

APPEAL BY ISLAND GAS LTD, ELLESMERE PORT
CHESHIRE WEST AND CHESTER COUNCIL REF: 17/03213/MIA
PLANNING INSPECTORATE REF: APP/AO665/W/18/3207952

CLOSING SUBMISSIONS OF ROBERT GRIFFITHS QC ON BEHALF OF
CHESHIRE WEST AND CHESTER COUNCIL

1. This Public Inquiry is about the effects of shale gas exploration on climate change. In the most recent publication from the Institute for Public Policy Research (February 2019) climate change has been described as “a crisis facing up to the age of environmental breakdown”. We put the concept of “being in crisis” to Mr Adams in cross examination and he acknowledged that was the case not only for his industry but generally in the field of human activities.
2. The conclusion by way of summary for the Institute for Public Policy Research is that, “mainstream political and policy debates failed to recognise that human impacts on the environment have reached a critical stage, potentially eroding the conditions upon which socioeconomic stability is possible.” The Institute’s view is that policy makers and politicians are not adequately recognising, let alone responding to, the catastrophic threat posed by environmental change. It is our central submission that the planning system, applying normal land use principles, should recognise this threat by refusing to grant planning permission for the proposed exploration for shale gas development.
3. This report emphasises the urgent need to react to, “human-induced environmental change” which is “occurring at an unprecedented scale and pace” and where “the window of opportunities to avoid catastrophic outcomes in societies around the world is rapidly closing.” The report warns that a failure urgently to address this problem will result in, “economic instability, large-scale involuntary migration, conflict, famine and the potential collapse of social and economic systems.” It characterises this change as resulting from,

“the historical disregard of environmental considerations” and as it having been “a catastrophic mistake.”

4. In the same report it is stated;

“Climate Change

Increased concentrations of greenhouse gases in the atmosphere are leading to rising global surface temperatures, which results in ocean acidification, melting ice sheets, rising sea levels, and ecosystem change. An atmospheric Co₂ concentration of 350 parts per million (ppm) is considered the limit above which dangerous destabilisation could occur (Hansen et al 2008). This boundary has been crossed; current Co₂ concentrations are around 405 ppm (Blunden et al 2018), the highest since the Pliocene era 3-5 million years ago when the temperature was 2-4C warmer and the sea level was 10-20 metres higher (WMO 2018a). Average temperatures in 2017 were 1C above pre-industry temperatures and, because of time lags in natural systems, the earth is already “locked in” to further warming (IPCC 2018). The 20 warmest years since records began in 1850 have been in the past 22 years, with the past four years being the warmest ever (WMO 2018b). On current emission trends, 1.5C of warming is likely to be reached as early as 2030 (IPCC 2018).

5. So far as the Council is concerned, this Inquiry needs to consider and decide on various matters of law and fact which arise out of the refusal to grant planning permission for the Appellant’s exploration activities. As we see it, certain preliminary but fundamental matters of approach need to be clarified and considered. The first is the extent to which, if at all, the Council has to take into account the grant of an Environmental Permit to the Appellant for carrying out certain operations which form part of the exploration activities. Secondly, the relationship between central Government policy and the policies of the adopted Local Plan. Thirdly, there is the status of the Paris Agreement. The fourth issue relates to the relevance

of local public opinion to the decision making process. Can the Secretary of State ignore local public opinion on the basis that Central Government Policy is generally supportive of shale gas exploration and production? The fifth matter requires a consideration of the relevance and weight to be attached to scientific evidence which arguably runs counter to Central Government Policy and Guidance currently in existence. We will look at these issues in turn.

Environmental Permits

6. There is a well-known distinction between regulatory and planning matters. The blurring of that distinction can lead to errors of law, irrational judgement and implausible reasoning. Planning involves a consideration of the land use implications of a proposed development whilst the regulatory regime looks at the operations which are there to ensure that the development is carried out in such a way as to comply with the requirements of the regulatory body which is considering the matter from a different perspective and vantage point from the Planning Authority. It is a trite proposition that even though, in regulatory terms, what is proposed is permissible that does not amount to a land use finding that the proposed development is acceptable in planning terms. They may represent two sides of the coin but they amount to two distinguishable exercises of judgement.
7. This can be illustrated by the fact that an Environmental Permit relating to the flaring of emissions is wholly different from a grant of planning permission for the exploration of shale gas. The land use considerations of granting a planning permission for shale gas development are totally distinguishable from the granting of an Environmental Permit dealing with emissions of natural gas including methane as a consequence of the development being carried out. That is why the grant of an Environmental Permit cannot be construed as an approval of a planning permission which is in accordance with policy STRAT1 of the adopted Local Plan.
8. STRAT1 requires the Local Authority to be satisfied that,

“STRAT 1

Sustainable development The Local Plan seeks to enable development that improves and meets the economic, social and

environmental objectives of the borough in line with the presumption in favour of sustainable development. Proposals that are in accordance with relevant policies in the Plan and support the following sustainable development principles will be approved without delay, unless material considerations indicate otherwise:

- Mitigate and adapt to the effects of climate change, ensuring development makes the best use of opportunities for renewable energy use and generation.”

9. All those matters in STRAT 1 have to be evaluated as a matter of judgement by the Council as a Planning Authority. The grant of an Environmental Permit follows from an assessment made by the Environment Agency of factors relevant to the grant of the Permit in terms of operational matters. It does not amount to a finding that the conversion of methane into carbon dioxide as part of the process of exploration is sustainable development and does not adversely have an impact on climate change. If it did, that would mean as was said in my Opening, that the Environment Agency was the sole and determinative arbiter of what was in this case the sole reason for refusing planning permission.
10. Furthermore, we will show later in these submissions that the remit of the EA in accordance with the relevant Directive and Regulations is limited to the release of pollutants by reference to specific standards particularised in both the Directive and the Regulations. Neither the Directive nor the Regulations have laid down specific standards as to the level of emissions compatible with climate change. These are matters solely vested in the Local Planning Authority which has to exercise its judgement in accordance with the Development Plan and all other material considerations which it regards as germane to the planning application before it.

Case law on the relationship between Planning and Environmental Regimes

11. In *Gateshead Metropolitan Borough Council v Secretary of State for the Environment* (1996) 71 P & CR 350 the Court of Appeal held that the two regimes are separate but complimentary. In *R (J Bailey and others) v Secretary of State for Business* [2008] EWHC 1257 (Admin) the environmental impact of the proposed development was distinguished

from the environmental regime which controlled the development. That distinction was further referred to in *Harrison v Secretary of State for Communities and Local Government* [2009] EWHC 3382 where the High Court held that there was a distinction between a planning decision about whether a development is an acceptable use of land and the impact of those uses and the PPC regime that controls the process or its emissions. That is a vital distinction which should be applied in this case. Pollution control and the grant of an environmental permit does not mean that the use of land is acceptable in any given situation and that no issues will arise if the PPC regime is complied with. In this case the Appellant's own witnesses Ms Hawkins, Mr Foster and Mr Adams accepted unequivocally that the Environmental Permit Regime and the grant of a Permit did not mean that there were no adverse climate change impacts.

12. In *Hopkins Development Ltd v the First Secretary of State & North Wiltshire District Council* [2006] EWHC 2823 (Admin) the Appellants argued that the Inspector had to assume the proper application of the pollution regime and accordingly had erred in law in deciding that there would be serious harm to the amenity of the area by reason of dust emissions. George Bartlett QC sitting as a Deputy High Court Judge said at paragraph 11;

“11. The relationship between the planning and pollution control regimes has been the subject of consideration by the Court of Appeal in *Gateshead Metropolitan Borough Council v Secretary of State for the Environment* (1994) 71 P & CR 350 and *R v Bolton Metropolitan Borough Council, ex p Kirkman* [1998] JPL 787. They establish the proposition that the impact of air emissions from a proposed development is capable of being a material planning consideration but in considering that issue the planning authority is entitled to take into account the pollution control regime. Thus in appropriate cases planning authorities can leave pollution control to pollution control authorities, but they are not obliged as a matter of law to do so. PPS23 reflects this. It says:

“8. Any consideration of the quality of land, air or water and potential impacts arising from

development, possibly leading to an impact on health, is capable of being a material planning consideration, in so far as it arises or may arise from any land use...

10. ...The planning system should focus on whether the development itself is an acceptable use of the land, and the impacts of those uses, rather than the control of processes or emissions themselves. Planning authorities should work on the assumption that the relevant pollution control regime will be properly applied and enforced. They should act to complement but not seek to duplicate it.”

13. At paragraph 15 of the Judgment he dealt with the argument put by Counsel and recorded in paragraph 14 of the Judgment that in view of the existence of the pollution control regime, the conclusion that dust would cause serious harm to the amenities was *Wednesbury* unreasonable. He said,

“15. This is an argument that is superficially attractive. But it is dependent on the underlying assumption that, in relation to the likely impact of pollutants to which the 2000 Regulations apply, primacy must be accorded to the judgment of the regulator above that of the planning authority. I can see no basis for such an assumption, and it does not appear to me that the passage from paragraph 10 of PPS23 that I have quoted above provides support for it. It would effectively mean that, unless it was clear to the planning authority that the plant could never achieve a permit (cf *Gateshead* per Glidewell LJ at 359), the potential impact of pollutants could never enter into its consideration of whether planning permission should be granted. The thrust of paragraph 10 is that planning authorities should focus on the impacts rather than the control of

emissions, not that they must subordinate their judgment on the impacts to those of the pollution control authority. I therefore reject Mr Wadsley's contention that it was not open to the inspector to conclude that the impact of dust would be seriously adverse."

14. In *Harrison*, His Honour Judge McKenna referred to the decision in *Hopkins* at paragraph 21 of his Judgment;

"21. The thrust of the decision in *Hopkins* therefore, a decision which of course is persuasive but not binding on me, is that the planning decision maker was entitled to reach his own conclusions as to the impact of the proposed development on amenity and whether the site under consideration was the appropriate location for the proposed development. The fact that the impact might be capable of being regulated under a pollution control regime did not necessarily mean that the only possible option available to an Inspector was to leave everything to that regime. If the planning decision maker considered that there might be adverse consequences because of the effects of the proposed development on amenity and/or issues as to the appropriateness of locating the development of the site in question, he was entitled to have regard to such matters as material considerations in making his decision on the planning merits of the proposed development."

15. At paragraph 22 of his Judgment, His Honour Judge McKenna described that approach as according with a fair reading of PPS 23. In this case the Judge found that a question of the acceptability of the site for the proposed use was the issue and the Inspector had to make a decision on planning grounds as to whether the location of the site was appropriate. He held that the Inspector, "had to have regard to all material planning considerations including the site's proximity to other users and in reaching his planning judgment about the acceptability of the use he correctly directed himself that he needed to make the decision on the assumption that the pollution control regime would be properly applied." But the Judge went on to say that;

“[the Inspector] was entitled to have regard to the evidence which he heard as to the effect of the use when it had operated without the benefit of planning permission. He did not simply accept that evidence but specifically acknowledged the scope for improvement when further steps were taken to comply with pollution controls and he clearly took into account the fact that the IPPC Permit had been issued in 2007. He nevertheless concluded that the close proximity of the site to residential developments would continue to cause problems. This was a judgment which was reasonably open to him on the evidence given that there was compelling evidence before him that there had been odour problems for many years and that those problems had existed notwithstanding the availability of the pollution control regime. He was not satisfied that the problems would be eliminated having regard to the specific limitations and areas of uncertainty which he himself identified during the course of his analysis. In so doing he undertook a realistic and fact specific assessment of the amenity impact of the proposal which he was entitled to do in the light of the controls that would be applied under the pollution control regime.”

16. In the same paragraph the Judge described the Inspector’s approach as, “a realistic and fact specific assessment of the amenity impact of the proposal which he was entitled to do in the light of the controls that would be applied under the pollution control regime.” The Judge further held that,

“he did not abdicate responsibility to decide whether the location in question was appropriate and what the effects of the development would be and his approach closely matched the approach of the Inspector in the Hopkin's case an approach which was to my mind, rightly upheld by the High Court. I am not persuaded by the Appellant's argument that the concluding sentence of paragraph 99 constituted an attempt

by the Inspector in some way to distance himself from the guidance.”

The Appellant’s Case

17. As I put in cross examination to Mr Adams it is a significant fact that no scientific evidence has been led or introduced by way of rebuttal of the Council’s scientific evidence. The only evidence before you to that is of Dr Balcombe and Dr Broderick and the evidence of the Rule 6 Party, especially Professor Anderson. The response by Mr Adams was that it was not needed as Government’s policy supported it and an Environmental Permit had been granted and the mitigation proposal had been accepted by the Environment Agency as Best Available Technique (BAT) (in fact this is not correct as to the DST stage). But in any event, what the Appellant has completely misunderstood is that the use of BAT is not the yardstick of what is acceptable in planning terms.
18. In that regard both Mr Foster and Mr Adams accepted in cross examination that the regulatory regime did not deal with the impact of the development after the regulatory controls had been implemented. The issue, therefore, did not turn on whether the flaring accorded with BAT but on whether, notwithstanding that flaring may be BAT, the effect of methane emissions into the atmosphere was to have a significantly adverse effect on climate change.
19. Indeed, it seems that it is now common ground as is clear from the estimates of these emissions set out in the agreed tables that have been put before you by the Planning Authority, the Appellant and the Rule 6 Party. Dr Balcombe’s schedule (Document C6) provides you with the agreed range of emissions that may result from the exploration stage. This is critical and indeed determinative evidence before the Inquiry for a number of reasons.
20. On all the estimates it is clear that there will be the release of methane emissions into the atmosphere which, when converted to CO₂ by flaring, will have a deleterious effect on climate change.

21. The Appellant accept by way of admission that the Environment Agency had before it incorrect information as to the level of emissions that would be generated by the development. This is a highly material fact. Mr Foster in cross examination suggested that the Appellant was to go back to the Environment Agency to correct this error. But for the purpose of this inquiry, this is too late. To say that the Appellant would go back to the Environment Agency after an Inquiry is over is obviously a recognition of a major deficiency in the Appellant's case, especially bearing in mind the great weight it attached to the EA's grant of the permit and its failure to object to the proposed development.

22. The reality is that the Appellant's Environmental Risk Assessment contained mistaken evidence as to the emissions that will result from the exploration stage. The Environment Agency would, therefore have been working on the premise that these emissions were low and could be discounted.

23. They would have been looking at the matter in the way it was set out in paragraph 8.9 of Mr Foster's Proof of Evidence where he says;

“Paragraph 11 of CW&CC's SSoC (CD4.4) sets out paragraph 49 of the 2016 CCC (CD8.1) which makes reference to emissions from exploration being generally small but it should not be taken as a given, especially for extended well tests. It states that appropriate mitigation techniques from exploration are generally small, the thrust of the matter is whether 'appropriate mitigation techniques' have been employed 'where practical'.”

24. The Environment Agency, therefore, granted an Environmental Permit on the basis of a false premise. This fact is at the heart of the Council's case. If it were not for the evidence of Dr Balcombe and Dr Broderick, this Inquiry would have been proceeding on the basis of that same false premise. It is a micro level factor which requires the decision maker to reach his determination not on the broader contextual basis of shale gas development and its impact on climate change but on the basis of empirical evidence which establishes a fundamental flaw in the Appellant's case. This flaw only came to light through the research of the Planning Authority's two eminent scientific witnesses. In particular, Dr Balcombe's rebuttal

evidence and his further supplementary statements fleshed out the magnitude of the point. No attempt to rebut that evidence was made by the Appellant for whatever reason.

25. It was only in the Appellant's response ("Response to Calculation on Methane and Global Warming Potential", 22 February 2019 (A4)) to Dr Balcombe's document, "A Clarification on estimates of methane emissions from exploration activities" 7 February 2019" (C3) that it was acknowledged in paragraph 2.2 that "there is an error in the GWP calculation, having used a default value emission for production gas flaring, rather than the default values for well testing."

26. The Inquiry now has before it Dr Balcombe's, "Statement on an agreed estimate of greenhouse gas emissions form well testing activities" (C6). The importance of that document cannot be devalued by the Appellant on the basis that there is a range of potential emissions. Whichever range is adopted the conclusion is, as Dr Balcombe set out in this statement at paragraph 13;

"13. It remains clear that the climate impacts associated with well testing are materially large, as well as being highly uncertain. The differences between emissions estimated by IGas in the environmental risk assessment and those presented here is also large and shows that emissions have up to now been mistakenly underestimated."

27. In his earlier document (C3) dated 7 February 2019 at paragraph 6 Dr Balcombe concludes;

"The effect on the climate of these additional emissions that are not currently accounted for is equivalent to 0.7 – 5.4 kt CO₂eq. using a global warming potential of 36. This is equivalent to a single modern passenger car (121 gCO₂/km) travelling up to 54 million km, equivalent to driving around the Earth's circumference 1,111 times, or driving to the moon and back 58 times"

28. It is to be noted that this is simply the effect of additional emissions that are not currently accounted for. The impact of the total emissions is significantly greater as is clear from Dr

Balcombe's table in C3 and his most recent statement (C6) dated 27 February 2019. The fact is, as Dr Balcombe notes at paragraph 3,

"3. Total emissions agreed between parties equate to 4 – 10.8 kt CO₂eq. using a GWP factor of 36, 3.3 – 7.6 using a GWP factor of 21 and 6.1 – 21.3 using a factor of 87"

29. Dr Balcombe has helpfully placed these values in context so that the non-scientists amongst us can get a true picture of the impact of the Appellant's development at the exploration stage and which are not disputed by the Appellant. At paragraph 5 of C6 he states;

"5. To place these values in context, the estimated total annual GHG emissions from industry and commercial activities within the Cheshire West and Chester local authority in 2016 was 1,099 ktCO₂. Total GHG emissions are up to 1% of annual regional industrial emissions using a GWP of 36, or 2% with a GWP of 87. It is the equivalent of adding 7,100 new cars on the road per year (13,000 with a GWP of 87). This is equivalent to a single modern passenger car (121 gCO₂/km) travelling up to 89 million km, equivalent to driving around the Earth's circumference 2,200 times, or driving to the moon and back 116 times."

30. Dr Balcombe characterised the total GHG emissions as "large" and explains the reasons for the increased estimate from the Appellant's estimate submitted in its Environmental Risk Assessment to the Environment Agency. He notes that it is not just flaring, but that, "methane emissions are likely to also occur via vents and fugitive leaks and were previously

unaccounted for” (paragraph 8 of C6). He also expresses his view as an expert in this field that, “Further, there is a risk of lower efficiency flaring due to the uncertainty of both gas flow rate and the gas composition” (paragraph 8 of C6).

31. It is also right to note that, as Dr Balcombe explains, the use of different GWP values has a large impact on results and that there are many GWP factors that have been used for methane. He observes that some are significantly out of date. That is his position as to the Appellant’s calculations. He points out that the value of 21 used within the Appellant’s calculation is based on a 13 year old IPCC third assessment report. He notes (and this has not been denied) that this value has been updated twice to 36 in the 2013 IPCC fifth assessment report. His value of 36 represents the average climate forcing of methane over 100 years so as to make the climate change comparison linked to Co2 which as he previously told us remains in the atmosphere for hundreds of years.
32. The Inquiry is also assisted by the input from the Rule 6 party in this issue who present a higher value of 87 also based on the value of the most recent IPCC report. This value, Dr Balcombe states, “reflects the significant additional harm cause by methane in the short term (as it is a short-lived climate pollutant)” as well as being a long term climate change factor (see paragraph 12 of C6).
33. May I say that the work done for this Inquiry by Dr Balcombe and Dr Broderick may not be limited in its value to the outcome of this Inquiry but to the whole gas industry in that it provides peer-reviewable material emanating from an actual research project – this application – and represents highly material scientific learning of both national and international import. But its importance to this Inquiry and what remains undisputed by the Appellant is that it shows that the Environment Agency, acting pursuant to a flawed

Environmental Risk Assessment by the Appellant, failed to take into account highly relevant material as to the likely extent of emissions attributable to the proposed development.

34. As Dr Balcombe concludes in C6;

“13. It remains clear that the climate impacts associated with well testing are materially large, as well as being highly uncertain. The difference between emissions estimated by IGas in the environmental risk assessment and those presented here is also large and shows that emissions have up to now been mistakenly underestimated.”

35. That is the evidence of an esteemed scientist eminent in the field of the shale gas development and climate change. It is highly material and probative evidence which is wholly supportive of the Council’ case. It has not been rebutted and no attempt has been made to rebut it by the Appellant. It is supported by distinguished scientists called on behalf of the Rule 6 Party.

36. In contrast, the evidence called by the Appellant is of no scientific or probative value at all. To be fair to the individual witnesses called by the Appellant, they did not purport to be qualified in expressing an opinion on these matters. Ms Hawkins, in her evidence at paragraph 2.7.1 stated, “Atmospheric methane and climate change impacts are outside the scope” of her evidence. In cross examination which was thereby made otiose and was highly abbreviated she agreed with me that there was nothing in her evidence or her rebuttal which dealt with these issues. She also agreed and volunteered in her evidence (see paragraph 1.3.2) that “air quality impacts contrast to controls.” She expressly agreed in

cross examination that the Environment Agency did not set standards for climate change and were not making determinations in relation to climate change in the grant of environmental permits. Her evidence referred to the control of pollutants (see paragraph 2.3.1) and that the Directive to which we will return and the Environment Agency were looking at flaring rate and implications on the potential emissions. The Environment Agency was not looking at the impact of emissions that remained after the adoption of BAT. In fact, all the Appellant's witnesses agreed that was the case. So far as the DST flare was concerned, Ms Hawkins characterised this as "low efficiency" and volunteered that this was not the preferred Environment Agency option as described in EA sector guidance.

37. Turning to Mr Foster, he limited his evidence to that of an industry professional and agreed in cross examination that he dealt with operational matters, namely controls and the regulatory regime. He readily agreed that he was "not a scientist" or an "expert in climate change." We have already referred to paragraph 8.9 of Mr Foster's evidence relating to the characterisation of emissions from exploration as being, "generally small." It was clear, as has been the case throughout, that he along with the whole of the Appellant's team was proceeding on that premise. It was in that context that he considered appropriate mitigation techniques and his consideration of practicality. It is not surprising that, therefore, both the Appellant and the Environment Agency formed the view that appropriate mitigation techniques had either been adopted or were not practical to adopt. What was appropriate and practical was assessed by reference to the characterisation of emissions from exploration being "small." Neither the Appellant nor the Environment Agency had ever assessed the necessary mitigation techniques and the practicality of those techniques available against a backdrop of the emissions being high and uncertain.

38. Furthermore, in paragraph 8.28 of his Summary Proof he describes the Council's reason for refusal as wholly inconsistent with the decision of the Environment Agency and the recommendation of professional officers. Now that we know that the Environment Agency, and indeed the Council Officers, were proceeding on a false premise (namely that the emissions were low) we can see that there is nothing whatsoever inconsistent between the Environment Agency, the Officers and the Members. The Officers and Environment Agency were not appraised of the relevant scientific facts and were not aware of the discrepancy between assumption and actuality as to the exploration stage in terms of emissions. That was one of the points made by Mr Vallely in his evidence which has been wrongly described as supportive of the Appellant's case. A close reading of Mr Vallely's evidence shows that was not the case. What he was doing was to explain that the Officer's recommendation to Members was made at a time when the relevant scientific evidence was not before them. He said that he did not feel it was fair to criticise them for the approach adopted absent that evidence. Quite fairly, he pointed out that the circumstances had changed and it was for the Inspector now to consider the matter on the basis of the evidence called before the Inquiry. The Members, acting intuitively, reached a conclusion which I have earlier submitted in Opening and do so again in Closing, that the impact of these proposals on Climate change taking into account the mitigation of the proposed flaring through a shrouded ground flare and an enclosed ground flare was not such as to prevent an adverse impact on climate change. That intuitive view has now been shown to be correct.

39. We now turn to the evidence of Mr Adams who, very fairly notwithstanding a number of purported unequivocal statements in his evidence, had to agree under cross examination that the Environment Agency's decision to grant a permit is not conclusive and determinative of the case. He likewise agreed that scientific evidence is relevant to the decision maker's consideration of the issues and in particular that Dr Balcombe and Dr

Broderick's evidence was relevant. I did not have to press him on these matters even though as I pointed out, he states in paragraph 6.55 of his evidence that, "it is not considered that the concerns related to climate change are material to the decision" and at paragraph 5.1, "climate change is not a material planning consideration." He clearly had further reflected on his evidence having presented it for which I thank him. He also agreed that the Paris Agreement was a material consideration (a matter to which I will return in my closing).

40. We now turn to two highly significant paragraphs in Mr Adam's evidence which, in our submission, are illustrative of the syllogistic and illogical nature of the Appellant's case. The flawed reasoning in two of his paragraphs, which in cross examination, he accepted could not stand are essentially non sequiturs and are an insight into the paucity of the Appellant's reasoning. They also provide the explanation as to why it has taken the view that it was not necessary to call any scientific evidence to rebut the evidence of the Council and the Rule 6 party. We will, therefore, look very closely at these two paragraphs.

41. At paragraph 3.55 of his Proof of Evidence Mr Adams said;

"It is unequivocal that the government's position is that exploration for domestic supplies of gas is of national importance and that great weight should be given to the benefits of natural gas from alternative hydrocarbon resources, such as shale. It follows that the inevitable land use planning consequences of such exploration are accepted (or else the principle of such exploration could not be supported).

42. The first non-sequitur as identified in this paragraph is that because the Government's position is that exploration for domestic supplies of gas is of national importance and that therefore great weight should be given to it, it follows that the inevitable land use planning consequences of exploration are accepted. Mr Adams conceded that this was not the case and that just because the exploration for shale gas is of national importance in the eyes of the Government, it does not follow that the inevitable land use planning consequences of

exploration are acceptable as a matter of planning land use. In other words you cannot jump to the conclusion that planning permission should be granted simply on the basis that Government policy generally supports shale gas development and that the environmental impact of that development (including climate change) is accepted. That approach, if we may say so, is totally misconceived. It is not simply because it is an illogical conclusion from the premise, but because as a matter of planning approach it is simply analytically wrong.

43. The thrust of all planning guidance and policy is that there should be a balancing exercise which balances and weighs various considerations against other considerations. Depending on the nature of the consideration, one consideration may outweigh another and the conclusion that is reached as a result of the balancing exercise largely (if not entirely) depends on the weight that is attached to the relevant material consideration. Some considerations, like the considerations of the Adopted Plan, are given great weight as a matter of law. Others are material because they are relevant to the assessment of the impact of a development on the use of land and they, in a given case, may be multi-faceted (as was pointed out by my learned friend for the Rule 6 party).

44. In this case, what has to be looked at in our submission is not simply the Government's position as a matter of general policy in relation to shale gas development, but the relationship between two potentially conflicting matters of national importance. In that context at this stage it is instructive to look at a relevant analogy between two potentially conflicting national interests as exemplified by proposed shale gas development and the protection of our National Parks. That is an analogy where, in looking at proposed development albeit in the national interest, one has to balance any national interest there may be in the development of the shale gas industry against another public interest, namely that of protecting the National Parks which by virtue of section 5 of the National Parks and Access to the Countryside Act 1949 (as amended by the Environment Act 1995) there is a duty to conserve and enhance natural beauty, wildlife and cultural heritage of the National Park. The balancing of two national interests is a difficult and complex exercise but it is not one that can be circumvented by attaching greater weight to one national interest from the weight you attach to another national interest.

45. That, in our submission is what the Appellant is trying to persuade you is the correct approach in this case. The Appellant attaches overriding weight to shale gas development on the basis that national policy supports it and the planning consequences of it have to be

accepted and are not a good reason for refusal. As quoted above, Mr Adams stated, “it follows that the inevitable land use consequences are accepted, or else the principle of such exploration could not be supported (emphasis added).” What we say is that argument is not only a total non sequitur (as conceded by Mr Adams as a matter of logic) but that it ignores the fact that the protection of the environment from climate change is itself a national interest. It is recognised as such both nationally and internationally by the Climate Change Act 2008, the Paris Agreement and by the most recent energy policy statement dated 17 May 2018.

46. We will return to the characterisation of the national interest relating to climate change in the next chapter of these submissions. But in order to complete the point in relation to the Appellant’s argument that the Government’s support for exploratory development in relation to shale gas is per se acceptable and as there are existing consents from the three regulators (the Environment Agency the Health and Safety Executive and the Oil and Gas Authority) that is a sufficient reason in itself for granting planning permission irrespective of the impact of the proposal on climate change. That, you may recall, arose out of a point that we contested with Mr Adams in our cross-examination of paragraph 3.42 of his main Proof of Evidence which reads as follows;

“3.42. It explained the intentions of the Government to hold a formal consultation on the principle of whether non-hydraulic fracking shale exploration development should be treated as permitted development. That in itself is revealing. For the government to consider exploratory development as potentially capable of being considered as permitted development, it suggests that they are of the view that the inevitable environmental impacts (including climate change impacts) of such development are not likely to be significant and that the existing consents from the three regulators (the Environment Agency, the Health and Safety Executive and the Oil and Gas Authority) are sufficient to control potential environmental effects to an acceptable level”

47. Mr Adams, in cross examination had to draw back from relying on that reasoning. He quite rightly accepted that the potentiality of exploratory development being considered as

permitted development was not, even if factually correct, a matter which coupled with the granting of the necessary relevant consents from the regulators resulted in the conclusion that shale gas development was acceptable to the Government in terms of its environmental effects. It is this type of simplistic reasoning which results in superficially attractive arguments being adopted at a cost to the environment that future generations will condemn.

48. As has been pointed out, and we adopt this as part of our submissions, “there is a contradiction between the warnings of environmental scientists and the actions of politicians” (IPPR, February 2019). It is that apparent contradiction with which this Public Inquiry has to grapple. It is not eradicated by regarding Government Policy on shale gas development as the indicator of the Government’s policy on climate change. The two issues should not be conflated (which is what the Appellant has sought to persuade you that you should do). The conflation of issues is invariably the hallmark of irrationality and implausibility.

49. We now turn to the consideration of climate change as a national interest. We start with the Climate Change Act 2008 which prescribes in section 10(2)(b) that the Committee on Climate Change in considering matters should take the following into account,

“(2) The matters to be taken into account are—

- (a) scientific knowledge about climate change;
- (b) technology relevant to climate change;
- (c) economic circumstances, and in particular the likely impact of the decision on the economy and the competitiveness of particular sectors of the economy;
- (d) fiscal circumstances, and in particular the likely impact of the decision on taxation, public spending and public borrowing;
- (e) social circumstances, and in particular the likely impact of the decision on fuel poverty;
- (f) energy policy, and in particular the likely impact of the decision on energy supplies and the carbon and energy intensity of the economy;

- (g) differences in circumstances between England, Wales, Scotland and Northern Ireland;
- (h) circumstances at European and international level;
- (i) the estimated amount of reportable emissions from international aviation and international shipping for the budgetary period or periods in question.

50. It can be seen that at forefront of those matters are (a) scientific knowledge about climate change and (b) technology relevant to climate change. Also relevant are, (g) differences in circumstances between England, Wales, Scotland and Northern Ireland and (h) circumstances at European and international level. In our submission, these self-same matters should be taken into account in reaching a decision in relation to this appeal. That is not to say that other matters cannot be taken into account because, as section 10(7) provides, the Secretary of State or the Committee are not restricted in the matters they may take into account. The specified matters above are those that must be taken into account, not only by the Committee but by the Secretary of State. In our submission, as a matter of law, that must mean they are not only material considerations to be taken into account in the matter of a consideration of a planning application, but their importance is enshrined in statute and accordingly great weight must be attached to them by the decision maker in circumstances where climate change is relied upon as a reason for refusal.

51. Section 10(2) of the Climate Change Act specifically incorporates as matters to be taken into account at (h) circumstances at European and international level. That, in our submission, incorporates both the Paris Agreement and Directive 2008/1/EC of the European Parliament and of the Council concerning integrated pollution prevention and control (15 January 2008). In that sense the factors are legally binding as a material consideration on the decision maker when considering an appeal of this kind. They are considerations of a normative form and are binding. The Paris Agreement is a legal instrument whose provisions are legally binding on the UK Government it having been as a treaty in November 2016. In our submission, the legal character of a norm differs from whether the norm is justiciable. The legally binding character of the norm does not depend on whether there is any court of tribunal with jurisdiction to apply it. Furthermore, the concept of a legally binding character is distinct from enforcement. As with justiciability,

enforcement is not a necessary condition for an instrument or norm to be legally binding. If a norm is created through a recognised law making process then it is legally binding whether or not there are any specific sanctions for violations. That is the case with the Paris Agreement. It creates legal norms within the community of its signatories and binding as norms in domestic circumstances on ratification by the Government.

52. The Government's most recent energy policy statement is a joint statement of the Secretary of State for Business, Energy and Industrial Strategy and the Secretary of State for Housing, Communities and Local Government. This joint statement should be considered "in planning decisions and plan making in England" (see first paragraph). It states that, "the UK must have safe, secure and affordable supplies of energy with carbon emissions levels that are consistent with the carbon budgets defined in our Climate Change Act and our international obligations."

53. As Professor H. L. A Hart referred to in his seminal work, "A Concept of Law" a legal norm reflects a state of mind of a decision maker but also the normative value given by the community. In that sense it constitutes a legal obligation in that compliance is required rather than being merely optional. From our experience of international legal agreements as opposed to domestic agreements, most international legal agreements provide no mechanism for judicial application and little enforcement. But that does not mean that they do not apply and are not legally binding on the decision maker. We do not accept, therefore, as a matter of law that the Paris Agreement ratified by the UK Government is not a weighty material factor in considering the impact of the proposed development. It self-evidently is one. It would be legalistic pedantry if the view was taken that the contents of the agreement should not be given a normative legal force in the consideration of this appeal.

The Paris Agreement

54. We now turn to some of the highly relevant provisions of the Paris Agreement. These individually and collectively show that so far as the UK Government is concerned, climate change considerations are to be characterised as a weighty public interest norm which should be applied in the balancing exercise of shale gas development and climate change mitigation.

55. The Paris Agreement (EP46) acknowledges that Climate Change is a common concern of human kind – parties should, when taking action to address climate change, respect and promote and consider their respective obligations on human rights. It should recognise the importance of the conservation and enhancement, as appropriate, of sinks and reservoirs of greenhouse gasses. It notes the importance of the concept of, “climate justice” when taking action to address climate change. It affirms the importance of public participation on matters addressed in the Agreement. It recognises the importance of the national legislation of parties in addressing climate change. But most importantly, for the purpose of this Inquiry, it recognises the need for an effective and progressive response to the urgent threat of climate change on the basis of the “best available scientific knowledge.” Article 4 specifically refers to “reach global peaking of greenhouse gasses as soon as possible” and to “undertake rapid reductions thereafter” in “accordance with best available science.”

56. Article 6(4) establishes a mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development. Its aim is;

- “(a) To promote the mitigation of greenhouse gas emissions while fostering sustainable development;
- (b) To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party;
- (c) To contribute to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its nationally determined contribution; and
- (d) To deliver an overall mitigation in global emissions.”

57. The importance of the Paris Agreement cannot be underestimated. Day by day we read of reports in newspapers and scientific journals of the failure to comply with its requirements. We have already referred to the characterisation as a “crisis facing up to the age of environmental breakdown.” In October 2018 the Inter-Governmental Panel on Climate Change (IPCC) warned that global greenhouse gas emission must be reduced by 45% by 2030 in order to keep warming to below 1.5C, above which damaging impacts become

increasingly dangerous and unmanageable. This warning came as the global temperature rise exceeded 1.C above pre-industrial levels, summer heatwaves broke temperature records and scientists warned of runaway climate change breakdown towards a “hot house earth” in which “serious disruptions to ecosystems, societies and economies could occur.” It should also be noted that we have just had the hottest February since records began (see Steffen W et al (2018) “Planet at risk of heading towards a “Hothouse Earth” state” Stockholm Resilience Centre).

Directive 2008/1/EC (15 January 2008)

58. This Directive focuses on emissions of greenhouse gas and other pollutants. It was accepted by Ms Hawkins in cross examination that this regime essentially dealt with pollutants and did not assist with climate change considerations. Although it had dealt with emissions of greenhouse gas for certain installations, the permit did not include an emission limit value for direct emissions of that gas. It was, therefore, of no real assistance in the circumstances of this case.
59. As to “best available technique” again this is defined but that is in the context of the grant of the permit. Although it introduces a concept of practicality, that is in the setting of pollutant control and is not an indication of its acceptability in terms of the impact on climate change.
60. The most relevant aspect of the Directive is the emphasis on public participation in the taking of decisions which is dealt with in the preamble in paragraph (24) which makes it clear that, “Effective public participation in the taking of decisions should enable the public to express, and the decision maker to take account of, opinions and concerns which may be relevant to those decisions, thereby increasing the accountability and transparency of the decision-making process and contributing to public awareness of environmental issues and support for the decisions taken.” We rely on that part of the Directive as establishing the principle that the opinions and concerns of the public in the decision making process are relevant. We see no reason to limit that right of effective public participation to pollutant emissions and not to apply it to the opinions and concerns of the opinion of the public in relation to climate change. In other words, the concerns of the public are material considerations. This mirrors the case law referred to by my learned friend for the Rule 6 party in her closing submissions.

61. As was referred to earlier, the most recent policy statement was made on 17 May 2018 by two Secretaries of State. That joint statement is very much more in hope and aspiration than a statement that can be relied upon as a justification for shale gas development irrespective of the consequences for climate change. The Secretaries of State say in the second paragraph, “as set out in the Clean Growth Strategy, innovations in technologies such as Carbon Capture Usage and Storage (CCUS) have the potential to decarbonise this energy supply still further and prolong its role in our energy mix.” This statement is not saying that per se shale gas development is acceptable development.

62. The statement goes on to say that;

“Our current import mix via pipelines from Norway and Continental Europe and LNG terminals that can source gas from around the world, provides us with stable and secure supplies. However, we believe that it is right to utilise our domestic gas resource to the maximum extent and exploring further the potential for onshore gas production from shale rock formations in the UK, where it is economically efficient, and where environmental impacts are robustly regulated.”

63. The emphasis on this paragraph is the potential for shale gas production where, “it is economically efficient, and where environmental impacts are robustly regulated”. The explicit and clear inference from that sentence is that when looking at the prospect of shale gas exploration, the environmental impacts of the exploration are factors which have to be taken into account. The premise of the potential for onshore gas production is that it is “robustly regulated.” The Council’s case, as developed by Dr Balcombe and indeed Dr Broderick, is that currently the best available techniques (BAT) still do not reduce the methane levels to an acceptable level in climate change terms and the residual impact after complying with the existing regulatory regime is not low but high. Their evidence, especially that of Dr Broderick on this point, reinforces the Secretary of State’s focus in this statement on “potential.”

64. We see that word again used in the joint statement in respect of the benefits of shale gas potential;

“We also believe that further development of onshore gas resources has the potential to deliver sustainable economic benefits to the UK economy and for local communities where supplies are located by creating thousands of new jobs directly in extraction, local support services, and the rest of the supply chain. A potential new shale gas exploration and production sector in the shale basis of England could provide a new economic driver. We also see an opportunity to work with industry on innovation to create a “UK model” – the world’s most environmentally robust onshore shale gas sector – and to explore expert opportunities from this model, a core them of our modern industrial strategy.”

65. That paragraph in particular shows that, albeit shale gas exploration and production could provide a new economic driver, and although there is an opportunity to work with industry on innovation to create a UK model – the world’s most environmentally robust onshore shale gas sector, that model has not yet been created. That is essentially what this document is saying. The immediate preceding paragraph refers to the need to work with responsible companies prepared to invest in this industry as they proceed with the exploration process. The indisputable fact is that we have not reached the stage in this country where the adverse environmental impacts of shale gas development have been reduced to an acceptable level in climate terms. Although the technology to achieve that reduction is being looked at, it has not yet been designed and implemented. That is the thrust of the Appellant’s case - carbon capture usage and storage it says has not been satisfactorily used in practice and that Dr Broderick’s evidence in particular where he points to the prospect of using that technology is unrealistic. The Appellant does not seem to be able to see that on its own case it is saying, “we have not yet developed a robust means of limiting the effect of shale gas development on the environment.” That is why the Appellant has constantly said that shale gas development will inevitably cause these emissions – effectively that is the price we have to pay. That approach is entirely inconsistent, we submit, with Government policy as evidence by the statement of the two Secretaries of State (above).

66. The Secretaries of State are saying in the last paragraph of the first page of that statement that we need to work with responsible companies to “ensure that our planning and regulatory systems work appropriately whilst assisting local Councils in making informed and appropriate planning decisions.” In effect, that system is not yet in place, hence the need to appoint a shale gas regulator to act as “one coherent single face for the public, Mineral Planning Authorities and industry.” The statement refers to the intention of establish the regulator from the summer. That, as we understand, has not yet happened but it is an indicator of the Government’s concern about the current arrangements which are characterised as “complex” with three regulators; the Environment Agency, the Health and Safety Executive and the Oil and Gas Authority. It continues, “it is not always transparent to both the public and the industry who is responsible for what.”
67. It is not disputed that the statement says that shale gas development is of national importance. But that does not justify the submission that because it is of national importance the Government is deemed to accept that the implications for climate change are given greater lesser weight in the balancing exercise and are trumped by shale gas development. It seems to us, whilst accepting the national importance of shale gas development, the Government is making it very clear that as a matter of principle, it should not go ahead irrespective of its impact on the environment. That is why in the same paragraph in the statement referring to the national importance of shale gas development, the Secretary of State says, “applications must be assessed on a site by site basis and having regard to their context.”
68. On this issue it is helpful to consider Dr Broderick’s evidence. At paragraph 20 of his main proof of evidence he refers to negative emissions technologies (NETs) such as direct capture of carbon dioxide and Bio Energy with Carbon Capture and Storage (BECCS) being currently still in technical development. That mirrors, to a large extent, what has been said by the Secretaries of State in the joint statement referred to above as to the availability of this technology. Dr Broderick states that whilst he supports such research and development there is wide recognition that the efficacy and global rollout of this technology is “highly speculative.” His view is there is a “non-trivial risk of failing to deliver at, or even approaching the scales typically assumed.” It is that assumption that he says, “unreasonably lends support for continued and long term use of gas and oil whilst effectively closing down more challenging but essential debates over supply and demand

for fossil fuels, lifestyle changes and deeper penetration of a genuinely decarbonised energy supply” (see paragraph 20 of Dr Broderick’s main proof).

69. Dr Broderick advocated in paragraph 21 of his proof, “an urgent programme to phase out existing natural gas and other fossil fuel use across the EU.” In his view, this was an imperative of any scientifically informed and equity-based policies designed to deliver on the Paris Agreement. His view of mitigation in STRAT 1 was that it should be interpreted in relation to compatibility with achieving the objectives of the Paris Agreement and for this to be the relevant standard.
70. In this regard, it is to be noted as Dr Broderick at paragraph 16 of his main proof states the minutes of the Planning Committee record that the Council’s solicitor explained the international legislative context and the Paris Agreement was cited in written objections in the Planning Officer’s Report to the Council. In approaching their task, the Members of the Planning Committee would have been aware that the Paris Agreement was implemented, “to reflect equity and the principle of common but differentiated responsibilities” and that developed countries should, “continue taking the lead by undertaking economy-wide absolute emission targets.”
71. We submit, therefore, that mitigation, in the circumstances of this case and as relied upon by the Council in its reason for refusal, has two equally applicable connotations. Firstly, mitigation in the broader sense relating to the achievement of the objectives of the Paris Agreement. We submit this is a legally binding obligation as opposed to a legally enforceable obligation which the decision maker should take into account in considering the application for planning permission. Secondly, there is mitigation in the technical sense as expounded by Dr Balcombe in relation to the failure to use technology to reduce carbon emissions to an acceptable level in planning terms. On both of these grounds the appeal should be dismissed.
72. We accept that the latest Energy Policy Statement says that shale gas development is of national importance. It is characterised in that way because of the benefits of mineral extraction, including to the economy. But that does not mean that the impact of shale gas development on climate change should not also be given great weight as a legally binding material consideration, not just of national but worldwide importance. As the Secretaries

of States' ministerial statement says, applications must be assessed having regard to their context.

73. Shale gas development is treated by the present Government as relevant to our economy and as a modern industrial strategy. Climate change is relevant to the future of our planet and mankind. In the balancing exercise of one national interest against (our present economy) another national interest (climate change) an objective evaluation by an informed and rational decision maker of what should be afforded greater weight, there can be no doubt that until a robust regulatory regime is in place the technology available to halt the march of climate change to abyss of self-destruction predicted by the vast majority of scientists worldwide, Planning Authorities should apply the precautionary principle to the control of development of this kind. There is no legitimate justification for not acting in this way. There is nothing inconsistent with that proposition in Government policy or the development plan.

74. The joint statement by both Secretaries of State in May 2018 stated, "the UK must have safe, secure and affordable supplies of energy with carbon emission levels that are consistent with the carbon budgets defined in the Climate Change Act and our international obligations." In this case, the Council found (entirely reasonably) that having regard to the Paris Agreement, the Climate Change Act 2008 and Policy STRAT 1, the proposed development should be refused. The Council found it was not in accordance with national policy or in accordance with an international Treaty ratified by the UK Government and that the development was unacceptable in land use terms. The Appellant's case is a weak one. It rests on a fundamentally flawed argument, the premise of which is that Government policy supports shale gas development, the necessary regulatory permits are in place, and that concludes its case. That is simply wrong (as was accepted by Mr Adams in cross examination). Government policy does not support shale gas development unless there is a robust regulatory regime in place and the technology exists to decarbonise this energy supply and prolong its role in the energy mix.

75. On the basis of the evidence before this Inquiry those condition precedents for shale gas development have not been satisfied. That does not mean that will always be the case. Science and technology make huge advances mainly for the benefit of mankind. Currently, shale gas development is not safe. It is not consistent with the carbon budgets defined in the Climate Change Act or our international obligations. The likelihood is that one day,

perhaps not so far distant, shale gas development will be acceptable. But we should be vigilant as a society and so should the planning system, to ensure that in pursuit of that goal we do not end up contributing to the demise of our planet. If that is an alarmist submission then so be it. It is made on the basis of the best available science and a sensible reading of Government policy and an international Treaty, a highly relevant Local Plan Policy and by giving due and proper regard to the weight to be attached to the justifiable concerns of the public, the residents of Chester and Cheshire West and the Members of the Council's Planning Committee.

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