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22 December 2015

Dear Mr Herbert

**TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT)  
REGULATIONS 2011 – REQUEST FOR A SCOPING OPINION UNDER REGULATION 13**

**PROPOSED EXPLORATORY WELL SITE – TINKER LANE 1, RETFORD ROAD, BETWEEN  
BLYTH AND BARNBY MOOR, NOTTINGHAMSHIRE**

I write with regard to the above scoping request. As you are aware, the Environmental Statement (ES) which will accompany any application for the above proposal is required to contain certain documentation which provides certain information for the purposes of assessing the likely impacts upon the environment arising from the development and operations of the proposed scheme. In line with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (hereafter referred to as 'the Regulations') the ES shall include such of the information referred to in Part 1 of Schedule 4 as is reasonably required to assess the environmental effects of the development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile, but that at least includes the information referred to in Part 2 of Schedule 4.

In accordance with Regulation 13(6) of the Regulations, the County Council is required to take the following into account prior to adopting a scoping opinion:

- The specific characteristics of the particular development;
- The specific characteristics of the development of the type concerned; and
- The environmental features likely to be affected by the development.

**The specific characteristics of the development of the type concerned and the particular development**

Location and Surroundings

The proposed exploratory well site is located in the north of Nottinghamshire, within the district of Bassetlaw and the Parish of Torworth, and adjacent to the Parish of Barnby Moor. The nearest residential areas are the villages of Torworth (1.4km north-east), Barnby Moor (1.2km south-east) and Blyth (2.3km north-west).

The site is accessed off the A634 which runs between Barnby Moor, where it joins the A638, and Blyth, which it joins the B6045. To the north and south of Blyth there is access onto the A1.

The wider area has a rural characteristic, comprising open agricultural fields and a generally flat topography. The application site itself is within an agricultural field and is bordered by fields to the north and west. To the immediate south is a field hedge boundary, beyond which are further

agricultural fields. To the east the site is bounded by a field hedge and the A634, beyond which are agricultural fields.

The closest residential properties include Beech Farm located approximately 625m to the south-west; Jubilee Farm located approximately 680m to the north-west; Billy Button Cottage 690m to the north and houses on the A638, approximately 850m to the east.

Mattersey Hill Marsh Site of Special Scientific Interest (SSSI) is approximately 2.7km north-east of the site and Sutton and Lound Gravel Pits SSSI is 3.7km to east. In addition, there is a geological SSSI at Scrooby Quarry approximately 3.6km to north. The nearest non-statutory designated ecological sites are Tinker Lane, Barnby Moor Local Wildlife Site (LWS) approximately 200m to the north and Daneshill Lakes and Woodland LWS located 1.6km to east.

Within the surrounding area there are conservation areas in the villages of Blyth, Lound and Mattersey. Within Blyth there are two Scheduled Ancient Monuments (SAM), namely Blyth Priory and Blyth School. There are a number of listed buildings and buildings of local heritage interest, the nearest to the site of which are located in Barnby Moor and Torworth.

The nearest public footpath is the Torworth Byway Open to all Traffic (BOAT) approximately 430m to the north of the site, which joins the A634 to Billy Button Lane. In addition, the Barnby Moor Bridle Path runs to the south of the site, approximately 630m at its closest, connecting Beech Farm to the A634.

Robin Hood Airport is approximately 11.2km to the north.

### Proposed Development

The proposed development is a vertical multi-core well which would recover samples from, and measure the properties of, the Namurian and Dinantian geological formations that underlie the site. In addition, three sets of monitoring boreholes are proposed to sample groundwater and ground gas within the Nottingham Castle Sandstone formation and isolated shallow sandstone formations that may be present.

The exploratory well would be drilled through all of the coal and shale formations with core samples taken at multiple intervals whilst drilling. Hydraulic fracturing would not be performed in the well on either the coal measure or shale targets.

### *Wellsite construction*

The wellsite construction process would take approximately three months and consist of the following:

- Formation of a new site access;
- Erection of gates, security fencing and CCTV;
- Stripping and storage of top-soil and sub-soils and formation of on-site bunds which would be grassed and maintained for the life of the development;
- Creation of the wellsite platform using impermeable geotextile membrane layers covered by a layer of aggregate hardstanding and the installation of a wellhead cellar with associated steel conductors;
- Installation of bunded storage areas for chemicals and a surface water attenuation tank for surface water management; and
- Staff welfare accommodation and on site vehicle parking.

### *Drilling*

The drilling phase would take approximately four months and the equipment required on site for the exploratory well would include:

- Drilling rig and ancillary equipment – the drilling rigs currently under consideration are the Bolden 92 (BDF Rig 92) which has a maximum height of 60m; or shorter rigs such as the Deutag Bentec T 208, the Bentec T-49 and the PR Marriot Drillmec HH220 (Rig 50);
- Containerised diesel power generators;
- Pumps and storage tanks for diesel, water, drilling mud and cuttings;
- Drill casing storage area and pipe rack;
- Ancillary equipment and materials; and
- Staff welfare facilities, offices, workshop, stores and parking.

At this stage it is not possible to state exactly which drill rig would be used as this is subject to planning permission being granted and the drill rig market available at that time. As such, it is indicated that the EIA proposes to assess the tallest rig.

Up to three monitoring boreholes would be drilled at each of the monitoring borehole locations, with the deepest being 20-40m. The deeper boreholes would target the Nottingham Castle Sandstone formation and the shallow boreholes would only be required if any distinct water bodies are identified in the shallower horizons. The drilling equipment used to construct these boreholes would be mounted on a heavy duty commercial 4x4 truck and no drilling pad is proposed.

### *Evaluation*

The evaluation period is estimated to last up to two years. During this period the well would be suspended and maintained in accordance with industry best practice and all above ground equipment would be removed from the site other than the wellhead, site offices and security fencing.

Collection of data from the monitoring boreholes would take place throughout this period.

### *Decommissioning and Restoration*

In the event that the results of the exploration work indicate that further development of the site is not viable, the well would be plugged and capped in accordance with industry best practice. For the monitoring boreholes, the headworks and upper 0.5m of casing would be removed from each borehole and the boreholes would be backfilled.

The remaining surface development would be removed from the site, the stockpiled topsoil and subsoil would be replaced and the site would be restored back to its previous agricultural use.

The restoration would take less than three months to complete and the restored land would be subject to a five year aftercare period.

### *Hours of Operation*

The site construction, drilling of the monitoring boreholes and restoration phases would take place 07:00 – 19:00 Monday to Friday and 07:00 – 13:00 on Saturdays. Drilling of the exploratory well would be a 24 hour, seven day a week process.

### *Traffic Generation*

The construction activity is estimated to generate a maximum of 60 vehicle movements a day (30 in and 30 out) of which 40 could be HGVs and 20 light vehicles.

The delivery of the drilling rig would generate in the region of 12-16 HGV movements a day, approximately 10 of which would be oversize vehicles over a two week period. Light vehicle movements over this period would average around 10 per day (5 in and 5 out). During the drilling phase HGV movements would be around 10 per day (5 in and 5 out) and light vehicle movements would be around 40 per day (20 in and 20 out).

Traffic movements during the evaluation period would be minimal with just monitoring and security visits required. Traffic movements during decommissioning and restoration are anticipated to be similar to those during the construction stage, but for a shorter period.

### *Pollution Control and Waste Management*

The exploratory well design would provide multiple barriers between the well and groundwater and would have to be approved by an independent well examiner and the Health and Safety Executive to ensure it was in accordance with current regulations and industry best practice. For the monitoring boreholes a solid casing, screen filter pack and grouting would be installed to ensure that the monitoring instruments only monitor the target strata and does not act as a vertical pathway that could link the surface to the aquifers or link different water bodies.

The monitoring boreholes would be the same as commonly used to install groundwater abstraction boreholes on farms and residential properties. The design of these boreholes and headworks would be the subject of consultation with the Environment Agency.

Drilling mud and cuttings would be stored in tanks and would be transported off site for treatment and/or disposal at an appropriate permitted waste management facility. Surface water run-off would be managed by the attenuation tank with sufficient capacity to handle a 1 in 100 year event and would be collected and removed from site by tanker to an appropriate waste water treatment plant.

### *Employment*

It is estimated that there would be 20-25 people employed at the site during the construction phase of the development. During drilling there would be 25-30 people employed with the site being operated in shifts to maintain 24 hour working.

### *Lighting*

During the drilling phase lighting would be required around the perimeter of the site for security purposes and within the site to allow 24 hour working. All lighting would be shielded and directed to only light the site and operations and to minimise light spill outside of the site.

## **The environmental features likely to be affected by the development**

In accordance with Regulation 15 of the Regulations a number of organisations have been consulted for their advice regarding the likely environmental effects of the proposed development. The opportunity has also been taken to undertake consultation with a number of specialists employed within the County Council, and local bodies/organisations. The consultations were sent out on the 27<sup>th</sup> October 2015. Responses have been received from the following (copies of the responses are attached as an appendix to this letter for your information):

Health and Safety Executive  
NCC (Nature Conservation)  
NCC (Highways)  
NCC (Noise Engineer)  
NCC (Reclamation)  
Historic England  
Blyth Parish Council  
Councillor Liz Yates, Nottinghamshire County Council  
NCC (Planning Policy)  
The Coal Authority  
Public Health England  
NCC (Landscape)  
Ranskill Parish Council  
Torworth Parish Council  
Campaign to Protect Rural England (CPRE)  
NCC (Built Heritage)

Western Power Distribution  
NCC (Public Health)  
Lincolnshire County Council  
Natural England  
Bassetlaw District Council  
Bassetlaw Environmental Health Department  
Barnby Moor Parish Council  
NCC (Archaeology)  
Nottinghamshire Wildlife Trust  
Environment Agency

At the time of writing the County Council has not received responses from the consultees listed below. Any responses received will be forwarded to the applicant.

Severn Trent Water Limited  
National Grid (Gas)  
National Grid Company PLC PYLON  
NCC (Countryside Access)  
NCC (Road Safety)  
Nottinghamshire Police Force Liaison Officer  
NCC (Energy and Carbon Management Team)  
Anglian Water Services Limited  
NCC (Flood Risk Management Team)  
Northern Powergrid  
Department of Energy and Climate Change (DECC)  
British Geological Survey (BGS)  
Hodsock Parish Council  
Babworth Parish Council  
Highways England

### **Comments in response to the scope of the Environmental Statement**

As part of the scoping document a proposed content of the ES is set out including introductory chapters and the environmental topics to be covered. The topic headings appear to be generally appropriate to the scale and character of the development. Within the topics the County Council requests that you incorporate sufficient environmental information for the Authority to reach an informed decision on the magnitude of environmental impact concerning the environmental issues. Please note, this scoping opinion does not preclude the possibility of additional information being requested during the determination period, and further to consultation responses. The comments in this letter should be read in conjunction with the consultation responses appended.

#### Planning Policy

It is recommended that the ES contains a section providing an overview of the relevant policies that have been considered in the preparation of the EIA. Particular reference should be made to European Directives, national and regional planning guidance/strategies (where relevant) as well as those planning policies set out in the Development Plan relevant to the proposed development. The key documents and policies that are expected to be assessed are outlined below, however, the summary is not exhaustive.

The proposal should be assessed against the National Planning Policy Framework (NPPF), particularly Chapter 13 'Facilitating the sustainable use of minerals'. Consideration should also be had to the relevant sections of online Planning Practice Guidance.

Chapter 5 of the Nottinghamshire Minerals Local Plan relates to mineral exploration and Policy M5.1 supports proposals for mineral exploration, subject to satisfactory environmental, amenity and reclamation safeguards.

Whilst Chapter 13 specifically relates to oil, coalbed methane and mine gas, policies M13.6 and M13.7 cover conflicts with other underground mineral resources and reclamation of oil and

methane sites respectively and these policies should be addressed. In addition, reference should be made to Chapter 3 which covers environmental protection.

Consideration should be given to the new Nottinghamshire Minerals Local Plan Preferred Approach consultation document published in October 2013. As the latest stage of the emerging new Minerals Local Plan this is a material consideration. This Plan includes a policy on 'Hydrocarbon Minerals' which covers all hydrocarbon development including shale gas (MP12). Also, Chapter 5 of the emerging MLP includes policies on the environmental issues NCC would wish to see considered.

At the point of writing the preferred approach is the most recently published element of the new Minerals Local Plan. However, a draft submission document is due to be put before Nottinghamshire County Council's Environment and Sustainability Committee on the 4<sup>th</sup> January 2016 before Full Council is asked to approve the Submission Draft for consultation purposes on the 14<sup>th</sup> January 2016. Should the submission draft be approved, this would be the document for consideration.

### Landscape and Visual Impact

The Landscape and Visual Impact Assessment (LVIA) is proposed to be undertaken in accordance with the Landscape Institute and Institute of Environmental Management and Assessment's Guidelines for Landscape and Visual Impact Assessment, third edition (GLVIA3) and the Countryside Agency's Landscape Character Assessment Guidance for England and Scotland. It is proposed that the LVIA would include:

- A review of baseline landscape, including landscape based planning designations within the study area, any relevant published landscape character assessments within the study area and description of the site and immediate surroundings;
- A review of visual baseline, including Zone of Theoretical Visibility (ZTV), identification of appropriate viewpoints and agreement with the planning authority, field work and recording of views from the representative viewpoints using digital camera;
- Preparation of a LVIA comprising text and supporting drawings and photography including a landscape mitigation plan; and
- An assessment of lighting and the impact this would have at the nearest sensitive receptors.

A Zone of Theoretical Visibility (ZTV) analysis based on digital terrain modelling would be used to determine initial potential representative viewpoints, to cover different directions, distances and types of receptor. The full height of the drill rig (the most visible element) and also the lower infrastructure would both be modelled.

The proposed delivery approach for assessing landscape and set out in the scoping document appears to cover the necessary areas. As set out in the scoping report the viewpoints should be agreed in advance with the County Council. Photographs from selected viewpoints should have the drilling rig's location clearly identified within the panorama. In addition, considering the size of the rig (and any associated noise attenuation) the EIA should provide details of its height and mass within the individual photograph viewpoints.

Notwithstanding the above, assets identified within the cultural heritage study should be analysed during the landscape and visual impact assessment. Any designated heritage assets that fall within the ZTV should be considered as visual 'receptors' in views prepared as part of the landscape and visual impact assessment.

### Transport

It is indicated that the exact details of what would be necessary will be discussed with the Highways Authority and Highways England to discuss their requirements for the Transport Assessment but at this stage, the scope of work proposed is:

- Determine the baseline conditions, including a site visit to determine the existing situation with the road networks and existing access arrangements;

- Collection of existing traffic data for the A634 Retford Road within the proximity to the site access (1 no. 24 hour 7 day ATC);
- Collection of accident data over a suitable study area to include the A634 Retford Road near to the site(s) access and potential HGV routes to/from the strategic highway network/A1(M);
- Quantification of future trips arising from the site;
- Quantitative assessment of effect of development traffic based on proportion of development to baseline traffic and environmental factors including road safety;
- Consideration of suitability of access route(s) for HGVs and oversize vehicles, swept path analysis along the route(s) provided where necessary;
- Provision of a preliminary access design drawing(s);
- Consideration of mitigation measures where appropriate; and
- Chapter text and suitable drawings.

The proposed scope of works as set out in the scoping request is considered acceptable, although any further discussion with the Highways Authority and Highways England is supported.

Attention is drawn to the northwest of the proposed site access where the A634 is crossed by the A1 over bridge at a clearance of 4.8m. Lorries below this height wishing to access the A1 would most likely pass in this direction through Blyth. Other vehicles including lorries travelling southeast onto the A638 Great North Road would pass through Barnby Moor and then most likely Retford.

It is noted that swept path analysis is included within the scope of the proposed EIA. A swept path analysis will be required of the largest vehicle to visit the site to demonstrate that the County road network and the proposed site access can accommodate the largest vehicle up to the trunk road network.

Visibility splays of 2.4m x 215m are likely to be required at the site access subject to being quantified by way of speed-readings to be included in the Transport Statement. This is likely to require the setting back of the hedgerow fronting Retford Road.

### Ecology

The following information should be provided as part of the ES (as an ecology and nature conservation chapter) in accordance with 'Guidelines for Ecological Impact Assessment in the United Kingdom' (2006) produced by the Institute of Ecology and Environmental Management (IEEM), now the CIEEM. The assessment should cover the following elements:

1. **Consultation and desktop study** – This should consider existing data covering the site and the surrounding area within a 2.5km radius (European designated sites within a 10km radius should be considered). This should identify the presence of nationally and internationally designated sites, locally designated sites, protected species and other notable species. This should be undertaken in consultation with Nottinghamshire Biological and Geological Records Centre and other records centres as necessary; County Mammal Recorder; other recorders/recording schemes as appropriate; on-line sources (e.g. National Biodiversity Network); and other site specific reports, surveys or records if available.
2. **Surveys** – An extended Phase 1 Habitat Survey should be undertaken of the proposed site by a suitably qualified ecologist, following standard methodologies. This should map habitats present on the site and indicate the locations of notable features and signs of (or potential for) protected species. Records should also be made of species of principal importance for conservation in England (as listed under Section 41 of the Natural Environment and Rural Communities Act 2006) and species listed in the Local Biodiversity Action Plan (LBAP) for Nottinghamshire. A Phase II survey should be undertaken for any areas identified as being of botanical interest in the Phase I survey.

Targeted surveys (undertaken at the appropriate time of the year, following standard methodologies and covering a survey area appropriate to the species/group in question) should be carried out for the following species/species groups (unless it can be clearly demonstrated that such surveys are not required):

- Badgers;
- Breeding birds (within the zone of influence around the wellsite);
- Bat activity (due to the proximity of mature vegetation including tree lines and hedgerow).

In addition, and depending on the results of the Extended Phase 1 Habitat Survey, surveys may also be required for (but not necessarily limited to):

- Roosting bats;
- Reptiles;
- Amphibians.

3. **Description, Evaluation and Impact Assessment** – A description should be made of the site, with an evaluation of the receptors likely to be affected by the scheme made with reference to legislation, policy and other relevant documents.

An assessment should be made of the likely impacts of the scheme on features of ecological value at the site or in the surrounding area. This should consider the magnitude and direction of impacts; whether impacts are direct or indirect; impacts arising during construction and operational phases; and cumulative impacts with other developments, scheme or projects in the area. Particular regard should be had to the following:

- The presence of nationally and internationally designated wildlife sites within the vicinity of the development;
- The presence of Local Wildlife Sites (including Tinker Lane, Barnby Moor LWS 2/414, within lies in proximity to the site);
- The potential impacts of noise and disturbance, artificial lighting and deposition of airborne emissions on sensitive wildlife and/or habitats during both drilling/site operation, and as a result of increase road traffic;
- The potential for impacts on aquatic habitats and surface waters.

In relation to noise, a noise contour plan should be produced, to illustrate modelled noise levels around the application site during different phases of development (and at different times of the day, if relevant).

4. **Mitigation, compensation and restoration proposals** – details should be provided of how any negative impacts from the development would be avoided, mitigated against or compensated for (in that order), with an assessment of residual impacts (positive or negative) remaining after the measures have been implemented.

Details should be provided showing how the site would be restored once the proposed activities have ceased. Where possible the wildlife value of the site should be enhanced. Where possible, this should aim to enhance the wildlife value of the site, for example through new native species hedgerow, tree and shrub planting or wildflower seeding.

The response from Natural England incorporates an Annex providing advice concerning EIA scoping requirements and additional guidance concerning the scope of ecological information that should be incorporated with the ES. Please have regard to this advice when you prepare your ES.

#### Noise and Vibration

The scoping assessment states that baseline noise measurements would be undertaken at up to four nearby noise-sensitive receptors over a weekend period (anticipated to be installed on Friday and retrieved on Monday).

Construction noise would be assessed in accordance with ABC methodology presented in BS5228:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*.



Operational noise would be assessed in accordance with the *Assessing environmental impacts from minerals extraction – Noise emissions section of the Planning Practice Guidance (PPG)*. The operational noise limits would be set at:

- During normal working hours (07:00 – 19:00) the limit should not exceed the background level at a sensitive property by more than 10dB(A). At locations where meeting this limit is not possible, the  $L_{Aeq, 1hr}$  (free-field) noise level of operations at the site must not exceed 55dB at the sensitive property.
- During the evening (19:00 – 22:00) the limit should not exceed the background noise level at a sensitive property by more than 10dB(A) and should not exceed  $L_{Aeq, 1hr}$  (free-field) 55dB(A).
- At night (22:00-07:00) the  $L_{Aeq, 1hr}$  (free-field) noise level of operations at the drilling site must not exceed 42dB at the sensitive property.

If required an assessment of the operational noise would also be undertaken in accordance with the ABC methodology presented in BS5228:2009+A1:2014.

It is proposed that the predicted ambient noise level of development related traffic during a worst case hour would be compared against the existing ambient noise environment at up to four nearby existing sensitive receptor locations.

It is recommended that a brief a qualitative statement of vibration resulting from operations should be included within the ES. The assessment should confirm whether or not vibration would be perceptible taking into account the depth of drilling and proximity of nearest sensitive receptors, and whether it could be considered a nuisance or cause damage.

The scope and methodology for assessing noise and vibration impacts is acceptable.

## Historic Environment

### *Built Heritage*

Noting the height of the proposed structure and the relatively flat nature of the surrounding landscape, the development is likely to be visible across a large area and affect the setting of heritage assets beyond the proposed 2km study zone. As such, it is suggested that a 5km study zone is adopted. The heritage assessment should demonstrate the extent of the proposed study area is of an appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed.

The proposed methodological approach to cultural heritage is for the most part adequate. However, it is recommended that heritage assets identified should be included in the ZTV and analysed during the landscape and visual impact assessment. It is also suggested that photomontages are a useful tool for understanding impacts in association with the ZTV.

### *Archaeology*

The scoping report notes the presence of local heritage asset Roman enclosures. It should be noted that there is an extensive Roman landscape of fields, tracks and villages which extends across the Sherwood sandstones from South Yorkshire to Sherwood Forest. The presence of these landscapes suggests the potential for Roman archaeology to be found.

The assessment should also consider, where appropriate, the likelihood of alterations to drainage patterns that might lead to *in situ* decomposition or destruction of below ground archaeological remains and deposits, and can lead to subsidence of buildings and monuments.

There may be a need for geophysical survey and trial trenching, however, discussion is ongoing with the NCC Archaeology Team.

All work should be undertaken by appropriately qualified and experience heritage specialists.

## Air Quality

The proposed assessment of air quality using dispersion modelling (ADMS or AERMOD) is supported. The ES should also assess any increase in road traffic (particularly HGVs) and the resulting impact on annual average and/or hourly mean air quality objectives. It is recommended that background readings and modelled screening based on air dispersion modelling software is provided to assess whether there would be any breaches due to increased vehicle movements.

The ES should undertake an assessment of dust associated with the proposed operations. This should cover the following issues:

- Potential sources of dust emissions – this is expected to include plant, machinery, vehicles and fugitive dust emissions from soil stripping, transportation, storage and replacement;
- Identification of the prevailing wind patterns and the nearest sensitive receptors;
- Measures for preventing and mitigating dust impacts;
- Quantification and assessment of the potential impacts with and without mitigation measures on residential properties and nearby statutory and non-statutory ecological sites;
- A dust management plan, to include a monitoring scheme and procedure for the management of unforeseen incidents.

## Water Environment

In line with the scoping report a Flood Risk Assessment (FRA) should be undertaken to assess the changes to the level of flood risk that would likely result from the development, and the level of risk to the proposed development. A high level surface water drainage strategy should also be included in the FRA.

The site is in a Source Protection Zone 3 for potable water supply. Barnby Moor potable water supply is located 2.3km to the south-east of the site. Groundwater in the area requires significant protection from pollution. Hazardous substances must be prevented from entry into ground and surface water and the entry into groundwater of all other pollutants must be limited to prevent pollution. These environmental considerations should be addressed during the development, construction and operational/appraisal phases of the proposal.

The scoping report states that groundwater is expected to be present at shallow depths in the sandstone that underlies the site and this, and potential effects and require mitigation to protect groundwater and surface water, would need to be assessed as part of the EIA. It is indicated that the potential effects of the proposed development on ground and surface water that would need to be assessed include:

- The development and removal of a temporary construction site and management of the rate and quality of runoff from this area;
- The potential pollution of ground and surface water from spillages (including drilling fluids) during construction drilling and demobilisation;
- The adequacy of the well design and its integrity to control the potential escape of drilling fluids, gas and formation fluids to groundwater.

The Environment Agency expect the EIA to consider the following:

- Cumulative, short, medium and long term effects on water and land. Permanent and temporary effects should also be addressed;
- Description of the management of the development to prevent soil and water contamination;
- The requirement for water during the operation and the percentage of water that would be re-used or recycled;
- Hydrological risk assessment of the potential impacts of groundwater and surface water including impacts on any aquifers or groundwater sensitive receptors;
- Monitoring and site management plan.

## Contaminated Land

The County Council archive does not indicate the presence of any contaminative former land use. Whilst no contaminative land risks have been identified it is considered prudent to undertake a more comprehensive search of data archives to validate the green field status of the site.

A conceptual site model for the site should be developed through the preparation of a phase one desk study to assess the environmental and human health risks posed by pollutant linkages at the site. Reference should be made to the Environment Agency's Model Procedures for the management of land contamination CLR11 and BS10175:2011+A12013 Investigation of potentially contaminated sites: Code of Practice.

## Land Use and Soils

As indicated within the scoping request the EIA should include an agricultural land classification survey. Impacts of the development should be considered in light of the Government's policy for the protection of Best and Most Versatile Agricultural Land as set out in Paragraph 112 of the NPPF.

## Health

To ensure that health is fully and comprehensively considered, the ES should provide sufficient evidence to allow the potential impact of the development on public health to be fully assessed. It is recommended that the EIA should contain a dedicated section considering health. The section should summarise key information, risk assessments, proposed mitigation measures, conclusions and residual impacts relating to human health. Compliance with the requirements of National Policy Statements and relevant guidance should also be highlighted.

The comments made in the consultation response from Public Health England should be carefully considered.

## Community and Socio Economic / Amenity Considerations

The ES should include an assessment of the socio-economic impact of the proposed development.

## Alternatives

The ES must include an outline of the main alternatives studied by the applicant and an indication of the main reasons for the choices being made, taking into account the environmental effects.

## Cumulative and Combined Effects

A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

The ES should include an impact assessment to identify, describe and evaluate the effects that are likely to result from the project in combination with other projects and activities identified by the applicant that are being, have been or will be carried out. Projects that should be included in such an assessment (subject to available information) include existing completed projects; approved but incomplete projects; ongoing activities; plans or projects for which an application has been made and are under consideration by the consenting authorities; plans and projects which are reasonably foreseeable (i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects).

Development which the Authority is aware of is a proposed Variation of condition of planning permission 1/14/00537 which would allow sand and gravel extraction at Scrooby South to continue to the end of 2023.

## Other

The Health and Safety Executive have specifically requested that the Environmental Statement includes the following details:

- A stratigraphic column describing the age and type of formation to be drilled in the exploratory borehole with depths of formation tops and geological cross-section across the site;
- Locations and separation of the proposed monitoring boreholes;
- A schematic of the proposed exploratory borehole showing total depth, hole/casing size and equipment installed in the borehole;
- A schematic of the proposed exploratory borehole showing the proposed hole sizes, casings, hole depth and casing shoe depth with respect to ground level, proposed mud type and estimated volumes in each hole section, proposed cement type and weight in each hole section and estimated volumes;
- The likelihood of lost circulation whilst drilling;
- If possible, a list of the likely mud and cement chemicals to be used, with the relevant Material Safety Data Sheets (MSDS);
- Proposed monitoring procedures during the possible two year evaluation period, including wellbore monitoring of the exploratory well for annulus pressure build up.

There are no recorded coal mining features at shallow depth in this area and as such, no Coal Mining Risk Assessment is required. However, the proposals would be located within the licensed area of past underground coal mining activity. Consideration should be afforded to the potential for deep drilling activities to intersect old underground coal mine workings and the need for these drilling activities to be undertaken safely. This consideration should inform the Geology and Hydrology section of the ES. The applicant should be aware that the location of the proposed site falls within the licence area of Harworth Colliery, held by UK Coal since 1994. The applicant would need to obtain agreement from UK Coal Harworth Limited to drill through coal seams as part of the proposal.

It is recommended that the ES includes details of waste management methods including the quantities of waste arising from the development and disposal and/or treatment methods.

It is requested that when a planning application is submitted the following is provided: five hard copies of the full ES, a further 50 copies of the non-technical summary and 50 copies of a CD ROM containing the full documentation. Within the ES the costs should be highlighted for any person who may wish to purchase hard copies of the full submission, the NTS or a CD ROM and where they can be purchased from.

Should you wish to discuss any of the above matters further please do not hesitate to contact the case officer Oliver Meek on the above number.

Yours faithfully

Oliver Meek  
Principal Planning Officer  
Nottinghamshire County Council

cc Bassetlaw District Council