



Date: Tuesday, 14 June 2016

Time: 2.00 pm

Venue: Shrewsbury/Oswestry Room, Shirehall, Abbey Foregate, Shrewsbury, Shropshire, SY2 6ND

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NORTH PLANNING COMMITTEE

TO FOLLOW REPORT (S)

- 12 Ellesmere Sand and Gravel, Spunhill, Ellesmere, SY12 0HY (14/04589/MAW) (Pages 1 - 118)**
Extension to Wood Lane Quarry.

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Committee and Date
 North Planning Committee
 14th June 2016

Item
12
 Public

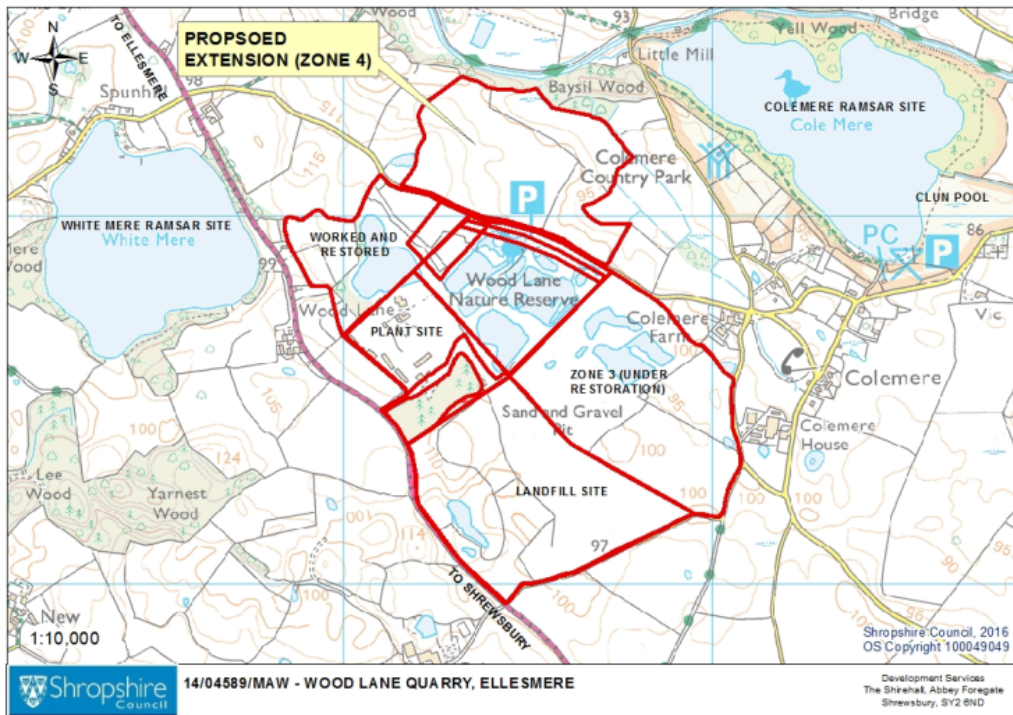
Development Management Report

Responsible Officer: Tim Rogers
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Summary of Application

Application Number: 14/04589/MAW	Parish:	Welshampton And Lyneal
Proposal: Extension to Wood Lane Quarry		
Site Address: Ellesmere Sand and Gravel, Spunhill, Ellesmere, SY12 0HY		
Applicant: Tudor Griffiths Ltd		
Case Officer: Graham French	email: planningdmne@shropshire.gov.uk	

Recommendation:- Grant Permission subject to the conditions and legal agreement set out in Appendix 1.



REPORT

1.0 THE PROPOSAL

1.1 The applicant, Ellesmere Sand & Gravel is proposing a 19.85 hectare extension to the existing quarry workings at Wood Lane, Ellesmere. The proposed extraction area is located to the immediate east of the existing quarry workings from which is separated by the minor road to Colemere. The application originally involved 3 phases of increasing depth. However, the proposals have been amended to address hydrological concerns linked mainly to the nearby Cole Mere RAMSAR site and it is now proposed only to work the uppermost phase (phase 1a). Any proposal to work the subsequent deeper phases (1b and 1c) below the ground water table would be subject to a separate planning application and associated Habitat Risk Assessment.

1.2 The proposals as originally submitted involved the extraction of approximately 2.1 million tonnes of sand and gravel at a rate of 250,000 tonnes over 8 years. However, omission of the 2 deeper phases has reduced the reserve by about 30% yielding a 5-6 year reserve.

1.3 Material that is extracted from the site will be transported by dump truck across Wood Lane via a new dedicated crossing point where it will be processed by the existing processing plant. It will then be exported from the Quarry via the current main access off the A528 Ellesmere to Shrewsbury Road. The proposals also involve:

- Management, improvement and enhancement of existing landscaping and mitigation measures;
- Restoration of the application site to grassland suitable for agricultural use.

1.4 Environmental Statement: An Environmental Statement accompanies the application under Schedule 2 of the EIA Regulations. The applicant has also submitted further technical information in response to questions raised during the planning consultation process, in accordance with Regulation 22 of the EIA Regulations. This includes supplementary reports on hydrology / hydrogeology and ecology. These matters are considered in section 6 below.

2.0 SITE LOCATION / DESCRIPTION

2.1 Wood Lane Quarry is located to the south of Ellesmere on the A528 Ellesmere to Whitchurch Road. Mineral extraction has taken place at the quarry since the 1930's. Former quarrying areas are now worked out and some are restored to fishing lakes and a nature reserve. A commercial landfill has been developed on previously extracted land adjacent to the mineral operations.

2.2 The extension area comprises two distinct parcels of land; gently undulating land fronting Wood Lane and steeply sloping land falling to the north and east at gradients of up to 1 in 3.5. Additionally, a small area of previously

restored land on the south side of Wood Lane is included to give vehicular access to the extension area.

2.3 SSSI and RAMSAR sites are located 180m to the north east (Cole Mere) and 420m to the west (White Mere). The Shropshire Union Canal passes 50m to the north, behind a shallow wooded ridge. The nearest public right of way passes to the north and west of the site at a distance of between 180 and 300m. The nearest residential properties are in the village of Colemere 400-850m to the south east, at Spunhill 560 - 950m to the west. 3 isolated properties front the A528 at Wood Lane Farm, 4-500m to the south west. A further 4 properties are located at Little Mill at the west end of Cole Mere 180-320m to the north of the site.

2.4 Tudor Griffiths Group is a long standing, family run business and employs over 250 people at various sites within Shropshire, Cheshire, Worcestershire and North Wales. The Group's main office is located at Wood Lane Quarry which is a main location for the Group's aggregate production business. Other areas of the business include ready mixed concrete production, builders' merchants and waste management, including materials recycling. The Group has also been responsible for the creation of the Wood Lane Wetland Nature Reserve in conjunction with the Shropshire Wildlife Trust.

3.0 REASON FOR COMMITTEE DETERMINATION OF APPLICATION

3.1 The proposals to extend Wood Lane Quarry have been referred to the Committee by the local member as the proposals raise complex issues and have attracted Parish Council objection.

4.0 COMMUNITY REPRESENTATIONS

Consultee Comments

4.1i. Welshampton and Lyneal Parish Council – The Parish Council reviewed the revised plans, further to the recent request for comments. The Parish Council's previous objections still stand because it is not satisfied that damage to the habitat will not occur, nor is there provision for appropriate remediation/habitat creation.

ii. The Parish Council considered the amended application at its meeting on 16th December 2015 and resolved to make the following comments:

- SAMDEV Policy MD5a states that permission will not be granted if adverse effects on the integrity of the Cole Mere or White Mere RAMSAR site cannot be avoided or mitigated in line with Policy MD12.
- The report submitted as part of the application does not demonstrate that the MD5a test has been met. The report states that only Phase 1a of the excavation could be implemented and assessed as having negligible impact on the identified eco-hydrological receptors. The

report states that further assessment of the Phase 1b and c elements is needed.

- The Parish Council is awaiting feedback from an expert in this field and reserves the right to comment once this is received.
- The Parish Council is further concerned that a conveyor belt has not been investigated as an alternative means of transporting the material.

(Note: The Parish Council has submitted technical comments from Dr Joan Daniels in support of its objections and these are included in Appendix 2. The latest observations from Dr Daniels were received before the scheme was amended to remove the lower phases)

4.2a Environment Agency (12/12/14) – Initial comments. No objection:

- i. Based on the information and assessment provided in the Hydrogeological Impact Assessment (HIA) and the EIA, including addendum reports, the applicant has demonstrated that the water environment will not be adversely impacted. This is primarily based on fact that the proposal to work Zone 4 will be either mostly above the water table or worked wet locally into the water table with no dewatering. It is the responsibility of the applicant through the planning process, to ensure that the development will also not adversely affect any existing legal water interests including abstraction licences in the area nor any water features such as groundwater fed meres (lakes), springs, boreholes, wells, watercourses and ponds which rely on groundwater for their existence. All licences have protected rights to abstract water and these are afforded a high degree of protection from activities which have the potential to cause derogation such as dewatering from sand and gravel quarries where the effects are not always seen straight away but over a period of time.
- ii. Hydrogeological Impact Assessment: We acknowledge that this application contains detailed site specific investigation data, time-series groundwater monitoring data and impact assessment in support of the extension area. This baseline data has allowed for detailed environmental impact assessment, looking at measures to avoid (our preference) remedy, or mitigate potential impacts through the design and layout of development where necessary. The quantitative HIA and the addendum TerraConsult report (2014) are a comprehensive and very detailed assessment of the groundwater environment within and around the Zone 4 proposed extension area. We acknowledge the conclusions of the reports which confirm that the proposed extension will be operated in much the same way as the present operation area where there has been no reported adverse impacts on the groundwater environment as a result of previous quarry activities. This is based on the understanding from the reports that the sand and gravels in the Zone 4 extension area will mostly worked above the groundwater table or at least worked wet (as referred to in the addendum TerraConsult 2014 report) where sub-water table conditions could be locally experienced. Consequently on that basis there will be no need for any physical dewatering operations. However, the Brassington (2009) and TerraConsult (EIA Sept 2014) reports do refer to the possibility of some limited sub-water table working with possible physical dewatering in Zone 4 (reports conflict in

content with the addendum). This may be necessary on a local basis depending on the operational hydrogeological conditions experienced. Shallow groundwater will be pumped to temporary sumps in the immediate vicinity of the excavation area. Should dewatering be necessary as suggested in Brassington (2009) which would involve percolation and recharge of this water back into the sand and gravel deposits locally, this is also acceptable to us as the local water balance in the aquifer is being maintained. We would agree with the conclusions of the various reports that this activity will be localised to the dewatering area and on that basis would not significantly affect or impact on the local groundwater system as referred to and demonstrated in the assessment within section 6.7 of the Brassington report.

- iii. Potential impact on meres: We provide the following comments regarding the potential impacts on the various meres in the vicinity of the Zone 4 extension area. Cole Mere is a groundwater dependant water body feature as referred to in the assessment and is an expression of the local water table along with inputs from rainfall runoff. Hydrogeological data and assessment presented, particularly by Brassington, concerning the potential impacts on Cole Mere has demonstrated that the mere has not been impacted by quarry operations to date. This is based primarily from hydrograph analysis. Consequently, the conclusion in the report is that this body will not be affected in the future. We have no reason to doubt these findings and consider that the assessment undertaken has adequately demonstrated that the proposed Zone 4 quarry extension activities should have no adverse impact on Cole Mere, especially if worked wet. White Mere has been demonstrated to be maintained largely by rainfall runoff. Similar to the above, the conclusion of the report is that the quarry will not impact upon this water body. Blake Mere is groundwater dependant, but importantly is 'up' hydraulic gradient of the quarry in terms of groundwater flows. Therefore, in relation to hydrogeological affects, the water body will not be impacted by the proposed works. After review of the HIA, we agree with the assessment of these features, especially as the Zone 4 extension area will be maintaining the same operating conditions. This should ensure that these features are protected.
- iv. Potential impacts upon other water features: We have considered the potential water quality impact upon the small surface watercourse/ ditch channel to the east/ north-east of the Zone 4 extension area. The ES concludes that long term groundwater level monitoring carried out shows there is no hydraulic connection between the groundwater under Zone 4 and this ditch. Therefore, we are in agreement that this ditch is more likely to receive its water from rainfall and is unlikely to be affected by quarry extension activities.
- v. Water Quality – Protection of controlled waters: This ES confirms suitable measures to help mitigate and manage potential adverse environmental impacts from operations. We note the proposals to protect groundwater quality from any accidental spills of fuels/ oils or other substances onsite. The mitigation proposed (as set out on page 15/16 of TerraConsult Report

No. 1026/1/2, Sept 2014) should be implemented to help reduce the risks and potential impacts on groundwater from quarry site activities. By way of further guidance, we suggest for a quarry site of this nature that an 'accident spill response plan' is made available, which all staff are made aware of during operations in order to protect the water environment.

- vi. Conclusion to HIA: The ES has adequately demonstrated that the water environment will not be adversely impacted especially as the proposal to work Zone 4 will be either mostly above the water table or worked wet locally into the water table with no dewatering. However, we would recommend that a planning condition for the continued monitoring of the operational quarry and extension area be included should planning permission be granted. We note that Section 4.3 of addendum TerraConsult report refers to 'Ongoing Monitoring'. (Condition recommended).
- vii. Biodiversity: A scoping opinion dated 7 July 2014 identified that the issues to be addressed in the Environment Impact assessment (EIA). This included:
- Full ecological surveys at correct times of the year for habitats (incl. UKBAP priority habitats), important and protected species.
 - Ponds and any drainage channels to be checked for Water Voles and Great Crested Newts.
 - Any impacts on the canal, Cole Mere, White Mere and Blake Mere (e.g. through changes to hydrology) to be identified and investigated.

Whilst the majority of the biodiversity issues appear to be satisfactorily addressed in the EIA, there are some exceptions discussed below:

- viii. Newts: A survey of the pools in the area for newts was undertaken in 2011. No suitable pools for breeding newts have been found within 250m of Zone 4 during this survey and the phase 1 vegetation surveys. It is therefore acceptable to consider that the quarrying is unlikely to have any impact upon pool habitat for newts. However, the ditches to the south east of zone 4 do not appear to have been assessed for the suitability of newts. Slow flowing, or static ditches can support newts and the boundary of the planning application borders these ditches. The applicant should undertake relevant assessment and supply further information to ensure any adverse affects can be suitably overcome. The applicant may consider that the distance between the current extraction area and screen bund is sufficient to ensure no adverse impact.
- ix. Water voles: The water vole is a protected species under the Wildlife and Countryside Act 1981. Water Voles have been recorded in the surrounding area and a request was made in the EIA scoping consultation for surveys of ponds and ditches to be made for water voles. The EIA has not taken into consideration the presence, or potential impact of the quarry on this protected species. We would refer you to the comments above, in relation to newts, and recommend you seek further information to be submitted. We would advise that you should not defer consideration of this relevant issue through the use of planning conditions e.g. a scheme to be agreed condition; as in the Cornwall County Council case (R v Cornwall County Council, ex p

Hardy, 2001 JPL 786) when a badger survey was not carried out as part of the EIA but was required by condition. This approach failed to properly assess all the likely environmental effects of a project. To ensure that there is no impact upon water voles that may be present, or to the wetland habitat that could support water voles in the future if water voles dispersed to the area, then the applicant may suggest that a suitable buffer zone from the ditches is sufficient to ensure no likely environmental effects. We would also recommend that further mitigation measures in the form of swales be included on the land between the quarrying zone and the ditch. This is linked to the surface water (flood risk) comments below. This feature should be created to ensure that any surface water runoff from the site is not washed directly into the ditches. Water voles are not directly affected by poor water quality. However, the plants that they depend upon are. The report states that although most rainfall on Zone 4 soaks into the ground due to the presence of near surface sands and gravels, there is some limited run-off to the small ditch located to the north of the site. From a surface water quality aspect, with the aim of meeting good ecological status by 2026 (Water Framework Directive) and associated ecology, noting the inputs in heavy rainfall events, we would recommend that appropriate mitigation measures be included. For example a restriction on the working area and extent of screen bund should be incorporated to ensure no disturbance in the buffer zone adjacent to the ditches. Our suggestion to incorporate swales etc between the working area and the ditch should be considered and applied to protect these valuable biodiversity areas and Cole Mere downstream. For completeness, the FRA and Water Framework Directive (WFD) assessment confirms that:

- 4.2.3... “Currently, the ditch receives very little run-off from the Zone 4 area except in high intensity rainfall events where some contribution can be expected. A series of swales on the ground running down to the ditch should be incorporated into the design of the working quarry area to capture and filter surface rainfall, particularly high intensity events”.
 - 4.2.8 ... “during periods of high rainfall for surface waters with a high suspended solid content to flow down into the valley area. This can be mitigated by utilising temporary surface water catchment ditches where necessary to slow the flow down and settle out any suspended solids...”
- x. Protected species (general/consenting informative): Checks for the presence of protected species, including breeding birds, bat roost sites, badgers, Great Crested Newts and water voles should be made prior to the development of any area on the site to ensure that habitat or individuals of species protected under the Wildlife and Countryside Act 1981 or the Conservation of Habitats and Species regulations 2010 are not harmed.
- xi. Habitats Regulations: The proposed new quarrying site (zone 4) lies 425m to the North West of Cole Mere. Cole Mere is a designated RAMSAR site of international importance for bird life under the Conservation of Habitats and Species Regulations 2010; known as the ‘Habitats Regulations’. Activities that have the potential to impact upon the conservation objectives of a RAMSAR site require a formal Habitats Regulations Assessment (HRA). It is the duty of your Council and Natural England, in this instance, to assess

whether this planning application warrants the requirement for a formal assessment. We have no comment on the HRA as part of this application as we are not the competent authority for the regulatory regime. Notwithstanding the above, to assist your decision making, based on the groundwater conditions and HIA the proposals are unlikely to have a significant impact upon the conservation status of Cole Mere.

- xii. Restoration Proposals: We note the restoration proposals and agree in principle with the phased approach suggested by Terra Consult Ltd. There would be a net positive environmental benefit in constructing the suggested wetland feature. This is an opportunity to provide a wetland feature of high ecological value and we would expect the applicant to consider all available options to increase the habitat. The planning permission should include a condition to secure details of a full restoration plan for the site, including the wetland. Reseeding of the area with wildflower rich grassland rather than amenity grass would have greater biodiversity benefit. The grassland restoration should incorporate the habitat requirements required of overwintering birds and should not be constrained to marginal areas of the site.
- xiii. Proximity to regulated PPC/ landfill site: The proposed quarry extension is remote from the currently permitted landfill installation and waste management facilities. It is not anticipated that the proposed activities will impact on these existing permitted waste management activities. The restoration of the proposed quarry area does not include any landfill option and will not require a landfill installation permit from us.
- ix. Mining Waste Directive: The Mining Waste Directive (MWD) requires that extractive wastes from mines, quarries and other mineral extractions are managed in a way that minimises impacts on the environment and human health. Extractive wastes are wastes generated from the prospecting, extraction, treatment and storage of mineral resources and the working of quarries. They will typically include 'overburden' – material that has to be removed in order to get to a mineral or rock, and fine material in suspension resulting from the treatment or extraction of mineral resources. Usually overburden will end up in an above ground tip or heap and material in suspension will eventually settle out in a pond or lagoon. The permitting requirements of the MWD have been transposed through amendments to the Environmental Permitting (England and Wales) Regulations 2007 (EPR). There are circumstances where a Mining waste permit will not be required. Extractive Material Management Statements (EMMS) were developed to enable operators to demonstrate that they don't produce extractive waste. This may be because this waste will be used for agreed restoration purposes only. There is no mining waste permit or EMMS on record for this site. It appears from the proposal documentation that extractive waste may be produced, stored, treated and used in restoration. This activity will require an environmental permit from us. The applicant is advised to discuss the proposals further with the Environment Agency further to ensure they are compliant with the Mining Waste Directive and the Environmental Permitting (England and Wales). At this stage, without prejudice, we do not anticipate

any significant issues relating to the ability to obtain a MWD Permit. This requirement relates to the existing area as well as the proposed extension area.

- x. Flood Risk: We have reviewed the Wood Lane Quarry Zone 4 - Flood Risk and Water Framework Directive Assessment dated September 2014. This site is entirely within Flood Zone 1 (low probability) and is over 2 miles from the nearest designated main river. The quarry catchment drains to Cole Mere and from there through an ordinary watercourse to the River Roden. The Flood Risk Assessment (FRA) refers in a number of places to Planning Policy Statement 25 (PPS 25) – Development and Flood Risk Practice Guide. This is no longer extant and reference should be made to the national Planning Practice Guidance (NPPG) which supplements the NPPF. It also refers to PPS25 in section 2.1.1 etc, rather than the NPPF. Section 2.1.5 references PPS 25 and that “planning applications for development within Flood Zone 1 need only consider arrangements / impacts arising from surface water management”. This should refer to the NPPF and PPG and the need to assess all sources of flooding. 2.1.8 refers to PPS25 Practice Guide which was replaced following the NPPG. The EIA document should be updated for completeness. Notwithstanding the above, the flood risk baseline information appears to be correct, in relation to fluvial flood risk impacts based upon the current Flood Map for planning. However we would recommend contact with your Flood and Water Management team who may hold information on other sources of flooding. The quarry extension site is flood zone 1 based on our flood map and the nearby receiving watercourses are 'ordinary' e.g. the ditch watercourse that runs along the eastern and northern edge of the area edged red (quarry extension area). This watercourse is under the jurisdiction of the Lead Local Flood Authority (LLFA). On this basis we would pick up 'strategic' comments based on our flood zone 1 process note including the need to make an appropriate assessment of any ordinary, or un-modelled, watercourses. The FRA should be updated to cover these points in the ES to ensure the EIA is sufficiently robust. The main issues would be overland flows and drainage from the site and we would expect this to be dealt with by the LLFA. The current ES does not provide much detail on the drainage from the site. We would expect the surface run off rates to be no greater than the existing Greenfield runoff rates. The FRA should be updated to cover these points, to ensure the EIA is sufficiently robust. However, we would not comment on the technical detail which may be looked at by your Flood and Water Management team
- xi. Surface Water Risk:
1. That it will be feasible to balance surface water run-off to the greenfield run-off rate for all events up to the 1% (1 in 100 year) storm (including additional climate change allowance*) and set out how this will be achieved, or achieve betterment in the surface water runoff regime; ensuring that surface water runoff will not increase flood risk to the development or third parties.
 2. How sustainable drainage system techniques (SUDS) will be used with any obstacles to their use clearly justified. (This should include, where appropriate, provision for the adoption of drainage infrastructure and

- maintenance contribution to that party). * Climate Change - An allowance for climate change needs to be incorporated, which means adding an extra amount to peak rainfall (20% for commercial development, 30% for residential).
3. The residual risk of flooding needs to be addressed should any drainage features fail or if they are subjected to an extreme flood event. Overland flow routes should not put people and property at unacceptable risk. This could include measures to manage residual risk such as raising ground or floor levels where appropriate.
- xii. Fluvial Flood Risk:
4. Some watercourses have not been modelled on our Flood Zone Maps. An assessment of flood risk associated with these unmodelled watercourses will also be necessary (Note - our Flood Zone Maps primarily show flooding from main rivers, not ordinary watercourses with a catchment of less than 3km)
- 4.2b.i. Environment Agency (09/12/15) – No objection. We have reviewed the further information including the Addendum Report on the Hydrogeology at Wood Lane Quarries, for Terra Consult Ltd), undertaken by R. Brassington, (July 2015). These comments relate to issues concerning the water environment, specifically any impacts upon groundwater and those features which also rely on groundwater. This response should be read in conjunction with our previous correspondence, dated 12 December 2014 (reference SV/2014/108123/01-L01).
- ii. Comments on 2015 Hydro-geological Addendum Brassington report. Following a review of the above, we are in agreement with the further appraisal of the water environment provided within the report, including the assessment of the potential impacts upon the nearby Cole Mere and peat deposits related to White Moss. We understand that in March 2015 an additional site investigation was undertaken to provide more hydro-geological data and assessment of the groundwater conditions in and adjacent to the peat deposit of White Moss along the north-eastern boundary of Zone 4. It is also understood that in the latest 2015 proposals, there have been revisions to the phased working scheme in Zone 4 resulting in a reduced area (orange line) proposed for extraction referred to as 'reduced extraction limit 2015 application' on map TerraConsult figure 1026/1/003. From the groundwater level data and assessment presented, the proposed Zone 4 area identified for the quarry development indicates a deep water table at about 82 – 84m AOD. This is below the water level in Cole Mere which is generally based around 85m AOD. It has therefore been demonstrated from the assessment presented that the main water table is not able to discharge to Cole Mere nor the peat deposits adjacent to the site as hydraulically the deep water table elevation is too low to do so. Water levels in the valley feature (White Moss) to the north-east, where peat within lower permeability geologic materials is found, has many shallow water tables (levels of 88 – 89m AOD) within a perched shallow aquifer environment. This is related to the underlying drift deposits which are complex in their geologic makeup being intermixed with sands, gravels and

clays depending on their glacial mode of deposition. We agree that it is logical that the perched water bodies appear to be therefore separate from the deeper water table at 82 – 84m AOD based on this hydro-geological line of evidence and the commentary discussion presented. It is acknowledged from the report that there appears to be some shallow perched groundwater with potential for limited upward gradients, particularly related to the valley feature. Further site investigation is planned to inform on the next stage of the phased approach as discussed below.

iii. Suggested two stage excavation approach:

We agree in principle with the approach suggested within the Conclusion (Section 7) detailing a two stage excavation proposal:

1. First Stage – limit depth of excavations to 90m AOD (Phase 1A) within the orange lined area specified as the reduced extraction limit (Zone 4) on map ‘TerraConsult figure 1026/1/003’. In parallel to this, we understand from the report that further hydrogeological investigations will be undertaken to better define the extent and characteristics of the low permeability natural barrier which exists. It is agreed that the proposed additional investigations should be used to further identify any risks from the enhanced monitoring data collection. This should help confirm the conceptual model already defined within Brassingtons 2015 addendum report. Should the outcome be favourable and the continued risk demonstrated to be low, progression on into the second stage to 80m AOD should then be acceptable. If the risks are deemed too high based on this additional information, then the onsite operations should be revised to reflect this risk to protect the groundwater and wetland environments. We would expect to be consulted on this additional information and assessment when it becomes available before the second stage is initiated. It is agreed that in hydro-geological terms, the first stage of excavations carry a low risk to the natural barrier system between the two water systems which appears from the evidence provided.
2. Second Stage – Excavations extend deeper to 80m AOD (Phase 1B/1C).

Agreement on commencement of this stage is subject to the ongoing investigations and updating of conceptual understanding and risk mitigation. We understand from the report, that excavations within the current application area will have a standoff between the proposed extraction limit (as defined on map ‘TerraConsult figure 1026/1/003’) and the wetland deposits to the north-east, within the base of the valley at White Moss by generally following the 100m contour with the lowest point being 98 m AOD. However, it is also understood from Section 6.17 that this planning application has been modified to reduce the extent of the excavation and the future investigation will determine the prospect of excavating additional materials in the eastern and northern sections of the site subject to the outcome of any future planning application.

iv. Operational method of working the mineral below the groundwater table

We would recommend you seek clarification on an issue we raised previously in our correspondence of 12 December 2014 (reference SV/2014/108123/01-L01) concerning the onsite method of working the mineral wet or whether active physical dewatering of the void to enable extraction is planned to take place. In previous reporting (Terra Consult 2014) it was suggested that Zone 4 would be worked wet locally into the water table with no dewatering. However, there appeared to be a conflict in other reports provided in the previous planning submission suggesting that active dewatering is proposed by pumping. We did not receive a response to our query. Thus, quote from our previous letter SV/2014/108123/01-L01: 'This is based on the understanding from the reports that the sand and gravels in the Zone 4 extension area will mostly be worked above the groundwater table or at least worked wet (as referred to in the addendum TerraConsult 2014 report) where sub-water table conditions could be locally experienced. Consequently on that basis there will be no need for any physical dewatering operations.'..... 'However, Brassington (2009) and TerraConsult (EIA report - Sept 2014) do refer to the possibly of some limited sub-water table working with possible physical dewatering in Zone 4 (reports conflict in content with the addendum TerraConsult 2014) which may be necessary on a local basis depending on the operational hydrogeological conditions experienced. Shallow groundwater will be pumped to temporary sumps in the immediate vicinity of the excavation area. Should dewatering be necessary as suggested in Brassington (2009) which would involve percolation and recharge back of this water into the sand and gravel deposits locally.....' The applicant should confirm the method of either working the mineral wet or whether active dewatering is proposed. Working the quarry wet will reduce further any risks to the water environment and provide an additional level of hydraulic protection to other water features i.e. wetlands which may derive some groundwater component from the shallow aquifer. However, if the active dewatering is proposed by pumping and the method employed, as suggested above, with local recharge back into the aquifer maintaining the water balance locally we cannot see this is a significant issue as long as the balance is maintained. From a risk perspective, working wet provides a higher degree of certainty (and comfort) where hydraulic connectivity risks are concerned with other features such as wetlands and this would be the preferred method of working. For completeness, we would suggest you seek clarification on the method. Groundwater monitoring condition We previously suggested draft wording for a monitoring condition (see our letter of 12 December 2014). The groundwater level monitoring data will be important to demonstrate future trends, triggers where issues may arise from quarry activities and the general baseline/ natural groundwater levels in and around the quarry developments as it progresses. In the past, this data has been used to demonstrate that no impacts have occurred from the quarry development and is a crucial line of evidence which we would expect to continue under the current proposal. Mitigation can then be implemented where appropriate to help avoid, reduce or remedy any significant impact should the data indicate any issues. Mitigation proposals have not been provided within the assessments (EIA) to date. We would have expected this aspect to have been scoped out should any risks become apparent during operations. It is

usual practice to set trigger levels on groundwater monitoring boreholes as an early indicator that an impact could be arising which would invoke further measures to address the potential risks. As suggested within our previous response, we would recommend that a planning condition for the continued monitoring of the operational quarry and extension area be included should planning permission be granted. This is necessary to protect and monitor the water environment during the operational lifetime of the Zone 4 'reduced extraction limit 2015 application' extension area.

- v. Conclusion: Based on the above proposal and assessment we agree in principle with the approach as suggested detailing a two stage excavation process with additional site investigation to inform the assessment for moving into future phases of quarry development. Continued groundwater monitoring networks and groundwater level data should be used to demonstrate that any risks are under control and where issues arise, mitigation must be applied to reduce that risk to the water environment.
- vi. Biodiversity; The supplementary information (NVC vegetation classification of White Moss, the SLR Great Crested Newt Survey and the Water Vole survey) provides evidence that the White Moss Valley is a valuable wetland habitat. The southern part of White Moss is designated as a Local Wildlife Site. Although no evidence of water voles was found during the survey, in July 2015, the ditches in White Moss provide highly suitable habitat for them. Water voles are present along the Newnes Brook, its tributaries to the west and north of Wood Lane and along the Shropshire Union Canal. It may be possible to connect these locations to White Moss in the future so that the population can disperse and expand to form a more resiliently sized meta-population. This is the aim of the Biodiversity Action Plan for water voles. It is therefore important that the habitat in White Moss Valley is protected and enhanced, where possible, to support these objectives. The additional reports help demonstrate that there should not be any significant impact upon the local ground water system that could lead to a detrimental impact upon Colemere RAMSAR site. The reports conclude that the phase 4 excavation area provides only a small proportion of the surface water catchment to White Moss (JBA lidar data and flow accumulation data). The developer has revised the excavation depths and area to limit any impact upon local ground water and surface water. The developer proposes to continue monitoring of ground and surface water in White Moss. Great Crested Newts were found in ditch D2 to the east of Zone 4 and in pond 2 on the western boundary of zone 4 of the quarry (June 2015). We would recommend you seek the views of Natural England as the lead on this protected species and Habitat Regulations matters.
- vii. Restoration proposals; Restoration to intensive agricultural use should be avoided at all cost as runoff from intensively farmed fields has been shown to contribute nutrients and sediments to the Meres. Eutrophication of Colemere is one of the key reasons for its current unfavourable conservation status, with reference to Water Framework Directive (WFD) objectives. Careful enhancement of the site could make a significant positive contribution to the environmental landscape of the area and help deliver

WFD objectives. Phase 4 should be restored to low intensity agricultural use and / or nature conservation use (a scalloped edge pool to benefit water voles (our interest) as well as newts and wading birds.

- viii. Other: We would reiterate the comment in our previous response of 12 December 2014 including sections on the 'Proximity to regulated PPC/ landfill site', the Mining Waste Directive requirements and flood risk. With regard to flood risk, the site is entirely within Flood Zone 1 (low probability of fluvial flooding) and is over 2 miles from the nearest designated main river. As previously recommended, we would recommend that your Flood and Water Management team be consulted on overland flows and drainage from the site.

4.3 Shropshire Wildlife Trust – Shropshire Wildlife Trust has a number of concerns relating to this application and therefore lodges a holding objection until the following issues are resolved.

- i. Impacts on Colemere; The hydrology report accompanying the application states that "Colemere is dependant on groundwater inputs and can be regarded as an expression of the local water table". However in ecological terms it is surface water inputs that have affected the meres in the area. For example:

- Enrichment resulting from the use of fertilisers on surrounding land being washed into the meres.
- Siltation from cultivation along inflow streams.
- Pollution from spills on adjacent land and roads.

We therefore have concerns with an assessment of impact that considers surface water inputs to be insignificant. Given the extensive groundwater monitoring associated with the existing site we accept impacts via the groundwater system are unlikely, however the extension area is within the Colemere surface water catchment and only 500m upstream of "the only place in England where the Least Water-lily grows naturally". Given the national and international status of Colemere it needs to be clearly demonstrated that there will be no significant impacts from excavation, operation, restoration uses or from accidents or possible responses to emergency situations.

- ii. Impacts on adjacent valley/ecological unit/wetland ecosystem:
In a landscape scale study under the Meres and Mosses LPS project, using data on topography, hydrology, and the peat soil resource, the area has been identified as an ecological unit/functional wetland ecosystem. These areas are thought to be key for nature conservation and the delivery of an effective ecological network at a landscape scale. A query of the most recent version of the Shropshire Ecological Data Network's (SEDN) database reveals records for Cowbane (*Cicuta virosa*) in the area of drains to the north of the site. If this data was available in 2010 more attention may have been given to the adjacent wetland area. We also note that while the scoping opinion from Shropshire Council identified water vole as a potential

issue this does not appear to have been addressed by the survey work. The area forms a shallow valley which links two Local Wildlife Sites ('Woodland Near Colemere' and 'Near Shropshire Union Canal, Colemere'). The excavation and restoration will affect a significant proportion of this sub-catchment and so has the potential to have a significant impact (via modifications to surface water flow and perched groundwater). It would therefore be appropriate to assess in more detail the existing ecological value of the area, implications for surface water balance and effects on interconnected sites.

- iii. Restoration Proposals: Shropshire Wildlife Trust welcomes the restoration to a nature conservation after use providing open water and wetland habitats. We suggest that specialist ornithological advice is sought over the layout to maximise the ability of the site to attract and support a wide diversity of bird species. There is no reason why the development should not aspire to be a 'premier' bird watching location in Shropshire. More detail is required to ensure that the restoration scheme enhances the existing ecological interest and ensure that it does not result in a negative ecological impact beyond the site boundary.
- iv. Shropshire Wildlife Trust requests the developer provide the following.
 - Further information to ensure there will be no possibility of impacts on Colemere, including via surface water.
 - Assurance that no contaminated run off can enter the surface water system (and hence risk impacts on the adjacent wetland, down stream LWS and Colemere).
 - A greater (or redesigned) buffer area is provided to protect the surface water system.
 - Assurance that water balance will be maintained in the valley area of marshy grassland.
 - Clarification on survey effort (e.g. water vole, etc) in the valley area.
 - A revised Restoration Plan to maximise the potential for biodiversity gains.
 - That during extraction and restoration phases soil bunds are not placed in areas that have potential for ecological restoration. For example Top soil bund T3 on marshy grassland identified in target note 11 in the habitat survey.

Officers from Shropshire Wildlife Trust would be happy to meet the applicant to discuss these matters further.

- 4.4. Natural England – No objection. Natural England has indicated in an email dated 3rd June 2016 that it accepts the conclusions of the Council's Habitat Risk Assessment as included in appendix 3.
- 4.5 Canal & River trust – No objection. After due consideration of the amended application details the Canal & River Trust would reiterate comments made in our previous response dated 4th December 2014 as outlined below:

- i. **Impact on Heritage, Character and Amenity of the Llangollen Canal**
The site is located partly within our buffer with the majority of the mineral workings taking place outside of the 150m consultation zone. The Phasing Plan shows a 4m high screen bund between quarrying works and canal corridor and the amended statement indicates that the works will last for approximately 5 years and the bunds will be created for screening purposes at the start of phase 1. Section 5 Landscape and Visual Impact Assessment of the application considers the canal at paragraphs 8.4.6.; 8.6.82.; 8.6.83.; 8.6.84.; 8.6.85.; 8.6.86.; 8.6.87.; and 8.6.88. Section 12 Assessment of Impact on Historic Setting, Cultural Heritage and Landscape considers the canal at paragraphs 6.3.2 and 6.3.3. The proposals do not raise concerns in relation to heritage issues. Due to the topography it appears that there will be a low impact on the canal setting and its associated structures. During construction and operation we recommend that the use of listed canal bridges in the vicinity of the site as a means of site access should be avoided due to their vulnerability to damage from large site vehicles and other routes should be used wherever possible. Photograph 9 and 10 in the Landscape and Visual Impact Assessment show that the land to the south of the canal has a long rise in level and that the density of tree cover is sparse in winter months. The proposed bunds would therefore become visually exposed during the winter seasons, altering the current outward perspective of the canal from this point. The temporary visual contrast of the bunds could be mitigated through upfront landscaping proposals. A landscaping scheme could propose to strengthen the native mature vegetation along the site's northern boundary and be delivered at the start of phase 1. This would have no impact upon the quarry works set further back into the site. Although a bund strategy would alter the canal's existing outward view, it would provide a much needed acoustic buffer for the canal corridor from the quarry works should they go ahead. In our opinion, a bund strategy would have a more natural visual characteristic upon the hills of the landscape than acoustic fencing.
- ii. **Impact on Natural Environment and Landscape of the Llangollen Canal;**
Any potential impacts upon the canal are considered in Section 9 Ecology of the application documents, which notes a section of the canal to be a County Wildlife Site. The proposed development is unlikely to result in direct impacts upon canal habitats and there is sufficient distance between development and canal features, so as to minimise impact on the ecology of the canal. Between the site boundary and the canal is a woodland buffer of approximately 30m which will not be affected, along with the proposed planted screen bund along the eastern and northern sections of the site boundary. There are no watercourses flowing directly into the canal which could result in possible ecological impacts by that means. Protected species have been accounted for and appropriate mitigation proposed throughout the development and operational works. Bats would be only main concern in respect of the canal with surveys noting an increased level of bat activity noted in the north of the site close to canal corridor. The canal is recognised as a foraging/commuting habitat feature, however there will be no impacts to this area. The report also states that no artificial lighting needed during operations on site. The restoration plan submitted is only indicative at this

time though the proposals have been amended following the removal of phase 1b and 1c from the proposed works. Any proposed restoration has the potential to provide a benefit to wildlife using and relying on the canal corridor. The full details of the restoration plan could be required by condition.

- iii. **Impact on Water and Environmental Quality of the Llangollen Canal:**
Neither Section 6 Dust Assessment nor Section 7 Noise Assessment have considered the impact of the development on the canal corridor. Although they have considered residential properties closer to the site than the canal moorings 500m to the west of the site. The report states “the noiselevel predictions have taken into account the provision of a 6 metre high soil amenity bund along the eastern perimeter and a 4 metre high bund along the northern perimeter of the northern extension area.” The soil storage mounds / screening bunds are very close to the canal so the process of creating these bunds are likely to create dust in the short term. Once established they will prevent dust generation. The canal corridor users haven’t been considered as receptors to noise and dust and we have previously requested clarification that the mitigation measures proposed will be protective of canal users. It is understood that it is now proposed to address this issue through a planning condition. The Trust would therefore wish to be assured that the canal will be recognised as a receptor to noise and dust and consulted on details of any mitigation measures submitted to discharge the condition.
- iv. **Impact on Structural Integrity of the Llangollen Canal**
With any development close to the waterway there is the potential for adverse impacts on the infrastructure of the canal in terms of stability, drainage, pollution, erosion, increase in water levels etc. Section 10 Geology and Hydrology of the application document has considered the canal at paragraphs 2.5.5; 2.5.6.; 2.5.7.; 4.1.3.; 3.3.4; and 4.1.4. Section 10 Flood Risk considers the canal at paragraphs 4.2.7 and 4.2.8. From a geotechnical viewpoint we have no issues with this application which is an extension to historical sand and gravel excavation that has been operating for many years without a problem. The canal does not appear hydraulically linked to groundwater so should have no effect. The zone of influence of the quarrying operation appears to be well outside the stand-off from the canal line. We normally use a standoff line distance equal to 45 degrees from the outermost edge of the canal to the base of the excavation for granular deposits (which would be 12m) but we do vary it to as low as 25 degrees in susceptible ground such as soft alluvial clays (28m). Given the geology the former would be used here. The applicant appears to be aware of the culverts in the area, and how they currently operate. There is detail relating to their ‘management’ proposals for these culverts, and it does appear that the culverts should be unaffected. Additional bunding and channels are proposed to aid in flood conditions. However, if any issues arise these shall need to be addressed by the quarry operator. After due consideration of the application details, the Canal & River Trust has no objections to the proposed development, subject to the imposition of suitably worded conditions as detailed above.

Internal Comments

- 4.5 Public Protection - No objection. Having considered the noise assessment it is noted that noise levels have been suggested as limits at five residential properties. By achieving these limits it is considered that the proposed operations will be in line with the NPPG. As a result I would recommend that noise limits at relevant properties are conditioned in line with section 7.1.2 of report R14.8168/1/JM dated 30th April 2014 submitted in support of this application by Vibrock Limited.
- 4.6. Highways Development Control – No objection. From a highway aspect I am content with the layout design and specification, which was agreed with the Divisional Manager last year. What needs to be ensured however is that the vehicle crossing area is maintained in good order. As part of any permission therefore this needs to be set out in any planning conditions imposed. In addition it needs to be recognised that if problems/highway safety issues arise then these can be considered and any reasonable mitigation carried out. This could be in terms of additional signing as an example but I do not envisage any substantial measures being required. In simple terms though if driver adhere to the code of conduct outlined in the suggested protocol then there should not be any issues. We discussed potential financial contribution towards improvement of the county road which leads, from the Ellesmere direction, past crossing point to the nature car park. I understand that a figure of 5-10k was considered. Looking at the condition and informal unsurfaced passing places along the route a figure of £20k would provide some material improvements that would benefit local traffic.
- 4.7.i. Natural Environment (Ecology) Final comments 03/06/16. This consultee response should be read in conjunction with my previous response dated 13th January 2015 (although this should read 2016) and the completed Habitat Regulation Assessment (HRA) for the project. The submitted documents and references used to inform this response are listed within Appendix 1 of the HRA. I have also referred to:
- Wood Lane Quarry and landfill Ellesmere, Shropshire, Great Crested Newt Survey Report, July 2011
 - Letter from SLR to Stuart Lawrence dated 23.8.11 Re: Habitat Suitability Assessment for great Crested Newts, Wood Lane – Supplementary information.
- ii. Recommendation: The conditions and informatives detailed below should be added to any planning permission. A 3 tests matrix for Great Crested Newts must be completed and attached to the committee report. A Habitat Regulation Assessment has been completed and passed for this project and Natural England have agreed with its findings. A copy of the HRA should be appended to the committee report and any conditions or legal agreements within it secured. As the proposed extraction Phases 1b and 1c could not pass the HRA without further detailed monitoring and investigation, the planning application has been modified to cover Phase 1a only.
- iii. Habitat Regulations Assessment of impacts on European Protected Sites: Zone 4 has been allocated in the SAMDev plan for quarrying sand and

gravel. The Habitat Regulation Assessment for SAMDev screened all EU sites within 10km of the proposed extension for any likely significant effects of the development. Of the 9 sites screened, all but Cole Mere and White Mere screened out with no apparent effect pathways. This process has been repeated in the light of additional information provided but the same conclusions have been reached. Further analysis of the various potential effect pathways which could cause harm to the designated features of the above European Sites as a result of the Phase 1a extraction has been undertaken. The Habitat Regulation Assessment of the project records the evidence and analysis, together with proposed counteracting (mitigation) measures. The latter would be secured by planning conditions and legal agreements. The conclusion of the HRA, which can be viewed on the planning website, is that there will be no likely significant effect on Cole Mere and White Mere Ramsar sites and SSSIs as a result of Phase 1a extraction at the development site.

iv. SSSIs, other designated Wildlife Sites and Priority Habitats:

SSSIs and priority habitats: Cole Mere, White Mere and Clarepool Moss are all SSSIs as well as European Sites. The same issues outlined in the council's HRA apply equally to these nationally designated sites. Priority habitats and species are present on White Moss (the adjacent valley to the north and east of Zone 4. Following the reduction in extraction area, providing the various effect pathways detailed in the HRA are avoided or mitigated for, these habitats and species should remain unaffected. If possible, ways of enhancing these habitats should be sought.

Hedges: The hedge on the southern boundary has been identified as species-rich (containing 6-7 species In the Ecology Chapter 9 of the ES (Ref. No 1) section 9.174, it states that c. 54m of roadside hedge is to be removed and c. 100m of new hedge is to be created at the crossing point from Zone 4 to the rest of the quarry. It is also states that no mature trees would be affected in this location. SLR, the ecological consultants for the applicant have confirmed that the affected lengths of hedgerow are to be translocated, thereby retaining the shrub species compliment. There should be no significant loss of hedgerow or change in species composition. Any subsequent failures would be replaced by appropriate native species of local provenance and the translocated hedge will be watered if necessary during dry periods. Hedge removal/translocation should be minimised and the hedges replaced as soon as possible after access construction. Great Crested Newts are present in surrounding ponds and ditches and will need to be taken into account (see below).

v. EU Protected Species

Great crested newts: The 'Great Crested Newt (GCN) Survey and Evaluation Report 2015 Appendix 9.8' by SLR, July 2015 Ref. No 17) updates the survey carried out in 2011, and now includes survey of the ditches and Mill Cottage Pond as requested. As for the 2011 survey, a cluster of ponds in Colemere village support a medium population of GCN (ponds 5, 18, 19 and 25a). The 2011 survey also detected a small population of GCN to the west of the A528 and the existing quarry. Smaller numbers of GCN have now been found in Ditches 1 (0m from site boundary and 75m from extraction

boundary) and 3 (0m from site boundary and 117m from extraction boundary), pond 2 (3m from site and extraction boundary), Pond 3 (144m from the site and 246m from the extraction boundaries) at Mill Cottage (including eggs) and pond 1 (304m from the site and extraction boundaries) to the north-west. There is a historical record of a GCN being found in the Wood Lane Nature reserve (section 9.85 Ref No 1) c. 85m from the application site. The 2015 survey also states that no populations of GCN were recorded during the 2011 surveys of the water bodies present in the nature reserve. However, no surveys for GCN were carried out within the existing quarry. Habitat Suitability Indices were scored as 'poor' due to water quality and use of the ponds (ponds 20 – 22) for fishing (Ref Nos. 27 and 28). In their letter of the 29th January 2016 'Re: Further Ecology Commentary on the Wood Lane Zone 4 Planning Application' (Ref. No 12) SLR state that the potential suitability of Ponds 20-22 for GCN was re-considered prior to the start of the 2015 survey and considered to remain low due to the current use by large numbers of water fowl/gulls and the fishing syndicate (which includes re-stocking) prevails. Terrestrial habitats remained poor for GCNs. SLR have recommended Risk Avoidance Measures for the operation of the quarry without obtaining an EPS licence from Natural England (see documents 11 and 12). In Document 12 SLR supply some additional Risk Avoidance Measures and then state 'SLR considers that in respect of Phases 1a,b and c a NE development (licence) for GCN is not required, however, the situation would be kept under review and informed by the findings of the precautionary measures proposed to ensure full compliance with the relevant legislation.' The LPA has to consider if the proposed development is reasonably likely to cause an offence under the Habitats Regulations. Due to the proximity of ponds and ditches in which GCNs have been found, the closest being around 3m from the site boundary, I consider that it is reasonably likely that GCNs could be killed or injured, albeit in small numbers, during the proposed development and the LPA must consider the 3 tests under the Regulations. Since SLR's letter Ref No 12), discussions on possible impacts through hydrological pathways have led to a proposed swale to be constructed along the northern and eastern boundaries of the void, which could create a habitat and commuting route for GCNs after a year or two. Removal of this feature and the soil bunds (likely to take after 4 – 10 years) could destroy habitat used for rest and shelter by GCNs and hence cause an offence under the Habitat Regulations. I agree that the favourable conservation status can be maintained with appropriate mitigation measures and have attached a 3 tests matrix with the FCS test completed. The planning case officer will need to complete the remaining two tests. The following conditions should be attached to any planning permission granted:

Bats: SLR confirm that the mature ash was partially dead in the Star Ecology report 2009 and it was lost in a storm event in 2013. They have also confirmed that there will be no artificial lighting of the quarry workings or the crossing point (Ref No 12). The following condition should be added to any planning permission.

Water Voles and Otter: The 'Water Vole Survey and Evaluation Report Appendix 9.7' by SLR July 2015 states that no evidence of Water Voles or

Otter was found along the ditches to the north and east of the proposed extension.

Reptiles: SLR stated that no reptile survey is required and now, with the reduction in extraction area, only arable land, poor grassland and hedgerow is to be affected.

Birds: The Ecology Chapter states that no Lapwing, Curlew or Skylark were found on site. Hedges and trees on site are likely to provide nesting opportunities and their removal should be carried out outside the nesting season.

Badgers: SLR (Ref. No 12) state that the application site and wider area extending to a minimum of 30m but up to 200m where woodland occurs was surveyed for the presence of badgers as access was unrestricted for their surveyors. A condition should be applied to any planning permission requiring an update survey for badgers before works begin on site.

- vi. Environmental Network and Nature Improvement Area – protection and enhancement through restoration and aftercare. Conditions requiring a detailed restoration plan and aftercare plan to be submitted for prior approval would need to be applied to any planning permission. Conditions should ensure the margins and slopes of the restored land form retain nutrient poor substrates to increase biodiversity and a mosaic of habitat types should be created from woodland, scrub and hedges to species-rich grassland. I have already supplied separate comments on the draft set of planning conditions. A Construction Environment Management Plan will be required to tie together the various mitigation measures required:
- 4.8i. Archaeology (Historic Environment) (10/12/15) – No objection: The proposed development comprises a c.19.74ha northern extension to the existing Ellesmere sand and gravel quarry. No known designated or non-designated heritage assets are recorded within the boundaries of the proposed development site itself on the Shropshire Historic Environment Record, and it is not considered that the proposed development would fall within the settings of any designated heritage assets. However, the site is located c. 41m south of the Ellesmere Canal/ Llangollen branch of the Shropshire Union Canal (HER PRN 03414). Further, there are a number of archaeological cropmark sites of likely later prehistoric to Roman date within a 1.5km radius of the site, the nearest of which comprises a double ditched curvilinear enclosure of probable Iron Age date c.200m to the north. These provide evidence for long term human activity within this part of the landscape in the later prehistoric and Roman periods. Taking into both this and the extent of the proposed development site, it is considered to have moderate archaeological potential. We note the Canal and River Trusts advice in their letter of 5 December 2014 and Historic England's advice of 30 November 2015.
- ii. We understand that Chapter 12 of the Environmental Statement comprises an Assessment of the Impact on Historic Setting, Cultural Heritage and Landscape by Pleydell Smithymen. It is accepted that this provides an adequate assessment of the potential impacts of the proposed development on the settings of heritage assets within the vicinity. However, it does not, in

our opinion, adequately assess the archaeological potential of the proposed development site in the terms outlined above and is not informed by the results of an archaeological field evaluation of the site. In this respect we do not consider that it satisfies the requirements of Paragraph 128 of the NPPF or Policy MD13 of the emergent SAMDev component of the Local Plan. As a consequence, we advise that the results of an archaeological field evaluation should be submitted prior to the determination of this application. This should initially comprise a geophysical survey of the proposed development site. This will enable an assessment to be made as to whether any further pre-determination evaluation work is required (in the form of targeted trial trenching), or whether further mitigation, comprising a minimum of an archaeological watching brief, can be made a condition of any planning consent. The above information is required in order to enable an informed planning decision to be made and there should be no determination of the application until it has been submitted to the Local Planning Authority.

- 4.8ii. Archaeology (Historic Environment) (27/05/16) – No objection. I understand that there is now an urgent need for the LPA to expedite determination of this planning application due to the length of time that has elapsed since it was submitted. Whilst far from an ideal situation, it is possible that the archaeological evaluation and any subsequent mitigation measures could be secured under a pre-commencement condition for a phased programme of archaeological works. This would need to comprise an initial field evaluation, comprising a geophysical survey and trial trenching across the whole of the site, followed by further mitigation as appropriate (up to and including, subject to their significance, full excavation of any archaeological features). This approach will, however, be at the applicant's risk because, without a pre-determination evaluation, we cannot at present quantify the degree of subsequent mitigation that may be required. A condition is recommended (see appendix 1). To implement this condition the applicant will need to engage an appropriately qualified archaeological contractor. I will be pleased to work with their chosen archaeological contractor to negotiate and agree a WSI for the initial evaluation phase of the work. If they mobilised quickly, they could potentially get the results of a geophysical survey to us prior to determination of the application.

4.9 SC Conservation – No comments.

4.10 Countryside Access – No comments.

4.12 SC Drainage - 1. The

4.13 Councillor Brian Williams (Ellesmere) has been informed of the application and has referred the application to be determined by the Committee.

Public Comments

4.14 The application has been advertised in the press and by site notice and the nearest private properties have been individually notified. The application

has attracted a representations from 23 individuals. These concerns are summarised below:

- i. Location: The application site is unsuitable for activities of this nature. Colemere is one of the most beautiful unspoiled areas of North Shropshire and is promoted by Shropshire Council as a tourist attraction and beauty spot. It is a natural habitat for wildlife, flora and fauna. The proposal would destroy the natural rural outlook of the land. We moved to this beautiful idyllic part of Shropshire just over two years ago and were immediately captivated with the location, beautiful scenery, tranquillity and nature that surround our property. However we are devastated by the recent planning application for a gravel and sand quarry to be operational, which will be situated opposite our property. We as residents feel this is intrusive and our privacy will be compromised, as we will be able to see the quarry and plant machinery from our property and our lovely views will be spoilt. Cole Mere is a recognised beauty spot visited repeatedly by many tourists, some of whom we have come to know and recognise, who have all expressed their alarm at the proposed devastation of the area. The fact that this is the only one of the meres to have a full circular walk, as mentioned in many guide books, makes it particularly popular with visitors.
- ii. Ecology: The application site sits within the Colemere boundary which is designated open countryside. Cole Mere itself is of international importance and holds SSSI and RAMSAR designations. This makes Colemere a very special place which should be protected and saved for future generations. There can only be an adverse impact on both the designated wildlife site and the national and internationally designated RAMSAR site that is Colemere. I believe that the council have a duty of care to protect not only the environmental and wildlife of this designated site, but also on the tourism associated with this area. Whilst not being qualified to comment on the effects on the hydrology of this area it seems to me that the exact mechanism by which the mere is fed by underground springs is not fully understood and would easily be compromised by quarrying in such very close proximity. Can water levels and water quality be assured? The very aspect of the present tranquillity of Colemere has been fundamental to the RAMSAR listing. Current government planning rules state that there will be a 'Strong presumption against' sand and gravel extraction on areas outside but close to RAMSAR sites. This site could not be any closer without being within the boundary. Should this planning application be accepted then the council must have very robust mechanisms and procedures in place to enforce the proposed timescale and not to allow for any extension.
- iii. Noise: The proposal will increase noise to unacceptable levels for people living in the village and visiting. The noise report within the application does not correspond to the application and incorrectly references estimated noise levels at the tunnel area. However, the excavated material will not be moved via a tunnel, rather it will be moved using lorries at ground level. The proposal will increase noise to unacceptable levels for people living in the village and visiting the mere. Tudor Griffiths are planning to work on the site all week including Saturday morning, leaving little 'quiet time'. It also refers

to local traffic noise in the Little Mill area which is more likely to actually be the excavation work and site traffic on the current Tudor Griffiths site, as very little traffic uses this area of Mill Lane. The noise readings were taken in the summer when trees would have dense foliage so the sound would obviously increase greatly in other seasons. The noise readings taken at Little Mill are in a relatively shielded location and the sound is always far more apparent on the other side of Cole Mere, especially by the canal and Yell Woods. To suggest in sections 6.3.4 and 7.1.2 of the Noise Assessment that the zone 4 excavations will be akin to a quiet office as described in Appendix 1, Part 6 is clearly not logical. The visitor moorings on the canal are very popular and because of their elevation would be considerably affected by the noise. Cole Mere is also a popular tourist area, especially with walkers, being part of the Ellesmere/Colemere circular walks who will be discouraged from visiting this SSSI / RAMSAR site because of the noise.

- iv. Dust: The movement of excavated materials will inevitably generate dust and other airborne particulates which may impact on the health and visual amenity of local residents and visitors.
- v. Light Nuisance: Colemere enjoys dark skies and it is inevitable that in the winter months lighting will be required on the site early in the morning and late afternoon/early evening. This will impact on the visual amenity of local residents and the habits of wildlife species. One of the joys of Colemere is to look into complete darkness at night. It is inevitable that in the winter months lighting will be required on the site early in the morning and late afternoon/early evening. This will impact on the visual amenity of local residents and the habits of wildlife species. Site lighting will be needed for safety purposes during winter working days. The Application must include that this lighting be switched off outside working hours to preserve the 'dark night skies' enjoyed by Colemere residents and visitors.
- vi. Watercourses: It is clear that the application has not undertaken a full evaluation of the potential impact on watercourses and springs in the area. There is high potential for long term damage to surrounding homes, farm land and the Mere itself. I am concerned with the potential damage to the mere, especially the area where the water lilies grow, both in terms of the water levels and the potential for environmental damage from contamination of the water. The fauna and wildlife that live on the mere will surely be affected. One local resident has queried the status of a watercourse which flows towards Cole Mere through Little Mill Cottage to the north of the site. It is stated that details of this have been omitted from the applicant's hydrology report and inaccurate assumptions have been made about the flow of surface water. Concern is expressed that the proposals could adversely affect Little Mill Cottage.
- vii. Road Infrastructure: The main access route to Colemere is via a narrow un-designated country lane with passing places which runs into the Village from the A528. This lane separates the proposed excavation site from TG's processing plant areas to which the excavated material needs to be transported. The current proposal is that the material will be transported from

the site in large lorries travelling at ground level across the lane to the processing area. The lorries will travel almost in convoy at a rate of 20 per hour or 1 every 3 minutes. This is madness. As stated, the lane is the primary access route to Colemere used by residents visitor and tourists. It is also the road used by the School bus. In parts the lane has poor visibility and several blind bends which can make it hazardous to travel particularly for visitors and tourists who do not know the area. The proposal will not only impede the progress of traffic along the lane but could also impact the progress of emergency service vehicles should they need to attend an incident in the village or at the Mere. The lane has no pavements and is used by walkers, cyclists and horse riders. The use of lorries will cause noise nuisance, pollution and it will have a significant negative visual impact on the area. It is rare to travel on this road without having to pull over or reverse to a passing point to let traffic travelling in the opposite direction pass. In parts the lane has poor visibility and several blind bends which can make it hazardous to travel, particularly for visitors and tourists who do not know the area. With the proposed lorries crossing the road at a rate of 20 per hour there will be a huge impact on the local road users. The figures obtained by the road use survey are only relevant for the period over which they were taken. The use of this road will increase as more housing and other development occurs in the areas served by it. It is not known what Sect.106 or CIL benefits may accrue from this Application, but if there are any, the restructuring of the Spunhill Crossroads must therefore be given a high priority. There have been many accidents at this Crossroads

- viii. Gas pipeline: The application site runs close to one of the country's largest gas pipelines. Quarrying activities could result in an increased risk of damage to the underground supply with the consequent threat to the community. The proposed road crossing incorporates the high pressure (ca.1500psi) gas pipeline on the north side of the road. The construction of the crossing over this pipeline will, no doubt, be to the relevant standards set by the line's Owner. The Site will be working for 275 d/yr. with 30 to 40, 35 tonne truck loads crossing it and the same number of empties returning. Assuming the trucks weigh at least 10 tonne, the loadings on the pipe crossing will alternately vary between 45t. & 10t. Over the quoted working life of the site of 7 to 8 yrs., this equates to between 115,500 and 176,000 fluctuating loadings on the road above the pipe. What calculations have been made and inspection regimes will be put in place to ensure that the safety and integrity of the pipeline in this area will be maintained? All such data should be included in this Application. The failure of this pipe would be catastrophic, especially as it is in an elevated position, facing Colemere. This situation would be avoided by a tunnel, which would actually support the pipeline.
- ix. Canal: The very close proximity to the canal is of concern and I assume that the canal and river trust have been informed/consulted in this regard, so there assessment can be made.
- 4.15 Inland Waterways Association (neutral): The Inland Waterways Association, campaigns for the conservation, use, maintenance, restoration and sensitive

development of Britain's canals and river navigations. Established in 1946, it now has over 16,000 members. We have no objection in principle to this application, subject to the screening provided Baysil Wood and Burns Wood being augmented so that the site is adequately hidden from users of the canal and its towpath for the estimated life of the operation of the site.

5.0 THE MAIN ISSUES

- i. The justification for the development;
- ii. The timing of the proposals / prematurity;
- iii. Effects on residential and general amenities (noise, dust, visual impact, traffic, timescale);
- iv. Other environmental effects (restoration and afteruse, ecology, hydrology, agriculture)
- v. Cultural heritage;
- vi. Other issues (cement silo, footpath diversion, slope stability).

6.0 OFFICER APPRAISAL

6.1 Context of development:

6.1.1 Wood Lane Sand & Gravel pit has been operated by Tudor Griffiths since 1935 and has been supplying buildings materials to the local market in Shropshire since that date. The sales from Wood Lane have been in the region of 300,000 tonnes per annum for the last 20 years. The recession since circa 2008 has saw a dip in output but there has been a significant increase in sales since mid - 2013 as the market has recovered. A large proportion of the sales from Wood Lane are internal sales within the company supplying the 12 concrete batching plants and the 7 builders' merchants. The applicant states that without the Wood Lane material there would be a significant demand on importation of Sand & Gravel from neighbouring counties to keep the various businesses operating.

6.1.2 The most recent excavations south of the current application area ('zone 3') are now undergoing restoration. The current application seeks to extend the quarry into a field area to the immediate north-east of the existing quarry site. The original proposals would have yielded a further 10 years of reserves at the anticipated extraction rate of 250,000 tonnes per annum (total 2.1 million tonnes). However, discussions regarding ecology have led to deletion of the lower 2 phases. The amended proposals would yield approximately 70% of the original reserves. Any proposals to work the lower 2 phases would now form the subject of a separate planning application.

6.1.3 The applicant advises that consideration was given to alternative sites within the immediate area. All alternatives required the transport of mineral across a road and constraints were broadly similar in all cases. The application site was considered to offer the advantages of being well screened, self-contained and close to an access for the transport of mineral.

6.2 Planning policy

- 6.2.1 Paragraph 145 of the NPPF requires Mineral Planning Authorities (MPA's) such as Shropshire to plan actively for the future supply of sand and gravel by ensuring amongst other matters that sufficient permitted reserves exist for at least 7 years of sand and gravel. This should be based on a rolling average of 10 years sales data, having regard to the advice of Regional Technical Advisory Bodies (of which Shropshire is a member) and other relevant information such as published National and Sub National Guidelines on future provision.
- 6.2.2 Strategic mineral policy in Shropshire is provided by Core Strategy Policy CS20 which confirms amongst other matters Shropshire's commitment to make continued provision for sand and gravel production at the appropriate apportionment level. The policy also establishes a preference for extending existing quarries such as Wood Lane rather than establishing new 'greenfield' sites.
- 6.2.3 SAMDev Policy MD5 reaffirms the above commitments and identifies new allocations for sand and gravel extraction. A range of proposed sites were evaluated by consultants as part of the SAMDEV evidence base. The current site scored highly relative to other potential sites as part of this assessment. Accordingly, the site was allocated subject to a number of criteria, including detailed studies into the potential impact on the surrounding area, in particular in landscape, ecological and transport terms but also with regard to the water environment around the site.
- 6.2.4 Some existing sand and gravel sites in Shropshire have limited reserves remaining. In terms of mineral resource, the sand and gravel in the proposed extension has been proven by boreholes and would be capable of supplying the quarry's existing established markets. In terms of production capacity, Wood Lane has historically accounted for around a quarter of the county's sand and gravel output. The required quarrying infrastructure is already in place and the quarry has good access to the primary road network. In these circumstances it is considered that the current proposals would be capable of making a significant contribution to the county's required annual production levels with a high degree of certainty. (Core Strategy Policy CS20)
- 6.2.5 The current proposals serve an established market and would not be expected to impact materially on the markets of other existing allocated sites. These are generally also extensions to existing sites which have their own separate established markets. Nor is it considered that releasing the mineral at this stage would lead to an oversupply of sand and gravel locally, given that the proposals would directly replace established production at Wood Lane. It is concluded that the current proposals can be supported in principle, provided other relevant policies are also capable of being complied with.
- 6.3 Environment and amenity

- 6.3.1 The NPPF advises (s143, 144) that ‘Mineral Planning Authorities (MPA’s) should ensure, in granting planning permission for mineral development, that there are no unacceptable adverse impacts on the natural and historic environment or human health, and should take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality’. MPA’s should also ensure amongst other matters that any unavoidable noise, dust and particle emissions are controlled, mitigated or removed at source, and establish appropriate noise limits for extraction in proximity to noise sensitive properties. The extent to which the current proposals are compliant with relevant environmental and amenity criteria is considered below:
- 6.3.2 Noise: The NPPF requires Mineral Planning Authorities to have regard to the need to protect local residents living near mineral sites from quarry related noise. The technical guide to the NPPF provides further guidance on the levels of noise which are acceptable (s30). Subject to a maximum of 55dB(A)LAeq, 1h, MPA’s should aim to establish a noise limit at the noise-sensitive property that does not exceed the background level by more than 10dB(A). It is recognised, however, that in many circumstances this will be difficult without imposing unreasonable burdens on the operator. In such cases, the limit set should be as near that level as practicable during normal working hours (0700-1900) and should not exceed 55dB(A) LAeq, 1h. Increased daytime limits of up to 70dB(A)Leq 1h are also allowed for short-term operations up to 8 weeks per year where this would generate benefits such as improved screening (NPF Guide s31).
- 6.3.3 The Environmental Statement includes a noise report which predicts noise levels at the 5 nearest sensitive properties in accordance with methodology set out in BS5228. Predicted noise levels indicate that, without exception, all temporary and normal operations within the proposed extension area produce worst case noise levels that are below the criteria of the NPPG. A series of noise limits at five noise sensitive locations, in accordance with current guidance contained within NPPF and NPPG have been recommended. The results of the survey demonstrate that potential noise impacts are of minimal significance and the extension of mineral extraction into the northern area of Wood Lane Quarry should be able to be worked by Tudor Griffiths Group within the noise criteria considered by NPPG to be normally justified for mineral extraction operations.
- 6.3.4 Public Protection has not objected to the proposals. There is no history of noise complaints and the proposed workings would be further from most of the nearest residential properties than the most recent workings. Conditions controlling noise have been recommended in Appendix 1. Subject to this it is considered that noise is capable of being controlled within acceptable limits.
- 6.3.5 Dust / Air Quality: The Environmental Statement has considered the potential for different activities to generate dust and methods of controlling dust have been identified. The working scheme has been designed to minimise haulage distances. A source of water for dust suppression would be retained permanently on site. The nearest privately owned are a

significant distance from the proposed extraction area. A full PM10 (respirable dust) assessment in line with the latest recommendations has been undertaken and this clearly shows that the Air Quality Objectives are not expected to be exceeded. The ES concludes that the proposed measures would ensure that dust continues to be controlled within acceptable levels. These conclusions are supported by the general absence of dust complaints relating to the existing workings. An appropriate condition covering dust control has been recommended.

- 6.3.6 Visual Impact: A landscape and visual impact appraisal accompanies the environmental statement. This assesses the likely effects of the proposals from 10 surrounding viewpoints. No impacts above 'moderate' in significance are predicted. The visual consequences relate mainly to the north-east and eastern locations. A section of the Shropshire Way long distance footpath follows the Shropshire Union Canal towpath. However any visual impact would be limited due to the enclosed environment of the Canal where intervening woodland and mature trees filter and restrict views. Consequently the magnitude of impact is judged as 'Very Small' with a resultant Minor significance of effect.
- 6.3.7 The progressive nature of working and restoration and the effect of the proposed screening bunds should minimise impacts on all the potential viewpoints to an acceptable level. The restoration proposals would change any short term adverse visual impacted to ratings of either negligible or slight beneficial. The restoration scheme has been designed to link with the natural undulating terrain. The return of land to grazing following restoration will facilitate a beneficial land use. The proposed retention of boundary hedgerows, hedgerow planting, gapping up of existing hedgerows and proposed broadleaf woodland planting around the west, south and south-eastern boundaries of the Site will strengthen the visual amenity.
- 6.3.8 There would be no significant effects upon the nearest designated landscape areas (Ellesmere Conservation Area, The Mere – Ellesmere Country Park, Colemere Country Park) due to the combination of the distance from the Site, the intervening landform, woodland blocks and hedgerows. The assessment concludes that the proposed development is capable of integration within the site and its local area without significant impact on landscape character and condition. The restoration proposals are assessed by the LVIA as beneficial, preserving locally characterised landscape elements and retaining and enhancing biodiversity features. It is considered that the design of the proposals and the well contained and generally remote nature of the site should ensure acceptability in relation to landscape and visual impacts. (Core Strategy Policy CS6, CS17, CS20)
- 6.3.9 Agriculture: The NPPF advises (para 112) that local planning authorities should take into account the economic and other benefits of the best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality. The extension area covers approximately 13 hectares of agricultural land. An

agricultural report accompanying the Environmental Statement finds that the extension area is predominantly grades 2 and 3a (i.e. best and most versatile). The original proposals resulted in a loss of approximately 3.2 hectares of grades 2/3a agricultural land, due to the proposals to construct a lake at the base of the excavation. However, the amended proposals exclusively to field areas will potentially allow all the best and most versatile land to be restored to an equivalent quality.

- 6.3.10 A detailed scheme of soil handling and restoration accompanying the application shows that all the soils will be used sustainably, and the introduction of a more moisture retentive lower subsoil should improve the potential land quality by increasing the moisture balance. The restoration scheme will restore a soil profile with uniform soil depths, without replicating the existing variations. It is considered that all the 'standard agricultural considerations' have been adequately addressed in relation to soils and agriculture. Provided soil handling, storage and restoration operations are subject to careful control it is considered that there should be no overall loss of best and most versatile agricultural land in principle following restoration of the site. The Environment Agency has advised against restoration to intensive agriculture as this can lead to pollution from agricultural run-off. The current indicative scheme envisages a sheep grazing use. Conditions requiring submission of afteruse and restoration schemes have been recommended. It is considered however that an appropriate balance is capable of being achieved in principle between agriculture and biodiversity. It is concluded that the proposals can be accepted in relation to relevant development plan policies and guidance covering agricultural land including NPF paragraph 113 and Core Strategy Policy CS20.
- 6.3.11 Traffic: The Environmental Statement includes a traffic assessment. Once processed, the sand and gravel would be distributed by road via the existing access on the A528. Output levels would remain in accordance with current/historic production, as would the operational hours of the site. As a result, the proposed development would effectively represent a continuation of current activities with the only exception being the proposed new crossing point. There would be no detrimental impact on the A528 when compared with current activities. The quarry access was improved in 2010 in association with a permission to extend the timescale for landfilling in part of the Wood Lane site. The highway design guidance at that time remains valid today.
- 6.3.12 The proposed crossing of Wood Lane to facilitate the transfer of mineral between the extraction and processing areas would result in a change to the existing road network. The crossing would accommodate up to 80 dump truck movements (40 each way) per day at peak periods, but this level of activity would not occur every day. This peak rate equates to 1 movement across Wood Lane every 8.25 minutes. The proposed crossing point, which would operate on a priority basis whereby the dump trucks would give way to vehicles travelling along Wood Lane. The low traffic flows on Wood Lane and low frequency of dump truck movements naturally limits the potential for vehicles to meet. The proposed crossing point would include a reinforced

surface with a level plateau on either side of the carriageway. The haul route would be constructed in a sealed surfaced for 50m on either side of the crossing to minimise the potential for detritus to be transferred to the carriageway. However, an on-site, tractor mounted sweeper supplemented by a contracted road sweeper would assist in ensuring highway cleanliness.

- 6.3.13 Highway officers have not objected subject to recommended conditions and a legal obligation which would deliver a payment of £20,000 by the applicant towards improvement of Wood Lane between the A528 and the crossing point. This will facilitate a general improvement to the local road network by allowing informal passing areas to be formally incorporated into the highway. It is considered that the proposals can be accepted in relation to relevant policies covering traffic and highway matters (NPPF para. 32; Core Strategy CS7, CS20).
- 6.3.14 Ecology, Protected Species: An initial Extended Phase 1 habitat survey was undertaken in May and July 2013. Further ecological surveys were subsequently undertaken in respect of bats and Great Crested Newts. No direct or indirect impacts upon statutory or non-statutory ecologically designated sites or important undesignated habitats have been predicted. The surveys consider the potential impacts to species to be of low significance and put forward appropriate mitigation measures. The restoration proposals offer additional potential for habitat creation over and above what is currently present.
- 6.3.15 The Natural Environment section has withdrawn an initial holding objection subject to recommended ecological conditions. Natural England has also confirmed that it is not objecting. A 3 tests Habitat Regulations Assessment is included as Appendix 4. It is concluded that the proposals are capable of being accepted in relation to relevant policies and guidance covering ecology, including Core Strategy Policy CS17 and SAMDev Policy MD12. (see also 'hydrology' below).
- 6.3.16 Ecology – hydrological matters: The application site is in a sensitive location close to the Cole Mere and White Mere RAMSAR sites / SSSI's. Hydrological reports have been submitted with the environmental Statement. The baseline hydrogeological conditions of the wider Wood Lane Quarry Complex and the Zone 4 area have been monitored and studied for decades. As a result the applicant advises that the geology and hydrogeology of the Zone 4 area is well understood. The key findings of the baseline study are:
- Zones 1-3 of the main Quarry Complex are located within a micro catchment and there is no drainage of surface water away from the site to external receptors (e.g. local Meres). Groundwater flow from this area is to the north towards Colemere, past Zone 4.
 - Zone 4 is separated from the main Quarry complex by a low ridge traversed by Wood Lane. Most rainfall on the Zone 4 soaks into the ground due to the presence of near surface sands and gravels. There is some limited run-off to a small ditch located to the north of the site.

- The groundwater that is present under Zone 4 flows towards Colemere and is hydraulically isolated from the local surface water system. Groundwater levels are approximately 3 metres below the base of the ditch to the north of the site. Proposals to work the Zone 4 quarry below the water table would not impact on the surface water drainage due to this isolation.
- The experience of working the sands and gravels in Zones 1-3 have shown that quarrying activities in Zone 4 can be undertaken in a manner which has no adverse impact on the quality and flow of groundwater leaving the site area. This is the case whether the proposed sub-water table quarrying is carried out using either wet or dry methods of working.
- The assessment undertaken has shown that the proposed quarrying activities will have no adverse impact either on the flow of water to Colemere or to the quality of water that enters it.
- The stability of the quarry faces is a key issue and the design has taken account of the presence of a gas main which runs along the southern boundary of the site adjacent to Wood Lane and of Wood Lane itself.

6.3.17 The applicant's hydrological reports have been assessed by Natural England and the Council's Natural environment team, given in particular the proximity to the Colemere RAMSAR site. A consultant acting for Welshampton and Lyneal Parish Council has also made detailed comments (see appendix 2).

6.3.18 The applicant has agreed to fund the cost of installing 2 silt interceptor traps on the public highway north of the site access in order to protect the quality of water flowing into White Mere and this forms part of the recommended legal agreement. The company has also recently installed a new wheel wash system at its quarry plant site and all mineral vehicles are diverted through this. There is a consequent significant reduction in the potential for mud to be trafficked onto the public highway and associated surface water quality issues.

6.3.19 A resident at Little Mill Cottage north of the site has queried surface water drainage issues in the vicinity of his property. The applicant has undertaken further survey work which has confirmed the direction of flow of a minor watercourse. This has clarified the local drainage system and demonstrated that there would be no impact from the development on Mill Cottage.

6.3.20 It is considered that there is a high degree of certainty regarding the hydrology of the upper phase (1a) based upon existing borehole monitoring and this conclusion has been accepted by the Environment Agency and the Natural Environment section. The applicant's consultants acknowledge however that some further monitoring data is required for phases 1b and 1c which are below the groundwater table. It is not possible therefore to predict with total confidence at this stage the likely effect of working beneath the water table (i.e. in phases 1b and 1c). As such it is not yet possible to discount the possibility that working these lower phases might have some adverse effects on the nearby European protected site at Cole Mere. In view of this, the lower 2 phases would not pass relevant legal tests for protection

of European sites. Accordingly, the applicant has agreed to withdraw the proposal to work phases 1b and 1c from the current application.

- 6.3.21 Natural England and the Natural Environment section has worked with officers to agree a robust schedule of recommended conditions to be imposed in the event of permission being granted. Appendix 1. It should also be noted that the Environment Agency exercises separate controls on drainage through the quarry's discharge consent and also through the handling of inert quarry wastes (silt / overburden) as part of the Mining Wastes Directive. These separate controls give additional safeguards with respect to the environmental sustainability of the proposals. It is concluded that subject to the recommended conditions the proposals can be accepted in relation to development plan policies and guidance covering hydrology. This includes Core Strategy policy CS18, CS20, SAMDev policy MD17, and paragraphs 99-103 of the NPPF and related technical guidance.
- 6.3.22 Cultural Heritage / Archaeology: The NPPF advises (para 129) that Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal taking account of the available evidence and any necessary expertise. The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset (NPPF para 135). A cultural heritage assessment accompanying the Environmental Statement advises that the overall significance of impact on cultural and visual setting is Minor Adverse in relation to the site itself and Minor Adverse in relation to the immediate periphery of the site. Beyond the periphery these adverse effects reduce to a Negligible Adverse significance of impact.
- 6.3.23 The Historic Environment section initially required an archaeological fieldwork evaluation to be undertaken as part of a pre-commencement condition. However, having reviewed the situation they are now prepared to accept a condition which is prior to the commencement of mineral extraction. It is understood that further appropriate archaeological investigation work is underway. It is concluded that the applicant has provided sufficient information to adequately define the value of the heritage asset within the site for the purposes of determining the current application. The recommended condition will also ensure that archaeology is treated appropriately during the proposed operational phase. The proposals therefore comply with paragraphs 129 and 135 of the NPPF and Core Strategy Policy CS17.
- 6.4 Other issues
- 6.4.1 Aftercare Management: The NPPF (s144) requires Mineral Planning Authorities such as Shropshire to put in place policies to ensure worked land is reclaimed at the earliest opportunity. High quality restoration and aftercare of mineral sites should take place, 'including for agriculture, geodiversity,

biodiversity, native woodland, the historic environment and recreation'. Policies M27 of the Minerals Local Plan and CS20 of the Core Strategy support this requirement. A recommended condition requires the applicant to prepare an aftercare management plan. This supports actions to ensure identified ecological targets are achieved. It is considered that the proposals meet the requirements of the section 144 of the NPPF, Policy 27 of the Minerals Local Plan and CS20 of the Core Strategy.

- 6.4.2 Canal: A canal passes 50m to the north and is an important tourism and heritage asset. The Canals and Rivers Trust has emphasised the need to protect the amenity of Canal users. It is considered that the design of the scheme with the containment / screening bund and the screening effect of natural topography and vegetation will ensure no adverse impact to canal users. Conditions relating to noise and dust have been included in appendix 1 and would provide additional reassurance.
- 6.4.3 Slope stability: There is a need to ensure that extraction does not affect slope stability adjacent to Wood Lane. The proposed restored gradient, stand-offs and tree planting measures will protect the integrity of the reinstated landform. The sand and gravel strata which would remain in-situ adjacent to the site are freely draining and there is no recent history of stability issues. Notwithstanding this, it is considered that a condition should be imposed requiring submission of a scheme to ensure slope stability. Subject to this it is concluded that the proposals can be accepted in relation to relevant guidance covering slope stability including paragraph 143 of the NPPF.
- 6.4.3 Socio-economic: The quarrying activity at Wood Lane directly supports a total of 20 jobs and more off site. Much of the employment generated is of a skilled and semi-skilled manual nature which is under-represented in the local economy. The quarry also invests in local goods and services. These beneficial effects to the local economy would be maintained in accordance with the objectives of Core Strategy Policy CS13 (Economic Development, Enterprise and Employment).
- 6.37 Interactions and cumulative effects: It is concluded that the restoration proposals would not involve any negative interactions as agricultural and ecological uses and landscape continuity would be maintained. The management plan for the site should assist in ensuring positive interactions between different aftercare land uses.
- 6.38 Legal agreement: A legal agreement would deliver funding for highway improvements and installation of 2 silt traps in the event that permission is granted. The agreement would be by the applicant and enforceable by the Council. It is not considered necessary to involve any third party landowners in this instance as the agreement relates to payments which would be due within 2 weeks of any planning approval and would not involve any third party land.

7. CONCLUSION

- 7.1 The proposals would secure production at Wood Lane for a further 6-7 years at the anticipated production rate. The mineral is a proven resource with an established local market and would make an important contribution towards the county's agreed proportion of sand and gravel production in the West Midlands region. This is in accordance with paragraph 145 of the NPPF and Core Strategy Policy CS20. The proposals would also facilitate comprehensive restoration achieving afteruse benefits in terms of habitat creation in accordance with Core Strategy Policy CS17.
- 7.2 The applicant has amended the scheme to remove the originally included lower extraction phases in response to the planning consultation process. Additional information has also been provided on hydrology and ecology. The information now available is sufficient to fully define the identified impacts and allow appropriate mitigation measures to be identified.
- 7.3 The individual effects of the proposals have been assessed in detail. No issues have been identified which would be likely to give rise to unacceptable impacts on the local environment or amenities which would justify refusal. This is having regard to the inbuilt safeguards in the design of the scheme and the recommended planning conditions and legal agreement. It is concluded that proposals are sustainable and can be accepted in relation to relevant development plan policies and guidance and other material planning considerations.

8.0 RISK ASSESSMENT AND OPPORTUNITIES APPRAISAL

8.1 Risk Management

There are two principal risks associated with this recommendation as follows:

- As with any planning decision the applicant has a right of appeal if they disagree with the decision and/or the imposition of conditions. Costs can be awarded irrespective of the mechanism for hearing the appeal, i.e. written representations, hearing or inquiry.
- The decision may be challenged by way of a Judicial Review by a third party. The courts become involved when there is a misinterpretation or misapplication of policy or some breach of the rules of procedure or the principles of natural justice. However their role is to review the way the authorities reach decisions, rather than to make a decision on the planning issues themselves, although they will interfere where the decision is so unreasonable as to be irrational or perverse. Therefore they are concerned with the legality of the decision, not its planning merits. A challenge by way of Judicial Review must be made a) promptly and b) in any event not later than three months after the grounds to make the claim first arose.

Both of these risks need to be balanced against the risk of not proceeding to determine the application. In this scenario there is also a right of appeal

against non-determination for application for which costs can also be awarded.

- 8.2 Human Rights: Article 8 give the right to respect for private and family life and First Protocol Article 1 allows for the peaceful enjoyment of possessions. These have to be balanced against the rights and freedoms of others and the orderly development of the County in the interests of the Community. First Protocol Article 1 requires that the desires of landowners must be balanced against the impact on residents. This legislation has been taken into account in arriving at the above recommendation.
- 8.3 Equalities: The concern of planning law is to regulate the use of land in the interests of the public at large, rather than those of any particular group. Equality will be one of a number of ‘relevant considerations’ that need to be weighed in Planning Committee members’ minds under section 70(2) of the Town and Country Planning Act 1970.
- 8.4 Financial Implications: There are likely financial implications of the decision and/or imposition of conditions if challenged by a planning appeal or judicial review. The costs of defending any decision will be met by the authority and will vary dependant on the scale and nature of the proposal. Local financial considerations are capable of being taken into account when determining this planning application – in so far as they are material to the application. The weight given to this issue is a matter for the decision maker.

9. BACKGROUND

Relevant Guidance and Planning Policies

- 9.1 National Planning Policy Framework: Summary of relevant minerals guidance:
- 9.1.1. 142: Minerals are essential to support sustainable economic growth and our quality of life. It is therefore important that there is a sufficient supply of material to provide the infrastructure, buildings, energy and goods that the country needs. However, since minerals are a finite natural resource, and can only be worked where they are found, it is important to make best use of them to secure their long-term conservation.
- 143: Local planning authorities should undertake a range of policy measures to safeguard mineral supply and avoid sterilisation whilst minimising environmental impacts and facilitation restoration of worked sites.
144. When determining planning applications, local planning authorities should amongst other matters:
- give great weight to the benefits of the mineral extraction, including to the economy;
 - ensure, in granting planning permission for mineral development, that there are no unacceptable adverse impacts on the natural and historic environment, human health or aviation safety, and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality;

- ensure that any unavoidable noise, dust and particle emissions and any blasting vibrations are controlled, mitigated or removed at source,³¹ and establish appropriate noise limits for extraction in proximity to noise sensitive properties;
- provide for restoration and aftercare at the earliest opportunity to be carried out to high environmental standards, through the application of appropriate conditions, where necessary. Bonds or other financial guarantees to underpin planning conditions should only be sought in exceptional circumstances;

145. Minerals planning authorities should plan for a steady and adequate supply of aggregates by:

- preparing an annual Local Aggregate Assessment, participating in the operation of an Aggregate Working Party,
- making provision for the land-won and other elements of their Local Aggregate Assessment in their mineral plans,
- taking account of published National and Sub National Guidelines on future provision,
- using landbanks of aggregate minerals reserves principally as an indicator of the security of aggregate minerals supply,
- making provision for the maintenance of landbanks of at least 7 years for sand and gravel, ensuring that large landbanks bound up in very few sites do not stifle competition; and
- calculating and maintaining separate landbanks for any aggregate materials of a specific type or quality which have a distinct and separate market.

9.1.2 Other relevant sections of the NPPF include:

- Achieving sustainable development
- Building a strong, competitive economy
- Supporting a prosperous rural economy
- Promoting sustainable transport
- Meeting the challenge of climate change, flooding and coastal change
- Conserving and enhancing the natural environment
- Conserving and enhancing the historic environment.

9.1.3 A technical companion guide to the NPPF includes minerals guidance on dust / air quality and noise and general guidance on drainage. This has been taken into account in assessing the application.

The Development Plan

9.2 Section 38 (6) of the Planning and Compensation Act 2004 Act states that "if regard is to be had to the development plan for the purpose of any determination to be made under the Planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise". The NPPF confirms that "there is a presumption in favour of sustainable development at the heart of the planning system, which should be central to the approach taken to both plan-making and decision-taking.

Local planning authorities should plan positively for new development, and approve all individual proposals wherever possible. Local planning authorities should:

- Prepare local plans on the basis that objectively assessed development needs should be met, and with sufficient flexibility to respond to rapid shifts in demand or other economic changes;
- Approve development proposals that accord with statutory plans without delay and Grant permission where the plan is absent, silent, indeterminate or where relevant policies are out of date
- All of these policies should apply unless the adverse impacts of allowing development would significantly and demonstrably outweigh the benefits, when assessed against the policy objectives in the National Planning Policy Framework taken as a whole.

9.3.i. The Shropshire Core Strategy

- Policy CS5 (Countryside and Green Belt) – allowing for development on appropriate sites within the countryside that maintain and enhance countryside vitality and character where they improve the sustainability of rural communities by bringing local economic and community benefits, particularly where they relate to specified proposals including: required community uses and infrastructure which cannot be accommodated within settlements;
 - Policy CS6 (Sustainable Design and Development Principles) – requiring designs of a high quality to respect and enhance local distinctiveness, mitigating and adapting to climate change
 - Policy CS8 (Facilities, Services and Infrastructure Provision) – seeking the development of sustainable places by preserving and improving facilities and services; facilitating the timely provision of additional facilities, services and infrastructure to meet identified needs in locations that are appropriate and accessible; positively encouraging infrastructure where this has no significant adverse impact on recognised environmental assets
 - Policy CS17 (Environmental Networks) – to identify, protect, enhance, expand and connect Shropshire’s environmental assets
 - Policy CS18 (Sustainable Water Management) – to reduce flood risk; to avoid an
 - adverse impact on water quality and quantity
- ii. Policy CS20 (Strategic planning for Minerals) Shropshire’s important and finite mineral resources will be safeguarded to avoid unnecessary sterilisation and there will be a sustainable approach to mineral working which balances environmental considerations against the need to maintain an adequate and steady supply of minerals to meet the justifiable needs of the economy and society. This will be achieved by:
- Protecting the Mineral Safeguarding Areas (MSA’s) and rail freight facilities which could contribute to the sustainable transport of minerals. Non-mineral development in these areas or near protected railfreight sites will be expected to avoid sterilising or unduly restricting the working

- of proven mineral resources, or the operation of mineral transport facilities, consistent with the requirements of national and regional policy.
- Encouraging greater resource efficiency by supporting the development and retention of waste recycling facilities which will improve the availability and quality of secondary and recycled aggregates in appropriate locations as set out in CS 19;
 - Maintaining landbanks of permitted reserves for aggregates consistent with the requirements of national and regional policy guidance. 'Broad locations' for the future working of sand and gravel are identified. Sites capable of helping to deliver the sub-regional target for sand and gravel will be allocated within these areas in the Site Allocations and Management of Development DPD;
 - Only supporting proposals for sand and gravel working outside these broad locations and existing permitted reserves, where this would prevent the sterilisation of resources, or where significant environmental benefits would be obtained, or where the proposed site would be significantly more acceptable overall than the allocated sites;
 - Supporting environmentally acceptable development which facilitates the production of other mineral resources such as crushed rock, clay and building stone to meet both local needs, including locally distinctive materials, and to help meet cross boundary requirements.
 - Environmentally acceptable proposals for the exploration, appraisal and production of hydrocarbon resources, including coalbed methane, will be supported as a contribution to meeting the requirements of national energy policy;
 - Requiring development applications for mineral working to include proposals for the restoration and aftercare of the site.
 - Priority will be given to environmentally acceptable proposals which can deliver targeted environmental or community benefits consistent with Policies CS8 and CS17. More detailed policies against which applications for mineral development can be assessed will be provided in the Site Allocations and Management of Development DPD.

Note: Wood Lane Quarry is within an area identified as a broad location for future mineral working in the plan accompanying policy CS20.

- 9.7 Site Allocations and Management of Development Document (SAMDEV)
This document currently under preparation will include specific site allocations, including for future mineral working. A study undertaken by independent consultants (Amec) to inform the identification of future mineral allocations identified the current application site as potentially suitable for mineral working. SAMDev mineral policies are:

MD5: Sites for Sand and Gravel Working:

1. The supply of sand and gravel during the Plan period should be provided in the first instance from existing permitted sites and then from the development of mineral working at the site identified on the Proposals Map and allocated in Schedule MD5a below;
2. Where monitoring demonstrates that the further controlled release of sand and gravel reserves is required, then the subsequent development of mineral

working will be considered at the sites identified in Schedule MD5b below. Applications for earlier development of these sites will be considered on their merits. In considering any such application, particular regard will be paid to:

- i. the need for minerals development to maintain an adequate and steady supply of sand and gravel consistent with the established production guideline;
 - ii. the need to control potential cumulative impacts associated with concurrent or sequential mineral extraction operations in a specific area, including through the imposition of output or timescale restrictions where these are necessary to reduce the potential for market oversupply and cumulative adverse environmental impacts;
 - iii. whether the early release of the site would enhance sustainability through meeting an identified local need.
3. Proposals for mineral working falling outside the allocated areas will be permitted where developers can demonstrate that:
- i. the proposal would meet an unmet need or would prevent the sterilisation of the resource; and,
 - ii. the proposal would not prejudice the development of the allocated sites; and,
 - iii. significant environmental benefits would be obtained as a result of the exchange or surrender of existing permissions or the site might be significantly more acceptable overall than the allocated sites, and would offer significant environmental benefits.

Schedule MD5a: Phase 1 Site Allocations:

Development of the allocated mineral sites identified on the Proposals Map should be in accordance with relevant Local Plan policies and the development guidelines set out in this schedule.

MD16 - Mineral Safeguarding

Transport and processing facilities will not be granted unless the applicant can demonstrate that:

1. The development proposed would not prevent or unduly restrict the continued operation of the protected infrastructure; or,
2. That the identified facilities are no longer required or that viable alternative facilities are available. MSA boundaries and protected mineral transport and processing facilities are identified on the Policies map and insets. The buffer zones which will apply to protected resources and facilities are identified in the explanatory text below.
3. Applications for permission for non-mineral development in a MSA must include an assessment of the effect of the proposed development on the mineral resource beneath or adjacent to the site of the development or the protected mineral handling facility (termed a Mineral Assessment). This assessment will provide information to accompany the planning application to demonstrate to the satisfaction of the MPA that mineral interests have been adequately considered and that known mineral resources will be prevented, where possible, from being sterilised or unduly restricted by other forms of development occurring on or close to the resource;

4. Identification of these areas does not imply that any application for the working of minerals within them will be granted planning permission.

MD17: Managing the Development and Operation of Mineral Sites

1. Applications for mineral development will be supported where applicants can demonstrate that potential adverse impacts on the local community and Shropshire's natural and historic environment can be satisfactorily controlled. Particular consideration will be given (where relevant) to:
 - i. Measures to protect people and the environment from adverse effects, including visual, noise, dust, vibration and traffic impacts;
 - ii. The site access and traffic movements, including the impact of heavy lorry traffic on the transport network and the potential to transport minerals by rail. Where opportunities to transport minerals by rail are not feasible there will be a preference for new mineral sites to be located where they can obtain satisfactory access to the Primary Route Network;
 - iii. The cumulative impact of mineral working, including the concurrent impact of more than one working in a specific area and the impact of sustained working in a specific area;
 - iv. Impacts on the stability of the site and adjoining land and opportunities to reclaim derelict, contaminated or degraded land (Policy CS6);
 - v. Effects on surface waters or groundwater and from the risk of flooding (Policy CS18);
 - vi. Effects on ecology and the potential to enhance biodiversity;
 - vii. The method, phasing and management of the working proposals;
 - viii. Evidence of the quantity and quality of mineral and the extent to which the proposed development contributes to the comprehensive working of mineral resources and appropriate use of high quality materials;
 - ix. Protecting, conserving and enhancing the significance of heritage assets including archaeology.

Where necessary, output restrictions may be agreed with the operator to make a development proposal environmentally acceptable.

2. Mineral working proposals should include details of the proposed method, phasing, long term management and maintenance of the site restoration, including progressive restoration towards full reinstatement of occupied land and removal of all temporary and permanent works. A satisfactory approach will avoid the creation of future liabilities and will deliver restoration at the earliest practicable opportunity to an agreed after-use or to a state capable of beneficial after-use. Where the proposed after-use includes agriculture, woodland, amenity (including nature conservation) or other uses, a satisfactory scheme will need to include the following:
 - i. Proposals which take account of the site, its surroundings, and any development plan policies relevant to the area;
 - ii. Evidence to show that the scheme incorporates best practice advice and is practical and achievable;
 - iii. A Management Plan, which should address the management requirements during each phase of the proposed development;
 - iv. A Reclamation Plan;

- v. Provision for a 5 year period of aftercare;
Where appropriate, a planning obligation will be sought in order to secure the after-use, long term management and maintenance of the site;
3. Proposals for the working of unconventional hydrocarbons should clearly distinguish between exploration, appraisal and production phases and must demonstrate that they can satisfactorily address constraints on production and processing within areas that are licensed for oil and gas exploration or production. Particular consideration will be given to the need for comprehensive information and controls relevant to the protection of water resources;
4. Where relevant, applications for the winning and working of coal should include proposals for the separation and stockpiling of fireclay so that its value as a mineral resource can be captured;
5. A flexible approach will be adopted to the duration of planning consents for very small scale, intermittent but long term or temporary working to work locally distinctive building and roofing stone consistent with the objectives of Policy MD2;
6. Where ancillary development is proposed, proposals should include satisfactory measures to minimise adverse effects, including:
- i. Locating the ancillary development within or immediately adjacent to the area proposed for mineral working or on an established plant site;
 - ii. Restricting the principal purpose to a purpose in connection with the winning and working of minerals at the site or the treatment, storage or removal of minerals excavated or brought to the surface at that site;
 - iii. For imported minerals, where necessary, to limit the quantities involved to control the volume and type of traffic, and the establishment of an acceptable route for the traffic to and from the site;
 - iv. The cessation of the ancillary development when working of the mineral for which the site was primarily permitted has ceased and removal of plant and machinery to allow full restoration of the site.
- Where ancillary development could have an adverse effect on the local environment which cannot be mitigated to acceptable levels, a condition may be attached to the planning permission to control the adverse effects by limiting development to an established plant site, or introducing a stand off from sensitive land uses, or mitigating effects in other ways, or as a last resort, withdrawing permitted development rights so that the ancillary development can be properly controlled by the terms of the planning permission

Other relevant policies:

- MD2 – Sustainable Design
- MD7b– General Management of Development in the Countryside;
- MD12: The Natural Environment;
- MD13: The Historic Environment.

Other relevant guidance:

9.8 National and regional guidelines for aggregates provision in England 2005-2020

The government has prepared guidelines for use in the preparation and revision of minerals local development frameworks. The objective of the guidelines was to inform the provision of aggregates through the planning system in the English regions and for individual mineral planning authorities. A new system for forecasting aggregate demand and apportioning production targets will be progressed linked to the Localism Bill.

10. RELEVANT PLANNING HISTORY:

10.1

- NS/04/01201/MIN Retrospective application for landfill gas flare NOBJ 2nd December 2004
- NS/05/01455/MIN Erection of recycling and reprocessing building and formation of composting area NOOBJC 1st September 2005
- NS/08/00456/DEEM Proposed installation of an electricity generation plant fuelled by landfill gas NOOBJC 10th April 2008
- NS/08/01830/OHL Application under Section 73A of the Town and Country Planning Act 1990 to allow for consent under section 37 of the Electricity Act 1989 for the erection of an Over Head Line at Land At Wood Lane, Ellesmere NOBJ 14th November 2008
- 10/05561/EIA Variation of Condition No.4 (time restriction) attached to SC/MN1992/0843/NS to allow for the continued use for landfill operations until 2035 GRANT 1st July 2014
- 12/01951/MAW Erection of storage building for timber GRANT 9th August 2012
- SC/MN2004/1071/NS A retrospective application for landfill gas flare PERMIT 12th January 2005
- SC/MN1992/0843/NS Controlled landfilling with waste materials (Partially Retrospective) PERMIT 19th January 1995
- SC/MN1972/2948/NS Extension to sand & gravel workings PERMIT 16th September 1972

11. ADDITIONAL INFORMATION

List of Background Papers: Planning application reference 12/04824/EIA and the related Environmental Impact Assessment, plans and supplementary reports as listed in condition 3 of Appendix 1 attached.
Cabinet Member (Portfolio Holder) Cllr M. Price
Local Member Cllr Brian Williams
Appendices: APPENDIX 1 - Legal obligation heads of terms and recommended conditions

APPENDIX 1

Legal Agreement Clauses

1. To fund highway improvements on the minor road between the A528 and Colemere to a value of £20k.
2. To fund the provision of 2 silt traps on the A528 to the north of the quarry access to a value of £4k.

Statement of Compliance with Article 31 of the Town and Country Development Management Procedure Order 2012

The authority worked with the applicant in a positive and pro-active manner in order to seek solutions to problems arising in the processing of the planning application. This is in accordance with the advice of the Government's Chief Planning Officer to work with applicants in the context of the NPPF towards positive outcomes. The applicant sought and was provided with pre-application advice by the authority. Further information was subsequently provided by the applicant in response to the planning consultation process between March and May 2013 in relation to ecology, archaeology, hydrology, restoration and footpath diversion. The submitted scheme, as supplemented by the further information, has allowed the identified planning issues raised by the proposals to be satisfactorily addressed, subject to the recommended planning conditions and legal obligation.

Conditions

1. The development to which this planning permission relates must be begun not later than the expiration of three years from the date of this permission.

Reason: To comply with Section 91(1) of the Town and Country Planning Act 1990 (1a) and to define and provide appropriate advance notice of the Commencement Dates for the development and for mineral extraction (1b, 1c).

DEFINITION OF THE PERMISSION

- 2a. This permission shall relate only to the area edged red on the approved location plan accompanying the application (Drawing no. WL950-D10v2) hereinafter referred to as the "Site".
- b. Unless otherwise required by the conditions attached to this permission, the development hereby permitted shall be undertaken in accordance with the approved scheme which comprises the following:

- i. The application form dated 9th October 2014 and the accompanying Environmental Statement and appendices.
- ii. The submitted drawings accompanying the Environmental Statement, namely:
 - WL950-D10v2 – Location and land in control;
 - WL950-D7v7 Rev A Phasing_Phase 1A;
 - WL950-D11 Version 2 Restoration Masterplan for Phase 1A.
- iii. The following further information:
 - Letter from Bright Associates to S.Lawrence dated 23 December 2015 (Site Restoration);
 - Letter from SLR to S.Lawrence dated 21st July 2015 (Great Crested Newt);
 - Revised Chapters 1 to 4 of the Environmental Statement;
 - Revised Landscape & Visual Impact Assessment;
 - Great Crested Newt Survey Report 2015;
 - Water Vole Survey Report 2015;
 - Wood Lane Habitat Regulation Supporting Document Addendum;
 - Habitat Regulations Assessment - Technical Support Document;
 - Wood Lane Eco-hydrological Assessment – Part 1;
 - Wood Lane Eco-hydrological Assessment – Part 2;
 - Brassington 2015 Addendum Hydrogeology Report Sections 1 – 4;
 - Brassington 2015 Addendum Hydrogeology Report Sections 5 – 7;
 - Wood Lane Crossing Highways Supporting Note & Plan;
 - Email from TG dated 16th May 2016 confirming removal of phases 1b and c;
 - The Great Crested Newt mitigation strategy and supplementary statement received from TG in April 2016.

Reason: To define the Site and permission

TIME LIMITS

- 3a. No less than 7 days prior notice of the commencement of the first stripping of soils under the terms of this permission shall be given in writing to the Local Planning Authority. Such date shall be referred to hereinafter as ‘the Commencement Date’.
- b. No less than 7 days prior notice of the commencement of mineral extraction shall be given in writing to the Local Planning Authority. Such date shall be referred to hereinafter as “the Mineral Extraction Commencement Date”.
- c. Extraction of sand and gravel from the site shall cease at the site within 10 years of the date of this permission and final restoration in accordance with

Conditions 38 and 39 below shall be completed within one year of the cessation date for mineral extraction.

Reason: To define and provide appropriate advanced notice of the Commencement Date and the date for commencement of mineral working under the terms of this permission (3a,b) and to define the cessation date for mineral extraction under the terms of this permission (3c).

HYDROLOGICAL MONITORING:

5. The boreholes shown on Drawing 1026/1/004 attached to this permission shall be retained, maintained and protected throughout the duration of the mineral extraction, restoration operations and aftercare hereby approved.

Reason: To ensure that an appropriate level of hydrological monitoring data can be gathered for the duration of the quarrying and restoration operations hereby approved, having regard to the proximity of the Colemere RAMSAR site and SSSI and important habitats within White Moss.

6. Notwithstanding Condition 7 below, no mineral extraction shall commence until a scheme for hydrological monitoring and visual inspection of clay layers within the quarry void has been submitted to and approved in writing by the Mineral Planning Authority. All mineral working, associated restoration works and aftercare within Zone 4 shall take place in accordance with the approved scheme which shall incorporate the following measures:
- i. Provision for monitoring of groundwater and surface water at an appropriate interval;
 - ii. Proposals for additional boreholes and piezometers and the timescale for installation.
 - iii. Provision for precautionary visual inspection of the extraction void to identify any discharges of perched water which may discharge to the Valley groundwater Body (White moss) or discharge directly to the regional groundwater.
 - iv. Provision for precautionary visual inspection to identify any slope stability issues with the potential to affect water flows and quality.
 - v. Potential mitigation measures available should hydrological monitoring reveal a drop in water levels in the Valley Groundwater Body (White Moss) or visual inspection reveals damage to perched water tables discharging into the Valley Groundwater body or a breach of the valley interface due to the development.
 - vi. Procedures and reporting timescales in the event that exceedance of any of the trigger levels under Condition 7 occur.

Reason: To ensure any fall in water levels in the Valley Groundwater Body (White Moss) due to the development are recognised quickly and mitigated for, to prevent any adverse impacts on Cole Mere SSSI and Ramsar Site and on priority habitats within the White Moss valley.

- 7a. Prior to the Mineral Extraction Commencement Date a scheme identifying a hydrological trigger level and how it is derived and defining the circumstances when additional mitigation action will be taken at the Site shall be submitted to and approved in writing by the Mineral Planning Authority. The scheme shall provide for ongoing review of the trigger level criteria and it shall be implemented in accordance with the approved details.

Reason: To protect the water environment by defining appropriate trigger levels based on current data at which the need for further action would be identified and implemented.

8. The Minerals Planning Authority shall be notified in writing as soon as possible and within one week of the developer obtaining confirmation that the trigger level defined under Condition 7 above has been exceeded. The scheme agreed under Condition 6 will be followed, including investigation to determine if the development is the cause of the trigger exceedance and implementation of agreed mitigation measures if this is found to be the case.

Reason: To protect the water environment ('controlled waters' as defined under the Water Resources Act 1991) by securing a scheme of hydrological monitoring which identifies an appropriate trigger level and makes provision for appropriate action in the event that this is exceeded, having regard to the proximity of the Colemere RAMSAR site and SSSI and the priority habitats of White Moss.

9. A scheme detailing measures for managing silty water from the extraction operations shall be submitted to and approved by the Mineral Planning Authority prior to the Mineral Extraction Commencement Date. The scheme shall be designed in order to reduce the possibility of silty water from entering into the surface and groundwater systems and shall include the following measures:
- i. A Construction of a swale/ditch within the margins of the extraction void, prior to commencement of mineral extraction and provision of a settlement area within the excavations as part of the water management system;
 - ii. Measures to direct water to a temporary settlement area in the quarry void, and;
 - iii. Control of excavations to promote more gradual dewatering (i.e. by local reduction in face heights).

Reason: To protect the water environment ('controlled waters' as defined under the Water Resources Act 1991) including the Colemere RAMSAR site.

10. Confirmation of the level of the lowest point of the extraction void in metres above ordnance datum shall be provided to the Minerals Planning Authority on request and annually by 1st March of each calendar year for the duration of mineral extraction operations under the terms of this permission. The applicant shall also provide a levels survey of the extraction void to the Minerals Planning Authority upon prior request.

Reason: To allow the Mineral Planning Authority to monitor the base level of the extraction void at an appropriate frequency, having regard to the proximity of the Colemere RAMSAR site and SSSI.

LIMITS OF MINERAL EXTRACTION

11. Prior to entry into phase 1a the spatial limits of mineral extraction shall be physically defined by wooden posts or other appropriate means. The boundaries so marked shall be inspected and approved by the Local Planning Authority as being in accordance with the permitted plans, and shall be thereafter retained in position for the duration of the mineral extraction operations under the terms of this permission.

Reason: To ensure that the limits of the mineral extraction within the extension area are properly defined.

OUTPUT

- 12a. Mineral shall not be exported from the Site at a rate exceeding 350,000 tonnes per calendar year (commencing on 1st January and ending on 31st December).
- b. Written records of the tonnage of mineral produced from the Site shall be provided to the Local Planning Authority upon prior request within three months of the end of each calendar year.

Reason: In the interests of highway safety, to ensure that the production and export of mineral is controlled at a level which will ensure the amenities of the local area are protected.

NOISE AND DUST

- 13a. Subject to condition 13b noise levels for normal quarrying operations measured as LAeq 1h (free field) shall not exceed the following limits at the sensitive receptor properties identified in the Vibrock report accompanying the Environmental Statement:

No.	Location	Noise Criteria (dB LAeq,1h)
1	Little Mill	52
2	Mistletoe Cottage	53
3	Colemere Farm	51

4	Whitemere	55
5	Spunhill Farm	55

- b. Topsoil and subsoil stripping and other works in connection with landscaping shall not exceed 70 dB $L_{Aeq,1h}$ free field at any inhabited property and such works shall be limited to a period not exceeding 8 weeks at any one property.

Reason: To protect local amenities from noise emissions associated with the quarrying operations hereby approved.

- 14a. All plant and machinery used within the Site shall incorporate silencers in accordance with the manufacturers' specification and those silencers shall be maintained in good condition in accordance with the manufacturers specification for maintenance..

- b. All quarry plant and machinery which is required to be fitted with reversing alarms shall be fitted with attenuated or non-audible reversing alarms rather than reversing beepers.

Reason: To assist in safeguarding the amenities of the area from noise disturbance.

15. Water shall be applied to main haul roads and other areas as necessary within the Site in order to prevent the generation of dust by vehicular/plant traffic.

Reason: To assist in safeguarding the amenities of the area and the integrity of nearby protected ecological sites.

16. Within 2 months of the Mineral Extraction Commencement Date and notwithstanding the existing measures for dust control within the Wood Lane Quarry site the developer shall submit a dust management plan for the approval in writing of the Mineral Planning Authority covering the following matters:

- i. Detailing the specific sources and locations of potential dust associated with the quarrying operations, including temporary works, plant site, stockpiles, haul roads and drying of mud;
- ii. Confirmation of the regime which will apply in order to ensure that sufficient resources are available to achieve effective dust suppression for all sources identified under 16i above, including numbers of bowsers, sweepers and personnel responsible for dust and mud suppression on site;
- iii. Setting out the monitoring procedures which will apply in order to ensure the effectiveness of dust suppression measures and to identify where additional action is required as part of a proactive and pre-emptive response.

Reason: To assist in safeguarding the amenities of the area and the integrity of nearby protected ecological sites.

17. In the event that a complaint is received regarding noise or dust impact and is subsequently validated by the Local Planning Authority the Developer shall submit a mitigation scheme for the approval in writing of the Authority which shall provide for the taking of appropriate remedial action within an agreed timescale. The mitigation scheme shall be submitted within 10 working days from the day when the Developer is notified of the complaint and the scheme shall be implemented in accordance with the approved details.

Reason: To assist in safeguarding the amenities of the area from noise or dust disturbance by implementing an agreed procedure for dealing with any complaints.

LIGHTING

18. No fixed lighting shall be installed at the quarry unless details of such lighting have been submitted to and approved in writing by the Local Planning Authority. The submitted scheme shall comply with current best practice guidance for the control of light pollution, including preventing adverse effects on wildlife. Following its approval, any lighting shall be installed in accordance with the approved details.

Reason: To safeguard the amenities and wildlife of the area from light pollution.

HOURS OF WORKING

- 19a. Mineral extraction and associated operations under the terms of this permission shall not take place other than between the hours of 7.00 – 18.00 on Mondays to Fridays and 7.00 - 13.00 on Saturdays. Such operations shall not take place on Sundays and Bank Holidays.
- b. Notwithstanding Condition 19a) above, essential maintenance works to plant and machinery on the Site may also be undertaken between the hours of 13.00 p.m. - 18.00 p.m. on Saturdays.

Reason: To safeguard the amenities of the area.

PLANT AND STOCKPILING

20. There shall be no stockpiling of mineral under the terms of this permission other than within the approved stockpiling area within the adjacent quarry plant site area.

Reason: In the interests of visual and general amenities.

REMOVAL OF G.P.D.O. RIGHTS

21. Notwithstanding the provisions of Part 17a of the Town and Country Planning General Permitted Development Order (2015) or any re-enactment of this statute, no fixed plant, mobile processing plant, machinery, buildings,

structures, or erections of the nature of plant or machinery, shall be erected at the Site without prior planning permission from the Local Planning Authority.

Reason: To ensure that any proposals to erect additional plant or structures within the Site are consistent with the need to protect the environment and visual amenities of the area, taking account of the ability of existing vegetation to perform an acceptable screening function.

HIGHWAY MATTERS

22. The sole means of access to the Site shall be via the internal quarry track linking to Zone 4 across the minor road to Colemere. The internal access track and junction shall be maintained as a smooth running surface, free of potholes and to the satisfaction of the Local Planning Authority for the duration of the operations hereby permitted.

Reason: In the interests of highway safety and to assist in preventing the deposit of mud and detritus on the public highway.

- 23a. The existing wheel bath facility within the quarry plant site shall be maintained for the duration of the operations hereby permitted. Wheel cleaning shall be employed by all goods vehicles leaving the Wood Lane Quarry site so as to avoid the deposit of mud on the public highway.
- b. In those circumstances where mud or dust has been transported onto the metalled access road a tractor mounted brush or other similar device shall be employed in order to clean the road.

Reason: In the interests of highway safety and to ensure nearby European nature conservation sites continue to be protected from damage due to sedimentation from road runoff within the site.

DRAINAGE / POLLUTION

24. No dewatering shall take place within the Site.

Reason: In accordance with the approved details.

- 25a. There shall be no discharge of foul drainage within the Site.
- b. Any silt laden water arising from the vicinity of the highway crossing point shall be intercepted on the Site and transferred to an appropriate settlement area prior to final discharge.
- c. There shall be no storage of fuels or chemicals within the Site.
- d. No washing of minerals shall take place within the Site. Such washing shall continue to take place exclusively within the adjacent quarry plant site area.

Reason: To prevent pollution to ground and surface water.

ECOLOGY

- 26a. Work shall be carried out strictly in accordance with the submitted 'Wood Lane Quarry – Zone 4 Revised Extraction Phases 1a, b, c – Precautionary Methods of Working/ Reasonable Avoidance measures (PMOW) in respect of Great Crested newt (GCN) (*Triturus cristatus*) by SLR dated 21.7.15 and the additional Reasonable Avoidance Measures in 'Further Ecology Commentary on the Wood Lane Zone 4 Planning Application' by SLR and dated 29.1.16, unless changes are required by Natural England in order to obtain a European Protected Species Mitigation Licence. Notification of any such changes to the above mitigation strategy must be submitted to the planning authority. If changes are required by Natural England then work shall be carried out strictly in accordance with the agreed scheme as amended.
- b. Not less than 1 year prior to the removal of the approved soil bunds and swale as part of the quarry restoration scheme an updated Great Crested Newt mitigation strategy shall be submitted to and approved in writing by the Mineral Planning Authority in consultation with the Council's Ecologist. The strategy shall set out the measures to ensure that there are no adverse impacts to GCN during the bund removal or restoration.

Reason: To ensure the protection of Great Crested Newts a European Protected Species.

27. No development, demolition or site clearance procedures on the site to which this permission applies shall be undertaken until evidence has been provided to the Local Planning Authority that no badger setts are present immediately prior to work commencing. The site should be inspected within the 90 days prior to the commencement of works by an experienced ecologist and a report shall be submitted to, and approved in writing by, the local planning authority

Reason: To ensure compliance with the legislation pertaining to Badger.

28. All trees, hedgerows and shrubs within the Site but outside the limits of extraction and their associated root protection zones as defined by BS5837 shall be retained and managed and protected by post and wire fencing or other suitable means during excavation and restoration works.

Reason: To protect the biodiversity interest of the site and in the interests of visual amenity.

29. No development shall take place, including any works of demolition or clearance of vegetation, until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the local planning authority. The plan will be implemented as approved and shall include:
- i. An appropriately scaled plan showing 'Wildlife/habitat Protection Zones' where construction activities are restricted and where protective measures will be installed or implemented;

- ii. Details of protective measures (both physical measures and sensitive working practices, e.g. for the relocated hedge, Great Crested Newts, badgers, pond 2) to avoid impacts during construction and extraction (may be provided as a set of method statements);
- iii. A method statement for the relocation of hedges to be removed for access (including re-establishment, watering, gapping up with native species of local provenance and root protection zone etc.);
- iv. Measures to promote the establishment of invertebrate habitats;
- v. A timetable to show phasing of construction activities to avoid harm to biodiversity features (e.g. avoiding the bird nesting season, Great Crested Newt mitigation);
- vi. The times during construction when specialist ecologists need to be present on site to over-see works;
- vii. The role and responsibilities on site of an ecological clerk of works (EcCoW) or similarly competent person;
- viii. Persons responsible for:
 - Compliance with legal consents relating to nature conservation;
 - Compliance with planning conditions relating to nature conservation;
 - Installation of physical protection measures during construction;
 - Implementation of sensitive working practices during construction;
 - Regular inspection and maintenance of physical protection measures and monitoring of working practices during construction;
 - Provision of training and information about the importance of 'Wildlife protection zones' to all construction personnel on site.

All construction activities shall be adhered to and implemented strictly in accordance with the approved CEMP unless otherwise approved in writing by the local planning authority.

Reason: To protect features of recognised nature conservation importance.

Notes:

- i. *Great Crested Newts are protected under the European Council Directive of 12 May 1992 on the conservation of natural habitats and of wild fauna and flora (known as the Habitats Directive 1992), the Conservation of Habitats and Species Regulations 2010 and under the Wildlife & Countryside Act 1981 (as amended).*
- ii. *The active nests of all wild birds are protected under the Wildlife & Countryside Act 1981 (As amended). An active nest is one being built, containing eggs or chicks, or on which fledged chicks are still dependent. Operations should be managed to avoid the need to commence work affecting vegetation or structures in the bird nesting season which runs from March to September inclusive. If it is necessary for work affecting vegetation or structures to commence in the nesting season then a pre-commencement inspection of the vegetation, machinery and buildings for active bird nests should be carried out. If vegetation cannot be clearly seen to be clear of bird's nests then an experienced ecologist shall be called in to carry out the check. Work affecting*

vegetation or structures should not proceed unless it can be demonstrated to the Local Planning Authority that there are no active nests present.

- iii. *Badgers, the setts and the access to the sett are expressly protected from killing, injury, taking, disturbance of the sett, obstruction of the sett etc by the Protection of Badgers Act 1992. Works within 30m of a badger sett may require a Badger Disturbance Licence from Natural England. The site should be subject to an inspection for badger setts by an experienced ecologist immediately prior to the commencement of works on the site.*

SOIL / MATERIAL MOVEMENT AND STORAGE

30. No waste, overburden or silt other than those arising as a direct result of the excavation and processing of mineral on the Site shall be deposited within the Site and such materials shall be used in the restoration of the site in accordance with Conditions 40 and 41 below.

Reason: To define the types of restoration material for use at the Site.

- 31a All topsoil shall be stripped to its full depth (varying from c.260-350mm) and all subsoil to its full depth (varying from c.650-740mm) to provide a stripped profile depth of 1.0m. Wherever possible, both topsoil and subsoil shall be directly placed in sequence as part of restoration, following stripping, except where otherwise specified in the planning application.

- b. All topsoil and subsoil shall be permanently retained on Site for use in restoration of the Site. In addition, all peat and medium textured mineral soils recovered from the Site which are suitable for use as a soil shall be stored for future use in restoration of the Site, including, if suitable, for use as a planting medium and in creation of lake margin and wetland habitats if appropriate. The majority of the non-agricultural area will remain free of topsoil, fertilizer or lime, to achieve a sustainable, low-fertility substrate for ephemeral wildflower communities and acid grassland, together with bare sand habitat for the rare invertebrate species present on site.

Reason: To prevent loss or damage to soils and offset any shortfalls of soil by using geological material.

32. No plant or vehicles shall cross any area of un-stripped topsoil or subsoil except where such trafficking is essential and unavoidable for the purpose of undertaking the permitted operations. Essential trafficking routes shall be marked so as to give effect to this condition. No part of the Site shall be excavated or traversed or used for a road or for the stationing of plant or buildings, or storage of soils, mineral or overburden, until all available topsoil and subsoil has been stripped. Where soils are stripped to less than 1 metre depth this deficiency shall be made up, where possible and appropriate, from soil making materials recovered during the working of the Site.

Reason: To prevent damage to soil structure in order to facilitate a productive afteruse for agricultural areas.

33. In each calendar year, soil stripping shall not commence in any phase until any standing crop or vegetation has been cut and removed,

Reason: To prevent damage to soil structure.

34. Topsoil subsoil and soil making materials shall only be stripped when they are in a dry and friable condition and operations shall be designed so as to avoid the need to move soils during the months of October to April (inclusive),. In particular there shall be no movement of soils:

- i. when the upper 1000mm of soil has a moisture content which is equal to or greater than that at which the soil becomes plastic as tested in accordance with BS 1377:1975, or,
- ii. where there are pools of water on the surface within areas of the Site designated for agricultural restoration.

Reason: To prevent damage to soil structure.

35. All topsoil, subsoil and soil making materials shall be stored in accordance with the provisions of the approved scheme and in separate mounds which:

- i. do not exceed 3.5 metres in height for topsoil and 5 metres for subsoil unless otherwise approved by the Local Planning Authority;
- ii. shall be constructed with external bund gradients not exceeding 1 in 2;
- iii. shall be constructed with only the minimum amount of compaction to ensure stability and so shaped as to avoid the collection of water in surface undulations;
- iv. shall not be traversed by heavy vehicles or machinery except where essential for the purpose of mound construction or maintenance;
- v. shall not subsequently be moved or added to until required for restoration unless otherwise agreed by the Local Planning Authority;
- vi. shall be seeded or hydra-seeded as appropriate as soon as they have been formed;
- vii. if continuous mounds are used, dissimilar soils shall be separated by either hay, sheeting or such other suitable medium.

Reason: To prevent loss of soil and minimise damage to soil structure.

SITE MAINTENANCE

36. All undisturbed areas of the Site shall be kept free from weed infestation by cutting, grazing or spraying as necessary. Spraying shall not take place in the non- agricultural areas except with prior permission of the Planning Authority.

Reason: To prevent a build-up of weed seeds in the soil, whilst protecting the nature conservation value of the non-agricultural areas.

SLOPE STABILITY

37. The stability of all slopes within the Site shall be the subject of ongoing review throughout the duration of the extraction, restoration and aftercare operations hereby approved under this condition and the scheme required by condition 6 above. In the event that any significant stability problems are identified following assessment by a competent person with geotechnical accreditation, such problems shall be notified to the Mineral Planning Authority within one weeks of them becoming apparent. Appropriate remedial measures, as determined by the competent person, shall then be employed as soon as practically possible, including if necessary drainage works and/or erosion remediation and/or buttressing with indigenous fill materials to ensure the continued stability of all areas within the Site.

Reason: To ensure slope stability is maintained.

Note: For the purposes of this condition a 'significant stability problem' means where there is evidence of gravity induced surface movement affecting an area greater than 5 metres in length.

RESTORATION OF HABITAT AREAS

38. Notwithstanding the details submitted in support of the application, a detailed scheme providing additional information on restoration of the habitat creation areas within the Site shall be submitted for the approval in writing of the Local Planning Authority prior to the Commencement Date. The required scheme shall in particular provide for the following:
- i. details of the treatment of wetland areas and their boundaries including the formation of isolated wetland scrapes;
 - ii. a detailed planting scheme for shrub planting areas including anticipated planting timescales, the species mix and planting spacings, including provision for use of locally native species of local provenance (Shropshire or surrounding counties);
 - iii. a review of the potential for additional shrub and hedgerow planting;
 - iv. written specifications (including species, cultivation and other operations associated with plant, grass (species-rich hay strewing to be used where possible) and wildlife habitat establishment, using locally native species of local provenance (Shropshire or surrounding counties);
 - v. a review of the potential for localised retention of sand-cliffs
 - vi. creation of small-scale topographic diversity using sand to promote invertebrate habitat etc.;
 - vii. maintenance of low-fertility soil conditions for habitat areas;
 - viii. consideration of the potential to provide a sand bund around the edge of the agricultural area, to reduce the effects of nutrient run-off and spray drift on the adjacent acid grassland and other low fertility habitats;

Reason: To secure the effective restoration of the proposed habitat areas within the Site.

RESTORATION OF AGRICULTURAL AREAS

39. A detailed scheme providing additional information on restoration of the agricultural areas within the Site shall be submitted for the approval in writing of the Local Planning Authority prior to the Commencement Date. The required scheme shall in particular provide for the following:-
- i. The rooting of the final excavation surface of each phase with a heavy duty winged tined roter (tines not exceeding 60 cm centres) to depths to be agreed in consultation with the Mineral Planning Authority.
 - ii. The replacement of a minimum of 60 cms of subsoil spread evenly over the final excavated level and loosened by a tined implement to remove compaction. Such works shall only be carried out when the soil conditions are drier than field capacity.
 - iii. The replacement of a layer of at least 25 cms of topsoil spread evenly over the subsoil and loosened by a winged subsoiler to a total depth of 0.45m to ameliorate compaction caused by excavators, scrapers and bulldozers.
 - iv. Following replacement the topsoil shall be analysed to establish fertiliser and lime requirements to restore the land for normal plant growth. The results of such analysis and the proposed liming/fertilisation measures shall be made available to the Local Planning Authority.
 - v. Notwithstanding the details supplied in support of this application the specification for the required fertilizer and lime and an agricultural type seed mix will be submitted to the Local Planning Authority for written approval and will thereafter be applied as approved on the agreed areas of the restored phases.

Reason: To secure the full and proper restoration of the Site.

40. Within five years of the date of this permission a detailed scheme of permanent fencing and final hedgerow and other planting for the Site including a timetable for the implementation of such measures, shall be submitted to and agreed in writing by the Local Planning Authority.

Reason: To secure the full and proper restoration of the Site.

FINAL SITE DRAINAGE

41. A final drainage scheme for the entire Site shall be submitted for the approval in writing of the Local Planning Authority prior to the completion of mineral extraction at the Site. The submitted scheme shall in particular provide for the following:
- i. consideration of underdrainage if necessary for areas of agricultural restoration, including the location and specifications of the proposed underdrainage system and an installation timescale;

- ii. provision of drainage ditches which are designed to prevent eutrophication of water features in the seasonally wet grassland area by intercepting run-off from agricultural land;
- iii. drainage from the restored site shall be attenuated to the equivalent of a green field state.

Reason: To ensure that restored Site is capable of being effectively drained whilst also protecting habitat areas.

REMOVAL OF PLANT AND STRUCTURES

- 42a. All buildings, plant and machinery within the permitted Site which have been installed in connection with the operations authorised under this permission or any previous permission relating to the Site, shall be demolished, destroyed or removed from the Site within twelve months of completion of mineral extraction and the sites of such buildings, plant and machinery shall be restored in accordance with the provisions of the schemes referred to in Conditions 38 and 39 above.
- b. All access and haul roads which have not previously been approved for retention by the Local Planning Authority in connection with the approved restoration and aftercare schemes shall be removed in accordance with the provisions of the schemes required by conditions 38 and 39 above.

Reason: To assist in securing the full and proper restoration of the Site within an acceptable timescale.

AFTERCARE

43. Aftercare schemes for agricultural and non-agricultural areas shall be submitted as soon as restoration has been completed to the written satisfaction of the Local Planning Authority. The submitted schemes shall provide for the taking of such steps as may be necessary to bring the land to the required standard for the agreed afteruses. The submitted aftercare schemes shall specify in relation to each phase the steps to be taken and shall include, as appropriate:
 - i. minor regrading works as necessary to alleviate the effects of settlement and surface ponding or minor improvements to landform in habitat areas;
 - ii. measures to reduce the effects of compaction;
 - iii. fertiliser and lime application;
 - iv. cultivation works;
 - v. reseedling where necessary of any parts of the area sown which do not provide a satisfactory plant growth in the first year;
 - vi. grass cutting or grazing;
 - vii. replacement of hedge and tree failures;
 - viii. weed and pest control;
 - ix. drainage including the construction/maintenance of ditches and soakaways;

- x. vegetation management proposals including as necessary firming, re-staking, fertiliser application, thinning and replacement of failures within the aftercare period;
- xi. habitat management proposals within the aftercare period;
- xii. track maintenance within the Site;
- xiii. repair to erosion damage;
- xiv. Drainage including the construction/maintenance of ditches, ponds or soakaways;
- xv. A system of under drainage where natural drainage is not satisfactory;
- xvi. Field Water Supplies;
- xv. Aftercare of habitat management areas.

Reason: To ensure the establishment of a productive afteruse for the agricultural area and suitable, varied wildlife habitat conditions for the non-agricultural areas of the Site in accordance with the details of the approved scheme.

44. Aftercare of the Site in accordance with the aftercare schemes referred to in Condition 43 above shall be carried out in each stage for a period of five years following the agreement of an aftercare scheme for that stage of restoration.

Reason: To ensure the establishment of a productive afteruse for the agricultural area and suitable, varied wildlife habitat conditions for the non-agricultural areas of the Site in accordance with the details of the approved scheme.

ANNUAL REVIEW

45. Before 1st February after the Commencement Date and after every subsequent anniversary of the Commencement Date for the duration of mineral working and restoration works under the terms of this permission an annual review of Site operations shall take place involving the Mineral Planning Authority and the Site operator. The Annual Review shall consider the following matters:

- i. areas and depths of working;
- ii. mineral resource issues;
- iii. monitoring and mitigation of any issues identified in the Habitat Regulation Assessment including any required changes in the monitoring scheme approved under condition 6 and the trigger level requirements under Condition 7 below;
- iv. progressive restoration and aftercare works undertaken during the previous calendar year;
- v. proposals for working, restoration and aftercare for the forthcoming year including the steps to be taken to reinstate land to the approved afteruses including habitat creation and agriculture;
- vi. a review noise, mud and dust control measures;
- vii. a review of other issues associated with mineral working including traffic and visual amenity issues.

- viii. proposals for aftercare works on restored areas of the Site where these are not already subject to an approved scheme, including areas of habitat management and planting;

Reason: To assist in ensuring establishment of the approved afteruses.

Note: The applicant/developer is advised to contact in order to ensure that any necessary consents are obtained and that the works comply with the Canal & River Trust “Code of Practice for Works affecting the Canal & River Trust”. In addition, in order for the Canal & River Trust to effectively monitor our role as a statutory consultee,

APPENDIX 2

COMMENTS OF DR JOAN DANIELS OBJECTING ON BEHALF OF WELSHAMPTON AND LYNEAL PARISH COUNCIL

1. Summary.
- 1.1 Many of the statements in the rebuttal are correct, but they continue to re-inforce the overall level of uncertainty which the consultants themselves acknowledge in their reports, namely that the geology and hydrogeology of this part of the Cole Mere catchment is very complicated, and many of their conclusions are based on conceptualisations rather than fact. As their reports have used incorrect ground water levels for Cole Mere, it is difficult to see how a Habitat Regulations Assessment could conclude that the proposals would not have a significant effect on Cole Mere and its supporting wetlands. Excavating Phase 1a, then carrying out a re-assessment before excavating Phase 1b and 1c, may be shutting the stable door after the horse has bolted. Also many of the issues raised in Additional Grounds for Objection have not been adequately addressed, such as the odd resultant landscape even after Phase 1a excavation, lack of a Phase 1 restoration plan, the connection between the Phase 1a cascading clay layers which impede downwards water flow and the White Moss head deposits, the possible reversal of groundwater flows to a new open water body created after Phase 1b and 1c excavation, and potential changes to water quality flowing into Cole Mere and White Mere.
- 1.2 Comments dealt with in the order of presentation in the rebuttal:
 1. Section 1.1. JBA challenge the significance of any effects of the excavation on Cole Mere. However from their reports, it appears that the level of significance cannot currently be determined. Although, as they state, many mineral applications may be in the catchments of SSSI's, not many will be in such close proximity to them and their supporting wetlands ie. here within 100m.
 2. Section 1.2 Most of what JBA say here is probably correct, or the White Moss peat body would not have formed. However, "low permeability" of the lower well-humified White Moss peats is not "no permeability", "limited flux" between the White Moss and regional ground water tables is not "no flux", and the White Moss groundwater being "to some extent isolated" does not mean "completely isolated". FIG 2.3 of the Ecohydrology report shows that a large part of the peatland is not the very deep deposits, the centres of which (figs 3.3 and 3.5) are underlain by clay that are predominately explored in the White Moss conceptualisation.
 3. Sect 1.2 JBA say they have presented "considerable evidence to support the conclusions of their report". It appears that there is still a sufficiently high degree of uncertainty, particularly as to the extent of the Valley Ground Water Body, as to merit refusing approval for the planning application. JBA accept that the geology of the area is complicated. There are only 3 boreholes in the higher ground of the proposed Excavation Area and two more at the top of the White Moss slopes, all varying in stratigraphy and hydrogeology. JBA highlight the considerable number of new boreholes and piezometers installed, but these are down in the valley bottom, and present minimal data about the lateral boundary between the Regional Ground Water Table and the Valley Ground Water Body. Their rebuttal concludes that there is sufficient information to support the excavation proposals, despite paragraph 4.3 of their Eco-hydrology report stating "that the nature of the boundary between

- the Regional Groundwater Table and the Valley Groundwater Body is not well constrained" and is an "Unknown hydro-geographical boundary".
4. Section 1.5 and 2.1.1.1 Given that the geology is acknowledged to be complicated with conceptualised slumped heads and possible perched water tables, (Fig 6.5, Hydrogeology Report Addendum 5-7), to state that, because the spring is not immediately linearly downhill of the Hollow, it therefore has no connection with surface water from the whole of the southern half of the excavation area which disappears into the Hollow, is questionable. The spring in this blunt ended "amphitheatre", in reality, is virtually downhill. It seems too great a coincidence that the only point spring for White Moss is downhill of this strange Hollow. The current lack of seepage vegetation as a result of the spring (Fig 3 vegetation report in Ecohydrology report pt. 2) may just reflect the interception of the water by the marginal ditch so the spring water no longer issues onto the peat surface. The lack of seepage vegetation where there is no ditch does reflect the capturing of the surface runoff by the Hollow, but this is not evidence against the connectivity of the spring to the Hollow. The spring must have been of significance or the ditch would not have been dug to capture it. Also JBA make no comment about the excavation area cutting into the White Moss catchment all along the top of this slope, Rebuttal Fig 1. JBA are correct in saying that if the Valley Ground Water Table was in good hydraulic connectivity with the Regional Ground Water Table which is lower, it would drain the White Moss water table down to the level of the latter, but accepting their conclusions about "low permeability", "limited flux" and "to some extent, isolation", in any system the resultant water level reflects inputs minus surface drainage, minus drainage to substrate, with the latter being determined by permeability of the materials concerned and hydraulic gradients. An underlying water table does not necessarily have to be above the surface water level to support a related higher one, as any lowering of the former would increase the hydraulic gradient between the two. The ability of the peat body to build up against permeable deposits of the meltwater channel sides, indicates a net surplus in this water balance which could be affected if either the influx was diminished or the hydraulic gradient was steepened by the quarrying operation.
 5. Section 2.1.2 This rebuttal merely repeats their 2015 report's conclusions that the plateau of the excavation area above White Moss is flat so most surface water will infiltrate and consequently Phase 1a will not remove a "significant" part of the White Moss and Cole Mere surface water catchment. This ignores points made about flowpaths shown in their Figure 2.11 and the presence of clay bands in the glacial deposits and seepage zones on White Moss.
 6. Section 2.1.3 The rebuttal states that effects on "Wood near Colemere" SBI were covered as just being part of White Moss. This ignores the fact that it lies on much shallower peat over sand (Fig 2.3).
 7. Section 2.2 The reports attribute the existence of the seepage vegetation in the north-west of White Moss to just being caused by surface water infiltrating from the steep slope above the Moss, passing through head deposits. The creation of such a large area of this vegetation from infiltration from such a small area of slope seems highly unlikely, and bearing in mind that, throughout the reports, there is an acknowledge lack of understanding of the lateral extent of the Valley Ground Water Body, it would instead suggest additional flow of infiltrated water from the much larger "flat" northern half of the Phase 1a excavation area, also passing through the head deposits. The rebuttal does not adequately demonstrate that importance of the cascading effect of impermeable layers in the glacial deposits in feeding infiltrated water downwards, described in paragraph 6.2 of the Hydrogeology report is not important in feeding water into the head deposits of White Moss. Would there

really be a complete separation of water infiltrating in the Phase 1a area being retarded by a clay layer from permeable head deposits in the adjacent meltwater channel?

8. Section 2.2.1.3 and 2.3 Re. reversal of hydraulic gradients in the narrow ridge left after Phase 1a excavation. JBA's generalised statement about perched water tables is correct, but if excavation cuts into the lateral water feed of a perched water table then it could reverse flow direction. To state that the extent of the proposed mineral excavation will not cut into sediments within the valley deposits contradicts statements about the uncertainty of the location of the limits of the extent of these sediments, for example see fig 3.1. Also see para 5 above, re potential interaction albeit limited, between the Regional and Valley Ground Water Tables, acknowledging that sand immediately under the peat is part of the VGWB sediments.
 9. Section 2.4 The Local Wildlife Site north of the canal, with its very deep peats, is a lot nearer to the excavation area than many parts of the White Moss peatland. By the time this receptor is included in the Phase 1b and 1c studies, damage to it may already have occurred.
 10. Section 2.3 and Section 2.5.1 JBA now acknowledge that the Regional Ground Water Table may feed Cole Mere, in contradiction to their submitted reports. The water levels for Cole Mere reported in the Atkins report, at ca 84.1-84.2 has been confirmed again on 4 March 2016. This contradicts the 85m level used in the JBA reports to imply that the regional ground water Table of Cole Mere and the excavation area are separate. Consequently, their whole analysis of groundwater movements is questionable. Atkins purports that Cole Mere is largely groundwater fed. JBA now state that the White Moss ground water body will provide a barrier between the excavation and Cole Mere. If true, JBA's supposition would require a complete re-assessment of Cole Mere's groundwater catchment, as the mere is surrounded by several meltwater channels, and therefore the proportional effect of the excavation requires re-assessment. Yet more uncertainty in a very complicated hydrogeological situation.
- 1.3 Conclusion: The rebuttal still does not convincingly demonstrate that even the proposed Phase 1a excavation can conclusively be shown not to have a potentially significant effect on the water regime of Cole Mere and its associated waterbodies. Therefore a Habitat Regulations Assessment should not be approved.

2. Comment submitted date: Sun 31 Jan 2016

1. Summary

- 1.1. I object to the Revised Proposals and ask Shropshire Council to refuse the application. Mineral abstraction should not be permitted within the water catchment of Cole Mere SSSI and Ramsar site in line with Professor Lawton's principles of maintaining the integrity of protected sites, and for wetlands this includes their catchments (including surface runoff and groundwater inputs); protecting stepping stone habitats such as White Moss that in turn support the protected sites; and the necessity for mitigating against climate change by allowing and supporting natural functioning of wetlands to accommodate potential changes in timing and delivery of water through altered patterns of precipitation. Alternative locations for extraction of minerals that genuinely has no impact on the hydrology and hydrochemistry of the protected sites Cole Mere and White Mere and valuable connecting wetland habitats such as White Moss should be found.
- 1.2. Although the revised application reports do acknowledge and investigate the existence, biota and hydrology of the adjacent peatland and show a much better understanding of its connection to Cole Mere, and the extent of the proposed

- excavation is smaller, although equally deep, experience at Shropshire Wildlife Trust's nearby Wem Moss, and nearby Fenn's Moss National Nature Reserve, continues to demonstrate the fragility of peatlands underlain by glacial sand and gravels. The uncertainties and speculation in the revised reports still point to the likelihood of damage to the White Moss and other related peatlands and consequently to the internationally important Cole Mere wetland.
- 1.3. The minimisation by the revised proposal reports of the importance of the water connection between the proposed quarrying area, the valley peatland and flow out of it into Cole Mere, cannot be supported by the data presented. The data demonstrates too great a complexity in the glacial deposits, too many unknowns and too little data in crucial areas to support the Quarry reports' conclusions. Justification for this statement and others in this summary are given in the conclusions below which are based on detailed comments in (Extension to Wood Lane Quarry, 14/0589/MAW, Additional Grounds for Objection- Supplementary Report to Welshampton and Lyneal Parish Council, Dr J L Daniels, January 2016).
 - 1.4. Even Phase 1a excavation should be the subject of a Habitats Regulation Assessment, as the deposits in Phase 1a could exert an influence on the Regional Groundwater Table and surface water runoff both to White Moss and Cole Mere and possibly to the Blake Mere wetlands, as the assertion that the Regional Groundwater Table of the extraction area is not connected with that of Cole Mere appears to be incorrect.
 - 1.5. The conclusions that there is little risk to the hydrology of White Moss and thereby to Cole Mere from excavating even Phase 1a appears to be incorrect, as:
 1. The conclusion that the southern half of the excavation area is not part of the White Moss water catchment does not seem to be justified, with the excavation area in reality perhaps accounting for 20-25% of the White Moss catchment rather than the 12% quoted. Quarrying Phase 1a could deprive a spring feeding White Moss Peat Body of its water supply.
 2. The conclusion that the clay bands in the Phase 1a plateau excavation are of no significance for the White Moss and Cole Mere water budgets is dubious.
 3. Similarly no analysis is made of the possible reversal of the hydraulic gradient which leads water towards the proposed perched water tables around the White Moss peats, drawing this water into the new void of the Phase 1a quarry crater, and greatly exacerbated by Phase 1b and 1c extraction.
 4. The Phase 1a extraction area extends so far north that it cuts into slope areas shown by the reports to channel surface water into the White Moss seepage communities, with the reports denying the importance of these established flow paths.
 5. The White Moss Valley Groundwater Body is vulnerable because much of the peat and peat-derived soils lie directly on sand. This vulnerability to alterations to inflow because of the quarrying is underestimated. Despite the way it is portrayed in some of the report figures, the Regional Groundwater Table (RGWT) lies at the same level, or often above the base of the peat and so is likely to support the Valley Groundwater body, and therefore any runoff from it.
 - 1.6. The resultant landscape after quarrying will not, contrary to presented opinions, be at all natural or typical of the internationally important Meres & Mosses Natural Area- it will have a wetland separated by an atypical narrow knife-topped ridge from a deep quarry crater.
 - 1.7. There is no restoration plan for just phase 1a extraction.
 - 1.8. There is no satisfactory resolution of the sedimentation risks to White Mere or discussion of the effects of changes in water quality to the least water lily in Cole Mere.

2. Details of grounds for objection in consideration of Wood Lane Quarry reports submitted Nov 2015. The Revised reports submitted by the Wood Lane Quarry Company in November 2015 are referred to as listed in section 5 - References, below. The reports furnish a much more detailed investigation into the White Moss peatland complex, which was totally omitted from consideration in the previous submission, and this time describes the surface water connection between the revised proposed extraction site and the internationally important Cole Mere wetland, describing the contribution of flow in the two Meltwater channels of Blake Mere and White Moss which merge to flow through the Little Mill ponds into Cole Mere. 21 piezometers and 68 peat auger holes were installed around White Moss and a vegetation survey was conducted. The 7 boreholes in the glacial sands above continued to be monitored. The reports and their maps show the current topography running down from 119mAOD at the top of the proposed abstraction slope, through a plateau at 102mOD to the White Moss peatland at 89mAOD. The propose a Regional Groundwater Table (RGWT) in the extraction site at 82-84.8mAOD, and a separate Valley Groundwater Body (VGWB) in White Moss at 88-89mAOD, and a water level of 85 to 85.5mAOD for Cole Mere (now believed by Natural England to be incorrect). The water level in the ditch system of White Moss is given as 88mAOD and it was acknowledged that the Moss would have had marginal flow before ditching for agricultural drainage. Their vegetation survey shows seepage communities in the north and west of White Moss. The base of Phase 1a excavation is proposed at 90m AOD, the base of phase 1b and 1c at 80mAOD, and the surface water in the new lake at 82mAOD.
 - 2.1. Surface Water Flow from the proposed excavation area to White Moss
 - 2.1.1. Removal of the southern half of the excavation area from the White Moss surface water catchment and the possible effect of Phase 1a quarrying on run-in into the peatland. The Supplementary Statement purports that it is safe to quarry Phase 1a because its base would be at 90mOD, one metre above the White Moss surface water level, so it would avoid any effect on the Valley Groundwater Body (VGWB). Paragraph 3.2 of the Eco-hydrology report states that "the glacial deposits outside the Valley Groundwater deposits are unlikely to provide groundwater which discharges into the White Moss Area", and "the supply of significant water to the Valley Groundwater Body is limited to direct recharge, surface water run-off from the steep slopes around it and flows down the ditch from upstream of White Moss." However:
 1. Fig 2.11 of the Eco-hydrology report shows the excavation area divided into a northern White Moss surface catchment area and a southern area where the flow lines show surface water disappears into a "Hollow", which the report implies, only feeds the Regional Groundwater Table. This "Hollow" lies just uphill of the White Moss "Amphitheatre", an arm of the peat body surrounded by very steep slopes. The "Hollow" also shows contour evidence of a past outflow leading towards the peatland. Consequently 55% of the proposed extraction area has been excluded from the White Moss surface water catchment, and therefore by implication, as stated in para 2.2.3, "A large part of the excavation area is not within the Cole Mere surface water catchment". However, this may not be strictly true. The Eco-hydrology report makes no mention of the spring at SJ4265 3301 and described in para 5.8 of the Hydrogeology report part 2, which lies immediately at the base of the slope below the "Hollow", and which feeds water into the Valley Groundwater Body.
 2. This spring may well be fed by water entering the "Hollow", as Borehole 804A, the closest to the "Hollow and "Amphitheatre" is described in Fig 2.12 as "regional water table - perched" and its profile in fig. 3.9 shows clay layers at 94 and 88-92mOD, one metre above the Valley Groundwater Body. Surface

- water infiltration in the "Hollow" could be feeding water to a perched water table supporting the Valley Groundwater Body and the issue from the spring.
3. Also Fig 3.9 of the Eco-hydrology report shows that the peatland in the "Amphitheatre" sits on sand with only a small amount of lacustrine clay below it. The base of the peat is at 84.5mOD (just 1 m above the average Regional Groundwater Table, and within its range of variation), so both Perched and Regional Groundwater Tables may be supporting the Valley Groundwater Body and hence flow out of it. Paragraph 2.3.4 states that "the base-flow index for the area is 0.9 so baseflow (mainly groundwater input) makes the bulk of streamflow", and together with the presence of the spring, this is likely to mean that premise that southern half of the excavation area slope to be quarried in Phase 1a is not contributing to the White Moss and Cole Mere surface water input is misleading. The purported 2% reduction in Cole Mere and 12% reduction in White Moss surface water catchments caused by the Phase 1a quarrying, stated in paragraph 4.5.2 may in reality be twice as large.
- 2.1.2. Effect of Phase 1a quarrying on the north and western part of White Moss.
Paragraph 2.2.3 of the Eco-hydrology report focusses only on the 55% of the area which they say does not contribute to the White Moss surface water catchment, not mentioning the implications of Phase 1a quarrying on the other northern 45% (Fig 2.11). The proposed Phase 1a excavation area cuts substantially into the slope which leads down to the northern end of White Moss, rather than following the top of slope 101m contour. Fig 2.11 shows the surface water trackways which lead north into White Moss, but the report states that, although the upper sections of the runnels lie within the excavation area, this area isn't important for surface water flow, as most water will infiltrate because it is relatively flat. Table 4.3 assesses the impact of quarry phase 1a in removing the upper end of the runnels as "certain" but "negligible". If this was the case, why would these flow patterns have formed? The excavation area will cut off a large part of the recruitment area for surface water flow into the peatland. This flow is confirmed by the seepage communities found by the Eco-hydrology report vegetation survey, which indicate surface water recruitment.
 - 2.1.3. "Wood near Colemere"
There is no mention in the Eco-hydrology report of any possible impact on "Wood near Colemere" Wildlife site, which shares the same very flat Valley Groundwater Body as the White Moss complex referred to in the Reports. Any reduction in water levels in the ditches or peat north of it would draw water out of this site.
- 2.2. The potential effect of Phase 1a (and 1b and 1c) quarrying on perched water tables feeding the Valley Groundwater Body
 1. Paragraph 4.3 of the Eco-hydrology report (Potential Impact Mechanisms) explains well the problems which could be caused to Cole Mere and White Moss by lowering the Valley Groundwater Table. It states "that the nature of the boundary between the Regional Groundwater Table and the Valley Groundwater Body is not well constrained" and that the Valley Groundwater Table extends out towards the excavation area, because of a) clay and sand lenses creating links between the two, b) permeability in the seal around the meltwater channel and perched water tables, so the hydraulic gradient is lowered between the two water tables, concluding that there is an "Unknown hydro-geographical boundary". Fig. 2.12 shows only 6 regional groundwater boreholes in and near the extraction area, and of these, only two, BH 805 and BH804, are near the steep slopes leading down into the peatland. Although paragraph 4.4.1 says boreholes 804 and 805 show no evidence of perched

- WTs, Fig 4.1 categorises them as being "regional Groundwater table-perched.)
2. Paragraph 3.1 states that because the 98mAOD perched water table below the plateau of the proposed phase 1a excavation area doesn't extend right to the edge of the steep slope into White Moss any water it was channelling towards the Valley Groundwater Body would infiltrate on the flat areas between to the regional groundwater table. Consequently the reduction in Cole Mere and White Moss catchments should not cause significant reductions in runoff. However paragraph 6.2 of the Hydrogeology report describes the importance of the cascading effect of impermeable layers in the glacial deposits in feeding infiltrated water downwards. This minimisation of the effects of Phase 1a on the the White Moss catchment because of infiltration, ignores potential interception of this water lower down the profile by the clay layers, which are shown at lower levels in all of the borehole profiles in Figs 3.3-3.9, and potential channelling of this water by these layers towards the peatland, and towards the spring feeding the "Amphitheatre". All of the boreholes near the White Moss slopes show clay layers above 90m AOD, the base level of Phase 1a.
 3. Hydraulic gradients in the narrow ridge remaining after quarrying Phase 1a
Figs 3.3, 3.5, 3.7 and 3.9 all indicate the likely presence of perched water tables in the Valley Groundwater Table within the meltwater channel infill bordering the White Moss peat (of unknown hydro-geographical extent). Even the extraction of Phase 1a will remove most of the glacial material above, and feeding water to, these clay bands. The resultant narrow ridge will have a very steep western slope, open to the void of the quarry crater, rather than the current pre-quarrying deposits with their limited pore space. This may well reverse hydraulic gradients which currently channel water in these perched water tables towards the peatland, and will draw water in the ridge instead into the quarry crater, thus lowering the Valley Groundwater Table and hence any groundwater-generated surface flow to Cole Mere. This reversal would be greatly exacerbated in Phases 1b and 1c.
- 2.3. The interaction between the Regional and Valley Groundwater Tables
- 2.3.1. The Vulnerability of the peat on sand The Eco-hydrology maintains that the excavation area is not necessary to adequate maintenance of water levels in White Moss and Cole Mere, purporting that the Regional Groundwater Table is not discharging into Cole Mere. It divides the Groundwater into the Regional Groundwater Table and the Valley Groundwater Body, and aims to demonstrate no interaction between them and a separation of the surface water feeding each of them. Paragraph 2.2.4 of the Eco-hydrology report shows that parts of White Moss have up to 6.3m depth of peat. This deep peat appears to have formed through a hydro-seral development in depressions in the meltwater channel infill sand which lay below the Regional Groundwater Table, and which became lined with lacustrine clay. The peat appears then to have spread out directly over the meltwater channel sand by paludification, indicating the role of a high Regional Groundwater Table in sustaining the development of the peat body. Otherwise any water impeded by peat development in the deeper hollows would have drained down through the sand to a lower Regional Groundwater Table. The peat auger surveys of 68 holes, listed in Appendix C, shows that only 5 had clay under the peat and 4 silt. The remainder were either shallow peaty /organic soils or deeper peats lying immediately above sand, which was often underlain by gravel. This indicates vulnerability of many areas of White Moss to abstraction/ drawdown of water levels in the substrate below the peat. These water levels could be affected if any perched water tables or water channelled towards the wetland by impedance layers of silt or clay in the sand were removed by quarrying. In the Eco-hydrology report, in paragraph 3.1 (the

White Moss Conceptualisation) and in Fig 3.1, the Regional Groundwater Table is shown at 82mAOD, whereas the range is later given at 82-84 AOD and one borehole shows it at 84.8 m. 84mAOD corresponds with the base of the peat in the meltwater channel, so showing the Regional Groundwater Table at 82mAOD minimises the visual representation of the potential interaction between the Regional Groundwater Table and the Valley Groundwater Body. Similarly Fig. 3.5 shows the RGWT at 81m but the model in Fig. 3.6 shows it at 82.8mAOD. Had the latter been used in Fig. 3.5 it would be above both the base of the peat and above the limited amount of lacustrine clay. This indicates potential interaction between the Regional Groundwater Table and the Valley Groundwater Body, and the vulnerability of both to quarrying. As stated in my previous objection, at Fenn's Moss and Wem Moss NNRs, a peatland similarly sitting on sand, the supporting interaction between the water table in the peat and in the sand below it, has been the subject of Environment Agency investigations and has shown the vulnerability of peatland on sand to lowering of the Groundwater table. In creating a much deeper quarry crater and a pool which would create a drawdown on the Groundwater table, Phases 1b and 1c would greatly exacerbate the potentially detrimental effects mentioned above. Although the Eco-hydrology report Appendix 2 shows that the vegetation of White Moss is pre-dominantly post-drainage non-peat forming communities, contaminated by nutrient enrichment from the south of Colemere village and direct agricultural practices on the land, and although only the north-west area of seepage vegetation reflects groundwater influence, this does not diminish the importance of the Regional Groundwater Table in sustaining the Valley Groundwater Body and runoff to Cole Mere, particularly because of the presence of sand immediately below so much of the White Moss peat. Nor does it diminish its role in supporting 9 Shropshire wetland axiophytes, although clearly the Moss would have greater value if restored to an actively forming peatland.

2.4. Effect on Blake Mere and its supporting wetlands

Paragraph 2.4.3 of the Eco-hydrology report also states that no hydrological links have been identified between Blake Mere (and consequently its meltwater channel peatlands) and the excavation area, but this has not been investigated. Fig 2.9 shows that the similarly very deep peats of the Blake Mere meltwater channel below the "Near Shropshire Union Canal" Local Wildlife Site are the same distance from the excavation area as part of the edge of the White Moss peats. The canal and its footings will not form an impermeable layer to the base of the peat, so perched water tables might as easily run below the canal from the excavation area, as into White Moss. Any effects on their Groundwater tables caused by excavating the Phase 1b and 1c quarry crater down to 10m below their current surface, are not investigated and are dismissed. If creation of this crater affected that Valley Groundwater Body too, it could similarly affect disintegration and subsidence of their peats and consequently flow to Cole Mere, as well as affecting these in White Moss.

2.5. The need for a Habitat Regulation Assessment

2.5.1. Groundwater connections to Cole Mere - water levels.

Paragraph 2.4.3 of the Eco-hydrology report states that the Regional Groundwater Table lies at 82-84 m AOD (varying up to 84.8mAOD) and incorrectly states that water levels in Cole Mere are 85 -85.5m AOD. Consequently the consultants conclude that the Regional Groundwater Table is unlikely to feed into Cole Mere. It also states that the Regional Groundwater Table flows both north and south from the excavation area but not to Cole Mere. The Addendum Report also states that the "regional groundwater body under the proposed excavation does not discharge to Cole Mere". Yet paragraph 2.5.8 of their original Hydrology and geology report shows that they measured the water level in Cole Mere as being 84.23mAOD on 10

April 2014, a date corresponding to the 2014 data used for water levels in the current reports and within the range found in the Regional Groundwater Table of the excavation area. The outflow sluice level at Cole Mere measured by Atkins (2015), is 84.05m AOD, and the water level in the Mere was 84.16mAOD. This too fits within the range presented by the Quarry reports for the Regional Groundwater Table. Natural England concludes from data presented in this report that Cole Mere receives water both from groundwater and streamflow, that the importance of groundwater varies seasonally, with the Mere receiving groundwater in winter and recharging to groundwater in summer, and that, although streamflow is the largest contributor to water levels, part of this streamflow itself is groundwater derived. Therefore removal of a portion of the surface water catchment of Cole Mere by excavating Phase 1a could affect the hydrology of Cole Mere, either via reduction in direct run-off via the ditch system or reduced percolation to the Groundwater which feeds the Mere. The hydrogeology report gives the water level of the new proposed pool created by excavating Phase 1b and 1c to be 82mAOD, which could draw groundwater towards it and away from Cole Mere. Consequently a Habitats Regulation Assessment is necessary, even for Phase 1a.

- 2.5.2. The Quarry Reports contain conflicting assessments as to the effects of the proposed quarrying. In the Eco-hydrology report, on p.42, the effect on Cole Mere via the reduction in water (via White Moss surface ditches and Valley Groundwater Body) is listed 'certain' and 'unknown' respectively with 'negligible impact', at Phase 1a and 'unknown' and 'negligible impact' at Phase 1b and 1c. On p.44 it gives the "Lowering of Groundwater Level in Valley Groundwater Body- Cole Mere - Reduction in Base-flow Input - unknown likelihood - unknown impacts, Engineering solution to ensure no groundwater flux out of the Valley - Residual Impact - negligible impacts". However in the Addendum, p.5, Table3-1 it states "No adverse impact on volume, quality or seasonality of the surface water to Cole Mere has been predicted". "Negligible impact" and "no adverse impact" cannot both be true. There will be an impact and at present it cannot be determined whether this will be a significant risk or not, for any of the Phases. Consequently a Habitats Regulation Assessment is necessary.
- 2.5.3. The Environmental Statement, repeating the Eco-hydrology report section 5, states that a Habitats Regulation Assessment can't be done yet as there is insufficient data. The Eco-hydrology report states "that the nature of the boundary between the Regional Groundwater Table and the Valley Groundwater Body is not well constrained" with the Valley Groundwater Table extending out towards the excavation area, and, concludes that there is an "Unknown hydro-geographical boundary". As the extent of the meltwater channel infill, the perched water tables in it, and any clay layers in the excavation area feeding the infill, are unknown, even phase 1a quarrying may affect surface and infiltrating water flow into the Valley Groundwater Body. Overall, the Report's conceptualisation is based on far too little data to justify its minimisation of the effect of excavation in Phase 1a, let alone Phases 1b or 1c, on the hydrology of White Moss and Cole Mere. Consequently as a Habitats Regulation Assessment can't yet be done, the application should not be approved for any of the Phases.
- 2.6. Post-quarrying landscape and Phase 1a restoration
- 2.6.1. The Restoration Rationale states that the design rationale of the restoration scheme is -"To mitigate adverse and significant effects on the broad landscape character and visual amenity at a local level". Paragraph 2.3.2.of the Visual and Landscape report states "The landform (post quarrying) is designed to create a naturalistic depression with central water feature, which is typical of the landscape of the meres and mosses area." It refers to slopes being similar to those to the north and east,

which elsewhere are termed "steep slopes". It makes no comment about the strange appearance created by forming a steep narrow ridge between the quarry crater and the adjacent wetland. Knife-backed ridges not at all typical of this nationally recognised landscape area.

- 2.6.2. No restoration plan has been presented for Phase 1a alone, reflecting a lack of intention to stop quarrying without proceeding to Phase 1b and 1c, which would create a much deeper quarry crater and progressively steeper slopes and more knife-backed ridge against the peatland, which instead of lying naturally in the landscape at the base of the slope would be marooned on the side of a hill.
- 2.7. Hydro-chemical considerations
 - 2.7.1. Para 2.4.6 of the Visual and landscape report states that after Phase 1b and 1c quarrying is completed, "Grazing pasture... will be restored to improved pasture ...which will... be suitable for a grassland crop or ...more intensive grazing." Para 2.4.7 states that 3-5 m of marginal grassland round the new wetland and woods MAY be fenced off and cut less, and woodland establishment would require fertiliser. These enriching inputs will be applied much nearer to the regional Groundwater Table than in the current situation.
 - 2.7.2. Section 8 of the Habitat Regs report says that there will be no likely significant effect from non-water issues, but also says the main issue regarding this of continued sedimentation into White Mere will be the subject of separate Shropshire Council consultations. Consequently the revised report does not resolve one of the major impacts of the existing quarry on the silt and nutrient loading to White Mere SSSI, although a new wheel wash is mentioned. Currently dust from lorries leaving the quarry, and soil dislodged from roadside verges by the lorries, enters road drains and ends up in White Mere SSSI. As an internationally designated site, this is further reason for the requirement for an HRA for any extension to the quarrying, even Phase 1a.
3. Conclusions from the detailed report (Extension to Wood Lane Quarry, 14/0589/MAW, Additional Grounds for Objection- Supplementary Report to Welshampton and Lyneal Parish Council. Dr J L Daniels, January 2016).
 - 3.1. The revised application reports (November 2015) try to minimise the connection between the hydrology of the proposed reduced quarrying area, the valley peatland and flow out of it into Cole Mere. They also seek to demonstrate that the slopes to be quarried only contribute water to the Regional Groundwater Table not to the Valley Groundwater Body, and that the Regional Groundwater Table has no connection to or role in supporting and sustaining water levels in either Cole Mere or the Valley Groundwater Body. These conclusions are drawn despite errors and substantial variation within their data, the glacial deposits being extremely complex and the required data so sparsely available, that interpretations to be made from the data are generally inconclusive, and liable to various interpretations.
 - 3.2. The Quarry's revised Eco-hydrology report fails to mention some of the findings of their Hydrogeology reports, in particular about the existence of a spring feeding surface water into the "Amphitheatre area" of White Moss. A "Hollow" is recognised in this report, which swallows all of the surface water drainage from the southern half of the excavation area. On the basis of this Hollow acting as a sink for the surface water, this half of the extraction area has been removed from the surface water catchment for White Moss and thereby from that of Cole Mere. However a spring lies immediately downhill of the "Hollow", feeding water into the White Moss ditch system, so in reality this supposition about the southern half of the excavation

area may well be misleading and irrelevant, as surface water may disappear into the Hollow, only to re-emerge in the spring. This means that the Phase 1 excavation, which would quarry away the slope and Hollow, could guarantee the loss of this water pathway feeding the peatland. This also means that the stated 12% reduction in White Moss surface Water catchment may be more like a 20-25% reduction.

- 3.3. The revised Hydrogeology report also minimises the effect of the Phase 1a excavation (to be quarried to 90mAOD) removing the bands of clay which occur at higher levels than the White Moss Valley Groundwater Body (89mAOD) in the glacial deposits. These bands are shown in all of the boreholes on the plateau of the proposed excavation area, and may, as described in the report, cascade water progressively at different depths towards perched water tables around White Moss, and which may therefore support the hydrology immediately beneath the peat and also the seepage communities in the north-west of the Moss.
- 3.4. Also, rather than following the 101m contour, extending Phase 1a so far north eats into slope areas which feed surface water into the White Moss seepage communities.
- 3.5. Creating such a narrow ridge between even the Phase 1a quarry and White Moss also could reverse the hydraulic gradient in the above-mentioned perched water tables away from the peatland and towards the new Quarry void.
- 3.6. The Valley Groundwater Body is particularly vulnerable as the peat auger readings show that, between deeper lacustrine clay lined pockets, much of the peat and peat- derived soils lie directly on sand. The Hydrogeology reports show that the Regional Groundwater Table lies at the same level or sometimes above the base of the peat and so supports the Valley Groundwater Body, and therefore any surface water flow arising from it, by reducing the hydraulic gradient below it. Consequently the report minimises the consequences of Phase 1a excavation, which could cause a much greater interference with the hydrology of the Valley Groundwater Body than purported.
- 3.7. Even quarrying Phase 1a could affect Cole Mere's hydrology, and therefore a Habitats Regulations Assessment is required. The quarry's own 2014 data, the LiDar data and that in Natural England's 2015 report set Cole Mere's water level at 84.05 to 84.3mAOD, not the 85-85.5m quoted in the revised reports. These values fall within the variation in the values of the Regional Groundwater Table in the extraction area boreholes. This would suggest that the Quarry reports' premise that the Regional Groundwater Table of the extraction area (82-84.8mAOD) is not connected with water levels in Cole Mere is incorrect. Natural England's report (2015) demonstrates in fact that, for large parts of the year, Cole Mere is recharged from the Regional Groundwater Table. Also as hydraulic gradients in the groundwater are so low and difficult to determine in this part of the Cole Mere catchment, with the reports stating that the water may flow north and/or south from the extraction area, creating a new sump wetland at 82mOD (hydrogeology report) could cause reversals of flow away from Cole Mere.
- 3.8. Also a Habitats Regulations Assessment is required in regard to the effects of the proposals on surface water flow to Cole Mere, but this cannot be carried out as there is currently too little data to determine whether even quarrying Phase 1a will lower the Valley Groundwater Body, with knock-on consequences on run-off to Cole Mere.

- 3.9. The postulation of the Landscape Report that the resultant landscape after quarrying will be typical of the area does not appear to be correct - it will not be at all natural in appearance; rather it will have a wetland at a channel at a high level separated by an atypical narrow knife-edge ridge from a deep quarry crater.
- 3.10. There is no restoration plan for only phase 1a extraction, indicating a presumption that Phases 1b and 1c will just follow on.
- 3.11. Hydro-chemical issues concerning the effect of sedimentation in White Mere and potential effects on the least water lily in Cole Mere which grows close to the inflow from White Moss, as raised in Daniels (2015), have not been resolved.
- 3.12. There still appears to be a clear conflict between Shropshire Council's adopted policies to protect its Meres & Mosses landscape, to protect its local and international biodiversity and to protect residual carbon in archaic peatlands with its need for sand and gravel and its identification of Zone 4 as its preferred location in the county for sand and gravel extraction. The proposals will adversely affect the ecological, geological and hydrogeological value of part of the Meres and Mosses Area. The proposed mitigation of creation of the smaller new wetland are still likely to be at the expense of a much larger ancient wetland and the species therein and there may be effects on Cole Mere as well.
- 3.13. Previous objections that the proposals conflict with the policies in Shropshire Council Local Plan Core Strategy (SC, 2011), Policy CS6 Sustainable Development and Design Principles and Policy CS17 - Environmental Networks, Shropshire Council's "Site Allocations and Management of Development (SAMDev) Plan ", Shropshire Biodiversity Action Plan for peatlands, and the aims and objectives of the Meres & Mosses Natural Character Area, Landscape Partnership and Nature Improvement Area (NIA) to which Shropshire Council are party still stand.
- 3.14. In particular, the Proposals still do not comply with any of the requirements no.s 1-6 made in the selection of Wood lane Quarry as a preferred site for sand and gravel extraction in Shropshire made in the SAMDEV (SC 2011).
4. Overall conclusions
Even Phase 1a of this revised proposed Zone 4 development will still be damaging to Shropshire's geomorphology, locally important habitats, flora and fauna, protected species and peat resource and may well damage Shropshire's internationally important designated sites. Even these reduced Proposals do not comply with Shropshire's policies for environmental and landscape protection. Consequently I object to the Revised Proposals and ask Shropshire Council to refuse the application.

Comment submitted date: Mon 01 Dec 2014

1. The premise that there is no interaction between surface water and deep groundwater in this large part of Colemere's catchment and that surface and subsurface flow off this slope does not contribute water to the wetland system in the valley at the eastern base of the slope is counter-intuitive to general understanding of how the hydrology of the meres and Mosses and their associated wetlands works. The geology, hydrology and ecology reports contain no geological, hydrological or ecological data for these wetlands yet conclude that there will be no effect on them or on Colemere, into which they feed.

2. A 9.3 ha wetland system with shallow peats extends from south-east to north-west, downslope of Zone 4. It runs a Local Wildlife site 'Woodland near Colemere' (SJ43.07) in the south, the latter comprising wet marshy grassland and willow carr with water horsetail to Baysil Fen in the north.
3. This basin will be in hydraulic connectivity with the shallow groundwater, via through flow through the superficial drift, possibly even upwelling at certain times of year, as well as receiving surface runoff, despite the height above the baseline groundwater table. The ditch and the adjacent wetland contains nine Shropshire axiophytes of fen and carr BAP habitat, which are not mentioned in the ecology report (SLR Consulting, Ecology 9) and therefore any reduction or alteration to the water balance and quality would be detrimental to the biodiversity of this area.
4. Foraging Common Snipe (Amber List, Birds of Conservation Concern), Raven and signs of Badger digging were all noted in the area of wet fen rush pasture at the foot of the Zone 4 slope. In the report the valley wetland is described as 'marshy grassland'. Whilst not species-rich, this wet fen rush pasture is a characteristic wetland habitat on a metre of peat whose protection should be ensured for the habitat itself, as a carbon sink, for its potential archaeological significance and historical ecology and as supporting habitat of the species-rich ditch and adjacent species rich fen and carr of Baysil Fen and Woodland Near Colemere Local Site and ultimately the Cole Mere SSSI.
5. Specifically the ecology and hydrology reports are flawed:
 - 5.1. The ecology report assumes that the ditch forming the eastern edge of the proposals site flows into the canal so does not assess potential damage to Colemere from changes to subsurface and surface flow caused by the removal of catchment and reversal of hydraulic gradient caused by excavating the new crater. Infact it flows under the canal and back through Little Mill into Colemere very near to the least water lily, so must be considered.
 - 5.2. The ecology report presents no data for the wetlands in the south-east to north-east valley, excluding them because the hydrology report said they would not be affected/ lay 'upstream'. There is no data for them in Appendix 9.2 supplied by SWT, as they have had no access to them, being on private land. The area surveyed by the quarry's ecological consultant excluded them, and consequently on the basis of not having any data for them, totally unjustifiably concluded that there would be no effect on any designated sites or protected species.
 - 5.3. The hydrology report excludes these wetlands at the base of the slope from the investigation area by stating that Local Wildlife site is upstream of the excavations and Baysil fen and the wetland along the valley bottom lies on clay. The only evidence given for this 'clay' is that ditches are cut into the area to drain it, which of course in most of Shropshire indicates, as is here, the presence of peat. The lie of the land, enclosed by the higher ground of Wood lane, Mill lane and the canal, sets these wetlands firmly in the hydrological system including the proposals slope, and explains their presence before any ditching and why the complex of ditches have been put in to drain them.
 - 5.4. Figure E of the Addendum hydrological report has diagrammatic surface flow arrows showing that almost all of the Zone 4 slope supposedly drains North-east, so inferring that the Colemere Farm Local wildlife site was too far 'upstream' to receive drainage off the slope so should be excluded from ecological consideration. The contours on that map however indicate that almost half of the proposals slope

would appear to be shedding surface and shallow subsurface flow to the valley around the Local wildlife site.

- 5.5. The hydrology report also says the ditch discharges from the application area into the marshland north of the canal and that this and Blakemere then contributes to flow in the continuation of the ditch along the north of the canal that then flows under and to Little Mill and Colemere, so the water from this northern marsh and Blakemere would dilute/ compensate for any effects of quarrying the proposals area. However on the ground, the main flow in the ditch along the north of the canal and back into Little Mill and Colemere appears to be a straight forward continuation of the stream from the proposals area.
6. At a public meeting in Welshampton on 27.11.14, the quarry representative concluded that because quarrying would not extend up to the edge of the stream at the east of the proposal area, that the reversed hydraulic gradient causing surface waters to flow westwards into the new pool would not remove much flow from the ditch and wetlands as that bank of the new pool is a relatively small area. This does recognise the loss of all of the subsurface flow which would otherwise have come down to the ditch from the whole unquarried slope.
7. The quarry representative also said they may make a new car park near the new lake, using the new access track and encourage dog walkers to use it instead of going to Colemere. Although this could be used as mitigation for new housing development in Ellesmere, it would draw new dog walkers in, would not relieve Colemere, and would certainly undermine any prospective bird interest from developing in the proposed new wetland.
8. And nowhere do the reports point out that the natural landscape, which informs so much about the natural fluvial geomorphological history of this area, will be irrevocably altered by human interference.

Comment submitted date: Tue 25 Nov 2014

We strongly object to the above proposals on the grounds of damage to landscape, hydrology of internationally and locally important wetland sites and internationally important biodiversity, and also on the grounds of traffic, light pollution, dust and noise.

1. **Landscape**
This proposal lies in the heart of the nationally recognised Meres and Mosses Nature Improvement Area, a post-glacial landscape of gently rolling hills and ancient wetlands. It is also an important part of the Meres & Mosses Landscape Partnership Area, to which Shropshire Council is party. It lies between two internationally important wetland sites, Whitemere and Colemere, and immediately uphill of a 'Local' wildlife wetland site of county significance, (referred to here as the Colemere Farm wetland). It is also part of the nationally important Ellesmere-Whitchurch glacial moraine geomorphological landscape. Creating a steep crater in such a sensitive area is completely contrary to the principles of the above designations. It is also against the principles of the Lawton Review, the principles of which form the core for action in the Nature Improvement Area, in that it will detrimentally affect the quality of the existing wetlands, reduce the extent of the existing wetlands, damage the connectivity along the wet valley feeding Colemere,

and will increase pressures on existing wildlife (see biodiversity below), so although creating a new wetland, this will be at the expense of existing high quality sites.

2. Hydrology

In contrast to the current quarry, which has not impacted on the hydrology of Colemere and Whitemere, this proposal is within, and will remove part of, the surface water catchment of Colemere Site of Special Scientific Interest and Ramsar site, which is a rainwater fed site. Inflow to the species-rich drains in the wetland at the base of the slope of the proposal area, which then run under the canal then back through the Little Mill garden into Colemere, will not receive as much water. Additionally the non technical summary and hydrology reports are incorrect in dissociating surface water and groundwater and in proposing that because the proposed quarrying is above the ground water table there will be no effect on adjacent wetlands. Surface water infiltration contributes to shallow groundwater flow and this groundwater in the proposal area is acknowledged in the reports to be in continuity with that in Colemere. Similarly, the shallow groundwater flow is likely to be important to the adjacent Colemere Farm Locally important wetland which comprises fen, carr and wet grassland. The hydrology reports do not adequately recognise the hydrological damage which could be caused to the existing wetlands, which cannot be compensated for by the creation of a new pool, and which will draw groundwater flow away from Colemere and the Colemere Farm Local wetland .

3. Biodiversity

3.1. Least water lily Colemere is the last site in England for the least water lily. This has been lost from many other sites in recent years because of increased nutrient inputs and has recently been the subject of conservation work by Shropshire Council and the Meres & Mosses Landscape Partnership, working with the local community. Currently agricultural inputs from the area are filtered through the sediments before reaching the groundwater. Proposed post-restoration farming on a surface much nearer to the ground water table could increase the nutrient inflow to Colemere very close to the site of the least water lily. Also, although the reports indicate that all pollutants and sediments would be contained, they may not , and might not increased dust from quarrying operations impact on the quality of that stream and Colemere itself?

3.2. Colemere Farm Local wetland

This is a long-established fen and carr with marshy wet grassland on peat. The alteration of hydrology to this area which is likely to be caused by the proposals, could not only cause the loss of several Shropshire wetland axiophytes (key wetland species present on the site), but could also damage the carbon storage in the peat. This does not appear to be mentioned in the proposal reports.

3.3. Restoration proposals

Restoration to wooded slopes on the steep crater sides will augment the hydrological damage by increasing evapotranspiration, and also provide more corvid roosts to the detriment of breeding waders in new and existing wetlands, including the adjacent Wood Lane Reserve. Many of the meres are sumps for local agricultural diffuse pollution from run-off. Restoration to farming could similarly blight the new wetland and groundwater. Use of any non-native species such as conifers in screening proposals would also detract from the naturalness of the landscape. Only native evergreen should be used.

4. Visual Intrusion, traffic movements, light, noise and dust

- 4.1. Visual intrusion and dust. The proposed bund at the south-eastern end of the site will not screen most of the view of the quarry face from Colemere Village, particularly from those living close to the Colemere Farm to Little Mill lane. The proposed vehicle crossing point from the existing quarry to the proposed area lies on the main visitor access lane to Colemere, and one of the main routes into the village for residents. The urbanisation caused by the structure of the crossing point, the high number of vehicle movements, combined with the likely high quantities of dust along the hedges, as exemplified by the main quarry access on the Ellesmere to Shrewsbury road, will not only be detrimental to visitor and residents' experience but also significantly detract from the ambition for the promotion of this landscape by the Meres & Mosses Partnership.
- 4.2. Traffic. The frequent wagon crossings will pose a significant danger to traffic on the single track lane, which is already hazardous. It may result in much higher use of the other approach lane south of the current quarry increasing traffic through the centre of Colemere village, which is all single track lanes, to the detriment of residents.
- 4.3. Noise and light. The conclusions of the noise assessment are incorrect, not only by including existing quarry noise, but in carrying out a measurement only in a sheltered location with leaves on the trees. Traffic noise will not be shielded at all as wagons cross the road. Also Colemere residents will not be shielded by the south-western bund from noise from quarrying operations on the higher areas of the slope, as they are from current operations by intervening ground. The noise of the existing quarry and recycling plant carry well onto higher areas of Colemere. The effects of light pollution on residents and local wildlife similarly have not been adequately addressed.
- 4.4. Adherence to current planning restrictions.
The quarry has not got a good record of adhering to current planning conditions, such as the height of the tip, and the major scar on the landscape caused by tipping which should have finished and been restored some years ago, will now extend for another 35 years, and the adjacent promised extension to the nature reserve will be delayed. Should this proposal go ahead can the timescale for quarrying and re-instatement be enforced? On all of the grounds above we strongly object to the proposals.

APPENDIX 3

Habitat Regulation Assessment (HRA) Screening Matrix

1.0 Introduction

The proposal to extend Wood Lane Quarry, near Ellesmere, north Shropshire has the potential to adversely affect a number of designated wildlife sites of international importance. The likelihood and significance of these potential effects must be investigated.

This is a record of the Habitats Regulation Assessment of the Wood Lane northern extension project, undertaken by Shropshire Council as the Minerals Planning Authority. This assessment is required by Regulation 61 of the Conservation of Habitats and Species Regulations 2010, in accordance with the EC Habitats Directive (Council Directive 92/43/EEC) before the council, as the 'competent authority' under the Regulations can grant planning permission for the project. In accordance with Government policy, the assessment is also made in relation to sites listed under the 1971 Ramsar convention.

Sources of information used in this HRA are listed in Appendix 1 and referred to by their reference number in the text below.

The memoranda ref. WoodLaneQuarry15.04589.MAW dated 13th January 2016 and WoodLaneQuarry(2)14.04589.MAW should be read in conjunction with this HRA, and these are also available on the planning website:
<https://pa.shropshire.gov.uk/online-applications/search.do?action=weeklyList>

Application name and reference number:

14/04589/MAW Wood Lane Quarry, Ellesmere Sand and Gravel, Spunhill, Ellesmere, Shropshire Extension to Wood Lane Quarry.
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Date of completion for the HRA screening matrix:

3rd June 2016

HRA screening matrix completed by:

Dr Sue Swales, County Ecologist Shropshire Council
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2.0 Stage 1 Screening

This stage of the process aims to identify the likely impacts of a project upon a European site, either alone or in combination with other plans and projects, and to consider whether the impacts are likely to be significant.

2.1 Summary Table 1: Details of project

Name of plan or project	<p>14/04589/MAW</p> <ul style="list-style-type: none"> Wood Lane Quarry, Ellesmere Sand and Gravel, Spunhill, Ellesmere, Shropshire <p>Extension (North) to Wood Lane Quarry.</p>
Name and description of Natura 2000 site potentially affected.	<p>Midland Meres and Mosses (Ramsar phase 2)</p> <p>Phase 2 of the Ramsar sites covers 1740.3ha and is entirely co-incident with the following 19 Sites of Special Scientific Interest (SSSI). These are: Abbots Moss, Aqualate Mere, Black Firs & Cranberry Bog, Brownheath Moss, Chapel Mere, Cole Mere, Cop Mere, Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses, Hanmer Mere, Hencott Pool, Linmer Moss, Llyn Bedydd, Morton Pool & Pasture, Oak Mere, Oakhanger Moss, Oss Mere, Rostherne Mere, Sweat Mere & Crose Mere and Vicarage Moss.</p> <p>Reasons for designation</p> <ul style="list-style-type: none"> Criterion 1a. A particularly good example of a natural or near natural wetland, characteristic of this biogeographical region, The site comprises the full range of habitats from open water to raised bog. Criterion 2a. Supports a number of rare plants associated with wetlands, including the nationally scarce cowbane <i>Cicuta virosa</i>, elongated sedge <i>Carex elongate</i> and bog rosemary <i>Andromeda polifolia</i>. Also present are the nationally scarce bryophytes <i>Dicranum undulatum</i>, <i>Dicranum affine</i> and <i>Sphagnum pulchrum</i>. Criterion 2a. Containing an assemblage of invertebrates, including several rare wetland species. There are 16 species of Red Data Book insect listed for the site including the following endangered species: the moth <i>Glyphipteryx lathamella</i>, the caddisfly <i>Hagenella clathrata</i> and the sawfly <i>Trichiosoma vitellinae</i>. <p>Cole Mere</p> <p>Cole Mere, Midland Meres and Mosses Ramsar Phase 2 is one of the largest of the Shropshire meres, with an almost complete fringe of woodland. There is a comparatively rich flora of aquatic macrophytes and the aquatic invertebrate fauna of Cole Mere is particularly diverse. It is included in the Ramsar Phase for its Open water, Wet pasture and Carr habitats with the plant species <i>Carex elongata</i></p>

Midland Meres and Mosses (Ramsar phase 1)

Phase 1 of the Ramsar designation covers 513.25ha and is entirely co-incident with the following 16 Sites of Special Scientific Interest (SSSI). These are Bagmere, Berrington Pool, Betley Mere, Bomere, Shomere & Betton Pools, Brown Moss, Chartley Moss, Clarepool Moss, Fenemere, Flaxmere, Hatchmere, Marton Pool (Chirbury), Quoisley Mere, Tatton Mere, The Mere (Mere), White Mere and Wynbunbury Moss SSSI's.

Reasons for designation

- **Criterion 1a.** A particularly good example of a natural or near natural wetland, characteristic of this biogeographical region, The site comprises the full range of habitats from open water to raised bog.
- **Criterion 2a.** Supports a number of rare species of plants associated with wetlands. The site contains the nationally scarce six-stamened waterwort *Elatine hexandra*, needle spike-rush *Eleocharis acicularis*, cowbane *Cicuta virosa*, marsh fern *Thelypteris palustris* and elongated sedge *Carex elongata*.
- **Criterion 2a.** Contains an assemblage of invertebrates, including the following rare wetland species. 3 species considered to be endangered in Britain, the caddis fly *Hagenella clathrata*, the fly *Limnophila fasciata* and the spider *Cararita limnaea*. Other wetland Red Data Book species are; the beetles *Lathrobium rufipenne* and *Donacia aquatica*, the flies *Prionocera pubescens* and *Gonomyia abbreviata* and the spider *Sitticus floricola*.

- **White Mere**

White Mere Midland Meres and Mosses Ramsar Phase 1 (31.97ha) is one of the richest of the North Shropshire meres for aquatic plants. It is included within the Ramsar Phase for its open water and carr habitats with the plant species *Carex elongata* and *Eleocharis acicularis*

Clarepool Moss

Part of the West Midlands Mosses Special Area of Conservation (SAC) and Midland Meres and Mosses Phase 1 Ramsar series of sites and notified at a national level as Clarepool Moss Site of Special Scientific Interest (SSSI).

Qualifying Features of West Midland Mosses SAC:

H3160. Natural dystrophic lakes and ponds; Acid peat-stained lakes and ponds

	<p>H7140. Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface</p> <p>Conservation Objectives of all designated sites:</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely.
Description of the project and potential effect pathways	<p>Wood Lane Quarry is an existing sand and gravel quarry, south of Ellesmere, Shropshire. The proposed extension would lie immediately to the north of the existing quarry, separated by Colemere Lane. Cole Mere lies to the north-east. Clarepool Moss lies to the north, as does Blakemere (not an EU Site), both separated by the Shropshire Union Canal (raised on an embankment) to the north-west. White Mere is separated from the proposed extension by the existing quarry to the west and Wood Lane. Vehicles from the existing quarry, and from the extension in future if permitted, pass within c. 20m of White Mere on Wood Lane and road gullies discharge into the mere via sediment traps.</p> <p>We have identified the following effect pathways:</p> <ul style="list-style-type: none"> • Possible effects on the hydrology and hydrogeology (alterations to surface and groundwater) of the European and Ramsar sites through excavation, • Damage to White Mere, and possibly Cole mere, through sediment being washed in from the highway, either through increased amounts, or similar or smaller amounts for a longer duration (up to c.10 years) • Damage to Cole Mere through additional sediment load in surface water from initial excavation and creation/movement of soil bunds. • Water quality issues (contaminants and nutrient enrichment) • Airborne dust • Slope stability, erosion • Invasive species • Effects of restoration and end use.
Is the project or plan directly connected with or necessary to the management of the site (provide	No

details)?	
Are there any other projects or plans that together with the project or plan being assessed could affect the site (provide details)?	<p>Yes 14/04047/OUT South of Canal Way, Ellesmere. Outline application for mixed development of a hotel, boating marina, leisure complex. Pub/restaurant, residential, holiday cabins and touring caravans with associated infrastructure to include access. Possible effect pathways identified with this application were:</p> <ul style="list-style-type: none"> • Recreational use of European Sites • Water quality in Cole Mere Ramsar and SSSI site <p>As Wood Lane Quarry, by its nature, will not encourage increased recreational pressure on European Sites, this pathway is not considered further. The proposed Marina site lies in the catchment of the River Perry, not the River Roden and so there are no in-combination effects relating to the Regional Ground Water (RGW). Potentially, in-combination effects are only possible for water quality, in terms of sedimentation and increased nutrients, through the Marina development's surface water connection to Cole Mere via the canal (overspill and sluice). However, the HRA for this project has concluded that the amount of sediment and additional nutrients entering Cole Mere via wash from a small number of additional boat movements passing the overspill structure is negligible. The conclusion is that there would be no likely significant in-combination effects.</p>

2.2 Description of project

Through planning application 14/04589/MAW, Tudor Griffiths Ltd proposes to extend existing mineral workings at Wood Lane Quarry into an adjoining area of land that is presently in intensive agricultural use. Wood Lane Quarry comprises a long standing sand and gravel extraction operation, some of which is restored to fishing lakes and a nature reserve. A commercial landfill has been developed on previously extracted land adjacent to the mineral operations. Planning permissions for mineral extraction at Wood Lane Quarry have existed since the 1930's.

The extension would lie to the north of the existing Quarry ('the application site', see Drawing 1) and is generally referred to as Zone 4. The material that is extracted from the site will be transported by dump truck across Colemere Lane via a new dedicated crossing point. It will then be exported from the existing Quarry via the current main access off the A528 Ellesmere to Shrewsbury Road. Initially the application aimed to extract sand and gravel in three phases, 1A, 1B and 1C. The application has now been reduced to cover Phase 1A only. A separate application may be made in future for the other two phases, once more detailed investigation of the hydrogeology below 90mOD has been made and sufficient information gathered to inform a separate Habitat Regulation Assessment.

The development will comprise of the following main elements:

- The extraction of sand and gravel to 90mOD;
- The creation of a crossing point over Colemere Lane for the transportation of mineral to the existing processing plant in the main quarry;
- Management and enhancement of existing landscaping and mitigation measures; and
- Restoration of the application site for agricultural land and nature conservation.

Further details and associated documents are published on the Shropshire Council public website, including the references listed in Appendix 1 of this HRA.

<https://pa.shropshire.gov.uk/online-applications/simpleSearchResults.do?action=firstPage&searchType=Application>

2.3 Consultations

Natural England and the Environment Agency were formally consulted on the original submissions with the application in 2014, and again in 2015 after considerable additional information was provided by the applicant (Ref. Nos. 16, 20 and 40). Their responses have been considered and used to inform the conclusions reached in this Habitat Regulation Assessment.

2.4 Previous Habitat Regulation Assessments relating to the Site

The application site is allocated for mineral extraction in Schedule MD5a of Shropshire's Site Allocations and Management of Development (SAMDev) Plan.

A HRA of the SAMDev Plan was carried out and policy MD5a minerals is covered in the Minerals Allocations HRA (see SC planning website). The application site (termed Wood Lane North Extension) could not be screened out and is subject to assessment of impacts on the integrity of two European Sites– White Mere and Cole Mere, component parts of the West Midlands Meres and Mosses Ramsar Sites). The Shropshire Council (SC) HRA considered all European sites with obvious potential effect pathways and any other EU sites within 10km as a precautionary approach. The following sites were scoped out as being unaffected by the proposed development:-

- Clarepool Moss, SSSI, SAC and West Midland Meres and Mosses Ramsar Site;
- Sweat Mere and Crose Mere West Midland Meres and Mosses Ramsar Site;
- Brownheath Moss West Midland Meres and Mosses Ramsar Site;
- Fenn's, Whixall, Bettisfield, Cadney & Wem Mosses SAC and West Midland Meres and Mosses Phase 2 Ramsar Site;
- Hanmer Mere West Midland Meres and Mosses Ramsar Site;
- Llyn Bedydd West Midland Meres and Mosses Ramsar Site; and
- River Dee and Bala Lake SAC.

The SC SAMDev Plan HRA records that both White Mere and Cole Mere Ramsar sites could be vulnerable to the following effects/issues:-

- invasive species;
- water quality;
- nutrient enrichment;
- sedimentation;
- erosion; and
- recreational disturbance.

In respect of potential impact pathways and the Zone 4 proposed development the following were recorded:-

White Mere Ramsar Site:-

- Airborne dust.
- Sedimentation from road gullies

Colemere Ramsar Site:-

- Hydrological impacts (alterations to surface and groundwater);
- Pollution; and
- Airborne dust.

Policies MD5 and 17 require detailed information and analysis of water movements and stringent mitigation management plans to avoid any adverse impacts on the relevant European Sites sites and SSSIs.

Since the production of the SAMDev Plan, new technical information has been submitted with the application and subsequently provided to answer queries from SC Planning, Natural England and a variety of consultees and members of the public. As a result of this new and detailed information, our understanding of the hydrological and hydrogeological processes involved has changed. Of particular note are:

- the direction of flow in the majority of ditches in White Moss, which flow north into Cole Mere, rather than south as stated in previous references,
- queries relating to the direction of flow of the groundwater in the region of the extension and Cole Mere
- the presence of a Valley Groundwater Body (VGWB) immediately to the north and partially within the site, supporting the White Moss habitats and a source of surface water flow to Cole Mere.
- Additional information obtained on surface water catchments for sites
- New borehole information for the VGWB.

2.5 Initial screening for likelihood of significant effects on European Sites.

As a precautionary step, in view of the new information above, the full list of EU sites within 10km has been re-screened for minerals allocation MD5a Wood Lane North Extension:

Table 2 – Initial screening for likelihood of significant Effects

European Designated Site	Distance from project site	Site Vulnerability	Potential Effect Pathways
Midland meres & Mosses Ramsar Phase 1 – White Mere	410m	Sites sensitive to invasive species, water quality issues, nutrient enrichment, sedimentation, erosion, & recreational disturbance	<p>No invasive species have been identified on Zone 4 and no issues with invasive species have been identified.</p> <p>Potential impacts from dust possible as White Mere lies 410m from the nearest point of the extension. The smallest particles could reach the Mere, causing sedimentation.</p> <p>There are no hydrological connections as White Mere lies on a perched water table (mere water level at c. 93-94mAOD compared to 82-84mAOD for the surface of the groundwater in the sands of the Extension site) and there are no surface water connections to the extension. In view of the above there should be no adverse hydrological effects on White Mere in terms of groundwater quantity, quality or seasonality. Similarly there should be no adverse effects on surface water quantity or seasonality.</p>

			<p>Quarry traffic will pass close to White Mere on the busy A528, and any sediment deposited on the road by quarry vehicles could wash into White Mere via the road gullies. However recent (2013) road drainage improvements have potentially decreased sediment entering the Mere compared with previous levels.</p> <p>Quarrying of the Extension (Zone 4) will extend the duration of quarry traffic movements by up to c.10 years. Impacts of any resulting sediment on White Mere and mitigation measures will need to be investigated.</p> <p>Further consideration of sedimentation and dust is needed. An appropriate assessment will be required.</p>
Midland Meres & Mosses Ramsar Phase 2 – Colemere	170m	Sites sensitive to invasive species, water quality issues, nutrient enrichment, sedimentation, erosion, & recreational disturbance	<p>No invasive species have been identified on Zone 4 and no issues with invasive species have been identified.</p> <p>A drainage ditch runs part way along the northern boundary of the proposed extension forming a surface water connection with Cole Mere via a channel which flows under the canal and then back under and into Cole Mere via the grounds of Mill Cottage. Groundwater may flow from the proposed extension towards Cole Mere. Pollution incidents within the extension could adversely affect water quality. Disturbance of the surface and groundwater catchment could adversely affect the water levels, sedimentation and nutrient loading. The Shropshire Union Canal and Baysil Wood lie immediately to the north of this potential mineral allocation and connect to the designated site at Cole Mere.</p> <p>Potential impacts from airborne particulate matter are possible as Colemere lies only 170m from the nearest point of the extension.</p> <p>Further consideration of hydrological information and dust is needed. An appropriate assessment will be required.</p>
Midland Meres & Mosses Ramsar Phase 1 – Clarepool Moss	1km	Sites sensitive to invasive species, water quality issues, nutrient enrichment, sedimentation, erosion, & recreational disturbance	<p>There should be no impact from dust from the North Extension as it is 1km from Clarepool Moss.</p> <p>There are no surface water connections from Wood Lane North Extension to Clarepool Moss. Groundwater appears to</p>

			<p>flow towards Colemere (situation is confused as new documentation says it could flow north or south, however, it seems likely that groundwater from the extension will flow towards the River Roden) and the quarry extension is beyond Cole Mere towards the river.. Phase 1A extraction will cease at 90mOD, at c.6 to 8m above the regional groundwater. In view of the above there should be no adverse hydrological or hydrogeological effects on Clarepool Moss.</p> <p>The north extension will not adversely affect recreational pressure on Clarepool Moss.</p> <p>There will be no likely effects from the project on Clarepool Moss Ramsar site and SSSI and no further assessment is required.</p>
West Midland Mosses SAC - Clarepool Moss	1km	Habitats sensitive to scrub encroachment and recreational disturbance.	<p>As above. The proposed extension would not affect scrub-encroachment on site. There will be no likely significant effects from the project on Clarepool Moss, West Midlands Mosses SAC and no further assessment is required.</p>
Midland Meres & Mosses Ramsar Phase 2 – Sweat Mere & Crose Mere	2.1km	Sites sensitive to invasive species, water quality issues, nutrient enrichment, sedimentation, erosion, & recreational disturbance	<p>Intervening habitat is a mosaic including large areas of farmed land. There should be no impact from dust from the North Extension as it is >1km from the Meres.</p> <p>Not in the same surface water catchment as the quarry extension (according to map of water catchments for meres and mosses supplied by Natural England). Water apparently drains from higher ground to south and drains from these sites eastwards. In view of the above there should be no adverse hydrological effects on Sweat Mere and Crose Mere.</p> <p>There will be no likely effects from the proposed quarry extension on the West Midland Mosses SAC and no further assessment is required.</p>
Midland Meres & Mosses Ramsar Phase 2 – Brownheath Moss	4.3km	Site sensitive to invasive species, water quality issues, nutrient enrichment, sedimentation, erosion, & recreational disturbance	<p>Intervening habitat is a mosaic including large areas of farmed land. Impacts not anticipated as Brownheath Moss is in a separate surface water catchment. Dust will not adversely affect the site as it is >1km away.</p> <p>There will be no likely effects from the project on Brownheath Moss Ramsar site and SSSI and no further assessment is required.</p>

Midland Meres & Mosses Ramsar Phase 2 – Fenn's, Whixall, Bettiesfield, Cadney & Wem Mosses	4.2km	Habitats present are sensitive to alterations in water level, especially lowering of water table. Some evidence of siltation having an adverse effect. Above critical load for ammonia, emitted by poultry farms, agriculture and industry	<p>Environmental Network formed by the Shropshire Union Canal and associated habitats links this potential mineral allocation to the designated site. However, the proposed quarry extension is not in the same catchment as the Mosses. The Shropshire Union Canal is clay lined and effectively isolated from the catchment, other than it intermittently discharges into Cole Mere and Fenn's and Whixall Mosses. In view of the above there should be no adverse hydrological effects on Fenn's, Whixall, Bettiesfield, Cadney & Wem Mosses.</p> <p>There should be no impact from dust from the North Extension as it is >1km from the Mosses. No other impacts anticipated at this distance.</p> <p>There will be no likely effects from the project on Fenn's, Whixall, Bettiesfield, Cadney & Wem Mosses Ramsar site and SSSI and no further assessment is required.</p>
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Midland Meres & Mosses Ramsar Phase 2 – Hanmer Mere	6km	Sites sensitive to invasive species, water quality issues, nutrient enrichment, sedimentation, erosion, & recreational disturbance	Intervening habitat is a mosaic including large areas of farmed land Impacts not anticipated– Hanmer Mere is not in the same catchment as the proposed extension. No further assessment required.
Midland Meres & Mosses Ramsar Phase 2 – Llyn Bedydd	7km	Sites sensitive to invasive species, water quality issues, nutrient enrichment, sedimentation, erosion, & recreational disturbance	Intervening habitat is a mosaic including large areas of farmed land Impacts not anticipated– Llyn Bedydd is not in the same catchment. No further assessment required.
River Dee and Bala Lake SAC	9.7km	Habitats and species sensitive to water quality, quantity and flow rate including siltation	No surface water connections. No adverse effects anticipated at this distance. No further assessment required.

2.6 Summary of Stage 1 screening

At the HRA Stage 1 screening Shropshire Council (SC) has taken a precautionary approach in screening all European Sites (and equivalent SSSIs) within 10km of the proposed extension. No effect pathways have been identified which could influence EU sites or SSSIs beyond 10km. The screening stage concludes that any impacts have been scoped out for the following European Sites and their nationally designated counterparts (SSSIs):-

- Clarepool Moss, SSSI, SAC and West Midland Meres and Mosses Ramsar Site;
- Sweat Mere and Crose Mere West Midland Meres and Mosses Ramsar Site;
- Brownheath Moss West Midland Meres and Mosses Ramsar Site;
- Fenn's, Whixall, Bettiesfield, Cadney & Wem Mosses West Midland Meres and Mosses Ramsar Site;
- Hanmer Mere West Midland Meres and Mosses Ramsar Site;

- Llyn Bedydd West Midland Meres and Mosses Ramsar Site; and
- River Dee and Bala Lake SAC.

Potential impacts on Cole Mere and White Mere have not been screened out, with likely significant effect pathways remaining. Shropshire Council has sought further information from the applicant in order to consider if the development will have significant effects on the SAC and Ramsar sites ('European Sites') or have an adverse effect on the integrity of these sites. Further information has also been sought from Natural England and the Environment Agency.

3.0 HRA Stage 2 – Detailed analysis of further information and Appropriate Assessment

3.1 Baseline description of Cole Mere and White Mere without the proposed quarry extension

3.1.1 Cole Mere

The water surface at Cole Mere is governed largely by the level of drop-boards at the outflow, the highest of these being at 84.05 mOD. In winter, accumulations of debris at the outflow may raise water levels to c. 84.30 mOD and in times of low rainfall water may cease to flow over the drop-boards. These fluctuations create a draw down zone around the Mere which is natural to Meres in the area and is important for a range of species, including aquatics and invertebrates.

The Atkins report (2015 Ref. No 35) states that Cole Mere receives water from both ground water and stream flow. The importance of groundwater varies seasonally, the Mere receiving groundwater in winter and recharging groundwater in summer. According to the 2001 ECUS report (Ref. No 33), on the basis of conductivity readings, 61 – 82% of the water in Cole Mere originates as groundwater. Hence any development affecting the Regional Ground Water (RGW) levels or water quality could have a negative impact on Cole Mere and the species it supports.

The Atkins Report (Ref. No 35) states that stream flows from the catchment are estimated to be the largest inflow to the Mere on an annual basis. However, some of the catchment flows may themselves be groundwater derived (e.g. Blake Mere catchment). The stream running through White Moss in the valley adjacent to the proposed development site flows northwards towards and under the canal where it joins a flow from Blake Mere and the Local Wildlife Site. The combined flow then turns eastward beside the base of the canal, before turning back under the canal through the grounds of Little Mill Cottage. In the grounds of the house another inflow joins it, rising up in one of the ponds, before the stream drains into Cole Mere itself. Other, normally dry channels into the Mere have been formed by water flows at times of high water levels. However, a major source of water is the canal itself, as there is both an overspill and a sluice which direct water into the Mere on a sporadic basis. As part of the information gathered for the Ellesmere Marina application (14/04047/OUT), Howard Griffiths of the Canal and Rivers Trust gave the consultants an upper bound estimate of the spillway overflow during rainfall events of 'perhaps' 3,000,000 gallons of water flowing into Cole Mere per event. He estimated that this happens 6 to 10 times per year. An overflow has been present in this location since 1913. The sluice is located near Yell Bridge and is operated manually in order to drain down the canal; and this is estimated to occur once in three years by The Canal and Rivers Trust. Comprehensive water flow studies have not been undertaken and so the exact proportions of the stream flows making up the total input to Cole Mere are unknown. It is possible that a reduction in stream flow

through White Moss, if this were to be caused by the proposed development, could have a negative impact on water levels in Cole Mere, at certain times of the year.

According to the 2001 ECUS report (Ref. No. 34) Cole Mere had poor water quality with a high phosphorus loading. This report and the Environment Agency's 'Waterbody Review', (2012 Ref. No 41) conclude the Mere is eutrophic. The Natural England condition assessment carried out in 2014 assessed the waterbody condition as 'unfavourable no change' with the comment that "Site fails on lack of characteristic species and water chemistry. Population of *Nuphar pumila* still present". Water quality data is available for the Mere and adjacent canal for 1991 -1992, 1997, 2004 – 2008 and 2013 - 2014.

Natural England have supplied their own recent water quality results for three data points around Cole Mere, but advise that results for a minimum of one year are required to cover seasonal changes adequately. This data however, indicates that the inflow via Little Mill Cottage garden, which includes the White Moss stream, is already richer in nutrients, particularly Total Phosphorus, than the Mere or the canal. Any increase in nutrients within the White Moss stream would be likely to have an adverse effect on Cole Mere as Phosphorus accumulates within the water body and the target level for Phosphorus for the Mere to reach 'favourable' status (0.015mg/l Total Phosphorus) is already exceeded. As well as nutrient loading of incoming water, the number of water fowl and dog walking around the Mere will also increase nutrient inputs.

Sediment also accumulates in the Mere, with the canal water being more turbid than either the Mere or the inflow stream through Little Mill garden (based on less than a year's data). Significant levels of additional sediment entering Cole Mere could cause adverse impacts.

3.1.2 White Mere

There are no hydrological connections as White Mere lies on a perched water table (mere water level at c. 93-94mAOD compared to 82-84mAOD for the surface of the groundwater in the sands of the Extension site). White Mere lies in the groundwater catchment which flow towards the River Perry rather than towards the River Roden as is the case for Zone 4. There are no surface water connections to the Zone 4 quarry extension. The busy A528 passes within 20m of the Mere and siltation from erosion of the road verges has been recognised as a threat to the Favourable Conservation Targets for White Mere for some years. Natural England financed a scoping report and the installation of silt interceptors on some gullies leading to White Mere in 2013.

3.1.3 Clarepool Moss SAC (and Blake Mere, not a EU site)

Gradients within the regional groundwater in the general area of the development site and Cole Mere appear to be slight and may alter with season. However, both Blake Mere and Clarepool Moss appear to be 'up gradient' of the proposed quarry extension and Cole Mere, the general flow being southwards towards the River Roden. **3.2 Analysis of further information, predicted impacts, counteracting measures and HRA conclusions for each identified effect pathway.**

In the following table, each effect pathway is considered in turn and the impacts of the development considered first without and then with counteracting (mitigation) measures. The overall findings of the analysis are summarised in **Table 4** below.

Table 3 Evidence and discussion for possible effect pathways on Cole Mere and White Mere Ramsar Sites

Abbreviations:	Feature
RGW	Regional Groundwater

VGW	Valley groundwater (within White Moss)
VGWB	Valley Groundwater Body(White Moss)
WT	water table
NE	Natural England
HIA	Hydrological Impact Assessment

Potential effect pathway	Phase 1a – Likely Significant Effects, counteracting measures and conclusions
Effect of excavation (Phase 1a) in Zone 4 on RGW for Cole Mere : a) hydrology/hydrogeology	<p>Predicted impacts</p> <p>The void base of Phase 1a (90mOD) would remain dry as it lies above the RGW (82-84mOD). Water falling into the void would recharge RGW as before (or some surface water previously going to the VGW would now go to RGW). Hydraulic gradients for RGW would be largely unaffected in Phase 1a. EU sites therefore would be unaffected by this pathway.</p> <p>The Environment Agency states (Consultee response by Mark Davies, EA dated 12.12.14, Ref 20) '<i>The quantitative HIA and the addendum TerraConsult report (2014) are a comprehensive and very detailed assessment of the groundwater environment within and around the Zone 4 proposed extension area. We acknowledge the conclusions of the reports which confirm that the proposed extension will be operated in much the same way as the present operation area where there has been no reported adverse impacts on the groundwater environment as a result of previous quarry activities.</i>' This is based on the understanding that Phase 1a lies entirely above the RGW.</p> <p>Counteracting Measures:</p> <ul style="list-style-type: none"> Quarrying will cease at 6 to 8m (90mOD) above the RGW with no loss of water infiltrating to RGW from the site. No impacts on RGW expected. During the extraction of mineral in Phase 1a, groundwater levels will in any case be monitored through the early warning Monitoring Scheme required by Conditions 6 to 8 (section 3.3.1 below) as a precautionary measure <p>Conclusions taking into account counteracting measures</p> <p>In view of the above, there should be no adverse effect on Cole Mere.</p>
Effect of Phase 1a excavation in Zone 4 on RGW for Cole Mere : b) water quality	<p>Predicted impacts</p> <p>Water quality changes may be through pollution, such as:</p> <ul style="list-style-type: none"> spillages of fuel or other chemicals, during excavation or restoration seeping into the RGW which could then reach Cole Mere, addition of fines (clay) to the RGW. <p>The quarry company already have established measures for storage of chemicals and fuel (c. 1km from Cole Mere Ramsar Site) and measures for containment of any spillages and these measures will continue for the duration of extraction and aftercare of the proposed extension.</p>

	<p>In the local RGW, the flow velocities are so low that any suspended fines rapidly settle and do not migrate to the groundwater. Within the existing quarry complex, a system of large de-silting lagoons has been operating for decades without any adverse effect on the quality of groundwater in adjacent ponds. The excavation will cease 6 to 8m above the RGW in Phase 1a.</p> <p>Counteracting measures:</p> <ul style="list-style-type: none"> • Fuel and oil will not be stored in Zone 4. Plant maintenance and fuelling areas are located in the main quarry area where there is concrete hard standing and permanent fuel stores within secondary containment structures (c. 1km from Cole Mere Ramsar site). See Condition 25 in section 3.3.1 below). • Plant is garaged off the extension site. • Third party contractors are required to provide a fuel storage and management plan and risk assessment. • A condition will be imposed on the decision notice requiring an 'accident spill response plan' to be submitted to the LPA and once approved to be brought to the attention of all staff during operations. • Condition 25 requires no washing of mineral within Zone 4. This operation is to take place at the existing facilities within the existing quarry complex. • Condition 9 requires submission of a detailed scheme designed to minimise the possibility of silty water from entering surface and ground waters, prior to mineral extraction commencing. <p>Conclusions taking into account counteracting measures In view of the above, there should be no adverse effect on Cole Mere.</p>
<p>Effect of Phase 1a excavation in Zone 4 on the White Moss Valley Groundwater body. a) via physical damage to the interface between the void and the VGWB.</p>	<p>Predicted impacts If the VGWB dries out due to the quarry operations in Zone 4, the resulting degradation of the peat bodies in the valley will be likely to increase nutrient flow into Cole Mere via the valley stream. Nutrient levels in Cole Mere are currently higher than the Favourable Conservation Status target levels (see 3.1.1 above).</p> <p>There is an interface between the VGWB with its perched water table and the remainder of the deposits in Zone 4, which discharge to the RGW. However, we don't know precisely where this is. The vertical interface between the VGWB and the other deposits in the extension must not be breached.</p> <p>In their consultation response of 9th December 2015 (Ref no 40) the EA state that they agree:</p> <ul style="list-style-type: none"> • that it is logical that the perched VGWB appears to be separate from the deeper water table at 82 – 84m AOD based on the submitted hydro-geological line of evidence and the commentary discussion presented.

	<ul style="list-style-type: none"> • with the approach suggested within the Conclusion (Section 7, Addendum Report on the hydrogeology at Wood lane Quarries, TerraConsult, Ref No 5) detailing a two stage excavation proposal. • the first stage will limit depth of excavations to 90m AOD (Phase 1a) within the orange lined area specified as the reduced extraction limit (Zone 4) on map ‘Terra Consult figure 1026/1/003’. In parallel to this, further hydro-geological investigations will be undertaken to better define the extent and characteristics of the low permeability natural barrier which exists. • the proposed additional investigations should be used to further identify any risks through the enhanced monitoring data collection. This should help confirm the conceptual model already defined within Brassington’s 2015 addendum report(Ref No. 5). • that in hydro-geological terms, the first stage of excavations carry a low risk to the natural barrier system between the two water systems which appears from the evidence provided. <p>The EA also state that <i>‘it is usual practice to set trigger levels on groundwater monitoring boreholes as an early indicator that an impact could be arising which would invoke further measures to address the potential risks’</i>.</p> <p>Counteracting measures:</p> <ul style="list-style-type: none"> • Excavation boundary has been reduced by 20 to 80m to the north and east to avoid the interface between the Valley Groundwater Body and the extraction area, which now roughly follows the 100m contour (98mOD at its lowest point). • Excavation will stop at 90mOD, which is c.6-8m above the RGW and c.1m above the VGW. • Early warning monitoring under the Monitoring Scheme required by Conditions 6 – 8 will trigger remedial action or cessation of excavation as appropriate to prevent adverse impacts on Cole Mere as a result of damage to White Moss. A scoping document on the monitoring and potential mitigation measures to be submitted for these conditions are described in Ref No 43 and 44. <p>Conclusions taking into account counteracting measures Phase 1a is considered to offer a low risk of hydrological damage by the applicant and his consultants, Natural England and the Environment Agency. Residual uncertainty is addressed by the Monitoring Scheme, which will be finalised prior to extraction commencing as required by Conditions 6 to 8. The scheme will define early warning triggers to initiate appropriate and timely mitigation measures, which can include cessation of working where necessary. Due to the low risk of the extraction operations and the precautionary counteracting measures there is no likely significant effect on Cole Mere via this pathway.</p>
Effect of Phase 1a	Predicted impacts

excavation in Zone 4 on RGW in relation to White Moss VGW.

b) via clay lenses above and below 90mOD cascading water into the VGW.

Concerns have been raised that some of the discontinuous clay lenses within Phase 1a of Zone 4 could support water tables which could deflect water into the VGWB, rather than simply draining down to the RGW. Removal of such clay lenses in Phase 1a could initiate drying of the peat in White Moss, leading to a reduced surface water flow and increased nutrient levels entering Cole Mere. Within White Moss (VGWB) 6 of the 68 boreholes in the peat were sitting on impervious layers, the rest were on sand and gravel. Hence the peat would be very sensitive to any hydrological changes in the VGW.

In Figures 4.2 to 4.5 (Brassington 2015, Ref.5, Addendum report on the hydrogeology at Wood lane Quarries), the 6 boreholes on the high ground above the VGWB, show alternating bands of permeable sand/gravel and relatively impermeable clay. However, the depth of clay bands and their thickness varies considerably between boreholes across the site, indicating that there is no continuous clay layer. Boreholes 801, 804, 805 and 806 lie immediately outside the excavation boundary, whilst boreholes 802 and 803 lie in the main body of the future void. Boreholes 804, 805 and 806 lie near the edge of the VGWB, at around 100-105m OD. Borehole BH801, in the highest south-western part of the site shows two clay layers, the lowest of which extends down to c. 96mOD. Boreholes BH802, 803 and 806, between BH801 and the VGWB, show no clay layers until c.92-85mOD. BH804 and BH805 lie at the eastern end of the proposed excavation area in the region of the boundary with the VGWB. They both show significant clay layers above 90mOD. There are no boreholes on the high ground edging the VGWB for the whole length of the excavation area between BH806 and BH805. Hence there does not appear to be a large continuous clay layer within Phase 1a which could channel water into the VGWB rather than the lower RGW. However, it has been suggested that smaller lenses of clay could form perched water tables that could discharge into the VGWB or marginal deposits to maintain hydraulic gradients in the sands surrounding the peat in the valley.

In particular it has been suggested (Dr Daniels, section 2.1.1.1. Ref. 27) that the 'spring' mentioned at the base of the eastern slope of Zone 4, feeding into the VGW may be fed by surface water draining into the 'hollow' on the eastern side of the higher ground, and hitting clay lenses shown in Fig 3.9 (Eco-hydrological assessment, Ref. 6) found in borehole BH804, which shows clay layers starting at c.94 and 92mOD. BH804 lies c. 70m to the south-east of the easternmost extraction boundary and c.148m from the centre of the hollow. BH803 lies only 73m west from the centre of the hollow, within the extraction area and shows no clay layers until c.84mOD.

JBA maintain that the 'spring' is not a seepage from a perched water-table within Phase 1a deposits above the valley, but the ditch collects water draining from the centre of the wetland in the VGWB itself. They say that the hollow is likely to recharge the deeper regional groundwater.

The main evidence for a lack of connection between the perched water tables within the glacial sand and gravels of Phase 1a and the valley groundwater body is as follows:

- Across all the site (except the NW) there is no evidence in the plant communities for groundwater input (JBA Eco-hydrological Assessment, Appendix B, Ref No 6).
- In the NW of the site the vegetation suggests that there **may** be groundwater influence. This has been explained as in Figure 3-3 (JBA 2015 Ref. 6) as potentially near surface flow through head deposits within the VGWB.
- Water-levels in boreholes around the edge of the valley are the same as for the peat body.
- There are no vegetation indicators or other visual signs of seepage faces on valley walls above the peat (Ref. No. 6 Appendix B).

The balance of evidence generally suggests that perched water tables above 90mOD are not discharging into the VGWB, but there is still a low level of residual uncertainty.

Counteracting measures

- Excavation boundary has been reduced by 20 to 80m to the north and east to avoid the interface between the Valley Groundwater Body and the extraction area, which now roughly follows the 100m contour (98mOD at its lowest point).
- Excavation will stop at 90mOD, which is c.6-8m above the RGW and c.1m above the VGW.
- Early warning monitoring under the Monitoring Scheme required by Conditions 6 – 8 will trigger remedial action or cessation of excavation as appropriate to prevent adverse impacts on Cole Mere as a result of damage to White Moss. The scope of the monitoring and potential mitigation measures to be submitted for these conditions is described in Ref Nos 43 and 44. Both hydrological monitoring of water levels in the VGWB and regular visual inspections of the deposits as they are exposed, particularly towards the northern and eastern Zone 4 boundaries will form part of the scheme.

Conclusions taking into account counteracting measures

The balance of evidence generally suggests that any excavation outside of the VGWB and above 90mOD should not impact on the valley's water supply, through removal of clay lenses with perched water-tables cascading water into the VGWB. However, a low level of residual uncertainty remains.

As a precautionary measure, additional information would be gathered during the excavation of Phase 1a to improve the eco-hydrological conceptual model, and an early warning monitoring system for the VGWB would be in place to remove any residual risk of adversely affecting the VGW and hence the surface water

	supply for Cole Mere via White Moss. Hence there will be no likely significant effect on Cole Mere via this pathway.
Loss of surface water into the VGWB from excavation in Zone 4.	<p>Predicted impacts</p> <p>Some surface water will be lost from valley slopes feeding the VGW of White Moss as a result of the extraction, the water being diverted to the RGW via the new void. Cole Mere could be affected by a reduced volume of surface water input (particularly in summer) via the valley stream, or if drying and degradation of peat deposits occurs, increasing release of nutrients.</p> <p>JBA 2015, (Ref. 6) states that the lateral extent of the proposed excavation has been chosen specifically to prevent significant changes in surface run-off contributions to White Moss. Figure 4-1 (Ref. 6) shows a slope analysis of the LIDAR data for the area. The excavation extent has been limited to the edge of the flat plateau area, and the steeper slopes surrounding White Moss (classified conservatively as slopes greater than 4 degrees) have been excluded.</p> <p>Map 4 and Map 5 show the current and post excavation (surface water) catchments of White Moss and Cole Mere and Table 4-2 shows the percentage changes. The excavation would result in a 12% (approx.) reduction in the White Moss catchment and a 2% change in the Cole Mere catchment. JBA state that these area reductions are unlikely to result in a significant change in run-off supply to White Moss and Cole Mere however because of:</p> <ul style="list-style-type: none"> • The very low Standard Percentage Runoff (SPR) of the catchment which is 15%;and; • The SPR of the (proposed) excavation area is likely to be much lower than the (overall) catchment SPR because it is flatter and drier than much of the catchment (both factors which will increase infiltration). <p>JBA (Ref. 28) state The Baseflow Index for the Cole Mere catchment (a measure of the relative contribution of groundwater in "supplying" water to the mere) is 0.89% which means that within a year 89% of the water inputs to Cole Mere are from baseflow (groundwater) rather than surface water input. This indicates that Cole Mere is predominantly recharged through groundwater flow. The ECUS report (Ref No 33) gives a figure of 61-82% on the basis of conductivity readings, of the water in Cole Mere originating as groundwater.</p> <p>Based on 89%, a 3% reduction in the surface water catchment of Cole Mere would using the above Baseflow Index equate to a 0.33% reduction of flow into the Mere (i.e. 3% of 11%). JBA state that this would be a negligible amount in their opinion in terms of impact upon the water level in Cole Mere. These calculations do not appear to take into account the additional surface water periodically entering Cole Mere via the canal overspill at times of high rainfall events (see section 3.1.1) and the canal sluice, effectively from the catchment of the Shropshire Union Canal.</p> <p>Dr Daniels (Ref No 36, point no. 7) states that the creation of such</p>

	<p>a large area of seepage vegetation in White Moss to the NW from such a small area of slope (as indicated by JBA) seems highly unlikely – it could instead suggest additional flow of infiltrated water from the much larger ‘flat’ northern half of the Phase 1a area, also passing through the head deposits. Dr Daniels (Ref No. 27) argues that rather than a 12% reduction in the catchment for the VGWB, this could actually be nearer 20 -25%.</p> <p>Counteracting measures:</p> <ul style="list-style-type: none"> • The extraction boundary has been reduced to the flatter areas of the hilltop, providing a wider and taller buffer to the White Moss Valley groundwater and avoiding the steeper slopes with greater likelihood of supplying surface water runoff. • Early warning monitoring under the Monitoring Scheme required by Conditions 6 – 8 will trigger remedial action or cessation of excavation as appropriate to prevent adverse impacts on Cole Mere as a result of damage to White Moss. The scope of the monitoring and potential mitigation measures to be submitted for these conditions is described in Ref Nos 43 and 44. Both hydrological monitoring of water levels in the VGWB and regular visual inspections of the deposits as they are exposed, particularly towards the northern and eastern Zone 4 boundaries will form part of the scheme. <p>Conclusions taking into account counteracting measures Whilst the amount of surface water entering the VGWB and then Cole Mere is likely to be reduced by the excavation, the reduction is likely to be very low, particularly due to the permeability of the sands and gravels. No drainage channels are visible on the surface of the slopes of the valley. The early warning monitoring proposed under Condition 6 – 8 within the VGWB will be designed to identify any fall in later levels in the VGWB likely to cause damage and mitigation measures will be implemented. Together the counteracting measures will ensure no likely significant effect on Cole Mere due to this pathway.</p>
<p>Reduction in quality of surface water flowing into the VGWB from Phase 1a excavation in Zone 4.</p>	<p>Predicted impacts Surface water into the VGWB may carry a heavy sediment load (and hence nutrients) during initial soil stripping and early excavation. Thereafter any surface water will drain into the void and soak down to the ground water. A second potential period for sediment mobilisation will be when soil bunds are moved for restoration purposes. Although generally there is a flatter vegetated area between the valley slopes and the ditch system in White Moss, it is possible that sediment or nutrients could be carried to Cole Mere.</p> <p>Section 4.2.8 (Ref No 8) states that during the Zone 4 soil stripping and perimeter bund formation activities there is a potential during periods of high rainfall for surface waters with a high suspended solid content to flow down into the valley area.</p>

	<p>Counteracting measures:</p> <ul style="list-style-type: none"> The first operation when preparing the site for excavation will be to dig a swale as shown on drawing WL950-D7 (Revision B) immediately within the boundary of the excavation area (see Condition 9). The top- and sub-soil bunds will then be created on the void side of the swale so that run-off will be slowed down and sediment will settle out rather than flowing into White Moss. The visual inspections under Condition 6 and any remedial works will ensure the continued functioning of the swale during bund construction and restoration works. <p>Conclusions taking into account counteracting measures In view of the existing filtering effects of the vegetation between the valley slopes and the ditch system, and the counteracting measures proposed there will be no likely significant effect on Cole Mere through increased sediment and nutrient loads in surface water as a result of initial site preparation, commencement of excavation or restoration. .</p>
Effect of sediment from the Colemere Lane crossing point entering the VGWB.	<p>Predicted impacts Mineral excavated from the quarry extension would be transferred across Colemere Lane to the existing quarry to the west via dump truck with up to 60 dump truck movements per day. There is potential for sediment to be washed from the road into the VGWB at times of high rainfall. However, dips in the lane downhill from the crossover point would prevent silty water travelling very far along the road. There are no highway gullies and water on the highway tends to infiltrate into the sandy-soiled verges and hedge banks either side. Where ponding does appear to occur, there are no obvious channels taking water downhill through the adjacent fields towards the valley ditch system. Generally it appears that any silt is likely to settle out on the road edge or in the intervening vegetation.</p> <p>Counteracting measures</p> <ul style="list-style-type: none"> Tudor Griffiths Ltd employs a road sweeper to clean the public highway outside the site and the sweeper will be used to keep the crossover on Colemere Lane clear of accumulating mud. Regular visual inspections of the lane after heavy rain will be undertaken and if sediment laden water is likely to overflow towards the valley, then settling pools will be constructed on the extension or if necessary within the main quarry as a part of the scheme submitted under Condition 9. <p>Conclusions taking into account counteracting measures No effects on Cole Mere from this pathway are anticipated.</p>

<p>Collapse of void walls leading to loss of buffer between the void and White Moss.</p>	<p>Predicted impacts The precise location of the interface between the VGWB is unknown. If the quarry wall becomes unstable on the northern or eastern boundaries with loss of land outside the extraction boundary, there is potential for loss of surface water runoff to the VGWB or a breach of the VGWB interface.</p> <p>Counteracting measures:</p> <ul style="list-style-type: none"> • Standard excavation batters, used elsewhere in the quarry without instability, are to be used in the extension. • Phase 1a will not proceed below 90m, which is 1m above the surface of the VGW and so loss of water should be avoided. • Condition 37 requires monitoring of slope stability and timely remedial action if any significant stability problems are identified. <p>Conclusions taking into account counteracting measures In view of the above counteracting measures, no effects on Cole Mere from this pathway are anticipated.</p>
<p>Airborne dust derived by working Zone 4, causing changes in vegetation on Cole Mere due to chemical or smothering effects.</p>	<p>Predicted impacts Potential impacts of airborne dust have been considered in ‘Dust Assessment of a Proposed Extension to Wood Lane Quarry, Ellesmere, Shropshire’, Vibrock 30th April 2014 (Ref No 38).</p> <p>Plant and vehicle movements have the potential to generate dust. The likelihood of problems caused by dust will be largely influenced by the effectiveness of on-site environmental controls. Winds appear to predominate from the SSW quadrant, generally blowing from the extension towards Cole Mere, c. 170m away at its nearest point. However, the site is separated from Cole Mere by a ridge of higher ground and woodland, which would provide a barrier and buffer aiding dust deposition. Dust is only likely to be mobile on days with less than 0.2mm of rainfall. The report considers dust in relation to human receptors rather than ecological ones. Little Mill at 175m from the extension, lies on the western end of Cole Mere and is likely to have 25 dry windy days annually when the wind comes from the direction of the extension.</p> <p>Section 3 and Appendix 3 of the above report (Ref. No. 38) detail dust emission suppression measures. These follow national best practice measures which have proved effective at other sites. Dust is carefully monitored on a daily basis to ensure the health and safety of staff and nearest neighbours. There have been no complaints regarding dust from the existing quarry.</p> <p>Counteracting measures.</p> <ul style="list-style-type: none"> • A water bowser circulates the site keeping all surfaces and stock damp in times of dry weather (see Condition 15).. Within the quarry site the haul roads are generally made of stone material so as to give a stable running surface for the dumpers, this also helps to reduce dust arising from traffic movements. • No waggon leaves the site without first being sheeted to

	<p>stop any materials blowing off onto the highway.</p> <ul style="list-style-type: none"> • Condition 16 requires a detailed dust management plan to be submitted to the LPA for approval before implementation and Condition 17 requires remedial action if problems are identified. <p>Conclusions taking into account counteracting measures The combination of distance, topography, dust management measures and appropriate planning conditions will minimise dust generation to a level at which there will be no likely significant effects on Cole Mere through airborne particles.</p>
<p>Restoration and aftercare - effects on RGW quality.</p>	<p>Predicted impacts During restoration, water quality changes could occur through spillages (e.g. fuel from quarry or farming machinery) or through application of fertilizers and pesticides which could then drain into the groundwater. Land-use before quarrying is intensive agriculture. After restoration the land-use will be a mix of agriculture and wildlife habitat, resulting in an overall reduction in application of fertilizer and pesticides.</p> <p>Counteracting measures:</p> <ul style="list-style-type: none"> • Fuel and oil will not be stored in Zone 4. Plant maintenance and fuelling areas are located in the main quarry area where there is concrete hard standing and permanent fuel stores within secondary containment structures (c. 1km from Cole Mere Ramsar site). See Condition 25. • Plant is garaged off the extension site. • Land would be restored to a reduced area for agriculture, reducing fertilizer and pesticide application, the remainder being used for nature conservation. <p>Conclusions taking into account counteracting measures No damaging effects from restoration and aftercare are expected.</p>
<p>Effect of sediment being washed into White Mere from the road adjacent.</p>	<p>Predicted impacts Natural England states (Ref. No. 16) that dust brought by the lorry traffic exiting from the existing quarry is already contributing to siltation problems at White Mere. The lorry traffic from the quarry site is a major contributor to the dust lining the verge, hedges, walls, front gardens and the surface of the A528 itself as it is visible to the north of the exit but less so the south (the north being the direction of the lorry traffic). Existing measures by the company to control dust are insufficient and Natural England and Shropshire Council have already invested in sediment chambers and constructed a silt trap to protect White Mere from the silt in the road runoff from this section of the road. Any increase in duration and intensity of delivery of dust to White Mere will result in increased nutrient loading of White Mere and water quality problems, whether atmospheric or carried in road runoff. NE go on to state that these pathways indicate a Likely Significant Effect under the habitat regulations and you may wish to consider this</p>

information as part of your authorities Habitat Regulations Assessment (HRA).

White Mere lies 450m from Zone 4 but the mineral is transported to the existing quarry site and it is then distributed by lorries leaving the site by the main entrance on the A528. Lorries turning north pass within 10-20m of White Mere. If the extension goes ahead for Phase 1a of extraction, the number of lorry movements is predicted to be the same as for the previous quarry operations. However, the lorry movements will carry on for c. 5 years longer. A number of mitigation measures have already been put in place, including:

- use of a wheel wash,
- widening the entrance and installing kerbs to prevent silt generation from lorries churning up the verge when entering and leaving the site,
- covering laden lorries before leaving the site,
- Tudor Griffiths Ltd employs a road sweeper to clean internal haul roads, yards and the public highway outside the site on Wednesdays and Saturdays each week.

The road is relatively narrow and has soft verges. Any large vehicles passing on the road tend to mount the verge to pass safely, causing soil to be deposited on the road. Clearly vehicles from the quarry form only part of the traffic on this busy A road, but large quarry vehicles will be contributing to the siltation problem in White Mere.

Natural England have reported that the silt traps installed in 2013 are full and consequently over-flowing into White Mere, showing that siltation is occurring rapidly in this location. The council Highways section currently have the sediment chambers on a 5 year emptying regime and they were unaware that they were already full.

In order to mitigate for the additional years of quarry vehicle movements a suite of measures have been put forward, in addition to continuing existing measures.

Counteracting measures

- The quarry currently operates a wheel wash facility, which every lorry leaving the site has to use to ensure material is not carried on to the public highway. The applicant has stated that the wheel wash facility was dated and has replaced it with a new, more efficient one ('Hippo wash' see specification in Ref. No 42) for the life of the operations in the extension.
- The applicant has agreed to sign a Unilateral Undertaking to install two new silt interceptors or similar measures to reduce siltation in White Mere or to provide a sum to finance the council's Highways department to install such measures.
- The council's Area Commissioner with responsibility for

	<p>Highways has agreed to sign a Memorandum of Understanding to carry out inspections of the existing interceptors and any new ones installed under the Unilateral Undertaking every 6 months. Also, to have the silt interceptors emptied every year, unless the 6 month inspections indicate more frequent emptying is required. This will be carried out for at least the lifetime of the development.</p> <p>Conclusions taking into account counteracting measures Providing the current counteracting measures are continued and the additional ones above secured, it is concluded that there will be no likely significant effect on White Mere Ramsar Site and SSSI through siltation from the road as a result of the proposed development. During active quarrying on the extension, the above counteracting measures will be operating for vehicles not associated with quarrying as well as for quarry vehicles. Providing any additional silt mitigation measures continue to be maintained after mineral extraction has ceased in Zone 4 a significant enhancement will have been provided by the development.</p>
<p>Airborne dust – changes in vegetation due to chemical or smothering effects on White Mere.</p>	<p>Potential impacts of airborne dust have been considered in ‘Dust Assessment of a Proposed Extension to Wood Lane Quarry, Ellesmere, Shropshire’, Vibrock 30th April 2014 (Ref No 38).</p> <p>Plant and vehicle movements have the potential to generate dust. The likelihood of problems caused by dust will be largely influenced by the effectiveness of on-site environmental controls. Winds appear to predominate from the SSW quadrant, generally blowing from the south and White Mere towards the extension. Dust is only likely to be mobile on days with less than 0.2mm of rainfall.</p> <p>The report considers dust in relation to human receptors rather than ecological ones. Whitemere, a property lying at 370m from the nearest excavation works and close to the eastern border of White Mere itself (c. 410m) is predicted to have only 5 dry windy days per year, when the winds pass over the proposed extension first.</p> <p>Section 3 and Appendix 3 of the above report (Ref. No. 38) detail dust emission suppression measures. These follow national best practice measures which have proved effective at other sites. Dust is carefully monitored on a daily basis to ensure the health and safety of staff and nearest neighbours. There have been no complaints regarding dust.</p> <p>Counteracting measures.</p> <ul style="list-style-type: none"> • A water bowser circulates the site keeping all surfaces and stock damp in times of dry weather (see Condition 15).. Within the quarry site the haul roads are generally made of stone material so as to give a stable running surface for the dumpers, this also helps to reduce dust arising from traffic movements.

	<ul style="list-style-type: none">• No waggon leaves the site without first being sheeted to stop any materials blowing off onto the highway.• Condition 16 requires a detailed dust management plan to be submitted to the LPA for approval before implementation and Condition 17 requires remedial action if problems are identified. <p>Conclusions taking into account counteracting measures The combination of distance, topography, prevailing wind direction, dust management measures and appropriate planning conditions will minimise dust generation to a level at which there will be no likely significant effects on White Mere through airborne particles.</p>

3.3 Securing counteracting measures

To secure the counteracting (mitigation) measures the following item is proposed for inclusion in a Section 106 agreement (Unilateral Undertaking)

- Installation or provision of payment for the installation of two silt interceptors or similar measures to reduce silt from the highway entering White Mere.

The following items are proposed for inclusion in a Memorandum of Understanding between the Operations Manager for Planning Services and the Area Commissioner with responsibility for highways:

- Installation of 2 silt interceptors or alternative silt reduction measures as financed by the applicant under the Unilateral Undertaking described above, unless installed by the applicant,
- Make arrangements for the six monthly inspection of the silt interceptors or other measures, and their annual emptying unless more frequent cleaning is shown to be necessary by the 6monthly inspections.
- Maintenance and cleaning of the silt interceptors or other measures will be continued for at least the lifetime of the development.

In addition the following conditions must be included on the decision notice:

3.3.1 Conditions (numbering and titles relate to those of the proposed Decision Notice)

HYDROLOGICAL MONITORING:

5. The boreholes shown on Drawing 1026/1/004 attached to this permission shall be retained, maintained and protected throughout the duration of the mineral extraction, restoration operations and aftercare hereby approved.

Reason: To ensure that an appropriate level of hydrological monitoring data can be gathered for the duration of the quarrying and restoration operations hereby approved, having regard to the proximity of the Colemere RAMSAR site and SSSI and important habitats within White Moss.

6. Notwithstanding Condition 7 below, no mineral extraction shall commence until a scheme for hydrological monitoring and visual inspection of clay layers within the quarry void has been submitted to and approved in writing by the Mineral Planning Authority. All mineral working, associated restoration works and aftercare within Zone 4 shall take place in accordance with the approved scheme which shall incorporate the following measures:
 - i. Provision for monitoring of groundwater and surface water at an appropriate interval;
 - ii. Proposals for additional boreholes and piezometers and the timescale for installation.
 - iii. Provision for precautionary visual inspection of the extraction void to identify any discharges of perched water which may discharge to the Valley

groundwater Body (White moss) or discharge directly to the regional groundwater.

- iv. Provision for precautionary visual inspection to identify any slope stability issues with the potential to affect water flows and quality.
- v. Potential mitigation measures available should hydrological monitoring reveal a drop in water levels in the Valley Groundwater Body (White Moss) or visual inspection reveals damage to perched water tables discharging into the Valley Groundwater body or a breach of the valley interface due to the development.
- vi. Procedures and reporting timescales in the event that exceedance of any of the trigger levels under Condition 7 occur.

Reason: To ensure any fall in water levels in the Valley Groundwater Body (White Moss) due to the development are recognised quickly and mitigated for, preventing any adverse impacts on Cole Mere SSSI and Ramsar Site and on priority habitats within the White Moss valley.

- 7a. Prior to the Mineral Extraction Commencement Date a scheme identifying a hydrological trigger level and defining the circumstances when additional mitigation action will be taken at the Site shall be submitted to and approved in writing by the Mineral Planning Authority. The scheme shall provide for ongoing review of the trigger level criteria and it shall be implemented in accordance with the approved details.

Reason: To protect the water environment by defining appropriate trigger levels based on current data at which the need for further action would be identified and implemented.

- 8. The Minerals Planning Authority shall be notified in writing as soon as possible and within one week of the developer obtaining confirmation that the trigger level defined under Condition 7 above has been exceeded. The scheme agreed under Condition 6 will be followed, including investigation to determine if the development is the cause of the trigger exceedance and implementation of agreed mitigation measures if this is found to be the case.

Reason: To protect the water environment ('controlled waters' as defined under the Water Resources Act 1991) by securing a scheme of hydrological monitoring which identifies an appropriate trigger level and makes provision for appropriate action in the event that this is exceeded, having regard to the proximity of the Colemere RAMSAR site and SSSI and the priority habitats of White Moss.

- 9. A scheme detailing measures for managing silty water from the extraction operations shall be submitted to and approved by the Mineral Planning Authority prior to the Mineral Extraction Commencement Date. The scheme shall be designed in order to reduce the possibility of silty water from entering into the surface and groundwater systems and shall include the following measures:

- i. A Construction of a swale/ditch within the margins of the extraction void, prior to commencement of mineral extraction and provision of a settlement area within the excavations as part of the water management system;
- ii. Measures to direct water to a temporary settlement area in the quarry void, and;
- iii. Control of excavations to promote more gradual dewatering (i.e. by local reduction in face heights).

Reason: To protect the water environment ('controlled waters' as defined under the Water Resources Act 1991) including the Colemere RAMSAR site.

10. Confirmation of the level of the lowest point of the extraction void in metres above ordnance datum shall be provided to the Minerals Planning Authority on request and annually by 1st March of each calendar year for the duration of mineral extraction operations under the terms of this permission. The applicant shall also provide a levels survey of the extraction void to the Minerals Planning Authority upon prior request.

Reason: To allow the Mineral Planning Authority to monitor the base level of the extraction void at an appropriate frequency, having regard to the proximity of the Colemere RAMSAR site and SSSI.

DUST

15. Water shall be applied to main haul roads and other areas as necessary within the Site in order to prevent the generation of dust by vehicular/plant traffic.

Reason: To assist in safeguarding the amenities of the area and the integrity of nearby protected ecological sites.

16. Within 2 months of the Mineral Extraction Commencement Date and notwithstanding the existing measures for dust control within the Wood Lane Quarry site the developer shall submit a dust management plan for the approval in writing of the Mineral Planning Authority covering the following matters:
 - i. Detailing the specific sources and locations of potential dust associated with the quarrying operations, including temporary works, plant site, stockpiles, haul roads and drying of mud;
 - ii. Confirmation of the regime which will apply in order to ensure that sufficient resources are available to achieve effective dust suppression for all sources identified under 16i above, including numbers of bowsers, sweepers and personnel responsible for dust and mud suppression on site;
 - iii. Setting out the monitoring procedures which will apply in order to ensure the effectiveness of dust suppression measures and to identify where additional action is required as part of a proactive and pre-emptive response.

Reason: To assist in safeguarding the amenities of the area and the integrity of nearby protected ecological sites.

17. In the event that a complaint is received regarding noise or dust impact and is subsequently validated by the Local Planning Authority the Developer shall submit a mitigation scheme for the approval in writing of the Authority which shall provide for the taking of appropriate remedial action within an agreed timescale. The mitigation scheme shall be submitted within 10 working days from the day when the Developer is notified of the complaint and the scheme shall be implemented in accordance with the approved details.

Reason: To assist in safeguarding the amenities of the area from noise or dust disturbance by implementing an agreed procedure for dealing with any complaints.

HIGHWAYS MATTERS

- 23a. The existing wheel bath facility within the quarry plant site shall be maintained for the duration of the operations hereby permitted. Wheel cleaning shall be employed by all goods vehicles leaving the Site so as to avoid the deposit of mud on the public highway.
- b. In those circumstances where mud or dust has been transported onto the metalled access road a tractor mounted brush or other similar device shall be employed in order to clean the road.

Reason: In the interests of highway safety and to ensure nearby European nature conservation sites continue to be protected from damage due to sedimentation from road runoff within the site.

DRAINAGE / POLLUTION

24. No dewatering shall take place within the Site.

Reason: In accordance with the approved details.

- 25a. There shall be no discharge of foul drainage within the Site.
- b. Any silt laden water arising from the vicinity of the highway crossing point shall be intercepted on the Site and transferred to an appropriate settlement area prior to final discharge.
- c. There shall be no storage of fuels or chemicals within the Site.
- d. No washing of minerals shall take place within the Site. Such washing shall continue to take place exclusively within the adjacent quarry plant site area.

Reason: To prevent pollution to ground and surface water.

SLOPE STABILITY

37. The stability of all slopes within the Site shall be the subject of ongoing review throughout the duration of the extraction, restoration and aftercare operations hereby approved under this condition and the scheme required by condition 6 above. In the event that any significant stability problems are identified following assessment by a

competent person, such problems shall be notified to the Mineral Planning Authority within one weeks of them becoming apparent. Appropriate remedial measures, as determined by the competent person, shall then be employed as soon as practically possible, including if necessary drainage works and/or erosion remediation and/or buttressing with indigenous fill materials to ensure the continued stability of all areas within the Site.

Reason: To ensure slope stability is maintained.

Note: For the purposes of this condition a 'significant stability problem' means where there is evidence of gravity induced surface movement affecting an area greater than 5 metres in length.

ANNUAL REVIEW

45. Before 1st February after the Commencement Date and after every subsequent anniversary of the Commencement Date for the duration of mineral working and restoration works under the terms of this permission an annual review of Site operations shall take place involving the Mineral Planning Authority and the Site operator. The Annual Review shall consider the following matters:

- i. areas and depths of working;
- ii. mineral resource issues;
- iii. monitoring and mitigation of any issues identified in the Habitat Regulation Assessment including any required changes in the monitoring scheme approved under condition 6 and the trigger level requirements under Condition 7 below;
- iv. progressive restoration and aftercare works undertaken during the previous calendar year;
- v. proposals for working, restoration and aftercare for the forthcoming year including the steps to be taken to reinstate land to the approved afteruses including habitat creation and agriculture;
- vi. a review noise, mud and dust control measures;
- vii. a review of other issues associated with mineral working including traffic and visual amenity issues.
- viii. proposals for aftercare works on restored areas of the Site where these are not already subject to an approved scheme, including areas of habitat management and planting;

Reason: To assist in ensuring establishment of the approved afteruses.

4.0 Summary of re-screening including counteracting measures

The project has been re-screened with the inclusion of counteracting (mitigation) measures and conditions have been agreed with the applicant. Natural England were re-consulted on this final HRA report and their comments are also summarised below.

Table 4 – Summary of HRA conclusions

EU Site	Effect pathway	1a HRA result	Natural England agree Y/N
Cole Mere	Effect of Phase 1a excavation in Zone 4 on RGW for Cole Mere: a) hydrology/hydrogeology	No effect	Yes
Cole Mere	Effect of Phase 1a excavation in Zone 4 on RGW for Cole Mere: b) water quality	No effect	<u>Yes</u>
Cole Mere	Effect of Phase 1a excavation in Zone 4 on the White Moss Valley Groundwater body. a) via physical damage to the interface between the void and the VGWB.	No Likely Significant Effect	Yes
Cole Mere	Effect of excavation in Zone 4 on the White Moss Valley Groundwater body. b) via clay lenses above and below 90mOD cascading water into the VGW.	No likely significant effect	Yes
Cole Mere	Loss of surface water into the VGWB from excavation in Zone 4.	No likely significant effect.	Yes
Cole Mere	Reduction in quality of surface water flowing into the VGWB from Phase 1a excavation in Zone 4.	No likely significant effect.	Yes
Cole Mere	Effect of sediment from the Colemere Lane crossing point entering the VGWB.	No effect.	Yes
Cole Mere	Collapse of void walls leading to loss of buffer between the void and White Moss.	No effect	Yes
Cole Mere	Airborne dust derived by working Zone 4, causing changes in vegetation on Cole Mere due to chemical or smothering effects.	No likely significant effect	Yes
Cole Mere	Restoration and aftercare - effects on RGW quality.	No damaging effect	Yes
White Mere	Effect of sediment being washed into White Mere from the road adjacent.	No likely significant effect	Yes
White Mere	Airborne dust – changes in vegetation due to chemical or smothering effects on White Mere.	No likely significant effect	Yes

5.0 Final conclusions

In view of the above, and providing the development is carried out according to the details submitted, the legal undertakings and the conditions on the decision notice, the proposal to quarry the Wood Lane Quarry Extension, Zone 4 Phase 1a, will have no significant impacts on Cole Mere, White Mere or any other European Sites, through the listed pathways detailed in this HRA, either alone or in combination with other plans or projects.

The Significance test

The proposed development under application number 14/04589/MAW Wood Lane Quarry, Ellesmere Sand and Gravel, Spunhill, Ellesmere, Shropshire - Extension to Wood Lane Quarry, was initially screened and it was concluded that effect pathways could have a likely significant effect on the Cole Mere and White Mere Ramsar sites (Meres and Mosses Ramsar Phases 1 and 2) or there was residual uncertainty on potential effects. The Habitat Regulation Assessment process could not be satisfied, further information and analysis was required and it was considered an Appropriate Assessment was needed.

During that further Appropriate Assessment, additional information and mitigation proposals resulted in a reassessment of the significant effects of the impacts.

The Integrity test

It was concluded that the proposed development under application number 14/04589/MAW Wood Lane Quarry, Ellesmere Sand and Gravel, Spunhill, Ellesmere, Shropshire - Extension to Wood Lane Quarry will not significantly effect Cole Mere and White Mere Ramsar sites (Meres and Mosses Ramsar Phases 1 and 2) due to the pathways listed in Table 4 above and consideration of the integrity test is not required.

Conclusions

There is no legal barrier under the Habitat Regulation Assessment process to planning permission being granted in this case.

Annex 1 documents used for this HRA

1. 'Environmental Statement, Chapter 9, Ecology' by SLR
2. 'Wood Lane Quarry Zone 4, EIA Geology & Hydrology' Sept 2014 by TerraConsult
3. 'Wood lane Quarry Zone IV EIA, Flood Risk & Water Framework Directive', Sept 2014, by TerraConsult
4. Hydrogeological Assessment of the Wood lane Quarries, Ellesmere, Rick Brassington, Sept 2009
5. Addendum Report on the Hydrogeology at Wood Lane Quarries, Rick Brassington, July 2015
6. Wood lane Eco-hydrological Assessment, Final report' July 2015 by JBA Consulting.
7. Revised Chapters 1 to 4 of the Environmental Statement
8. Wood Lane Habitat Regulation Supporting Document Addendum
9. Habitat Regulation Assessment – Technical Support Document
10. Proposed Haul road crossing of Wood lane, Wood lane Quarry, Ellesmere
11. WL950-D7 (Rev A) Sheet 1 of 4 Phase 1A extraction and road crossing
12. WL950-D7 (Rev A) Sheet 2 of 4 Phase 1B extraction and Phase 1A restoration
13. WL950-D7 (Rev A) Sheet 3 of 4 Phase 1C extraction and Phase 1B restoration
14. WL950-D7 (Rev A) Sheet 4 of 4 Concept Site Restoration Masterplan. 2014

15. Supplementary Statement to accompany further submissions for Planning Application Ref:- 14/04589/MAW
16. Consultation response from NE dated 25th November 2014
17. 'Great Crested Newt (GCN) Survey and Evaluation Report 2015 Appendix 9.8' by SLR, July 2015.
18. Letter dated 21.7.15 to Stuart Lawrence from SLR Re: Wood lane Quarry – Zone 4 Revised Extraction Phases 1a, b, c – Precautionary Methods of Working/ Reasonable Avoidance measures (PMOW) in respect of Great Crested newt (GCN) (*Triturus cristatus*).
19. Water Vole Survey and Evaluation Report Appendix 9.7' by SLR July 2015
20. Consultation response from the EA dated 12.12.14,
21. Consultation comments from the Canal and River Trust dated 5th Dec. 2014
22. Consultation comments from the Shropshire Wildlife Trust
23. Objection comments from Keith Harris
24. Objection comments from Dr Joan Daniels
25. 'Grounds for Objection – Effect on local landscape, habitats and wildlife, Report to Welshampton and Lyneal Parish Council', January 2015, by Dr Joan Daniels
26. Email from Stuart Lawrence to Graham French dated 21.12.15.
27. Additional Grounds for Objection, Supplementary Report to Welshampton and Lyneal Parish Council, Dr JL Daniels, January 2016.
28. Letter from JBA Consulting to Tudor Griffiths Ltd dated 5th February 2016 providing a response to Ref. 27 above.
29. Letter from SLR to Stuart Lawrence, TG Ltd. Responding to my ecological queries in my memo dated 13th January 2015.
30. Letter from JBA Consulting to Stuart Lawrence, TG Ltd providing a response to my hydrological/hydrogeological queries in my memo dated 13th January 2016.
31. Wood Lane Quarry and landfill Ellesmere, Shropshire, Great Crested Newt Survey Report, July 2011
32. Letter from SLR to Stuart Lawrence dated 23.8.11 Re: Habitat Suitability Assessment for great Crested Newts, Wood Lane – Supplementary information.
33. Meres and Mosses Conservation Plans, White Mere, ECUS February 2001 for English nature.
34. Meres and Mosses Conservation Plans, Clarepool Moss, ECUS February 2001 for English nature.
35. Cole Mere, Hydrological Study, Atkins, 7th July 2015.
36. Rebuttle response to Dr Daniel's Welshampton PC Report 2675005, Dr Daniels, 4th March 2016
37. Letter from JBA consulting (dated 10th March 2016) responding to Dr Daniels document of 4th March 2016
38. 'Dust Assessment of a Proposed Extension to Wood Lane Quarry, Ellesmere, Shropshire', Vibrock 30th April 2014
39. 'Assessment of the Environmental Impact of Noise, Proposed Northern Extension to Wood lane Quarry, Ellesmere Shropshire', Vibrox Ltd, 30th April 2014
40. Consultation response from the EA dated 9.12.15
41. Water Framework Directive, Waterbody Review, 2012 Environment Agency
42. 'Hippo' wheel wash specification.
43. Technical Note: Methodology for Developing an Environmental Monitoring Scheme for Wood Lane Zone 4, by TerraConsult (18.April 2016)
44. Letter from JBA consulting detailing 'Potential Impact Mechanisms' as an addition to Ref. No 43, dated 27th April 2016.
45. Drawing 1, Location Map.

Habitat Regulation Assessment Outcomes

A Local Planning Authority can only legally grant planning permission if it is

established that the proposed plan or project will not adversely affect the integrity of the European Site.

If it is not possible to establish this beyond reasonable scientific doubt then planning permission cannot legally be granted unless it is satisfied that, there being no alternative solutions, the project must be carried out for imperative reasons of over-riding public interest, and the Secretary of State has been notified in accordance with section 62 of the Conservation of Habitats and Species Regulations 2010. The latter measure is only to be used in extreme cases and with full justification and compensation measures, which must be reported to the European Commission.

Duty of the Local Planning Authority

It is the duty of the planning case officer, the committee considering the application and the Local Planning Authority as a whole to fully engage with the Habitats Regulation Assessment process, to have regard to the response of Natural England and to determine, beyond reasonable scientific doubt, the outcome of the 'significance' test and the 'integrity' test before making a planning decision.

APPENDIX 4

EUROPEAN PROTECTED SPECIES – Consideration of the three tests

Application name and reference number:

14/04589/MAW Extension to Wood Lane Quarry

Date of consideration of three tests:

3rd June 2016

Consideration of three tests carried out by:

Dr Sue Swales

County Ecologist (01743 258515): sue.swales@shropshire.gov.uk

Grahame French

Principal Planner (01743 258714) graham.french@shropshire.gov.uk

- 1 Is the purpose of the development/damaging activity for ‘Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment?’**

Yes. The Government requires planning authorities to plan to ensure sufficient supplies of aggregate are available to meet national and local demand. The site is allocated for mineral extraction in the SAMDev plan and would provide essential minerals for the local construction industry, whilst also supporting local jobs and the local economy. Effective mitigation measures are available to prevent any adverse impact on protected species and the restoration proposals have the potential to deliver ecological benefits. It is considered that this amounts to an overriding public interest. (Grahame French, Principal Planner, 6/06/16)

- 2 Is there no satisfactory alternative?**

There is no satisfactory alternative. There are no other allocated sites within a 10 mile radius which can provide a suitable mineral to make the aggregate products necessary to supply the company’s internal market and customers at the rate required and in a sustainable way. The suitability of the site has been confirmed by investigations undertaken by consultants AMEC in support of the Council’s adopted SAMDev plan.

(Grahame French, Principal Planner, 6/06/16)

3 Is the proposed activity ‘not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range’?

Through planning application 14/04589/MAW, Tudor Griffiths Ltd proposes to extend existing mineral workings at Wood Lane Quarry into an adjoining area of land that is presently in intensive agricultural use. Wood Lane Quarry comprises a long standing sand and gravel extraction operation, some of which is restored to fishing lakes and a nature reserve. Planning permissions for mineral extraction at Wood Lane Quarry have existed since the 1930's.

The extension would lie to the north of the existing quarry and is generally referred to as Zone 4. The material that is extracted from the site will be transported by dump truck across Colemere Lane via a new dedicated crossing point. It will then be exported from the existing Quarry via the current main access off the A528 Ellesmere to Shrewsbury Road.

The development will comprise of the following main elements:

- The extraction of sand and gravel to 90mOD;
- The creation of a crossing point over Colemere Lane for the transportation of mineral to the existing processing plant in the main quarry;
- Management and enhancement of existing landscaping and mitigation measures; and
- Restoration of the application site for agricultural land and nature conservation.

The ‘Great Crested Newt (GCN) Survey and Evaluation Report 2015 Appendix 9.8’ by SLR, July 2015 Ref. No 17) updates a survey carried out in 2011, and now includes survey of the ditches and Mill Cottage Pond as requested. As for the 2011 survey, a cluster of ponds in Colemere village supports a medium population of GCN (ponds 5, 18, 19 and 25a). The 2011 survey also detected a small population of GCN to the west of the A528 and the existing quarry. Smaller numbers of GCN have now been found in Ditches 1 (0m from site boundary and 75m from extraction boundary) and 3 (0m from site boundary and 117m from extraction boundary), pond 2 (3m from site and extraction boundary), Pond 3 (144m from the site and 246m from the extraction boundary) at Mill Cottage (including eggs) and pond 1 (304m from the site and extraction boundaries) to the north-west.

Since mitigation measures were proposed, discussions on possible impacts through hydrological pathways have led to a proposed swale to be constructed along the northern and eastern boundaries of the void, which could create a habitat and commuting route for GCNs after a year or two.

Removal of this feature and the soil bunds (likely to be after 4 – 10 years) could destroy habitat used for rest and shelter by GCNs and hence cause an offence under the Habitat Regulations.

There is a historical record of a GCN being found in the Wood Lane Nature reserve (section 9.85 Ref No 1) c. 85m from the application site. No surveys for GCN were carried out within the existing quarry. Habitat Suitability Indices were scored as 'poor' due to water quality and use of the ponds for fishing. In their letter of the 29th January 2016 'Re: Further Ecology Commentary on the Wood Lane Zone 4 Planning Application' SLR state that the potential suitability of Ponds 20-22 for GCN was re-considered prior to the start of the 2015 survey and considered to remain low due to the current use by large numbers of water fowl/gulls and the fishing syndicate (which includes re-stocking) prevails. Terrestrial habitats remained poor for GCNs.

SLR have recommended Risk Avoidance Measures for the operation of the quarry in the following documents:

1. Letter dated 21.7.15 to Stuart Lawrence from SLR Re: Wood lane Quarry – Zone 4 Revised Extraction Phases 1a, b, c – Precautionary Methods of Working/ Reasonable Avoidance measures (PMOW) in respect of Great Crested newt (GCN) (*Triturus cristatus*).
2. Letter from SLR dated 29th January 2016 'Re: Further Ecology Commentary on the Wood Lane Zone 4 Planning Application

Precautionary methods of working include:

- Works to be supervised at key stages/areas by an Ecological Clerk of works,
- Tool-box talk to contractors,
- Storage of plant and materials away from hedges,
- Hand searches in advance of the road-side hedge re-location works,
- Grassland sward on bunds to be kept short by mowing or grazing,
- A 10m vegetated buffer to the roadside hedge will be retained as protection for the underground services.

Due to the proximity of ponds and ditches in which GCNs have been found, the closest being around 3m from the site boundary, the LPA considers that it is reasonably likely that GCNs could be killed or injured, albeit in small numbers. However, the favourable conservation status can be maintained with the appropriate mitigation measures and restoration which will improve the habitat locally for GCNs.

The 10m buffer beside the roadside hedge will remain post development and the steeper slopes of the quarry void will be restored to wildlife habitat including woodland, scrub and natural, low-fertility grassland. The potential foraging and commuting habitat for GCNs will ultimately be increased through this development.

The following conditions should be attached to any planning permission granted:

Condition

a Work shall be carried out strictly in accordance with the submitted 'Wood Lane Quarry – Zone 4 Revised Extraction Phases 1a, b, c – Precautionary Methods of Working/ Reasonable Avoidance measures (PMOW) in respect of Great Crested newt (GCN) (*Triturus cristatus*) by SLR dated 21.7.15 and the additional Reasonable Avoidance Measures in 'Further Ecology Commentary on the Wood Lane Zone 4 Planning Application' by SLR and dated 29.1.16, unless changes are required by Natural England in order to obtain a European Protected Species Mitigation Licence. Notification of any such changes to the above mitigation strategy must be submitted to the planning authority. If changes are required by Natural England then work shall be carried out strictly in accordance with the agreed scheme as amended.

b. Not less than 1 year prior to the removal of the approved soil bunds and swale as part of the quarry restoration scheme an updated Great Crested Newt mitigation strategy shall be submitted to and approved in writing by the Mineral Planning Authority in consultation with the Council's Ecologist. The strategy shall set out the measures to ensure that there are no adverse impacts to GCN during the bund removal or restoration.

Reason: To ensure the protection of Great Crested Newts a European Protected Species.

No development shall take place, including any works of demolition or clearance of vegetation, until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the local planning authority. The plan will be implemented as approved and shall include:

i. An appropriately scaled plan showing 'Wildlife/habitat Protection Zones' where construction activities are restricted and where protective measures will be installed or implemented;

ii. Details of protective measures (both physical measures and sensitive working practices, e.g. for the relocated hedge, Great Crested Newts, badgers, pond 2) to avoid impacts during construction and extraction (may be provided as a set of method statements);

- iii. A method statement for the relocation of hedges to be removed for access (including re-establishment, watering, gapping up with native species of local provenance and root protection zone etc.);
- iv. Measures to promote the establishment of invertebrate habitats;
- v. A timetable to show phasing of construction activities to avoid harm to biodiversity features (e.g. avoiding the bird nesting season, Great Crested Newt mitigation);
- vi. The times during construction when specialist ecologists need to be present on site to over-see works;
- vii. The role and responsibilities on site of an ecological clerk of works (EcCoW) or similarly competent person;
- viii. Persons responsible for:
 - Compliance with legal consents relating to nature conservation;
 - Compliance with planning conditions relating to nature conservation;
 - Installation of physical protection measures during construction;
 - Implementation of sensitive working practices during construction;
 - Regular inspection and maintenance of physical protection measures and monitoring of working practices during construction;
 - Provision of training and information about the importance of 'Wildlife protection zones' to all construction personnel on site.

All construction activities shall be adhered to and implemented strictly in accordance with the approved CEMP unless otherwise approved in writing by the local planning authority.

Reason: To protect features of recognised nature conservation importance.

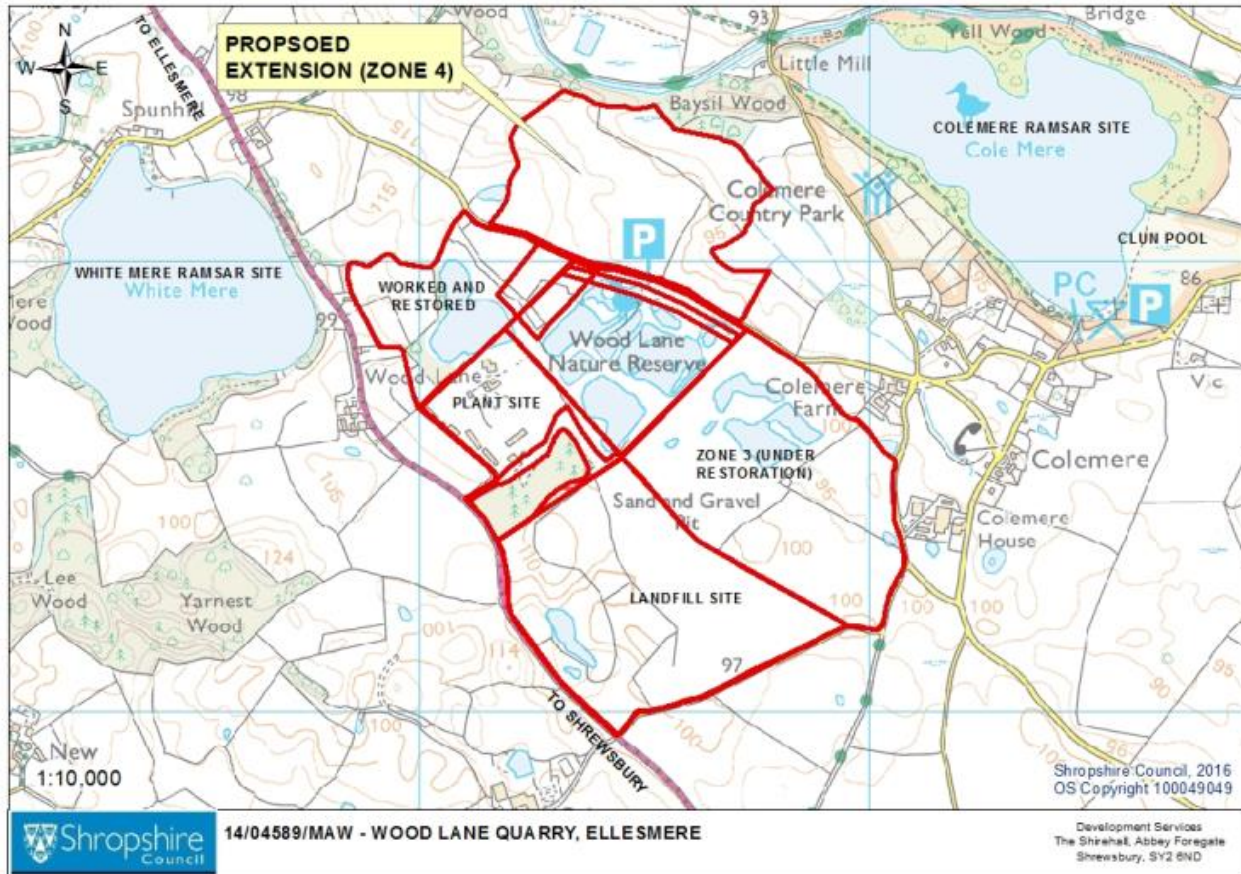
Summary

The proposed development will not be detrimental to the maintenance of the populations of Great Crested Newts at a favourable conservation status within their natural range, provided that the conditions and informatives detailed in the consultee responses and Habitat Regulation Assessment from Sue Swales dated 13.1.15 (actually 2016), 3.6.16 and 3.6.16 are attached to any consent and thereafter implemented.

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APPLICATION SUMMARY

14/04589/MAW Extension to Wood Lane Quarry, Spunhill, Ellesmere - Tudor Griffiths Ltd



The Proposal: The proposal is for a 19.85 hectare extension to the existing quarry workings at Wood Lane, Ellesmere. The extension area is to the immediate east of the existing quarry workings from which is separated by the minor road to Colemere. Material extracted from the site would be transported by dump truck across Wood Lane to the existing processing plant via a new dedicated crossing point.

The proposals as originally submitted involved the extraction of 2.1 million tonnes of sand and gravel in 3 phases at a rate of 250,000 tonnes over 8 years. However, the proposals have been amended to address hydrological concerns linked mainly to the nearby Cole Mere RAMSAR site. It is now proposed only to work the uppermost phase (phase 1a – to 90m AOD) and this has in turn reduced the reserve by about 30%, yielding 5-6 years of mineral supply. Any subsequent proposal to work the deeper phases (1b and 1c) below the ground water table (to 80m AOD) would be subject to a separate planning application and associated Habitat Risk Assessment.

The application is supported by an Environmental Statement which includes supplementary reports on hydrology / hydrogeology and ecology.

The site: The extension area is located 180m to the north east (Cole Mere) and 420m to the west (White Mere). The Shropshire Union Canal passes 50m to the north, behind a shallow wooded ridge. The nearest settlements are the village of Colemere 400-850m to the south east and the hamlet of Spunhill 560 - 950m to the west. Further isolated properties are located at Wood Lane Farm 400m south west and Little Mill 180m to the north.

Community consultations: Welshampton and Lyneal Parish Council maintains its objection on the basis that it is not satisfied that damage to the habitat will not occur, and there is insufficient habitat creation. They do not consider that the test set in SAMDev policy MD5a requiring no adverse impact on the Cole Mere or White Mere RAMSAR sites can be met.

The Environment Agency does not object and considers that the applicant has demonstrated that the water environment will not be adversely impacted provided there is no physical dewatering. The applicant has demonstrated that Cole Mere has not been impacted by quarry operations to date so the extension should have no adverse impact, especially if worked with White Mere has been demonstrated to be maintained

largely by rainfall runoff. Long term groundwater level monitoring carried out shows there is no hydraulic connection between the groundwater under Zone 4 and the small watercourse running through the peat body (White Moss) to the immediate north east. The suggested 2 stage excavation approach is accepted in principle. A planning condition for the continued monitoring of the operational quarry and extension area should be included. Restoration to intensive agricultural use should be avoided.

Natural England has no objection following detailed discussions with the applicant and Council officers regarding planning conditions and has indicated that it accepts the conclusions of the Council's Habitat Risk Assessment.

Shropshire Wildlife Trust has emphasised the need to protect the Meres and the peat area (White Moss) adjoining the extension area and to properly understand the nature of the local hydrology.

The Canals and River Trust has not objected provided appropriate noise and dust controls are in place.

SC Public Protection has no objection and accepts the proposed noise control limits.

Highways development control have not objected provided the crossing point is maintained in good order and subject to a financial contribution to provide some improvements to the minor road to Colemere.

SC Ecology has no objection subject to conditions relating to habitat creation, ecology and hydrological monitoring and has produced a Habitat Risk Assessment which Natural England has accepted.

SC Archaeology has not objected subject to a pre-commencement condition providing for archaeological evaluation and a Written Scheme of Investigation has been agreed in principle.

Public representations: The application has attracted a representations from 23 individuals. The main concerns are inappropriate countryside location; impact on ecology / RAMSAR sites; noise, dust and light nuisance; impact on drainage and highway safety.

Officer appraisal: National policy requires the Council to maintain a 7 year supply of sand and gravel and the site is allocated as part of this 'landbank' under SAMDev policy MD5. The policy sets out detailed criteria for the site to comply with and the amended satisfies these criteria. The required quarrying infrastructure is already in place, the quarry has good access to the primary road network and Core Strategy Policy CS20 establishes a presumption in favour of extensions such as the current site rather than new greenfield sites.

The scheme is capable of complying with appropriate criteria for the control of noise and dust. There would be no increase in traffic relative to the existing situation and the applicant's highway contribution is to be welcomed. There would be up to 40 return movements across the crossing point each day at peak periods but these would be carefully managed and existing highway traffic would have priority. A visual appraisal confirms that the site is capable of being effectively screened once the proposed containment bunds have been formed on the northern and eastern boundaries. The amended scheme would result in no overall loss of agricultural land.

In terms of ecology no impacts on protected species are predicted once appropriate mitigation has been put in place. A significant amount of hydrological information has been provided and this indicates that phase 1a (to 90m AOD) can be worked safely without adverse impacts on hydrology including the nearby RAMSAR sites. The applicant's consultants acknowledge that some further monitoring data is required for the lower phases which are below the groundwater table and these have now been omitted from the scheme. Natural England and the Natural Environment section has worked with officers to agree detailed planning conditions providing appropriate monitoring and safeguarding provisions for the proposed operations. These consultees are now satisfied that phase 1a can be worked without adverse impact to the water environment, including the RAMSAR sites. Funding has been agreed to install 2 silt interceptors on the Ellesmere Road and this will result in an overall environmental improvement for White Mere.

Conclusion: The proposals would secure production at Wood Lane for a further 6-7 years at the anticipated production rate. The mineral is a proven resource with an established local market and would make an important contribution towards the county's agreed proportion of sand and gravel production in the West Midlands region. The applicant has amended the scheme to remove the originally included lower extraction phases.

No issues have been identified which would be likely to give rise to unacceptable impacts on the local environment or amenities once available mitigation measures have been implemented. Detailed conditions have also been recommended in consultation with relevant consultees. It is concluded that proposals are sustainable and can be accepted in relation to relevant development plan policies and guidance subject to the recommended condition and legal agreement.