

NB/KF/03/P/09336
14 December 2006

Neil Boardman
01633 648629
01633 648062
Email: neil.boardman@torfaen.gov.uk

SLR Consulting Ltd
Titan House
Cardiff Bay Business Park
Lewis Road
Cardiff CF24 5BS

Dear Sirs

**RECLAMATION OF FORMER OPENCAST WORKINGS, RECOVERY OF
SECONDARY AGGREGATES AND CONSTRUCTION OF NEW ACCESS ROAD
AFFECTING PUBLIC RIGHTS OF WAY**

I refer to the above planning application which is accompanied by an Environmental Statement, and which has been the subject of an extensive consultation exercise. As a result of this, I have been contacted by a number of statutory and other consultees requesting additional information, which they consider necessary to properly assess the scheme. Similarly, as you are aware, this Authority has appointed an independent consultant to consider amongst other factors the need for this material, its suitability as a road surfacing material and other alternative supplies both locally and nationally.

I have previously contacted you with regards to a number of these issues and some information has been submitted. However, I now consider that I am in a position to formally request additional information in accordance with Article 19 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999.

With regards to the question of need for this particular material, I would be grateful for your comments on the following observations received from our consultant.

*“My preliminary observations, with respect to establishing (or otherwise) a case for the need for this material, are set out as bullet points under the various sub-headings below. **Key points are highlighted in bold text.** My preliminary conclusions and recommendations are then summarised at the end.*

THIS DOCUMENT IS AVAILABLE IN LARGER PRINT UPON REQUEST

*In essence, despite the tempting logic of wishing to do something positive (in both mineral and landscape terms) with a former opencast site, **I do not consider that the specific need for this development has been adequately demonstrated by the applicant. I also believe that it will be very difficult for them to establish this need, unless they can be a lot more convincing about the quantity and quality of the material that could be recovered from the site. That, however, is an issue on which I must reserve judgement until I have seen further evidence.***

The general need for High PSV Sandstone

- SLR note (ES, Section 4, page 41, para. 4) that the Travers Morgan Report published in 1993 remains the most comprehensive analysis of the High Specification Aggregate (HSA) market. This is wrong. **The Travers Morgan report was updated by the Capita Symonds report dated November 2004.** (I was the principal researcher and lead author of both reports, so I can say this without fear of contradiction!).
- SLR quotations from the Travers Morgan Report on page 42 of the ES are largely still valid, but **the statements made in the last paragraph of that page, continuing on page 43, are now superseded by the findings of the Capita Symonds report.** Essentially, the speculations regarding future market growth, which were little more than best guesses from various stakeholder groups in 1993, have not been born out by actual market trends (see below).
- SLR note, in the penultimate sentence of the first para. on page 43, that the switch to thin surfacing technology has had a marked effect in increasing the demand for HSA. Again this is wrong. **The Capita Symonds Report demonstrates conclusively that this has NOT in fact been the case (the specified demand has increased substantially because of the technological change, but the actual demand (in terms of the overall rate at which HSA reserves are being consumed - which is what matters) has hardly changed at all.**

- *The Capita Symonds report does confirm that HSA reserves are still in relatively short supply and that 'new reserves will need to be permitted at a faster rate than has been the case over the last ten years' (para. 8.11) in order to maintain an adequate security of supply. It also points out, however, (para. 5.116) that England is becoming increasingly dependent on imports from neighbouring countries, including Wales. This is occurring despite the existence of geological deposits capable of yielding HSA within England. **In terms of transport costs and associated emissions, then in order to satisfy the continuing (rather than growing) demand in England, there would be much stronger arguments for developing new reserves in England, rather than in Wales.** Unfortunately, the ES does not consider alternatives, and does not even consider the particular geographical markets, which the Tir Pentwys material would serve. As explained in more detail below, the market for any HSA supplied from this site would be primarily in England rather than in Wales.*

The Proportion of Tir Pentwys material likely to be capable of being processed for use as road surfacing aggregate

- *SLR note (ES, section 3, page 8) that the in-situ strata from which the tipped material was derived comprised 20 - 25 metres of sandstone with interbedded thin layers of mudstone, with a 'markedly thinner' (but unspecified) sequence of mudstone, weathered sandstone and drift above this.*
- *SLR also note (ES, section 5, page 50) that the sandstone belongs to the 'Grovesend Beds' part of the Pennant Sandstone, and that this comprises 'massive' sandstone at the base, but becomes more 'flaggy' (thinly bedded) with increasing height above the base. ('Massive' is a geological term that is used to describe sandstones with no obvious internal bedding planes). The importance of all this is that **it is only from such 'massive' beds that large boulders are likely to be produced.** No indication is given by SLR, however, as to the thickness of the lower, massive, layer. (This will need to be established by independent field observations and photographic recording of the exposed faces)*
- *All of the above material was tipped into the former excavation (ES, section 3, page 8) and the assumption has been made by SLR that the tipped materials closely resemble those exposed in the exposed high wall (ES, section 5, page 50). This seems to be a reasonable assumption, from which deductions can be made (see below).*

- *SLR note that **it is only from boulders of 'sufficient size' that HSA can be derived** (ES, section 5, page 51, para.4). No indication is given as to what the threshold size might be, although reference is made to large and small boulders (greater and smaller than 0.5m diameter respectively). Elsewhere (ES section 3, page 9, para. 4) SLR state that material less than 0.2m diameter would automatically be regarded as 'spoil' and would not be processed.*
- *The process of blasting which was originally used to remove all of the tipped material in order to access the coal will have broken up the sandstone into blocks that are considerably less in diameter than the original bedding thickness.*
- ***It follows from all of this that none of the superficial drift material, none of the mudstones and flaggy sandstones within the original sequence, and only part of the more thickly bedded sandstone will be capable of even being processed for HSA.***
- *SLR state (ES, section 5, page 52, para.1) that the total quarry output (of all saleable products, not just HSA) has been assumed to be 50% of the total volume of tipped material. **Blocks capable of being processed for HSA probably constitute no more than half of this estimated output** (this is my assumption and would need to be checked against field evidence and/or data held by SLR). **If true, this would mean that suitable blocks would amount to no more than 25% of the total volume of tipped material.***

- *Of this approximate 25%, **there will be further wastage during processing:** Even in primary aggregate Pennant Sandstone Quarries, which are processing aggregate from completely fresh material, a high proportion of the blocks fed into the crushers is ultimately lost in the form of 'scalpings' (inferior flaky material from weathered surfaces) and/or dust. Of the remaining sound aggregate, it is only the 10mm and 14mm chippings, which are currently in high demand as HSA. Finer material, which is inevitably produced by the crushing process, has much less of a market. The HSA yield of existing primary Pennant Sandstone quarries in South Wales averages about 60% of the total quarry sales. This would need to be regarded as an upper bound figure for the HSA yield likely to be obtained from the worthwhile sandstone blocks at Tir Pentwys. This is because the blocks themselves are all derived from relatively shallow strata (all within about 25 metres of the original ground surface) and will therefore tend to be more weathered than most of the material being quarried from the existing deep Pennant Sandstone quarries. Moreover, the tipped material has been exposed to additional sub-aerial weathering ever since it was first excavated, between 1954 and 1962.*
- *Weathering tends to increase the proportion of material lost in the 'scalping' process and **an optimistic figure for the proportion of HSA obtained from the large sandstone blocks at Tir Pentwys is therefore likely to be no more than about 50% of the volume of those blocks. Allowing for the other reduction factors noted above, this equates to no more than about 12.5% of the total volume of tipped material.***
- ***Even this small proportion would only be useable as HSA if it met the stringent laboratory test criteria summarised on page 46 of the November 2004 Capita Symonds report.** (see below for further consideration of this).*

The Suitability of Tir Pentwys material for use in the High Specification Aggregates (HSA) market

- *No laboratory testing data is provided by SLR to support their assertions that the best material obtained from the tip is capable of meeting HSA requirements (This will need to be obtained in order to carry out a more thorough review). Certain deductions can, however, be made from the qualitative statements made in the ES.*

- *SLR note (ES, section 5 page 51, para's 2 and 3) that the laboratory testing was done only on handpicked, "apparently unweathered" fragments from the bulk mass of sampled materials, both from the rock face and from boulders within the tipped material. This, in itself, implies that **significant proportions of both materials are heavily weathered**, as I have already surmised above.*
- *No figures are given in the ES for the **Polished Stone Value (PSV)** of the aggregate. This is the property, which defines the achievable skidding resistance. It is likely to be very high - typical values for the Grovesend Beds are around PSV70 - and should have no difficulty meeting this aspect of HSA requirements.*
- *No figures are given either for the **Aggregate Abrasion Value (AAV)** or the **Los Angeles value** of the material. These are both critical properties which, in different ways, are used to distinguish between durable aggregates (low values) and those which are less durable (high values). Pennant sandstones, particularly those extracted from relatively near to the ground surface (as in this case) tend to have relatively high AAV and Los Angeles values. Even the established Pennant Sandstone quarries, working deeper deposits, have Los Angeles values, which are close to the limits of acceptability. **It can therefore be expected that AAV and, especially Los Angeles values for this quarry may prove to be in excess of acceptable limits**, AAV and Los Angeles testing certificates from a UKAS accredited laboratory, from a comprehensive programme of sampling, will need to be inspected to assess whether or not HSA can be derived from this material.*
- ***Water absorption values**, though not given, are said by SLR to be 'at the upper margin for high quality sandstone' High values of water absorption are regarded by the industry as an indication that the aggregate may not be 'sound' and that the more definitive **Magnesium Sulphate test** will need to be carried out. No such data are provided by SLR. Magnesium Sulphate testing certificates from a UKAS accredited laboratory, from a comprehensive programme of sampling, will therefore need to be inspected to assess whether or not HSA can be derived from this material.*

- *Even if some satisfactory test results were obtained (i.e. results in which all of the above properties for a given sample fell within the stated criteria), there is likely to be considerable variability within the material. Unlike a primary aggregates quarry, where inferior material may be identified within specific horizons and selectively discarded, if necessary, the jumbled nature of the tipped material at Tir Pentwys makes that option impossible. **It could therefore be extremely difficult for the operator to produce a CE-marked product that met the same quality control standards as that produced by the established quarries.***

The specific need for the Tir Pentwys material

- *SLR claims that the need for the material is predicated almost entirely on its ability to meet HSA criteria. **The case for need is therefore directly influenced by the quality of the material.***
- *Based on the foregoing evidence and deductions, only a small proportion (no more than about 12.5%) of the tipped material seems likely to be capable of being processed into road surfacing aggregate, and it is by no means certain that even this would be capable of meeting HSA specifications and quality control criteria. **If little or none of the likely output were capable of meeting those criteria, this particular need would become irrelevant, and there would then be no justifiable need for extraction of the Tir Pentwys material.***
- *Even if a higher proportion of the material were to be capable of meeting HSA criteria, **a very high proportion of that demand would be from customers within England. Notwithstanding the fact that the Pennant Sandstone is regarded in MPP Wales as a Nationally (UK- wide) important resource, this may nevertheless have a bearing on the relevance attached to that demand in relation to a planning decision in Wales, when there are unpermitted resources of HSA material available in England, closer to the main centres of demand.** In support of that argument, the established Pennant Sandstone quarries in South Wales already produce more than enough HSA to satisfy the local (South Wales) market. This is evidenced, in part, by the fact that they already export a substantial proportion of their HSA output to England, Current (2003) exports from these quarries average around 26% of their total output and more than 60% of their HSA output.*

Preliminary Conclusions

- *I do not consider that the specific need for mineral extraction at Tir Pentwys has been adequately demonstrated by the applicant.*
- *The logic for working and then restoring a derelict colliery spoil tip is very tempting, but the application has been predicated on the need for HSA material, which, at best, would seem likely to form only a small proportion of the total future output from this site.*
- *I think that it will be very difficult for the applicant to establish this need, unless they can be a lot more convincing about the quantity and quality of any HSA material that could be recovered.*

Recommended Further Work

- *I would recommend that a more detailed analysis be commissioned, after giving the applicant the opportunity to provide more detailed information to address the deficiencies noted above (see below). The further analysis would need to include discussions or at least correspondence with the applicant and with his consultants (SLR), together with some independent fieldwork, in order to test, robustly, the validity of any further information that they may wish to provide. The detailed scope and likely costs of this work will be set out in a separate note.*

Further Information Required

- *I consider that the following information needs to be requested from the applicant:*
 - *all available (i.e. good and bad) UKAS-accredited PSV test certificates for numbered samples obtained from the Tir Pentwys site, including both the tip and the exposed rock face;*
 - *ditto, AAV test certificates*
 - *ditto Los Angeles test certificates*
 - *ditto water absorption test certificates*
 - *ditto Magnesium Sulphate test certificates (if available, but if not our assessment may need to rely upon the less definitive water absorption values)*
 - *ditto Ten Percent Fines test certificates (both dry and soaked) (these are no longer a specified requirement but may be helpful if available)*

THIS DOCUMENT IS AVAILABLE IN LARGER PRINT UPON REQUEST

- *a schedule of all sample numbers indicating, for each sample, its exact provenance, date of sampling, date of testing, a lithological description including degree of weathering, and any other observations which may explain why certain test results fall outside the range required to meet HSA specifications;*
- *a more detailed assessment of the quantity of road surfacing aggregate expected to be obtained from the tipped material, supported by quantitative geological descriptions of both the exposed face and the tipped material*
- *an assessment of the typical PSV, AAV, LA and MS values for this processed material that are likely to be declared for the purposes of CE Marking*
- *an assessment of the markets likely to be served by any HSA produced from this site: specifically, the proportions likely to be supplied into Wales and into each of the English Regions*
- *This information is all directly relevant to establishing the need for the proposed extraction, since that need has been largely predicated on the ability to supply High Specification Aggregates for road surfacing applications.”*

I have previously contacted you regarding a number of issues raised by the Countryside Council for Wales who as you are aware object to this application in its current form pending the provision of additional informations. They are of the opinion that this information is required before the Local Planning Authority can make a fully informed decision regarding protected species on site, and therefore, recommend that further surveys be undertaken.

I would thus be grateful if the following comments of the Countryside Council for Wales are noted and the appropriate work undertaken.

“1. **European Protected species**

1.1 **Bats**

We note that the Section 8 (page 8-15) of the EIA states that “Survey suggests that bats roost within beech trees which occur within the route of the proposed access road.” However, the same page states that “The presence and status of roosts within the route of the proposed road corridor Would be determined by additional targeted surveys to inform proposed mitigation measures”.

THIS DOCUMENT IS AVAILABLE IN LARGER PRINT UPON REQUEST

In addition, Table 8-12 – Summary Table of Initial Impact Assessment and Mitigation, page 8-32 concludes that impacts upon bat roosts is not significant. Given that there is survey work outstanding, to locate unidentified roost sites, we are of the opinion that this statement is premature at this stage of the assessment.

Table 8-12 also classifies the bat assemblage as one of County Value. Given the presence of Barbastelle, and yet without identification of barbastelle roosts, we feel that this assessment may be inaccurate. The presence of roosting barbastelle would make the bat assemblage of national value.

We therefore recommend that additional work be undertaken to allow you to make an informed decision about the effect of this scheme on bats, a European protected Species. Please see Annex B for further recommended work.

1.2 Amphibians

We note that the survey protocol was not consistent with standards for Great crested newt survey (as laid out in the English Nature Great Crested Mitigation Guidelines). In particular, the timing of the survey (Late June) makes it less likely that Great Crested Newts would be found. Therefore we recommend a further survey at the appropriate time of year.

2. UK Protected Species

2.1 Badgers

We note that no badger survey was carried out. We strongly recommend that a badger survey be carried out.

2.2 Reptiles

We note that surveys identified the presence of reptile species on site. We generally support the recommendations made in the EIA, Table 8-12 – Summary Table of Initial Impact Assessment and Mitigation, page 8-33. Further information will need to be provided by the developer to the planning authority, although this can be supplied at a later stage.

Reptiles can be protected through the inclusion of appropriate planning conditions on any consent. CCW would be happy to work with the LPA Planning Officer at the appropriate time to draw up suitable, enforceable conditions to safeguard these species.

2.3 **Birds**

We note that no specific survey for birds has been carried out. We remind the developer that all birds are protected during the breeding season. Any site works must avoid damaging or destroying the nest of any bird.

Works carried out during the breeding season must have first carried out a survey to determine presence of breeding birds and take necessary steps to avoid damage or disturbance.

3. **BAP habitats and species**

We note that the proposed access track cuts through upland heath, acid grassland and ancient semi-natural woodland. These habitats are listed in the UK and Local Biodiversity Action Plans. The loss and/or disturbance of these habitats (approximately 6 ha) is likely to have a direct impact on the ecological viability of the area and an indirect impact on associated species these habitats support. In particular, we are concerned about the loss and subsequent fragmentation, by the road corridor, of broadleaved woodland (approximately 2 ha). We refer you to paragraph 5.2.8 of Planning Policy Wales (March 2002) that states:

‘ancient and semi-natural woodlands are irreplaceable habitats of high biodiversity value which should be protected from development that would result in significant damage’.

We also refer you to “Woodlands for Wales: The National Assembly for Wales Strategy for Trees and Woodlands” (2001). This addresses the issues of woodland loss and fragmentation.

The road corridor is also likely to create a barrier to the movement of wildlife, both flora and fauna, especially as currently the woodland and other habitats are un-fragmented.

You should also be mindful that all public bodies now have a duty to conserve species listed under Section 74 of the Countryside and Rights of Way Act 2000/Section 42 of the Natural Environment and Rural Communities Act 2006, as being important for the conservation of biological diversity.

This list has been published by the National Assembly for Wales in support of the UK Biodiversity Action Plan, and can be viewed at www.gov.uk.”

I refer to your letter dated 13 October 2006 which incorporated further information relating to acid rock drainage, a licenced supply, dewatering, effects on groundwater recharge and surface water monitoring. Following this, further comments were received from the Environment Agency, and whereas they have expressed satisfaction with the acid rock drainage they have requested further information.

In particular:

“We require the following further information to demonstrate that groundwater resources, including a licensed water supply (a spring) at SO 232 014 will not be adversely affected by the development:

- *It must be demonstrated (in further detail) that the proposed development including restoration) will not impact on this resource (both quantity and quality).*
- *It is stated that ‘all drainage from (the cutting) will be directed into the remaining lake or allowed to form infiltration through SUDS’. Is the water in this cutting believed to be recharging the spring. On what basis, if water is to be re-directed from this area then what effect will this have on recharge to the spring. Please could the hydrogeological conceptual model of the area be clarified.*
- *The letter suggests that although dewatering is not proposed, there may be ‘minor seepages from the side walls’. The extent of this and potential impact on local resources (including the spring) should be considered in further detail.*
- *Section 6.4.1 of the Environmental Statement (October 2003) states that ‘It is considered that, as the proposed development produces a shallower landform following restoration, there will be no such negative impacts on the groundwater regime as result of the mineral recovery excavations’. We require the supporting information in relation to the anticipated impact on groundwater flows during development and post restoration to justify this conclusion.”*

The Consultations response from the Council's ecologist raised a number of issues and again recommend that further work be undertaken. The consultation response states that from the ecological survey it is clear that the proposed route of the new access road will have a significant negative impact on a number of many habitats and species and raising concerns at the extent of ecological damage that is likely to occur should the proposal proceed in its present form. The response goes on to state:

“European Protected Species

Bats

From the survey it is noted that the woodland and mature hedgerows provide ideal habitat for roosting and foraging bats including vital flight and commuting routes. A total of seven species were recorded but the report acknowledges this to be ‘only a proportion of the potential bat species’. Given this, the area probably exceeds that which is required for designation as a Site of Importance for Nature Conservation (SINC). Apart from their status under The Conservation Regulations, bats recorded such as common pipistrelle and barbastelle are also listed as priority species under the UK Biodiversity Action Plan (BAP) process with all bats are listed under the Torfaen Local Biodiversity Action Plan (LBAP).

*The report goes on to state ‘it is considered that the woodland as a whole provides suitable roosting sites for bats’ however, even though bats were recorded entering the woodland, the survey failed to confirm the presence of any roosts. In light of this and as suggested in the report **further survey is required to determine the exact location of woodland roosts before any trees and/or vegetation is removed.***

Due to the variety of bats recorded and the impact on roosting and foraging areas it is clear there is potential for damage to the local bat population. As bats are European Protected Species a Welsh Assembly Government development licence will be required should work proceed. Views of Countryside Council for Wales must be considered closely when determining whether to grant permission based on current proposals.

Dormouse

I am pleased survey work for this species follows recognised methodology as set out in English Natures Dormouse Conservation Handbook. On this occasion no evidence of dormouse was found, however, the habitat is recognised as suitable and there were limitations to the work in terms of restricted access to more dense parts of the woodland. A recommendation in the report suggests 'that in the event dormice are encountered during site clearance work should stop immediately'. This is the correct procedure but by this time planning permission will have been granted and work started. Dormice suffer badly from habitat damage, disturbance and in particular fragmentation of woodland areas. In its current form, this proposal will affect the integrity of the mature woodland and resulting in severe fragmentation, and if dormice are not currently present the future prospect of colonisation in line with UK and local Biodiversity Action Plan expansion targets will be lost.

As dormouse is a European Protected Species the views of Countryside Council for Wales are important in determining the way forward with this species. Nonetheless I suggest the following options:

- a) Re-survey for dormouse accessing all parts of woodland to determine definitively if dormouse are present. Or;***
- b) Exercise the precautionary principle as outlined in Planning Policy Wales and assume dormice are present and make a decision accordingly.***

Impact on LBAP Habitats and Species

It is noted that the proposals currently impact on a range of UK and Local Biodiversity Action Plan habitats. These include acid grassland, upland heath, beech and yew woodland, neutral grassland and hedgerow. The report estimates a loss of 6.3 hectares of semi natural habitats and signposts the negative impact this will have on local ecology. There are eleven areas of negative impact. These are:

- Woodland habitats between Craig Sion Siencyn and Craig Gwent.*
- Fragmented heathland habitats within Tir Shon Shenkin Farm.*
- Acid grassland habitat on common land.*
- Neutral grassland within Tir Shon Shenkin Farm.*
- Bat assemblage.*
- Breeding, passage and wintering bird assemblage associated with common land habitats.*
- Slow worm population on roadside embankment of old Crumlin Road.*

THIS DOCUMENT IS AVAILABLE IN LARGER PRINT UPON REQUEST

- *Slow worm and common lizard population associated with Tir Sion Shenkin Farm.*
- *Palmate newt and common frog populations associated with Tir Sion Shenkin Farm Pond.*
- *Breeding bird assemblage associated with woodland.*

Although mitigation is proposed the cumulative nature of the loss and damage of such locally distinctive habitats must be considered carefully when determining this application. Some of the habitat loss can be mitigated for but other elements are more difficult. For example removing mature beech woodland in favour of new planting is not suitable 'like for like' mitigation. Furthermore a road corridor of up 20m in width will represent a major fragmentation of habitat and represent a significant barrier to wildlife, and is difficult to mitigate against. Biodiversity is a material consideration in the planning process and the extent of loss of habitat proposed here is arguably against the principles of sustainable development. All developments should aim for a net gain for biodiversity but its difficult to see where benefits can be accrued as a result of this new access route proposal.

Breeding Birds

*I see no reason why a breeding bird survey was omitted from this study. It is likely the woodland and areas of acid grassland and heathland will support a number of UK and Local BAP species. Some such as skylark and lapwing were noted through the provision of anecdotal records. The omission of a bird survey leaves a gap in ecological information. Without a survey for breeding birds for this new proposal I believe the ecological assessment is incomplete. **I recommend a breeding bird survey commencing spring 2007, is conducted before the determination of this planning application.***

As you are aware there have been a number of public meetings arranged to discuss the proposal and this has led to a large number of questions and queries and I will contact you further regarding a number of these. However, one particular matter has been raised constantly and this relates to the construction of the new access road. It is claimed that certain information was given to residents when the public exhibitions were being held and this has further raised concerns relating to the aspect of the scheme.

16

SLR Consulting Ltd

14 December 2006

Although it is open to the Local Authority to attach appropriate conditions to any consent issued residents have now been assured that this matter would be taken up with you and considered as part of the current application I would, therefore, be grateful if further information could be provided regarding the construction details of the proposed road, the amount of material necessary, length of contract, numbers and types of vehicles involved and the route these would be brought in.

I appreciate that there is a substantial amount of information required, but I would be grateful for your urgent response so that a further consultation exercise can be undertaken.

Yours faithfully

Neil Boardman
TEAM LEADER (WEST)
PLANNING & ENVIRONMENTAL PROTECTION

THIS DOCUMENT IS AVAILABLE IN LARGER PRINT UPON REQUEST