Three Nooks Farm: Phase 2 (SM.12/06/161 M) – Response to Planning Regulation Consultation

Prepared by: RSK Environment Ltd **Date: 20th November 2012**

Background

The following information has been prepared by RSK Environment Limited on behalf of Seven Star Natural Gas Limited in response to points raised through the process of consultation undertaken by Staffordshire County Council on planning application ref: SM.12/06/161 M submitted in July 2012 for Phase 2 gas to power generation at Three Nooks Farm.

Having reviewed the consultation response (Ref: 161 M/DMW - issued to RSK Environment Limited on 12th November 2012), we are encouraged to note that Staffordshire County Council's Planning and Regulation Team have no objections in principle to the application. We acknowledge, however, that the team has raised a number of queries that either require attention or may need to be addressed by way of planning condition, should approval be granted for the project.

Accordingly, the following sections are framed around the various topic-specific issues and concerns set out in the consultation response.

Relationship to SM.11/18/161 M

We note that the consultation response makes reference to matters relating to the approved Phase 1 operations (under consent SM.11/18/161 M) that are currently being implemented at Three Nooks Farm by Seven Star's appointed drilling contractors.

There appears to be confusion in the response, as concerns have been raised regarding a lack of restoration plans for the borehole area in the Phase 2 application (SM.12/06/161 M).

We can confirm that a full site restoration and long term management plan for the Phase 1 works that cover this area were approved under the above permission, and will be implemented irrespective of whether the current Phase 2 application is granted approval.

Figures within SM.11/18/161 M accordingly present full details regarding the planned finish of the area post completion of the borehole repair and gas appraisal works, stating that the affected field will be recontoured to its original profiles and gradients. The only visible remains will be the gas valve (protected and contained within a 4x4m fenced off compound), and a narrowed stone track to provide future maintenance and farm vehicle access.

Noise Levels

Concerns have been raised over the predicted noise levels associated with the operation of the Phase 2 equipment.

As set out in the submitted application details, the proposal makes clear that only one gas combustion engine will be operating, on a 24/7 basis, at any given time. The second engine will serve to act as a backup generator in the event that the first unit is not operational. Both engines will be located in acoustic containers, outwardly similar to a steel road container, and supplied by their own gas compressor and control gear. These containers, in turn are located within individual rooms.

The observation that the new barn will be used on a shared occupancy arrangement between Seven Star and the farmer is correct; however the building plans show that the two acoustic containers are to be set within solid block walling of the room and further solid block walling between the energy section and agricultural barn section. Internal and external doors to the generation sets would remain closed, apart from during essential maintenance events where access would be required.

In response to the query regarding 45 dB(A) at Three Nooks Farm being very low for the proposed gas combustion engines, we can confirm that the best available data was utilised to undertake the computer noise modelling, using noise monitoring at a similar site and data provided by the supplier of the gas combustion engines. Monitoring at the similar site at Houghton indicated noise levels would be lower than the predicted sound levels modelled for the Three Nooks Farm site, which has used supplier data. It is therefore considered that the noise levels predicted at the worst case façade of Three Nooks Farm are representative of noise levels from the proposed plant.

In relation to noise from the gas combustion engines from within agricultural areas of the barn, the supplier of the proposed gas combustion engine (Finning CAT) have stated that the gas combustion engine system has been designed to achieve 75 dB(A) + 2 dB tolerance outside of the container. The container would be separated from the rest of the farm building as set out above. Even with potential reflections within the agricultural building, it is considered unlikely that noise levels would exceed 80 dB(A) and the lower action threshold in accordance with The Control of Noise at Work Regulations within an adjacent room to the gas combustion engine container.

The worst-case emission points for noise from the gas combustion engine would be the louvers in the container door and the farm building façade as currently modelled. Noise exiting the farm building via open doors (both the internal door to the container room and the door to outside of the farm building via a corridor) would not be considered to significantly add to external plant noise, as noise transmission from this additional route would be 10 dB below that transmitted via the louvers.

In response to the acceptability of 45 dB(A) during night time periods, we can confirm that the computer noise model for the gas combustion engine is calibrated to the specified noise level of 77 dB(A), which already contains a 2 dB tolerance or error. This is considered an achievable maximum noise level. In addition, the computer noise modelling has worst-case assumptions including meteorological conditions (downwind for favourable noise propagation, relative humidity and temperature), which means that noise levels are likely to be lower than predicted. Therefore the 45 dB(A) level predicted at Three Nooks Farm is considered to be achievable.

The predicted noise level of 45 dB(A) has been assessed based on the likely resulting internal noise level within a room which has been calculated as 35 dB(A) (assuming an open window will provide 10 dB(A) of attenuation). This noise level would be considered as 'reasonable' for sleeping conditions in accordance with BS 8233. Given the angle of noise propagation from the proposed plant and the nearest window at Three Nooks Farm, it is likely that the noise level inside the (assumed) first floor bedroom at the western façade of the building would be less than predicted.

Additionally, the assessment assumes all cooling plant is in operation during the quietest time of the night, which may not be the case as ambient temperatures are generally lower during the night and the cooling plant will have the capacity to meet the development requirements during the hottest summer days.

Emission Exhaust Stacks

The form and height of the proposed exhaust stacks has been queried in the consultation response.

We can confirm these are set out on Figures 6a & b, and Figure 22 & 22a within SM.12/06/161 M, the height of which will be 1m above the ridgeline of the proposed barn roof.

The images presented in pages 4 and 5 of the Supporting Additional Information were provided solely to illustrate the typical form and appearance of ancillary external equipment similar to that proposed in the application, as stated in the document. They should not be construed as an indicator of the height, diameter or material finish of planned generator exhaust stacks forming part of the proposed barn structure; these images depict exhaust stacks associated with more overtly industrial units housing a different equipment configuration.

Colour Schemes

The proposed finishes of the barn and associated ancillary equipment have been developed to be aesthetically sympathetic to the receiving local environment, and were advanced following detailed pre-application consultation with Staffordshire County Council's landscape officers undertaken to agree basic design principles.

We note that a query has been raised with regard to whether the black finish is aesthetically appropriate and whether this should be substituted with a grey colour to match the proposed barn. We would like to clarify that the proposed barn will be predominantly finished in natural timber Yorkshire Boarding cladding – on the recommendation of the landscape officers – and will therefore eventually 'weather' to be silver grey in colour.

Following completion of a landscape and visual assessment of the site, it was concluded that the proposed colours and finishes were entirely appropriate to the receiving environment and in keeping with local vernacular. Additionally, we are not aware of any other concerns being raised either during pre or post application consultation in relation to the acceptability of the proposed external treatments.

Mounding

The query regarding the composition and extent of mounding is noted, as is the apparent contradiction between the submitted Planning Statement and Design and Access Statement.

Para. 6.5.74 of the submitted Planning Statement specifically relates to the use of temporary mounding during the construction phase i.e. that which may be introduced as a short term measure to screen temporary construction activities in nearby views. The landscape and visual assessment concluded there to be no requirement for such temporary measures due to the short duration that the Phase 2 construction period will persist for.

The assessment did, however, identify a need for longer-term visual screening and containment specifically for the proposed barn and silage clamp, full details of which are set out in Para's 6.5.75 to 6.5.78 of the Planning Statement. The information presented in Para 4.8.3 of the submitted Design and Access Statement duplicates that which is presented in Para 6.5.76 of the Planning Statement.

We can therefore clarify that, as presented in the application, the only proposed permanent mounding that will be undertaken as part of the proposed Phase 2 works relates to that along the northern boundary of the new barn and silage clamp, as depicted on Figure 13 of the application submission.

The composition of this mounding will be derived from the topsoil and sub-soil arising from the re-configuration of the silage clamp. The excavations required to provide the silage clamp structure are balanced by the extent of the proposed mounding, thereby avoiding the need to import or export such material and so reduce traffic movements.

This mounding will be subject to a targeted ecological landscaping treatment to provide not only visual filtering and screening of the rear façades of the proposed barn and silage clamp from residential receptors to the north-west, but also enhance the local wildlife habitat.

Planning Conditions

We note that a number of potential conditions have been suggested in the consultation response.

It is not anticipated there will be a requirement for remedial works at the wells at any future date. Testing and appraisal to be undertaken as part of the consented Phase 1 works currently being undertaken at the site will serve to robustly establish the quantity of gas within the reservoir, prior to progression of works associated with the Phase 2 application (subject to consent being granted).

In the unlikely event that future remedial works are required at the well head, Seven Star would accordingly liaise with Staffordshire County Council on the matter prior to undertaking any such operations. This approach has been successfully followed throughout the ongoing Phase 1 works, and is an approach that Seven Star would intend to adopt in the long term to ensure transparent communications with the Minerals Planning Authority are maintained during the production phase of the project.

We can confirm that it is not the intention of Seven Star to use any inert fluids as part of the proposed Phase 2 operations forming the basis of the submitted application.

The Site Waste Management Plan incorporated into the submitted application provides an outline framework for this type of document, and was included to demonstrate a clear commitment by Seven Star and its appointed operatives to good site practice. Subject to the granting of consent, this outline plan will be formalised as part of the Phase 2 contract documentation and signed by the Principal Contractor.