



**BALCOMBE PARISH COUNCIL COMMENTS
TO WEST SUSSEX COUNTY COUNCIL**

ON THE

**PLANNING APPLICATION
BY CUADRILLA BALCOMBE LIMITED**

APPLICATION NO. WSCC/005/14/BA

Location: Lower Stumble Hydrocarbon Exploration Site, London Road, Balcombe, Haywards Heath, West Sussex, RH17 6JH

Proposal: Temporary permission for exploration and appraisal comprising the flow testing and monitoring of the existing hydrocarbon lateral borehole along with site security fencing, the provision of an enclosed testing flare and site restoration.

19 MARCH 2014

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1. INTRODUCTION

1.1. This document has been prepared by Balcombe Parish Council in response to West Sussex County Council's invitation to comment on the planning application no. WSCC/005/14/BA, made by Cuadrilla Balcombe Ltd to West Sussex County Council for Temporary permission for exploration and appraisal comprising the flow testing and monitoring of the existing hydrocarbon lateral borehole along with site security fencing, the provision of an enclosed testing flare and site restoration at Lower Stumble Hydrocarbon Exploration Site, London Road, Balcombe, Haywards Heath, West Sussex, RH17 6JH.

1.2 This document was prepared in draft by the Parish Council's Oil Exploration Working Group with the assistance of others and has been adopted by the full Parish Council at an Extraordinary Parish Council Meeting on the 8th March 2014.

1.3 Balcombe Parish Council sought the views of the residents of Balcombe by instigating a consultative ballot carried out by Electoral Reform Services whose report is set out in section 2 of this document. The response rate was 59.8%.

The first question on the ballot form asked how Balcombe Parish Council should respond to this application.

59.5% of respondents indicated that Balcombe Parish Council should oppose this application.

1.4 As a consequence of the result of the consultative ballot, Balcombe Parish Council hereby registers its opposition to the application. The specific grounds for objecting, together with corresponding conditions that are requested in the event that WSCC decides to grant planning permission, are set out in section 3 of this document

The appendices to this document (referenced to correlate with items in the planning application) provide additional and detailed information in support of the Parish Council's specific grounds for objecting.

2. REPORT BY ELECTORAL REFORM SERVICES ON THE THE BPC CONSULTATIVE BALLOT



20th February 2014

BALCOMBE PARISH COUNCIL LOCAL REFERENDUM

Our report of voting for the above ballots which closed yesterday at noon is as follows:

Number of eligible voters:	1507
Total number of votes cast:	901
Turnout:	59.8%

Question 1

Cuadrilla has made a new application to West Sussex County Council for planning permission to flow test the exploratory well that it drilled during the summer of 2013. This includes security fencing, an enclosed testing flare and site restoration. Further information is available on the Balcombe Parish Council website or from the Parish Clerk. Balcombe Parish Council has been asked whether it wishes to make any comment on this application.

How should Balcombe Parish Council (BPC) respond to this application?

Number of votes found to be invalid/blank	4
Total number of valid votes to be counted:	897

Result

"BPC should support this application"	309
"BPC should oppose this application"	536
"BPC should make no comment"	16
"I am not sure how BPC should respond" ...	36

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3. SPECIFIC OBJECTIONS AND CONDITIONS REQUESTED

3.1 Residents opposition to this application

3.1.1 BPC Objection:

The result of the BPC consultative ballot relating to this application concludes that BPC should oppose this application and as such we restate our position to oppose, as detailed in previous sections of this document 1: Introduction & 2: Report by Electoral Reform Services on the BPC Consultative Ballot. There is a simple majority in opposition to this application, which should be taken as a material consideration by WSCC.

3.1.2 BPC requests that the application is refused on this basis.

The application should be refused as residents' views are seen as a material consideration in WSCC's review of the application.

3.2 The Applicant's financial condition.

3.2.1 BPC objection:

It should be clarified whether Chris Hird is an officer of Cuadrilla Balcombe Ltd, and is legally authorised to make the application on behalf of the corporate body. (Note: He is not a director, and at the last filing, the company had no employees). The latest accounts filed at Companies House showed that Cuadrilla Balcombe Ltd had net liabilities (Dec 2012). This means that there would be no equity to absorb any unforeseen costs (such as an environmental clean up). Given the company's uncertain revenue stream, and ongoing exploration expenses, its parent company should be required to take out adequate insurance and place funds in escrow pending the site being restored to satisfactory condition. Doing this protects the community from the contingent financial risks that may arise if the parent company chooses not to support Cuadrilla Balcombe Limited, which it is at liberty to do at any time. It is not seen as acceptable that the operating company at Balcombe should be a shell company in negative equity.

3.2.2 BPC requests that a condition be applied if WSCC decides to grant consent:

Any consent should be conditional upon the provision of surety and/or insurances that are transparent, adequate and extend to a minimum of 50 years beyond the life of the well. We ask that WSCC set the level of indemnity to cover all eventualities.

3.3 Environmental Impact Assessment (EIA)

3.3.1 BPC objection:

WSSC have relied upon the very temporary nature of this particular project. It is for a period of exploration only. This approach fails to take account of the possible cumulative effects of a series of such exploratory projects occurring over time in this avowedly sensitive area. Cumulative effects are one of the elements that the relevant EIA Regulations require the planning officer to consider in deciding whether an EIA or an Environmental Study (ES), are needed. Recent press reports suggest that the industry anticipates quite a prolonged period of such exploratory works in order to establish commercial viability. This particular project ought therefore to be seen for EIA purposes as part of a much more extensive process and assessed accordingly, otherwise the true intensity of environmental impacts of the testing phase will not be properly understood.

WSSC should review the decision that an EIA and ES are not needed. In short, the decision on this current planning application should be properly informed and consulted on the wider environmental impacts of the likely full programme of exploration of which it forms but a stage.

3.3.2 BPC requests that a condition be applied if WSSC decides to grant consent:

Cuadrilla to submit an acceptable EIA as a pre-requisite to commencing on site.

3.4 Traffic (refer to appendix B)

3.4.1 BPC objection:

The application fails to adequately address the impact of vehicles through the village of Balcombe.

Except for the rig, which in itself is only partly detailed, it fails to detail the types and sizes of vehicles travelling through the village. It fails to address the carriage of hazardous waste through the village. The application fails to justify the avoidance of the route to and from the south, bizarrely stating traffic will avoid Cuckfield whilst never mentioning Balcombe. There are no traffic management plans and no temporary road signage is detailed. There is no measure to reduce the impact of traffic on the village primary school.

BPC strongly contend that a Traffic Management Plan and Traffic/Transport Assessment should have been provided due to the presence of large and abnormal loads, the transport of hazardous materials and the proximity of the school to the route.

3.4.2 BPC requests that a condition be applied if WSSC decides to grant consent:

A Traffic Management Plan and Traffic/Transport Assessment should be provided and should address:

- Temporary traffic signage to be provided to prevent collisions involving vehicles entering or leaving the site.
- A speed restriction of 20 mph to be imposed on HGV traffic travelling through the village
- Restrictions on times at which HGV may travel through the village
- Access to and from the south should be allowed/ imposed for:
 - All traffic heading to or coming from the south.
 - All HGV traffic at set-down and pick-up times from the school should it be necessary to enter or exit the site at these times.
- Any hazardous loads to be moved past the school outside school hours to avoid the possibility of an incident while children are in residence.
- Limits on numbers of HGV traffic to avoid exceeding the estimates made in the application.

3.5 Noise (for more detail refer to appendix D)

3.5.1 BPC objection:

3.5.1.1 The application does not accurately consider the effect of noise at the nearest residential properties and does not satisfy National Planning Policy Framework (NPPF) paragraphs 123, 144 and Technical Guidance to the National Planning Policy Framework paragraphs 28,29 and 30.

3.5.1.2 NPPF 2012 guidance note 30 and 31 state that the first aim of background noise level for all periods should be set at (La90) + 10dB (A). No attempt has been made to achieve this and secondary aims have been predicted based upon this noise limit restriction imposing an unreasonable burden on operations.

3.5.1.3 There are fundamental flaws and omissions within the noise impact assessment methodology and the inaccurate presentation of the data would intimate that the Noise Impact Appraisal was written to achieve the NPPF noise levels rather than demonstrate the correct noise levels and in doing so neglects to highlight the requirement for noise mitigation proposals to reduce the noise level to an acceptable level from the start.

3.5.1.4 The failure of addressing the noise generated by the flare which is recognised as a dominant noise source is a concern that should not be ignored.

3.5.1.5 Within the application Cuadrilla describes breaching the maximum limits set in the NPPF.

3.5.1.6 It is suggested that the noisy activities could possibly be of relatively brief duration – for example the flare will only operate for seven days – from experience, by the time monitoring has taken place, data has been collected, then analysed, then accepted as a breach of a standard, there would be no time to apply noise mitigation proposals.

3.5.1.7 The WSCC noise consultant should have carried out a site visit and site assessment of the revised noise assessment proposals and should not have relied upon desktop studies.

3.5.1.8 WSCC must ensure that effective noise equipment and resources are available and accessible for monitoring to ensure compliance and that any breaches are dealt with appropriately and promptly.

3.5.2 BPC requests that a condition be applied if WSCC decides to grant consent:

That the highest possible level of controls are set with regular, independently tested monitoring and transparency of results. In particular:

- Cuadrilla must complete an accurate noise assessment to determine correct background noise levels.
- Cuadrilla must provide accurate noise modelling of the flare within the assessment
- Cuadrilla must review the method of assessing the noise levels at the closest property and provide a clear assessment strategy, reporting procedures and immediate cessation of works proposal to ensure that noise limits are not exceeded.
- Cuadrilla to install additional noise monitoring equipment in new sites at suitable locations within the village to assess the impact within the built up area.

- WSCC must impose background +10dB maximum noise levels and not +55dB as the daytime noise limit.
- Noise mitigation equipment must be installed prior to site establishment
- Cuadrilla must submit details to WSCC on how noise limits will be achieved.

3. 6 Air (refer to Appendix H)

3.6.1 BPC objection:

Air dispersion studies on levels of Sulphur Dioxide, Polyaromatic Hydrocarbons and Particulate Matter are missing from the application and seem likely to breach National Air Quality Objectives. BPC note that similar issues have been raised by Public Health England in their letter to WSCC dated 4.3.14 and published on the WSCC Planning Portal.

3.6.2 BPC requests that a condition be applied if WSCC decides to grant consent:

That a wider, independent and more detailed study is carried out and that the most stringent level of controls are set with regular, independently tested monitoring and transparency of results together with agreed mitigation measures.

3.7 Drainage and Flooding (refer to Appendix E)

3.7.1 BPC comment:

Point of accuracy: Is the site within an area at risk of flooding? Cuadrilla have answered NO.

An on-line review of the Environment Agency's Flood Map suggests that the body of the site may just fall into a flood risk zone and the red line of the drill bore crosses a flood risk zone. Should the applicant have answered YES?

3.7.2 BPC comment;

Point of accuracy: Is your proposal within 20 metres of a watercourse (e.g. river, stream or beck.)? Cuadrilla have answered NO.

The "issue" marked on drawing 62087 (A0) scales at only 15.5m from the red lined site boundary, albeit the access road. Should the applicant have answered YES?

3.8 Ecology

3.8.1 BPC objection:

Reasonable likelihood of protected or priority species being adversely affected on land on or near the application site. Cuadrilla have answered NO.

The application fails to identify the habitat of protected species stated within the area. In particular Great Crested Newts are indicated as being in the area and yet no ponds have been identified. How therefore have exclusion zones been considered?

3.8.2 BPC requests that a condition be applied if WSCC decides to grant consent:

For the applicant to carry out a survey to establish habitats for this species and any other protected or priority species and to agree any appropriate mitigation measures as a pre-requisite to commencement.

3.9 Bat Survey

3.9.1 BPC objection: The detailed bat survey included in the application was carried out during August 2013, AFTER the Cuadrilla works had already commenced and with the site and surrounding areas continuously operational. It is possible that this may have produced distorted results.

3.9.2 BPC requests that a condition be applied if WSCC decides to grant consent:

For the applicant to carry out a new bat survey while the site is not occupied and to agree any appropriate mitigation measures as a pre-requisite to commencement

3.10 Timeline

3.10.1 BPC objection:

The 7 day notice prior to works commencing seems very short and BPC are concerned that adequate time is allowed for the relevant authorities to initiate and check all protective procedures are in place prior to any work commencing. A longer notice period allows the authorities more preparation. A longer notice period should be provided.

3.10.2 BPC requests that a condition be applied if WSCC decides to grant consent:

For the applicant to provide a minimum of 28 days notice prior to commencement.

3.11 Site Restoration

3.11.1 BPC objection:

There needs to be more detail about the length of the aftercare period, i.e. the time following these works that Cuadrilla will be required to remedy any subsequent issues.

3.11.2 BPC requests that a condition be applied if WSCC decides to grant consent:

The aftercare period should involve appropriate monitoring, to be determined by WSCC and for a minimum of 50 years.

3.12 Pollution risks and crisis planning (refer to Appendix E)

3.12.1 BPC objection (spillage):

BPC has a number of objections in the following areas:

- Appendix E was prepared in August 2013 for the revised flare application. The plan of the site set-up in figure 1 does not match that of the flow test application section labelled CRL-002. The Spill Management section refers to method statement in appendix 2, which doesn't exist in this application but may refer to the previous, now withdrawn, application.
- The application has two areas of drainage. The test area which is bunded and membraned and drained to both a sump and the cellar and from which any spillage and surface water is recycled or removed from site. The remainder of the site drains to a perimeter French drain and to an interceptor. There are no details given as to where the interceptor outfalls to in this application. Section 6.1 describes how the interceptor will be closed off during operation of the site but this takes no account of volume of storage or containment of the interceptor to accommodate surface water. An interceptor would normally

hold back hydrocarbon contaminants but allow through flow of water. If this is the case the application should state where this outfalls.

- Plans referred to are a Spill Plan, Pollution Incident Plan, Pollution Prevention Plan. These are not included in the application and should be available for reference.
- There is ambiguity about what gets transferred to where due to differences between the 2013 (App E) and 2014 application descriptions of operations.
- There is ambiguity as to the water abstraction protection zone used. Is this 2km from well head or the western end of the horizontal bore?
- There is ambiguity over The Application Forms in sections 10 and 13.
- The location of the physical pipe work connections to tanker transport is outside the bunded area of the site.
- Mixing on site of HCl is also mentioned and, although not stated, it is shown to be mixed off the bunded area.

3.12.2 BPC requests that a condition be applied if WSCC decides to grant consent:

Ensure that the bunded area extends to all areas where there is a risk of spillage.

3.12.3 BPC objection (spillage):

In Appendix E it is stated, "The water supply for households and industry etc. in the area is supplied from abstractions taken from Ardingly reservoir and the River Ouse"

However in the sections on Pollution Prevention & Drainage and Emergency Preparedness & Response there is no mention of mitigations to prevent pollution to Ardingly reservoir.

There are two adjacent streams to the well site, and both feed into the River Ouse. Two miles downstream the Ouse is augmented by the outflow, from Ardingly reservoir. At this point South East Water have a facility that enables them to pump water up from the Ouse into the reservoir, which they have used several times in the last few years. Therefore there is a risk of a pollution spill incident occurring at the same time that South East Water are pumping into the reservoir. The drilling site must have a 24-hour ability to contact South East water so that pumping could be immediately stopped before any pollution reaches their pumping point. Also this would enable South East water to react in a timely manner further downstream at their Barcombe facility.

3.12.4 BPC requests that a condition be applied if WSCC decide to grant consent:

A robust crisis management plan that includes emergency communication with South East Water. Reference is made to the Pollution Prevention Plan. This should be made public and a condition imposed that this plan is agreed before works commence.

3.12.5 BPC objection (lighting):

Site lighting levels are not defined adequately in the application.

3.12.6 BPC requests that a condition be applied if WSCC decides to grant consent:

The lighting pollution to be measured and monitored at suitable receptor points with reference to the railway, Kemps House (being the nearest dwelling), and the public highway, and levels set by WSCC at the lowest reasonable levels.

3.13 Baseline Studies

3.13.1 BPC Objection:

BPC is aware of public concern over the methods used in the summer of 2013 for baseline and subsequent testing.

3.13.2 BPC requests that a condition be applied if WSCC decide to grant consent:
WSCC should stipulate a schedule of full and independently verified testing, monitoring and publication for noise, air and water.

3.14 Landscape and Visual Impact. Photomontage showing the rig.

3.14.1 BPC objection:

This photomontage shows the rig and should also show the flaring housing in order to give a true representation of the visual impact of the development. BPC believe that the true visual impact of the operation has not been demonstrated in this application.

3.14.2 BPC requests that a condition be applied if WSCC decides to grant consent:
Cuadrilla must demonstrate, prior to commencement, that the visual impact of both the rig and the flare housing is acceptable to WSCC.

3.15 Points of accuracy and conflicting information.

Item ref.	Document	Section of document	BPC comment or observation
3.15.1	Application Form	Page 2. Section 5. Total application area (as outlined in red on your plans) in Hectares. Stated 0.73	BPC note that the red lined area does not reflect the fenced off area of the site on the ground or the site area that Cuadrilla will control.
3.15.2		Page 3. Section 7. Type of Application	Should the answer to question (b) "involving the disposal of mineral waste" be YES? The application currently states NO and this seems to conflict with the body of the application.
3.15.3		Page 4. Section 8. Mineral Extraction.	Is WSCC certain and content that these questions have been answered accurately?
3.15.4		Page 6. Section 13 question D. Disposal of Mining Waste. Answered No.	This conflicts with section 4.5 of the supporting statement (pages 18 and 19 of 39), which specifically mentions activities controlled by a mining waste permit.
3.15.5		Page 11. Agricultural Holding Certificate E	Is this certificate correctly completed - it seems to conflict with certificates B and F.
3.15.6	Copies of letters to land owners and tenants	Located prior to the supporting statement contents page 1 of 39.	The letter to Mr G Larwood of West Up Farm is missing.
3.15.7	Supporting Statement	Page 5 of 39. Section 2.2 Access	The public footpath at Pilstye Farm has been missed which is approximately 600m to the South of the site entrance. The footpath to the North West of the site as it crosses the railway is approximately 300m away.

3.15.8		Page 6 of 39. Section 2.6 distance between the site and Kemps House 385m	There are some inconsistencies in the document on the correct distance. As the crow flies and closest boundary to closest boundary, we estimate that the distance is 320m to Kemps House and 350m to Kemps Farm.
3.15.9		Page 10 of 39. Section 3.4 Access - fencing.	Cuadrilla anticipate the need to erect the extra fencing because of protesters, as before. Protest management should be properly considered as a component of this application.
3.15.10		Page 12 of 39. Section 4.2 Landscape and Visual Impact. Distance to Kemps Farm 380m and Page 21 of 39. Section 4.13 Heritage Archaeology. Distance to Kemps House 385m	There are some inconsistencies in the document on the correct distance. As the crow flies and closest boundary to closest boundary, we estimate that the distance is 320m to Kemps House and 350m to Kemps Farm.

APPENDIX A - GEOLOGY

No further comment

APPENDIX B - TRANSPORT (also refer to traffic objection in section 3)

Summary of details in the Application;

Traffic Movements

Assume HGV units stated are one-way journeys. (ie 54 HGV is 27 vehicles on a round trip.) This is not explicitly stated in the application.

The Rig stays on site for the duration. The application tells us how long the rig vehicle is but not how wide. - This would be significant coming along London Road where parked vehicles narrow the road. There is no Traffic Management Plan for its arrival and there is no notification policy for the rig or any other of the larger loads. The applications states journeys would avoid peak traffic flow periods but no hours are specified.

Other vehicles are not specified and it is impossible to assess how many 'abnormal' or large loads make up the HGV traffic stated.

It is difficult to assess water/ waste tanker movements as we don't know how much will come back from the well. Up to 200m3 of HCL and water combined goes in but on return there may be more due to produced water or less due to reaction/loss.

In any case the HGV movements stated would seem enough to cover this.

Traffic Summary from Table 3.3 of the application

Mobilise	1 week	54 HGV	1 an hour
Flow Test	2 weeks	70 HGV	1 every 2 hours
Pressure Mon	9 weeks	10 HGV	Negligable
Sealing	4 weeks	42 HGV	2 a day
Demob & Clear	4 days	42 HGV	1 every half hour
Total	14 weeks 4 days	218 HGV	Av 1 every 2 hours

Average numbers of HGV's are not significant in Highways terms when set against the current average daily flows of about 120 HGV's except possibly for the short period of 4 days of demobilisation where they are one every half hour assuming a normal working day.

(Section 4.3 of the application has a typo referring to section 3.2 rather than 3.3.)

Route Restrictions and The School

There is no mention of Balcombe in the transport and access sections of the application. Nor is there any assessment of the impact of traffic on the village or of any plans for large vehicles. There is no mention of travel past the school as there was in the 2010 application.

Cuckfield is mentioned extensively in the document, including bizarrely in the last paragraph of 5.2.3 the avoidance of Cuckfield village.

Although the document states several times that Cuckfield is to be avoided the reason is not stated. It may be that weight restriction on the southern end of the High Street has been taken into account, but this is not stated as a reason. In any case the

route via Whitemans Green towards the A23 at Warninglid could take the normal HGV's and tankers with ease. There is no weight restriction on this route and it is freely trafficked by such vehicles at present. Larger vehicles such as the rig and articulated vehicles would be unable to negotiate the mini-roundabout at Whiteman's Green and would be precluded from this route.

The Whiteman's Green route passes no more houses than coming from the north through Balcombe and doesn't pass a school. The application seems to make no sense on this point.

A voluntary undertaking was offered in the 2010 application, and in subsequent discussions with the applicant, to avoid travelling past Balcombe Primary school at set down and pick up time. None is offered in this application.

Vehicles carrying hazardous material, including material controlled by the Mining Waste Permit and the Radioactive Substances Regulations should have consideration given to the route, bearing in mind the proximity of the school to the proposed route.

Transport Assessment –

The necessity for a Transport Assessment does not rely solely on the number of vehicles but also on type, load and route. Neither type of vehicle, material carried nor route seem adequately detailed or considered in the application.

Traffic Management Plan and Signage

There are no traffic management details.

The previous application had temporary traffic signage on the approaches to the site added as a condition yet this application does not offer such. The application does mention in 3.4 the temporary matrix signs, which are in fact no longer in place.

Appendix B of the application

The description and table in Appendix B agree with the Application details of 3.3 and 3.4 . They do not agree with the Noise Appendix D .

Recommendations;

A Traffic Management Plan and/ or Traffic/Transport Assessment should be provided due to the presence of large and abnormal loads, the transport of hazardous materials and the proximity of the school to the route.

Details of temporary traffic signage should be provided to avoid collisions with turning vehicles at the site entrance.

The restriction on access from the south should be removed for normal HGV traffic:

- Use this route for all traffic heading to or coming from the south.
- Use this route at set-down and pick up times from the school should it be necessary to enter or exit the site at these times.
- Consider using this route for any hazardous loads to avoid the possibility of an incident near the school.

Restrictions on hours past the school for HGV's should be made, although smaller, non hazardous HGV's could be permitted.

APPENDIX C - ECOLOGY AND BAT SURVEY

No further comment (refer to Ecology objection in section 3)

APPENDIX D - NOISE (also refer to noise objection in section 3)**A. FLARE NOISE.**

Nowhere within the planning application does it calculate the noise of the flare or state that the noise generated will be controlled at source (only that it can), e.g. during sensitive night time periods but does not state at what decibel levels.

Within the current Noise Impact Appraisal Section 3.4 of the application 'Noise produced during testing operations' states:

- 'may be a requirement for burning off produced gas, commonly known as flaring'.
- 'noise produced by flaring is variable, being dependent upon gas flow rates to the burner and can vary between barely perceptible (with very low gas flows), to a more significant level with high gas flow rates'.
- 'as the flare noise is unpredictable, but is controllable the potential contribution from this source has not been included in the prediction'.

There is no commitment to control the emissions or provide an indication of how much pressure can be allowed to build up overnight for flaring the next day or state the suggested noise level of the flare which will not be exceeded.

Modern flare systems are highly optimised, special solutions tailor made for a specific application. Whilst simplistic equations are available to calculate the A-weighted sound power level of the noise emitted by the flare more accurate flare noise prediction models are available to calculate the noise levels. The applicant has stated the worst case noise scenario as noted within tables 2 & 3 of the Air Dispersion Report (Appendix H) which would be when the flare is operating at maximum design conditions for which the noise level can be calculated and should surely be considered.

Therefore, the current application does not satisfy the second aim of the Noise Policy Statement for England 2010 and National Planning Policy Framework paragraph 123 'Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbourhood noise within the context of Government Policy on sustainable development' as the application has not taken all reasonable steps to assess the actual impact on health and quality of life and as such has not fully appraised the methods required to minimise and mitigate the adverse impact.

The current application also does not comply with NPPF paragraph 144 'When determining planning applications, local planning authorities should ensure that any unavoidable noise, dust and particle emissions and any blasting vibrations are controlled, mitigated or removed at source, and establish appropriate noise limits for extraction in proximity to noise sensitive areas'.

The current application does not address the requirements of the Technical Guidance of the National Planning Policy Framework – paragraph 28 *‘minerals planning authorities should ensure that unavoidable noise emissions are controlled, mitigated or removed at source.*

The applicant has not accurately assessed the noise parameters of the flare stack.

The current application does not address the requirements of the Technical Guidance of the National Planning Policy Framework – paragraph 29 ‘those making development proposals should carry out a noise emissions assessment, which should identify all sources of noise and, for each source, consider the proposed operating locations, procedures, schedules and duration of work for the life of the operation’.

Whilst the applicant has made reference to the use of British Standard 5228 – 1:2009 to assess the noise levels on site one of the primary sources of noise during the testing phase – the flare which is elevated 14m above ground level and thus a more dominant noise source has been excluded from the assessment.

BS 5228 – 1:2009 states *‘local authorities need to know the expected levels of site noise in order that assessments can be made as to whether potential problems exist and whether controls are necessary. They also need to ensure that any noise limits proposed are practicable for the developments concerned and that the limits are capable of protecting the community from excessive noise’.*

With the exclusion of the noise from the flare stack we are unable to accurately assess the noise impact in accordance with BS 5228. Without accurate noise assessment information it is not appropriate to determine in favour of the applicant and we would recommend refusal of this application due to the failure to comply with the NPPF as stated above.

B. NOISE LEVELS.

The anticipated and proposed noise levels within the application are based upon the same approach as the previous planning consent. However the previous Noise Impact Appraisal (2010) which formed part of the previous planning consent was proven to be woefully inaccurate during the drilling phase of the works, proposed the use of a ground flare and not an elevated flare stack and just like the current application excluded the noise from the flare within the Noise Impact Appraisal.

This application has not provided an accurate ambient noise assessment for daytime, evening or night time conditions and in doing so has ignored the requirement to initially establish a noise limit at the noise sensitive property that does not exceed the level by more than 10dB(A).

Without knowing the background ambient noise levels or actual noise levels generated during the works the applicant has not reasonably considered the burden of noise attenuation prior to stating that the daytime limit of 55dB(A) and night time limit of 42dB(A) would be used.

In doing so the application does not comply with the Technical Guidance for the National Planning Policy Framework paragraph 29 which states 'Those making a development proposal should assess the existing noise climate around the site of the proposed operations, including background noise levels at nearby noise sensitive properties'. The application also fails to comply with the initial assessment requirements of Technical Guidance for the national Planning Policy Framework paragraph 30.

The applicant has also failed to establish a noise limit at the noise-sensitive property that does not exceed the background level by more than 10dB(A) or accurately consider the requirements to achieve a +10dB(A) limit.

Section 3 of the Noise Impact Appraisal states that 'predictions have been made in accordance with guidelines and procedures contained in BS 5228-1:2009'.

BS 5228 states that they should include all of the main items of plant and equipment used on the site but within section 3.4 'Noise Appraisal' of the Planning Application they state that they have deliberately excluded the noise generated by the flare stack which would be elevated 14m above the hard standing and just below the level of Kemps farm.

BS 5228-1:2009 is usually applied to assess the noise levels during the construction phase of a proposed development and because greater protection of amenity is normally considered appropriate for the 24-hour, seven-day production and testing phases BS5228 is not considered appropriate for noise assessment during the testing phase of the works.

However, since BS 5228 has been used we have provided below an assessment of the Noise Impact Appraisal which demonstrates that the assessment does not comply with BS 5228 – 1:2009.

Annex F2 of the British Standard assesses the adjustment to be made to a noise source based upon the local ground conditions and the distance between the noise source and the nearest property.

Within the application a 5dB(A) deduction was applied due to the screening and 60dB(A) deduction due to the distance of 400m from the noise source to Kemps Farm. These figures were taken from Annex F2.3 of BS 5228 which provides a more generous noise reduction value.

However, the application clearly states that the plant will be permanently on and is in a fixed position. Therefore, it should be classified as an 'activity' and should have been assessed in accordance with the more stringent Annex F2.2 which is used specifically for assessing the noise reduction for stationary and quasi stationary plant like the power generator, beam pump and flare stack.

Within the noise reduction assessment the applicant also made a reduction of 5dB(A) for screening. The rules with BS 5228 for deduction due to screening of 5dB(A) is based upon the requirement for the top of the equipment to be just visible to the receiver over the noise barrier. The flare will be 14m in the air and any screening is provided by a field of Christmas trees less than 2m high and with the topography of the land rising to Kemps Farm where you are able to view all of the exploration site from.

BS5228 also states that it is not advisable to combine the attenuation of screening and soft ground attenuation. Take either the attenuation from screening and hard ground propagation or the attenuation of the soft ground, whichever is the greater.

Considering the flare is 14m above ground level and clearly visible from Kemps House which is elevated above the Lower Stumble a deduction for site screening is not valid.

It should also be noted that the current noise assessment does not consider an adjustment for two sound sources continuously constant which could present an uplift of noise source level of up to 3dB(A) as stated within table F.3 of Annex F.2.6.1 of BS 5228.

Excluding the noise from the flare stack at this stage and using the values stated for the other plant and equipment the anticipated noise level at Kemps House would exceed the maximum night time guideline level of 42dB(A) and without the addition of the noise of the flare stack considered it is apparent that screening and noise mitigation should be installed prior to works commencing.

It should also be considered that with distances over 300m noise predictions have to be treated with caution because of the meteorological effects.

The processed meteorological data used to generate a five year frequency distribution of wind speed and direction shown as a Wind Rose Diagram for Gatwick 2005 – 2009 (Cuadrilla Technical Report: Air dispersion Model of exploration Drilling and Well Testing at Balcombe – Appendix H page 4). clearly shows a dominant south westerly wind that would carry the noise and increase the noise level at Kemps Farm.

From the previous works at Lower Stumble it was established that the tree line and topography to the east of the site channels the noise in to the centre of the village and this must be considered within the noise assessment.

APPENDIX E – DRAINAGE (also refer to drainage, flooding, pollution risks and crisis planning objections in section 3)**Observations**

Appendix E was prepared in August 2013 for the revised flare application. The plan of the site set-up in figure 1 does not match that of the flow test application section labeled CRL-002. The Spill Management section refers to method statement in appendix 2, which doesn't exist in this application but assumedly refers to the previous, now withdrawn, application.

The application has 2 areas of drainage. The test area which is bunded and membrane and drained to both a sump and the cellar and from which any spillage and surface water is recycled or removed from site. The remainder of the site drains to a perimeter French drain and to an interceptor. There are no details given as to where the interceptor outfalls to in this application. Section 6.1 describes how the interceptor will be closed off during operation of the site but this takes no account of volume of storage or containment of the interceptor to accommodate surface water. An interceptor would normally hold back hydrocarbon contaminants but allow through flow of water. If this is the case the application should state where this outfalls.

There seems to be some ambiguity about what gets transferred where due to the 2013 (App E) and 2014 application descriptions of operations.

Plans referred to are a Spill Plan, Pollution Incident Plan, Pollution Prevention Plan. Are these available for reference?

There is ambiguity as to the water abstraction protection zone used.
There is ambiguity over The Application Forms in sections 10 and 13.

Application Forms - Accuracy;

Section 10 deals with Flood Risk .

- The applicant has indicated NO to flood zone 2 or 3, but EA maps show this not to be the case and section 2.0 discusses the Flood Zone 3 at the London Road entrance.
- The applicant states the stream is greater than 20m away from the site. It is closer at about 15.5m to the access track, which is outlined red on the application. The stream may be further than 20m to the compound but not to the 'site' as defined by the application.
- Surface Water, the applicant has stated yes to sustainable drainage system and existing watercourse but this is not substantiated by the rest of the application.

Section 13 D – the form states that the application does not involve disposal of Mine waste. Is this by definition different to Mining Waste?

Summary of details in the Application;

3.5- Stage 1 Exploration and Well testing

- The membrane is asymmetric on the bore but seals the “well testing area” preventing accidental spillage and rain water from entering the underlying soils, groundwater and local watercourses.

4.5 – Waste Management

- Contradiction with 13D in the forms, Mining Waste -v- Mine Waste
- Site drainage would be collected in the water suction sump
- Wastewater and fluids removed by licensed operators following analysis if required.
- Contaminated surface water collected in the lined ditch during drilling would not be released into local watercourses/drainage but would be disposed of at approved location.

4.7 – Flood Risk

- Flood Zone 1, this is not entirely the case and this is discussed in section 2.0. of Appendix D and there seems little risk due to site contours but the statement is not strictly correct.

4.8 – Surface and Groundwater Management

- Contradicts 10 in application Forms which says surface water to water course.
- No potable water abstraction points in immediate vicinity
- Storage of oil, produced water and HCL within the bunded area.
- No surface water from the site would be permitted to enter watercourses or local sewers. Surface water runoff from the pad would be directed into a cellar and disposed of off site via suction tanker and waste water treatment works.
- Statement from EA as to satisfaction with borehole construction as part of groundwater risk assessment.

4.9 - Drainage and Pollution control

- Site specific **Pollution Prevention Plan** audited by the EA. Membrane, spill kits, flood risk, land drainage.

5.2.4 - Water Resources and Flood Risk

- NPPF flood -v- development. Not really an issue here despite the maps. Surface water removed from site.

Appendix E of the application:

Prepared in August 2013 for a previous application not specifically to this application.

2.0 – Flooding from the Site

- Flood areas contradict Application Form but explained here.
- All surface water to cellar from membrane.

3.0 – Site Set up/ Impermeable Membrane

- Description of a bunded, edged wrapped, membrane with a sump and aco drains. Needs better sketch the description is complicated and figure 1 out of date.
- All fluids from bund are recycled or taken off site.

4.2 – Baseline Information

- points 4&5 - No abstraction greater than 20m³ a day or less than 20m³ a day in vicinity or within 2km of the site. The horizontal bore goes 520m west. Is the 2km from the outer limit of that 520m reach or from the well head ? WSCC should check the measure has been made 2.5km from vertical bore.
- point 6 – Not strictly correct households & Industries are only topped up from Ardingly reservoir via the river Ouse which is also supplied by boreholes, although not from the Balcombe aquifer. The Ouse is overpumped into Ardingly Reservoir to keep levels high.

6.1 – Surface Water Management

- Emergency response procedure for spillages on the access track. Spill kits with transport off site.
- Interceptor outfall for general site drainage seems inadequately explained.

6.2 - Diesel, Chemical Storage and re-fuelling

- **Pollution Incident Plan.** Transfer of fuel/ Chemicals not on membrane? Mixing of acid and water not on membrane. The description in 6.2 may not be specific to the Flow Test. Appendix E has the refueling operation on drip trays and there seems to be discrepancy?

7.1 – Fire Fighter Water – what is this?

7.2 – Spill Management

- refers to the **Method Statement** contained in Appendix 2. Which doesn't exist in this application.
- Says membrane will contain large spill but transfer / mixing doesn't all happen on the bund? Activities off the well pad area seem to rely on individual trays and spill kits.

In Appendix E of the application it is stated that;

“The water supply for households and industry etc. in the area is supplied from abstractions taken from Ardingly reservoir and the River Ouse”

However in the sections on Pollution Prevention & Drainage and Emergency Preparedness & Response there is no mention of mitigations to prevent pollution to Ardingly reservoir.

There are two adjacent streams to the well site, and both feed into the River Ouse.

Two miles downstream the Ouse is augmented by the outflow, from Ardingly reservoir. At this point South East Water have a facility that enables them to pump water up from the Ouse into the reservoir, which they have used several times in the last few years.

Therefore there is a risk of a pollution if a spill incident were to occur at the same time that South East Water are pumping into the reservoir.

The drilling site must have a 24 hour ability to contact South East water so that pumping could be immediately stopped before any pollution reaches their pumping point.

Also this would enable South East water to react in a timely manner further downstream at their Barcombe facility.

Recommendations;

Clarify the purpose and outfall for the interceptor.

2km abstraction. Is this from the end of the horizontal bore or from the well head

Transfer and mixing of liquids on or off the bund. Clarify what happens where.

APPENDIX F - SITE RESTORATION (also refer to site restoration objection in section 3)

No further comment

APPENDIX G - SUPPORTING PHOTOGRAPHS

No further comment

APPENDIX H - AIR DISPERSION (also refer to air objection in section 3)

(a) New Air Dispersion Studies on Sulphur Dioxide (SO₂), Polyaromatic Hydrocarbons and Particulate Matter (PM) are required.

(b) An appropriate plan for Monitoring and Mitigation of Emissions is required.

The Air Dispersion Report provided by the Applicant (in Appendix H) in support of an application for planning consent for well pre-test and testing operations at the Lower Stumble Hydrocarbons Exploration Site has been subjected to review.

On the basis of the inspection and appraisal of the details provided further information is requested.

The applicant has presented an air dispersion study of carbon monoxide (CO) and oxides of nitrogen (NO_x) emissions from flaring affecting properties in the prevailing wind from the flare. In the vicinity of the residences located within about 400 metres from the flare, the CO and NO_x levels are likely to be at levels which comply with National Air Quality Objectives.

However, further information is requested below on three other toxic emissions which were not considered by the applicant and which seem likely to breach National Air Quality Objectives. Also, a proper regime for the monitoring and mitigation of flaring emissions needs to be put in place.

i) Sulphur Dioxide (SO₂)

At room temperature, sulphur dioxide is a non-flammable, colourless gas with a very strong, pungent odour and is heavier than air. Inhalation is the major route of exposure to sulphur dioxide. Most exposures are due to air pollution, and this has both short-term and chronic health consequences for people with lung disease. Inhaled sulphur dioxide readily reacts with the moisture of mucous membranes to form sulphurous acid (H₂SO₃), which is a severe irritant. People with asthma can experience increased airway resistance with sulphur dioxide concentrations of less than 125 micrograms/m³

The gas feed entering the flare stack is a wet gas (not dry as stated by the applicant) and has a range of 0-8% molar composition expected for a solution gas coming out of the very sulphur rich Kimmeridge oil. A mathematical model of the air dispersion was constructed designed to give estimates of the concentrations of flaring emissions. The model was parameterised against the Aermod calculations submitted by Cuadrilla. In the vicinity of the residences located within about 400 metres from the flare (at Kemps House and Holts House) a sulphur dioxide concentration in the range 0-500 micrograms/m³ is estimated as the likely Sulphur Dioxide concentration. This is up to 4 times the National 24 hourly Air Quality objective for sulphur dioxide (125 micrograms/m³). The applicant has not considered that sulphur dioxide would be above this level. Furthermore, at this time following the drilling phase the applicant is very likely to have data on the chemical composition of the wet gas entering the flare. Information on this should be provided. Hence accurate air dispersion calculations for sulphur dioxide should be undertaken.

(ii) Polyaromatic Hydrocarbons

Polyaromatic hydrocarbons are by-products arising from incomplete combustion of organic matter that are frequently released into our environment. They are produced in flares. Many Polyaromatic hydrocarbons are strong carcinogens and have been linked to increased incidences of various types of cancer in humans for which there is no known safe threshold concentration or exposure time.

Flare feed composition data and literature values for emission factors (0.001) for polyaromatic hydrocarbons from the flare and the dispersion model described above was used to estimate the likely polyaromatic hydrocarbon concentration. In the vicinity of the residences located within about 400 metres from the flare (at Kemps House and Kemps Farm) the polyaromatic hydrocarbon concentration is expected to be around 6 ng/m³. This is 24 times the National Air Quality Objective for Polyaromatic hydrocarbons (0.25 ng/m³) and so air dispersion calculations of this are necessary.

(iii) Particulate Matter (PM)

Particle pollution (also known as "particulate matter") in the air includes a mixture of solids and liquid droplets. Some particles are emitted directly; others are formed in the atmosphere when other pollutants react. Particles come in a wide range of sizes. Those less than 10 micrometers in diameter (PM10) are so small that they can get into the lungs, potentially causing serious health problems. Ten micrometers is smaller than the width of a single human hair.

Particulate Matter generated in the flare can be detrimental to public health. Using similar models to above it is estimated that the total PM concentration in particular in the vicinity of the residences located within about 400 metres from the flare is 100 micrograms/m³. This is 4 times the National Air Quality Objective PM (25 micrograms/m³). There is a large uncertainty in this figure due to lack of reliable data on PM emission factors. so further accurate air dispersion calculations are necessary.

Monitoring and Mitigation of Emissions

The Environment Agency has issued a flaring permit to the applicant which does not set limits for toxic air emissions from the flare.

One monthly spot test is required and the results of this communicated to the Environment Agency. It is not at all evident that such a monitoring regime is appropriate for this application. A strategy needs to be in place for continuous monitoring of all toxic emissions from the flare at Kemps House and Kemps Farm. These residences are less than 400 metres in the prevailing wind from the flare.

If it is found that any emissions levels breach safe limits a strategy must be in place to immediately remedy this situation.