

**EAST HERTFORDSHIRE DISTRICT
STANDON PARISH**

**PROPOSED BORROW PIT TO SERVE A10 BY-PASS CONSTRUCTION AT
PLASHES FARM, STANDON, HERTFORDSHIRE**

Report of the Director of Environment

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1. Purpose of Report

To consider planning application ref. 3/1391-01 and accompanying Environmental Statement for a proposed borrow pit for the A10 by-pass construction at Plashes Farm, Standon, Hertfordshire.

2. Summary

- 2.1 This is a major planning application involving mineral extraction accompanied by an Environmental Statement in accordance with Regulation 2 (1) of the Town and Country Planning (Environmental Impact Assessment)(England and Wales) Regulations 1999.
- 2.2 The application proposes the extraction of over 250,000 tonnes of sand and gravel from 4.5 ha of land near Plashes Farm, Standon, to serve the construction of the proposed A10 Wadesmill, High Cross, Colliers End by-pass. The proposal involves both mineral extraction and associated backfilling with inert waste arising from the road construction activities to achieve restoration back to an agricultural use. The erection of an aggregate processing plant, concrete batching plant and coated roadstone plant is also proposed towards the south west corner of the excavation area.
- 2.3 This application is similar to the previous application presented at 13 July 2001 Development Control Committee. The Committee resolved to defer that application in order to provide an opportunity for additional detailed information to be provided to enable members to fully evaluate the significant environmental impacts of the scheme proposed. The current application incorporates additional information in respect of lorry movements associated with the delivery of aggregate and backfilling for restoration. Additional information has also been included in respect of mitigating the impact on ecologically sensitive areas (including Plashes Wood SSSI), methods of dewatering and site restoration including independent advice on agricultural land quality.

- 2.4 Material extracted from the “borrow pit” would only be used for the construction of the A10 by-pass. The proposed programme of operations is scheduled to last for a period of 34 months, based on the current proposals for the construction of the by-pass with proposed site preparation works commencing in March 2002 and the completion of restoration (excluding aftercare) in December 2004.
- 2.5 Due to the proximity of the application site to the proposed line of the by-pass, it is proposed that no additional traffic movements would arise on the public road system. The proposed vehicle movements at the site are approximately 30,000 lorry movements. The proposed hours of operation would be 0600-1800 Monday to Friday and 0600-1300 on Saturdays.
- 2.6 The site lies within a Landscape Conservation Area, in a rural area beyond the Green Belt. Plashes Wood Site of Special Scientific Interest is in close proximity to the site.
- 2.7 The main issues in this instance relate to:-
- the need for the borrow pit, balancing this need against strategic mineral planning policy for mineral supply and any associated detrimental effects of the development;
 - the proximity of existing mineral sites to provide materials to serve the construction of the by-pass measured against the benefits of removing lorries, delivering and receiving materials from the borrow pit from the public road network ;
 - the landscape and visual amenity implications, including the site’s location within a Landscape Conservation Area;
 - the potential impact on groundwater resources;
 - the noise, dust and other environmental impacts of the proposal.

3. Conclusion

The report concludes that subject to the prior conclusion of a Section 106 to ensure that:

- (i) the extraction of mineral only commences following evidence that the applicant has secured contracts for the backfilling of the application site using material arising from the construction of the by-pass in accordance with an approved restoration plan (being supplied to and approved in advance by the Mineral Planning Authority);
- (ii) the provision that only internal haul routes will be used for all vehicles associated with the development, and;
- (iii) a financial bond provision to secure successful timely restoration;

the Director of Environment should be authorised to grant planning permission reference 3/1391-01 for the Borrow Pit to serve the proposed A10 by-pass construction and that conditions should be attached relating to:

- time of commencement;

- removal of permitted development rights;
- time limits for completion;
- restriction of site as a borrow pit for the A10 by-pass;
- removal of plant;
- methods of working;
- site layout;
- restoration and landscaping;
- soil handling, soil stripping, soil storage;
- hours of operations;
- dust propagation;
- noise and noise monitoring;
- material types for backfilling;
- access restriction;
- archaeology;
- protection of water resources and SSSI;
- maintenance of the haul road;
- protection measures for the rights of way;
- periodic groundwater, habitat monitoring and protection, and;
- aftercare.

1. Background

- 1.1 The A10 Wadesmill, High Cross by-pass is part of the Government's targeted programme of road improvements and construction is scheduled to commence in spring 2002. At the time of writing a contractor has not been appointed and the detailed design of the scheme is not known, however, the construction of the by-pass will require the importation of sub-base (Type 1 aggregate), coated roadstone and concrete. It is also likely that a granular capping material will also be required for the road but this will depend on the appointed contractor's pavement design. Five nominated contractors have been elected by the Highways Agency to prepare design and build tender documents by 20 November 2001. It is likely that the Highways Agency will appoint the successful contractor in February 2002.
- 1.2 The primary purpose of a borrow pit is to provide aggregate minerals over a limited period for use in a specific construction project which will usually be close to or contiguous with the site. In this case the proposed borrow pit would supply aggregate, concrete and coated road stone for the construction of the A10 by-pass, with surplus excavated spoil arising from the road construction being utilised for the borrow pit's restoration.
- 1.3 This is a new application, albeit similar to an application presented at 13 July 2001 Development Control Committee. The Committee resolved to defer that application in order to provide an opportunity for additional detailed information to be provided to enable members to fully evaluate the significant environmental impacts of the scheme proposed. That application is now the subject of an appeal for non-determination. The current application incorporates additional information in respect of lorry movements associated with the delivery of aggregate and backfilling for restoration. Additional information has also been included in respect of mitigating the impact on ecologically sensitive areas (including Plashes Wood SSSI), methods of dewatering and site restoration including independent advice on agricultural land quality.

2. Description of the site and proposed development

- 2.1 This is a major planning application involving mineral extraction accompanied by an Environmental Statement in accordance with Regulation 2 (1) of the Town and Country Planning (Environmental Impact Assessment)(England and Wales) Regulations 1999.
- 2.2 The application site, currently used as arable farm land, lies within East Hertfordshire District and is located to the east of the existing A10, north of High Cross and south-east of Colliers End. The site has an area of 7.34 hectares. The northern boundary of the site adjoins Plashes Farm, the southern boundary adjoins an area of land previously raised with inert waste to bring about an agricultural improvement and the western edge opens onto agricultural fields. Adjacent to the north-western boundary of the site is Plashes Wood, a designated Site of Special Scientific Interest (SSSI). To the north and east are Plashes Farm Meadow and Pond and Plashes Farm Fish Ponds, which are cited as having ecological value. To the south, between Gore Lane and the site are

Blackey Mead Wood and Badgerseye Plantation, again, both being areas with ecological value.

- 2.3 Geological information accompanying the application indicates that the proposed extraction site has an underlying geology comprising an upper 5 metre average depth of chalky sand, gravel and clay followed by a London Clay seam of approximately 20 metres to upper chalk. The average thickness of top and sub-soils is approximately 0.75 metres.
- 2.4 The proposed development involves the extraction of approximately 250,000 tonnes of sand and gravel to serve the construction of the proposed A10 Wadesmill, High Cross, Colliers End by-pass. This incorporates both mineral extraction and associated backfilling with inert waste arisings from the road construction activities to achieve restoration to back to an agricultural use. The materials would be transported from the site via a haul road linking the south west corner to the road construction area.
- 2.5 Sand and gravel would be extracted from a 4.54 ha excavation. Positioned at the base of the quarry, in the south west corner, a gravel screening and washing plant, a concrete production plant and a roadstone coating plant are proposed. Material extracted from the “borrow pit” would only be used for the construction of the A10 by-pass. A number of soil storage mounds would need to be created around the excavation areas and these would vary in height between 3-4 metres.
- 2.6 As evidence suggests that de-watering of the excavation would be necessary, it is proposed to construct 3 silt lagoons and an additional settlement lagoon into the clay at the base of the void. All water would stand in the additional settlement lagoon in the south east corner of the site to allow final settlement of any suspended solids before being pumped from the south east corner overland for discharge directly into the Barwick Tributary. Furthermore, the applicant proposes to construct an engineered clay bank to be constructed against the western perimeter of the excavation area as the work proceeds in the first phase. The purpose of this perimeter work is to prevent dewatering operations at the face of the workings from lowering the water table outside the extraction area. Additional clay bunding may be required against the northern edge of the extraction face, however, this will be determined from the results of groundwater and SSSI monitoring carried out as extraction progresses.
- 2.7 The void created by the mineral extraction would be progressively filled to pre-existing levels only with inert surplus spoil excavated from the by-pass construction works. It would be brought by dump truck along the new haul road from the road construction site to the west of the site. Once filling is complete the subsoils and topsoils would be re-spread and the whole area would be restored to agricultural land. The applicant has stated that the overall agricultural land capability of the site is likely to be improved.
- 2.8 The proposed programme of operations is scheduled to last for a period of 34 months. This is based on the current proposals for the construction of the by-pass with proposed site preparation works commencing in March 2002 and the completion of restoration (excluding aftercare) in December 2004.

- 2.9 Due to the proximity of the application site to the proposed line of the by-pass, it is proposed that no additional traffic movements would arise on the public road system. The applicant has established contact with the five nominated road contractors, who have confirmed that an internal haul route would be constructed along the full length of the by-pass as soon as possible to enable dump trucks and other plant to travel along the road under construction without travelling on the public highway. Vehicle movements at the site would be approximately 30,000 lorry movements. The proposed hours of operation would be 0600-1800 hours Monday to Friday and 0600-1300 hours on Saturdays.
- 2.10 The site lies within Landscape Conservation Area, in a rural area beyond the Green Belt. Plashes Wood Site of Special Scientific Interest is in close proximity to the site. During archaeological investigations, a pit dating to the third millennium BC was excavated and a concentration of late Iron Age to later Roman activity was found.
- 2.11 The application has been accompanied by an Environmental Statement, which sets out the following:
- description of development;
 - alternatives;
 - description of aspects of environment;
 - information and data required to identify and assess the main effects which the development is likely to have on the environment;
 - likely effects of development on environment;
 - measures envisaged to avoid, reduce and remedy significant environmental effects;
 - measures envisaged to avoid, reduce and remedy lesser environmental effects.
- 2.12 The likely effects of the development are highlighted as being the impact on the SSSI and other ecological habitats, impact on watercourses, impact on public rights of way, impact on the Landscape Conservation Area, impact on existing agricultural land, proximity to farm buildings, impact upon the Listed Buildings, noise and dust impacts and impact on natural heritage.

3. Consultations

- 3.1 A summary of all consultation responses is attached as Appendix 1. Due to the timing of the application not all consultation responses have been received in writing at the time of writing the report.
- 3.2 East Hertfordshire District Council has no objections subject to the following:
- the construction of the clay bank would require careful monitoring to ensure it functions properly. The submitted details state that there will not be any adverse impact on the SSSI and request the County Council check this point carefully;
 - it may be appropriate to allow for new hedgerow and tree planting to link the adjacent woodlands and create more attractive footpath links. Advance screen planting on the boundaries would also help reduce the impact of the excavation with height restrictions imposed to limit the impact of stored or deposited material on site;

- that suitable controls are imposed to ensure that the extraction of material is limited only to the construction of the A10 by-pass with appropriate trigger dates to ensure restoration is by fill from the road construction project only to return the site to an agricultural use.
- 3.3 The Environment Agency has no objection, subject to the imposition of conditions relating to the location of plant, surface drainage, surface water source control measures, a buffer strip to protect the Plashes Pond Alert site, scheme for dewatering and the advance approval of a scheme to control surface water discharge.
- 3.4 Vivendi Water have no objection subject to any potential perforation of clay through to the chalk aquifer being sealed with an impermeable clay layer reconstructed to a minimum thickness of 1 metre. Additionally, any water used for the processing plant should come directly from the mains supply and not from chalk abstraction.
- 3.5 The Highways Agency state that overall it is their view there is considerable merit in proposal as the development would provide construction materials without the need for the vehicles delivering these materials to travel on the local road network and at the same time providing a location for the disposal of surplus inert material. However, at this time there is no confirmation of the type and quantity of materials that will be required for construction, nor the quantity of surplus material requiring disposal, until a contractor has been appointed.
- 3.6 English Nature have recommended that subject to the imposition of conditions relating to the construction of the clay bund, water being pumped from the site with the suspended solids removed and no access or storage of materials takes place within the SSSI, then they are satisfied that the special interest features of the SSSI are not likely to be adversely affected by the proposed development.
- 3.7 The County Council as Highways Authority is concerned to ensure that there is no possibility of mineral extraction or importation of restoration material after the A10 by-pass is opened to traffic and which would involve the use of local roads by haulage vehicles. Nevertheless, should planning permission be granted, conditions are recommended that materials are solely used in connection with the construction of the by-pass, evidence that material will be available for restoration purposes, the advance construction of a haul route, the restrictions of vehicles to the specified haul route and the prevention of vehicles exceeding 3.5 tonnes gross vehicle weight from using Gore Lane
- 3.8 Department for Environment, Food and Rural Affairs (DEFRA) do not wish to make detailed comments on the principle of the application, however has recommended a conditions be attached to protect soil resources at the site and ensure that adequate restoration is achieved.
- 3.9 Built Environment and Management Services (BEAMS) have provided comments in respect of the impact the proposed development would have on the setting of the Plashes Farm listed buildings. The site currently maintains a secluded setting within farmland and woodland areas and the setting of the buildings would have changed little over the centuries. The setting of the listed buildings should not be dismissed as

the sand and gravel extraction would have a negative impact on Plashes Farm. BEAMS recommend that the application site is re-located further south so that the appropriate setting of the historic site is maintained.

3.10 Thames Water, The County Archaeologist, Herts Biological Record Centre, The County Council's Rights of Way Officer, Herts and Middlesex Badger Group, A Consultant Entomologist and the County Council's Noise Consultant have no objection subject to conditions including:

- the advance submission of drainage details (Thames Water);
- the prior submission of an additional written scheme of investigation and implementation of a programme of work (County Archaeologist);
- that there is no water discharge into any existing ponds, that a buffer zone is created to protect the ponds from the workings, that the impact of the Borrow Pit is monitored on surrounding areas and habitats and that there is an extension to the clay bund should there be any apparent problems with the water supply to the springs north of the pit; (HBRC);
- that footpaths 42 and 43 are fully protected from the workings including fencing, signing and buffer zones where appropriate (Rights of Way);
- the relocation of the haul route to protect existing badger setts (Badger Group);
- advance baseline information being gathered in advance of the development with periodic monitoring to measure the impact upon invertebrate fauna (Entomologist);
- that conditions are imposed requiring 55dB noise limits for normal working and 70dB limits for temporary working at noise sensitive properties, in accordance with Mineral Policy Guidance Note 11. Should night time working be required then potential noise disturbance may be greater (Noise Consultant).

3.11 Stort Valley Friends of the Earth and Standon and Puckeridge Amenities Society object to the application. The objections can be summarised as being that:

- damage will be caused to the SSSI from dust, vehicular pollution and waste water run-off, which is contrary to Section 74 of the Countryside and Rights of Way Act. Furthermore concerns have been raised regarding the effect on groundwater and levels of water purity, which feed the ponds, and the possible damage to the archaeological site (Stort Valley FOE);
- the impact of the backfilling upon the water table and the detrimental impact of the development upon Plashes Wood SSSI. Concern has also been raised in respect of the quality of information provided in the Environmental Statement (Standon and Puckeridge AS).

3.12 A total of 49 properties were consulted on the application and at time of writing 1 letter has been received objecting to the application. The main issues of concern can be summarised as:

- the impact upon Plashes Wood SSSI;
- the impact on Barwick Tributary;
- contamination to the chalk aquifer;

- lorry movements on Gore Lane;
- noise and dust impact;

4. Planning Considerations

4.1 The principal issues to be taken into account in determining this application are:-

- the need for the borrow pit, balancing this need against strategic mineral planning policy for mineral supply and any associated detrimental effects of the development;
- the proximity of existing mineral sites to provide materials to serve the construction of the by-pass measured against the benefits of removing lorries, delivering and receiving materials from the borrow pit from the public road network ;
- the landscape and visual amenity implications, including the site's location within a Landscape Conservation Area;
- the potential impact on groundwater resources;
- the noise, dust and other environmental impacts of the proposal.

Planning Policy and Guidance

4.2 Need: The construction of the A10 by-pass will require significant amounts of materials for construction work. The actual net needs, which can only be provisional at this stage, are estimated as 230,000 tonnes of aggregate for pavement works and structures, including Type 1 sub base aggregate, coated road stone aggregate, drainage materials and potentially a capping layer. The potential yield of sand and gravel from the application site, without being processed, is estimated at over 250,000 tonnes which suggests that there are sufficient mineral deposits to supply sand and gravel based construction materials for the whole road scheme. Subject to advance processing, the mineral gained from the borrow pit would therefore meet the aggregate requirements for the new road, however one of the main issues revolves around whether the justification for the borrow pit exists.

4.3 The Hertfordshire Minerals Local Plan 1991 – 2006 (MLP) does not contain any specific policy in favour of borrow pits as the plan is intended to meet all market requirements for mineral supply over the plan period. The supporting text of the Minerals Local Plan confirms that when planning applications for borrow pits are submitted separately from the highway scheme, they should be considered on the same basis as applications for longer term workings.

4.4 Policy 1 of the Minerals Local Plan provides that planning permission for the extraction of proven economic mineral reserves will be granted to ensure that adequate supplies are available to meet the County's agreed apportionment of regional supply, subject to other policies of the plan. The County Council will normally grant planning permission sufficient to ensure the maintenance of at least a seven-year landbank of sand and gravel reserves, throughout the plan period, consistent with this apportionment.

- 4.5 Hertfordshire's required landbank of sand and gravel is calculated to be 7 years x 2.4 million tonnes (SERPLAN apportionment) = 16.8 million tonnes. At the end of August 2001, the estimates indicate that Hertfordshire's permitted reserves are in the order of 15.15 million tonnes (mt) of sand and gravel. This equates to approximately 6.3 years reserves based on an Hertfordshire's annual 2.4mt apportionment. The reserves at Plashes Farm would add 0.1 years to the landbank.
- 4.6 This figure does not include reserves at the two preferred areas identified in the Minerals Local Plan (Policy 2 - land at the former Napsbury Hospital site and land at the former Hatfield Aerodrome), which have yet to come forward. Reserves at these sites are estimated at 11mt, which means that the total potential provision for the county is 11 years.
- 4.7 There are two existing sand and gravel extraction sites, Westmill Quarry and Rickneys Quarry in close proximity to the southern point of the proposed line of the by-pass. Both quarries are operational, although at November 2000, Rickneys Quarry only had permitted sand and gravel reserves of around 80,000 tonnes. However Westmill Quarry, which has its access located approximately 2.5km from the southern point of the proposed by-pass, has an estimated sand and gravel reserve in excess of 2mt. Current figures would therefore indicate that there are sufficient mineral resources at permitted sites in close proximity to the proposed by-pass to cater for the construction of the by-pass.
- 4.8 At this stage, in advance of the award of the contract for the road, it is impossible to predict with any certainty where the contractors would seek their supplies. In this respect, should planning permission be granted for the proposed borrow pit at Plashes Farm, there is no guarantee that the site would be utilised to supply construction materials for the by-pass.
- 4.9 The applicant has established contact with the five nominated contractors who are bidding for the design and construction of the by-pass. The deadline for tenders to be submitted is 20 November 2001 and the Highways Agency have confirmed that the contract to contract the A10 by-pass is likely to be awarded to one of the five contractors in February 2002. The applicant has established contact with all five of the prospective contractors and information has been submitted confirming that a haul road will be constructed along the full length of the proposed by-pass at an early stage in the construction process. This will enable dump trucks and other plant involved in the project to travel along the proposed by-pass route without the need for vehicles to travel on the public highway. It is therefore feasible for the lorries transporting materials from the proposed borrow pit site to reach to the various points of the by-pass construction, and delivering surplus road excavation spoil for backfilling purposes, without the need to utilise the local road network.
- 4.10 Minerals Local Plan Policy 4 states, inter-alia, that planning permission outside the identified areas will normally be granted where the landbank is insufficient and there is a need for the proposal, which cannot be met from the identified areas. No planning applications have been submitted for either of the preferred areas at this time. Given the proposed timescale for the by-pass it is unlikely that they could meet its needs even if an application was forthcoming in the near future. However, the Policy goes on to

say that planning permission will not normally be granted where the proposals would conflict with the other policies of the Plan. The principle of establishing borrow pits to cater for a specific mineral supply is established, and could therefore override this policy presumption, provided that the benefits of providing material for the road would outweigh any harm caused by opening a new extraction site and the environmental effects associated with that.

- 4.11 Landscape and the Countryside: Under Policy RA11 of the adopted East Hertfordshire Local Plan 1986-2001 the application site is designated as a Landscape Conservation Area. The emerging district local plan (East Herts Local Plan Pre-Deposit Consultation March 1999) confirms that policy RA11 will remain until such time as the emerging landscape appraisal has been carried out. Policy RA11 states, inter-alia, that planning permission will not normally be granted for development which will have a detrimental effect on the landscape, or detract from the visual quality of landscape conservation areas. MLP Policy 9 states that, within landscape conservation areas, planning applications and associated landscaping and restoration schemes will be expected to include proposals which will result in a landscape which at least matches the existing quality of the area and preferably offer clear benefits and improvements to it.
- 4.12 Although individual trees or hedgerows will not be directly affected by the proposal, it is considered that the Environmental Statement inadequately addresses landscape character and visual impacts. Nevertheless, while the development would have no major long term negative impact on the landscape character of the area as a whole, the proposal is not fully in accordance with MLP Policy 9 (landscaping works) or the emerging landscape strategy for the area since it will not conserve or improve upon the existing landscape value. In respect of the visual impact, the proposed haul route, passing up the slope from the proposed by-pass, would cause the primary visual impact. The route's incline may lead it to form a focal point in the landscape for people travelling north on the A10 between High Cross and Gore Lane. To mitigate this impact the haul route could be located by the southern edge of Plashes Wood, however, this would conflict with advice received from the Hertfordshire and Middlesex Badger Group and would bring the haul route much closer to the SSSI.
- 4.13 Mitigation of the detrimental visual impact, in respect of views from the west of the site from the rights of way, could be partially achieved through advance planting of trees, hedgerow replacement and soil bund seeding and management, however the applicant has not provided details of how this will be achieved. In any event, given the temporary period of the operations, any planting proposals would only be of limited benefit.
- 4.14 The proposal does not strictly accord with the landscape policies contained within the District Local Plan and Minerals Local Plan. However, mineral can only be extracted from where it occurs and in view of the temporary landscape impact and the restoration back to agriculture, then a refusal solely on landscape grounds is not considered justified.
- 4.15 In relation to rights of way, a bridleway and a footpath would be directly affected by the proposal. The first, bridleway 43, passes along the access to Plashes Farm, to the

west of the proposed site. The second, footpath 42, stretches from Gore Lane to Colliers End and will eventually be bisected by the A10 by-pass when constructed. Both the bridleway and the footpath would be affected by the proposed borrow pit haul route bringing about potential conflict between footpath users and lorry movements. The applicant has confirmed that warning signs and a fence will be erected. Buffer zones, fencing and appropriate warning signs would be required to protect footpath and bridleway users from the mineral workings and associated lorry movements. In accordance with MLP policy 14 (Rights of Way) it would therefore be possible for the applicant to protect existing rights of way from the development, although no detailed proposals have been submitted.

- 4.16 Water Resources and Ecology: Plashes Wood SSSI is noted for its woodland type, cited as being a rich and diverse woodland site with a rich ground flora and structural and species diversity, reflecting the variation in soil types from damp heavy clays to lighter gravels on the higher ground. The geology of the application site consists of sand and gravel underlain by clay beneath a relatively shallow layer of topsoil, subsoil and overburden. The base of the mineral/top of the clay deposit gently slopes from above 105 metres AOD¹ in the north of the site to less than 101 metres at the southern end. The applicant has inferred from this data that groundwater will flow through the base of the sand and gravel above the clay, within the extraction area, from the north to the southwest, along the line of the bridleway.
- 4.17 In consultation with English Nature the applicant has carried out a groundwater monitoring exercise which revealed that groundwater from the proposed excavation area does not flow into the SSSI. Nevertheless, supported by advice from English Nature, the applicants propose to construct an engineered clay bank along the western perimeter of the excavation area as work proceeds. The clay bank will be constructed using clay from beneath the sand and gravel horizon with the purpose being to prevent dewatering operations at the excavation face from lowering the water table outside the application site. To protect Plashes Wood SSSI, English Nature have confirmed that the imposition of a clay bank is required to ensure there is no drawdown of the water table from dewatering or flooding of the land by water impounded by the excavation works.
- 4.18 The clay bank will be constructed from clay derived from the base of the excavation area along a 32 metre strip along the western perimeter of the site. This would be undertaken in the initial phase of the development. Extraction of the clay is likely to require dewatering of the excavated strip. The clay would be placed in compacted layers along the line of the western face with the height being fixed to the minimum of the summer watertable. The work of excavation and the clay bund construction will be a continuous operation so as to reduce the dewatering time as much as possible. Following the bund's construction the dewatering operation may cease. Excavation would then commence at the eastern end of the second phase to the south of the site and progress westwards, with the excavation being dewatered as necessary. English Nature are satisfied that the construction of the clay bund should prevent any adverse impact upon Plashes Wood SSSI. This should also address the concerns the consultant entomologist has in respect of the drying out of the woodland floor, which may negatively impact on the invertebrate fauna.

¹ Above Ordnance Datum (sea level)

- 4.19 Nonetheless, as an additional security, the applicant has confirmed that an additional clay bund, similar in configuration to that created against the western face, may be constructed along northern extraction faces as the development proceeds. Whether additional bunding will be required will be determined by monitoring groundwater from existing dipwells and tree and flora surveys of the SSSI. Should groundwater readings indicate extraction is causing the drawdown of water supporting the SSSI, then additional bunding would be required.
- 4.20 The water authority is concerned that the clay base is at risk of being perforated, should the London Clay base be thinner than the applicant has quoted. The application site is located within the outer groundwater protection zone of Thundridge Pumping Station, a public water supply comprising three abstraction boreholes. The water authority have recommended that if any perforation of the clay occurs a replacement impermeable clay layer should be re-constructed to a minimum thickness of 1 metre to ensure pollution to the chalk aquifer is prevented.
- 4.21 Although there are no records of features of ecological significance within the application site there are a number of sensitive sites in the area surrounding the site. These include “Plashes Farm Meadow and Pond” and “Plashes Farm Fish Ponds” to the north east of the site. Concern had been raised in respect of the potential impact upon the (said to be medieval) fish ponds. From borehole data submitted by the applicant, there is indication that the ponds stand directly above a clay base. In accordance with ecological advice received it is important therefore that a buffer zone of 20 metres is maintained between the ponds and the extraction area to ensure that the ponds are not affected. Should planning permission be granted, a condition could be imposed to cover to this issue.
- 4.22 A habitat survey carried out in March 2000 highlighted significant features to the north and east of the site and immediately to the west and south of the area, which could be affected by excavation and soil storage. The survey identified remnant stands of veteran oak pollards/hornbeams and some relic acid grassland, with a large pond and associated vegetation and old trees. Furthermore, to the south of the site, there are other Environmental Sites namely Badger’s Eye Plantation, Track by Badger’s Eye Plantation and Blackey Mead Wood. The environmental record survey describes the plantation as being “an ancient broad-leaved woodland with some broadleaf plantation” whilst the Wood is described as an “ancient semi-natural broad-leaved woodland”. Both areas contain protected species.
- 4.23 The applicant has stated that the habitats adjacent to the application site and the Badger’s Eye Plantation, track and Blackey Mead Wood, including the badger population, would not be affected by the development. Although the information supporting this statement is limited, the County Council has not received any objection from the County’s Head of Ecology, nor the Herts and Middlesex Badger, Consultant Entomologist or Bat Groups, subject to protection measures being put in place. Nevertheless, the applicant has agreed to carry out groundwater monitoring on a regular basis to ensure that water is not depleted from ecologically sensitive areas as extraction progresses.

- 4.24 The River Rib flows north to south approximately one kilometre east of the application site. East of the point where the farm access road leaves Gore Lane, the Barwick Tributary, a tributary of the River Rib, follows the line of the lane towards Barwick where the tributary joins the river. Two branches of the Barwick Tributary join at the point where the farm access road leaves Gore Lane. One branch joins from the south west and the other run north to south between the farm access and the proposed line of the by-pass. The proposed borrow pit haul route will cross this branch. The applicant states that there will be no adverse impact upon existing water courses as the restored landform of the site will be as existing, that the agricultural drainage systems of the area will not be affected and there will be no sealing or diversion of watercourses or new drainage outfalls. Subject to conditions to protect the water environment being imposed to any grant of planning permission, the Environment Agency, Thames Water and Vivendi Water do not object to the proposed development.
- 4.25 Archaeology: An archaeological evaluation has already been carried out at the site. Several phases of archaeological activity were identified by investigations of an area larger than that which is to be affected by the proposed development. Within the proposed extraction site a pit dating to the third millennium BC was excavated and a concentration of late Iron Age to later Roman activity was found. The findings of an archaeological investigation revealed that the site has the potential for furthering knowledge of Roman rural settlement layout and economy. A Roman kiln has already been identified and if further kilns are present this will aid the understanding of the Hadham pottery industry. Should planning permission be granted, a condition should be imposed to secure a further programme of work in accordance with a written scheme of investigation. This accords with the aims of Policy 24 of the MLP
- 4.26 Highway and Traffic Implications: MLP Policy 18 sets out the Council's policy with regard to the transport of materials to and from workings. It states that planning permission will normally only be granted for the extraction of minerals which are capable of being transported from sites via primary and distributor roads. The suitability and, where necessary, capacity of available access routes to serve areas of reserves will also be taken into account. The proposal is that the mineral extracted from the proposed borrow pit and the surplus spoil required for its restoration would be limited to facilitate the construction of the proposed by-pass. Over the 34 month period available for the development, there would be approximately 30,000 lorry movements delivering aggregate, concrete and coated roadstone from the excavation area to the road under construction and transporting surplus spoil from the road to complete the filling of the void created by the aggregate extraction. The Environmental Statement considers three alternatives, which are:
- alternative ways of implementing the borrow pit within or near to the application site;
 - alternative ways of providing a ready mix concrete plant and coated roadstone plant for the construction and surfacing of the by-pass, and;
 - the provision of processed aggregate for by-pass construction from an existing sand and gravel working rather than from the proposed borrow pit.
- 4.27 None of the alternatives were considered suitable by the applicant as, in summary:

- the movement of soils for storage nearer to the by-pass would create additional movements and any changes in the methods of working and positioning of the proposed plant would prolong the visual impact and causing dump trucks to travel unnecessarily across sensitive soils resources;
- there are no existing ready mixed concrete and coated roadstone plants along the line of the proposed by-pass. It would therefore be necessary to import concrete and roadstone to the construction site from an established plant which would involve additional movements on an already congested A10 and local road networks;
- there are no existing sand and gravel workings, neither, as far is known, are there any alternative locations for borrow pits along the line of the road. If the aggregate required for the by-pass were brought in from an existing sand and gravel working then this would involve additional movements on the already congested A10 and local road networks.

- 4.28 Although the detailed design and method of construction for the by-pass has not been determined, advice received from the Highways Agency has confirmed that the proposed road would have two construction access points, one at the northern most point, at the junction of the A120, and one at the southern most point linking into the existing A10 north of Ware. Information received from three nominated contractors confirms that the borrow pit development would potentially greatly reduce the number of lorry movements on the local road network. This has been supported by the confirmation that aggregate would be transported from the borrow pit along the route of the by-pass on graded temporary haul roads, as would surplus spoil used to restore the borrow pit.
- 4.29 Subject to the detailed methods of construction once the tender is let, the Highways Agency has indicated that bulk excavation works would have to be carried out before the surfacing of the road is commenced. The applicant has confirmed that the nominated contractors would create a haul route at an early stage in the by-pass construction works. This could coincide with the bulk excavation works, which would suggest that is practicable to restrict the transportation of materials to internal haul routes. This would be in accordance with MLP policies 18 (transport to and from workings) and 26 (landfill).
- 4.30 In the event that internal haul routes are constructed it is unlikely that a contractor would want to transport surplus spoil to sites other than the borrow pit (or the proposal for environmental bunds which are being considered elsewhere on this Agenda), as this would enable the use of non-taxed vehicles, thereby reducing associated transportation costs. Nevertheless, at this stage without knowing the details of the road scheme, the applicants have agreed to the imposition of a planning condition or Section 106 legal agreement clause requiring that all lorry movements take place via the haul road connection to the line of the by-pass.
- 4.30 Materials such as bitumen, cement and possibly granite could need to be imported to the borrow pit to supply the proposed concrete and coated roadstone plant. The applicant has not stated what quantities of such materials would be required, except to say that such materials would have to be imported in any case and additional lorry

movements are not likely to be any greater than would be the case with alternative arrangements. A clause in a Section 106 legal agreement could ensure that lorries delivering such materials could only travel to the borrow pit site via the haul route created for the by-pass construction.

- 4.31 Subject to a Section 106 agreement ensuring that associated lorries utilise the internal haul routes, the proposal is considered to be in accordance with MLP policy 18.
- 4.31 Restoration: The applicant has confirmed that the void created by the proposed extraction would be progressively backfilled to existing levels with surplus spoil arising from the road construction site. The Highways Agency was concerned that the amount of inert spoil arising from the road project is uncertain. However, given that a maximum void of 168,000m³ would be created through the mineral extraction, the borrow pit is potentially capable of being backfilled with material solely arising from the road scheme.
- 4.32 Until the road contract details are finalised it is not clear at this stage when the surplus spoil would be delivered to the borrow pit site or the total amount available. This issue could be addressed by a Section 106 legal agreement to ensure that the extraction of mineral only commences following evidence that the applicant has the contractual means to backfill using surplus material from the by-pass construction in accordance with an approved restoration plan (being supplied to and approved in advance by the Mineral Planning Authority). This could include limiting the extent of extraction to the available amount of fill.
- 4.33 Once filling is complete the subsoils and topsoils, previously stripped and separately stored, would be replaced to return the land to the same agricultural capability. Acting on the advice of DEFRA, an Agricultural Land Classification Survey has been carried out to correctly identify soil resources so that they are appropriately stripped, stored and restored, should planning permission be granted. The applicant provided accurate information relating to soil types for both the borrow pit site and the soils expected to be utilised for restoration purposes. The ALC survey has revealed that the majority of the application site is of a grade 3b capability, therefore, not constituting the best and most versatile agricultural land. Provided that surplus spoil is delivered to the site at such a time to be used to backfill the mineral void and that soils are handled and placed correctly, it is considered that the site is capable of being restored to an agricultural use of a similar standard, if not improved. Notwithstanding this, a restoration bond or similar measures may be appropriate to ensure successful restoration is achieved.

Other Considerations

- 4.34 Impact Upon Plashes Farm Listed Building: The barn and stables adjacent to Plashes Farm are Grade II* Listed Buildings and the farmhouse is a Grade II Listed Building. MLP Policy 13 (historic buildings) states, inter-alia, that planning permission for mineral working will normally be refused where this would adversely affect the setting of a statutorily listed building. The development will take place over a period of 34 months and the proposal does provide for restoration back to an agricultural use. Therefore, in the long term the setting of the listed building is assured.

- 4.35 The key issue then is that of the impact during the life of the proposed extraction and associated restoration operations. It is also proposed to commence extraction at the southern end of the site furthest away from the listed buildings, thereby allowing the plant to be erected at the furthest point from the farm house and stables. Nevertheless the sand and gravel extraction will have a negative impact on the setting of Plashes Farm and advice received does suggest that the northern boundary of the application site will cause detriment to the appropriate setting for what is a historic site. The proposal in its current form will adversely affect the setting of the Plashes Farmhouse barn and stables and on the face of it conflicts with MLP Policy 13. However, as the proposed development is of a temporary nature, there will not be any long term detrimental impact of the listed buildings' setting. In addition, should the northern phase of the extraction area not be required to be worked (see paragraph 4.32), this would leave a larger 'buffer zone' further assisting the mitigation of the impact upon the Plashes Farm buildings.
- 4.36 Noise: MLP Policy 15 states that the County Council will not normally refuse on noise grounds applications for mineral workings where the applicant is able to demonstrate that no significant noise intrusion will arise from the proposed works. The proposed development will cause additional noise during the period of operations, compared to the existing noise experienced from agricultural activities. Other than walkers and riders using the footpath and bridleway, the nearest noise sensitive locations are Plashes Farmhouse and Stable Cottage. The greatest impact of noise upon the farm will occur when soils are being stripped and stockpiled at the northern boundary of the application site and, at a later date, when stockpiled soils are replaced for final site restoration.
- 4.37 Specialist advice has indicated that the distance of the workings is such that conditions, reflecting the guidance contained within Mineral Policy Guidance Note 11 (The Control of Noise at Surface Mineral Workings), could be imposed to limit the maximum noise levels experienced at the farm for normal and temporary working (such as the construction of soil mounds). There is, however, potential for the occupants of the farm buildings to be disturbed if works are carried out outside of daytime working hours. It is not clear at this stage whether the proposed road works would require a night time supply of materials to be delivered, which would bring about adverse noise conditions at the noise sensitive properties. In addition it has been recommended, by the County Council's noise consultant, that the noise emitted from vehicle reversing alarms should be controlled.
- 4.38 Dust: As a result of the expected damp working face of the site, resulting from projected groundwater flows, the applicant has stated that it is unlikely that operations will generate a significant amount of dust. Notwithstanding the fact that groundwater flows may be impeded by the construction of the clay bund, vehicles travelling over the proposed haul route, joining the borrow pit to the line of the by-pass, do have the potential of causing a major dust nuisance. The applicant has not addressed this, however, in accordance with Policy 19 of the MLP, the emission of dust could be controlled through a suitable planning condition.

5. Conclusions

- 5.1 Permitted reserves in the County are currently only marginally below the level required to maintain a seven year landbank. The MLP contains no policies in favour or against borrow pits and the plan is intended to meet all market requirements for minerals over the plan period. In order to satisfy Policy 4 of the Minerals Local Plan 1991 – 2006 (MLP), the proposal would need to demonstrate that it does not conflict with the other policies of the Plan.
- 5.2 The proposed development would result in the extraction of sand and gravel from a archaeologically sensitive area, being surrounded by ecologically important sites. Groundwater flows would have to be diverted for the period of the development and mitigation measures put in place to protect an adjacent SSSI and other sensitive features dependant on the continuity of water supply. Following the deferral of a similar planning application by the Development Control Committee in July 2001, the applicant has provided additional details demonstrating that there is unlikely to be any detrimental impact on groundwater and the surrounding area. The method of constructing the clay bank along the western perimeter has been addressed, and subject to its prompt construction to specified standards and periodic monitoring programme put in place this should ensure there is no adverse impact upon watercourses or impact on the sensitive ecological balance of the surrounding areas. Subject to appropriate conditions being imposed, English Nature and HBRC have supported this.
- 5.3 The proposed development will cause harm to an area of acknowledged landscape importance and adversely affect the setting of listed buildings. However, this would be on a temporary basis and has to be balanced against any benefits that would arise from the proposal.
- 5.4 It is accepted that the borrow pit would have the potential to reduce lorry movements on the public road network, provided that adequate internal haul routes are constructed early and made available throughout the life of the development. The applicant has sought to address this issue by providing information from the five nominated by-pass contractors, confirming that, should the proposed Borrow Pit be utilised as a source of aggregate, a graded haul route would be provided along the length of the proposed by-pass. This would therefore enable lorries supplying aggregate or delivering spoil for restoration purposes to reach the Borrow Pit without the need to travel on the local road network. Subject to appropriate restrictions being put in place through planning conditions and a Section 106 agreement, it is therefore possible for lorries to be confined to internal routes.
- 5.5 In advance of the contract being awarded for the A10 by-pass construction it could be argued that is slightly premature to consider the application, however the applicant has provided a degree of certainty that any adverse impact on the environment caused through both the direct impact of the development and indirectly through lorry movements on local roads, can be mitigated. On balance, the provision of positive benefits from removing lorries from the local road network, whilst ensuring that there is sufficient mitigation in place to be certain that there will be no adverse impact on surrounding sensitive areas, outweighs any temporary landscape harm or adverse affect upon the listed buildings. It is therefore concluded that planning permission should be granted subject to conditions and an appropriately worded S106 legal agreement.

5.6 The Section 106 agreement should ensure that the extraction of mineral only commences following:

- (i) the extraction of mineral only commences following evidence that the applicant has secured contracts for the backfilling of the application site using material arising from the construction of the by-pass in accordance with an approved restoration plan (being supplied to and approved in advance by the Mineral Planning Authority);
- (ii) the provision that only internal haul routes will be used for all vehicles associated with the development, and;
- (iii) a financial bond provision to secure successful timely restoration.

Suitable planning conditions should be attached relating to:

- time of commencement;
- removal of permitted development rights;
- time limits for completion;
- restriction of site as a borrow pit for the A10 by-pass;
- removal of plant;
- methods of working;
- site layout;
- restoration and landscaping;
- soil handling, soil stripping, soil storage;
- hours of operations;
- dust propagation;
- noise and noise monitoring;
- material types for backfilling;
- access restriction;
- archaeology;
- protection of water resources and SSSI;
- maintenance of the haul road;
- protection measures for the rights of way;
- periodic groundwater, habitat monitoring and protection, and;
- aftercare.

6. Financial implications

6.1 Planning applications should be determined on the basis of material planning considerations, and not on the basis of their financial implications for the County Council. However, it is a requirement of the County Council to advise all Committees of the financial implications that may arise from their decisions.

6.2 If a planning application is refused or is not determined within a specific period, the applicant has a right of appeal. Any appeal would result in additional costs, which in part can be met from existing budget provisions. However, a major public inquiry may give rise to significant costs for which there is no specific budget provision. If the County Council refuses an application without reasonable planning grounds on which

to base its decision, it may be liable to pay the costs of the applicant in contesting the appeal.

Background information used by the author in compiling this report

Planning application reference 3/1391-01 and accompanying Environmental Statement
Consultation responses and representations received in response to planning application ref.
3/1391-01

Hertfordshire County Structure Plan Review 1991-2011

East Hertfordshire Local Plan 1986 – 2001, adopted December 1999

East Herts Local Plan Second Review pre-deposit consultation March 1999

Hertfordshire Minerals Local Plan 1991 –2006 Adopted July 1998

Mineral Policy Guidance Note 11

Town and Country Planning (Environmental Impact Assessment)(England and Wales)
Regulations 1999

APPENDIX 1

Highways Agency: Overall it is the Highways Agency's view that there is considerable merit in a proposal which would provide a source of bound and unbound materials adjacent to the site without the need for vehicles delivering these materials to travel on the local road network and at the same time providing a location for the disposal of the surplus inert material. There will be no confirmation of the type and quantity of materials that will be required from construction, not the quantity of any surplus material until a contractor has been appointed. However, it may be that when the scheme is put out to tender the applicant could work with a tenderer to remove these uncertainties from the assessment. It may be appropriate therefore to defer any decision until that time.

Should planning permission be granted the Highways Agency would require a condition be placed on the permission that the haul road is removed before the London bound carriageway is opened to traffic. They will make it a requirement of their contract that any temporary accesses, such as the haul road, are removed before the carriageway is opened.

East Herts District Council asks that the point in the submitted details stating that there will be no adverse impact on the SSSI be checked carefully. They suggest that a landscape restoration plan and a long-term maintenance plan should be submitted, and that new tree and hedgerow planting is allowed to link the adjacent woodlands. They also ask for advance screen planting on the exposed boundaries in order to reduce the visual impact of the restoration. They suggest that suitable controls should be imposed so that material extraction is limited to the construction of the A10 bypass only, and for trigger dates to be introduced to ensure restoration by 'fill' from the road construction site only and that it returns to agricultural use. Archaeological work should be carried out in accordance with the reasonable requirements of the County Archaeologist. They advise that the batching and coating plant be authorised under the provisions of Part 1 of the Environmental Protection Act 1990.

Environment Agency: have no objection in principle to the proposed development subject to the imposition of conditions to prevent pollution of the water environment; to prevent the increased risk of flooding and to improve water quality; surface water drainage; to ensure that the disturbance from the development on the areas of conservation are minimal; to protect and conserve the local aquatic and riparian habitats; and to protect and conserve the ecology of the receiving watercourse.

Department of Environment Food and Rural Affairs (DEFRA) advise that in view of the size and likely quality of the site, they do not wish to comment on the principle of the proposal, however the following agricultural considerations are taken into account in order to achieve successful agricultural restoration and aftercare;

- there is no reference to any agricultural land classification (ALC) or Soil Physical Characteristics (SPC) survey of the site. Although the Environmental Statement states in section 5.4.1 that the site soil consists of a single soil resource with no horizons in the topsoil, it was discovered after studying the geological boring data

that there is some variation in the soil resources across the site and likely to be 2 distinct horizons above the mineral/over burden;

- in order to correctly identify the soil resources on site and appropriately strip, store and restore them, an appropriately qualified person should be commissioned to undertake an Agricultural Soil Classification and Soil physical Characteristics survey and to devise a suitable soil handling strategy;
- attached as an appendix the FRCA recommend conditions be attached in respect of pollution and contamination prevention, soil handling, soil stripping and storage, final contours, soil replacement and aftercare.

English Nature state that the proposed works may have an adverse impact on the SSSI in the following way:

- drawdown on the water table resulting in changes to the type of woodland. Trees may die back and the ground flora and shrub layer may die off. Changes in species abundance and distribution may occur;
- water pumped out of the excavated site could run into the SSSI area and silt in the water smother the ground vegetation;
- uncontrolled works (access tracks, vehicle movement and storage of materials) could cause direct damage to the woodland.

On this basis English Nature recommend that if planning permission is granted, conditions should be imposed to avoid such adverse effects:

- a clay bund is built around the pit face to ensure the level of the groundwater surrounding the site is not affected. The height of the clay wall should be set at the minimum of the watertable – i.e. the summer levels. The clay bund should be constructed to fully protect the SSSI and if this will be achieved through bunding only of the extraction site then they have no objection to only part of the site being bunded;
- any water pumped from the site should have suspended solids removed and the water pumped from the site should avoid travelling across the area of the SSSI;
- there should be no access to SSSI by the machines employed in the works associated with permission granted;
- there should be no storage of materials on the SSSI.

The County Council as Highway Authority is concerned to ensure that there is no possibility of mineral extraction or importation of restoration material after the A10 by-pass is opened to traffic and which would involve the use of local roads by haulage vehicles. Nevertheless, should planning permission be granted, conditions are recommended that materials are solely used in connection with the construction of the by-pass, evidence that material will be available for restoration purposes, the advance construction of a haul route, the restrictions of vehicles to the specified haul route and the prevention of vehicles exceeding 3.5 tonnes gross vehicle weight from using Gore Lane

Transco: have no objections to the proposal, but wish to be contacted if the work extends beyond the indicated limits and there being therefore a possibility of their apparatus being affected.

The County Council's Head of Landscape the landscape strategy for the area is to conserve and improve it, which includes increasing hedged field boundaries, encouraging woodland planting around existing woodland, replacing hedges on historic field boundaries. Particular attention to the historic character of the area around the A10 bypass is sought. The applicant's Environmental Statement (non-technical summary) evidences inadequate attention to landscape character and visual impacts. The application does not achieve any of the actions indicated or in the character assessment guidelines. Further advice is provided on the potential impact of the development upon soils, flora, crops, water bodies and grassland as well as the potential visual impact. Recommendations are made that the haul route is located near to Plashes Wood, avoiding the canopy lines. If planning permission is granted, a natural expertly designed and planted landscape scheme be required to be established, the haul route is decommissioned and invisibly restored to match the adjacent landuse at the expiry of the permission and that the restoration is in accordance with best practice.

The County Council's Archaeology Officer asks that the following provisions be made to minimise the archaeological impact of the development proposals:

- full archaeological excavations in advance of any development of those main areas of archaeological potential;
- an archaeological watching brief of all other areas of the development site;
- such appropriate mitigation measures indicated as necessary by that watching brief. These would include full excavation as above.

Thames Water advise that no development is started until the local planning authority has approved details of on and off site drainage works. No works which result in the discharge of foul or surface water should be started until the off site drainage works have been completed.

Hertfordshire Biological Records Centre have the following reservations about the proposal which they feel may need to be addressed for the proposal to go ahead;

- the construction of the bypass will directly destroy one badger sett and the haul road is relatively close to others. Herts and Middlesex Badger Group need to be consulted on the acceptability of the location of the haul road and whether this would impede an artificial, replacement sett to be provided in the vicinity of Plashes Wood;
- although the water pumped into either Barwick Tributary or into the fishponds would be de-silted, this should still be checked with the Environment Agency. Pumping the water into the fishpond overflow may cause capacity problems with the discharge pipe;
- the boundary of the excavation area (within 20 metres of the nearest fishpond) needs to be clearly demarcated before the excavation starts and no vehicle

movements or overburden piles are allowed to infringe on the buffer zone. In addition, a clay bund against the western flanks of the pit could be applied to this area so ensure no polluted water seeps into the water supply for the ponds.

The comments above concerning the potential impact of excavating this pit still apply, in that the reduced size of this pit, and its location, have effectively dealt with any over-riding objection to the excavation from an ecological point of view, as long as we can be sure that the hydrological information provided by the applicants can guarantee that the principal subterranean water flow which supplies the adjoining spring systems and seepages will not be affected.

However, the importance of the spring seepages and stream systems which supply habitats in Plashes Wood is such that we would support English Nature's requirement for a clay bund to be constructed along the western margin of the pit to minimise any potential effects of draw-down on the woodland.

Note that English Nature has only asked for a clay bund to be applied to the western margin of the pit, and understand that it is the intention to monitor the effects of the excavation in Phases 1 and 2 and to require the applicants to add a similar bund along the northern margin if there is any apparent problem which emerges during the excavation with the water supply to the springs north of the pit. We would support this position.

In excavating the clay for the bund, also note that it is the intention of the applicant to take this clay from the floor of the pit. Suggest that great care needs to be taken to ensure that this excavation will leave sufficient clay in the floor of the pit to avoid the perched water table being punctured, allowing drainage into the Chalk beneath. No doubt the Environment Agency would be concerned about this possibility also. This should be closely monitored by competent individuals during the construction of the bund.

In the excavation of the clay for the bund, also suggest that care should be taken to ensure that the resulting extra void in the clay created to supply the material for the bund does not retain significant standing water. That is, it should be constructed so as to drain laterally from the pit. This is to avoid its becoming a stagnant water body whose overflow could affect water quality elsewhere in the future, and also to ensure that water continues to flow laterally away from the pit into surrounding ground, maintaining water supply elsewhere, especially to the stream system south of the pit.

There have been suggestions that monitoring of species within Plashes Wood is needed to ensure that the effects of the pit can be monitored. Consider that the most effective way of ensuring that the pit's effect is monitored is to carry out measurements of the actual extent of the wetland habitat in and associated with the wood, including the quantity and quality of water flowing through the system, rather than attempt to measure the effects on individual species, for which the detailed base-line information is not available and could not be easily collected. The reason for this is that in the event of there being any effects on the species, obtaining meaningful information which could be proved to reflect the impact of the pit would be next to impossible, while the direct impact of reduced water flows could be picked up relatively quickly and mitigation measures imposed. Suggest that either MPA or English Nature should require such measurements to be designed and carried out by a competent hydrologist/ecologist, and that a condition is applied which would require the applicants to carry out immediate remedial works should such an effect be apparent.

Previously drawn attention to the need for a specialist survey of the amphibians using the adjoining ponds. Re-iterate that this is needed, including a survey of their use of surrounding habitats, and measures which might be necessary to avoid damage to their populations.

Finally, the applicants will need to be required to mitigate any adverse effects on the movement of other protected species through the area, particularly badgers, following any advice that the Herts & Middx Badger Group may provide.

Standon and Puckeridge Amenities Society are concerned about the proposal for the following reasons:

- there is no mention of how the water will move on the site after restoration. The gravel is being replaced by clay backfill, which will surely affect the watertable on the SSSI;
- although the county has pushed for “best advice”, the experts are not always right as the disturbance of the watertable and dying trees near the Letty Green bypass (A414) demonstrates;
- the Society is concerned that historically the applicant has disregarded planning rules;
- the Environmental Statement non-technical summary states that the chosen contractor will decide on the amount of gravel to be removed, but the approval will be for the maximum amount possible. They believe that this is naïve and gives away any control the county may have retained;
- Plashes Wood has the richest mixture of plant life of any woodland in Hertfordshire. They are convinced that the scheme will not go according to plan, thus risking the destruction of Plashes Wood.

Stort Valley Friends of the Earth are concerned about the proposal for the following reasons:

- the site is within 100 metres of Plashes Wood SSSI. It contains a diverse habitat with a large and varied representation of many species with many established populations including Dormice, which is a protected species. There are also 2 ponds that are medieval fish lakes, providing a habitat for a large number of amphibians;
- they believe that damage to the site is inevitable from dust and pollution and from wastewater run off;
- they are also concerned about the effect on groundwater levels and purity, which feed the two ponds and damage to the archaeological site.

Hertfordshire and Middlesex Badger Group are concerned about the location of the haul road as it appears to pass close to two badger setts in dells in the fields south of Plashes Wood. Provided that the road is moved to the south if necessary so there is a minimum of 30 metres between the setts and the road, the badger group has no objections to the application.

Vivendi Water (General Utilities Partnership) state that the proposed quarry site is located within the outer groundwater protection zone of Thundridge Pumping Station, which is a public water supply. They also noticed that there is no provision in the application for the protection of the chalk aquifer and any excavation into the clay provides the potential for migration of pollutants into the underlying chalk aquifer. No studies have been done to the south of the site in the direction of the regional groundwater supply and the Thundridge public water supply. They are concerned that discharge of water from the Borrow Pit to the River Rib may cause problems to the riparian environment and the seasonal flow regime. They suggest that rigorous procedures are put in place to ensure that the inert waste used to back fill the excavation would not contain leachable or degradable material and that a replacement impermeable clay layer of a minimum thickness of 1 metre is provided, should the London Clay seam be perforated.

Rights of Way (the County Council's Countryside Access Officer) suggest that for safety reasons the haul route should be alongside rather than on footpath 43, Thundridge and fenced off from the right of way with a sign posted set crossing point. The haul route also crosses footpath 42, Thundridge and may cross new temporary or permanent routes, which should likewise be limited and signed. Due to the fact that part of the application site itself is adjoining footpath 43, they suggest that a buffer zone of at least 2 metres should be created to avoid slippage of the path into the quarry and a secure fence should be placed between the two.

Built Environment and Management Services (BEAMS) have provided comments in respect of the impact the proposed development would have on the setting of the Plashes Farm listed buildings. The site currently maintains a secluded setting within farmland and woodland areas and the setting of the buildings would have changed little over the centuries. The setting of the listed buildings should not be dismissed as the sand and gravel extraction would have a negative impact on Plashes Farm. BEAMS recommend that the application site is re-located further south so that the appropriate setting of the historic site is maintained.

The County Council's Noise Consultant recommends that it would be appropriate to include the standard noise conditions contained in MPG 11 in relation to maximum levels for normal and temporary working. There is potential for the occupants of the farm to be disturbed if works carried out outside of daytime working hours. The intentions of the applicant should be obtained in this regard and further consideration given if necessary. Additionally, control should be imposed on the potential annoyance due to audible reversing alarms, given the length of site life and that vehicles would probably be permanently based at the site for the contract.