

Flintshire Deposit Local Development Plan 2015 - 2030

Background Paper 4 Minerals

September 2019

Contents

1. Introduction	2
2. Policy Context – National, Regional and Local Planning Context	4
3. Unitary Development Plan	10
4. Preferred Strategy	12
5. Safeguarding	13
6. Ensuring a Sustainable Supply of Minerals	18
7. Minimising the Impact of Extraction	30
8. Inactive Sites	31
9. Encouraging the Use of Alternatives	33
10. Neighbouring Authorities	33
11. Monitoring	34

Appendices

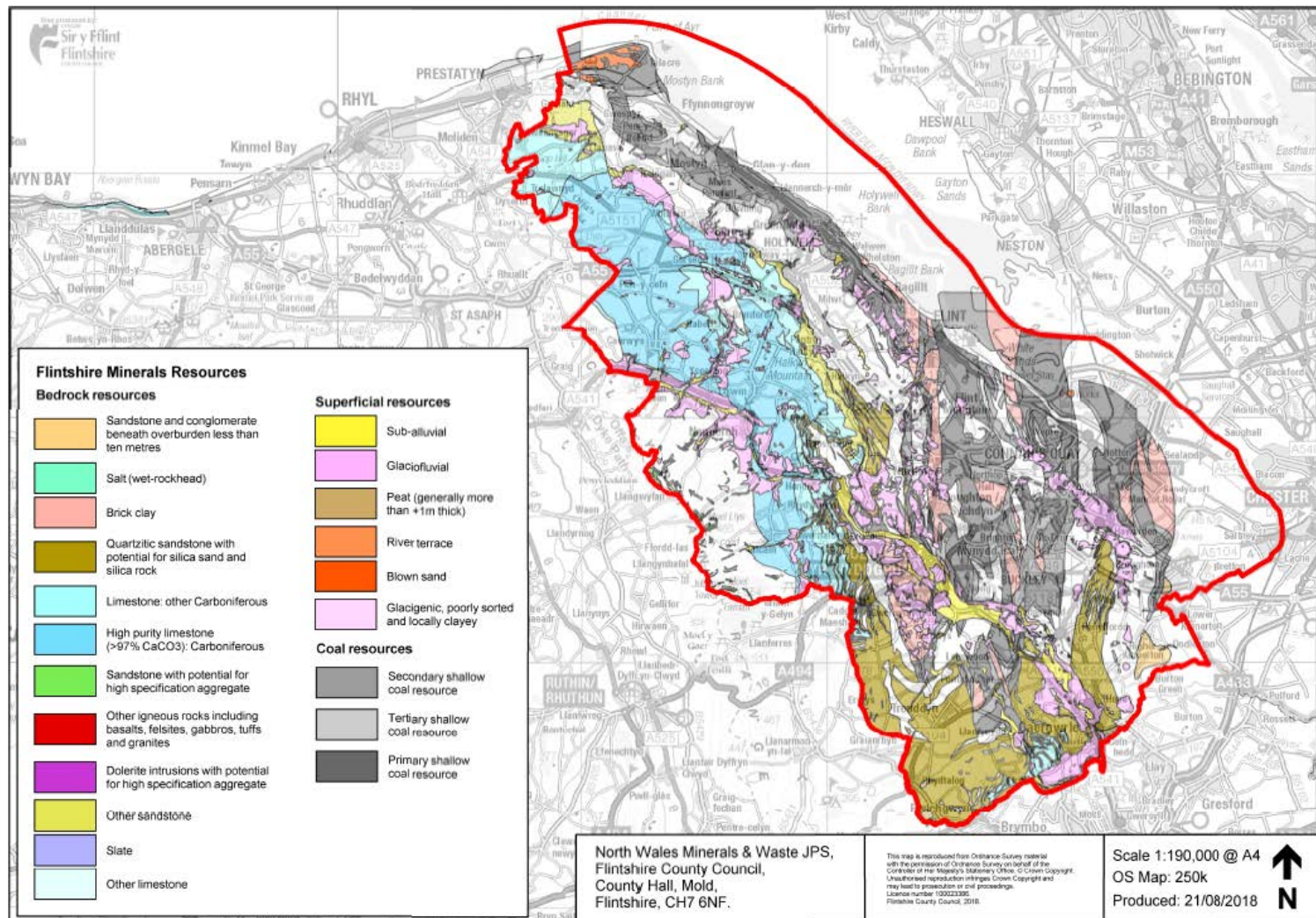
Appendix 1: Flintshire County Council Candidate Sites Minerals Assessment	35
Appendix 2: Minerals assessment of Allocations	87
Appendix 3: Assessment of Mineral Candidate Sites	89

1. INTRODUCTION

1.1. Purpose

- 1.1.1. This background paper has been prepared to support the Deposit Local Development Plan (LDP) 2015-2030. The purpose of the paper is to explain how the allocations have been developed taking into account the underlying mineral resources across the County and how the minerals policies have been developed. Minerals are an important component of the Flintshire economy with a number of strategically important sites located within the County. Minerals are critical to the construction industry, therefore their continued supply is fundamental to the delivery of the LDP. Minerals are a finite resource which can only be worked where they occur. Increasing pressure for non-mineral development is a particular challenge, especially in Counties like Flintshire where settlements have been shaped by mineral extraction.
- 1.1.2. An important consideration when developing the LDP and approach to minerals has been the extent of minerals of economic importance across the County. The built up areas of Flintshire in particular are underlain by a number of different minerals of economic importance including sand and gravel, coal (primary or secondary) and limestone, including high purity limestone. Figure 1 shows the distribution of minerals across the County.
- 1.1.3. A range of minerals have historically been worked in Flintshire, including metalliferous, coal, limestone, clay, sand and gravel, silica and sandstone. There are a number of active quarries in the County which still produce limestone and sand and gravel. Limestone is produced at a number of sites for aggregate, and for industrial uses at Cefn Mawr. Sand and gravel is still produced at Maes Mynan though there are permitted reserves at Fron Haul and Ddol Uchaf. Sand and gravel production within Flintshire is considerably less compared with Wrexham which has significant reserves remaining at Borrass Quarry. Coal and lead has historically been worked within the County and has left a legacy which must be taken into account when developing on or near sites of past working.
- 1.1.4. In addition to more traditional quarrying the County has been the subject of interest in relation to unconventional gas extraction. The County is underlain by coal measures strata which is capable of producing methane gas which could be exploited (Coal Bed Methane). Applications for exploratory boreholes have been granted in the authority and there are licence blocks within the County.
- 1.1.5. This paper draws upon the following background information:
- The North Wales Regional Technical Statement 1st Review (2014);
 - Mineral Resource Maps (2010) British Geological Survey;
 - Aggregates Safeguarding Maps (2012) British Geological Survey;
 - Onshore oil and gas activity map published by the Oil and Gas Authority;
 - Planning permissions;
 - North Wales Regional Aggregates Working Party Annual Survey 2016
 - Annual Minerals Raised Inquiries (AMRI) Surveys 2001-2014
 - Digest of UK Energy Statistics: Solid Fuels and Derived Gases (2017)

Figure 1: Mineral Resource Map of Flintshire



2. POLICY CONTEXT

2.1. Planning Policy Wales (Edition 10, December 2018)

- 2.1.1. National Policy sets out a number of important principles in relation to minerals which should be addressed through the LDP:
- Ensure sustainable supply;
 - Safeguard for future generations;
 - Minimise conflict between mineral and non-mineral development;
 - Secure suitable restoration;
 - Encourage the use of alternatives to primary resources.

2.2. Minerals Technical Advice Note 1: Aggregates

- 2.2.1. Minerals Technical Advice Note (MTAN) 1: Aggregates provides advice about how the land use planning system should contribute to the sustainable supply of aggregates and sets out detailed advice on aggregates, such as limestone, sand and gravel. Paragraph 49 requires a minimum 10 year land bank of crushed rock and minimum 7 year land bank of sand and gravel to be maintained throughout the LDP period. Where a land bank can provide for over 20 years of extraction, new allocations will not be necessary and proposals for further extraction should not be permitted apart from in exceptional circumstances. The Welsh Government has since published Policy Clarification Letter CL-05-14 which, significantly, advises that given the length of LDPs it would be prudent to come to this conclusion only if there was in place a landbank of 25 years or more. The Letter also advises that a revised methodology, using a 10 years sales average as opposed to 3, to calculate the landbank is appropriate given the economic recession. This methodology has been used to identify the level of need within the Regional Technical Statements which are discussed in paragraph 2.5.1 below.
- 2.2.2. In order to reduce the impact of aggregate production, local authorities are required to identify buffer zones around permitted and allocated mineral extraction sites (in line with Planning Policy Wales). MTAN 1 identifies the minimum distance that should be maintained for sand and gravel (100m) and hard rock quarries (200m).

2.3. Minerals Technical Advice Note 2: Coal

- 2.3.1. Flintshire is underlain by the Flintshire Coalfield which has historically been worked at depth and at surface. Minerals Technical Advice Note (MTAN) 2: Coal provides advice about how the land use planning system should contribute to the sustainable supply of coal and requires local authorities to direct coal working away from sensitive locations and indicate those areas where coal should not be worked. It states that buffer zones of 500m around existing and proposed coal working sites and areas to be safeguarded should be shown on the proposals maps unless there are exceptional circumstances as set out in the MTAN. The MTAN sets out that where coal working would destroy or degrade mature landscapes, ancient woodlands, important hedgerows or vulnerable trees it should only be permitted if reclamation benefits outweigh the demonstrable harm

of working a site. There is no forecast of need or landbank of permitted reserves for coal, as there is for aggregates.

- 2.3.2. On the 26th of October 2017 the Welsh Government issued a letter¹ regarding decarbonisation of our energy system and an intention to consult on whether national policy should no longer be supportive of certain forms of fossil fuel extraction, including coal.
- 2.3.3. PPW10 reaffirms this approach and, in particular removes the need to safeguard coal resources. PPW10 states that LPAs may wish to safeguard primary coal depending on their individual circumstances². As there are no specific circumstances within Flintshire to warrant the safeguarding of coal resources, the Minerals Safeguarding Areas no longer safeguard coal resources and the proposals maps does not contain a coal Mineral Safeguarding Area. Furthermore, there would be no requirement within Policy EN23 for sites underlain by coal to provide a prior extraction assessment.
- 2.3.4. PPW10 states that proposals for opencast, deep-mine development or colliery spoil disposal should not be permitted save in wholly exceptional circumstances where proposals would need to clearly demonstrate need, in the context of climate change reduction targets and for reasons of national energy security.³ Should an application be submitted, it is considered that there is sufficient protection in the LDP with the provisions made in Policies PC2, EN26 and other EN policies, and also PPW10 to protect the environment and amenity.

2.4. Onshore Oil and Gas

- 2.4.1. There has been interest within the County in the extraction of Coal Bed Methane and planning permissions have been granted for exploratory boreholes in the County. In addition to planning permission a site must also be covered by a licence. There are two licence blocks within Flintshire: PEDL 184 and PEDL 147, see Figure 2 below. No further licence blocks were issued during the 14th Landward Licensing Round. From October 2018 licensing functions were transferred from the Oil and Gas Authority to the Welsh Ministers. The revised policy position set out in PPW10, in relation the continued extraction of fossil fuels, it is clear that unconventional oil and gas extraction should be avoided⁴, with call in measures should LPA's be minded to approve⁵. However, while PPW10 is strongly against mineral energy development it does not prevent the possibility of an exceptional case being made, and there is nothing to prevent a planning application being submitted. Should an application be submitted, it is considered that there is sufficient protection in the LDP with the provisions made in Policies

¹ Reference MA-P-LG-369117

² PPW10 (paragraph 5.10.17): <https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf>

³ PPW10 (paragraph 5.10.14): <https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf>

⁴ PPW10 (paragraph 5.10.11): <https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf>

⁵ PPW10 (paragraph 5.10.11): <https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf>

PC2, EN26 and other EN policies, and also PPW10 to protect the environment and amenity.

2.5. Regional Context

- 2.5.1. The North Wales Aggregates Working Party produce Technical Statements which identify what level of aggregate provision needs to be made in each local authority area. The latest Statement was published in 2014 and sets out the need for Flintshire to make additional provision of 3.84 million tonnes of hard rock in conjunction with Wrexham. Allocations of 1.4 million are identified as required for sand and gravel. Allocations are also identified as being required elsewhere in the region and the sub-region, including Denbighshire. Failure to meet this shortfall in other authorities will place increased pressure on existing sites which could increase the rate at which permitted reserves are used up and as a consequence increase the need within Flintshire. To date, no consents have been given in Denbighshire though this is a matter which Denbighshire would be required to deal with as part of the review of its LDP. A further review of the RTS is expected to be published in 2020 and will be taken into account through the LDP process and any reviews of the LDP.

2.6. Local Context

- 2.6.1. The Preferred Strategy explains where growth is being directed to and why. Minerals are one consideration alongside many others which the LDP has to balance when deciding the location of growth. Growth is concentrated in the main service centres: Holywell, Flint, Shotton, Connah's Quay, Queensferry, Saltney, Mold and Buckley with local service centres accommodating modest levels of provision, more limited growth in sustainable villages and infill and local needs affordable housing in undefined villages.
- 2.6.2. Flintshire has a long history of mineral working which goes back hundreds of years. A large number of prohibition orders have been served within the County which have extinguished old mineral permissions and which have now been confirmed by the Welsh Government, as detailed within Table 1. There are a number of inactive or dormant⁶ sites within the County which, in line with Planning Policy Wales, will be the subject of a suitable strategy and, where necessary, policies to explain future proposals for the land. Table 2 provides an overview of existing sites and sites which have stopped working during the life of the UDP.

Table 1: List of Prohibition Sites

Site	Location	Site	Location
Coed Issa	Llanfynydd	Crowndale	Llanfynydd
Bryn Farm	Ffrith	Bryn Yorkin	Caergwrle
Victoria	Gronant	Mynydd Du	Treuddyn
Garreg Boet	Hendre	Park	Afonwen
Pen y Fron	Gwernaffield	Olwyn Goch	Hendre

⁶ A Dormant Site is defined by the Environment Act 1995 as a Phase I or Phase II site in, on or under which no minerals development has been carried out to any substantial extent at any time in the period beginning on 22nd February 1982 and ending with 6th June 1995 otherwise than by virtue of a planning permission which is not a relevant planning permission relating to the site.

Pen y Gelli	Lloc	Afonwen	Afonwen
Plas Winter	Halkyn	Cefn Ucha	Cilcain
Cae Rhug	Gwernaffield	Bryn Gwyn	Gwernymynydd
Hendre Spar	Cilcain	Cae Rheinall	Llanfynydd

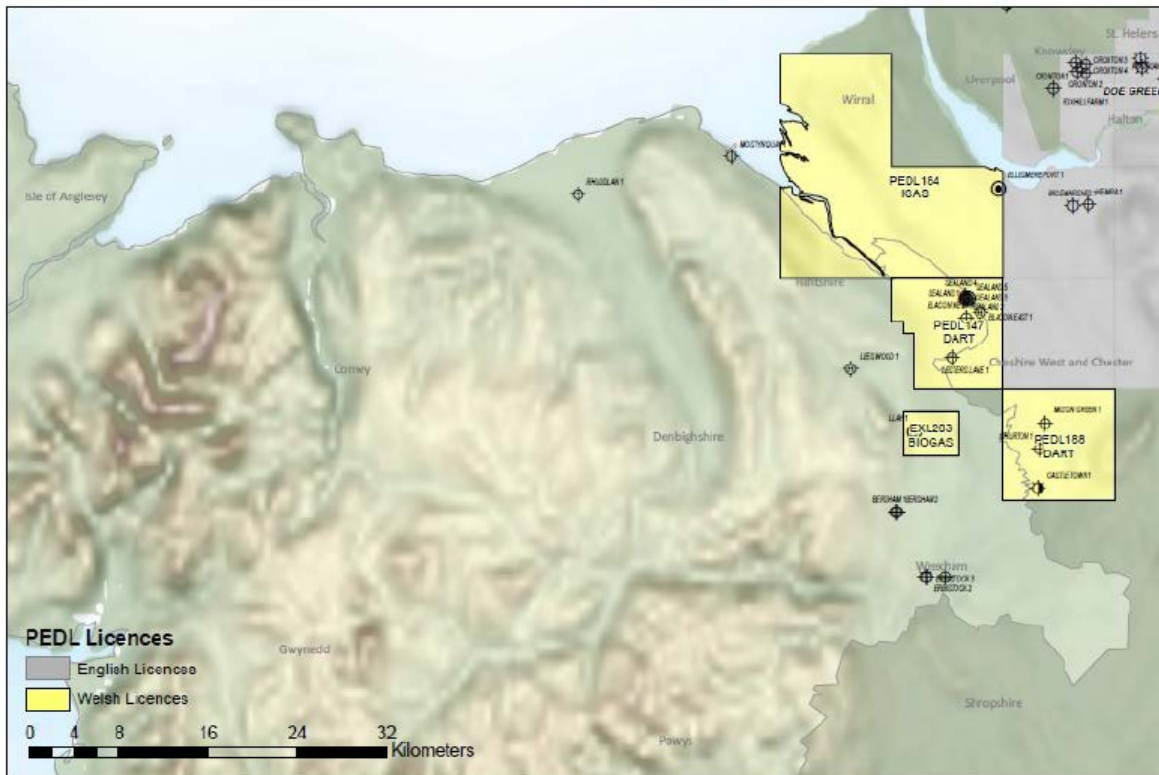
Table 2: Mineral Sites in Flintshire

Site Name	Mineral Type	Operator	Status	End Date for mineral extraction	Comments
Limestone					
Aberdo/Bryn Mawr	Limestone/Chertstone	CCP Building Products Ltd	Active	February 2042	Site has recently changed ownership. Currently being worked to produce limestone and chertstone.
Cefn Mawr	Limestone	Hanson	Active	February 2042	The site is worked to produce limestone for use at the cement kiln at Paedswod. Poorer quality material is also worked to produce aggregate.
Grange	Limestone		Dormant	February 2042	The site as not worked since the 1970s. The owner has shown no intention of working the site.
Hendre	Limestone	Tarmac	Active	December 2020	The site is a significant producer of limestone.
Pant y Pwll Dŵr	Limestone	Cemex	Active	February 2042	The site is a significant producer of limestone.
Pant	Limestone	Tarmac	Active	April 2025	Mineral has not been extracted at the site for a number of years. Stability issues have been cited.
Pen yr Henblas, Pen-y-Garreg and Bryn Blewog	Limestone	Grosvenor Estate	Inactive	February 2042	The site/s have not worked since 1996.
Trimm Rock	Limestone	Hanson	In extended aftercare secured by section 106 agreement	August 2012	Mineral extraction at the site has now ceased and restoration and substantive aftercare completed (August 2019). The site is now in extended aftercare enforced by a section 106 legal agreement for tree planting (until August 2024) and management of adjacent Coed Ddu Woodland (until August 2021)

Clay/Shale					
Liverpool Road/Catheralls	Clay/Shale	Hanson	Dormant	February 2042	The site is inactive and is the subject of a stalled ROMP which is linked with Parry's Quarry. The site has been put forwards for inclusion in the LDP for housing.
Parry's Quarry	Clay/Shale	Mold Investments Ltd	Current landfill permission	January 2034	The site is the subject of a stalled ROMP which is linked with Liverpool Road/Catheralls.
Pinfold Lane	Clay/Shale	Brock Plc	Inactive	February 2042	The operator did not comply with a request for further information in respect of the ROMP application and is now considered to have lapsed.
Stoney Beach	Clay/Shale	Brock Plc	Inactive	February 2042	Planning permission has been granted for a waste facility at the quarry which is subject to a S106 which prevents mineral extraction.
Ruby	Shale	DP Williams	Dormant	31 December 2021 Missed periodic review	The site has not been worked for a number of years and has naturally regenerated.
Sand and Gravel					
Ddol Uchaf	Sand and Gravel	Breedon	Dormant	February 2042	The site has not worked for a number of year, however the owners have indicated an intent to reactivate in the future and the site is subject to an allocation in the LDP.
Fron Haul	Sand and Gravel	Breedon	Active	21 February 2042	Sand extracted at Maes Mynan is processed at Fron Haul. There are reserves remaining at the site which will be worked once Maes Mynan is completed.
Sandy Lane Farm, Kinnerton	Sand and Gravel	T Cannon and Sons	Active	December 2022	The site is currently producing sand but operating on an ad hoc basis and is likely to require a further extension of time
Maes Mynan	Sand and Gravel	Breedon	Active	May 2023	The site currently produces concreting sand.

Figure 2:

Onshore PEDL Licences in North Wales



3. Unitary Development Plan

3.1. The Unitary Development Plan (UDP) contains a number of policies relating to minerals. These policies have been reviewed and their relevance for the LDP is discussed in the Table 3 below.

Table 3: Consideration of UDP policies for the LDP

Policy	Comment	Recommendation for the LDP
MIN 1 Guiding Minerals Development	Confirms preference for the use of secondary aggregates and recycled materials and a preference to deepening or lateral extension of existing workings.	Since the adoption of the UDP a need for crushed rock and sand and gravel within the County has been identified. Specific allocations will therefore need to be made within the LDP for crushed rock and sand and gravel.
MIN 2 Minerals Development	Provides some spatial criteria based policy against which an application for extraction would be considered.	As above, allocations will need to be made for crushed rock and sand and gravel extraction. Criteria will still be required against which proposals can be assessed in the event that an application comes forwards outside an allocated site.
MIN3 Controlling	Provides additional criteria against which mineral extraction would be considered.	Criteria will still be required against which proposals for mineral extraction would be assessed.

Minerals Operations		
MIN4 Restoration and Aftercare	Secures restoration and aftercare in minerals development. Does not specify what an appropriate after-use may be.	Restoration will still need to be secured, however, this does not need to be a standalone policy and should indicate suitable after uses for sites.
MIN5 Dormant, Inactive and Interim development Order Sites	Confirms the LPA's intention to ensure that such sites meet modern planning standards in their operation and restoration.	PPW requires that LDPs identify a strategy for sites which are dormant or unlikely to be worked again. Policy would only be required where the LPA is seeking to secure a specific end use for a site. Unless this is the case, consider confirming the intention to issue prohibition orders sufficient.
MIN6 Review of Mineral Permissions	Confirms the intention to serve prohibition orders.	As above. There is a degree of duplication between the two policies.
MIN7 Exploration for Minerals	Confirms the LPA's support for exploratory development.	Consider this policy to be unnecessary. Where mineral exploration is not permitted development and requires planning permission it could be considered against a general mineral policy and other policies of the LDP.
MIN8 Protection of Mineral Interests	Safeguards crushed rock and sand and gravel.	Since the UDP was adopted the BGS have published the Aggregates Safeguarding Map of Wales which will be reviewed and the safeguarding approach amended accordingly.
MIN9 Borrow Pits	The policy confirms support for borrow pits where there is demonstrable environmental benefit.	This policy repeats national policy.
MIN10 Mineral Buffer Zones	The policy applies buffers around mineral sites in accordance with MTAN 1.	The buffer zones will need to be revised in light of the closure and subsequent restoration of a number of quarries.

4. Preferred Strategy

- 4.1.1. The Preferred Strategy sets out the strategic policy for minerals in Strategic Policy STR16. The Policy sets out the intention to protect minerals from unnecessary sterilisation; reduce conflict through the use of buffer zones; contribute towards regional supply in collaboration with Wrexham; identify those areas where mineral extraction would not be acceptable; minimise the impact of mineral extraction on communities and the environment; secure appropriate restoration and maximise the use of secondary and recycled aggregates.

Figure 3: Strategic Minerals Policy

STR16: Strategic Planning for Minerals
Flintshire's important mineral resources will be sustainably managed by: <ul style="list-style-type: none">i. Protecting minerals from unnecessary sterilisation by directing new development away from areas underlain by mineral of economic importance or where this is not possible through the requirement for prior extraction;ii. Reducing the conflict between mineral development and sensitive development through the use of buffer zones;iii. Contributing towards the regional supply of mineral through the allocation of 1.4 million tonnes of sand and gravel and 3.84 million tonnes of crushed rock through the extension to existing quarries, in collaboration with Wrexham County Borough Council;iv. Ensuring new mineral extraction is located so as minimise impacts on communities and the environment;v. Securing appropriate restoration which can deliver specific environmental and community benefits;vi. Maximising the use of secondary and recycled aggregate.

- 4.1.2. During the consultation on the Preferred Strategy a number of comments were made by consultees regarding the approach to minerals. Generally, comments raised related to the fact that the policy was strategic and wasn't considered detailed enough. Of particular note, however, was the fact that no objections were received regarding the collaborative approach proposed between Flintshire and Wrexham with respect to crushed rock. The need to allocate sites was highlighted, as was the risk in relying on a small number of sites to meet identified needs.
- 4.1.3. At the time of writing the report, Wrexham has been through its Deposit Consultation stage. The Deposit also proposes to contribute towards regional supply of mineral through collaboration with Flintshire. This approach has also been agreed at the Councils' respective Local Development Plan Member Steering Groups prior to consultation and a Statement of Common Ground has been produced to support Wrexham County Borough Council's LDP Examination in Public.

Figure 4: Wrexham Strategic Mineral Policy

Policy SP17: Minerals Supply and Safeguarding
Minerals will be sustainably managed through: <ul style="list-style-type: none">a. The protection of minerals from unnecessary sterilisation by directing new development away from areas underlain by mineral of importance or where this is not possible, through the requirement to extract mineral prior to the non-mineral development; andb. Avoiding conflict between mineral working and sensitive development through the use of buffer zones; andc. Contributing towards meeting the regional need for aggregate minerals in collaboration with Flintshire County Council; andd. Supporting proposals for mineral extraction within the County Borough which contribute towards maintaining an adequate supply of minerals in sustainable locations including the delivery of high quality restoration and aftercare programmes which enhance and provide linkages with the natural environment.

5. Safeguarding

5.1. Introduction

- 5.1.1. PPW10 paragraph 5.14.7 sets out the requirement for Local Development Plans to safeguard minerals by protecting mineral resources from other types of development which would either sterilise them or hinder mineral extraction. Consideration has primarily been given to minerals which are worked at the surface since these would be most affected by non-mineral development. Minerals which can be worked at depth, such as some coals and unconventional oil and gas, have therefore not been considered further as part of the safeguarding process. Data sources used include the British Geological Survey (BGS) minerals resource maps which show, at the strategic level, the distribution of minerals across the County and the BGS Aggregate Safeguarding Map. The Coal Authority publish maps which show areas at risk of past mining have also been used. The Flintshire Coalfield has been exploited for centuries and left a legacy which also needs to be taken into account during development. There is a legacy of underground lead and spa mining in large areas of the County underlain by carboniferous limestone.
- 5.1.2. There are two aspects to safeguarding:
- i. Evaluation of and policy approach to sites which would be identified through the LDP; and
 - ii. Identification of areas which would be safeguarded through the LDP.

5.2. Assessment of Allocations of all developments in the LDP:

- 5.2.1. A review of all candidate sites has been undertaken to establish:
- Whether a site is underlain by mineral of economic importance;
 - Whether development of a site would affect a resource adjacent to the site;
 - What the extent of any sterilising effect would be; and
 - Whether prior extraction is likely to be feasible.
- 5.2.2. An initial review of candidate sites was undertaken in 2015 (see Appendix 1) which identified that the majority of sites put forward are underlain by surface mineral of economic importance. A traffic light system was used to broadly group sites into:
- i. No mineral of economic importance, where minerals are not relevant (white).
 - ii. Development of the site would not compromise national safeguarding objectives because, for example, the site is either already sterilised by virtue of existing sensitive development or the mineral is of less strategic importance (green).
 - iii. The development of the site may compromise national safeguarding objectives. The need for the development should be carefully considered against the need to protect the resource (orange).
 - iv. The development of the site will result in the loss of important mineral. The development of this site should only be considered where the development

of the site can be fully justified or it should be demonstrated that there is no mineral of economic importance through a site investigation (red).

- 5.2.3. During this first sieve of sites (Appendix 1) it was identified that approximately 68% of the sites put forwards are underlain by mineral of economic importance. Of this, approximately 4% were grouped as red sites. The vast majority of those sites underlain by mineral have already been sterilised to varying extents by non-mineral development and coal would be the most affected mineral, including primary coal. The assessment was undertaken prior to the publication of PPW10 which now does not require local planning authorities to safeguard coal.⁷
- 5.2.4. All sites which have been put forward for inclusion in the LDP, either at the Candidate Sites Stage or the Alternative Sites Stage have been assessed, not just in relation to minerals but against a variety of other material considerations. The sites which were considered suitable for allocation in the deposit plan have been assessed in more detail and have helped inform the safeguarding policy itself. The general strategy of the LDP has been to allocate sites within or adjacent to existing settlements. This helps minimise the loss of mineral through proximal development but also reduces opportunities for prior extraction due to the need to retain suitable distances between existing sensitive development and extraction areas and also the need to ensure a suitable development platform following any prior extraction. This approach is also consistent with the search sequence for site allocation identified in national planning policy⁸.
- 5.2.5. Generally, prior extraction has not been considered appropriate on sites less than 4ha, see Appendix 2 (Review of allocations), taking into account the distribution of the mineral concerned and the location of sensitive development. The majority of smaller sites underlain by mineral have already been sterilised by proximal development and any further sterilisation would be limited. Where sites are underlain by primary coal and are within areas identified at high risk from past coal mining activities, it is considered that the main objective should be to address any issues of stability rather than prior extraction, although stability may be secured through prior extraction. As PPW10 states that safeguarding of coal is no longer required, Policy EN23 does not require the submission of a prior extraction assessment for sites underlain by coal. The requirement for developers to address risks arising from past coal mining in Policy DM1 would secure prior extraction on sites underlain by coal where it is an appropriate means of remediation.
- 5.2.6. An assessment has been undertaken to quantify what area of relatively unconstrained land underlain by Category 1 aggregate minerals remains within the County. This aids understanding as to what impact the LDP is likely to have in terms of direct loss of mineral as a result of sterilisation. Whilst Flintshire is underlain by significant deposits of important minerals, large areas have already been sterilised by non-mineral development or would not be suitable for extraction due to constraints such as the AONB, Ecological designations and so on. The relatively unconstrained areas comprise the land outside settlement boundaries

⁷ PPW10 (paragraph 5.10.17): <https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf>

⁸ PPW10 (Paragraphs 3.37 – 3.38) : <https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf>

and nationally and internationally designated sites. The assessment carried out establishes what land area underlain by these minerals remains after settlements and significant constraints have been removed and what area would be lost as a result of bringing forward the LDP allocations, see Table 4 below.

- 5.2.7. The assessment carried out in Table 4 does not consider the depth or thickness of mineral; or the location of isolated dwellings or roads.

Table 4: Assessment of unconstrained mineral and area lost to LDP allocations

Mineral	Area outside settlements and designated sites (ha):	Approximate area lost as a result of LDP allocations (ha):	Direct Loss as a %
Sand and gravel	9,158	39.35	0.43
Limestone	9,878	0.32	0.003

- 5.2.8. Mitigation can be secured through the requirement for prior extraction, however, it is essential that the non-mineral development itself is acceptable in landscape terms and that other problems are not created by any lowering of the land such as drainage and flood risk. Some importation of inert material could help achieve an appropriate development platform, however, the availability of inert waste fluctuates over time and actual waste disposed of in inert landfill sites in North Wales is actually very limited in terms of the overall tonnage produced⁹. It is therefore recommended that the potential for prior extraction is considered at an early stage so that it can be incorporated into the overall development.
- 5.2.9. The loss of sand and gravel as a proportion of the overall sand and gravel within the County is relatively small and would be less than 1% of the total resource available outside settlements and sites constrained by national and international designations. Sand and gravel is not identified as a nationally scarce mineral, however, because of its distribution it is increasingly being sterilised by non-mineral development. Sand and gravel distribution across the region is more limited elsewhere, though there are deposits of potentially commercial significance within the west of Gwynedd and Wrexham. Cheshire also has significant deposits and is an important supplier of sand and gravel to the North West.
- 5.2.10. The assessment carried out cannot take into account factors such as depth, level of overburden, quality (for example, commercial sand and gravel extraction is composed of particles that are rich in silica, e.g. quartz, quartzite and flint) and particle size (i.e. how much fine sand, coarse sand and gravel there is). This means that the estimates of available mineral are likely to significantly overstate what is actually commercially viable mineral, particularly when the requirement

⁹ North Wales Waste Planning Monitoring Report April 2016 - <https://gov.wales/waste-planning-monitoring-report-north-wales-april-2016>

for buffer zones and compensation land are taken into account. Whilst it is accepted that there will be a loss of mineral as a result of the delivery of allocations in the LDP this increases the importance of protecting mineral resources outside existing and allocated sites.

3.1 Identifying Areas which should be safeguarded:

- 5.2.11. Flintshire is underlain by a variety of different minerals of economic importance including sand and gravels, limestones, sandstone, clay and metalliferous minerals. Safeguarding all mineral which underlies Flintshire would result in vast areas of the County being safeguarded and is considered unnecessary and potentially counterproductive. Table 5 identifies the rationale for the safeguarding of different minerals.

Aggregates

- 5.2.12. The BGS has published a national safeguarding map for Wales which, although not policy, the Welsh Government consider provides a key evidence base for Local Development Plan preparation. The map identifies Aggregate Safeguarding Areas and differentiates between different categories of aggregate minerals:
- **Category 1:** Those resources which have a national importance in Wales, for example sand and gravel (glacio-fluvial and river terrace), high purity limestone and high specification aggregate;
 - **Category 2:** Those resources which are considered to be of more local importance and which may have some regional significance, for example sub-alluvial sand and gravels, sandstone and sandstone with potential for silica sand and silica rock, igneous rocks, limestone (not high purity) and slate; and
 - **Category 3:** These resources are not identified on the maps but may be worked locally.
- 5.2.13. It is recommended that all Category 1 resources are safeguarded with the exception of sandstone due to its very limited distribution in Flintshire within an area where there is very limited development pressure. Category 2 resources have not been safeguarded due to the extensive availability of higher quality mineral elsewhere or the lack of demand. This approach is reflected in the proposals maps accompanying the deposit LDP.

Non-Aggregate Minerals

- 5.2.14. The BGS has also published a Minerals Resource Map of Wales which shows the distribution of a range of minerals, including aggregate, industrial and energy minerals. Areas underlain by primary and secondary coal have not been included in the safeguarding areas due to the revised policy approach taken in PPW10 with regards to safeguarding coal. Areas of national and international designation have been removed as well as settlements. Given the limited distribution of unconstrained clay within the County, it is recommended that it is not safeguarded clay in the LDP.

Table 5: Safeguarding Rationale

Mineral	Discussion	Conclusion
Limestone	There is an extensive outcrop of high purity limestone in Flintshire which extends from Axton in the north to Cadole in the south and beyond. Unlike other authorities in this area, much of this outcrop is unaffected by the AONB designation. There are poorer quality limestones which are currently exploited within Flintshire and which are understood to be underlain by high purity limestone. It is therefore recommended all limestone is safeguarded within the LDP.	All limestone deposits will be safeguarded within the LDP
Sand and Gravel	There are deposits of high quality sand and gravel, particularly around Mold and the Wheeler Valley, along which there are a number of extant permissions. There are very limited occurrences of poorer quality sand and gravel deposits within the County which largely coincide with the C2 flood plain. Given the distribution of sand and gravel it is recommended that the LDP focuses on Category 1 sand and gravel through its safeguarding policy.	Glaciofluvial and river terrace sand and Gravel deposits will be safeguarded in the LDP.
Coal	There are extensive deposits of primary coal within Flintshire, though significant areas have already been sterilised by non-mineral development. MTAN 2 requires that primary and secondary coal are safeguarded. However Planning Policy Wales 10 does not require coal to be safeguarded. As there are no specific circumstances with Flintshire to warrant the safeguarding of coal resources, the Minerals Safeguarding Area does not safeguard coal resources.	Coal does not need to be safeguarded through the LDP.
Metaliferrous minerals	Lead and zinc ore was historically mined in Flintshire. Uncharted mineral veins may remain, but would require an extensive geophysical, geochemical and drilling programme to identify quality and extents. Workings are generally underground at depth, surface development would not sterilise these deposits.	Do not safeguard within the LDP
Silica rock	This is localised degraded Millstone grit of high silica purity. It is not unique, but is still worked near Eryrys. There is little information on where the "degraded" silica rock occurs and therefore the entire millstone grit would have to be safeguarded, which is disproportionate and unnecessary. Prohibition orders have extinguished old planning permission, suggesting no intention to work, and therefore indicative of a lack of economic demand.	Do not safeguard within the LDP
Clay	Flintshire has a history of clay extraction, with areas of Etruria Marl Clays found around Buckley, a high quality clay for making bricks. Clay extraction has significantly declined in North Wales with the majority of quarries worked out and/or restored. The extent and distribution of this type of clay is very limited. Given the limited distribution of this type of clay it is recommended that it is not safeguarded in the LDP.	Do not safeguard within the LDP.
Sandstone with potential for high specification aggregate	There are very small, isolated occurrences of outcrops which are predominantly located on the Denbighshire side of the Clwydian's but extend into Flintshire. The deposits are located almost entirely within the AONB and are therefore highly unlikely to ever be worked.	Do not safeguard within the LDP.

6. Ensuring Sustainable Supply of Minerals

6.1. Introduction

- 6.1.1. National policy sets out the need for local development plans to provide for an adequate supply of minerals that society may need now and in the future. To help facilitate this the North Wales Regional Aggregates Working Party have published a Regional Technical Statement 1st Review (2014) document which sets out the level of need for crushed rock and sand and gravel across the region over a period of 25 years and 22 years respectively. The RTS 1st Review identifies a requirement to allocate at least 1.4 million tonnes of sand and gravel and at least 3.84 million tonnes crushed rock, shared with Wrexham. A second review is currently taking place and discussed further in paragraph 6.4.31.
- 6.1.2. PPW10 sets out the requirement for LDPs to provide a clear guide to where mineral extraction is likely to be acceptable and include policies which protect sensitive environmental features and provide environmental and resource protection. Commercial mineral extraction is unlikely to be acceptable within or adjacent to settlements and MTAN 1 and MTAN 2 contain advice regarding the minimum distance between mineral workings and settlements: 500m in the case of coal, 200m in relation to crushed rock and 100m in relation to sand and gravel and other mineral types where blasting is not required. PPW seeks to direct mineral working away from European and Nationally designated sites such as Ramsar sites, Areas of Outstanding Natural Beauty (AONBs), Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSI).
- 6.1.3. Wrexham have addressed the above requirement through the identification of Extraction Exclusion Areas (EEA) and this approach has also been considered for the Flintshire LDP. However, the Welsh Government has recently consulted on its intention to drastically change its approach to coal, including onshore oil and gas which would remove the need to identify such areas for energy minerals. In relation to aggregate minerals, it is proposed to allocate sites for mineral extraction and this is considered a robust way of guiding new mineral extraction in the County, removing the need to identify EEAs.

6.2. Crushed Rock

- 6.2.1. Crushed rock worked in North Wales is predominantly limestone, with 66% of all crushed rock being sourced from limestone quarries in North Wales in 2015. Igneous and metamorphic rock and slate made up 25% and 9% of crushed rock sales in 2015 respectively and is worked in the west of the region at a number of sites. Given the distribution and extent of igneous and metamorphic rock and slate in Flintshire and Wrexham, the most likely source of crushed rock is considered to be limestone.
- 6.2.2. Flintshire has a number of sites which currently produce limestone for aggregate, including Pant, Pant Y Pwll Dŵr, Hendre, Aberdo and Cefn Mawr. Limestone is also worked at Cefn Mawr to provide limestone for the cement at Paedswod. The tonnage of crushed rock identified by the RTS 1st Review is relatively small and is not considered sufficient to support the development of a new quarry. Therefore, the most likely means of meeting this need is through an extension to an existing quarry within Flintshire. A call for sites has been

carried out in both Flintshire and Wrexham: A number of sites were put forward for mineral extraction in Flintshire whilst no sites were put forward in Wrexham. A collaborative approach has therefore been proposed between Flintshire and Wrexham and is being pursued through the Wrexham LDP and the Flintshire LDP. At the time of writing this report Wrexham had consulted on its Deposit LDP which confirms this approach and a Statement of Common Ground between the two authorities had been prepared to provide evidence at the Wrexham LDP Examination in Public to provide certainty to the Inspector that the identified shortfall would be provided by an extension of a site or sites in Flintshire.

6.3. Assessment of Candidate Sites

- 6.3.1. The Candidate site assessment methodology developed to assess proposals for new development within the LDP is not directly relevant to the assessment of proposals for mineral extraction since minerals can only be worked where they occur and due to the need to minimise impacts on sensitive development through careful siting away from residential properties and other sensitive uses such as schools. The evidence to date indicates that allocation requirements are unlikely to be sufficient to support the development of an entirely new quarry for hard rock and therefore the location of existing quarries which could be extended is also of importance. LDPs are required to demonstrate that the strategy and policies of the LDP are viable and deliverable. Engagement with operators is an important means of ensuring that allocated sites are deliverable and has been carried out throughout the LDP process.
- 6.3.2. A Call for Sites was carried out in 2014 for all development types. In response, a number of mineral sites were put forward by operators and landowners. A targeted Call for Sites for minerals and waste was also carried out in 2017 which prompted the submission of a number of additional sites. Appendix 3 details the assessment which has been carried out for each site.

6.4. Crushed Rock Sites

- 6.4.1. A number of sites were put forwards in response to the Call for Sites which could help meet the need for crushed rock. Not all the sites would be required to meet this need and, following the initial assessment of sites, two sites are recommended for further consideration:
- i) Hendre Quarry; and
 - ii) Pant Y Pwll Dŵr Quarry.

Hendre Quarry

- 6.4.2. Hendre is a limestone quarry operated by Tarmac and has planning permission for the extraction of mineral until 31st December 2030 after receiving planning approval for an extension of time under reference 058984. This will enable Tarmac to extract the remaining permitted reserves at the site. The submission to Flintshire's Further Call for Mineral Candidate Sites to effectively extend the existing Hendre Quarry laterally to the east and to deepen the workings.

Mineral quality and distribution

- 6.4.3. The potential extension to Hendre Quarry could deliver an additional 10 million tonnes of Loggerheads Limestone (3 million tonnes within the eastern working and 7 million tonnes at depth). The proposed extension would also secure an additional 1 million tonne reserves of Cefn Mawr Limestone 'Toprock'. The current rate of extraction is 700,000 tonnes per annum. Therefore, at existing extraction rates that would provide an additional 15 years supply of limestone, in addition to the existing permitted reserves.

Residential Amenity

- 6.4.4. Pentre Lygan Uchaf farm is located 400 metres to the east of the proposed extraction area. The proposed extension would not bring the extraction area any nearer to properties close by to the north of the site.

Highways

- 6.4.5. The quarry is accessed via an unclassified County Road linking the A541 and the B5123. Due to the quarry's proximity to the A55 trunk road it is considered to be an important strategic facility supplying limestone products to both the North Wales region and the North West of England.
- 6.4.6. The extension would not increase the tonnage of material which the site could produce and so the overall vehicle number and types accessing the site would not change as a consequence. Therefore, in principle, there would be no adverse highway impact arising from the extension.

Flood risk

- 6.4.7. The public highway A541 that is adjacent to the quarry lies within Zone C2: areas of the floodplain without significant flood defence infrastructure.

Visual and landscape

- 6.4.8. The site is not situated within a formal landscape designation. The site is visible from viewpoints to the south and south west of the quarry. It is not within, but is visible from the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty which is located nearly 2 km to the west of the quarry. In relation to visual impact and landscape impact, this would be assessed at the planning application stage.

Ecology

- 6.4.9. The Coed-y-felin SSSI is located immediately to the south of the quarry. The proposed extension would be no nearer to the SSSI. Coed Lygan-Uchaf and Coed Nant Figillt Ruby Quarry SSSI is located to the east of the quarry. The extension would effectively move the boundary of the extraction area 250 metres nearer to the SSSI. The SSSI would then lie 600 metres to the east of the extraction boundary.
- 6.4.10. There are a series of hedgerows and trees within the site which would be lost by the development. The extension of the site has the potential to impact

badgers and bats. There there is a Biodiversity Action Plan for Hendre which describes the extension area as improved grassland with hedgerows, although since it is on limestone it is more likely to be semi improved. The action plan also references neutral and limestone grassland (narrow) compartments to be managed along the eastern boundary of the quarry which would be lost so it would be important to create other limestone/neutral grasslands. There are known bat roosts and the locality has high potential for bat species generally. Between the operator's existing landholding including the quarry and continuing the funding to NWWT to manage Coed Y Felin nature reserve, there would be a number of biodiversity enhancement options for habitats and species.

Heritage and Archaeology

- 6.4.11. The site is located in close proximity to a Grade II Engine House listed as a good example of an engine house and for historical associations with the local industry. The area has a history of lead mining and therefore there may be archaeological remains that are undisturbed in the extension area. As part of the previous review of mineral planning permission for the quarry an archaeological watching brief was required during soil stripping. Should any application be submitted, and subsequently granted planning permission, it is likely that this would be a requirement of any conditional consent.

Agricultural land quality

- 6.4.12. The extension area would affect 8 hectares of grade 3a agricultural land.

Public Rights of Way

- 6.4.13. Public Right of Way 24 is located to the north and east of the proposed extension area. This would not require any diversion should the site be developed.

Aerodrome Safeguarding

- 6.4.14. The proposed extension site is not within the Aerodrome Safeguarding area but it is located 90 metres to the south of the extension and part of the existing quarry site is located within the Aerodrome Safeguarding area and therefore consultation would be required as part of the LDP process and should a planning application be submitted.

Pant Y Pwll Dŵr Quarry

- 6.4.15. Pant Y Pwll Dŵr is a limestone quarry operated by Cemex and has Planning permission for extraction of mineral until 21st February 2042. The operator put forward two sites for inclusion in the LDP: an extension to the west of the quarry and an extension to the north, extending into the overburden bund. The operator has confirmed that they no longer wish to pursue the western extension and this assessment is therefore based upon the northern extension.

Mineral quality and distribution

- 6.4.16. The operator has submitted information which demonstrates the contribution that the allocation would make over the longer term, beyond the Plan Period. At current rates of production permitted reserves would be exhausted within the Plan Period. The site yields a very high quality limestone which has a variety of different uses, including industrial applications.
- 6.4.17. The proposed extension could supply up to 13 million tonnes of limestone suitable for processing into aggregate products as a continuation of the Company's existing business. At existing rates of output this would extend the life of the quarry by approximately seventeen years. The extant permission for Pant y Pwll Dŵr Quarry will, again at current rate of sales, result in the site's exhaustion by 2031, within the proposed Plan period.
- 6.4.18. The Quarry is considered to be of critical and strategic importance to the Company due to its proximity to the A55 and it supplies much of the North West of England with aggregate. An extension would realise a further 13 million tonnes of the same high quality limestone and would extend the life of the site until approximately 2033 – 2036 depending on production rates.

Residential Amenity

- 6.4.19. The proposed northern extension would bring the extraction area of the quarry closer to residential properties and sensitive receptors to the north west of the site. The nearest residential property is located just over 100 metres to the north west of the proposed extension extraction area.
- 6.4.20. There are a small number of isolated residential properties in close proximity to the site which could be impacted by an extension. The operator has carried out an assessment, which demonstrates that at the closest properties: Pant y Groes; Parc y Prysau; and Parry's Mine, limits in MTAN 1 would not be breached. This would, however, necessitate a reduction in the maximum instantaneous explosive charge to ensure that the limits are not breached at Pant y Groes.
- 6.4.21. In addition to the impacts of blasting, the extension has the potential to have a visual impact on sensitive receptors and to create nuisance through the generation of noise and dust. Part of the extension area is currently occupied by a bund which provides visual mitigation and noise attenuation for properties to the north west of the site.

Highways

- 6.4.22. The A55 North Wales Expressway is located 1.5km to the east of the site, with access to this route from the quarry gained via local unclassified roads through Pentre Halklyn, linking to the B5123 and connecting to the A55 at the Springfield Interchange. Due to the quarry's proximity to the A55 trunk road it is considered to be an important strategic facility supplying limestone products to both the North Wales region and the North West of England.
- 6.4.23. To release mineral within the northern part of the site the access would need to be reconfigured. Although the precise location of the access is not currently

known, this is a matter which can reasonably be dealt with at the planning application stage. The extension would not increase the tonnage of material which the site could produce and so the overall vehicle number and types accessing the site would not change as a consequence. Therefore, in principle, there would be no adverse highway impact arising from the extension.

Ecology

6.4.24. The proposed site contains the bulk of the Pant y Pwll Dŵr Non-Statutory Wildlife Site (NSWS), and the winning and working of mineral would result in its loss. The majority of the proposed extension site, however, now lies beneath a recently formed overburden storage area and an ecological assessment undertaken in support of planning application no. 055218, determined that apart from a small area of semi-improved grassland, the Wildlife Site contained little of ecological interest. The development of the overburden bund resulted in the loss of the wildlife site, however, this was accepted because the overburden bund was being restored to calcareous type grassland in keeping with Halkyn mountain SSSI/SAC features. This habitat could be recreated within the margins of a specific development proposal for the winning and working of minerals within the area proposed. The site also lies partly within the Halkyn Common and Holywell Grasslands Site of Special Scientific Interest (SSSI). All of the site that lies within the SSSI is, however, part of the operational quarry and as such is disturbed on a regular basis so plays no role in the nature conservation value of the wider SSSI.

6.4.25. The proposed extension also lies in close proximity to the Halkyn Mountain Special Area of Conservation (SAC), which lies both to the north and south. As with the SSSI, however, assessments undertaken in conjunction with planning permission no. 055218 did not indicate an impact on the SAC, nor was a pathway by, which that development could have an impact on the SAC identified. The loss of this area would need to be compensated either within the site or on land within the control of the applicant. Furthermore, the final quarry restoration incorporated similar features.

Heritage and Archaeology

6.4.26. The site lies in close proximity to Parc y Prysau Tumulus B Scheduled Ancient Monument (SAM). An assessment undertaken in conjunction with planning permission no. 055218 determined that the SAM is not located within its original topographical setting due to historic mining activity and that its main value lies within the SAM itself, not its setting. The proposed extension area would not intrude on to the SAM itself, leaving it undisturbed. Furthermore as part of the permission 055218, a programme of archaeological fieldwork was implemented within the proposed area; little of significance was identified.

Visual Impact and Landscape

6.4.27. The site also lies wholly within, but at the edge of, the Holywell Common and Halkyn Mountain Registered Landscape of Outstanding Natural Interest. This is a non-statutory designation and it is considered that the proposed extension area would have no impact on any specific features within it. In relation to visual impact, this would be assessed at the planning application stage.

Common Land

- 6.4.28. The site is registered Common Land which is used by the Halkyn Graziers to graze their animals. It consists of upland grassland with small scattered areas of bracken; the land is used predominately for sheep grazing although there are signs that it is also used for casual horse riding. It incorporates two disused and fenced off mine shafts. Should the site come forward as a planning application, all the relevant consents would have to be sought from the Planning Inspectorate Wales in accordance with the Commons 2006 Act.

Public Rights of Way

- 6.4.29. There are two public rights of way; FP32 and FP36 that cross the proposed extension site, and a private road which leads to a property called Nant y Fuwch also crosses the site that would be required to be diverted

Summary of Crushed Rock Allocations at present

- 6.4.30. Given the presence of existing operational hard rock sites within Flintshire, it is considered that the requirement identified within the RTS would more sustainably be met in Flintshire from an extension to an existing quarry rather than establishing a new quarry. The above demonstrates that the quarry operators of the two named existing limestone quarries are committed to extending these sites to meet the shortfall and that the two sites will come forward as allocations within the Flintshire LDP once adopted. Subject to the necessary planning permissions, there is certainty that the shortfall of crushed rock in the region, identified in the RTS first review will be provided by an extension to an existing quarry in Flintshire.

Future implications of the RTS 2nd Review

- 6.4.31. At the time of the publication of the Preferred Strategy and Policy STR16, a review of the RTS for aggregates hadn't yet commenced. However, the review is currently on going, and it is anticipated a consultation on this document would be published in autumn 2019. Early indications are such that there will be an increased requirement for contributing to the regional supply of crushed rock (limestone). The RTS 2nd review will not be published until early 2020. The allocations for crushed rock within the LDP would go a long way to contribute to this requirement. In the event of a shortfall, this can be addressed within the first five year review of the LDP and possible other collaborations with neighbouring authorities.

6.5. Sand and Gravel

- 6.5.1. Flintshire has a small number of operational sand and gravel sites, Maes Mynan, Fron Haul and Kinnerton and an inactive site, Ddol Uchaf. The North Wales Regional Aggregate Working Party publishes an annual survey which sets out the level of sales for aggregates within the region. Due to commercial confidentiality and the limited number of sites elsewhere within the region, data for Flintshire is combined with figures for other sand and gravel producing authorities including Wrexham and Gwynedd. The 2015 annual survey identified that there was a 24 year landbank in North East Wales and a 21 year

landbank across the whole of North Wales using a 10 year sales average. A requirement for 1.4 million tonnes was identified within the RTS 1st Review. During the Call for sites two sites were put forwards for sand and gravel extraction:

- Fron Haul Quarry; and
- Ddol Uchaf Quarry

Fron Haul Quarry

- 6.5.2. Fron Haul is an active sand and gravel quarry and has planning permission for the extraction of sand and gravel, reference 037406 which requires that planning permission ceases by 31st December 2022. There are unconsented reserves of sand and gravel beneath plant and offices which are estimated to yield approximately 500,000 tonnes which would contribute to the required tonnage identified within the RTS 1st Review.
- 6.5.3. The area proposed is entirely within the existing planning permission boundary and is currently occupied by offices and fixed plant. The existing access would be used. It is considered that the proposal would have no greater impact compared with the existing approved development.

Site Location and Description

- 6.5.4. Fron Haul quarry is a sand and gravel quarry located in Afonwen and owned by Breedon Aggregates. The site is located off the A541 approximately 3 km to the east of Maes Mynan Quarry. No mineral is currently being extracted from Fron Haul, however the site remains in use as the main stockpiling and processing area for mineral extracted from the nearby Maes Mynnan quarry also operated by Breedon Aggregates. The mineral is transported by HGV from Maes Mynnan to Fron Haul where it is processed (crushed and screened) and the stockpiled prior to transportation off site. On average approximately 8,000 tonnes of mineral is leaving the site each month. No material is currently being extracted from Fron Haul, although considerable consent reserves remain.
- 6.5.5. Breedon Aggregates also operate a sand and gravel quarry to the west of this site at Maes Mynan Quarry which was granted an extension of area and of time to 2023 in 2016. However, reserves are becoming depleted at Maes Mynan and when the site has been fully worked out it is thought that the company will recommence operations at Maes Mynan.
- #### *Mineral quality and distribution*
- 6.5.6. The quality of the mineral under the office/plant area is currently unknown as no boreholes have been drilled. This is anticipated to be undertaken in 2020. However it is expected to be round 80% fine sand and 20% gravel due to the existing records for the permitted reserves on the site.
- 6.5.7. The current operators of Fron Haul quarry also operate Maes Mynan Quarry located 3km to the west of Fron Haul. This site will be worked out soon and it is expected that Fron Haul would be worked after the exhaustion of Maes Mynan Quarry. It is anticipated that there would be a continuation of annual production which have historically been in the order of 140,000 tpa.

- 6.5.8. The extension of the existing quarry would secure employment for an additional 3.5 years from the current work force based at both Maes Mynan and Fron Haul Quarries as they would all transfer to Fron Haul on the closure of Maes Mynan.
- 6.5.9. An application is anticipated to be submitted during 2021 for the extension area and it is anticipated that the site would operate for an additional 3.5 years.
- 6.5.10. The site is an important facility for the operating company and they have a commitment to work the quarry once the Maes Mynan Quarry closes.

Residential Amenity

- 6.5.11. As the proposed extension is within the confines of the existing permitted planning permission boundary, there would be no additional impact on residential amenity.

Highways

- 6.5.12. The site is accessed of the A541. There would be no change to the existing access and it is not anticipated that output rates would increase over the current output rates at Maes Mynan which is 140,000 tpa. The extant consent has an output limit of 220,000 tpa, and therefore it is not expected that there would be any additional impact on the highways from the proposed extension.

Public rights of way

- 6.5.13. The proposed extension would not have an impact on public rights of way.

Ecology

- 6.5.14. As the proposed extension is within the existing quarry boundary the proposal would have a limited impact on ecology on nature conservation interests. There are ancient and semi-ancient woodlands within 200m of the site and there are wildlife sites within 100m of the site.

Heritage and Archaeology

- 6.5.15. As the proposed extension is located within the confines of the existing quarry site, the ground surface has already been disturbed.

Visual impact and landscape

- 6.5.16. The Clwydian AONB is to the south of the quarry. It is not likely that the proposed extension would have a significant landscape impact as it is contained within the confines of the existing quarry. However, in relation to visual impact, this would be assessed at the planning application stage.

Ddol Uchaf Quarry

- 6.5.17. Ddol Uchaf is currently an inactive sand and gravel quarry. The winning and working of sand and gravel at Ddol Uchaf was granted in 1946 under an Interim Development Order (IDO). On 3rd February 1965, a further planning permission was granted at the site for the winning and working of sand and gravel. These conditions were reviewed under the provisions of the Environment Act and permission is granted on 14 January 2013 until the 21st February 2042 under planning reference 029143.

Site Location and Description

- 6.5.18. Ddol Uchaf is a sand and gravel quarry located in Afonwen and owned by Breedon Aggregates. The operations are currently dormant, and have been for approximately 18 years. The quarry was last worked c2001 and since then it has been dormant and some natural regeneration of the site has occurred. Breedon Aggregates also operate a sand and gravel quarry to the west of this site at Maes Mynan Quarry which was granted an extension of area and of time to 2023 in 2016. As stated above, Breedon Aggregate intends to work Fron Haul Quarry once Maes Mynan has been worked out, and then would move into Ddol Uchaf and recommence operations at Ddol Uchaf when reserves are depleted at Fron Haul.
- 6.5.19. The existing quarry covers an area of approximately 5.2ha, of this area around 3.1ha have been previously worked to a depth of 103.3m AOD in parts. The proposed extension would increase the site to 10ha.
- 6.5.20. The site lies immediately to the East of the village of Afonwen and is bounded by the A541 and beyond that by the Clwydian Range Area of Outstanding Natural Beauty. The site is almost completely surrounded by agricultural land, although there are some residential properties located to the East where access to the quarry is currently achieved.

Mineral quality and distribution

- 6.5.21. It is estimated that approximately 500,000 tonnes of consented mineral reserves remain at Ddol Uchaf, and it is predicated that annual extraction rates would be similar to that of Maes Mynan Quarry at 140,000 tonnes per annum.
- 6.5.22. It is expected that the proposed extension would yield 1.4 million tonnes. With estimated production rates this would extend the life of the quarry for a further 10 years over the current 3.5 years remaining in the consented permitted reserves at the quarry.
- 6.5.23. The site is an important facility for the operating company and they have a commitment to work the quarry once Fron Haul Quarry closes which is anticipated to be around 2027.

Residential Amenity

- 6.5.24. A limited number of rural dwellings and a farm lie adjacent to and/or overlook the existing boundary of the consented site. It is considered that the extension area would not be overlooked by residential properties. However, the extension would be located closer to residential properties within Afonwen. Notwithstanding this, an appropriate buffer zone would be applied in accordance with proposed Policy 24 of the LDP.

Highways

- 6.5.25. Planning permission was granted in 1989 for an access into the quarry directly off the A541. The bell-mouth of this new access has been completed up to the highway boundary but the remaining access road though the quarry has yet to be constructed. within the A541 has already been constructed. It is anticipated

that the proposed extension at Ddol Uchaf would provide a continuation of working following the closure of Fron Haul. It is anticipated that there would be no increase in vehicle movements along the A451 as the two sites would not be operating simultaneously.

Public Rights of Way

- 6.5.26. Footpath No.27 is located to the north of the existing site, and through the proposed extension. Therefore a temporary diversion of this public right of way would be required should planning permission be granted.

Ecology

- 6.5.27. The site is designated a local wildlife site (Ddol Uchaf Sand Pit) and there are a number of other local wildlife sites within 200m of the site. Ddol Uchaf SSSI is located immediately to the east of the site. The Caerwys Tufa SSSI (designated for geological features) is located 200m to the west of the extension area and the Coed Trefaith SSSI is located 800 metres to the north of the proposed extension area. The impact on ecology would be assessed at the planning application stage.

Trees

- 6.5.28. Coed Wyn which adjoins the A541 would be retained. Self-seeded, semi-mature trees which the boundary of the existing site and the proposed extension would be removed.

Heritage and Archaeology

- 6.5.29. Ancient and semi-ancient woodland to the south of the site. There may be potential archaeological interest on this site which would be assessed at the planning application stage.

Visual impact and landscape

- 6.5.30. The Clwydian Range AONB is located adjacent the Southern boundary of the site. The landscape and visual impact of any extension would be assessed at the planning application stage.

Flood risk/hydrogeology

- 6.5.31. The site is not located in an area of flood risk and therefore a flood consequence assessment would not be required. It is unlikely that the site would be dewatered as former proposals would be for wet-working as the future sand pit working area would be worked beneath the water table. These matters would be the subject of assessment at the planning application stage and included in an Environmental Statement.

6.6. Non-aggregate Minerals

Clay

6.6.1. Forecasts of need are not carried out for non-aggregate mineral types and would need to be considered on a case by case basis. Clay and shales continue to be worked at sites within England¹⁰ though sales declined significantly following the recession and have not yet recovered to pre-2008 levels. Clay and shale has been worked at a number of sites in Buckley, however, in recent years extraction has been carried out at one site for engineering purposes within the site itself. Given the availability of permitted reserves existing sites and the decline in demand for clay across the UK and the absence of sites being put forwards during the Call for Sites it is considered reasonable not to allocate sites for clay extraction in the LDP.

6.6.2. Brick making capacity has declined in the UK. However, there is renewed demand for bricks and new brick works are being developed within England, with an increasing emphasis on transporting high quality clay for specialist applications.

Silica Sand

6.6.3. Industrial Sand: Silica. Deposits of sandstone with potential for silica sand and silica rock are extensive within North East Wales. Silica sand is sourced from degraded Millstone Grit of high silica purity. It is not known where the degraded silica rock occurs, i.e. the material which can be worked to produce a silica sand. Up until 2013 silica sand was extracted from a site in Denbighshire which has now been mothballed. A number of prohibition orders have been issued for sites elsewhere in the region. No sites were put forward for inclusion in the LDP through the Call for Sites. Sales of industrial sand are relatively small with the majority of sales originating in Cheshire. Given this, it is considered reasonable not to allocate sites for silica sand extraction in the LDP.

Coal

6.6.4. Sales of coal and demand have significantly declined since the start of the century due to the closure of the last large deep mine in 2015 combined with a steep decline in demand due to government policy and market forces reducing the use of coal for electricity generation. No sites were put forward for inclusion within the LDP during the Call for Sites and no applications have been received for the extraction of coal.

6.6.5. Given the declining demand, changes to UK Energy Policy and the absence of demand for sites in Flintshire, and the new policy position in PPW10 regarding the extraction of coal and fossil fuels, it is considered reasonable that no allocations are made within the County for the extraction of coal. The continued extraction of all fossil fuels are not compatible with carbon reduction targets, and the Welsh Government Policy is therefore to avoid the continued extraction and consumption of fossil fuels. PPW10 states that proposals for opencast, deep-mine development or colliery spoil should not be permitted except in wholly exceptional circumstances.¹¹

¹⁰ Annual Minerals Raised Inquiry Survey 2005-2014

¹¹ PPW10 (paragraph 5.10.14): <https://gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf>

6.6.6. Should proposals be submitted to the Local Planning Authority for the extraction of coal, robust and credible evidence will need to be provided to the effect that the proposals conform to the energy hierarchy. While PPW10 is strongly against mineral energy development it does not prevent the possibility of an exceptional case being made, and there is nothing to prevent a planning application being submitted. Should an application be submitted, it is considered that there is sufficient protection and flexibility in the LDP with the provisions made in Policies PC2 and EN26 and also PPW10 to be able to assess such proposals.

7. Minimising the Impact of Extraction

7.1. Buffer Zones

7.1.1. PPW10 sets out the need for LDPs to minimise conflict between mineral and non-mineral development through the use of buffer zones. In respect of aggregate minerals, MTAN 1 advises the use of 100m buffers for sand and gravel (and other sites where no blasting is permitted) and 200m for crushed rock sites. There are a number of active quarries within Flintshire, as detailed in Table 2 above. Each site has been assessed and the need for a buffer considered. Table 6 below explains what buffers have been proposed and why.

Table 6: Proposed Buffer Zones

Site Name	Mineral	Buffer	Comments
Aberdo/Bryn Mawr	Limestone/Chertstone	200m	Permitted, active site.
Cefn Mawr	Limestone	200m	Permitted, active site.
Grange	Limestone	200m	The site has not worked since the 1970's and the owner has shown no intention of working the site. Although the site is a candidate for prohibition a buffer shall be retained until such time as an Order is confirmed.
Hendre	Limestone	200m	Permitted, active site.
Hendre Quarry Extension	Limestone	200m	Proposed Allocation – extension to existing quarry.
Pant	Limestone	200m	Mineral has not been extracted at the site for a number of years. Stability issues have been cited. Although the site is a candidate for prohibition a buffer shall be retained until such time as an Order is confirmed.
Pant y Pwll Dŵr	Limestone	200m	Permitted, active site.
Pant y Pwll Dŵr extension	Limestone	200m	Proposed Allocation – extension to existing quarry
Pen yr Henblas, Pen-y-Garreg and Bryn Blewog	Limestone	200m	The site/s have not worked since 1996. Although the site is a candidate for prohibition a buffer shall be retained until such time as an Order is confirmed.
Liverpool Road/Catheralls	Clay/Shale	100m	The site is inactive and is the subject of a stalled ROMP which is linked with Parry's Quarry. The site has been put forwards for inclusion in the LDP for housing. Although

			the site is a candidate for prohibition a buffer shall be retained until such time as an Order is confirmed.
Pinfold Lane	Clay/Shale	100m	The operator did not comply with a request for further information in respect of the ROMP application and is now considered to have lapsed. Although the site is a candidate for prohibition a buffer shall be retained until such time as an Order is confirmed.
Stoney Beach	Clay/Shale	100m	Planning permission has been granted for a waste facility at the quarry which is subject to a S106 which prevents mineral extraction. Although the site is being developed for an alternative use a buffer shall be retained until such time as the planning permission is implemented.
Ruby	Shale	100m	The site has not been worked for a number of years and has naturally regenerated. Although the site is a candidate for prohibition a buffer shall be retained until such time as an Order is confirmed.
Ddol Uchaf	Sand and Gravel	100m	The site is dormant but the operator has indicated that they intend to work the site in the near future.
Ddol Uchaf extension	Sand and Gravel	100m	Proposed Allocation – extension to existing quarry
Fron Haul	Sand and Gravel	100m	Permitted, active site.
Sandy Lane Farm, Kinnerton	Sand and Gravel	100m	Permitted, active site.
Maes Mynan	Sand and Gravel	100m	Permitted, active site.

7.1.2. In line with the requirements of PPW10 and MTAN 1 a buffer has been identified around the above sites and shown on the proposals maps. Since blasting is not required at any of the above sites a buffer of 100m has been used. Policy EN24 has been developed to meet the requirements of PPW10 and MTAN 1 and to enable any proposals which come forwards to be considered without compromising quarrying operations. The identification of a buffer is not a moratorium on all development but does require it to be demonstrated that any development which would occur within the buffer zone would not itself inhibit quarrying operations, either through the introduction of sensitive development or through the direct sterilisation of areas which would be required for quarrying development.

8. Inactive Sites

8.1.1. There are a number of inactive sites within the County which do not carry out mineral extraction, as detailed within Table 2. A number of these sites have been restored or secured alternative planning permissions and will therefore

not be considered further. Those sites which have not been worked for over 2 years and :

- Grange;
- Pant;
- Pen yr Henblas;
- Liverpool Road/Catheralls;
- Pinfold Lane; and
- Ruby.

- 8.1.2. The Grange site is a former limestone quarry in Pantasaph with mineral extraction ceasing a number of years ago. No activities are understood to take place at the site though there are potentially significant reserves remaining. The site is considered to be a candidate for prohibition and this will be further investigated.
- 8.1.3. Pant is a limestone quarry in Halkyn which is owned by Tarmac. An asphalt plant is currently operated out of the site though mineral has not been worked within the site, with the last blast in 2010. There are very limited reserves remaining at the site. Restoration at the site is not progressing in a timely manner, and an appropriate course of action is currently being considered by the Local Planning Authority. Restoration at the site is due to be completed by the 30th of April 2025 and the precise course of action will need to be carefully considered by the Local Planning Authority. Although the site is a potential candidate for prohibition, enforcement action may be a more appropriate way forward in this instance, depending upon the outcome of discussions with the operator.
- 8.1.4. Pen yr Henblas, which includes Pen y Garreg and Bryn Blewog, has planning permission for the extraction of limestone. Planning Application Reference 98/14/1228 proposes that no working will take place on the site until a scheme of working and restoration has been submitted and approved by the Mineral Planning Authority. The site now forms part of the Halkyn Common and Holywell Grasslands SSSI and Halkyn Mountain SAC and hosts key habitat for a range of fauna and flora including the European Statutory Protected Species Great Crested Newt. Due to conflict between planning restoration requirements and the legal conservation status of the land, active restoration has not been pursued and the site is naturally regenerating.
- 8.1.5. Liverpool Road/Catheralls is a clay site owned by Hanson and has never been worked. The planning permission is linked to the permission at Parry's Quarry which is in different ownership and which has resulted in the ROMP never being determined. The site was put forwards for housing during the LDP Call for Sites.
- 8.1.6. Pinfold Lane is a clay site owned by Brock Plc. The site has planning permission for the recycling of inert waste in part of the site and was the subject for an application for a landfill which was refused and then dismissed on appeal. The neighbouring site, Stoney Beach Quarry has secured planning permission for a range of waste management uses and the wider area is used for various industrial uses. During the Call for Sites the landowner submitted the site for employment uses. However, there is adequate provision of employment land

so not included as an allocation in the LDP. The site is however listed in Policy EN21 as a site in principle suitable for waste management uses.

- 8.1.7. Ruby Quarry is a shale site which has not been worked for a number of years and which has regenerated naturally over time. A planning permission issued in 1996 requires a number of schemes to be submitted before working can commence and the Local Planning Authority has previously agreed to extend the period for submission of the Review as the site is not operational.
- 8.1.8. It is recommended that a review of sites within Flintshire is carried out and a statement is included within the Justification of Policy EN26 confirming that sites which are dormant or inactive will be kept under review and prohibition orders issued where deemed necessary.

9. Encouraging the use of alternatives to primary resources

9.1. Introduction

- 9.1.1. PPW10 sets out that particular emphasis should be given to increasing the use of alternative products to primary materials where appropriate. The use of secondary and recycled aggregates will be supported through General DC policies and further encouraged through Policy EN27: Secondary and Recycled Aggregate where proposals for the management of secondary and recycled aggregate will be supported outside the settlement boundaries provided they meet a number of criteria listed in the policy.

10. Neighbouring Authorities

- 10.1.1. Flintshire borders a number of different authorities including Denbighshire, Wrexham and Cheshire. Geologically there are similarities between Flintshire and Wrexham with extensive coalfields, sand and gravel, Millstone Grit, limestone and clay. North Wales is a net exporter of aggregates with Flintshire being an important supplier of crushed rock both within the region and in neighbouring England. The RTS 1st Review ensures that adequate provision is made, taking into account sales over the past 10 years which include exports outside of Flintshire and the region.
- 10.1.2. The approach taken by other authorities has been considered: Powys, for example, has decided to safeguard Category 2 sand and gravel which is not being proposed in the Flintshire LDP. The quality and distribution of sand and gravel is far more limited in Powys compared to Flintshire, making poorer quality resources more important given the size and rural nature of the County.
- 10.1.3. Depending on the outcome of the RTS 2nd review there may be a need for collaboration with neighbouring authorities with respect to sand and gravel.

11. Monitoring

- 11.1.1. LDPs are required to include Core Indicators within their monitoring Framework. The following indicator is identified for minerals:
“The extent of primary land-won aggregates permitted in accordance with the Regional Technical Statement for Aggregates expressed as a percentage of the total capacity required as identified in the Regional Technical Statement (MTAN).”

APPENDIX 1

Flintshire County Council Candidate Sites Minerals Assessment (2015)

1. Purpose of this document

- 1.1. This document comprises a review of the sites contained on the Candidate Sites Register in respect of minerals. Minerals Planning Policy Wales, paragraph 13, requires local authorities to identify areas to be safeguarded on proposals maps and protect potential mineral resources from other types of permanent development which would either sterilise them or hinder extraction. The potential for extraction of minerals resources prior to undertaking other forms of development must also be considered.
- 1.2. The Candidate Sites Register identifies the sites submitted by landowners, developer, and other interested parties as potential development sites for inclusion in the LDP following a call for sites in 2015. The assessments contained in this document only consider the candidate sites in respect of minerals and do not consider any other aspects (such as ecology) which will also need to be considered prior to the Deposit stage of the LDP.

2. Methodology

- 2.1. A methodology has been developed to enable a consistent approach to be taken, however, at this stage of the LDP it would not be appropriate to definitively exclude (or otherwise) sites on the basis of the presence of minerals at this stage because there are many other factors which will affect the suitability of a site and the approach will need to evolve as the list of sites for inclusion within the LDP are finalised.

Data Sources

- 2.2. The bedrock geology, superficial geology and coal resources have all been mapped using the BGS Resource mapping data. Buffers of 100m have been applied to sand and gravel, 200m have been applied to hard rock and 500m have been applied to coal (1° and 2°). The resultant mapping is similar to the national Aggregates Safeguarding Maps produced by the BGS but enables the user to delineate between a site within a buffer and a site within a resource. The mapping also includes mineral which are not included within the national Aggregates Safeguarding Maps but which may be of local importance. It is also important to note that the national Safeguarding maps only relate to aggregates and do not therefore include all mineral of economic importance.

Traffic light system

- 2.3. A traffic light system has been used to help the non-mineral planner understand those sites for which minerals are of particular concern/importance. In order to ensure consistency when applying the traffic light system criteria have been developed which are shown in Table 1 below. At this stage of the LDP this is considered an appropriate method, however, as the LDP progresses, a more detailed consideration of sites against other LDP criteria will also be necessary.

Traffic light system and criteria

Meaning of colours

White = No mineral of economic importance, therefore minerals not relevant in this case.

Green = 4 or below

The development of the site will not compromise national safeguarding objectives because, for example, the site is either already sterilised by virtue of existing sensitive development or the mineral is of less importance.

Amber = 5 – 10

The development of the site may compromise national safeguarding objectives. The need for the development should be carefully considered against the need to protect the resource.

Red = 11 +

The development of the site will result in the loss of important mineral. The development of this site should only be considered where the development of the site can be fully justified or it should be demonstrated that there is no mineral of economic importance through a site investigation.

Minus points if adjacent (-2) or within (-3) settlement boundary

But points added if further work required

Minus points if totally sterilised

Criteria A: Type of mineral

Superficial geology:

S&G River terrace

S&G Glaciofluvial

Bedrock:

Limestone (high purity and other carboniferous)

Sandstone with potential for high PSV

Coal:

1° coal

2° coal

If the site is underlain by the minerals identified above = 3

Superficial geology

S&G glacial

Sub-alluvial

Bedrock:

Sandstone with potential for silica sand and silica rock

<p>Clay Slate</p> <p>If the site is underlain by the minerals identified above = 1</p> <p>Reasoning: The scoring above reflects the level of importance of the mineral. Limestone, for example, is identified as a category 1 resource within the National Aggregate Safeguarding Maps of Wales and is of strategic importance.</p>
<p><u>Criteria B: Size of site</u></p> <p>>3 ha = 3 1-3 ha = 1 <1ha = 0</p> <p>Reasoning: The size of the site will naturally affect how much mineral is sterilised. It will also affect whether it is viable to extract mineral prior to development.</p>
<p><u>Criteria C: Does the proposal include sensitive development?</u></p> <p>Yes = 3 No = 0</p> <p>Reasoning: Sensitive development, such as residential development, will not only sterilise mineral beneath it, but will also hinder extraction of the mineral around it due to the need to retain a suitable buffer between mineral extraction and sensitive development.</p>
<p><u>Criteria D: Will the development of the site sterilise a wider area?</u></p> <p>Yes = 3 No = 0</p> <p>Reasoning: Prior extraction may help avoid unnecessary sterilisation of mineral on the site being developed, however, it is unlikely to be feasible or desirable to require prior extraction on land adjacent to a development site.</p>

3. Key issues

Flintshire's Geology

- 3.1. Much of Flintshire is underlain by mineral of economic importance. There are significant resources of good quality coal at shallow depth, some of which have already been sterilised by non-mineral development. There are also extensive resources of limestone in the County, including high purity limestone outside of the AONB. There are also clay and sandstone resources, although the demand for these minerals has declined over time. Smaller areas of high quality sand and gravel are present within the County, have been exploited historically and are still worked at a small number of sites.

- 3.2. The implications of Flintshire's geology is that a large number of potential sites put forward for inclusion in the LDP are affected by the presence of mineral.

Proximal development

- 3.3. Non-mineral development can sterilise mineral by virtue of being close to it. Prior extraction can be considered in relation to coal and sand and gravel (for example) but can only take place on land within the control of the applicant. It is also unlikely to be desirable to require large areas of land to be worked simply because housing is going to be erected next to it (there will be impacts associated with the extraction itself). Prior extraction therefore isn't a panacea and the impact of development on adjacent mineral resources must also be considered carefully through the LDP process.

Bedrock geology

- 3.4. Prior extraction is unlikely to be desirable, so where a site falls within high purity limestone (and other carboniferous limestone), for example, it may need to be demonstrated that the need for the development outweighs the need for the resource, unless the mineral is already sterilised by virtue of proximal development (within 200m of the resource). Justification/further investigation may be necessary, although in some circumstances, for example where only a small area of a very large resource is sterilised (and the need for the allocation outweighs the need to protect the resource in terms of achieving the LDP strategy).

Superficial geology

- 3.5. Prior extraction may be feasible, particularly on larger sites (>3ha) although there is no absolute cut-off in terms of size. Factors to consider include whether a development would sterilise a wider area by virtue of proximal development or whether it is already sterilised.

Coal

- 3.6. Prior extraction (PE) may be feasible and desirable as it may address stability issues. PE can be undertaken on very small sites (<1ha), although proximity to sensitive receptors may be an issue. Due to the quality and limited distribution of 1° coal, there is a need to avoid unnecessary sterilisation. Where a site falls within 1° or 2° coal it will need to be considered against the justification test in MTAN 2 (para 39) unless it is located within an existing settlement

Site Ref	Name / location of Site	Site Area (ha)	Development or Protection	Minerals comments
AFN001	Maes Mynan Quarry, Afonwen	5.43	Minerals Development	Proposed extension to existing site. No existing residential properties in the buffer zone
AFN002	The Sawmills, A541, Afonwen	2.85	Housing & Mixed Use Development	underlain by suballuvial and glaciofluvial superficial S&G but PDL, however, the site is less than 200m from Maes Mynan Quarry existing quarry therefore would be in the buffer zone of Maes Mynan it would also potentially sterilise the sand resource to the south of Maes Mynan Quarry (also CS AFN001)
ALLT001	Land at Oakfield Cottage, Mold Road, Alltami	2.68	Housing & Mixed Use Development	underlain by primary shallow coal, consider prior extraction. Would potential sterilise a wider resource
ALLT002	Bryn Road, Alltami, Near Mold	1.04	Housing & Mixed Use Development	underlain by primary and secondary shallow coal resource - opportunities for Prior extraction should be explored Would potential sterilise a wider resource
ALLT004	Land off Alltami Road, Alltami	0.83	Housing & Mixed Use Development	underlain by primary shallow coal, consider prior extraction. Would potential sterilise a wider resource
ALLT005	Lower House Farm, White Farm Road, Alltami	0.59	Housing & Mixed Use Development	underlain by primary shallow coal, consider prior extraction. Would potential sterilise a wider resource
ALLT007	Land north of Bryn Road, Alltami	8.03	Housing & Mixed Use Development	underlain by primary and secondary shallow coal resource - opportunities for Prior extraction should be explored Would potential sterilise a wider resource
ALLT008	Land south of Alltami Farm, Alltami	1.5	Housing & Mixed Use Development	underlain by primary shallow coal, consider prior extraction. Would potential sterilise a wider resource
BAG001	Former Canton Depot, Pen y Maes Rd, Bagillt	0.98	Housing & Mixed Use Development	PDL underlain by sub alluvial superficial S&G and secondary shallow coal which may give rise to opportunities for PE. However PDL so may not be viable and the site is surrounded by other residential development therefore the resource is already sterilised. but PE may be possible
BAG002	Land adj Pen y Cefn, The Nant, Bagillt	0.79	Retail, Tourism & other Commercial	NMR
BAG003	Land at Bryn Hyfryd, Sandy Lane, Bagillt	0.32	Housing & Mixed Use Development	underlain by primary shallow coal and S&G - possibility for PE. Proposal would not sterilise resource

BAG005	Old Lead Mill, High Street, Bagillt	3.88	Housing & Mixed Use Development	On the site of Springhill Quarry still in restoration/aftercare. Underlain by shallow primary coal, glaciofluvial S&G and brick clay. Some of which may have been worked out already from previous quarrying activities if resources are still present consider PE
BAG006	Land at Gadllys Lane, Bagillt	0.65	Housing & Mixed Use Development	underlain by primary shallow coal - explore PE would not sterilise wider resource
BAG007	Wern Farm, Bagillt	1.67	Housing & Mixed Use Development	underlain by primary shallow coal - explore PE would not sterilise wider resource
BAG008	Land west of Victoria Park, Bagillt	0.92	Housing & Mixed Use Development	NMR
BAG009	Land east of Victoria Park, Bagillt	0.78	Housing & Mixed Use Development	Majority of the site underlain by sub alluvial superficial S&G could consider PE but would not sterilise wider resource as its already sterilised by existing development
BAG010	Old London Road, Bagillt	1.03	Housing & Mixed Use Development	underlain by primary shallow coal and superficial S&G - explore PE would not sterilise wider resource
BAG011	Land west of Riverbank, Bagillt	1.14	Housing & Mixed Use Development	Majority of the site underlain by sub alluvial superficial S&G could consider PE but would not sterilise wider resource as its already sterilised by existing development
BAG012	Land adj Maes Teg Farm, Pen y Maes Road, Bagillt	0.36	Housing & Mixed Use Development	underlain by secondary shallow coal, consider PE but as it's a small site and surrounded by development its unlikely to be feasible
BAG013	Ysgol Glan Aber, Bagillt	0.8	Other form of Unspecified Development	underlain by primary shallow coal, possibilities of PE should be explored but wider resource already sterilised by development
BAG014	Former Canton Depot, Pen y Maes Rd, Bagillt	1.11	Housing & Mixed Use Development	PDL underlain by sub alluvial superficial S&G and secondary shallow coal which may give rise to opportunities for PE. However PDL so may not be viable and the site is surrounded by other residential development therefore the resource is already sterilised. but PE may be possible
BAG015	Wern Farm, Bagillt	1.45	Housing & Mixed Use Development	underlain by primary shallow coal - explore PE

BRET002	Digby Farm, Bretton Lane, Bretton	3.18	Housing & Mixed Use Development	NMR
BRET003	Land south of Tri Ffordd, Chester Road, Bretton	8.65	Housing & Mixed Use Development	NMR
BROU001	Land between Retail Park, Bretton Road and A55, Broughton	4.95	Housing & Mixed Use Development	NMR
BROU003	Tanfield House, Old Warren, Broughton	0.42	Housing & Mixed Use Development	NMR
BROU004	Disused Aircraft Dispersal Area to the north of west factory	11.07	Employment Development	NMR
BROU005	Land north of Chester Road and west of newly constructed gate 3 access road, Broughton	4.48	Employment Development	NMR
BROU006	Land east side of junction of Manor Lane and Chester Road, Hawarden Industrial Park, Broughton	29.47	Employment Development	Primary Shallow Coal, 2ndary shallow coal - explore prior extraction as large site but would not sterilise wider resource
BROU007	Compound Site, west of Broughton Shopping Park	0.98	Housing & Mixed Use Development	NMR
BROU008	Land between Chester Road and slip road, north of Broughton Shopping Park	3.36	Retail, Tourism & other Commercial	NMR
BROU009	Land to east of Parc Jasmin and Bluestone Meadow, Broughton	2.12	Housing & Mixed Use Development	NMR
BROU010	Land to the south of Old Warren, Broughton	2.52	Housing & Mixed Use Development	NMR
BROU011	Warren Hall, Broughton	76.32	Housing & Mixed Use Development	Some of the site (north west section) is underlain by glaciofluvial sand and gravel explore prior extraction
BROU012	Land North of Broughton Retail Park, Broughton	1.8	Retail, Tourism & other Commercial	NMR
BROU013	Compound Site, Broughton	1.8	Housing & Mixed Use Development	NMR
BRYN001	Land rear of Delfryn, B5121, Brynford	0.52	Housing & Mixed Use Development	underlain by limestone but would not be feasible to work also underlain by glaciofluvial superficial S&G could consider Prior Extraction but may not be viable due to the size of the site

BRYN002	Land north of Hiraethog, Brynford	0.64	Housing & Mixed Use Development	underlain by limestone but would not be feasible to work also underlain by glaciofluvial superficial S&G could consider Prior Extraction but may not be viable due to the size of the site
BRYN005	Land to north and south of The Rectory, B5121, Brynford,	1.74	Housing & Mixed Use Development	underlain by high purity limestone and limestone however resource has already been sterilised by existing development
BRYN006	Former Ysgol Talfryn, Brynford	2.01	Housing & Mixed Use Development	underlain by high purity limestone however resource has already been sterilised by existing development
BUC001	Land rear of Crestonia, Liverpool Road, Buckley	0.5	Housing & Mixed Use Development	underlain by Secondary shallow coal, small site so prior extraction may not be appropriate, existing development has already sterilised the resource
BUC003	Land at Bryn Faigas Farm, Buckley	32.93	Housing & Mixed Use Development	partially underlain by primary shallow coal, large site should consider prior extraction, also could sterilise the resource to south of the site - further exploration needed
BUC004	Bistre Farm, Padeswood Road South, Buckley	29.99	Housing & Mixed Use Development	partially underlain by primary shallow coal, large site should consider prior extraction, also could sterilise the resource to south of the site - further exploration needed
BUC005	Stud Farm, Liverpool Road, Buckley	13.02	Other form of Unspecified Development	partially underlain by primary shallow coal, large site should consider prior extraction, wider resource sterilised by existing development
BUC006	Land north of A549 Chester Road & Dirty Mile, Buckley	14.56	Housing & Mixed Use Development	NMR
BUC009	Land at Rose Lane, Buckley, Flintshire	4.3	Housing & Mixed Use Development	NMR
BUC010	Land adj Hawthorn Cottage, Little Mountain Road, Buckley	0.56	Housing & Mixed Use Development	NMR
BUC012	Lower Padeswood Road, Buckley	3.26	Housing & Mixed Use Development	underlain by primary and secondary shallow coal, could sterilise a wider resource - further consideration required prior extraction should be considered]

BUC013	Land east of Precinct Way, Buckley Town Centre	1.85	Retail, Tourism & other Commercial	underlain by secondary shallow coal resource prior extraction should be considered but probably not feasible due to the size of the site and PDL and infill development within the settlement boundary. Any future largescale coal resource sterilised due to existing development
BUC014	Land adj 3 Mount Pleasant Road, Buckley	0.41	Housing & Mixed Use Development	Underlain by primary shallow coal, prior extraction should be considered but small site adjacent to the settlement boundary
BUC016	Land west of Birkdale Avenue / Aberllanerch Drive, Buckley	6.62	Housing & Mixed Use Development	Underlain by secondary shallow coal, prior extraction should be considered wider resource is already sterilised by existing development site adjacent to the settlement boundary
BUC017	Spon Green, Buckley	37.32	Housing & Mixed Use Development	underlain by primary shallow coal resource prior extraction should be considered especially since this is a large site. Any future largescale coal resource sterilised due to existing development
BUC018	Land adj Viandra, Bannel Lane, Buckley (inc Spitalfields)	0.7	Housing & Mixed Use Development	underlain by primary shallow coal resource prior extraction should be considered but probably not feasible due to the size of the site. Any future largescale coal resource sterilised due to existing development
BUC019	Land north of Pinfold Workshops, Pinfold Lane, Buckley (site 1)	4.11	Housing & Mixed Use Development	Underlain by secondary shallow coal, prior extraction should be considered wider resource is already sterilised by existing development site adjacent to the settlement boundary
BUC020	Land south of A494 (to east and west of Pinfold Lane, Buckley) (site 2)	57.6	Housing & Mixed Use Development	Proximity to Thorncliffe's at Ewloe Barns, Parry's Quarry (operational Landfill) and Brookhill Quarry. Major concerns in relation to existing operational waste sites and noise and also restored landfill and any leachate or landfill gases
BUC021	Airbus factory, junction of Drury New Road and Chester Road, Buckley	5.69	Housing & Mixed Use Development	Underlain by secondary shallow coal, prior extraction should be considered wider resource is already sterilised by existing development site partially within the settlement boundary

BUC022	Land between Liverpool Road, Ewloe Place and Catherall's Industrial Estate, Buckley	12.47	Housing & Mixed Use Development	NMR
BUC023	Land south of Bryn Awelon, Buckley	2.8	Housing & Mixed Use Development	NMR
BUC026	Land adj Viandra, Bannel Lane, Buckley	0.42	Housing & Mixed Use Development	underlain by primary shallow coal resource prior extraction should be considered but probably not feasible due to the size of the site. Any future largescale coal resource sterilised due to existing development
BUC027	Land south of The Collins, Little Mountain Road, Buckley	1.37	Housing & Mixed Use Development	NMR
BUC028	Land at Little Mountain Road / Bannel Lane. Buckley	5.54	Housing & Mixed Use Development	NMR
BUC029	Land to north west of Spon Green Farm, Megs Lane, Buckley	3.62	Housing & Mixed Use Development	underlain by primary shallow coal resource prior extraction should be considered. Any future largescale coal resource sterilised due to existing development
BUC030	Land between Bannel Lane and Chester Road, Buckley	5.07	Housing & Mixed Use Development	underlain by primary shallow coal resource prior extraction should be considered. Any future largescale coal resource sterilised due to existing development
BUC031	Well Street, Buckley	5.28	Housing & Mixed Use Development	50% of the site is underlain by secondary shallow coal. Prior extraction should be considered
BUC032	Land to south of Stud Farm, Liverpool Road, Buckley	1.76	Other form of Unspecified Development	Underlain by secondary shallow coal, prior extraction should be considered wider resource is already sterilised by existing development site adjacent to the settlement boundary
BUC033	The Stables, Well Street, Buckley	6.88	Housing & Mixed Use Development	NMR
BUC034	Old Cross Keys Farm, Chester Road, Buckley	1.15	Housing & Mixed Use Development	Underlain by secondary shallow coal, prior extraction should be considered but small site adjacent to the settlement boundary resource already sterilised by existing development
BUC035	Land between Liverpool Rd and Ewloe Place, Buckley	11.02	Housing & Mixed Use Development	NMR

BUC036	Land south of Well Street / Bryn Awelon, Buckley	7.72	Housing & Mixed Use Development	NMR
BUC037	Land between Chester Road and Bannel Lane, Buckley	4.71	Housing & Mixed Use Development	underlain by primary shallow coal resource prior extraction should be considered. Any future largescale coal resource sterilised due to existing development
BUC040	Somerfields, Buckley	0.39	Housing & Mixed Use Development	underlain by secondary shallow coal resource prior extraction should be considered but probably not feasible due to the size of the site and PDL and infill development within the settlement boundary. Any future largescale coal resource sterilised due to existing development
BUC041	Land south east of Water Treatment Works. Padeswood Road South, Buckley (2 of 3)	2.48	Housing & Mixed Use Development	Underlain by secondary shallow coal, prior extraction should be considered Could sterilise a wider resource, further investigations necessary
BUC042	Land to south Moel View Road, Padeswood Road South, Buckley (3 of 3)	4.91	Housing & Mixed Use Development	Underlain by Brick clay, extension of existing settlement boundary however could sterilise a wider coal resource to the east - further investigation required
BUC043	Pren & Aberllanerch Farms, Buckley	27.04	Housing & Mixed Use Development	majority of the site is underlain by secondary shallow coal, prior extraction should be considered, extension to the existing settlement boundary and would not sterilise a wider resource due to existing development
BUC044	Land south of Powell Road, Buckley	3.05	Housing & Mixed Use Development	Partially underlain by brick clay and primary shallow coal. Prior extraction of the coal should be considered, extension to the existing settlement boundary and would not sterilise a wider resource
BUC046	Jubilee Road, Buckley	0.45	Community Facility Development	underlain by secondary shallow coal resource prior extraction should be considered but probably not feasible due to the size of the site and PDL and infill development within the settlement boundary. Any future largescale coal resource sterilised due to existing development

CAE005	Summerhill Farm, Drovers Lane, Caerwys	1.94	Housing & Mixed Use Development	Underlain by high purity limestone but the resource has already been sterilised by the settlement of Caerwys, the candidate site would be an extension to the settlement
CAE006	Land to north of Summerhill Farm Caerwys	1.19	Housing & Mixed Use Development	Underlain by high purity limestone but the resource has already been sterilised by the settlement of Caerwys, the candidate site would be an extension to the settlement
CAE008	Land adj Telephone Exchange, Pen y Cefn Rd, Caerwys	4.49	Housing & Mixed Use Development	Underlain by high purity limestone but the resource has already been sterilised by the settlement of Caerwys, the candidate site would be an extension to the settlement
CAE009	Summerhill Farm, Drovers Lane, Caerwys	1.94	Housing & Mixed Use Development	Underlain by high purity limestone but the resource has already been sterilised by the settlement of Caerwys, the candidate site would be an extension to the settlement
CAR001	Halfway Field, Carmel, Holywell	2.17	Housing & Mixed Use Development	underlain by limestone but the resource is already sterilised by existing built development and the settlement of Carmel
CAR002	Land adj Garreglwyd, Carmel Hill, Carmel	0.58	Housing & Mixed Use Development	underlain by high purity limestone but the resource is already sterilised by existing built development and the settlement of Carmel
CIL001	Land to north of Lon Cilan, Cilcain	1.89	Housing & Mixed Use Development	underlain by high purity limestone but the resource is already sterilised by existing built development and the settlement of Cilcain - the CS would be an extension to the settlement
CIL002	Land west of Ffordd y Llan, Cilcain	4.11	Housing & Mixed Use Development	underlain by high purity limestone but the resource is already sterilised by existing built development and the settlement of Cilcain - the CS would be an extension to the settlement
CIL003	land north of Cilcain Lodge, Cilcain	0.39	Housing & Mixed Use Development	underlain by high purity limestone but the resource is already sterilised by existing built development
COE001	Land at Former Hepworths Industrial Site, Pontybodkin	3.59	Housing & Mixed Use Development	Underlain by secondary shallow coal and brick clay. Prior extraction should be considered but may not be appropriate the CS could sterilise a wider resource of coal to the west
COE003	Land to north of Bryn Awel, Coed Talon	1.32	Housing & Mixed Use Development	Underlain by secondary shallow coal. Prior extraction should be considered but may not be appropriate

COE005	Former Clwyd Alloys Works, Corwen Road, Coed Talon	2.28	Housing & Mixed Use Development	50% of the site Underlain by secondary shallow coal and 50% underlain by Sub alluvial superficial S&G resource. PDL Prior extraction should be considered but may not be appropriate
COE006	Station Yard / Depot, Coed Talon	1.49	Housing & Mixed Use Development	50% of the site Underlain by secondary shallow coal and 50% underlain by Sub alluvial superficial S&G resource. PDL Prior extraction should be considered but may not be appropriate
CON001	Quay Business Park, Dock Road, Connah's Quay	0.52	Other form of Unspecified Development	NMR inside settlement boundary and PDL
CON002	Broad Oak Holding, Mold Road, Connah's Quay, Flintshire	1.25	Housing & Mixed Use Development	Partially underlain by Glaciofluvial S&G should consider prior extraction but the site is small the wider S&G resource is already sterilised by existing development
CON003	Land off Barmouth Close, Connah's Quay	1.87	Housing & Mixed Use Development	NMR
CON004	Hillcrest, Broad Oak, Mold Road, Northop	1.03	Housing & Mixed Use Development	NMR
CON005	Top House, Golftyn Lane, Connah's Quay	1.31	Housing & Mixed Use Development	Partially underlain by brick clay and secondary shallow coal, prior extraction should be considered
CON006	Land south of Ivy Cottage, Golftyn Lane, Connah's Quay	1.13	Housing & Mixed Use Development	Partially underlain by secondary shallow coal, prior extraction should be considered
CON007	Land south west Bryn Gaer, Golftyn Lane, Connah's Quay	0.49	Housing & Mixed Use Development	Partially underlain by secondary shallow coal, prior extraction should be considered
CON008	Land to north of Hillcrest, Mold Road, Connah's Quay	2.54	Housing & Mixed Use Development	Partially underlain by Glaciofluvial S&G should consider prior extraction but the site is small
CON009	land west of Hillcrest, Mold Road, Connah's Quay	3.3	Housing & Mixed Use Development	Partially underlain by secondary shallow coal, prior extraction should be considered
CON010	Land on south side of Mold Road, Connah's Quay	3.76	Housing & Mixed Use Development	NMR
CON011	Land west of Llwyni Drive, Connah's Quay	6.17	Housing & Mixed Use Development	NMR

CON012	Land east of Kelsterton Hall, Connah's Quay	3.02	Housing & Mixed Use Development	underlain by brick , prior extraction should be considered but may not be feasible due to the size of the site
CON013	Land south and west of Kelsterton Farm, Connah's Quay	45.38	Housing & Mixed Use Development	Partially underlain by secondary shallow coal and brick clay, prior extraction should be considered
CON014	Land west of The Beeches, Wepre Lane, Connah's Quay	0.37	Housing & Mixed Use Development	NMR
CON016	Land east of Colomendy Farm, Wepre Lane, Connah's Quay	0.3	Housing & Mixed Use Development	NMR
CON017	Land north of Colomendy Farm, Wepre Lane, Connah's Quay	1.21	Housing & Mixed Use Development	NMR
CON018	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON019	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON020	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON021	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON022	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON023	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON024	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.42	Housing & Mixed Use Development	NMR
CON025	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON026	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR

CON027	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON028	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON029	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON030	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON031	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON032	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON033	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON034	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON035	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON036	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON037	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON038	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON039	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON040	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR

CON041	Land east of Colomendy Farm, Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON042	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON043	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON044	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON045	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON046	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	8.93	Housing & Mixed Use Development	NMR
CON047	Land west of Cheriton Close and west of Llwyni Drive, Connah's Quay	4.96	Housing & Mixed Use Development	NMR
CON048	Land west of Llwyni Drive, Connah's Quay.	13.76	Housing & Mixed Use Development	NMR
CON049	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay.	0.69	Housing & Mixed Use Development	NMR
CON050	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON051	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON052	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON053	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON054	Land west of Llwyni Drive, Connah's Quay.	13.76	Housing & Mixed Use Development	NMR

CON055	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON056	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON057	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON058	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON059	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON060	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON061	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay.	0.69	Housing & Mixed Use Development	NMR
CON062	Land west of Llwyni Drive, Connah's Quay.	13.76	Housing & Mixed Use Development	NMR
CON063	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay.	7.61	Housing & Mixed Use Development	NMR
CON064	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON065	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON066	Land west of Llwyni Drive, Connah's Quay.	13.76	Housing & Mixed Use Development	NMR
CON067	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay.	0.69	Housing & Mixed Use Development	NMR
CON068	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay.	7.61	Housing & Mixed Use Development	NMR

CON069	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON070	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON071	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON072	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay.	0.69	Housing & Mixed Use Development	NMR
CON073	Land west of Llwyni Drive, Connah's Quay.	13.76	Housing & Mixed Use Development	NMR
CON074	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON075	Land west of Llwyni Drive, Connah's Quay.	13.76	Housing & Mixed Use Development	NMR
CON076	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay.	7.61	Housing & Mixed Use Development	NMR
CON077	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON078	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON079	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON080	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON081	Land west of Llwyni Drive, Connah's Quay	13.76	Housing & Mixed Use Development	NMR
CON082	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON083	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay.	0.69	Housing & Mixed Use Development	NMR

CON084	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON085	Land east of Colomendy Farm, off Wepre Lane, Connah's Quay	7.61	Housing & Mixed Use Development	NMR
CON086	Land west of Llwyni Drive, Connah's Quay	13.61	Housing & Mixed Use Development	NMR
CON087	Land south of Sidney Hall Court, off Llwyni Drive, Connah's Quay	0.69	Housing & Mixed Use Development	NMR
CON088	Land at Colomendy Farm, Wepre Lane, Connah's Quay	12.19	Housing & Mixed Use Development	Majority of the site NMR however to the north east of the site there is some secondary shallow coal and glaciofluvial S&G. Prior extraction should be considered. Wider resource is already sterilised by settlement.
CON089	Land to the north west of Connah's Quay Power Station, Connah's Quay.	26.57	Employment Development	partially underlain by some primary and secondary shallow coal and some brick clay, prior extraction should be considered
CON090	Land to the south east of Connah's Quay Power Station, Connah's Quay.	12.75	Employment Development	Underlain by primary shallow coal reserves. Prior extraction should be considered
CON091	Land to the rear of 79-83 Wepre Lane, Connah's Quay	0.7	Housing & Mixed Use Development	underlain by glaciofluvial superficial S&G and Primary/secondary coal but prior extraction may not be feasible due to size of site
CON092	Land to the rear of 45 to 73 Wepre Lane, Connah's Quay	2.31	Housing & Mixed Use Development	underlain by glaciofluvial superficial S&G and Primary/secondary coal but prior extraction may not be feasible due to size of site
CON093	Highmere Drive, Connah's Quay	5	Housing & Mixed Use Development	Partially underlain by primary and secondary shallow coal resource, prior extraction should be considered
CON094	Adj Fairoaks Drive, Mold Road, Connah's Quay	2.96	Housing & Mixed Use Development	Partially underlain by Glaciofluvial S&G should consider prior extraction but the site is small the wider S&G resource is already sterilised by existing development
CON095	Ffordd Llanarth, Connah's Quay	0.64	Housing & Mixed Use Development	Underlain by primary shallow coal, however this is an infill development and prior extraction is probably not feasible but should be explored

DEE001	Land north of Weighbridge Road, DIP	88.14	Employment Development	NMR
DEE002	Land north of Shotwick Road, DIP	157.86	Employment Development	NMR
DEE003	Land south of Converter Station, Weighbridge Road, DIP	3.41	Employment Development	Primary shallow coal resource - consider prior extraction
DOB003	Wood House, south of Chester Road, Dobs Hill	2.69	Housing & Mixed Use Development	NMR some silica rock but would not be feasible to work
DOB004	former Depot, Chester Road, Dobshill	0.6	Housing & Mixed Use Development	NMR some silica rock but would not be feasible to work
DRU001	Land at Bank Lane/Meadow Avenue, Drury	1.78	Housing & Mixed Use Development	underlain by secondary shallow coal resource, wider resource already sterilised by existing development but prior extraction should be considered.
DRU002	Land at Drury New Road, Drury	7.77	Housing & Mixed Use Development	underlain by secondary shallow coal resource, wider resource already sterilised by existing development but prior extraction should be considered.
DRU004	Bank Lane Holding, Drury Lane, Drury	3.23	Housing & Mixed Use Development	underlain by secondary shallow coal resource, wider resource already sterilised by existing development but prior extraction should be considered.
DRU005	Land adjacent to Vestalia, Dinghouse, Drury	1.3	Housing & Mixed Use Development	underlain by secondary shallow coal resource, wider resource already sterilised by existing development but prior extraction should be considered.
DRU007	Dingle Farm, Drury Lane, Drury	6.11	Housing & Mixed Use Development	underlain by secondary shallow coal resource, wider resource already sterilised by existing development but prior extraction should be considered.
DRU008	Land south of Mornington Crescent, Drury	0.73	Housing & Mixed Use Development	underlain by secondary shallow coal resource, wider resource already sterilised by existing development but prior extraction should be considered but the site is small so may not be viable
DRU009	Land at Woodside Cottages, Bank Lane, Drury	0.5	Housing & Mixed Use Development	underlain by secondary shallow coal resource, wider resource already sterilised by existing development but prior extraction should be considered but the site is small so may not be viable
DRU011	land north of Homeleigh, Lower Farm, Drury	9.67	Housing & Mixed Use Development	partially underlain by secondary shallow coal, wider resource already sterilised but prior extraction should be considered

EWL002	Land on south side of Stamford Way, Ewloe	2.53	Retail, Tourism & other Commercial	NMR however a large resource of primary shallow coal is located to the south west of the site and therefore this CS could sterilise the resource - discuss with Coal Authority.
EWL003	Land between Chapel House and Landsdowne, Mold Road, Ewloe Green	0.53	Other form of Unspecified Development	The site is underlain by primary shallow coal, prior extraction should be considered
EWL004	Land off Old Hall Road/Greenhalls Avenue, Ewloe	1.98	Housing & Mixed Use Development	Partially underlain by glaciofluvial sand and gravel prior extraction should be considered wider resource already sterilised
EWL005	Land west of Kearsley Farm, Ewloe	10	Housing & Mixed Use Development	Partially underlain by glaciofluvial sand and gravel prior extraction should be considered wider resource already sterilised
EWL006	Land adj Gateway to Wales Services - A55/A494 Ewloe	4.32	Housing & Mixed Use Development	Adjacent to Parry's Quarry (operational landfill) proposed use Employment or housing?? Concerns re proximity to landfill site noise, and environmental concerns further discussion with NRW required
EWL007	Land between Old Aston Hill and A494, Ewloe	8.37	Housing & Mixed Use Development	The site is underlain by primary and secondary shallow coal resources and glaciofluvial S&G. Large site should consider prior extraction but it would not sterilise the resource surrounding the CS as this is already sterilised by existing development
EWL009	Lansdowne, Mold Road, Ewloe Green	0.78	Housing & Mixed Use Development	The site is underlain by primary shallow coal, prior extraction should be considered
EWL011	Transport Yard, Old Aston Hill, Ewloe	1	Housing & Mixed Use Development	The site is underlain by primary shallow coal resources and glaciofluvial S&G. this is a small site but still should consider prior extraction but it would not sterilise the resource surrounding the CS as this is already sterilised by existing development
EWL012	Land east side Old Liverpool Road, Ewloe Green	1.7	Housing & Mixed Use Development	The site is underlain by primary shallow coal, prior extraction should be considered
EWL013	Wood Lane, Hawarden	0.89	Housing & Mixed Use Development	The site is underlain by primary and secondary shallow coal, prior extraction should be considered

EWL014	Land to west of Kearsley Farm, Ewloe	10	Housing & Mixed Use Development	Partially underlain by glaciofluvial sand and gravel prior extraction should be considered wider resource already sterilised
EWL015	Land at Old Hall Road, Ewloe	1.97	Housing & Mixed Use Development	Partially underlain by glaciofluvial sand and gravel prior extraction should be considered wider resource already sterilised
EWL016	Land to the rear of Rose Villa, Green Lane, Ewloe Green	4.36	Housing & Mixed Use Development	The site is underlain by primary shallow coal, prior extraction should be considered
EWL017	Land west of Hilltop Close and south of Holywell Road, Ewloe	7.55	Housing & Mixed Use Development	The site is underlain by secondary shallow coal, prior extraction should be considered it could also sterilise coal resources to the north of the site
EWL020	Land adjacent and including Ivy Cottage, Green Lane, Ewloe Green	2.42	Housing & Mixed Use Development	The site is underlain by primary shallow coal, prior extraction should be considered
EWL021	Penarlag CP School, Ewloe	1.04	Other form of Unspecified Development	The site is underlain by glaciofluvial S&G, prior extraction should be considered but the site is very small so may not be feasible, would not sterilise wider resource
EWL022	Ewloe Green CP School	0.88	Other form of Unspecified Development	The site is underlain by primary shallow coal, prior extraction should be considered however this is a small site so it may not be viable would not sterilise a wider resource
EWL023	Land south of Kearsley Avenue, Ewloe	1.87	Housing & Mixed Use Development	The site is underlain by glaciofluvial S&G, prior extraction should be considered but the site is small so may not be feasible, would not sterilise wider resource
FFY001	Land opposite Former Vicarage, Llinegr Hill, Ffynnongroyw	0.83	Housing & Mixed Use Development	NMR
FFY002	Land to the west of Llinegr Hill, Ffynnongroyw	2.67	Housing & Mixed Use Development	NMR
FFY003	land adjoining Llinegr, Garth Lane, Ffynnongroyw	3.25	Housing & Mixed Use Development	mostly NMR eastern boundary underlain by sub-alluvial S&G deposits - explore prior extraction
FFY004	Land between A548, Main Road and Fairfield Avenue, Ffynnongroyw	0.52	Housing & Mixed Use Development	NMR

FFY005	Land east of tennis courts, Main Road, Ffynnongroyw	1.13	Housing & Mixed Use Development	NMR
FFY006	Land adjacent Elsinore, Fairfield Avenue, Ffynnongroyw	0.93	Housing & Mixed Use Development	NMR
FFY007	Land to the west of Fairfield Avenue, Ffynnongroyw	1.26	Housing & Mixed Use Development	NMR
FLI002	Pandy Garage, Chester Road, Oakenholt	0.49	Housing & Mixed Use Development	underlain by primary shallow coal, PDL in the settlement boundary therefore would not sterilise any wider resource
FLI003	Land at Coed Onn, Oakenholt	40.67	Housing & Mixed Use Development	underlain by primary shallow coal resource, large site which would sterilised the resource. prior extraction should be insisted due to the size of the site
FLI005	Land adjoining Manor Estate, Flint	1.58	Housing & Mixed Use Development	underlain by primary shallow coal - explore PE
FLI006	Leadbrook, Oakenholt, Flint	4.08	Housing & Mixed Use Development	underlain by primary shallow coal prior extraction should be considered
FLI007	Land at Northop Road, Flint	9.35	Housing & Mixed Use Development	underlain by a mix of resources brick clay, secondary shallow coal, river terrace and glaciofluvial S&G prior extraction should be considered
FLI008	Land at Bryn Farm, Holywell Road, Flint	28.41	Housing & Mixed Use Development	underlain by a mix of resources brick clay, primary and secondary shallow coal, glaciofluvial S&G prior extraction should be considered
FLI009	Mountain Park Hotel & Golf Course, Northop Road, Flint	20.82	Housing & Mixed Use Development	partially underlain by secondary shallow coal, and some glaciofluvial S&G with some brick clay, would not sterilise a wider resource but prior extraction should be considered
FLI010	Land south side of Chester Road, Oakenholt (site A)	1.02	Housing & Mixed Use Development	underlain by primary shallow coal resource, prior extraction should be considered
FLI012	Land at Glantraeth Farm, Chester Road, Oakenholt (Site B)	3.97	Housing & Mixed Use Development	Partially underlain by primary and secondary shallow coal, prior extraction should be considered
FLI013	Land west of Rockliffe Lane, Chester Road, Oakenholt (Site C)	2.7	Community Facility Development	Partially underlain by secondary shallow coal, prior extraction should be considered

FLI014	Land west of Greenbank Drive, Flint	3.69	Housing & Mixed Use Development	Partially underlain by brick clay and secondary shallow coal, prior extraction should be considered
FLI015	Land adj Bod Hyfryd Nursing Home, Northop Road, Flint	0.86	Housing & Mixed Use Development	underlain by brick clay
FLI016	Land north of Coed Onn Farm, Flint	8.67	Housing & Mixed Use Development	underlain by primary shallow coal resource, this would sterilise the coal resource so prior extraction should be considered
FLI017	Headlands Food, Unit 29, Castle Park Industrial Estate, Flint	2.32	Housing & Mixed Use Development	underlain by primary shallow coal - explore PE
FLI018	Land west of Nos. 1 to 52 Leadbrook Drive, Flint	4.84	Housing & Mixed Use Development	underlain by primary shallow coal resource, the wider resource has been sterilised already due to existing development prior extraction should be considered
FLI019	Land east of Coed Onn Farm and west of Leadbrook Drive, Flint	8.2	Housing & Mixed Use Development	underlain by primary shallow coal resource, this would sterilise the coal resource so prior extraction should be considered
FLI021	Land between 417 and 419 Chester Road, Oakenholt	2.77	Employment Development	underlain by primary shallow coal resource, so prior extraction should be considered
FMTN002	Land adj Ysgol Maes Edwin, Pentre Hill, Flint Mountain	1.54	Housing & Mixed Use Development	underlain by primary and secondary shallow coal with some brick clay. Would not sterilise a wider resource but prior extraction should be explored
FMTN003	Land at Pentre House, Pentre Hill, Flint Mountain	0.5	Housing & Mixed Use Development	underlain by glaciofluvial sand and gravel would not sterilise a wider resource but prior extraction should be considered
FMTN004	Land at Waen Farm, Y Waen, Flint Mountain	1.56	Housing & Mixed Use Development	underlain by brick clay would not sterilise a wider resource
FMTN005	Land west of Waen y Balls Farm, Y Waen, Flint Mountain	0.38	Housing & Mixed Use Development	underlain by glaciofluvial S&G and primary shallow coal. Wider resource would not be sterilised and the site may be too small for prior extraction to be feasible
GAR002	Sealand CP School, Garden City	0.95	Other form of Unspecified Development	underlain by primary shallow coal prior extraction may not be feasible PDL
GAR003	Land adj RAF Camp, Green Lane, Sealand	93.04	Retail, Tourism & other Commercial	NMR

GFD001	Land adj Coppy Farm, Gwernaffield Rd, Gwernaffield	3.04	Housing & Mixed Use Development	underlain by silica rock sterilised by the settlement
GFD002	Land opposite Bwlch y Ddeufryn, Cilcain Road, Gwernaffield	0.52	Housing & Mixed Use Development	underlain by silica rock and limestone sterilised by the settlement
GFD003	East side of Rhydymwyn Road, Gwernaffield	0.61	Housing & Mixed Use Development	underlain by silica rock sterilised by the settlement
GFD004	Land east of the Vicarage, Cilcain Road, Gwernaffield	1.16	Housing & Mixed Use Development	underlain by silica rock sterilised by the settlement
GFD005	Land ad Church Farm, Gwernaffield	3.86	Housing & Mixed Use Development	Very close proximity to Cefn Mawr Quarry. The candidate site is within the buffer zone of the Quarry. The high purity limestone at Cefn Mawr Quarry is noted as a nationally important strategic resource within MPPW. The quarry company own the farm house within the permission boundary to the south of the CS so in the future, should the quarry wish to extend the site, GFD005 would sterilise a nationally important strategic resource.
GFD006	Gwernaffield CP School	1.77	Other form of Unspecified Development	underlain by silica rock and limestone sterilised by the settlement
GFD007	Bryn Bellan, Bryn Road, Gwernaffield	0.53	Employment Development	underlain by glaciofluvial superficial S&G prior extraction may not be feasible due to size of site
GOR004	The Cedars, Gorsedd	1.39	Housing & Mixed Use Development	underlain entirely by high purity limestone but due to existing development and A55 its unlikely that the resource in this location would be feasibly worked. Existing development has sterilised this resource
GRE001	Land rear of Tai Drill, Rayon Rd, Bagillt	0.4	Housing & Mixed Use Development	underlain entirely by primary shallow coal but this is a tiny site so probably not economically viable for PE
GRE002	Tan y Felin, Greenfield	8.7	Housing & Mixed Use Development	underlain entirely by secondary shallow coal resource site would be suitable for PE also part of the site (about a third) is underlain by superficial glaciofluvial S&G consider PE this would also sterilise some resource to the north west

GRE005	Greenfield Dock	0.3	Retail, Tourism & other Commercial	underlain entirely by primary shallow coal but this is a tiny site so probably not economically viable for PE
GRE006	Land at Former Textile Mill, Holywell	2.39	Retail, Tourism & other Commercial	NMR
GRE008	Land west of Greenhill Farm, Bryn Celyn, Greenfield	11.48	Housing & Mixed Use Development	NMR
GRE009	Land south west of School Lane, Greenfield	0.98	Housing & Mixed Use Development	underlain entirely by secondary shallow coal resource site could be suitable for PE and superficial glaciofluvial S&G consider PE
GRE010	Coed Mawr Market Site, Greenfield	7.5	Retail, Tourism & other Commercial	entirely underlain by primary shallow coal PDL but consider prior extraction possible sterilisation issues with wider coal reserves - coal authority to advise -
GRE011	Land at Bryn Celyn, Greenfield Road, Holywell	2.3	Housing & Mixed Use Development	NMR
GRO001	Land between and to rear of Parkfield and Pen-y-Cefn, Llanasa Road, Gronant	1.08	Housing & Mixed Use Development	NMR
GRO002	Ysgol Gronant	1.26	Other form of Unspecified Development	NMR
GRO003	East of Gronant Hill, Gronant.	0.94	Housing & Mixed Use Development	NMR
GWAE001	Land at Cae Gwyn, Gwaenysgor	1.72	Housing & Mixed Use Development	Underlain by Limestone but extension to existing settlement not feasible to prior extract and would not sterilise resource due to existing settlement
GWE001	Adj Greengate, Gwespyr	0.91	Housing & Mixed Use Development	NMR
GWE002	Scrapyard on western edge of Gwespyr	1.56	Housing & Mixed Use Development	NMR
GYM001	Land to east of Waverley, Gwernymynydd	0.55	Housing & Mixed Use Development	No viable mineral resource - underlain by silica rock
GYM003	Llys Newydd, Gwernymynydd	1.59	Housing & Mixed Use Development	No viable mineral resource - underlain by silica rock
GYM004	Land to the rear of Uwch y Dre, Gwernymynydd	0.87	Housing & Mixed Use Development	NMR

HCAC001	Caerestyn Crossroads, bound by Gresford Road & Rhyddyn Hill	2.79	Housing & Mixed Use Development	partially underlain by silica rock, already sterilised by development
HCAC004	Land west of Wrexham Road, Abermorddu	3.51	Housing & Mixed Use Development	underlain by glaciofluvial S&G and primary shallow coal resource prior extraction should be considered. The proposal could also sterilise the wider resource to the south west
HCAC015	Land rear of Well House, Pigeon House Lane, Hope	2.75	Housing & Mixed Use Development	underlain by silica rock but already sterilised by existing development
HCAC016	Former Quarry, Fagl lane, Hope	48.19	Housing & Mixed Use Development	Restored sand quarry, sand resources still present but not extracted
HCAC017	Land side and rear of Greenacres, Wrexham Road, Hope.	2.96	Housing & Mixed Use Development	underlain by silica rock but already sterilised by existing development
HCAC018	Land south of No. 19 Rhyddyn Hill and west of Christian Mountain, Rhyddyn Hill.	3.7	Housing & Mixed Use Development	Underlain by primary and secondary shallow coal prior extraction should be considered existing development already sterilised this wider resource
HCAC021	Land west of Gwalia / Bryn Yorkin	1.35	Housing & Mixed Use Development	NMR
HCAC024	Abermorddu CP School	0.96	Other form of Unspecified Development	underlain by glaciofluvial and primary shallow coal reserves prior extraction should be considered but may not be viable
HCAC025	Land off Huxleys Lane, Hope	1.23	Housing & Mixed Use Development	underlain by silica rock but already sterilised by existing development
HCAC026	Land north of Bryn Issa, Gresford Road, Hope	0.32	Housing & Mixed Use Development	underlain by silica rock but already sterilised by existing development
HCAC028	Land on south side of junction Gresford Rd and Hope Hall Drive, Hope	1.44	Housing & Mixed Use Development	underlain by silica rock and some S&G but already sterilised by existing development
HCAC029	Land at Bryn Tirion, Mold Road, Caergwrle	2.04	Housing & Mixed Use Development	underlain by silica rock and some S&G but already sterilised by existing development should consider prior extraction of the glacio fluvial S&G
HK002	Land adj and South of Kinnerton Lane, Higher Kinnerton	2.97	Housing & Mixed Use Development	NMR

HK003	Land adj and south of Kinnerton Lane, Higher Kinnerton	16.28	Housing & Mixed Use Development	NMR however could sterilise the superficial glaciofluvial S&G deposits which are adjacent to the south west of the CS.
HK004	Land adj Old Rectory, Main Road, Higher Kinnerton	0.32	Housing & Mixed Use Development	NMR however could sterilise the bedrock S&G deposits which are adjacent to the east of the CS.
HK005	Land at Kinnerton Bank Farm, Sandy Lane, Higher Kinnerton	11.84	Housing & Mixed Use Development	Within buffer/on site of Kinnerton S&G Quarry. Would sterilise bedrock S&G reserve and resource surrounding the site this is a large site which would sterilise further bedrock S&G resources
HK006	Land between Bennetts Lane and Sandy Lane, Higher Kinnerton	1.72	Housing & Mixed Use Development	Some bedrock S&G to the south west of this CS only small amount but could sterilise a wider resource to the south
HK007	Land south of The Grange, Sandy Lane, Higher Kinnerton	3.11	Housing & Mixed Use Development	NMR
HK008	Land between Main Road and Sandy Lane, Higher Kinnerton.	2.47	Housing & Mixed Use Development	NMR
HK009	Land south of The Grange, Sandy Lane; and land between Main Road and Sandy Lane, Higher Kinnerton.	5.5	Housing & Mixed Use Development	NMR
HK010	Land west of Rosemount, Main Road, Higher Kinnerton	2.03	Housing & Mixed Use Development	NMR
HK011	Land at junction of Main Road and Sandy Lane, Higher Kinnerton	2.39	Housing & Mixed Use Development	NMR
HK012	Land adj The Grange, Sandy Lane, Higher Kinnerton	2.25	Housing & Mixed Use Development	NMR
HK013	Crabmill Farm, Leeches Lane, Higher Kinnerton	43.12	Housing & Mixed Use Development	Sub-alluvial superficial S&G, primary and secondary shallow coal resources consider Prior Extraction
HOL002	Land to rear of 174 Pen y Maes Road, Holywell	3.96	Housing & Mixed Use Development	NMR

HOL003	Land south of Pen y Ball Hill / Fron Park Road, Holywell	2.8	Housing & Mixed Use Development	Entire site underlain by sandstone but this is would be an extension to the settlement so the resource has already been sterilised but existing built development furthermore it would be unlikely if it would be viable
HOL004	Land at Pen y Ball Hill/Coed y Fron, Holywell	4.55	Housing & Mixed Use Development	underlain by limestone and sandstone. This resource is partially sterilised by existing development but would potentially sterilise limestone resources to the south west
HOL005	Land Adj to Stamford Way, Holywell	1.2	Housing & Mixed Use Development	NMR
HOL008	Land north west of Coed Duon Nursing Home, Halkyn Road, Holywell	0.32	Housing & Mixed Use Development	NMR
HOL012	Land east of Community Hospital car park, Holywell	0.4	Housing & Mixed Use Development	NMR
HOL013	Land rear of Llesty Hospital, Holywell	0.72	Housing & Mixed Use Development	underlain by sandstone bedrock but would not be viable to extract due to existing built development to the east
HOL014	Bagillt Hall Farm / Wood Lane, Holywell	34.17	Housing & Mixed Use Development	northern part of the site (about a third) is underlain by shallow secondary coal resources, consider Prior extraction
HOL015	Land ad Wood Lane, Holywell	1.2	Housing & Mixed Use Development	NMR
HOL017	Land south of Ffordd Beuno, Holway, Holywell	1.1	Housing & Mixed Use Development	NMR
HOL018	Land to the north east of Nant Eos, Holway, Holywell	7.36	Housing & Mixed Use Development	NMR
HOL019	Ysgol Gwenffrwd, Holywell	0.81	Other form of Unspecified Development	NMR
HOL020	Llesty Hospital, Holywell	2.22	Housing & Mixed Use Development	Majority of the site NMR with a small amount of sandstone bedrock which would not be viable to extract. This resource has already been sterilised
HOL021	Strand Park, Holywell	0.63	Community Facility Development	NMR

HOL022	land adj to Brynford Hall Farm	0.32	Housing & Mixed Use Development	majority of the site is underlain by superficial glaciofluvial S&G possibility of PE but would not sterilise wider resource due to existing development - proposal would be an extension to housing
HWN001	Land rear of Aston Hall Farm, Lower Aston Hall Lane, Hawarden	18.03	Housing & Mixed Use Development	Partially underlain by primary and secondary shallow coal and glaciofluvial S&G, would not sterilised a wider resource but prior extraction should be considered
HWN002	Land rear of Aston Hall Farm, Lower Aston Hall Lane, Hawarden	0.3	Housing & Mixed Use Development	NMR
HWN003	Groomsdale Lane, Hawarden	0.48	Housing & Mixed Use Development	Underlain glaciofluvial S&G, would not sterilised a wider resource but prior extraction should be considered
HWN004	Land at Gladstone Way/Bennett's Lane, Hawarden	7.57	Housing & Mixed Use Development	Underlain entirely by primary and secondary shallow coal and glaciofluvial S&G, would not sterilised a wider resource but prior extraction should be considered
HWN005	Land between Gladstone Way & Ash Lane, Hawarden	15.25	Housing & Mixed Use Development	Underlain entirely by primary and secondary shallow coal with some glaciofluvial S&G, would not sterilised a wider resource but prior extraction should be considered
HWN006	Land adj to Hawarden Infants School	3.86	Housing & Mixed Use Development	Underlain by primary shallow coal resource and glaciofluvial S&G, would not sterilised a wider resource but prior extraction should be considered
HWN008	Land adj and incl The Coach House and Friars Gap, Groomsdale Lane, Hawarden.	0.71	Housing & Mixed Use Development	Underlain glaciofluvial S&G, would not sterilised a wider resource but prior extraction should be considered
HWN010	Land east of Groomsdale Cottage, Groomsdale Lane, Hawarden	0.35	Housing & Mixed Use Development	Underlain glaciofluvial S&G, would not sterilised a wider resource but prior extraction should be considered
HWN011	Land south east of Hillside, between Gladstone Way and Benett's Lane, Hawarden	1.09	Housing & Mixed Use Development	Underlain by primary shallow coal resource and glaciofluvial S&G, would not sterilised a wider resource but prior extraction should be considered

LEE001	Land adj Queens Farm, Dingle Road, Leeswood	5.06	Housing & Mixed Use Development	Underlain by primary shallow coal prior extraction should be considered existing development already sterilised this wider resource
LEE003	Land n/e of Windover, Stryt Cae Rhedyn, Leeswood	0.87	Housing & Mixed Use Development	NMR
LEE004	Land to side and rear of Wesley Methodist Church, King Street, Leeswood	1.37	Housing & Mixed Use Development	Underlain by secondary shallow coal prior extraction should be considered existing development already sterilised this wider resource
LEE005	Land rear of Wesley Methodist Church, Leeswood	5.18	Housing & Mixed Use Development	Underlain by primary and secondary shallow coal prior extraction should be considered existing development already sterilised this wider resource
LEE006	Ysgol Derwenfa, Leeswood	1.64	Other form of Unspecified Development	NMR
LEE007	Land adj Ffordd Siarl, Leeswood	1.59	Housing & Mixed Use Development	underlain by brick clay but infill development within the settlement boundary
LFD001	Land to rear of Old Post Office, Llanfynydd	0.59	Housing & Mixed Use Development	NMR
LIX001	Land north west of Tan y Graig, Lixwm	1.17	Housing & Mixed Use Development	Underlain by high purity limestone but already sterilised by existing development, infill development and an extension of the settlement boundary
LIX003	Maes y Goron, Lixwm	0.79	Housing & Mixed Use Development	Underlain by high purity limestone but already sterilised by existing development, infill development and an extension of the settlement boundary
LIX005	Land north of Hillbank, Ffordd Walwen, Lixwm	0.53	Housing & Mixed Use Development	Underlain by high purity limestone but already sterilised by existing development, infill development and an extension of the settlement boundary
LIX006	Land to the rear of Llwyn Onn, Lixwm	1.37	Housing & Mixed Use Development	Underlain by high purity limestone but already sterilised by existing development, infill development and an extension of the settlement boundary

LIX007	Land to north of Llys Ifor, Lixwm	0.59	Housing & Mixed Use Development	Underlain by high purity limestone but already sterilised by existing development, infill development and an extension of the settlement boundary
LIX008	School playing fields	1.11	Other form of Unspecified Development	Underlain by high purity limestone but already sterilised by existing development, infill development and an extension of the settlement boundary
LLOC001	Land adjoining Garfield House	0.41	Housing & Mixed Use Development	underlain entirely by high purity limestone but due to existing development it is unlikely that the resource in this location would be feasibly worked. Existing development has sterilised this resource
LNG001	Land west of 1-5 Stone Row, Llong	0.5	Housing & Mixed Use Development	Site underlain by S&G, small site may not be feasible for prior extraction but should be explored
MAN001	Land between Mancot Lane and Mancot Way, Mancot	1.55	Housing & Mixed Use Development	Underlain by primary and secondary shallow coal. Prior extraction should be explored but this is a small site so may not be feasible. Would not sterilise wider resource due to existing built development
MAN002	Land between Mancot Lane & Willow Park, Mancot	21.15	Housing & Mixed Use Development	Underlain by primary and secondary shallow coal. Large site Prior extraction should be explored. Would not sterilise wider resource due to existing built development
MAN003	Land between Aston Hill & A550	37.05	Housing & Mixed Use Development	Underlain by primary and secondary shallow coal. Large site Prior extraction should be explored. Would not sterilise wider resource due to existing built development
MAN004	Land to east of Leaches Lane, Mancot Royal	6.01	Housing & Mixed Use Development	underlain by primary shallow Coal resource and brick clay. Potential for prior extraction of coal It would not sterilise a wider resource due to existing built development
MAN005	Mancot Farm/Greenacres Farm	7.05	Housing & Mixed Use Development	underlain by primary shallow Coal resource. Potential for prior extraction of coal It would not sterilise a wider resource due to existing built development
MAN006	Land adj Mancot Way / Foxes Close, Mancot	0.92	Housing & Mixed Use Development	Small site underlain by brick clay, primary and secondary coal. Prior extraction is possible but very small site may not be feasible

MOL001	Bryn yr Haul Cottage, Rhydgaled, Argoed Hill, Main Road, Mold	0.69	Housing & Mixed Use Development	Majority of the site is a greenfield site outside of the settlement boundary however this is a small site underlain by primary/secondary shallow coal and brick clay but it would not sterilise a wider resource and the site is small
MOL002	Land between Ruthin Road and Plas Anney, Mold	5.4	Housing & Mixed Use Development	greenfield site adjacent to the settlement boundary Underlain by Brick Clay and Glaciofluvial S&G Prior extraction should be considered
MOL003	Land south of Cwrt Rhyd y Galed, Mold	8.54	Housing & Mixed Use Development	Greenfield site but adjacent to the existing settlement boundary
MOL004	Land north of Wood Green, Mold	0.86	Housing & Mixed Use Development	Greenfield site but adjacent to the existing settlement boundary underlain by primary shallow coal and Glaciofluvial S&G. Prior extraction should be considered but v small site may mean it is not viable
MOL005	Land north of junction of A494 and Ruthin Road, Mold	8.27	Housing & Mixed Use Development	large greenfield site outside of the settlement boundary Underlain by Brick Clay and Glaciofluvial S&G Prior extraction should be considered
MOL006	Land south of The Haven, off Upper Bryn Coch, Mold	1.62	Housing & Mixed Use Development	small Greenfield site just adjacent to the settlement boundary Underlain by Brick Clay and Glaciofluvial S&G Prior extraction should be considered
MOL007	Land off Cilnant, Queens Park, Mold	4.49	Housing & Mixed Use Development	Greenfield site just adjacent to the settlement boundary No viable mineral resources
MOL008	Llyn y Glyn Fields, Denbigh Road, Mold	3.3	Housing & Mixed Use Development	Greenfield site but within the settlement boundary Underlain by Brick Clay and partially by Glaciofluvial S&G Prior extraction should be considered
MOL009	Mold Football Ground, Denbigh Road, Mold	3.41	Housing & Mixed Use Development	Greenfield site but within the settlement boundary underlain by Sub alluvial and glaciofluvial S&G, primary shallow coal and brick clay prior extraction should be explored
MOL010	Land south of Chester Road, Mold	0.71	Retail, Tourism & other Commercial	PDL within the Settlement boundary

MOL011	Land south of junction of A494 and Wrexham Road, Mold	7.95	Housing & Mixed Use Development	large greenfield site outside of the settlement boundary however underlain by brick clay, primary shallow coal and suballuvial and fluvial S&G resources. This CS would sterilise the wider resources to the south. Prior extraction should be considered if the site comes forward in the plan
MOL013	Alun Meadows, Love Lane, Mold	1.89	Housing & Mixed Use Development	Greenfield site but within the settlement boundary underlain by Sub alluvial and glaciofluvial S&G, primary shallow coal and brick clay prior extraction may be feasible but this is a small site surrounded by built development
MOL014	Land south of Cwrt Rhyd y Galed, Mold	8.54	Housing & Mixed Use Development	Greenfield site but adjacent to the existing settlement boundary partially underlain by Primary/secondary shallow coal, brick clay and Glaciofluvial S&G. Prior extraction could be explored would not sterilise a wider resource
MOL016	Former Driving Centre, St. David's Lane, Mold	0.41	Housing & Mixed Use Development	PDL within the Settlement boundary
MOL017	County Hall, Raikes Lane, Mold	12.18	Housing & Mixed Use Development	PDL within the Settlement boundary some of the site is underlain by glaciofluvial S&G and primary/secondary shallow coal, would not sterilise wider resource but prior extraction should be considered
MOL019	Penybont Farm, Chester Road, Mold	13.4	Retail, Tourism & other Commercial	Greenfield site but within the settlement boundary. Large site which prior extraction could be feasible; sub alluvial and glaciofluvial S&G, Primary and Secondary Shallow Coal and Brick clay. Prior extraction should be considered
MOL020	Maes Gwern, Mold Business Park, Mold	5.75	Housing & Mixed Use Development	Greenfield site but within the settlement boundary Underlain by Brick Clay and Glaciofluvial S&G Prior extraction should be considered
MOL024	Land on western edge of Mold, south of Gwernaffield Road	13.17	Housing & Mixed Use Development	Large greenfield site adjacent to the settlement boundary - Partially underlain by brick clay, secondary shallow coal and Glaciofluvial S&G, prior extraction of coal and sand should be explored

MOL025	Land between Factory Pool Lane and Gwernaffield Road, Mold	8.28	Housing & Mixed Use Development	Relatively large greenfield site adjacent to the settlement boundary underlain by brick clay, secondary shallow coal and glacio fluvial sand and gravel. Prior extraction of coal and S&G should be explored
MOL026	Land opposite Synthite, Denbigh Road, Mold	3.3	Community Facility Development	Greenfield site but within the settlement boundary Underlain by Brick Clay and partially by Glaciofluvial S&G Prior extraction should be considered
MOL027	Mold Football Ground, Denbigh Road, Mold	3.41	Housing & Mixed Use Development	Greenfield site but within the settlement boundary underlain by brick clay, primary shallow coal and sub alluvial S&G. prior extraction of coal and sand should be explored
MOL028	Police Station, King Street, Mold	0.62	Housing & Mixed Use Development	PDL within the Settlement boundary
MOL029	Car park, New Street, Mold	2.56	Housing & Mixed Use Development	PDL within the Settlement boundary
MOL030	Cattle Market, King Street, Mold	0.46	Retail, Tourism & other Commercial	PDL within the Settlement boundary
MOL031	Queens Park Hendy Road, Mold	1.64	Housing & Mixed Use Development	Underlain by brick clay Greenfield site but within the settlement boundary small site not realistic to request prior extraction
MOL038	Ysgol Delyn, Alexandra Road, Mold	2.64	Community Facility Development	PDL within the Settlement boundary
MOL039	Post Office, Earl Road, Mold	0.31	Employment Development	PDL within the Settlement boundary
MOL040	Land between Upper Bryn Coch and Llys Ambrose, off Ruthin Road, Mold.	1.59	Housing & Mixed Use Development	Small greenfield site adjacent to settlement boundary Underlain by Brick Clay and Glaciofluvial S&G Prior extraction should be considered
MOL041	Land west of Hawthorn Avenue and Elm Drive, Mold.	12.14	Housing & Mixed Use Development	Greenfield site adjacent to the settlement boundary, southern park of the site is within the settlement boundary, partially underlain by brick clay, secondary shallow coal and Glaciofluvial S&G, prior extraction of sand and coal should be explored
MOL043	Land between Smurfit Kappa and G C Hahn Ltd, Maes Gwern, Mold Business Park, Mold	4.58	Housing & Mixed Use Development	Greenfield site but within the settlement boundary Underlain by Brick Clay and with some Glaciofluvial S&G Prior extraction probably not viable but should be explored

MOL044	Land opposite Pool House, Denbigh Road, Mold	3.93	Housing & Mixed Use Development	Greenfield site adjacent to the settlement boundary partially underlain by secondary shallow coal and sand and gravel- prior extraction should be explored
MOL045	Land west of Beechwood Close and Alwyn Close, Mold	8.28	Housing & Mixed Use Development	Relatively large greenfield site adjacent to the settlement boundary underlain by brick clay, secondary shallow coal and glacio fluvial sand and gravel. Prior extraction of coal and S&G should be explored
MOL046	Land west of Ivy Crescent and Hawthorn Avenue, Mold	2.67	Housing & Mixed Use Development	Greenfield site adjacent to the settlement boundary, southern park of the site is within the settlement boundary, partially underlain by brick clay, secondary shallow coal and Glaciofluvial S&G, prior extraction of sand and coal should be explored however this is a smaller site and the prior extraction may not be feasible
MOL047	Land south of Gwernaffield Road and east of Maes Garmon Lane	12.78	Housing & Mixed Use Development	Large greenfield site just outside of the settlement boundary partially underlain by brick clay, secondary shallow coal and glaciofluvial S&G prior extraction of the sand and coal should be explored
MOL048	Land south of Hendy Road and west of Tan Y Graig, Mold	4.27	Housing & Mixed Use Development	Greenfield site just adjacent to the settlement boundary partially underlain by Brick clay but otherwise NMR
MOL050	Former Kwik Save site and adjacent Rugby Club land, Chester Road, Mold	5.58	Retail, Tourism & other Commercial	Majority of the site is within the settlement boundary, the eastern part of the site is outside of the settlement boundary and is agricultural land however the majority is PDL within the settlement boundary
MOL051	Land north of Ruthin Road, Mold	2.94	Housing & Mixed Use Development	greenfield site outside of the settlement boundary - Underlain by Brick Clay and Glaciofluvial S&G Prior extraction should be considered
MOL052	Land between Upper Bryn Coch House and The Haven, Mold	4.42	Housing & Mixed Use Development	greenfield site outside of the settlement boundary - Underlain by Brick Clay and Glaciofluvial S&G Prior extraction should be considered
MOL053	Land east of Hendy Farm, Hendy Road, Mold	2.65	Housing & Mixed Use Development	Small greenfield site outside of settlement boundary - NMR

MOL054	Land north of Hendy Farm, Hendy Road, Mold	1.19	Housing & Mixed Use Development	Small greenfield site outside of settlement boundary - NMR
MOL055	Land west of Hendy Farm, Hendy Road, Mold	0.55	Housing & Mixed Use Development	Small greenfield site outside of settlement boundary - NMR
MOL056	Land at Pen-Y-Bont, Chester Road, Mold	11.66	Housing & Mixed Use Development	Green field site but in settlement boundary. Large site which prior extraction could be feasible; sub alluvial and glaciofluvial S&G, Primary and Secondary Shallow Coal and Brick clay. Prior extraction should be considered
MOL057	Land at Tre-Beirdd Farm, Maes Gwern, Mold	5.75	Housing & Mixed Use Development	Greenfield site but within the settlement boundary Underlain by Brick Clay and Glaciofluvial S&G Prior extraction should be considered
MOS001	Bychton Hall Farm, West of Ffordd Pennant, Maes Pennant, Mostyn	0.91	Housing & Mixed Use Development	Site entirely underlain by primary shallow coal and secondary shallow coal resource - explore prior extraction the CS would also sterilise coal resources surrounding the site
MOS002	Land at Ffordd Pennant, Maes Pennant, Mostyn	2.22	Housing & Mixed Use Development	Site entirely underlain by primary shallow coal and secondary shallow coal resource - explore prior extraction the CS would also sterilise coal resources surrounding the site
MOS003	Land to south of Depot, Glan y Don, Coast Road, Mostyn	0.67	Housing & Mixed Use Development	Site entirely underlain by primary shallow coal and secondary shallow coal resource - explore prior extraction would not sterilise wider resource due to existing development - extension to existing settlement
MOS004	Land adj Penrho Hall, Hafod y Ddol, Mostyn	1.04	Housing & Mixed Use Development	Site entirely underlain by primary shallow coal and secondary shallow coal resource - explore prior extraction would not sterilise wider resource due to existing development - extension to existing settlement
MOS005	Land west of Glanasaph Terrace, A548, Mostyn	1.25	Housing & Mixed Use Development	Site entirely underlain by primary shallow coal and secondary shallow coal resource - explore prior extraction would not sterilise wider resource due to existing development - extension to existing settlement

MOS006	Land rear of 8 to 24 Hafod Y Ddol, Mostyn	1.63	Housing & Mixed Use Development	Site entirely underlain by primary shallow coal and secondary shallow coal resource - explore prior extraction the CS would also sterilise coal resources surrounding the site
MYN001	Land south of Bryn-y-Baal Road and east of A494, Mynydd Isa	7.08	Housing & Mixed Use Development	underlain by shallow primary and secondary coal prior extraction should be considered
MYN003	Land north of Issa Farm, Mynydd Isa	2.85	Housing & Mixed Use Development	underlain by shallow primary coal prior extraction should be considered. Wider resource already sterilised by existing development
MYN005	Land adj 162 Mold Road, Mynydd Isa	0.43	Housing & Mixed Use Development	underlain by shallow primary coal prior extraction should be considered. Wider resource already sterilised by existing development
MYN007	Highfield Farm, Bryn Road Mynydd Isa	0.33	Housing & Mixed Use Development	underlain by shallow primary coal but prior extraction unlikely feasible due to the size of the site
MYN008	Land off Bryn Y Baal Road, Mynydd Isa	1.01	Housing & Mixed Use Development	underlain by shallow primary and secondary coal but prior extraction unlikely feasible due to the size of the site
MYN009	Rose Lane, Mynydd Isa	1.86	Housing & Mixed Use Development	underlain by shallow secondary coal and sub alluvial superficial S&G prior extraction should be considered but unlikely to be feasible
MYN013	North of Issa Farm, Bryn y Baal	2.85	Housing & Mixed Use Development	underlain by shallow primary coal prior extraction should be considered. Wider resource already sterilised by existing development
MYN014	Ysgol Uwchradd Argoed High School, Mynydd Isa	2.38	Other form of Unspecified Development	underlain by shallow primary coal but prior extraction unlikely feasible due to the size of the site
NAN001	Land rear of Bryn Dedwydd, Village Road, Nannerch	0.35	Housing & Mixed Use Development	underlain by high quality limestone and glaciofluvial superficial S&G prior extraction may not be feasible due to size of site resource already sterilised by existing development, the CS would be an extension to the existing settlement boundary
NAN003	Land between Nannerch Hall and Pen y Felin Rd, Nannerch	0.96	Housing & Mixed Use Development	underlain by high quality limestone and glaciofluvial superficial S&G prior extraction may not be feasible due to size of site resource already sterilised by existing development, the CS would be an extension to the existing settlement boundary

NAN005	Land north side Pen y Felin Road, Nannerch	0.63	Housing & Mixed Use Development	underlain by high quality limestone and glaciofluvial superficial S&G prior extraction may not be feasible due to size of site resource already sterilised by existing development, the CS would be an extension to the existing settlement boundary
NAN007	Land west of Pen Y Coed, Nannerch	1.74	Housing & Mixed Use Development	underlain by high quality limestone and glaciofluvial superficial S&G prior extraction may not be feasible due to size of site resource already sterilised by existing development, the CS would be an extension to the existing settlement boundary
NER001	Land adj Ger y Pistll, Off Village Road, Nercwys	3.33	Housing & Mixed Use Development	no viable mineral resource Underlain by brick clay
NER002	Pistyll Far, Nercwys	0.38	Employment Development	no viable mineral resource Underlain by brick clay
NER003	Land west of Hendre Ucha, Ffordd Y Pentre, Nercwys	0.55	Housing & Mixed Use Development	no viable mineral resource Underlain by brick clay and some S&G but very small site would be unlikely to be appropriate for prior extraction
NER004	Land adj Hill View, Ffordd Y Pentre, Nercwys	0.63	Housing & Mixed Use Development	no viable mineral resource Underlain by brick clay and some S&G but very small site would be unlikely to be appropriate for prior extraction
NER006	Land west of Tan Y Rhos and Church View, Ffordd Y Pentre, Nercwys	0.85	Housing & Mixed Use Development	no viable mineral resource Underlain by brick clay
NEW001	Land east of Green Haven, A5119, New Brighton	1.95	Housing & Mixed Use Development	NMR
NEW002	Parcel of land at Mynydd Bychan, New Brighton Road, New Brighton	0.55	Housing & Mixed Use Development	primary and secondary shallow coal - explore prior extraction
NEW003	Land between Moorcroft Estate and A494, New Brighton	3.234	Housing & Mixed Use Development	Partially underlain by primary shallow coal, should explore prior extraction
NEW004	Land between New Brighton Road and A5119, New Brighton	1.69	Housing & Mixed Use Development	Partially underlain by primary shallow coal, should explore prior extraction
NEW005	Land east of Cae Derwen, New Brighton	0.87	Housing & Mixed Use Development	underlain by primary shallow coal explore prior extraction
NEW007	Land west of Bryn Offa Farm, New Brighton	0.55	Housing & Mixed Use Development	NMR

NEW009	Land adj Green Haven, Main Road, New Brighton	1.95	Housing & Mixed Use Development	NMR
NEW010	Land adj Argoed View, New Brighton	3.24	Housing & Mixed Use Development	underlain by primary shallow coal explore prior extraction
NEW011	Land between Moorcroft and A494(T), New Brighton	4.11	Housing & Mixed Use Development	Partially underlain by primary shallow coal, should explore prior extraction
NEW013	Land to the west of Cae Isa, New Brighton.	3.52	Housing & Mixed Use Development	Partially underlain by primary shallow coal, should explore prior extraction
NH001	Land south west of Institute Lane, Northop Hall	2.03	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH002	Land on south side of Village Road, Northop Hall	1.34	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH003	Land off Bryn Gwyn Lane, Northop Hall	3.14	Housing & Mixed Use Development	NMR
NH004	Land adj St Charles Cottage, Smithy Lane, Northop Hall	3.32	Housing & Mixed Use Development	Underlain by primary and secondary shallow coal, could sterilise wider resource to the north, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH006	Land north side of Bryn Gwyn Lane, Northop Hall	1.87	Housing & Mixed Use Development	Partially underlain by primary shallow coal, should explore prior extraction
NH007	Land south side of Bryn Gwyn Lane, Northop Hall	3.02	Housing & Mixed Use Development	Underlain by primary and secondary shallow coal, could sterilise wider resource to the north, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH008	Land at Wellfield Farm, Village Road, Northop Hall	6.41	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered

NH009	Former Galchog Colliery Site, Village Road, Northop Hall	1.9	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH010	Land to south of Northop Hall	7.2	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH011	Land Between Chester Road and A55, Northop Hall	5.48	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH020	Land south of Wellfield Farm, Village Road, Northop Hall	5.95	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH021	Land east of Brookside, Northop Hall	1.8	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH022	Plas Ifan Hotel, Village Road, Northop	2.87	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH023	Land west of St Mary's Drive Play Area, Northop Hall	0.89	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH024	Land to the north of Gardd Eithin, Northop Hall.	1.86	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered

NH026	Northop Hall CP School	1.06	Other form of Unspecified Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH027	Land south of Cae Eithin, Northop Hall.	1.21	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NH028	Land adjacent Smithy Lane, Northop Hall.	1.2	Housing & Mixed Use Development	Underlain by secondary shallow coal, would not sterilise wider resource due to existing development, proposal would be an extension to the settlement boundary but prior extraction should be considered
NOR001	Land south of Tyn y Caeau, Mold Road, Northop	0.78	Housing & Mixed Use Development	underlain by Glaciofluvial S&G and brick clay. Consider prior extraction of S&G however the proposal would not sterilise the wider resource
NOR003	Land at Connah's Quay Road, Northop	1.34	Employment Development	Underlain by primary shallow coal prior extraction should be considered. existing development in the form of the A55 already sterilised this wider resource
NOR006	Land south of Tyn y Caeau, Mold Road, Northop	0.74	Housing & Mixed Use Development	underlain by Glaciofluvial S&G and brick clay. Consider prior extraction of S&G however the proposal would not sterilise this resource
NOR029	Land north of St Peters Park, Northop	3.09	Housing & Mixed Use Development	underlain by primary shallow coal and brick clay, consider prior extraction of coal.
NOR030	Land north of Cricket Club, Northop	5.71	Housing & Mixed Use Development	underlain by glaciofluvial S&G and brick clay. Prior extraction of the S&G should be considered.
NOR031	Land west of A5119 (north of Tyn y Caeau), Northop	6.94	Housing & Mixed Use Development	underlain by brick clay, secondary shallow coal and glaciofluvial S&G. should consider the prior exactraction of the Coal and S&G. could sterilised wider sand resource to the south
NOR032	Land north of Northop Brook, The Green, Northop	1.45	Housing & Mixed Use Development	underlain by brick clay but would not sterilise a wider resource

NOR033	Land north and east of Northop Cricket Club, Northop.	6.93	Housing & Mixed Use Development	underlain by primary shallow coal and brick clay, consider prior extraction of coal.
NOR034	Land north east of Green Cottage and to rear of Green Villa, The Green, Northop.	2.3	Housing & Mixed Use Development	underlain by brick clay but would could sterilise a wider resource
NOR035	Land to the east of Green Cottage, The Green and north west of Lower Lodge, Northop Road, Northop	6.26	Housing & Mixed Use Development	underlain by brick clay but could sterilise the wider resource of S&G to the south of the site
NOR036	Land at The Green, Northop	3.96	Housing & Mixed Use Development	underlain by brick clay but could sterilise the wider resource of S&G to the south of the site
NOR037	Land adj Maes Celyn, Holywell Road, Northop	22.89	Housing & Mixed Use Development	partially underlain by S&G and secondary shallow coal large site so prior extraction should be considered. There is a strip of secondary coal resource located to the west of the site but is less than 400m in width according to the maps
NOR039	Ysgol Owen Jones, Northop	0.87	Other form of Unspecified Development	Small site underlain by brick clay, primary and secondary coal. Prior extraction is possible but very small site may not be feasible
PAD002	Land north of Smithy Farm, Chester Road, Padeswood	7.46	Housing & Mixed Use Development	underlain by primary shallow coal resource prior extraction should be considered. Any future largescale coal resource sterilised due to existing development
PANT001	Shirnil, Cilcain Road, Pantymwyn	0.4	Housing & Mixed Use Development	underlain by high purity limestone but already sterilised by existing development
PANT002	Garthdale, Cilcain Road, Pantymwyn	0.62	Housing & Mixed Use Development	underlain by high purity limestone but already sterilised by existing development
PANT003	Rathmourne, Cefn Bychan Road, Pantymwyn	0.9	Housing & Mixed Use Development	underlain by high purity limestone but already sterilised by existing development
PANT004	Voel Awel, Cilcain Road, Pantymwyn	0.84	Housing & Mixed Use Development	underlain by high purity limestone but already sterilised by existing development
PANT005	Land west of Bryn Rhosyn, Pantymwyn	2.4	Housing & Mixed Use Development	underlain by high purity limestone but already sterilised by existing development

PAPH001	Land (frontage) between Rockwood and Convent Farm, Pantasaph	1.09	Housing & Mixed Use Development	entirely underlain by limestone with some superficial glaciofluvial s&G however existing development has sterilised the limestone resource unlikely to be economic to PE the S&G
PAPH002	Land between Rockwood, Convent Farm and A55, Pantasaph	2.27	Housing & Mixed Use Development	entirely underlain by limestone with some superficial glaciofluvial s&G however existing development has sterilised the limestone resource unlikely to be economic to PE the S&G
PAPH003	Land to rear of Convent Farm, Pantasaph	0.54	Housing & Mixed Use Development	entirely underlain by limestone however existing development has sterilised the limestone resource
PAPH004	Land north of Lower Stables Farm, Babell Road, Pantasaph	0.81	Housing & Mixed Use Development	entire site underlain by Superficial glaciofluvial S&G - consider Prior extraction of S&G. partially underlain by limestone. Existing development has already sterilised and would not sterilise wider resource to the west.
PAPH006	Land west of The Coachhouse, Monastery Road, Pantasaph	0.99	Housing & Mixed Use Development	entirely underlain by limestone however existing development has sterilised the limestone resource
PEN002	Land at Bank Farm, Lower Mountain Road, Penyffordd	2.75	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN003	Land north of Station Way, Penyffordd	1.7	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN004	Land adj Offa's Dyke, Abbott's Lane, Penyffordd	1	Housing & Mixed Use Development	NMR
PEN005	Land south of Rhos Road, Penyffordd	0.94	Housing & Mixed Use Development	NMR
PEN006	Beverley, Wrexham Road, Penyffordd CH4 OHT	0.48	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN007	Land adj Hope Hey, Rhos Avenue, Penyffordd	0.3	Housing & Mixed Use Development	NMR
PEN008	Bryn yr Haul, Wrexham Road, Penyffordd	0.79	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN009	Land at Hawarden Road / A550 (south side)	2	Housing & Mixed Use Development	NMR

PEN010	Land adj western edge Wood Lane Farm development, Penyffordd	0.66	Housing & Mixed Use Development	NMR
PEN011	Land at Style End, junction of Chester Road and Hawarden Road, Penyffordd	0.41	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN012	Blackbrook House, Terrace Lane, Penyffordd	2.29	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN013	Land adj Cambrian House, Station Way, Penyffordd	1.08	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN014	Land north side of junction Ros Rd / A550, Penyffordd	1.58	Housing & Mixed Use Development	NMR
PEN016	Land between railway station and A550, Penyffordd	2.33	Employment Development	NMR
PEN031	playing field, Penyffordd CP School, Chester Road, Penyffordd	0.43	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN032	County Primary School, Penymynydd Road, Penymynydd	0.71	Community Facility Development	no viable mineral resource Underlain by silica rock already sterilised
PEN036	Land at junction Hawarden Road / A550, Penyffordd	1.36	Housing & Mixed Use Development	NMR
PEN037	Land north of Wood Lane Farm, Penyffordd	3.48	Housing & Mixed Use Development	NMR
PEN038	Land north of Beaumont, Chester Road, Penymynydd	7.7	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PEN039	Land on north side of junction of A550 / Rhos Road, Penyffordd	1.58	Housing & Mixed Use Development	NMR
PEN040	Land north of Wood Lane, Penyffordd	4.82	Housing & Mixed Use Development	NMR
PEN041	Land rear of Millstone Park, Penyffordd	5.72	Community Facility Development	no viable mineral resource Underlain by silica rock already sterilised
PEN043	Abbots Lane School, Penyffordd	1.81	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised

PEN044	Penyffordd CP School, Chester Road, Penymynydd	1.15	Housing & Mixed Use Development	no viable mineral resource Underlain by silica rock already sterilised
PH001	Land north of B5123 at Pentre Halkyn	3.41	Housing & Mixed Use Development	NMR
PH002	Land at Pentre Farm, Pentre Halkyn	0.49	Housing & Mixed Use Development	underlain by superficial S&G but PDL and a small site, may be scope for PE but resource already sterilised
PH003	Land east of Pentre Farm, Pentre Halkyn	1.42	Housing & Mixed Use Development	Some superficial S&G under the site but only a small proportion of the site underlain - majority of the site NMR and would not sterilise resource due to existing development may be feasible for PE before development
PH004	Land East of Salem Chapel, Pentre Halkyn	3.41	Housing & Mixed Use Development	NMR
PH005	Pant Y Pwll Dwr Quarry, Pentre Halkyn, CH8 8HP	4.79	Minerals Development	Proposed extension to Pant y pwll dwr quarry would not encroach any further than existing buffer zone
PYF001				NMR
PYF002	Land north of Coed Mor, Rhewl Fawr Road, Pen y ffordd	1	Housing & Mixed Use Development	Partially underlain by shallow secondary coal - explore prior extraction
PYF003	Land between Rhewl Fawr Road and Picton Road, Pen y ffordd	9.5	Housing & Mixed Use Development	majority of the site is underlain by secondary shallow coal and some of the site by primary shallow coal resource, fairly large site - should consider prior extraction, extension to existing settlement therefore the resource has largely been sterilised by existing development but should consider PE
PYF004	Land to the east of Ysgol Bryn Garth, Maes Emlyn, Pen-Y-Ffordd	3.16	Housing & Mixed Use Development	majority of the site underlain by shallow secondary coal - explore prior extraction
PYF005	Ysgol Bryn Garth, Pen y ffordd	0.81	Other form of Unspecified Development	Site entirely underlain by primary shallow coal and secondary shallow coal resource - explore prior extraction
PYF006	Land on north side of Llinegr Hill, Pen y ffordd	0.54	Housing & Mixed Use Development	NMR

RHE001	Swn-y-Gwynt, Rhewl Mostyn, Holywell, Flintshire	5.4	Housing & Mixed Use Development	Site entirely underlain by primary shallow coal and secondary shallow coal resource - explore prior extraction the CS would also sterilise coal resources surrounding the site
RHO001	Land adj 3 River View, Berth Ddu, Rhosesmor	1.05	Housing & Mixed Use Development	underlain by limestone but the resource and wider resource is already sterilised by existing development
RHYD001	Brookside Works, Denbigh Road, Hendre	3.82	Minerals and Waste Development	NMR but existing quarry/industrial use, close proximity to existing housing Ruby Cottages and Hendre Villas and adjacent to CS RHYD002 for housing could present bad neighbour development
RHYD002	Brookside Works, Denbigh Road, Hendre	1.68	Housing & Mixed Use Development	underlain by sub alluvial S&G prior extraction should be considered but within the buffer zone of Hendre Quarry but only due to the access road but consideration to high volume of HGV quarry traffic should be considered as there could be future conflict with conflicting neighbouring land-uses, also adjacent to Ruby Quarry and CS RHYD001 proposed for minerals and waste could present problems with conflicting neighbouring land-uses
RHYD003	Brookside Works, Denbigh Road, Hendre	3.56	Employment Development	NMR
RHYD004	Brookside Works, Denbigh Road, Hendre	7.39	Employment Development	NMR
RHYD005	Land east of A541, Rhydymwyn (Site 1 of 3)	0.48	Housing & Mixed Use Development	Underlain by sub alluvial S&G, the wider resource would not be sterilised, prior extraction should be considered but may not be viable since the site is small
RHYD006	Land east of garage, A541, Rhydymwyn (site 2 of 3)	4.95	Housing & Mixed Use Development	Underlain by sub alluvial S&G, the wider resource would not be sterilised, prior extraction should be considered
RHYD007	Land east of A541, Rhydymwyn (site 3 of 3)	7.69	Housing & Mixed Use Development	underlain by sub alluvial S&G prior extraction should be considered Within the buffer zone of Hendre Quarry but only due to the access road but consideration to high volume of HGV quarry traffic should be considered as there could be future conflict with conflicting neighbouring land uses

RHYD008	Site of former Ysgol y Ddol, Rhydymwyn	0.8	Housing & Mixed Use Development	NMR
RYC003	Shalom, Rhos y Cae	0.4	Housing & Mixed Use Development	underlain by high purity limestone but infill development
RYC005	Land opposite and south of Trem Y Foel, Rhos Y Cae	0.8	Housing & Mixed Use Development	underlain by high purity limestone but already sterilised by existing development however, could sterilise a wider resource
SAL001	Land at River Lane, Saltney	13.1	Employment Development	NMR
SAL002	Watersmeet	159.82	Housing & Mixed Use Development	NMR
SAL003	Saltney Ferry CP School	1.42	Other form of Unspecified Development	NMR
SAL004	"Watersmeet" - Land adjoining Chester West Employment Park and land to the south of the River Dee, on the eastern side of Saltney.	193.2	Housing & Mixed Use Development	NMR
SAN001	Land between Station Road and B5129 Sandycroft	61.56	Employment Development	underlain by Brick Clay
SAN002	Land adj Prince William Avenue, Sandycroft	60.24	Employment Development	NMR but adjacent to brick clay resource
SAN003	Sandycroft CP School	0.55	Other form of Unspecified Development	Primary Shallow Coal prior extraction should be considered
SEA001	Land to east of Windmill Garden Centre, Sealand Road, Sealand	1.58	Housing & Mixed Use Development	NMR
SEA002	Land to north of The Owl Industrial Estate, and south of the A548 Sealand Road, Sealand.	4.96	Housing & Mixed Use Development	NMR
SEA003	Land east of Sandford Grange, Green Lane, Sealand	5.69	Housing & Mixed Use Development	NMR
SEA004	Land opposite 30-36 Manor Road, Sealand	0.94	Housing & Mixed Use Development	NMR
SEA005	Land east of Point Farm House, Ferry Lane, Sealand	1.64	Retail, Tourism & other Commercial	NMR

SEA007	Land west of 12 St Bartholomews Court, Sealand.	1.42	Housing & Mixed Use Development	NMR
SEA008	The Owl Industrial Estate, Manor Road, Sealand	1.11	Housing & Mixed Use Development	NMR
SHO001	Land to rear of Old Barns, Killins Lane, Higher Shotton	2.35	Housing & Mixed Use Development	Underlain by primary shallow coal and some sub alluvial S&G, would not sterilise a wider resource but should consider prior extraction
SHO002	Land adj Poor Clare Colletine Community Convent, Upper Aston Hall Lane/Bennetts Lane Hawarden	4.22	Housing & Mixed Use Development	Underlain by glaciofluvial S&G would not sterilise a wider resource but prior extraction should be considered
SHO003	Land east of Aston Hall, Lower Aston Hall Lane	1.84	Housing & Mixed Use Development	partially underlain by secondary shallow coal would not sterilise a wider resource but prior extraction should be considered
SYCH001	New Brighton Road, Sychdyn	7.13	Housing & Mixed Use Development	underlain by primary and secondary shallow coal prior extraction should be considered. There isn't a wider resource so this would not cause further sterilisation
SYCH002	Playing Field, Wat's Dyke Way, Sychdyn	2.91	Housing & Mixed Use Development	underlain by brick clay but resource is already sterilised and this would be an extension to the settlement boundary
SYCH003	The marshland, adj A5119, Sychdyn	2.46	Housing & Mixed Use Development	mixed geology with some silica rock, brick clay and primary and secondary shallow coal, should consider prior extraction of the coal but otherwise the wider resource is already sterilised and this would present an extension to the settlement boundary
SYCH005	The Marshland, adj A5119, Sychdyn	2.46	Housing & Mixed Use Development	mixed geology with some silica rock, brick clay and primary and secondary shallow coal, should consider prior extraction of the coal but otherwise the wider resource is already sterilised and this would present an extension to the settlement boundary
SYCH007	Land adj Top Y Bryn, Sychdyn	2.26	Housing & Mixed Use Development	site is underlain by brick clay but would not be appropriate for prior extraction and the proposal is an extension to the settlement and therefore would not sterilise a wider area

SYCH016	Former Sewage Works, Wats Dyke Way, Sychdyn	2.12	Housing & Mixed Use Development	site is underlain by brick clay but would not be appropriate for prior extraction and the proposal is an extension to the settlement and therefore would not sterilise a wider area
SYCH019	Land to north and west of Cae Trol, Northop Road, Sychdyn	1.95	Housing & Mixed Use Development	site is partially underlain by brick clay but would not be appropriate for prior extraction and the proposal is an extension to the settlement and therefore would not sterilise a wider area
SYCH021	Land to east of Vownog Cottage, Sychdyn	1.55	Housing & Mixed Use Development	site is underlain by brick clay but would not be appropriate for prior extraction and the proposal is an extension to the settlement and therefore would not sterilise a wider area
SYCH022	Land north east The Vownog Cottage, Sychdyn	3.12	Housing & Mixed Use Development	site is underlain by brick clay but would not be appropriate for prior extraction and the proposal is an extension to the settlement and therefore would not sterilise a wider area
SYCH023	Land at Tyddyn Uchaf, Blackbrook, Sychdyn (site 1 of 3)	17.55	Housing & Mixed Use Development	partially underlain by glaciofluvial S&G, primary and secondary shallow coal prior extraction should be considered but the site would not sterilise the resource
SYCH024	Land west of junction of Raikes Lane and Blackbrook, Sychdyn (site 2 of 3)	1.51	Housing & Mixed Use Development	partially underlain by glaciofluvial S&G and underlain by secondary shallow coal Prior extraction should be considered
SYCH025	Land west of T'yn Llwyn, Raikes Lane, Sychdyn (site 3 of 3)	2.71	Housing & Mixed Use Development	underlain by glaciofluvial S&G and secondary shallow coal, prior extraction should be considered
TLD001	Land opposite Ery Wen, London Road, Trelawnyd	0.72	Housing & Mixed Use Development	Underlain by limestone however this would be an extension to the settlement boundary and would not further sterilise the resource as the settlement has already sterilised the limestone resource
TLD002	Land south of Faenol Fach, Rhodfa Arthur, Trelawnydd	0.54	Housing & Mixed Use Development	Underlain by limestone however this would be an extension to the settlement boundary and would not further sterilise the resource as the settlement has already sterilised the limestone resource

TLD003	Land east of Parc Offa, London Road, Trelawnyd	2.31	Housing & Mixed Use Development	Underlain by limestone with some high purity limestone however this would be an extension to the settlement boundary and would not further sterilise the resource as the settlement has already sterilised the limestone resource
TLD004	Land east of Parc Offa, London Road, Trelawnyd	1.37	Housing & Mixed Use Development	Underlain by limestone with some high purity limestone however this would be an extension to the settlement boundary and would not further sterilise the resource as the settlement has already sterilised the limestone resource
TLD005	Land at Ochr y Gop, Trelawnyd	6.93	Housing & Mixed Use Development	Underlain by limestone with some high purity limestone however this would be an extension to the settlement boundary and would not further sterilise the resource as the settlement has already sterilised the limestone resource
TLD006	Trelawnyd VP School	0.46	Other form of Unspecified Development	Underlain by limestone however this would be an extension to the settlement boundary and would not further sterilise the resource as the settlement has already sterilised the limestone resource
TRE001	Land rear of Cherry Tree Cottage	0.32	Housing & Mixed Use Development	NMR
TRE003	Land rear of Berth Log, Trelogan	0.53	Housing & Mixed Use Development	Underlain by silica rock however, the existing settlement has already sterilised the resource
TRE004	Land west of Maes y Bryn, Trelogan	1.59	Housing & Mixed Use Development	underlain by limestone and glaciofluvial S&G should consider prior extraction of the S&G but it would not sterilise the resource as this is already sterilised by settlement
TRE005	Land rear of Hill Cottage, Trelogan	0.52	Housing & Mixed Use Development	underlain by high purity limestone and glaciofluvial S&G should consider prior extraction of the S&G but it would not sterilise the resource as this is already sterilised by settlement
TRE006	Pwll Mawr, Trelogan	0.32	Housing & Mixed Use Development	underlain by limestone and glaciofluvial S&G should consider prior extraction of the S&G but it would not sterilise the resource as this is already sterilised by settlement -
TRE007	Land south of Bryn Hadydd, Trelogan	0.79	Housing & Mixed Use Development	Underlain by high purity limestone however, the existing settlement has already sterilised the resource

TRE008	Ysgol Gynradd CP School, Trelogan	0.73	Other form of Unspecified Development	underlain by limestone and glaciofluvial S&G should consider prior extraction of the S&G but it would not sterilise the resource as this is already sterilised by settlement
TRE009	Land east Crib y Gwynt, Trelogan	0.52	Housing & Mixed Use Development	underlain by limestone and glaciofluvial S&G should consider prior extraction of the S&G but it would not sterilise the resource as this is already sterilised by settlement
TREU001	Adj Bryn Tirion, Fordd-y-Rhos, Treuddyn	1.79	Housing & Mixed Use Development	Underlain by silica rock already sterilised by the settlement
TREU002	Land east of Pen Llan, Ffordd y Bont, Treuddyn	1.35	Housing & Mixed Use Development	Underlain by silica rock already sterilised by the settlement
TREU003	Land adj Treuddyn Vicarage, Fford y Llan, Treuddyn	3.76	Housing & Mixed Use Development	Underlain by silica rock already sterilised by the settlement
TREU005	Land between Queen Street and A5104, Treuddyn	8.72	Housing & Mixed Use Development	Underlain by silica rock already sterilised by the settlement
TREU006	Ysgol Terrig & Pac y Llan, Treuddyn	1.27	Other form of Unspecified Development	Underlain by silica rock already sterilised by the settlement
WHI001	Land east of Ty Nant Barn, Whitford Road, Whitford	0.4	Housing & Mixed Use Development	Entirely underlain by superficial glaciofluvial S&G - consider PE
WHI002	Pistyl Wood, Fachallt Road, Whitford	0.97	Housing & Mixed Use Development	South west of the site underlain by high purity limestone, this site would sterilise high purity limestone resources to the south west but this may have already been sterilised by existing development
WHI004	Land off Facallt Road, West of Nant y Dyffryn CH8 9AL	0.9	Housing & Mixed Use Development	NMR however high purity limestone is located 200m to the south west of the site potential to sterilise HPL to the south west
WHI005	Land north east Whitford	5.26	Housing & Mixed Use Development	NMR

Appendix 2: Minerals assessment of Allocations

Ref.	Settlement	Site	Area (ha)	Minerals	Waste
1	Buckley	Well Street BUC031	5.3	Half of the site underlain by secondary coal and a very small amount of primary coal which is already sterilised.	No comment
2	Connah's Quay	Broad Oak Holding, Mold Rd CON002	1.25	Small site underlain by glaciofluvial sand and gravel. Mineral is already sterilised by non-mineral development. Site has planning permission	No comment
3	Connah's Quay	Highmere Drive CON093	5.0	Underlain by primary and secondary coal which has already been sterilised by proximal development. Part of the site is in a high risk area from past coal mining.	No comment
4	Flint	Northop Road	1.6	Small site, majority underlain by secondary coal, glaciofluvial sand and gravel and a part underlain by clay. Mineral is already sterilised by non-mineral development.	No comment
5	Mold	Maes Gwern	5.7	Site has planning permission	No comment
6	Mold	Land between Denbigh Rd and Gwernaffield Rd	10.6	Sites adjoin MOL008. Partially underlain by secondary coal which is already sterilised by proximal development and glaciofluvial sand and gravel. Because of the distribution of the mineral and housing within the site consider prior extraction unlikely to be appropriate or feasible despite the relatively large size of the site.	Within 250m of a closed inert landfill site. Considered unlikely to affect the deliverability of the site.
7	Ewloe	Holywell Road / Green Lane EWL017 / EWL020	7.5 2.5	The site is underlain by secondary coal. The site abuts the development boundary. The site is predominantly underlain by primary coal, with the north eastern part of the site underlain by secondary coal. The site itself has already been sterilised by proximal development. The site is long and narrow which makes prior extraction challenging due to the proximity to residential properties.	The site is within 250m of a historic inert landfill. Considered unlikely to affect the deliverability of the site.
8	Hawarden	Ash Lane HWN005	9.6	Underlain entirely by primary and secondary shallow coal with some glaciofluvial S&G, would not be sterilised a wider resource but prior extraction should be considered for S&G.	No comment
9	HCAC	Wrexham Rd, Abermorddu HCAC004	3.5	Underlain by glaciofluvial S&G and primary shallow coal resource prior extraction of S&G should be considered. The proposal could also sterilise the wider resource to the south west.	No comment

10	New Brighton	Cae Isa NEW013	3.5	The majority of the site is underlain by primary shallow coal resources. Some of which is already sterilised by existing development. However, the LPA are no longer required to safeguard coal resources and therefore this housing allocation would not present any policy conflict should it be allocated.	Site of former inert and municipal landfill site. Gas monitoring would have been carried out.
11	Penymynydd	Chester Rd PEN038	7.7	Site has planning permission	

Appendix 3: Assessment of Mineral Candidate Sites

Site name/Ref	Mineral type	Location	Planning History	Constraints	Comments
MIN1 Pinfold Lane/Stoney beach Quarry	Clay and shale / existing employment use	Alltami	Area put forwards comprises two former quarries and an employment area.	<ul style="list-style-type: none"> Proximity to the Buckley Newts SAC and SSSI. Ancient and Semi-Woodland 	Not requested by promoter as a mineral site. Put forward as waste site, this is listed in EN21, also put forward as an employment allocation in the LDP. Adequate provision of employment land so not included as an allocation
MIN2/MIN3 Aberdo	Limestone	Halkyn	<p>Two sites put forwards: Site 1 to the south east</p> <p>2155/620/16 H/50/118 H6 051205 – the continued extraction and processing of limestone, chertstone and other associated minerals from Aberdo Bryn Mawr Quarry: Currently under consideration.</p> <p>027395: ROMP which expires 21st February 2042.</p>	<ul style="list-style-type: none"> PROW Lime kilns – Grade II listed building. Archaeological interest. Landscape of Outstanding Historic Interest Common Land. Halkyn Mountain SAC (site. Site 1 is within the SAC whereas Site 2 is not. Halkyn Common and Holywell Grasslands SSSI – Site 2 is partially within the SSSI and Site 1 is within it. 140m from Local Wildlife Site Pen Y Gareg Farm. RIGs Bryn Mawr and pen yr Henblas. 	<p>Expansion of the site would result in the direct loss of SAC habitat and/or SSSI habitat.</p> <p>Site 1 would bring extraction much closer to residential properties. There are significant environmental and amenity constraints associated with the expansion of the site to the north east.</p> <p>Given the constraints associate with the sites it is recommended that these are not taken forward in the LDP.</p>

<p>MIN4 Hendre Quarry</p>	<p>Limestone</p>	<p>Hendre</p>	<p>045739 – Application for determination of Conditions: First Periodic Review.</p> <ul style="list-style-type: none"> • Condition 3 requires mineral extraction to cease by 31st December 2020 • 058984 – planning permission granted to extend the life of the quarry to 31 December 2030. 	<ul style="list-style-type: none"> • PROW • Aerodrome safeguarding: Extension area just outside BUT would affect entirety of site so consultation would be required. • Listed Building Grade II Quarry Engine house. • Ancient woodland to the east and south of the quarry. • Coed-y-felin SSSI to the south of the quarry. • Coed Lygan-uchaf SSSI and Coed Nant Figillt to the east. • Highway within C2 flood zone 	<p>The operator advises that an additional 11 million tonnes could be provided by the proposed extension, comprising 10 million tonnes loggerheads limestone and 1 million tonnes Cefn Mawr limestone (which is typically a poorer quality limestone with a higher level of impurities). It's likely that some form of application would need to come forwards prior to the adoption of the LDP to ensure that mineral extraction can continue uninterrupted.</p>
<p>MIN 5 Pant Y Pwll Dŵr Quarry</p>	<p>Limestone</p>	<p>Pentre Halkyn</p>	<ul style="list-style-type: none"> • 00/20/570 – Deemed consent. • 054768 – S73 Variation of condition no. 17 attached to planning permission ref: 00/20/570 to increase production limit. • 055218 – Creation of overburden storage mound. 	<ul style="list-style-type: none"> • SAM adjacent to, but outside of the site. • SAC – Halkyn Mountain (quarry not included) • SSSI – Halkyn Common and Holywell Grasslands. • Local wildlife site. • Common Land • Historic Landscape. • Within 100m of nearest residential property. • PROW 	<p>Proposed extension of 16.6ha of which 8.8ha would be subject to mineral extraction supplying up to 13 million tonnes of limestone. Proposed extension is within area already consented either by the mineral permission or the overburden storage mound.</p>

			<ul style="list-style-type: none"> The site is permitted for the winning and working of minerals until 21st February 2042. 	<ul style="list-style-type: none"> Gas Pipeline to the north of the site. 	<p>Annual output limit of 1.2 million tonnes which it is understood would not change as a result of the proposed extension.</p> <p>Development to the west of the permitted extraction area would bring extraction closer to sensitive receptors.</p>
MIN 6 Fron Haul	Sand and Gravel	Nannerch	<p>Planning permission 037406 requires that planning permission ceases by 31st December 2022.</p>	<ul style="list-style-type: none"> The Mold Denbigh Road is in the C2 flood plain. Fron Haul Farm, a building of local interest is adjacent to the site. The Clwydian AONB is to the south of the quarry. Ancient and semi-ancient woodlands within 200m of the site. Within 100m of wildlife sites. 	<p>The area proposed is entirely within the existing planning permission boundary and is currently occupied by offices and fixed plant. The existing access would be used. It is considered that the proposal would have no greater impact compared with the existing development.</p> <p>Unconsented reserves of sand and gravel beneath plant and offices are estimated to yield approximately 500,000 tonnes.</p>

MIN 7 Ddol Uchaf	Sand and gravel	Afonwen	The most relevant permission is reference 029143 which is the initial review. Permission is granted until the 21 st February 2042.	<ul style="list-style-type: none"> • The site is designated a local wildlife site and there are a number of other local wildlife sites within 200m of the site. • Ddol Uchaf SSSI is approximately 120m to the east of the site. • The Clwydian AONB is to the south of the site. • A public right of way runs through the site. • Ancient and semi-ancient woodland to the south. 	Approximate reserve of 1.4 million tonnes across existing and proposed site. The site is currently inactive.
AFN001	Sand and Gravel	Afonwen	Planning Permission granted on 23.09.2016 under reference 054707 for the proposed Candidate Site		As the site is now consented and implemented (and almost worked out). The developer has confirmed that there are no further opportunities for expansion at this site. There is no need to include the site as an allocation within the LDP
PH 005 Pant y Pwll Dŵr Quarry	Limestone	Pentre Halkyn	As above	<ul style="list-style-type: none"> • Within the SAC 	Given the constraints associate with the sites it is recommended that this site is not taken forward in the LDP and the two sites proposed within the LDP would provide sufficient reserves to meet the need identified in the RTS.

