



Technical Report

**Common Field, Betchworth, Surrey
&
Shagbrook, Reigate Heath, Surrey**

Prepared by

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1 Introduction

- 1.1 The Campaign Against Mineral Extraction & Landfill (CAMEL) has been established by concerned residents in the villages of Buckland, Betchworth, Brockham and the town of Reigate to oppose and/or control mineral development, extraction and landfill operations in the surrounding area.
- 1.2 CAMEL has the support of the Parish Council of Betchworth, the Parish Council of Buckland, the Parish Council of Brockham and the Reigate & Banstead Borough Council. It also has the support of the Reigate Society, the Betchworth and Buckland Society and the Brockham Village Green Society. The standing committee members of the group have skills in fund raising, mineral extraction, construction, town planning, engineering, and chemistry.
- 1.3 CAMEL was formed mainly in response to the publication by Surrey County Council of the Surrey Mineral Development Framework that, inter alia, designated six sites in the local area as potential mineral extraction zones.

2 Scope of this report

- 2.1 This report deals with the technical issues other than strict Town and Country Planning issues that arise from the identification of the Potential Mineral Zones Nos, 55, 56, 57, 58, 59, and 60 in the area between Brockham and Reigate. This report is essentially in two parts, dealing principally with The Common Field (PMZ 55) and Shagbrook (PMZ 60). The comments set out herein apply also to a significant extent to each of Potential Mineral Zones Nos. 56, 57, 58, and 59 which, at the present, have not been designated for inclusion in the Surrey Mineral Development Framework Document.

3 Documentation

- 3.1 The following documents are referred to in this report:

Document No	Description
1	Report on PMZ 55 by Surrey County Council
2	Borehole map produced by Peter Crate showing extent of sand deposit.
3	Extract from the geological map of Surrey showing the geological makeup the site.
4	Planning Appeal Decision APP/B3600/A/02/1085910 for the extension of the Betchworth sandpit eastward to Station Road.
5	Ordnance survey map for the area showing the access road network.
6a	Ordnance survey map showing the junction of Old Reigate Road with the A25 at the Harvester.
6b	Photographs of the junction of 6a above
7	Photograph of The Street showing narrowness and lack of footpath.

- 8 Photograph of the footpath bordering the zone showing its winding nature.
- 9 Paper entitled "Strategic Environmental Assessment of Mineral Sites"
- 10 Ordnance survey map showing the contours of the site
- 11a Map showing the potential working area with a 70 metres standoff.
- 11b Map showing the potential working area with a 150 metres standoff.
- 12 Promotional Material for the Greensand Way
- 21 Report on PMZ 60 by Surrey County Council
- 22 Letter from the Environmental Agency to SCC dated 9 December 2004
- 23 English Nature Environmental Report on Reigate Heath SSSI
- 24 OS Map showing Contours of the site
- 25 View of Shagbrook from Windmill 28/1/05
- 25a View of Shagbrook looking towards Box Hill 28/1/05
- 26 Minute of Telephone Conversations by Bert Smith
- 27 Geological Survey Map of Shagbrook Site
- 28 Extract from Table 2-- Summary Table-Assessment of Potential Mineral Zones for Extraction of Sand and Gravel in Surrey
- 29 Decision of the Planning & Regulatory Committee in connection with applications MO01/1040 & MO01/1041

4 General Geology

- 4.1 All the sites lie along Greensand Way (Folkestone Bed), which extends east-west between Brockham and Reigate. The sand here is of variable quality; some is silica sand but the bulk is commercial building sand. As the sand bed extends southward from the area of high-quality silica sand, the proportion of clay in the sand increases until it exceeds a proportion of clay of greater than 20% at which point the commercial value of the sand reduces significantly.
- 4.2 There are a number of water boreholes in the general area with significant extraction points at Clifton's Lane, Lawrence Lane, and at Headley.

5 Commercial

- 5.1 The designation of an almost continuous strip of land between Brockham in the west and Reigate has blighted a large number of properties within the area. Vendors of properties in the vicinity of a PMZ are obliged to disclose this to their intending purchasers; the consequential effect of this is already becoming apparent. The situation is particularly acute for residents of Old Road, Buckland since here there is a Potential Mineral Zone on both sides of the road. In future years, extraction could take place simultaneously in both zones, whereupon the properties along Old Road would become uninhabitable and unsaleable.

6 Confidence in the planning process

- 6.1 As has been expressed by representatives of CAMEL in meetings with Surrey County Council, local residents lack confidence in the ability of Surrey County Council to control major mineral and landfill projects during the planning process and after consent has been given. Local residents are well aware of at least one major failure in the planning process where in spite of warnings given by residents during the planning procedure, these warnings were overruled with the result that eventually there was extensive contamination of the water supply necessitating the sleeving of an extraction borehole over a significant part of its depth.

- 6.2 Specific instances that have been drawn to CAMEL's attention are as follows:

- a) Betchworth Limestone Quarry; the import of material into this site was scheduled to cease on the 31st December 2004. Work is still continuing as of February 2005. No new planning application has been submitted. As far as the residents are concerned, no enforcement action has been taken by the Surrey County Council. This is not the first such infringement at the Quarry. It follows 23 years of protest, and complaints to Surrey County Council concerning overfilling of the quarry and numerous other infringements of the planning conditions. In spite of numerous assurances by council officers, planners and elected representatives that all importation and filling would have ceased by the 31 December 2004 this still has not in fact happened. CAMEL accept that the failure to complete the filling and restoration on time is not primarily the fault of Surrey County Council, but the Council's track record of failure to enforce its own planning conditions gives clear signals to developers and operators and brings the planning process into disrepute. If any resident in Betchworth or Buckland were, unilaterally, to flout planning permission and conditions in this way, action would be taken immediately by way of enforcement.

Due process requires that an enforcement notice be issued immediately after the expiry of the period for completion, and the developer invited to submit a new application. This ensures that, inter alia, residents local to such a sensitive site would have the opportunity to comment. The local residents are aware that Surrey County Council holds a bond of £100,000 pending satisfactory completion of this project and they wish to know why rights under that bond have not been exercised.

- b) Tapwood/Colley Pit: permission for the excavation of sand was approved on appeal in 1997 after refusal by Surrey County Council. At the appeal, evidence was submitted on behalf of Surrey County Council to the effect that there was a likelihood of groundwater contamination if proposals to excavate sand and backfill the resultant void were permitted. The appeal officer taking the decision, chose to ignore this advice and permission was eventually granted. In 2002, the local water company had to cease extraction of water from the Lawrence Lane borehole because of excessive ammonia contamination of water being drawn therefrom. This contamination was traced back to inappropriate fill in Tapwood Pit. This necessitated sleeving of the borehole over an extended depth and at the same time the water company concerned asked that no further back filling take place in Tapwood Pit.

Local residents say that this was a total of failure of the planning system. Not only were the planners warned of the inevitable consequences, but common sense dictates that back filling of such a sensitive site within a few metres of a borehole was a dangerous thing to do. Nevertheless, on appeal, permission for such activity was still granted.

7 Confidence in the Minerals Development Framework

- a) In reviewing the County's draft Mineral Development Framework, CAMEL notes that 106 sites have been identified as holding significant reserves of recoverable sand. Of these 106 sites, a significant number have reserves well in excess of 10m tonnes. In its presentations, inter alia, at Ashcombe, Surrey County Council stated that they needed 2.6m tonnes of sand recoverable each year. The local residents are therefore puzzled as to why Surrey County Council have sought, therefore, to designate such relatively small reserves of 0.7m tonnes and 2.2 million tonnes respectively in an area of outstanding scenic beauty, when much more significant quantities of building sand are available for exploitation elsewhere.
- b) In the published document for the draft Surrey Mineral Development Framework, information relating to each of the sites is woefully inadequate and in many cases incorrect. Correct information is and always has been in the files and records of Surrey County Council. To say, for example, that the Common Field in Betchworth is 300 m from the village of Betchworth is plainly wrong on the face of it. The correct information is in the hands of the Highways Department of Surrey County Council and, furthermore, can be determined from an ordnance survey map that can be purchased in any bookshop!
- c) In Table 2: Summary Table-Assessment of Potential Mineral Zones for Extraction of Sand and Gravel in Surrey to the Draft Surrey Mineral Framework document (see document 28 below), there appears against PMZ 60 under the heading "Predominant Landscape/Ecology notification" the answer "None". Shagbrook is designated as an Area of Greater Landscape Value.

CAMEL say that the inconsistencies in 4 and 5 above are elementary and impart to the informed reader the impression that the factual information in the document has been "skewed" to guide the uninformed reader to a predetermined and desired conclusion.

8 The Common Field Betchworth (PMZ55)

8.1 Geology

The prospective developer (J & J Franks Ltd) has already sunk a number of boreholes to establish the extent of recoverable sand deposits. The geological map and borehole diagram (distributed to local residents by JJFL on 15th October 2004) is attached as document no.2. This shows that the exploitable sand reserve runs below the North East corner of the zone, the limits of which are defined by Old Reigate Road, the Village footpath and adjacent residential properties. In their letter, JJFL indicated their intent to work as close to the boundary of the zone as possible, in order to maximise their operation. Assuming that they would be allowed to do so, JJFL have estimated 700,000 tonnes of recoverable sand. JJFL have further advised local residents and the Parish Council that the sand residues within the remainder of the site are not of commercial interest.

The borehole map (Document No 2) shows JJFL's attempt to determine the extent of the recoverable sand. From Document No 2, boreholes BH 9, 10 & 11 are an attempt to find the boundary of the deposit, as are Boreholes BH 1, 2 & 3 and also BH 5 & 6. It is interesting to note that the boundaries marked on the borehole map (Document No 2) follow almost exactly the general geological map for the area (Document No 3).

We understand from existing planning applications that the developer cannot excavate below the level of 47 m above ordnance datum since to do so would breach the estimated level of the water table/aquifer. (See Document No 4)

8.2 Mains services

There are a number of physical limitations to the site in that a high-capacity gas main runs North-South across the western part of the designated site, while a high-voltage underground electricity cable is buried under the bridleway. The Bridleway is a right of way linking two national grade footpaths; Pilgrim's Way to the North and Greensand Way to the South.

8.3 Access

Access to the site is by minor roads only, which serve the villages of Betchworth and Brockham (Document No 5). These minor roads are already hazardous to pedestrians and motorists alike. They are narrow, winding and undulating with very poor sightlines. They have neither verge nor footpath, have a number of concealed drives opening onto them and also have a number of residences (e.g. Elm Villas), which open directly onto the highway. In addition, these roads are already heavily used by commuters and others seeking to avoid Reigate. The Parish Council is in continuous dialogue with the local police as to how these roads can be made safer. While it may be feasible to extract the sand reserves by tunnelling from the existing pit north of the Old Reigate Road, the back filling of the quarry which would be required in order to restore it to its original state cannot reasonably be done other than by direct vehicular access into the site. The high volume of heavy goods traffic which will result, will not only render the local roads even more hazardous, but will increase noise and pollution generally throughout a significant part of Betchworth Village. Access via the Harvester would result in traffic entering

traffic flows on the A25 on the apex of an extremely dangerous bend. (See Documents 6a & 6b) The heavy goods traffic will also cause a rapid break-up of the road surfaces, as was experienced during the recent laying of the gas mains at the west of the zone.

8.4 Filing

There is no reasonable control that can be exercised over the nature of the "inert" fill introduced to the site in the first instance. While material can be sorted and graded on site, the fact remains that some putrescent material will inevitably be present in some of the fill and this will be accompanied by the usual problems of smell and vermin and eventual methane generation if included in the fill. In view of the nature of the site, it will be necessary to re-export this putrescent material to a landfill or other suitable facility for disposal thus increasing, further, the extent of heavy vehicular traffic on these otherwise unsuitable roads around the area. All this risk of contamination is in the heart of the village of Betchworth and within a few metres of the village primary school, nursery school and village shop.

8.5 Health and safety

The existing planning permission granted in respect of the sandpit north of the Old Reigate Road (Document No. 4) contains a condition that the working face for the quarry should not be steeper than 80° to the horizontal. CAMEL is concerned that the operator – J & J Franks Limited -- is using a mining technique, which involves undercutting the existing face and allowing it to collapse. This technique appears to be in direct breach of the planning conditions imposed and CAMEL are concerned that in routine inspections, the minerals and waste administration of Surrey County Council have neither noticed this infringement nor sought to enforce it.

Surrey County Council are well aware that in the Folkestone Beds (which is the layer being worked in the Reigate Road Quarry) there is a tendency for the horizontal permeability to be greater than the vertical permeability, i.e., for water to move more freely sideways rather than down. This can lead to lateral near surface water movement occurring towards the unsupported face of excavation and hence to instability in the upper portion of the excavated face. It was presumably for this reason that the specific requirement was included. While after the undercutting, the resultant cliff face is re-profiled to the 80° face required by the planning permission to satisfy any subsequent inspection, CAMEL consider that the threat to the health and safety of the operator and to members of the public by mining in this way, the operator is risking an uncontrolled collapse of the quarry face and the surface immediately above with consequential instability of the surrounding ground. It will be appreciated that the risk is quite significant if attempts are made to excavate to the margin of a site.

In this, Surrey County Council have shown themselves to be incapable of preventing this hazardous situation arising. Yet the County have proposed that PMZ55 should abut the village footpath. Indeed, JJFL proposal (see Document No. 1) to work the site as close to the existing footpath as possible, attempts to take full advantage of this. It is inconceivable that the County could risk a similar flouting of planning conditions in this location, where there would be an

immediate risk to adjacent properties, local residents and to all those using the village footpath, especially as the County Council has already shown itself to be incapable of preventing it. Therefore, CAMEL would expect Surrey County Council to redraw the Eastern boundary of PMZ55 to omit that area of sand which could not be excavated in a safe manner. i.e. without risk of collapse of surrounding properties and without risk of injury or death to local residents and those using the village footpath.

At present, the health and safety of pedestrians – and particularly children - using the footpath is further protected by the presence of the Bridleway, which is used by horse riders and dog-walkers. The Bridleway is a right of way linking two national grade footpaths; Pilgrim's Way to the North and Greensand Way to the South. Were the bridleway, in its present form, to be lost then horses and dogs would be forced to share the footpath with attendant risks. The hazard posed by horses is obvious.

8.6 The footpath

The errors in the Preliminary Assessment of PMZ 55 have already been pointed out to Surrey County Council and these errors were tacitly acknowledged at a meeting on the 28 January 2005. The importance of the footpath is that it forms the major route for pedestrians (and some cyclists) within Betchworth Village itself. The principal road through the village is "The Street"--this is a winding narrow road skirted in places by high walls on both sides and for much of its length has no footpath, not even a rough verge. (See Document No. 7). The Street is one of the favourite "rat runs" between South London and Gatwick Airport and is extremely busy during the morning and evening rush hours. It also has a higher than justified level of traffic at other times due to passengers moving between Gatwick Airport and South London/M25.

The accompanying picture (Document No 7) shows clearly the lack of footpath in the Street. In the event of two vehicles meeting in a non-footpath area of The Street, there is no refuge for pedestrians whatsoever. In consequence, nearly all pedestrian movement along the length of the village takes place along the footpath at the edge of PMZ 55. Not only is this path the principal means of communication between the Bus Stop, Shop and Post Office in the north of the village and the Pub and Church in south, it is also used extensively for recreation, by the villagers and visitors alike.

While it is assumed that there is no intention to interfere physically with the footpath itself, the integrity, amenity value of the footpath will require protection for the reasons stated under the heading "Health and Safety " above. Furthermore, due to the proximity of the school there will need to be sufficient security measures in place along the perimeter of the site. The effect of this coupled with the 'bunds' required to reduce noise impact will enclose what is, at the present, an open footpath, and turn it into a narrow, somewhat forbidding and indeed even threatening "alleyway". Because of the need for such security, CAMEL believes that this will reduce very significantly the attractiveness of the footpath to members of the village, and it is likely to become significantly less used as a result. In order to make passage between the north and south of the village, therefore, the villagers will need to use either The Street or use their motor vehicles. This will be particularly true in times of darkness and poor visibility.

The children attending the village school use the current footpath extensively. Parking arrangements in The Street are severely limited; the delivery and collection of children at the school seriously impedes traffic and increases the potential danger to pedestrians. Some mothers collect their children from the top of the footpath outside the Post Office and bus stop. The children walking along the path from the school can be seen by their parents along its whole length and their mothers collect them by parking either on the bridleway or along the Old Reigate Road. The importance of the footpath and its open nature, therefore, to the village of Betchworth cannot be underestimated. This will not be an option if development takes place since the slightly winding nature of the path (Document No 8) with the juxtaposed fence will reduce sight lines from the road so that parents will not be able to follow the progress of their children along it.

8.7 Noise

CAMEL are concerned at the apparent conflict between the proposals for noise protection in the Preliminary Assessment of PMZ 55 (Document 1) and the proposals contained in the sound engineers report (Document No 9). The proposals in PMZ 55 suggest a 70 m stand off to protect properties to the west (only) of the zone that is to say in Brockham. No formal recommendation is made to protect ANY of the properties in Betchworth! Under the heading "Core Details" and "Key Issues" there is the statement that potential noise impacts for residential properties within 150m of the PMZ but NO RECOMMENDATION is made to protect properties to the north and to the east of the site. The sound engineers report (Document No 9), however, is more specific and states that a 150m standoff and a 4m bund may be required for some properties, "...possibly a bit less." The school is deemed to require at least 150m standoff and a 4m bund and special consideration will be required for noisier operations to be carried out during school holidays or out of school hours. CAMEL asks what is the point of having a sound engineers report if that engineer's recommendations are wholly ignored?

The sound engineers report here seems to be flawed since examination of the topography of the site (Document No 10) will show that the majority of the neighbouring properties, particularly to the north, lie above the 60m contour whereas the bulk of the proposed site for excavation lies about 15 to 20m below this contour. Accordingly, increased protection will be required for properties at the edge of the site and CAMEL say that a 150m minimum stand-off would be required from the curtilage of each dwelling and not just from the physical structure of buildings. This is supported by the sound engineers comments in the document entitled "Strategic Environmental Assessment of Mineral Sites" (Document No 9) and CAMEL say that 150m should be taken as a minimum.

When the issue of noise was considered in respect of the existing quarry to the North of Old Reigate Road, much was made of the fact that the prevailing wind would carry noise away from the village and towards the A25. Within the proposed zone, which is further to the south, the converse will be true. From this zone, the prevailing wind would carry noise from any workings throughout the northern part of Betchworth village. CAMEL asks why is this issue being treated differently on this occasion?

8.8 Dust and smell

Dust and smell would be an unavoidable consequence of quarrying and – even more so – of land filling. As would be the case with noise, the prevailing wind would carry all dust and smell arising from PMZ55 throughout the northern part of Betchworth village.

8.9 The Greensand Way

As is apparent from document 6a, the Greensand Way runs to the south of the site. This is a major tourist attraction for the area. It is promoted by "Discover Dorking" and is the subject of a book entitled "The Greensand Way" by Bea Cowan -- a guide produced by Kent County Council and by Surrey County Council (see Document 12). Development of this site would mean that the countryside would be "industrialised" in this area and in view of the bunds and planting deemed necessary in the draft Framework document relating to PMZ 55, views of the North Downs would be obscured. This is particularly so since the Greensand Way path is significantly lower than the proposed area of working.

9 Shag Brook, Reigate Heath (PMZ60)

9.1 Water/hydrology

In a letter to the County Planning Dept of Surrey County Council dated 9 December 2004, the Environment Agency deal, inter alia, with the effects of potential excavation on the adjacent SSSI of Reigate Heath. A copy of this letter and its supporting documentation is attached as Document No 22.

A major concern is that the removal of significant quantities of material from the area of the Shag Brook would result in a significant lowering of the water table in the area of Reigate Heath, which would be wholly detrimental to the status of the Reigate Heath SSSI. This is clearly a current problem as will be apparent from the attached Report from the English Nature Web Site (Document No. 23) and has its origin in the 1970, i.e. about the time that excavation had commenced in earnest at Park Pit

It has been proposed in the SCC Document PMZ 60 (Document No. 21) that it may be possible to restore the site to water when sand extraction has ceased. CAMEL is concerned that this proposal will have a significant and permanent adverse effect on Reigate Heath SSSI. Sand comprises small particles and contains about 30% voids. These voids, in an enclosed space in the ground act, using the surface tension of water, to raise the level of the water table essentially by capillary action. The hydrology of the subsoil of the Reigate Heath SSSI does, therefore, rely on the presence of the sand in the Shagbrook Site in order to maintain the environmental balance of the Heath. This is supported by Paragraphs 70 and 71 of the Decision of the Planning & Regulatory Committee in connection with applications MO01/1040 & MO01/1041 see Document No 29.

In the event that sand is extracted from the Shagbrook site, the capillary action of the sand that had previously been there will no longer be available to support the level of the water table in the surrounding areas. The introduction of such a large open area of water many tens of feet deep will be to produce a void of essentially zero resistance to water flow thus allowing migration of the water into the void to the detriment of the natural capillary action in the surrounding area. This will have the effect of producing a progressive lowering of the water table towards the standing water.

This effect will be exacerbated by the fact that the Shagbrook Site is more than 65 feet below the general level of the Reigate Heath SSSI (see Document 24) and excavation at this site will, therefore, have a much more pronounced effect than would be the case if the site and Reigate Heath were at approximately the same level. Careful examination of the ordnance survey map (Document 24) will show that the gradient is in fact quite a steep one and this means that the effect of lowering the water table will extend much further into the surrounding area covered by Reigate Heath SSSI than would otherwise be the case. This is apparent from the extensive view of the site available from the top of the scarp at the edge of the Reigate Heath SSSI—Documents 25 & 25a.

It follows from this that restoration of excavations at Shagbrook to water would create a 67 acre lake which will result in:

- a) a permanent and radical change in this Area of Great Landscape Value
- b) a permanent and radical change to the outlook from surrounding Areas of Outstanding Natural Beauty (e.g. North Downs)
- c) a permanent and radical change in the nature, hydrology, flora and fauna of the adjacent Reigate Heath SSSI.

The local water company has been consulted with regard to the possibility of sand extraction at Shagbrook (see Document No 26). The Civil Engineer in charge of New Works, Peter Isherwood, reported that they have already been made aware of the proposed PMZ's and have taken the position that in the event of extraction being permitted they had great concern at any proposed subsequent landfill.

The local water company has confirmed that it would totally oppose any form of back filling even with inert backfill (see Document No 26). Isherwood reported that, in 2002, they had had to sleeve some 85 m of their Lawrence Lane borehole due to contamination from previous back filling in the nearby Tapwood Quarry. We understand that backfilling at Tapwood Quarry has since ceased. The water company are concerned that similar contamination could occur at their Clifton's Lane borehole if similar back filling took place at Shagbrook.

It follows from this, therefore, that Surrey County Council is caught firmly on the horns of a dilemma. If extraction is to proceed at Shagbrook, then restoration can only be to standing water since the water company would exercise their presumed right of veto in order to protect the public water supply. If restoration to water does take place, then this will damage irrevocably Reigate Heath and the Reigate Heath SSSI for the reasons stated above.

9.2 Access

We understand that there have been discussions between Surrey County Council and the present operator of Park Pit as to the possibility of using the existing Park Pit as an access to Shagbrook. The proposal here is that the necessary machinery would be sited in Park Pit and access to excavated material in Shagbrook could be by means of conveyor and tunnel under the existing Shag Brook. This will avoid the need for a separate entrance to the site and would make use of existing facilities. It would also, however, require an extension of the existing permission to work in Park Pit, which as local residents have been promised, is due to cease in 2010.

A sand quarry at Shagbrook would involve an increase in traffic flow along the A25, which is becoming increasingly busy. What would have been an acceptable increase in traffic levels in the mid-1990s is much less acceptable with the projected traffic levels of 2010.

9.3 Sand

A stream effectively bisects the Shagbrook Site, which is a tributary to the Shag Brook. It runs across the site in a North-East-South West direction and joins the Shag Brook towards the southwest corner of the site. The flow of this tributary reflects generally the sloping nature of the site away from Reigate

Heath towards the West. This stream is the site of a significant alluvial deposit probably of some 20 to 30 feet in depth (see Document No 27), which in the event of exploitation would need to be removed and the stream diverted. The presence of the alluvial material will also reduce the effective yield of the site.

9.4 Noise

The County's sound engineer has recommended a stand off of 70 m for each of the properties bordering the site. It is not clear from the sound engineer's recommendations as to the datum for that assertion. Many of the properties to which the recommendations relate have large gardens and it is not seen that it is reasonable for the developer to take the offset measurements from the physical structure of the building itself. CAMEL says that ALL offset measurements should be taken from the extremity of the curtilage. The purpose of the offset is to protect the residential property (including its environs) against excess noise levels and CAMEL say that residents should be entitled to at least the same level of noise protection in their gardens as they are in the physical structure of their property, and arguably more. The effect of this will be to reduce significantly the amount of sand recoverable according to the estimates produced by Surrey County Council.

It is not understood, either, why a reduced level of sound protection of 70 m is applicable to the Shagbrook Site, when the levels of protection of 150 m has been proposed elsewhere, cf PMZ 58. The need for increased sound stand off in the Shagbrook Site is much greater than elsewhere since all the properties surrounding the site lie to the north and east, downwind of the of the workings and on higher ground. It follows from this, therefore, that even with appropriate bunding, the noise pollution will be greater unless the bunding is of an unacceptable height. This will be accentuated by the prevailing winds from the west which in a very large open area such, for example, as a 67 acre hole (which, remember, cannot be back filled as it is excavated) will result in the wind eddies through the base of the void which will tend to produce a sound " skip " effect over the cliff face and the 4 m bund proposed.

The level of background noise experienced currently by the properties well away from the A 25 is extremely low and in consequence even a slight increase in background noise is very noticeable. Accordingly, CAMEL says that in this instance the sound engineer's recommendations are woefully inadequate and has not taken into account the actual sound environment that pertains to Shagbrook. Furthermore, The sound engineer has dealt with the issue of sound intensity and not with sound loudness, which latter is the actual problem that residents experience. CAMEL say that the stand-off from each of the properties should be at least 150 m and for those properties more remote from the A25 should be significantly more, in the region of 250m.

9.5 Amenities

Reigate Heath is a considerable amenity area. The Heath is home to a golf club, while the area towards the junction of Reigate Road and Flanchford Road is used for cricket and football. As will be apparent from document 24, the route of the Greensand Way runs along the southern edge of the site. As is discussed in numbered paragraph 9 above, this is a much promoted and very popular tourist attraction within the area and development at Shagbrook would very seriously reduce in the attractiveness of this amenity.

10 Conclusions

- 10.1 CAMEL says that the indiscriminate and ill-considered designation of relatively small reserves of sand as proposed in the draft document has produced planning blight within the area resulting in a significant reduction in the value of property.
- 10.2 CAMEL says that there is a general lack of confidence in the planning process on the part of the residents in the area and the failures outlined above are merely examples of the generally lax standards applied by Surrey County Council in planning and controlling mineral extraction and landfill activities generally. Experience shows that undertakings/conditions, which may be given in any eventual planning consent, are unlikely to be enforced or will probably be sought to be "varied" by the developer once general permission has been given (a process which is sometimes referred to as the "ratchet principle") to the detriment of the environment of the local residents.
- 10.3 CAMEL says that there has been a general lack of activity by Surrey County Council to protect the interests of residents where permission has been granted and that where developers require variations of conditions these are frequently relaxed or enforcement of existing conditions is not undertaken.
- 10.4 CAMEL says that Surrey County Council has neglected to verify many of the facts upon which they have relied in their designation of PMZ 55 and PMZ 60 for inclusion in their eventual Minerals Development Framework document and that in consequence their decision making process is fatally flawed.

As to **SHAG BROOK**

- 10.5 CAMEL says it is quite apparent that any activity in this site will cause irrevocable harm to the environment on a long-term and ongoing basis. Unlike the majority of sites that have been proposed in the report by Surrey County Council, PMZ60 is one that cannot be worked without a major permanent change in the landscape and a major permanent degradation of the environment in the adjacent SSSI.
- 10.6 CAMEL is further concerned at the inadequacy of the sound review and the failure to recognise the acoustic effect of the topography of the site.

As to the **COMMON FIELD**

- 10.7 CAMEL says that if due consideration is to be given to the environment of the villages of Betchworth and Brockham and in particular to the advice of their own engineers, then the amount of recoverable sand from PMZ 55 which is considered to be of commercial value will be significantly less than the 700,000 tonnes proposed by Surrey County Council and endorsed by JJFL. The accompanying diagrams show the effect of a 70m standoff (Document No 11a) and a 150m standoff (Document No. 11b) proposed by the sound engineer --- the hatched portion shows the area of potential working in each case.

- 10.8 CAMEL says that the development proposed would have an unduly injurious effect on the environment regarding the principal footpath between the north and south of the village of Betchworth.
- 10.9 In view of the foregoing, CAMEL says that each of the sites between Brockham and Reigate should be excluded permanently from further consideration for mineral exploitation.

BS/DCE, 24/2/05