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Dear Oliver

**Planning Application Ref ES/3379 Proposed development from Island Gas Limited:
To develop a hydrocarbon wellsite and drill up to two exploratory hydrocarbon wells (one vertically and one horizontally) by use of a drilling rig together with associated ancillary works at land off Springs Road (The Rocket Site), Misson.**

Thank you for consulting Misson Parish Council with regard to the above application from Island Gas Limited (IGas). Misson Parish Council (MPC) considered the application at an Extraordinary Meeting of the MPC on Thursday 10th December 2015.

Having considered the information in detail Misson Parish Council **OBJECTS to the application** on multiple grounds where MPC believes the application contravenes County and District Planning Policies. Please see a summary of MPC findings below, followed by additional information/comment by subject heading used by the applicant in their Environmental Statement (October 2015).

Summary of Misson Parish Council key objections:

- 1) **MPC believes the application contravenes the Nottinghamshire County Council preferred approach for the new Minerals Local Plan policy MP12: Hydrocarbon Minerals – Exploration point 2.** ‘where proposals lie within an environmentally sensitive area, evidence must be provided to demonstrate that exploration could not be achieved in a more acceptable location and that within the area of search the proposed location would have least impact’.

For this reason NCC should reject the application.

- 2) **MPC believe the application contravenes the Nottinghamshire Local Minerals Plan (MLP) Policies for:**
 - M3.7 Dust and Air Quality

- M3.8 Water Environment
- M3.12 Highway Safety and Protection
- M3.13 Vehicular Movements
- M3:17 Biodiversity
- M3:19 Sites of Special Scientific Interest
- M3: 20 Regional and Local Designated Sites

3) MPC believe the application contravenes the Bassetlaw District Council Core Strategy Development Management Policies:

- DM7 Securing Economic Development
- DM9 Green infrastructure, biodiversity & geodiversity, landscape, open space and sports facilities
- DM12 Flood risk, sewerage and drainage.e

MPC analysis of our findings are detailed below.

MPC additional comments on the Environmental Statement Contents Subject

1. Introduction

No comment

2. Environmental Statement

MPC question the assertion by IGas that the ES:

- appropriately assessed the relevant environmental issues
- potential environmental impacts are identified together with appropriate mitigation measures
- the proposed mitigation measures will be effective and that they will ensure that any residual impacts are reduced to an acceptable degree

MPC has found numerous omissions throughout the document with regard to the identification, investigation and analysis of potential adverse impacts on the local population and the environment. Together with these serious omissions, a number of statements of policy and practice are used out of context, or wrongly attributed. We find these misleading statements very disturbing from a company that intends to operate an untested technology within our community.

3. The Site and Surroundings

- MPC question why Blaxton and Wroot are excluded from the description of the locality and subsequent analysis. Blaxton is on the proposed haul route for **all the traffic movements** identified within the application and should be part of the consultation
- The applicant omits to state that the site of the drill rig lies within a Non-Designated Heritage Asset as identified by Bassetlaw District Council (BDC).
- On the evidence of Professor David Smythe, whose expert analysis forms part of the MPC objection, we believe the site may lie above the Groundwater Source Protection Zone (SPZ) 3. If this is proven, the site is not appropriate for the development purposes. The applicant does not state how this is going to be verified thus providing a risk to Groundwater. Should Nottinghamshire County Council approve this application we expect that this is a condition prior to any works commencing on site
- MPC consider that a site in Flood Zone 3 is taking an unnecessary risk when more suitable sites in PEDL 139 and 140 must be available.

- e) MPC does not accept that the ‘related development’ of the proposed monitoring boreholes should be determined prior to this application as this implies that the applicant is predetermining a future planning application. The two applications are indivisible and should be assessed as one.

4. Proposed Development

- a) MPC have a principle objection to the application in that we believe the inclusion of the potential for drilling a **horizontal well** is pre-determining a future planning application to hydraulic fracturing at the application site. Having taken expert advice from Professor David Smythe, we believe a horizontal well is not required to test for the commercial abundance of gas deposit and the applicant should be requested to remove this from the application
- b) MPC do not accept that a 60m high, 18m wide drill rig, fully enclosed with an acoustic enclosure, is an acceptable feature in our low lying landscape. MPC believe that NCC should give full consideration of the ‘intention to subsequently apply for a fully hydraulic fracturing hydrocarbon extraction site’ – a site which will be developed with numerous drill rigs on an ongoing basis. This sets a precedence and a landscape dominated by the permanent presence of ‘temporary’ drill rigs.
- c) MPC believes that the applicant needs to provide an additional assessment to accommodate surface water drainage, particularly in relation to the sensitive ecological SSSI adjacent to the site, and in relation to fire management practices.
- d) There appears to be no independent monitoring and assessment of the site operations (as set out in the ES) by the EA, HSE, BGS and NCC. MPC experience of company ‘self-certification and reporting’ has demonstrated that paper compliance reports bear no relation to on site practices which do not live up to the required safety or environmental standards. MPC would like assurance in the form of a condition that independent monitoring of working practices will take place on a regular basis by the appropriate Government Agency, should planning be approved.
- e) MPC do not accept that drilling operations need to take place continuously, 24 hours a day, seven days a week for the convenience of the applicant – as they say ‘to enable wells to be drilled and cased as quickly and efficiently as possible’. Efficiency of process to the accepted detriment of nearby human and wildlife receptors is not material to the planning process.
- f) There is insufficient information in the Transport Assessment and MPC have doubts that an oversize/abnormal load vehicle required to transport the rig can negotiate the Springs Road, in particular the Warping Drain Bridge, Railway Bridge and the Snow Sewer Bridge. MPC request further information from the applicant and approval from Network Rail and NCC Highways. This road has been closed twice in the last twelve months and has had an impact on the businesses within the village and Misson Mill
- g) MPC question how the application can be fully assessed and open to public scrutiny if the well design is not disclosed within the application. The applicant states that the well design is prepared and internally approved but not submitted. We expect that this information to be provided before the application is considered so that the County Council can make an informed decision

5. Alternatives

- a) MPC find the applicants justification of the site selection on the grounds of the objectives of:
- the proposed exploratory drilling programme and
 - the sub-surface geology

are unsupported by application evidence or other published evidence. The majority of the PEDL 139 & 140 areas are covered by an equivalent depth of Bowland Shale – the primary target. It seems inconceivable that two small areas around Misson, one to the south and one to the north accounting for 4% of the PEDL land area, are the only suitable locations for shale gas exploration within the 7,000 hectares of the two PEDL's.

- b) The application location is on the edge of the 3D seismic testing undertaken in 2014 and as such does not benefit from the full 3D picture. This suggests that the site location has not been selected on the grounds stated by the applicant. To justify the site location on the geological grounds attested the applicant will need to provide additional evidence, including from their 3D seismic survey.
- c) The applicant states a number of constraints they have taken into account when selecting the site, which they do not apply to the site selection, namely:
- Sites should not be adjacent to or within Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS). ***The site is adjacent to the Misson Training Ground SSSI with which it shares a subsurface boundary – of particular significance considering the groundwater requirements of the SSSI.***
 - Sites at lower risk of flooding should be selected if possible. ***The site selected is at higher risk of flooding than the 'alternative' in a high Flood Risk Zone 3.***
 - There should be no access constraints, including the presence of public rights of way on potential access routes. ***The access route chosen is not free of constraints – it is an unclassified, rural road with soft verges, liable to significant subsidence and ungritted in winter. It has width constraints of 5m at two pinch points – the railway crossing & the Snow Sewer Bridge. The proposed HGV traffic cannot safely travel the Springs Road and 'cross' one another without damaging the highway, its verge and any other road users including cyclists, pedestrians and equestrians. HGVs cannot safely enter or exit the Springs Road onto the B1396 without compromising other vehicles on the opposite carriageway.***
 - Land with a lower Agricultural Land Classification (ALC) grade should be identified where possible. ***The site is classed as Grade 2 land – Very Good – the highest classification in the search areas. As the applicant has stated the majority of landholdings in this area are farmed, with the largest landholding being that of a major organic farmer. This local business providing local employment will be severely constrained***

The site does meet two of the applicant's criteria

- it should be more than 200m from residential properties;
- More than 200m from listed buildings.

This criteria is barely met with the nearest residential property, Prospect Farm, being 'around 268m north of the wellsite' and closer still to the site boundary. There are nine families resident within 1km of the site, including seven farms and one listed building.

In addition to the applicant's own constraints, the site lies within a 2km radius of:

- A further two SSSIs forming part of the important Idle Valley Green Infrastructure corridor
- A range of important Local Wildlife Sites
- Five public rights of way which require use of the Springs Road highway to link to one another as used by walkers and equestrians

The site is directly within:

- The Humber Levels Nature Improvement Area (NIA)

- A Nitrate Vulnerable Zone for Surface Water
- An important Cold War heritage site which is a Non-designated Heritage Asset
- An area of contaminated land with an unknown quantity of unexploded ordnance
- A Groundwater Source Protection Zone (SPZ) 3 which supplies over 3 million residents.

Considering the points above MPC believes the application contravenes the Nottinghamshire County Council preferred approach for the new Minerals Local Plan policy MP12: Hydrocarbon Minerals – Exploration point 2. ‘where proposals lie within an environmentally sensitive area, evidence must be provided to demonstrate that exploration could not be achieved in a more acceptable location and that within the area of search the proposed location would have least impact’.

On this basis alone MPC believe the application should be rejected.

6. Transport

MPC believes the application fails to make the case for the utility and safety of their preferred (or any) access route.

MPC find the transport analysis to have a number of significant omissions, flaws and falsely attributed statements designed to misdirect the County Council Members. In addition, the applicant fails to address the cumulative impacts of a number of development schemes affecting the Springs Road, including the omission of their own associated application to construct 12 monitoring boreholes at the proposed well site.

MPC, via resident volunteers, has carried out a baseline traffic survey on three separate days on 13th November; 26th November and 10th December each over a 12-hour period from 07:00 to 19:00. The surveys covered the Springs Road north of Misson twice, and the Bawtry Road south of Misson once. The vehicle movements recorded on both roads were significantly higher than that recorded by IGas as a baseline. For Springs Road Misson residents recorded an average 659 movements, whilst IGas report an average figure of 554. This latter figure is **over 200 vehicle movements a day less** than the Network Rail count of vehicles using Beech Hill Level Crossing, which is 755 movements by automatic counter. Using the Network Rail automatic counter figures **IGas have underestimated the daily traffic figures on the Springs Road by over 26%.**

Using a flawed baseline has serious implications for the IGas assertion that the increase in traffic flow created by the IGas developments would not create a perceptible traffic impact.

MPC believe that this is not the case and an analysis by Misson resident, Mr Simon Gledhill, has shown that the increase in HGV traffic created by the proposals will breach Environmental Assessment of Road Traffic IEA Rule 1 for both the Springs Road and the B1396 (Bank End Road) between the Springs Road junction and Blaxton village. **For both roads the increase in HGV movements along these stretches of highway will increase by over 30% - in the case of Springs Road by 48.5% and 66.9% for the B1396.**

The Transport Analysis by Mr Gledhill is included as part of the data supporting MPC objection to the planning application. We would however, like to bring the following analysis to Members attention:

- a) IGas state that the GTA thresholds requiring a full Transport Assessment are not triggered by the development as the development would not have any highway

capacity impacts – particularly given that the overall background traffic volumes on both Springs Road and the B1396 are low. Given the analysis above MPC question whether a full Transport Assessment is required as IGas have significantly misrepresented the base line traffic movements.

- b) IGas misquote Road Design Manuals (DMRB) to suggest the preferred route is performing well within the link capacity as the basis they are quoting refer to a Carriage Way Standard S2 for a 7.3m wide carriageway with a 1m Hard Strip which does not apply to any roads on the preferred Route A.
- c) IGas state that the preferred route is performing ‘marginally’ worse than would be expected in road safety terms. The road has 35% more collisions than would be expected – hardly a marginal variance. IGas also surmise that this is likely due to collisions at its junction with the A614 – this statement is completely unsupported by any evidence.
- d) IGas make no mention of the narrow Warping Drain Bridge associated with the railway level crossing, which Network Rail deems to be unsafe and have applied to infill the bridge.
- e) Nor do IGas assess the engineering capability of the old and narrow Snow Sewer Bridge for HGV and oversize HGV traffic and the load weights they will be carrying. **MPC consider that this bridge should have a weight limit and if this has been assessed for oversize loads.**
- f) IGas have omitted to mention the fatality at the Springs Level Crossing in 2012 and the Network Rail Risk Rating for the crossing which is in the highest quartile for collective risk.

MPC would like confirmation that Network Rail has risk assessed the level crossing for the significant increase in traffic, particularly HGV traffic and that the conclusion should be made public

The applicant omits to state what route vehicles will take when the Springs level crossing is closed for maintenance works which is a frequent situation though out the year.

MPC do not believe the IGas mitigation proposals for the Springs Road/B1396 junction are adequate. The issue of the Springs Road limited width has not been addressed. MPC understand that it is normal practice to provide scale plans with the largest anticipated HGV/oversize vehicle drawn to scale entering and leaving the application site – leaving the site is not included in the application. We would also like to see this practice applied to the entry and exit from Springs Road onto the B1396. The suggestion that IGas will have a Traffic Management Plan, if required as a mitigation measure, suggests that IGas can control **ALL** the traffic movements along the public highway. The applicant does not state how this will be achieved and as such we do not believe this is credible or feasible option.

IGas have omitted to assess any of the Cumulative Impacts relating to traffic movements along the Springs Road. **This includes the impacts of the IGas associated scheme to develop 12 boreholes at the Rocket Site for monitoring purposes.** Other development proposals MPC is aware of include:

- Network Rail pre-approval of the infill of the Warping Drain Bridge associated with the railway line – BDC Ref: 15/01557/NOT. Network Rail considers the bridge to be unsafe.
- Proposal to develop Nettleham Wells Farm, Springs Rd, as a football and community sports facility for The Doncaster Belles Football Team

- Development of the Misson Mill site for mixed use 30+ business units and around 50 residential units. The applicant has unaccountably discounted this scheme. However, the Misson Mill developer submitted a Masterplan to BDC in 2014 and has received written feedback from BDC Planning Officers. At a public vote on 6th December, a Preferred Option (above) received a massive public vote. This has been developed in association with the Misson Neighbourhood Plan, which we have been working on with BDC Planning Officers since September 2014. There is no reason why traffic associated with this development will be restricted to Bawtry Road access.

These prospective cumulative impacts require examination and assessment.

In addition, IGas fail to assess the preferred route for non-vehicular traffic and/or Public Rights of Way

The Springs Road serves numerous rural businesses including Equestrian Livery Yards; Riding Schools and The Vale of York Polo Club together with individual horse owners. All these equestrian activities make use of the bridleways and to use the bridleway linkages have to use the Springs Road. The increase in HGV traffic, will have serious consequences for these activities. Likewise, the Springs Road is a popular training and racing route for cyclists. The safety implications for cyclists should be assessed as the HGV's are a direct hazard and likely to degrade the road surface and road edges.

Having discovered so many omissions, misleading information and discrepancies in the IGas transport assessment, MPC have grave doubts as to the validity of the remaining Technical Appendices, which have been submitted without the appropriate and accurate supporting evidence.

Considering the above analysis MPC believe the proposed IGas Transport Route contravenes the NCC Minerals Local Plan Policy M3.13 Vehicular Movements which states 'Planning permission for minerals development will only be granted where the highway network can satisfactorily accommodate the vehicle movements likely to be generated and would not cause unacceptable impact upon the environment and disturbance to local amenity.' MPC believe this policy criterion is not met by the current planning application.

7. Noise and Vibration

MPC do not accept that residents' health, together with that of other sensitive receptors, should be put at risk for the convenience of the applicant – as the applicant states 'to enable wells to be drilled and cased as quickly and efficiently as possible'.

MPC consider that the following examples of nuisance that will arise from any operations forms the basis of an **objection to the proposals**;

- The applicant does not demonstrate exactly how the potential for the impacts of noise and vibration from the site will be mitigated. The noise and vibration from transport, construction and from the drill operation will need to be properly explored and mitigated to a reasonable level.'
- The applicant should base his proposals on BS 7445:1991 and Calculation of Road traffic Noise (CRTN) and Design Method for Roads and Bridges (DMRB) to scope for the potential traffic noise impacts of the development.
- Noise from construction: hours for construction works are limited to Mon – Fri (7am – 7pm) and Saturday 7am – 1pm) to protect the amenity of local residents.'

- The applicant should confirm that any drilling will not take place 24 hours per day, 7 days per week. Development shall not commence until an assessment to show that the rating level of any plant & equipment will be at least 5 dB below the background. Noise assessment and scoping reports should be submitted to and be approved in writing by the Local Planning Authority. The assessment must be carried out by a suitably qualified acoustic consultant/engineer and be in accordance with BS4142: 2014 – “Method of rating industrial noise affecting mixed residential and industrial areas”. The applicant does not advise that an acoustic consultant is part of the design team

IGas continually assert that a ‘temporary’ change in noise level is considered acceptable which is a subjective statement and not evidenced by any data concerning current noise levels and proposed noise levels. MPC do not recognise this statement as having any meaning for the nearby receptors who live and work in this environment every hour of every day. As has been previously stated many of the nearby residences are working farms where their owners will have no respite from the noise of increased road traffic, generators, engines, construction, site traffic and drilling.

The applicant does not provide an assessment on sensitive farm livestock, which with some species could be fundamental to their existence. Other rural businesses in the vicinity of the site are equestrian, a more sensitive animal to noise than the horse it is difficult to imagine.

The applicant should provide further analysis and assessment of noise disturbance as there are currently too many unknowns. Added to this, the significant underestimation of the volume of traffic using the Springs Road the current assessment, were any analysis has been attempted, could be flawed.

The applicant has omitted to assess the impact of noise on the adjacent Misson Training Ground SSSI. It is inconceivable that the significant increase in noise pollution continuous drilling will not have an adverse effect on the wildlife species that inhabit the SSSI for breeding and foraging. Nottinghamshire Wildlife Trust (NWT), assert that the increased noise levels produced by the development will have a high likelihood of negatively impacting breeding birds. The SSSI supports important bird species including red and amber list species. NWT believe that there would be an unacceptable adverse impact on breeding birds in the area.

For this reason, amongst others, NWT believes that the application contravenes NCC MLP

- Policy M3.17 Biodiversity
- Policy M3.19 Sites of Special Scientific Interest
- Policy M3.20 Regional and Local Designated Sites

8. Air Quality

MPC believe the air quality assessment is flawed and incomplete in many respects including:

- a) The IGas transport assessment has seriously underestimated the impact of traffic volumes and types (HGV) using the Springs Road. This flawed assessment has a knock on effect in the IGas assessment of air quality effects due to road traffic emissions.
- b) IGas have not provided any assessment or analysis of the air quality impacts on populations living in villages along the A614 due to their increased traffic volumes, particularly HGVs. Villages include Hatfield Woodhouse towards the M62, and Blaxton, Finningley, Austerfield and the town of Bawtry towards the A1 and A1(M). These communities which line the A614 are already subject to heavy traffic volumes

and associated poor air quality. In particular we would like to draw attention to the potential impacts on Austerfield residents. Austerfield residents are under particular stresses for air quality as they have Bawtry Carbon International operating in their midst. This company produces carbon cylinders under a Class 1 Environmental Permit overseen by the Environment Agency team in the East Midlands. The chemicals used in the process are all individually and in combination highly toxic. The dust and particulates produced in the process are also frequently emitted to the environment, even entering residents homes. **Now that we understand IGas will be using this route for at least some of their haulage MPC believe these potential impacts should be investigated and assessed.**

- c) IGas discount the detection of odour, such as hydrogen sulphide, beyond the site boundary. However, IGas propose no methodology for capturing and containing odours from their processes. Residents from a wide range of parishes in this area will attest to the fact that odour cannot be confined to a site boundary without mitigation/abatement measures being put in place. The Environmental Health team at Bassetlaw District Council can corroborate this. IGas are proposing to operate in an area with a very sensitive perception of odour, including that of hydrogen sulphide. IGas omit to detail the chemical components of the odours they say are 'reportedly' experienced from Tunnel Tech North (TTN). Ignoring this obvious slur on local populations for information the chemical components of the TTN odours are:

- Hydrogen sulphide
- Trimethylamine
- Methyl sulphide
- Methyl disulphide
- Ammonia
- Dimethyl disulphide

MPC believe odour emissions from the IGas site could create a significant nuisance and distress to local receptors and this should be assessed by the applicant. In combination with the odours released from the TTN site the odours could have a combined and cumulative effect which will be detrimental to health and well-being of Misson residents and this should be assessed. Bassetlaw District Council has many studies and modelling of the dispersion of TTN gaseous emissions, together with Officers of particular expertise, which could aid IGas in their assessments.

- d) IGas discount the effects of oxides of nitrogen such as nitrogen dioxide as insignificant on the Misson Training Ground SSSI. MPC dispute this statement, which is not based on evidence, analysis or accurate interpretation of the applicants findings that critical EAL levels are exceeded in the SSSI. IGas omit to explain the significance of NO_x compounds in this environment, which is in a Nitrate Vulnerable Zone for Surface Water and is already stressed from exposure to these nitrogenous pollutants. The NWT provide make a robust case to demonstrate the applicant has failed to provide the necessary evidence to demonstrate that there will be no significant adverse effects on Misson Training Ground SSSI and also the watercourse LWS in the area.

In this respect, we believe the application contravenes LMP Policy M3.19 Sites of Special Scientific Interest. This policy states 'There is a strong presumption against development unless overriding need can be demonstrated, **not just for the mineral but for the mineral in that location**, or conditions imposed to prevent damage. Permission for development which would destroy or detrimentally affect a SSSI will not be granted.' This application fails on two counts – 1. It has not demonstrated the need for development in this particular location against other with the PEDLs 139 and

140; and 2. It has failed to demonstrate on multiple levels how it will not adversely affect the SSSI .

In addition, MPC believe the application contravenes LMP Policy M3.20 Regional and Local Designated Sites with regard to air quality. The local and regional significance of the SSSI is that it is an integral element of the Idle Valley Green Infrastructure. This is not only recognised by NCC at regional level but by Bassetlaw District Council in their Core Strategy & Development Management Policies DPD adopted in December 2011. BDC recognise the significant of biodiversity ‘corridors’ that link isolated special sites (nodes into ‘coherent, landscape scale frameworks that deliver significantly greater value than the nodes in isolation’. BDC highlight three Green Infrastructure Corridors in their Core Strategy Policy DM9 – the first and foremost being the Idle Valley. Policy DM9 seeks to ensure development protects and enhances where possible such Green Corridors – as a result **MPC believe this application contravenes BDC Policy DM9.**

- e) IGas fail to adequately address the Cumulative Effects of their proposal through a number of omissions in their assessment of committed and prospective development in and around Misson, including:
- The IGas ‘associated application’ to construct 12 water monitoring boreholes on the same application site as the exploratory wells.
 - The prior-approval of safety improvements to the Warming Drain Bridge associated with the railway line on Springs Road – a Network Rail project.
 - The demolition of the current Misson Mill site off Bawtry Road, together with redevelopment for mixed used including some 30+ business units, 50 residential units and new access roads and landscaping
 - The proposal to develop Nettleham Wells Farm, Springs Road for a sports training ground and leisure facility for the Doncaster Belles Football Team.

Misson Parish Council believe significant further assessment and analysis is required before the IGas assertions on Air Quality can have any credibility within the planning policy framework.

9. Landscape and Visual

Misson Parish Council accept that the principle landscape and visual impact is that of the drill rig – which at up to 60m in height and 18m wide will be visible for miles around, day and night, in this low lying agricultural landscape with uninterrupted views of large skies and low horizons.

The incongruous drill rig will be clearly visible from every public right of way within the parish, giving a constant presence of a truly massive industrial visual detractor. This removes the pleasure of the amenity of the whole parish, chosen by families who wish to live within a quiet, rural setting where they can enjoy the countryside, its setting, flora and fauna.

MPC have a number of questions relating to the landscape and visual assessment:

- a) Bassetlaw District Council (BDC) Landscape Character Assessment concludes that the combination of a moderate sense of place, high visibility and dominance of the low lying landform results in **the definition of a high overall landscape sensitivity.** The applicant challenges this assessment and instead uses the GLVIA3 methodology, which reduces the sensitivity to **moderate.**

MPC wish to seek clarification from NCC as to the merits of these approaches in this particular case. Using the BDC approach a different assessment and impact would be produced.

- b) MPC would expect to see the drill rig superimposed to scale on the ZTV views towards the proposed development from all the chosen viewpoints, together with the uninterrupted views. These are not provided.
- c) Assessment of the views to and from the principle churches in the settlements has not been undertaken. Way finding using the height of the church towers and spires within this landscape is a cultural tradition. The Grade 1 listed church at Misson is built on a mound to achieve the necessary height to navigate to the Grade 1 churches at Finningley and Haxey for example. Are these sight lines affected by the drill rig?

NCC MLP Policy M3.3 Visual Intrusion suggest that where appropriate conditions will be imposed to ensure plant, structures, buildings and storage are:

- a) Located in such a position as to minimise impact on adjacent land
- b) Kept as low as practicable to minimise visual intrusion
- c) Of appropriate colour, cladding or suitably treated to reduce their visual impact
- d) Satisfactorily maintained to preserve their external appearance
- e) Removed upon cessation of extraction and the site restored to an acceptable level

In addition, measures should be taken by sympathetic design and/or screening to avoid unacceptable light intrusion..

IGas do not propose any mitigation measures for the site boundary or the drill rig in their proposal. **MPC feel that mitigation measures are a minimum requirement with regard to visual intrusion to comply with the above policy.** The drill rig and it's acoustic cladding can be camouflaged/coloured as far as possible to mitigate it's intrusion and impact on the skyline. In addition, the treatment of the site boundary with additional tree planting will screen and soften this incongruous industrial unit in an otherwise rural pastoral landscape.

MPC are also seeking assurance that the applicant will restore the site promptly on completion of the works and ensure the Non-designated heritage elements including the missile pads are undamaged. MPC understand that a well IGas drilled in the same PEDL area in 2010 is still to be properly decommissioned and restored in line with the planning conditions. Would NCC consider holding a bond on behalf of the company to ensure the site will be successfully restored should the applicant not be able to fulfil this condition?

Although the drill rig is a temporary feature MPC wish to point out that if successful this application may well lead to a full hydraulic fracturing gas field with so called 'temporary' drill rigs in permanent residence in this historic landscape. Whatever the merits or otherwise of gas production it will always be an inappropriate land use in this highly productive agricultural area; an area which was 'won' for the nation by the Dutch drainage engineers in the 1600's and has remained essentially unchanged up to this day. So fertile is the landscape that the principle production is that of high value organic vegetable crops by a local producer serving national retail outlets. This application puts all this production and the 75 local jobs associated with it at risk.

10. Lighting

MPC welcome the assessment of impacts on both human and wildlife receptors in this section. We do not know if the proposed 24/7 lighting for the nine months of phase 2 operations will have an effect on the growth/seasonality of the nearby SSSI flora and sensitive bryophytes but trust that as a temporary effect any adverse effects could be recoverable.

11. Hydrogeology and 12. Hydrology and Flood Risk

Due to the major concerns voiced by Misson residents regarding the potential threat to the integrity of the fresh water resources in Misson Springs, the decision was made to commission an expert report. Professor David Smythe is a recognised expert in the field of geology and hydrogeology having experience with the British Geological Survey and 3D seismic surveying. The report was entirely financed by individual donations from residents of Misson and North Nottinghamshire with Bassetlaw Against Fracking communicating directly with Professor Smythe on their behalf over the development of the report.

In his report, Professor Smythe lists 27 substantive errors, omissions and misleading statements made by IGas and he suggests that they are treating the planning system with contempt. These are listed below:

1. The horizontal appraisal well serves no useful purpose, other than as the preparatory hole to be fracked.
2. No details are provided as to what 'evaluation' will be carried out on this well.
3. No accurate depths or prognoses have been provided for either the vertical or the horizontal well, contrary to normal practice.
4. No details of the well casing programme have been provided, contrary to normal practice.
5. The locations of the two yellow-hatched local search areas have not been justified, and have probably been selected using non-geological criteria.
6. The statement that slant drilling from outside these areas to a target within would not be possible is erroneous, given that the 1500 or greater depth to all the targets.
7. The Millstone Grit 'secondary target' is vague and incompatible as a viable conventional hydrocarbon prospect within the small area of the two local search areas.
8. No mention is made of the significance or otherwise of the minor gas discovery at Everton-1. A 1988 exploration well drilled 4.9 km south of the site and within the 3D seismic survey area.
9. The so-called 'Carboniferous Limestone Supergroup' tertiary target (presumably a conventional prospect) does not exist as a recognised rock formation east of the Pennines, therefore this target is undefined; the Craven Group does not belong to this Supergroup.
10. The secondary and tertiary conventional targets appear to be fictitious, inserted as a cover to disguise the true aim of the drilling, which is unconventional.
11. The borehole and well data compilation allegedly used by the Applicant in preparing the application is grossly incomplete.
12. Nine boreholes or wells which should have been considered in the application have not been included.
13. Four existing wells said to have been used have all been mispositioned, one by over 2 km; even the least mispositioned well, at 80 m off true, will have affected the well-to-seismic tie.
14. Cartoons have been provided instead of accurate scaled cross-sections of the expected geology, contrary to normal practice.
15. One of these cartoons mismatches the other by up to 50%.
16. The numbers quoted in the cartoons have gross errors.
17. The thickness of the Bowland Shale (300 m) is less than one-tenth of the BGS estimate for the site.
18. No details for, nor examples of, the 3D seismic survey have been supplied.

19. The 3D seismic survey is manifestly inadequate for imaging the rocks at the target site, which lies in the fringe area of reduced 3D coverage.
20. The Applicant failed to incorporate 2D seismic data into its interpretation and assessment, to the detriment of the geological understanding.
21. The 3D seismic survey allegedly failed to reveal any fault, when in fact many examples of faults on all sides of the site can be seen on the existing 2D seismic data.
22. Coal mining and 2D seismic data evidence together suggest a fault density of at least one per kilometre, but the Applicant allegedly sees no faults.
23. There is strong borehole evidence for the existence of a NE-SW trending normal fault (the Misson fault) traversing the site, but the Applicant failed to recognise this fault.
24. As a result of the above failure of elementary geology on the part of the Applicant, most or all of the site may be sited on the Sherwood Sandstone Principal Aquifer, and not, as claimed, on the Mercia Mudstone Group.
25. The Applicant has failed to mention the Magnesian Limestone Principal Aquifer, which runs at less than 500 m depth below the site and will therefore hold potable groundwater and will be at risk from the development.
26. The Applicant has wilfully misled the Council as to the extent of the Sherwood Sandstone Principal Aquifer below the site, despite it being clearly shown on BGS maps cited.
27. The two cartoons depicting the Source Protection Zone 3 of the SSG Principal Aquifer seek to mislead the Council into believing that the SPZ3 is well away from the proposed surface and subsurface activities.

Professor Smythe's report concludes:

"The Applicant's geological model in the vicinity of the site is not based on sound data since the site lies on the very edge of the 3D seismic survey volume" and that "The risk, however small, of permanently contaminating one of England's main water resources should not be contemplated. It is reprehensible of the Applicant to have sought to minimise the true proximity of the site to two major groundwater resources".

"If the Council is minded not to refuse the application outright, the Council should, as a minimum requirement request further information from the Applicant. Here is a list of what, in my opinion, is required".

- 1) Acquisition and processing reports and other information on the 3D seismic survey.
- 2) Example images from the 3D volume as detailed above.
- 3) Correction of maps to place all relevant boreholes and wells in the correct locations.
- 4) Inclusion of the existing available 2D seismic data to enlarge the geological interpretation around the site.
- 5) Well-to-seismic tie examples.
- 6) Velocity data used in time-to-depth conversion.
- 7) Structure contour maps for the principal seven horizons: Top Permian, Top Carboniferous unconformity, Top Middle Coal Measures, Top Lower Coal Measures, Top Millstone Grit, Top Bowland Shale, Top Craven Limestone Group.
- 8) Correction of the solid geology to take account of the Misson Fault.
- 9) Justification of how the two yellow-hatched search areas were selected, together with an account of how the rest of the two PEDL licences were deemed unsuitable.
- 10) Detailed well casing programme for both wells.
- 11) Monitoring borehole plan incorporating the necessary deep boreholes to the Millstone grit.

- 12) A full 3D hydrogeological model of this part of the Gainsborough Trough constructed by an independent research organisation.

He concludes that “on the technical and environmental safety grounds discussed above the application should be refused”.

Flood Risk Assessment

The site is situated in a Flood Zone 3, (land having a 1 in 100 or greater annual probability of river flooding) the risk of flooding from all sources in the area is high. Due to climate change, recent excessive rainfall in parts of the UK has led to a 1 in 100 event occurring more than three times within a ten-year timescale. There is concern that in the case of a flood event if the River idle over-tops the flood defences, the site would cause widespread pollution over surrounding farmland and wildlife sites.

IGas’s assessment and assumptions made have been as a result of a desk top exercise. No site visit has been carried out by a suitably qualified water quality or flood risk specialist to inform the process. Instead, the Applicant has relied on information and data obtained from other work conducted for other reports within the technical appendices. We do not consider that this is a thorough and robust method of assessing flood risk in the area, which should be a site-specific exercise. The IGas Hydrological Report states that “Hydrological and hydraulic information for local watercourses in the vicinity of the Proposed Development is limited; therefore the assessment is based on professional judgment together with information taken from mapping, publically available data sources and local knowledge gained through consultation with statutory consultees. No site visit has been conducted by a water quality or flood risk specialist, but information and photographs have been available from site visits conducted as part of the ecological survey work described in Technical Appendix I.”

Not only have IGas arrived at their conclusions without actually visiting the site, the Nottinghamshire Wildlife Trust (NWT) confirm that the IGas consultants haven’t visited the SSSIs and LWS dependent on a particular hydrological regime. Again, conclusions have been made in the absence of any interrogation of the WLMP for the Misson TG SSSI, which contains hydrological information produced by a specialist consultancy. This is a cause for concern, particularly with regard to the interpretation of data and assessment of impacts.

NWT find that throughout the hydrogeology, hydrology and flood risk assessments the applicant makes a series of flawed assumptions and uncorroborated conclusions based on selective desk based analysis without reference to the detailed studies pertaining to the protected wildlife sites.

These findings mirror those of Professor David Smythe in his analysis of the hydrogeology and hydrology in relation to the positioning of the principle aquifer beneath the site and the areas of potential ‘faulting’.

The serious questioning of the rigor and quality of the applicants assessments leads MPC to believe the application will contravene a series of MLP Policies including:

- MP12: Hydrocarbon Minerals – exploration points 1) and 2).
- MP3.8: Water Environment
- MP3.17: Biodiversity
- MP3.19: Sites of Special Scientific Interest
- MP3.20: Regional and Local Wildlife Sites

13) Contaminated Land

MPC find that the applicant has followed the recommended practice set out by NCC for the assessment of land contamination.

However, MPC is concerned that the potential for harm to site workers particularly, including those working at Jackson's, remains unknown from the desk based study of UXO. MPC has requested information from the Ministry of Defence (appended) which indicates the type and volume of bombs recovered but leaves unanswered the type and volume that remains. The ordnance includes:

- Bombs – aircraft
- Bomb – Fuzes
- Ammunition – aircraft
- Pyrotechnics – aircraft
- Land services ammunition (SAA, Mortars, Grenades)
- Misc. aircraft explosive cartridges
- Explosive fill

MPC question whether it is adequate to focus on the well cellar alone for the presence of UXO clearance work. Should UXO be present in other areas of the site would vibration from the drilling activities be a reason for concern?

14) Ecology

MPC have significant concerns regarding the quality of, and conclusions reached by the Ecology Assessment. Even to the layperson it is not credible to believe that the applicant can state that 'There would be no direct impacts on the nature conservation designations, as none of the identified designations have direct habitat connectivity to the proposed development and there is no pathway by which direct impacts could occur'. The Misson Training Ground SSSI shares a sub-surface boundary with the applicant's site and is merely 100m away above ground.

The ecological assessment goes on to state that 'Disturbance of birds in the wider landscape beyond the site boundary is considered unlikely and can be scoped out, as the proposed development is concealed behind mature boundary plantations that screen and buffer the site from adjacent land. The applicant fails to demonstrate how the limited deciduous amenity tree cover can screen a 60m high drill rig, producing 50+dBA, floodlit 24/7 for nine months. MPC believe the desk-based survey would have identified the importance of the breeding birds resident in the adjacent SSSI and triggered a breeding bird survey of the designated site. This is a serious omission, which will need to be addressed in order to test the applicants claims.

MPC believe that the cumulative effects of atmospheric nitrogen oxides should be assessed on the ecology of the site and designed sites within the 2km radius. MPC are aware that ammonia and other nitrogen compounds from Tunnel Tech North emissions can reach as far as Bank End Cottage on the B1396. These should be considered in combination with fugitive emissions from the machinery and drill rig.

15) Cultural Heritage

MPC considers that Misson parish has considerable cultural heritage values defined by the high numbers of designated heritage assets, non-designated heritage assets, Scheduled Ancient Monument and archaeological finds falling within the parish boundary. During the proposed operational phases of the development there will be a significant impact on the setting of the parish and its heritage assets.

The historical significance of the village itself has been highlighted by BDC having undertaken the consultation to establish a conservation area covering a large part of the village. The cultural heritage assessment (CHA) fails to mention this. MPC strongly disagrees with the statements that many of these assets have lost their heritage value and would point out that BDC conservation team have this year highlighted over 50 non-designated heritage assets in the village alone as part of the establishment of a conservation process. This is in addition to the Listed Buildings and Scheduled Monument already mentioned. MPC disagree that there are 'a small number of non-designated heritage assets within the study area'. This is due to the limitations of the study area being **confined to 1km not the 5km used for designated assets. Why has this distinction been made?**

MPC is disappointed that the applicant has not consulted with the NCC Buildings Conservation Officer as suggested in the NCC Scoping Opinion. As the applicant states 'in all cases determining the level of harm to the significance of the asset arising from development impact is one of professional judgement'. MPC would like to have seen the professional judgement of the NCC Buildings Conservation Officer being consulted in the scope of this assessment.

MPC is also disappointed that the applicant has not consulted with the BDC Conservation Team at Bassetlaw Museum. The Museum staff could have provided a more accurate view of the impact the development will have on the cultural and historical aspects of Misson parish. Bassetlaw Museum holds a wealth of Misson artefacts including a large archaeological record dating back to the Mesolithic Period up to 9,000 BC. Many of these finds were recovered from mineral workings to the south of Misson village within the Idle Valley floodplains. Historically this would not be a dissimilar landscape to that of the Rocket Site. **MPC would like to see the archaeological potential of the proposed development site assessed prior to and during any development as recommended in the NCC Scoping Report.**

Misson Parish Council does not believe it is acceptable to develop a hydrocarbon well site on the site of a non-designated asset of the historical importance of the Bloodhound Missile Site at Misson. The significance of this period of history is such that it studied by history students as a standard text from GCSE to Post Graduate Level. The remaining Vulcan Bomber based at the former RAF Finningley, now Robin Hood Airport, that the Bloodhound missiles protected is celebrated the world over.

MPC would welcome the support of statutory agencies such as Historic England, working with BDC and NCC, to preserve the Bloodhound Missile Site and develop it's tourist potential linked to the Vulcan at Finningley. This would support BDC Policy DM7: Securing Economic Development and support MPC Neighbourhood Plan objectives to develop the economic and heritage assets of the parish.

16) Other Issues

Public Health

MPC believe further assessments will need to be carried out in relation to the assertions made for the public health impacts. We believe the applicant has based their assessment on flawed data and analysis for:

- Highway safety risks and traffic volumes and types

- Material highway capacity issues
- Proposed routes now include the A614 through Blaxton, Finningley, Austerfield and Bawtry to the A1(M) – these have not been assessed
- Air quality assessment are based on underestimations in traffic volumes and types
- The protection of safe drinking water from the principle and secondary aquifers which Prof Smythe has shown to be at risk from the proposed activity
- The quantity and volume of unexploded ordnance is unknown on the site & the applicant only proposes to survey the immediate area of the well-head.

Considering the number of flaws in the baseline data used by the applicant the Public Health impacts cannot be discounted as the applicant suggests.

Socio-economic Impacts

The applicant has not addressed these issues to any meaningful degree. MPC believe the disruption to the road network along Springs Road; the visual impact of the drill rig on public rights of way; together with the noise disturbance will have a detrimental adverse effect on the existing businesses in Misson Springs. This application puts at risk many existing businesses in Misson Springs including framing, fishing, equestrian and tourism related enterprises. Serious concerns about this application have been expressed by a very successful local organic farming business. They fear that if their organic status is compromised, then over 75 jobs could be lost with the knock on effect to the local economy.

In consequence, we believe this application contravenes Bassetlaw District Council Planning Policy DM7: which seeks to secure economic development including opportunities for the growth of indigenous businesses.

MPC is pleased to see that the applicant can assure Misson (and other) users of the BDC N3 broadband that the signal will not be affected by the development, and should this arise IGas will provide a solution to ensure continuity of service. MPC would like to thank IGas for this assurance.

17) Cumulative and Combined Effects

Having given a commitment not to use the Bawtry Road through Newington and Misson as a haul route to the development site, MPC agree with the applicant that the following proposals have no cumulative and combined effects with regard to transport and air quality:

- The extension to Newington Quarry and a new Newington Quarry site
- The solar PV farm at Newington which should be constructed by March 2016
- The proposed extension to Misson Grey Sand Quarry off Bawtry Road.

However, we do not accept that the emissions from the Tunnel Tech North factory will not have a cumulative & combined effect with IGas proposals. BDC have commissioned odour modelling by experts ADAS, which will be readily available for IGas to map against their site. Experience and expert assessment will show that fugitive odours cannot be guaranteed to remain within the site boundary unless a gaseous capture procedure is implemented. The IGas proposals have numerous gaseous emissions not only from the well, but from machinery and generators on the site. With two sources of hydrogen sulphide producers, one to the south and one to the north, of Misson village the resulting cloud of odour could be tipping point for breaching this community's fundamental right to clean air. **MPC urge NCC to insist that this potential for a combined and cumulative effect is assessed, preferably by an independent source familiar with TTN processes.**

MPC do not agree that the extension to the Finningley Quarry which has been approved could not have a combined effect with the application development. The quarry extension covers land over Misson Springs close to the application site and Springs Road. The impact of concern is the combined noise levels that could arise both from quarry generators for water level management which have caused nuisance in the past, and quarry traffic movements and quarrying machinery noise. These noise sources will not be included in the baseline noise assessment as the works are not yet underway. However, the three-year time scale of the proposal offers significant opportunity for combined noise levels to have an adverse effect.

MPC is concerned to learn that the applicant was led to believe that the redevelopment of the Misson Mill Site south of the village was not a foreseeable development so no assessment was made. BDC Planning Policy Officers have been working with MPC and the Neighbourhood Plan Steering Group since September 2014 on this proposal. The Misson Mill developer submitted a Masterplan in 2014 and received written feedback from BDC Planners. The proposals have progressed to a public vote on the four development options on 6th December. A preferred option was selected to be worked up for submission to BDC. MPC envisage work to demolish the site and redevelopment will begin during the duration of the IGas proposals. As the majority of the Mill buildings are asbestos a significant environmental hazard is posed to residents raising the environmental stresses the community faces. We would expect this cumulative effect to be assessed.

MPC is concerned that none of the proposed developments north of the village on the Springs Road have been assessed for cumulative and combined effects, however two of these projects are relatively recently gone public. Proposals include the applicants own related application for 12 water monitoring boreholes. As stated elsewhere these projects include:

- The IGas water monitoring borehole application F/3321
- Network Rail bridge safety improvements BDC application 15/01557/NOT
- A proposal by the Doncaster Belles Football Team to develop Nettleham Wells Farm, Springs Road as a training centre and leisure facility has been publicised in the local press.

MPC believe the cumulative and combined effects of these long-term infrastructure projects, with other adverse operations such as the nearby Finningley airport, have significant effects on the health and well-being of Misson residents. Misson already helps to provide the nation with its mineral resources through quarrying, and has done so since the 1930s. We also still have to cope with the noxious emissions from Tunnel Tech North, which have polluted our atmosphere for over 20 years. Misson residents suffer a level of environmental stress beyond anything expected of a relatively remote rural community living within a historic village and landscape setting. Ironically, we do not even have mains gas. This major proposal to the north of the village will confirm one residents appraisal of our situation as the 'village of the damned' 82% of Misson residents are opposed to the application. We believe the negative impacts of this proposal far outweigh any potential benefits.

18) Conclusions

MPC cannot concur with IGas conclusion that:

- a) A comprehensive assessment of the environmental implications of the development has taken place and
- b) If mitigation measures defined in the ES are implemented the residual effects will be acceptable

On the evidence of the numerous experts MPC has consulted in making this response, the application contravenes at least seven NCC MLP policies including the crucial test of site selection.

In addition the application contravenes BDC DMP policies on securing economic development (DM7); green infrastructure, biodiversity & geodiversity, landscape, open space and sports facilities (DM9); flood risk, sewerage and drainage (DM12)

Thank you, once again, for your consideration of our response to this planning application. Please do not hesitate to contact us for any clarification or further information.

Yours sincerely

Vivienne Shilling
Chairman
Misson Parish Council

Encs.

1. Objection on the grounds of geology and hydrogeology, David Smythe, Emeritus Professor of Geophysics, University of Glasgow
2. Transport Assessment, Mr Simon Gledhill, Misson resident and transport professional
3. Ordnance type and volume, Ministry of Defence response 25th March 2015
4. Misson non-designated heritage assets, BDC Map 2015