstable.





Trial Pit Log

Trialpit No

TP113

Sheet 1 of 1

Project Name: Stansty Chain Road

Project No.
11130Co-ords: 332390.00 - 351620.00
Level:Date
02/10/2017

Location: Wrexham

Dimensions (m):
Depth 1.80
2.5
0.6Scale
1:25
Logged

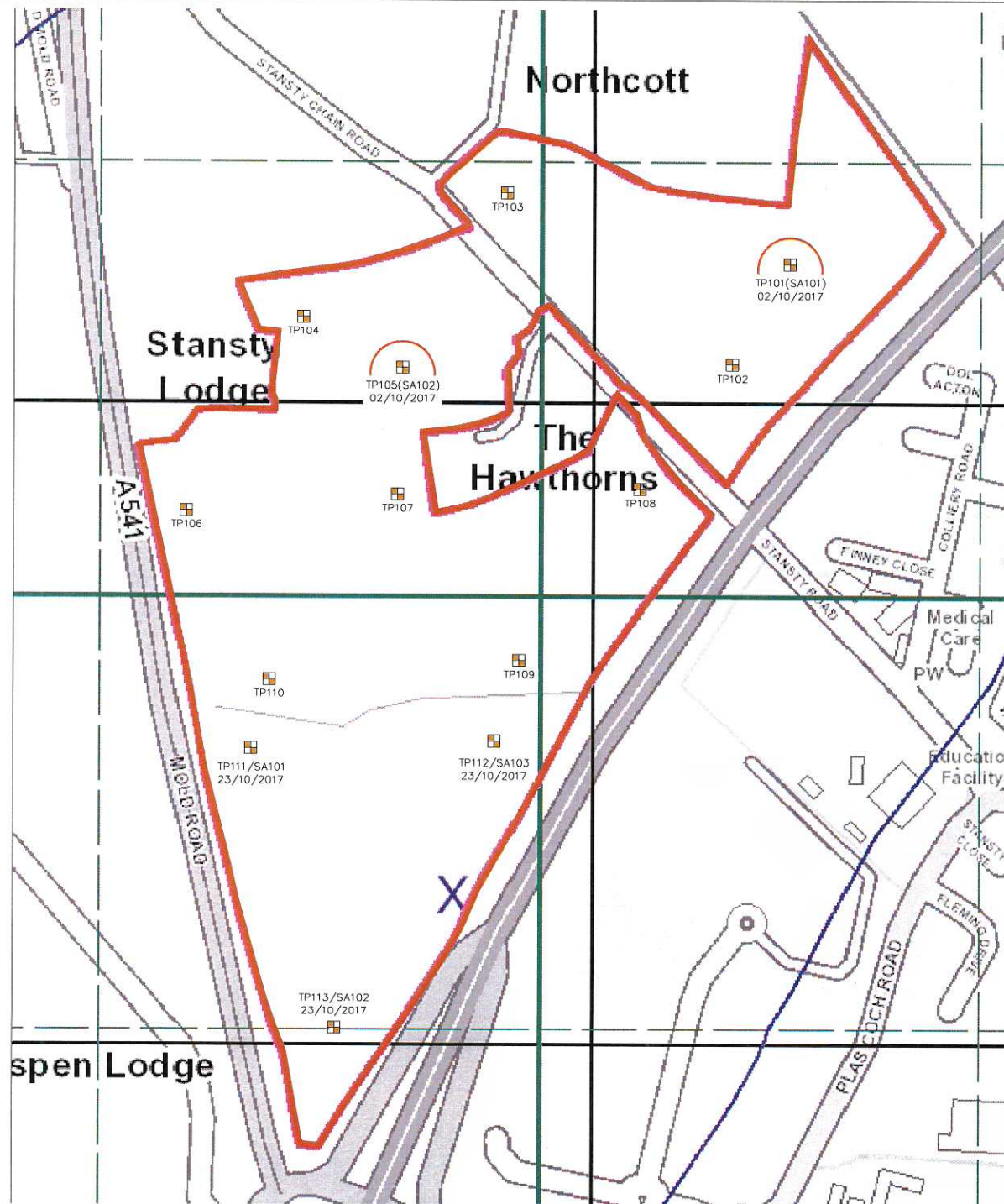
Client: Russells Construction

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.64			Dark brown slightly gravelly very clayey SAND (Topsoil). Gravel is fine to medium sub-rounded to rounded of sandstone and quartz.
				1.80			Brown clayey very sandy GRAVEL. Gravel is fine to coarse sub-angular to sub-rounded of mudstone, coal and sandstone.
							End of pit at 1.80 m

Remarks: Complete.

Stability: Stable.





Key:

Location Symbols



Approximate Trial Pit Location



Approximate Trial Pit Location and Soak-away Test Location

Notes:

P1	R2	24.11.2017	REVISION	CB	MD
P1	R1	26.10.2017	REVISION	DW	MD
P1	-	03.10.2017	DRAFT	AL	MD
Phase	Revision	Date	Issue	Drawn	Authorised
Client:			Job No:	Date:	
Russell Homes			11-130	24-11-2017	
			Drawing No:	Scale:	
			004	NTS @ A3	
Job Title:			Drawing Title:		
Stansty Chain Road, Wrexham			Exploratory Hole Location Plan		



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Appendix 4

Adopted UDP Mineral Protection Policy MW9

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Restoration of Mineral Working Sites

Policy MW8 Proposals for the winning, working and processing of minerals should make provision for securing a beneficial after use. Sites should be progressively restored in accordance with the following criteria:-

- a) where the development comprises a single, discrete phase of working, restoration of the site should commence immediately on conclusion of all extraction and processing operations;
- b) where the development comprises two or more discrete phases of working, restoration of the site should be undertaken in sequence commencing as soon as extraction and processing operations within each phase have been completed;
- c) where the development comprises overlapping phases of working which prevent full restoration of each phase in sequence, deferred restoration of some phases may be acceptable within the broader context of the site restoration as a whole.
- d) if the restoration scheme entails the return to agriculture of land which is classified as Grades 1, 2 or 3a, the site should be restored as closely as practicable to its original grade.

11.9 Planning permissions for mineral working are granted for finite periods at the end of which land affected must be restored to a beneficial and sustainable after use. Operations must generally allow for phased restoration which reduces the overall environmental impact of the working and, as far as reasonably practicable, restricts the

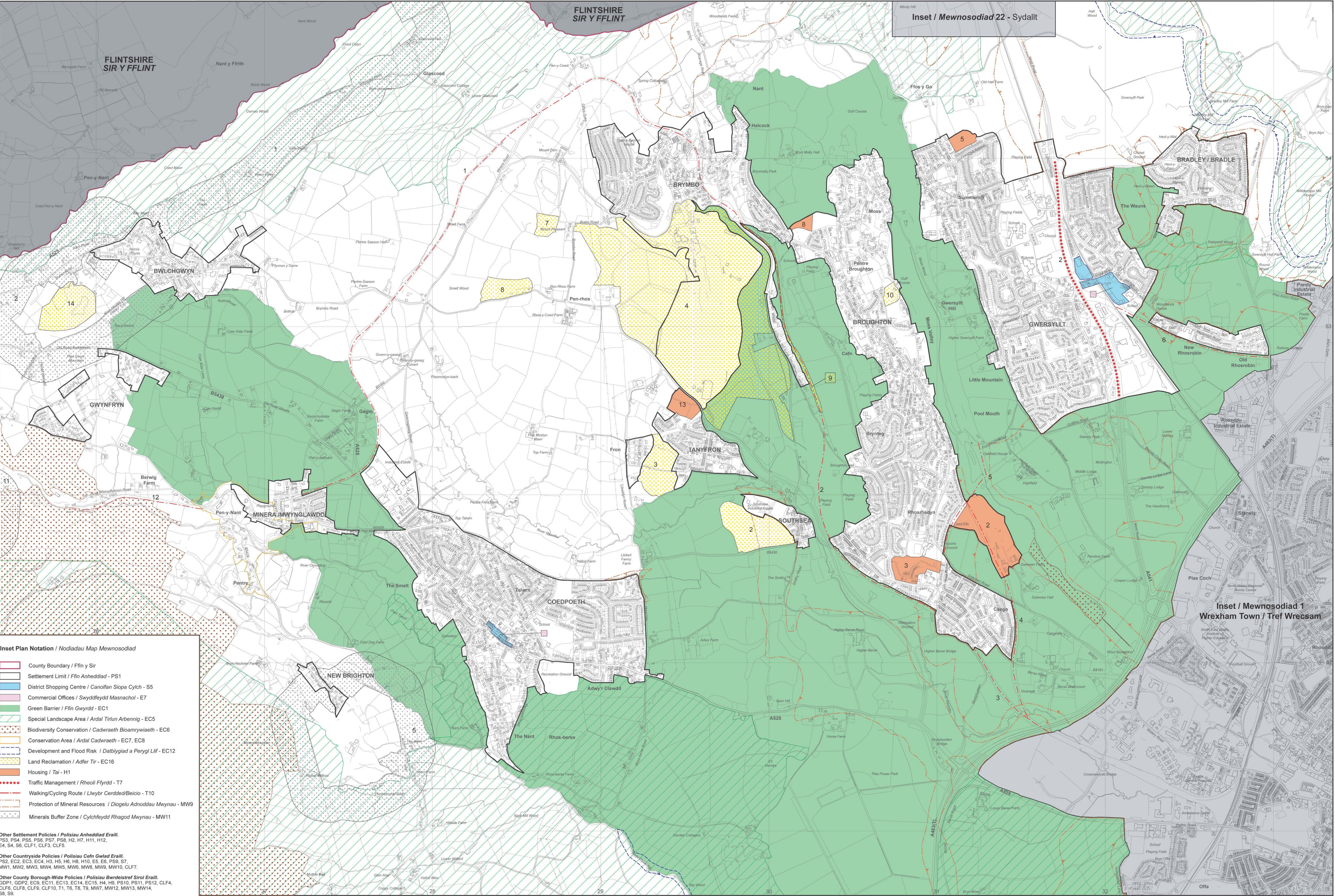
amount of land subject to mineral working at any one time. In accordance with the principles of sustainability, reclamation schemes should be to a high standard that enhances the quality of poorer land and landscapes and provides opportunities for creating sites for nature conservation interest. In addition to restoration, where a site is restored to a "green" after use then reclamation will normally also involve aftercare. The phasing of operations allows for a phased restoration that reduces the overall environmental impact of the working and minimises the loss of agricultural land. The restoration scheme must comply with the Plan's land use and environmental policies.

Protection of Mineral Resources

Policy MW9 Resources of sand and gravel, and clay will be safeguarded from non-mineral development in order to prevent the sterilisation of unworked minerals deposits. The identification of mineral resource areas gives no presumption in favour of the working of any deposits. Within such areas non-mineral development will be strongly resisted unless a resource assessment (or other information) is provided to demonstrate that no exploitable reserves exist within the development site. Where non-mineral development which materially prejudices minerals resources is granted planning permission on land holding minerals deposits, provision should be made for the prior removal of mineral deposits.

11.10 Sand and gravel extraction is the principal mineral working activity in the County Borough with output contributing significantly to the total regional output of North Wales. In addition, the County Borough's clay reserves provide a high quality

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- Inset Plan Notation / Nodiadau Map Mewnosodiad**
- County Boundary / Ffin y Sir
 - Settlement Limit / Ffin Anheddiad - PS1
 - District Shopping Centre / Canolfan Siopa Cylch - S5
 - Commercial Offices / Swyddfeydd Masnachol - E7
 - Green Barrier / Ffin Gwyrdd - EC1
 - Special Landscape Area / Ardal Tirlun Arbennig - EC5
 - Biodiversity Conservation / Cadwraeth Bioamrywiaeth - EC6
 - Conservation Area / Ardal Cadwraeth - EC7, EC8
 - Development and Flood Risk / Datblygiad a Perygl Llif - EC12
 - Land Reclamation / Adfer Tir - EC16
 - Housing / Tai - H1
 - Traffic Management / Rheoli Ffyrdd - T7
 - Walking/Cycling Route / Lwybr Cerdded/Beicio - T10
 - Protection of Mineral Resources / Diogelu Adnoddau Mwynau - MW9
 - Minerals Buffer Zone / Cylchfeydd Rhagod Mwynau - MW11

Other Settlement Policies / Polisiau Anheddiad Eraill.
PS3, PS4, PS5, PS6, PS7, PS8, H2, H7, H11, H12, E4, S4, S6, CLF1, CLF3, CLF5.

Other Countryside Policies / Polisiau Cefn Gwlad Eraill.
PS2, EC2, EC3, EC4, H3, H5, H6, H8, H10, E5, E6, PS9, S7, MW1, MW2, MW3, MW4, MW5, MW6, MW8, MW9, MW10, CLF7.

Other County Borough-Wide Policies / Polisiau Bwrdeistref Sirol Eraill.
GDP1, GDP2, EC9, EC11, EC13, EC14, EC15, H4, H9, PS10, PS11, PS12, CLF4, CLF8, CLF9, CLF10, T1, T6, T8, T9, MW7, MW12, MW13, MW14, S8, S9.

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Appendix 5

Emerging Mineral Safeguarding Policy MW1

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6 Topic, Criteria and Area Based Policies

Minerals, Waste and Renewable Energy

Policy MW1: Minerals Safeguarding

Non-mineral development within Mineral Safeguarding Areas as defined on the proposals map will only be permitted where it can be demonstrated that:

- i. The mineral underlying the site does not merit extraction, or
- ii. The need for the non-mineral development outweighs the need to protect the resource, or
- iii. The mineral can be satisfactorily extracted prior to the non-mineral development, or
- iv. The development is of a temporary nature or can be removed within the timescales within which the mineral is likely to be needed, and
- v. Essential infrastructure that supports the supply of minerals would not be compromised or would be provided elsewhere.

All applications for development in these areas shall be supported by a Mineral Safeguarding Assessment.

Proposals for non-mineral development on allocated sites of 4ha or more and which are underlain by surface coal or Category 1 sand and gravel shall be supported by a Prior Extraction Assessment.

Minerals Safeguarding

6.180 This policy expands on policy SP17, protecting potential resources from development and accords with national planning policy contained in PPW which requires Mineral Planning Authorities to safeguard access to mineral deposits which society may need.

6.181 Wrexham is underlain by a wealth of minerals which society may need, now or in the future. Minerals are a finite resource and can only be worked where they occur whereas there is often choice regarding the location of non-mineral development. In order to prevent the unnecessary sterilisation of minerals this policy safeguards undeveloped land underlain by mineral from unnecessary sterilisation. The mineral resources safeguarded include sand and gravel, limestone, primary and secondary coal, and clay. Rail heads are also safeguarded under the above policy and are identified under the Mineral Safeguarding Areas on the proposals map.

6.182 Due to the extent and distribution of mineral within the County Borough and the need for non-mineral development such as housing, it is inevitable that some sterilisation will occur and this is accepted and established through the allocation of sites underlain by mineral in the LDP. Where mineral is confirmed as being of economic importance it will be expected that the potential for extraction of the mineral prior to the non-mineral development will be explored, this is defined as 'prior extraction'. Any loss should be minimised through prior extraction where feasible. Although the policy includes provision for prior extraction, even where prior extraction is required it is likely that there will still be some sterilisation of mineral since there will be a need to ensure that development can occur over a reasonable timescale and without prejudicing the viability of the non-mineral development.

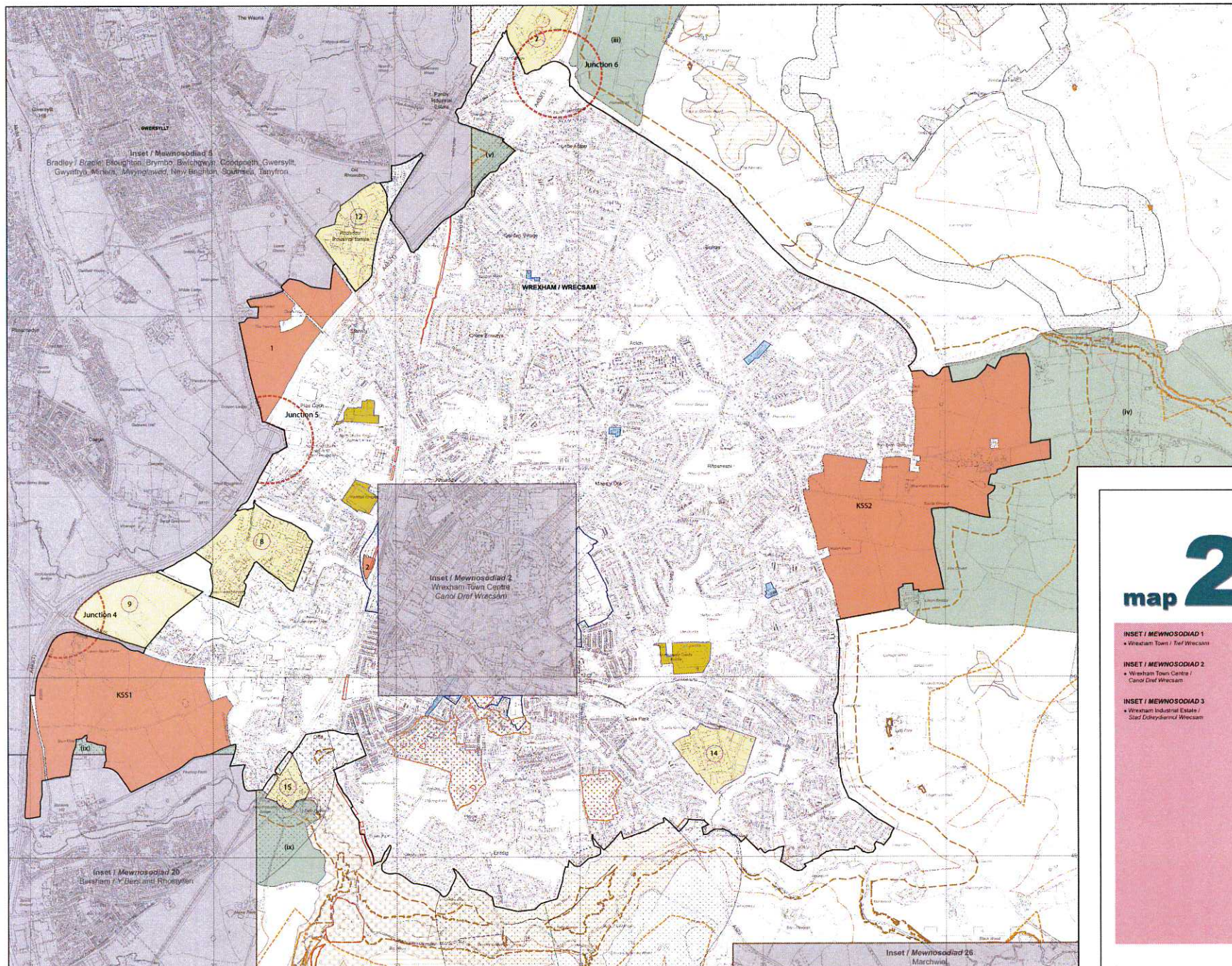
Topic, Criteria and Area Based Policies 6

6.183 The Mineral Safeguarding Assessment should contain sufficient information to enable the Local Planning Authority to establish whether the proposed development meets any of the criteria identified within the policy above. The information used to establish Mineral Safeguarding Areas was produced at a strategic level and there may be instances where mineral underlying a site does not merit safeguarding. Mineral produced as a result of prior extraction will be considered to be a windfall and need for the mineral concerned does not need to be demonstrated against regional needs.

6.184 The need for mineral underneath sites which are allocated for non-mineral development has already been considered through the development of the LDP and the need for the non-mineral development is considered to outweigh the need to protect the resource in its entirety. Nevertheless, prior extraction should be undertaken where possible and applications for non-mineral development should be supported by a Prior Extraction Assessment. The level of prior extraction which can be undertaken will depend upon the nature of mineral concerned, the size of the site, the phasing, timing, design and delivery of the non-mineral development. The allocated sites which are considered to offer the greatest potential for prior extraction are those which are at least 4ha in size and applications on these sites should be supported by a Prior Extraction Assessment. Prior extraction on smaller sites is considered much less likely to be feasible or desirable. Nevertheless, an advisory will be included on any pre-application advice issued in respect of such sites confirming the likelihood of the site being underlain by mineral of economic importance and the potential benefits of prior extraction.

Question 65

Policy MW1: Minerals Safeguarding



Inset Plan Notation / Nodiadau Map Mewnrosodiad

- Settlement Limit - SP2
- District, Local Village or Neighbourhood Centre - R1
- Employment Area - SP2, SP8, EM1
- Housing - SP1, SP3, SP4, SP5, H1
- Conservation Area - SP16
- Article 4(2) Direction - SP16
- Strategic Transport Improvement - T6
- Green Wedge - SP7
- Wrexham Town Centre Masterplan Area - R2
- Regional Sports Stadium - CF3
- Energy Mineral Extraction Exclusion Area - SP17, MW3
- Non Energy Mineral Extraction Exclusion Area - SP17, MW3
- Sand and Gravel Safeguarding Area - SP17, MW1
- Clay Safeguarding Area - SP17, MW1
- Coal (Secondary Resource) Safeguarding Area - SP14, MW1
- Minerals Buffer Zone / Byffer Mynau - SP17, MW2
- Local Search Area - Solar Energy Developments - RE2
- Scheduled Ancient Monument (SAM) - SP16
- Registered Historic Park and Garden - SP16
- TAN15 Flood Zone (C2) - SP19, DM1
- Coal and Development (High Risk) - DM1
- Local Designated Sites of Nature Conservation and Geological Importance - NE2

Scale 1:10000

map 2

INSET / MEWNOSODIAD 1
• Wrexham Town / Tref Wrecsam

INSET / MEWNOSODIAD 2
• Wrexham Town Centre / Canol Dref Wrecsam

INSET / MEWNOSODIAD 3
• Wrexham Industrial Estate / Stad Ddiwydiannol Wrecsam

wrexham & wrexham industrial estate
wrecsam a stad ddiwydiannol wrecsam

Wrexham County Borough
Local Development Plan 2013-2028
Deposit April 2018

Cynllun Datblygu Lleol 2013 - 2028
Cyngor Bwrdeistref Wrecsam
Ymgynghoriad Ebrill 2018

1. Wrexham Town / Tref Wrecsam

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Appendix 6

Review of Allocated Site WR003AS

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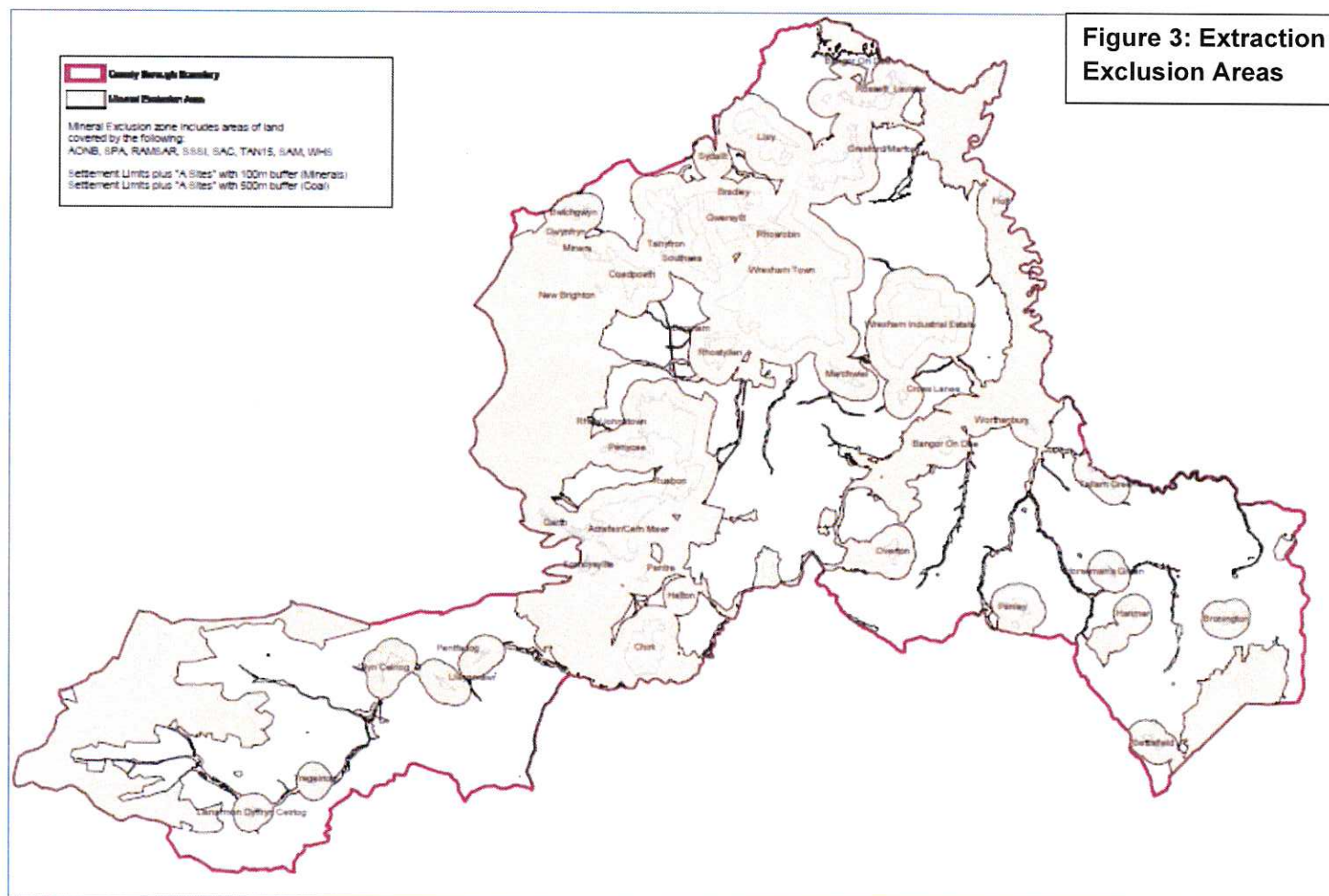
WR003AS (H1, site allocation 1)	21.97	Secondary coal and sand and gravel	The majority of the site is underlain by secondary coal (approximately 20.37ha) and a small area to the south of the site (approximately 1.6ha) is underlain by primary coal. Part of the site is underlain by glaciofluvial sand and gravel (approx.11ha). A borehole in this location indicates that the coal which is present is located at depth (17.9m) and that working it at the surface would not be viable in this location. Prior extraction of the sand and gravel may be feasible although commercial extraction is considered unlikely to be viable due to the distribution of the sand and gravel and the sterilising impact of the A541 to the west.
WR20CS (SP4)	75	Primary and secondary coal, sand and gravel and clay.	Approximately 35% of the site is underlain by Brick clay, 25% of the site is underlain with glaciofluvial sand and gravel and part of the site is within the buffer. Approximately 55% of the site is underlain by a combination of 1° and 2° shallow coal (10.4ha and 30.6ha respectively). Whilst part of the site is underlain with glaciofluvial sand and gravel, clay and coal, the resources surrounding the site to the north, east and south have already been sterilised by existing development. However, development of this site could potentially sterilise secondary coal resources to the west. It would also sterilise the sand and gravel, brick clay and coal beneath the site so prior extraction should be sought if feasible. SJ35SW37: Borehole to the north of the KSS indicates that the coal is at 20m depth. Overburden is 2.7m thick with limited thickness of sand and gravel where it occurs. It is considered unlikely that prior extraction of the site would be feasible or desirable, however, it is recommended that an investigation of the site is carried out to confirm this.
WXT019UCS (H1, site allocation 2)	0.54	Sand and gravel and clay.	The site is underlain by clay and a combination of sub-alluvial and glaciofluvial sand and gravel. The site is previously developed and bound to the east and west by the railway line. The mineral resource is already sterilised and prior extraction is considered unlikely to be feasible or desirable due to the need to retain a reasonable stand-off between the site and nearby sensitive receptors.
WXT092NUCS	1.6	Sand and	The site is underlain by glaciofluvial sand and gravel. The site is previously developed and

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Appendix 7

Extraction Exclusion Area

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