

**RE: FRIENDS OF THE EARTH
SCOTLAND**

**On whether Scottish Ministers have,
and/or the Scottish Parliament has,
the competence to legislate to
prohibit onshore unconventional oil
and gas development and if so on
what basis**

ADVICE

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ADVICE

1. INTRODUCTION

- 1.1 I refer to the Memorial for the Opinion of Counsel and associated papers, all sent under cover of an E-mail from my instructing solicitors dated 22 January 2019. I apologise for my delay in replying.
- 1.2 I am asked to advise on whether Scottish Ministers have and/or the Scottish Parliament has the competence to legislate to prohibit onshore unconventional oil and gas development and if so on what basis.
- 1.3 The position currently in Scotland appears to be that there is as yet no prohibition against unconventional oil and gas extraction but instead an emerging but as yet unfinalised planning policy to the effect that there is “no support” on the part of the Scottish Government for the development or extraction of unconventional oil and gas (“UOG”) in Scotland. The process of policy development has not yet been complete. The Scottish Ministers are still considering a strategic environmental assessment (SEA) commissioned by it, and a business and regulatory assessment (BRIA) had still to be carried out: see *Ineos Upstream Ltd v Lord Advocate* [2018] CSOH 66, 2018 SLT 775.

Summary

- 1.4 **My advice, in summary, is that it is within the legislative competence of the Scottish Parliament to pass primary legislation in effect to prohibit onshore unconventional oil and gas (UOG)**

exploitation in Scotland by imposing mandatory conditions upon which the Scottish Ministers may grant PEDL licences such as to forbid the use of such technologies when carrying out operations under the PEDL licence.

- 1.5 Indeed, given the current international law and domestic regulatory framework, a strong argument can be made out that the Scottish devolved institutions are *required* under international, EU, UK and Scots law – given that it is otherwise within their powers – to impose an outright ban on unconventional oil and gas extraction in Scotland.
- 1.6 Further, as a matter of devolved politics, if there is a political consensus within the devolved institutions that there should be no unconventional oil and gas extraction in Scotland, then the surer way successfully to defeat any further legal challenges which might be brought by oil concerns aggrieved at this position, would be for a ban expressly to be enshrined in primary legislation from the Scottish Parliament, rather than simply left to the administrative or planning discretion of the Scottish Ministers.
- 1.7 This is because the courts regard measures involving political, social and economic issues as falling centrally within the *legislature's* discretionary area of judgment and would respect its decision as to what was in the public interest unless it were shown to be manifestly unreasonable.¹ which is a higher test than the courts will set for a successful challenge to purely administrative action or the executive's exercise of such discretionary powers as are invested in it by the legislature: see e.g. *AXA General Insurance Ltd v Lord Advocate* [2011] UKSC 46, 2012 SC (UKSC) 122 per Lord Reed at para 124:

“At the domestic level, courts require to be similarly circumspect, since *social and economic policies are properly a responsibility of the*

¹ See for example *James v United Kingdom* (1986) 8 EHRR 123, para 46: “[T]he notion of ‘public interest’ is necessarily extensive. In particular, as the commission noted, the decision to enact laws expropriating property will commonly involve consideration of political, economic and social issues on which opinions within a democratic society may reasonably differ widely. *The court, finding it natural that the margin of appreciation available to the legislature in implementing social and economic policies should be a wide one, will respect the legislature’s judgment as to what is ‘in the public interest’ unless that judgment be manifestly without reasonable foundation*”

See too *Maurice v France* (2005) 42 EHRR 885, para 84

legislature, and policy-making of this nature is amenable to judicial scrutiny only to a limited degree."

2. UNCONVENTIONAL OIL AND GAS EXTRACTION : THE FACTS

2.1 "Fracking" is oil industry slang for hydraulic fracturing. This technique involves the forcing of artificial fractures in source rocks with low porosity, such as shale, by injecting wells at high pressure with: water; tracers (that allow the fracturing fluids to be tracked); chemical additives (such as friction reducers); and proppants (which keep the created fractures open allowing the gas/oil released to flow).

2.2 Shale formations (rocks) contain radionuclides of "Naturally Occurring Radioactive Materials" (NORM) at relatively higher concentrations than conventional oil and gas formations, as well as the known carcinogenic 'BTEX' chemicals – Benzene, Toluene, Ethylbenzene and Xylenes. The shale fracking process and associated activities, i.e. the drilling stage; the fracturing phase; the production stage; storage, treatment and disposal of effluents (wastewaters); and disposal of solid wastes all normally give rise to the release of radioactive NORM and numerous other harmful substances – both naturally occurring and introduced during drilling and fracking processes – into the environment.

2.3 Unlike shale gas, coalbed methane (CBM) is a gas formed as part of the process of coal formation, and is physically adsorbed by the coal. It can be released when the pressure surrounding the coal is decreased. Extraction of CBM may use some similar techniques to those used for shale gas (e.g. horizontal/directional drilling), it differs in that it typically involves removal of water from the coal seams ('de-watering'). Additionally, fracking can be used for CBM recovery activities where seams are thicker or at deeper levels. Many of the environmental and public health impacts of CBM are similar to those of shale gas extraction, whether or not fracking takes place, e.g. the mobilisation of naturally occurring radioactive materials and BTEX chemicals, air and noise pollution and landscape impacts from multiple drilling sites and related infrastructure.

2.4 There is a growing body of evidence that links UOG extraction to adverse environmental and public health impacts of in the short and longer term, though considerable gaps remain. See for example:

- (1) Elliot, Trinh et al "[Unconventional oil and gas development and risk of childhood leukemia: Assessing the evidence](#)" (2016) 576 *Science of the Total Environment* 138- 147
- (2) McKenzie et al "[Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado](#)" (2014) *Environmental Health Perspectives* 122
- (3) Colburn et al "[An Exploratory Study of Air Quality near Natural Gas Operations](#)" (2012) *Human and Ecological Risk Assessment: An International Journal* 86-105

3. COMPETENCE OF THE DEVOLVED INSTITUTIONS IN SCOTLAND RE OIL AND GAS EXTRACTION

3.1 In the *Reference by the UK Attorney General and the Advocate General for Scotland re UK Withdrawal from the European Union (Legal Continuity) (Scotland) Bill* [2018] UKSC 64 [2019] 2 WLR 1, 2019 SLT 41 the UK Supreme Court summarised the approach to be taken to understanding the extent of the legislative competences of the Scottish Parliament as follows (at § 12):

"The powers of the Scottish Parliament, like those of Parliaments in many other constitutional democracies, are delimited by law. The Scottish Parliament is a democratically elected legislature with a mandate to make laws for people in Scotland.

It has plenary powers within the limits of its legislative competence. But it does not enjoy the sovereignty of the Crown in Parliament; rules delimiting its legislative competence are found in section 29 of and Schedules 4 and 5 to the Scotland Act, to which the courts must give effect.

And the UK Parliament also has power to make laws for Scotland, a power which the legislation of the Scottish Parliament cannot affect: section 28(7) of the Scotland Act.

The Scotland Act must be interpreted in the same way as any other statute. The courts have regard to its aim to achieve a constitutional settlement and therefore recognise the importance of giving a consistent and predictable interpretation of the Scotland Act so that the Scottish Parliament has a coherent, stable and workable system within which to exercise its legislative power. This is achieved by interpreting the rules as to competence in the Scotland Act according to the ordinary meaning of the words used."

3.2 Section 28(1) of the Scotland Act 1998 (SA) stipulates that, subject to Section 29 SA, the Scottish Parliament may make laws, to be known as Acts

of the Scottish Parliament. Section 29 SA sets out the limits on the legislative competence of the Scottish Parliament by providing, so far as relevant, as follows:

“29.— Legislative competence

- (1) An Act of the Scottish Parliament is not law so far as any provision of the Act is outside the legislative competence of the Parliament.
- (2) A provision is outside that competence so far as any of the following paragraphs apply—
 - (a) it would form part of the law of a country or territory other than Scotland, or confer or remove functions exercisable otherwise than in or as regards Scotland,
 - (b) it relates to reserved matters,
 - (c) it is in breach of the restrictions in Schedule 4,
 - (d) it is incompatible with any of the Convention rights or with EU law,
 - (e)
- (3) For the purposes of this section, the question whether a provision of an Act of the Scottish Parliament relates to a reserved matter is to be determined, subject to subsection (4), by reference to the purpose of the provision, having regard (among other things) to its effect in all the circumstances.
- (4) A provision which—
 - (a) would otherwise not relate to reserved matters, but
 - (b) makes modifications of Scots private law, or Scots criminal law, as it applies to reserved matters,
 is to be treated as relating to reserved matters unless the purpose of the provision is to make the law in question apply consistently to reserved matters and otherwise.
- (5) ...”

3.3 *The Reference by the UK Attorney General and the Advocate General for Scotland re UK Withdrawal from the European Union (Legal Continuity) (Scotland) Bill* [2018] UKSC 64 [2019] 2 WLR 1, 2019 SLT 41 the UK Supreme Court distinguished between Section 29(2)(b) and 29(2)(c) SA as follows (at § 51):

“When the UK Parliament decides to reserve an entire area of the law to itself, it does so by listing the relevant subject matter in Schedule 5. When it has not taken that step, but has protected a particular enactment from modification by including it in Schedule 4, it is not to be treated as if it had listed the subject matter of the enactment in Schedule 5. Where the only relevant restriction on the legislative power of the Scottish Parliament is the protection of an enactment from modification under Schedule 4, the Parliament has the power to enact legislation relating to the same subject matter as the protected enactment, provided it does not modify it.”

3.4 The restrictions of particular relevance to the questions posed of me in the present opinion concern Schedule 5 rather than Schedule 4, in particular those set out under *Head D -Energy* in Part II of Schedule 5 SA. Paragraphs 2 and 3 of Part II of Schedule 5 specify that “a Section applies to any matter described or referred to in it when read with any illustrations, exceptions or interpretation provisions in that Section” but that “any illustrations, exceptions or interpretation provisions in a Section relate only to that Section (so that an entry under the heading “exceptions” does not affect any other Section).”

3.5 Paragraphs D2, since the amendment introduced by Scotland Act 2016, now carves out the following oil and gas issues as “reserved matters” and so outwith the legislative competence of the Scottish Parliament:

“D2. Oil and gas

Oil and gas, including—

- (a) the ownership of, exploration for and *exploitation of deposits of oil and natural gas*,
- (b) the subject-matter of section 1 of the Mineral Exploration and Investment Grants Act 1972 (contributions in connection with mineral exploration) so far as relating to exploration for oil and gas,
- (c) *offshore* installations and pipelines,
- (d) the subject-matter of the Pipe-lines Act 1962 (including section 5 (deemed planning permission)) so far as relating to pipelines within the meaning of section 65 of that Act,
- (e) the application of Scots law and the jurisdiction of the Scottish courts in relation to *offshore* activities,
- (f) pollution relating to oil and gas exploration and exploitation, *but only outside controlled waters* (within the meaning of section 30A(1) of the Control of Pollution Act 1974),
- (g) the subject-matter of Part II of the Food and Environment Protection Act 1985 so far as relating to oil and gas exploration and exploitation, *but only in relation to activities outside such controlled waters*,
- (h) restrictions on navigation, fishing and other activities in connection with *offshore* activities,
- (i) liquefaction of natural gas, and
- (j) the conveyance, shipping and supply of gas through pipes.

Exceptions

The subject-matter of—

- (a) sections 10 to 12 of the Industry Act 1972 (credits and grants for construction of ships and offshore installations),
- (b) the Offshore Petroleum Development (Scotland) Act 1975, other than sections 3 to 7, and
- (c) Part I of the Environmental Protection Act 1990.

The granting and regulation of licences to search and bore for and get petroleum that, at the time of the grant of the licence, is within the Scottish onshore area, except for any consideration payable for such licences.

Access to land for the purpose of searching or boring for or getting petroleum under such a licence.

The manufacture of gas.

The conveyance, shipping and supply of gas other than through pipes.

The provision in relation to gas of consumer advocacy and advice by, or by agreement with, a public body or the holder of a public office, but not any related compulsory levy on persons supplying gas to premises or conveying gas through pipes.

The Scottish onshore area is the area of Scotland that is within the baselines established by any Order in Council under section 1(1)(b) of the Territorial Sea Act 1987 (extension of territorial sea).

“Petroleum” means petroleum within the meaning given by section 1 of the Petroleum Act 1998 in its natural state in strata.”

3.6 Section 1 of the Petroleum Act 1998 specifies that (emphasis added):

“In this Part of this Act “*petroleum*”—

- (a) includes *any mineral oil or relative hydrocarbon and natural gas* existing in its natural condition in strata; but
- (b) does *not* include coal or bituminous shales or other stratified deposits from which oil can be extracted by *destructive distillation*.

3.7 The Petroleum Act 1998 has also been amended by the Scotland Act 2016 to take into account the devolution to the Scottish Parliament and the Scottish Ministers of the power to grant and regulate licences to search and bore for and get any mineral oil or relative hydrocarbon and natural gas existing in its natural condition in strata that, at the time of the grant of the licence, is within the Scottish onshore area.

3.8 Thus Section 8A of the 1998 Act on the interpretation of Part 1 now reads, so far as relevant, as follows:

- “(1A) The “appropriate authority” means—
 - (a) *in relation to the Scottish onshore area, the Scottish Ministers;*
 - (b) otherwise, the OGA [Oil and Gas Authority]
- (2) The “appropriate Minister” means—
 - (a) *in relation to the Scottish onshore area, the Scottish Ministers;*
 - (b) otherwise, the Secretary of State.
- (3) The Scottish onshore area is the area of Scotland that is within the baselines established by any Order in Council under section 1(1)(b) of the Territorial Sea Act 1987 (extension of territorial sea).
- (4) In subsection (3) “Scotland” has the same meaning as in the Scotland Act 1998.

3.9 And Sections 2, 3 and 4A of the 1998 Act makes the following provision on the requirement to obtain licences in order to be able lawfully to search and bore for and get petroleum in Scotland:

2.— Rights to petroleum vested in Her Majesty.

- (1) Her Majesty has the exclusive right of searching and boring for and getting petroleum to which this section applies.
- (2) This section applies to petroleum (including petroleum in Crown land) which for the time being exists in its natural condition in strata in Great Britain or beneath the territorial sea adjacent to the United Kingdom.
- (3) For the purposes of subsection (2), “Crown land” means land which—
 - (a) belongs to Her Majesty or the Duchy of Cornwall;
 - (b) belongs to a government department; or
 - (c) is held in trust for Her Majesty for the purposes of a government department.
- (4)

3.— Licences to search and bore for and get petroleum

- (1) The appropriate authority, on behalf of Her Majesty, may grant to such persons as the appropriate authority thinks fit licences to search and bore for and get petroleum to which this section applies.
- (2) This section applies to—
 - (a) petroleum to which section 2 applies; and
 - (b) petroleum with respect to which rights vested in Her Majesty by section 1(1) of the Continental Shelf Act 1964 (exploration and exploitation of continental shelf) are exercisable.

(3) Any such licence shall be granted for such consideration (whether by way of royalty or otherwise) as the OGA with the consent of the Treasury may determine, and upon such other terms and conditions as the appropriate authority thinks fit.

(4) Subsection (1) is subject to paragraph 4 of Schedule 3 [which provides that:

‘Nothing in section 2 or 3 shall be taken to prejudice any right conferred by any licence granted under section 2 of the Petroleum (Production) Act 1934 which is in force immediately before the commencement of this Act so long as the licence remains in force.’]”

...

4A Onshore hydraulic fracturing: safeguards

....

(2) A hydraulic fracturing consent is not to be issued unless an application for its issue is made by, or on behalf of, the licensee.

3.10 Separately Paragraph D3 in Part II of Schedule 5 SA carves out the following aspects of coal as being outwith the Scottish Parliament’s legislative competence:

D3. Coal

Coal, including its ownership and exploitation, deep and opencast coal mining and coal mining subsidence.

Exceptions

The subject-matter of—

(a) Part I of the Environmental Protection Act 1990, and

(b) sections 53 (environmental duties in connection with planning) and 54 (obligation to restore land affected by coal-mining operations) of the Coal Industry Act 1994.

3.11 In sum, it is clear from the foregoing provisions that the only entity which has the *right* to drill for oil and gas in the island of Great Britain and in the territorial sea of the UK is the Crown. No one else has a right to drill for oil and gas. Other parties may only carry out such activities *if and only if* they have first obtained a Petroleum Exploration and Development Licence (PEDL) allowing for this from the appropriate authority. And because no one other than the Crown has a right to get at the oil and gas lying beneath from UK territory, no one party can be said to have any absolute right or basic entitlement to be granted a PEDL licence.

3.12 In Scotland the appropriate authority from whom such a licence must be sought, including a licence allowing for hydraulic fracturing or fracking, is the Scottish Ministers. The power to grant licences implies the power to refuse them, if the conditions under which those licence might otherwise be granted are not or cannot be fulfilled by the applicant.

3.13 It is undoubtedly within the legislative competence of the Scottish Parliament to regulate the conditions under which such licences may be sought from, and granted by, the Scottish Ministers in respect of oil and gas to be found in its natural condition in strata lying beneath the Scottish onshore area. The Scottish Parliament's power to regulate PEDL licences include the power to impose, by and within primary legislation, mandatory conditions on those licences.

3.14 The power to impose mandatory conditions on the granting of licenses has already been used by the Scottish Parliament in other licensing contexts. For example Section 3A of the Civic Government (Scotland) Act 1982 as amended by the Criminal Justice and Licensing (Scotland) Act 2010 gives the Scottish Ministers general powers to prescribe mandatory conditions for all purposes in respect of licence applications made to a relevant licensing authority under paragraph (1) of Schedule 1 to the 1982 Act. Provision is also made specifically for mandatory conditions to be imposed in respect of the licensing of sexual entertainment venues (see new Section 45E of the Civic Government (Scotland) Act 1982 as amended by the Air Weapons and Licensing (Scotland) Act 2015). A whole series of mandatory condition regulating the retail sale of alcohol are set out in Schedule 3 to the Licensing (Scotland) Act 2005 (including conditions as to the minimum price at which alcohol may be sold, following the Alcohol (Minimum Price) Scotland Act 2012 as well as bans on multi-buy and other packaged promotions in respect of alcohol imposed by the Alcohol etc. (Scotland) Act 2010.)

3.15 Accordingly it is clear that the power given to the Scottish Parliament to legislate re the granting and regulation of PEDL licences includes the power to legislate, if so advised, to make it a mandatory condition for the granting of such licences in Scotland that *any* use of the techniques of hydraulic fracturing of shale or strata encased in shale or dewatering of coal seams to search or bore for or get petroleum is forbidden.

3.16 This can be done by the Scottish Parliament even if that is not a policy which the UK Parliament or UK Government follows in relation to PEDL

issued south of the border.² Again in the *Reference by the UK Attorney General and the Advocate General for Scotland re UK Withdrawal from the European Union (Legal Continuity) (Scotland) Bill* [2018] UKSC 64 [2019] 2 WLR 1, 2019 SLT 41 the UK Supreme Court observed (at § 62) that:

“[I]f the Scottish Parliament legislates in order to give effect in Scotland to a policy which has been rejected by the UK Parliament, it does not, as a general rule, thereby infringe the reservation created by paragraph 1(c) [of Part I of Schedule SA]. Neither the purpose nor the effect of such legislation impinges upon the constitutional functions, powers or privileges of [the Westminster] Parliament.”

3.17 It is not, however, yet within the legislative competence of the Scottish Parliament to regulate (still less to prohibit) the extraction of coal or bituminous shales or other stratified deposits such as tar sands in order to obtain shale oil from it by a process of its destructive distillation on the surface. But legislation passed by the Scottish Parliament can require that the Scottish Ministers make it a condition of all and any licences made available under the PEDL regime that the techniques of fracking for shale or tight oil and gas, and fracking and dewatering for coalbed methane not be authorised (effectively thereby imposing a legislative ban on use of these techniques or technologies in Scotland).

4. PRECEDENTS IN OTHER JURISDICTIONS

4.1 Such a ban would in any event be in line with similar moves in other jurisdictions. Restrictions on unconventional oil and gas extraction already exist in other parts of the British Isles and in the European Union, for example:

(1) In October 2011, France became the first country in Europe to ban hydraulic fracturing, passing [Law No. 2011-835](#), *aimed at prohibiting the exploration and exploitation of liquid or gas hydrocarbon mines using*

² See for example *Stephenson v Secretary of State for Housing, Communities and Local Government* [2019] EWHC 519 (Admin) in which Dove J in the Admin Court held that the consultation which preceded revision of the National Planning Policy Framework in England to add para.209(a) relating to shale fracking had been unlawful because the UK Secretary of State was not undertaking the consultation at a formative stage and had no intention of changing his mind about the substance of the policy. Furthermore, he had failed to take into account scientific evidence put forward by the claimant bearing upon a key element of the evidence base for the proposed policy and its relationship to climate change effects.

hydraulic fracturing and repealing exclusive exploration permits including projects involving such technique.

- (2) In February 2015, the Welsh Government issued [The Town and Country Planning \(Notification\) \(Unconventional Oil and Gas\) \(Wales\) Direction 2015](#) requiring planning applications for “Unconventional Oil and Gas Development” to be referred to Welsh Ministers, where the local planning authority does not propose to refuse them.
- (3) on 28 September 2015, the [Strategic Planning Policy Statement for Northern Ireland](#) published by the NI Government provided in para 6.157 “a presumption against [UOG] exploitation until there is sufficient and robust evidence on all environmental impacts”.
- (4) Ireland enacted the [Petroleum and Other Minerals Development \(Prohibition of Onshore Hydraulic Fracturing\) Act 2017](#) on 6 July 2017 banning unconventional oil and gas extraction .
- (5) The European Commission published a report in December 2016 [On the effectiveness of Recommendation 2014/70/EU on minimum principles for the exploration and production of hydrocarbons \(such as shale gas\) using high-volume hydraulic fracturing \(HVHF\)](#) which noted (page 2) that only eleven of the twenty eight Member States authorised the use of HVHF. The remaining seventeen Member States either have no known resources or have introduced moratoria or outright bans or other restrictions on unconventional oil and gas extraction , including the Czech Republic, [the Netherlands](#), [Bulgaria](#) and [Germany](#).

5. FUNDAMENTAL RIGHTS AND ENVIRONMENTAL PROTECTION

5.1 The protection of health and the protection of the environment are essential objectives of the European Union: Case C-28/09 [Commission v. Austria \[2011\] ECR I-13525](#) at paras 120-2.

5.2 Articles 35 and 37 of the EU Charter of Fundamental Rights provide, so far as relevant as follows:

“A high level of human health protection shall be ensured in the definition and implementation of all the Union’s policies and activities.”

...

“A high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development”.

5.3 The European Convention of Human Rights contains no explicit reference to rights in relation to protection of the environment but in *S.C. Fiercolect Impex S.R.L. v. Romania* [2016] ECtHR 26429/07 (Third Section, 13 December 2016) at §65 the European Court of Human Rights (ECtHR) observed that:

“[I]n today’s society the protection of the environment is an increasingly important consideration. The environment is a cause whose defence arouses the constant and sustained interest of the public, and consequently the public authorities. *Financial imperatives should not be afforded priority over environmental protection considerations, in particular when the State has legislated in this regard.*”

5.4 The ECtHR has held that the State’s permitting environmental hazards may contravene Article 8 ECHR where the hazard at issue attains a level of severity resulting in significant impairment of the applicant’s ability to enjoy their homes, private or family life, even without, however, seriously endangering their health. The assessment of that minimum level is relative and depends on all the circumstances of the case, such as the intensity and duration of the nuisance: *Taşkın v Turkey* (2006) 42 EHRR 50 at §§113-7.

5.5 Positive duties may also be imposed on the State under Article 8 ECHR in the context of possible environmental hazards. In particular, States have an obligation to set in place regulations geared to the special features of the activity in question, particularly with regard to the level of risk potentially involved. They must govern the licensing, setting-up, operation, security and supervision of the activity and must make it compulsory for all those concerned to take practical measures to ensure the effective protection of citizens whose well-being might be endangered by the inherent risks: *Öneryıldız v Turkey* (2005) 41 EHRR 20 (Grand Chamber) §90.

5.6 Because of the negative impacts on human health and on the environment of unconventional oil and gas extraction, any failure to impose a ban on unconventional oil and gas development may constitute a breach of individuals’ fundamental rights.

5.7 Although it might be argued by oil industry undertakings that by any such ban would interfere with their Convention right under Article 1 of Protocol 1 of the European Convention on Human Rights ECHR (A1P1 ECHR) to

respect for their property in their business, such considerations do not rule the possibility of such a ban still being Convention compliant, particularly against a background of the requirements of EU environmental law and international law. The Strasbourg Court noted in *O'Sullivan McCarthy Mussel Development Ltd. v. Ireland* [2018] ECtHR 44460/16 (Fifth Section, 7 June 2018) (at §§ 109, 124, 130)

"109 Public authorities *assume a responsibility which should in practice result in their intervention at the appropriate time to ensure that the statutory provisions enacted with the purpose of protecting the environment are not entirely ineffective.* In addition, in the instant case the impugned measures taken were adopted to ensure the respondent State's compliance with its obligations under EU law, which the Court has also recognised as a legitimate general-interest objective of considerable weight.

....
124.[E]nvironmental protection policies, where the community's general interest is pre-eminent, confer on the State a margin of appreciation that is greater than when exclusively civil rights are at stake. In implementing such policies, the State may, in particular, have to intervene in the sphere of public property and even, in certain circumstances, foresee a lack of compensation in a number of situations falling within the control of the use of property. As the Court has held, where a measure controlling the use of property is in issue, the lack of compensation is a factor to be taken into consideration in determining whether a fair balance has been achieved but is not of itself sufficient to constitute a violation of Article 1 of Protocol No. 1.

...
130. The essential grievance in this case is that the loss of profit incurred by the applicant company in 2010 went uncompensated. Before this Court, however, it sought to establish via Article 1 of Protocol No. 1 State liability for damage allegedly caused by measures adopted to correctly, albeit belatedly, implement EU law. *The Court has recognised the weight of the objectives pursued, and the strength of the general interest in the respondent State in achieving full and general compliance with its obligations under EU environmental law.* It is not persuaded that the impugned interference in this case constituted an individual and excessive burden for the applicant company, or that the respondent State failed in its efforts to find a fair balance between the general interest of the community and the protection of individual rights."

6 CLIMATE CHANGE OBLIGATIONS OF THE SCOTTISH GOVERNMENT

Factual background

6.1 The primary driver of human-induced climate change is the burning of coal, oil and natural gas - all are hydrocarbons whose combustion produces carbon dioxide (CO₂) which has a greenhouse effect when released into the atmosphere. The major component of natural gas is methane (CH₄). Not only does methane produce CO₂ when combusted, but it is itself a

greenhouse gas (GHG) which, when emitted in an uncombusted state, traps more heat in the atmosphere molecule-for-molecule than CO₂. Methane has a stronger immediate effect on the climate, with a global warming impact 86 times that of CO₂ over 20 years, and 34 over 100 years. It decays much more quickly than CO₂ which retains around a fifth of its greenhouse effect even after 1,000 years. Under accounting for UK carbon budgets and Scottish emissions targets, as well as UN-agreed international emissions reporting, a tonne of methane emitted is equal to 25 tonnes of CO₂.

6.2 The Environment Agency published a report [*Monitoring and control of fugitive methane from unconventional gas operations*](#) warning that the techniques used in unconventional oil and gas extraction may lead to 'fugitive emissions' into the atmosphere through leakage and methane migration through high permeability strata, faults and old coal mine working. In addition to flaring and venting this has led scientists to argue that the climate impact of unconventional gas extraction is greater than that of conventional natural gas, and some to suggest it could be as bad as coal.

6.3 According to the Department of Energy and Climate Change [*Strategic Environmental Assessment for Further Onshore Oil and Gas Licensing*](#) (December 2013):
 "Unconventional oil and gas exploration and production activities have been assessed as having a significant negative effect on climate change ... at the sectoral level (i.e. as compared to the effects from the existing oil and gas sector)."

6.4 And in its November 2012 report [*Gas fracking: can we safely squeeze the rocks ?*](#) the UNEP Global Environmental Alert System observed:
 'Unconventional gas (UG) exploitation and production may have unavoidable environmental impacts. Some risks result if the technology is not used adequately, but others will occur despite proper use of technology. UG production has the potential to generate considerable GHG emissions, can strain water resources, result in water contamination, may have negative impacts on public health (through air and soil contaminants; noise pollution), on biodiversity (through land clearance), food supply (through competition for land and water resources), as well as on soil (pollution, crusting)."

6.5 Shale gas, shale oil and coal bed methane are all found in Scotland, concentrated in the most densely populated parts of the country, across the central belt: see the British Geological Survey (BGS) report on "[*Midland Valley Scotland*](#)".

6.6 Research published in 2015 (by [Christophe McGlade & Paul Ekins in 517 \(2015\) Nature 187](#)) underlines the need to leave significant reserves of fossil fuels unexploited if catastrophic climate change is to be avoided, noting:

“It has been estimated that to have at least a 50 per cent chance of keeping warming below 2°C throughout the twenty-first century, the cumulative carbon emissions between 2011 and 2050 need to be limited to around 1,100 gigatonnes of carbon dioxide (Gt CO₂).

However, the greenhouse gas emissions contained in present estimates of global fossil fuel reserves are around three times higher than this, and so the unabated use of all current fossil fuel reserves is incompatible with a warming limit of 2°C.

Our results suggest that, globally, a third of oil reserves, half of gas reserves and over 80 per cent of current coal reserves should remain unused from 2010 to 2050 in order to meet the target of 2°C.”

6.7 Fossil fuel resources, that is, the estimated amount of oil, gas or coal believed to be present, but not necessarily recoverable, whether due to technology or economic conditions, are estimated at nearly 11,000 Gt CO₂ – ten times the amount of carbon that can ‘safely’ be emitted to have even a 50:50 chance of avoiding catastrophic warming. Most of the world’s UOG, including Scotland’s, are classified as resources rather than reserves.

International law

6.8 The UN Framework Climate Change Convention (UNFCCC) entered into force on 21 March 1994 and has been ratified by 197 countries. Its ultimate aim is to prevent “dangerous” human interference with the climate system caused by GHG emissions. In 1997 the Kyoto Protocol to the UNFCCC set binding targets for 37 industrialised countries and the European Union for reducing GHG emissions up to 2020. In December 2015 196 nations committed to the [Paris Agreement on GHG reduction](#) with a view to limiting global warming to “well below 2°C” (and ideally no more than 1.5°C) to avoid catastrophic climate, which means getting to “net zero emissions” between 2050 and 2100. The language of “well below” equates to at least a 66% probability of avoiding 2°C – more robust than the 50:50 approach reflected in previous UNFCCC targets. The Paris Agreement incorporates the principle of Common But Differentiated Responsibility, enshrined in the UNFCCC, which requires developed countries as historical polluters to act sooner and do more to tackle the climate crisis.

6.9 All Parties to the Paris Agreement have a legally binding obligation to prepare, communicate and maintain a nationally determined mitigation contribution. And each Party is legally bound to pursue domestic mitigation measures, with the aim of achieving the objectives of their contributions. The Paris agreement opened for signature for one year on 22 April 2016 and [entered into force](#) on 4 November 2016. The agreement recognises the role of non-Party stakeholders in addressing climate change, including cities, other subnational authorities, civil society, the private sector and others and inviting them to scale up their efforts and support actions to reduce emissions.

EU law

6.10 The main Treaty provisions concerning environmental protection are now contained in Articles 191 to 193 of the Treaty on the Functioning of the European Union (TFEU), which sets out the objectives of and principles to be followed by the EU in the area of environmental protection. These objectives include preserving, protecting and improving the quality of the environment; encouraging prudent and rational utilisation of natural resources; and protecting human life and promoting international measures where appropriate to deal with transnational environmental problems. The principles to be applied by the EU in this area include the following:

- a) the precautionary principle (*Vorsorgeprinzip*), which is to say that there is a presumption in favour of precautions against risk of environmental degradation;
- b) that a preventive strategy is to be preferred to a remedial one;
- c) that environmental damage should be rectified at source;
- d) that the polluter should pay; and
- e) that the requirements of environmental protection should be wholly integrated into the definition and implementation of other Community policies.

6.11 At EU level, a comprehensive package of policy measures to reduce GHG emissions has been initiated through the European Climate Change Programme (ECCP). This introduces progressive reductions in the number of emission allowances granted under the EU Emissions Trading System under the GHG Emissions Directive 2009/29. The Renewable Energy Directive 2009/28 also set binding national targets for Member States for the usage of renewable energy sources by 2020. The UK target is to supply 15% of energy from renewable sources by 2020, while Scotland's target is 20% by 2020. Measures for the 20% improvement in energy efficiency were set out in the Energy Efficiency Directive 2012/27. New targets of a 40% cut in GHGs, 27% renewable energy consumption and 27% energy savings are set out in the EU's [2030 Energy Strategy](#).

6.12 Article 194 TFEU leaves it to each Member State "to determine the conditions for exploiting its energy sources, its choice between different energy sources and the general structure of its energy supply". In January 2014 the Commission issued (the non-legally binding) [Recommendation 2014/70/EU on minimum principles for the exploration and production of hydrocarbons \(such as shale gas\) using high-volume hydraulic fracturing](#).

UK law

6.13 The Climate Change Act 2008 sets out emissions budgets for the UK for successive five-year periods, each imposing a target for further reductions to the UK's net greenhouse gas emissions. The 2008 Act originally set out a target of a 26% reduction in greenhouse gas emissions by 2020 from 1990 levels, which was increased to 34% by the Climate Change Act 2008 (2020 Target, Credit Limit and Definitions) Order 2009/1258. There is a final target of reducing emissions by at least 80% by 2050.

6.14 Part 2 of the 2008 Act establishes the Committee on Climate Change (the CCC), a non-departmental public body with operational independence from Government. The CCC is jointly sponsored by the Department for Business, Energy and Industrial Strategy (BEIS), the Northern Ireland Executive, the Scottish Government and the Welsh Government. The Minister of State for Energy and Clean Growth [recently announced](#) that the Government would ask the CCC for advice on the implications of the Paris Agreement for GHG targets.

Scots law and policy

6.15 The Climate Change (Scotland) Act 2009 is an Act of the Scottish Parliament which sets targets for the reduction of greenhouse gas emissions and makes further provision about mitigation of and adaptation to climate change. There is a clear imperative that Scotland, as a developed nation and birthplace of the industrial revolution, not only has a strong historical responsibility to act under the principle of CBDR, but also the capacity to do so – additionally having an abundance of renewable energy resources. Scotland is committed to a 42% reduction in emissions by 2020 and a reduction target of at least 80% for 2050. Scotland has also begun setting out annual reduction targets between 2010 and 2050 under s.3 of the 2009 Act.

6.16 In 2016, the Scottish Government announced its intention to enact new climate change legislation, including changing the way that emissions are accounted for within legislated targets and increasing the ambition of the targets following the Paris Agreement. The Scottish Government requested advice from the CCC on the design of the new targets and on their levels, which the Committee provided in its March 2017 [Advice on the Scottish Climate Change Bill](#). The new Climate Change Bill has not been published and will not become law until 2019, however in June 2017, the Scottish Government announced its intention to adopt a more ambitious 2050 target for a reduction of 90% on 1990 levels, and a 2030 target of 66%.

6.17 Under section 44(1) of the current CCSA 2009, a public body (meaning a Scottish public authority within the meaning of section 3(1)(a) of the Freedom of Information (Scotland) Act 2002) must, in exercising its functions, act in the way best calculated to contribute to the delivery of the targets set in or under Pt 1 of the CCSA 2009. Scottish Ministers are explicitly covered by this duty. The Act's climate change duties cover not only 'direct' GHG emissions from the public body's own sources (e.g. energy used in local authority buildings), but also 'indirect' emissions arising from the effect of public decision-making on external sources. Thus the Scottish Government [statutory guidance](#) observes (at page 26) that:

“spatial planning policies may impact on greenhouse gas emissions associated with waste, transport and energy in a particular local area. Spatial planning policies may also affect the resilience of natural systems to the changing climate and the vital resources they provide, such as food and water.... Energy policy can also influence greenhouse gas emissions and the resilience of energy infrastructure to the impacts of the changing climate.”

7 UNCONVENTIONAL OIL AND GAS EXTRACTION: THE CURRENT REGULATORY FRAMEWORK IN SCOTLAND

7.1 In its 2016 report on [*Scottish Unconventional Oil and Gas: compatibility with Scottish greenhouse gas emission targets*](#) the CCC advised as follows:

“Our assessment is that exploiting unconventional oil and gas by fracking on a significant scale is *not* compatible with Scottish climate targets *unless* three tests are met:

Test 1: Well development, production and decommissioning emissions must be strictly limited.

Test 2: Consumption - fossil fuel consumption must remain in line with the requirements of Scottish emissions targets.

Test 3: Accommodating unconventional oil and gas production emissions within Scottish emissions targets.”

7.2 The CCC noted that even if fossil fuel consumption does not increase as a result of UOG development, and even if production emissions are strictly regulated, “domestic production of unconventional oil and gas will lead to some additional Scottish emissions.” Further, the Committee emphasised that “the high level of ambition embodied in Scottish annual emissions targets means that finding offsetting elsewhere in order to accommodate even moderate additional emissions from UOG production...would be challenging.”

7.3 Lax regulation may have been one of the preconditions for the economic viability of shale gas in the United States. Shale gas extraction was exempted from a number of environmental protection acts there. US experience also indicates that an important contributor to methane emissions has been so-called ‘super-emitters’: large methane leaks left

unchecked for extended periods of time. As a consequence, a small number of wells have been found to contribute disproportionately to emissions.

7.4 As a corollary, any claims made that shale gas extraction and other unconventional oil and gas extraction activities present a low risk to existing or anticipated climate emission targets are based on the assumption that a robust regulatory system is in place. But the present regulatory regime in Scotland does *not* fit the technology and processes it is trying to control and it is *not* adequate to the purpose of permitting the development while keeping to existing and anticipated climate change obligations.

7.5 As we have seen ownership of oil and gas resources in the Great Britain and UK territorial waters is vested in the Crown. Developers looking to extract shale gas or oil can only do so under a Petroleum Exploration and Development Licence (PEDL) from the relevant authority (which in Scotland is the Scottish Ministers). But obtaining a PEDL licence is simply the start. As was noted in a “Case Comment on *Ineos Upstream Ltd and Friends of the Earth Scotland v The Lord Advocate* (2018) 11 *Journal of Planning & Environment Law* 1211:

“A PEDL did not give permission for operations. It merely granted exclusivity in relation to hydrocarbon exploration and extraction within a defined area. The licence holder had to obtain not only a ministerial consent under the terms and conditions of the PEDL, but also permissions and regulatory consents from land owners and a range of public authorities, including the Scottish Environmental Protection Agency (‘SEPA’), the Health and Safety Executive (‘HSE’), the Coal Authority, Scottish Natural Heritage (‘SNH’) and local planning authorities. In order to carry out UOG extractions in Scotland, in addition to a PEDL, the petitioners needed to obtain planning permission under the Town and Country Planning (Scotland) Act 1997 (“the 1997 Act”) and related legislation, and authorisation by SEPA under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (SSI 2011/209) (‘the 2011 Regulations’).”

7.6 The consent of the Coal Authority in the UK under the Coal Industry Act 1994 is required for any well entering into or passing through a coal seam. Drilling activities are also regulated by the Health and Safety Executive (HSE). Under regulation 6 of the Borehole Site and Operations Regulations 1995, operators must notify the HSE of the well design and operation plans at least 21 days before drilling is planned to ensure likely impacts on well integrity and major accident risks can be addressed.

7.7 The PEDL and Coal Authority Licensing stages are economically rather than environmentally focused, with a preference for resource maximisation rather than environmental protection. The HSE inspections are aimed at health and safety (especially of workers) and not at safeguarding broader public health or the environment. And none of these authorities are subject in the exercise of their functions to the climate change duties imposed on Scottish public authorities by the Climate Change Scotland Act 2009.

7.8 Regimes which are environmentally and public health focused and subject to these Scottish climate change duties only come into the unconventional oil and gas extraction authorisation process with: an application for planning permissions submitted to the relevant Scottish planning authority accompanied by any necessary Environmental Impact Assessment.

7.9 In order to be granted planning consent a proposal would need to be in line with the relevant development plan and wider Scottish Planning Policy, as well as be compatible with the Scottish GHG emissions targets.

7.10 Separately environmental and climate change issues also figure in the involvement of the Scottish Environment Protection Agency (SEPA) to whom well operators have a duty to advise of their intention to drill. But as SEPA does not have power to directly regulate the fracturing of rocks, fracturing activities would largely be managed through water pollution controls under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). The production of flow-back fluid from hydraulic fracturing is a mining waste activity and would require an agreed waste management plan approved by SEPA.

7.11 Under the Management of Extractive Waste (Scotland) Regulations 2010, operations will need to have a waste management plan in place and be able to demonstrate to planning authorities how they will store and dispose of waste materials safely. In addition, a pollution and prevention and control (PPC) permit is required under the Pollution Prevention and Control (Scotland) Regulations 2012 for the processing of gas on site. However, a PPC permit would not apply to initial exploratory drilling operations

associated with shale gas development. The PPC regime applies to activities involving refining of gas, gasification or other heat treatments, combustion, or disposal of solid and liquid wastes.

7.12 Under the Environmental Liability (Scotland) Regulations 2009, SEPA must be notified where operators have caused, or are likely to cause, land or water damage as a result of shale gas development. Further, Scottish Natural Heritage should be notified if damage is caused, or likely to be caused, to protected species and natural habitats.

7.13 Even where the regulatory regimes are environmentally and public health focused, there remain considerable uncertainties regarding the interconnection between them (and also between the economic and environmental regimes). It is not clear, for example, which regulatory agency, if any, might have responsibility in respect of possible emissions occurring outside any well or production site (e.g. from supporting infrastructure such as pipelines, processing facilities and gathering stations) and more generally in relation to emissions to the atmosphere, especially fugitive methane emissions. Venting and flaring (which have both global climate and local air pollution implications), though subject to economic regulation via PEDL, are only caught in Scotland at the *production* stage through the PPC controls (as are fugitive emissions). The uncertainty of the regime applicable to waste gases arising from shale fracking applies equally in relation to waste produced water from CBM dewatering. It is not clear whether this falls within CAR, the mining waste regime, PPC, the radioactive substances regime or a combination of these.

7.14 Finally in Scots law it is an established principle that, save for reservations to the Crown or others, the owner of the surface also owned everything to the centre of the earth below the property: *Bocardo SA v Star Energy UK Onshore Ltd* [2010] UKSC 35 [2011] AC 380 per Lord Hope at para 16. Holders of a PEDL in Scotland still need to reach agreement with landowners before underground access beneath their land would be permitted. If agreement cannot be reached then there is an application process, under section 7 of the Mines (Working Facilities and Support) Act 1966, to the Secretary of State and to courts for access rights to be granted to allow development: *BP Petroleum Developments Ltd v Ryder* [1987] 2

EGLR 233, Ch D. But under Section 3(1) of the 1966 “No right shall be granted under section 1 of this Act unless the court is satisfied that the grant is expedient in the national interest”. This clearly means that such an order could only properly be granted where the decision maker was satisfied about the safety and environmental impact of hydraulic fracturing and separately its compatibility with climate change obligations.

7.15 In sum, current the regulatory framework applicable to onshore UOG development in Scotland remains notably unclear. If not properly regulated, the emissions footprint of UOG production in Scotland would be substantial and wholly inconsistent with maintaining its emissions targets; even if robustly regulated, it would be challenging to accommodate the additional emissions from this sector within existing Scottish climate targets, to say nothing of the more ambitious targets proposed in response to the Paris Agreement.

7.16 Attainment of the Scottish emissions targets require that the unabated net consumption of all fossil fuels (i.e. without any carbon capture and storage (CCS)) decline over time. Should effective CCS not be developed and deployed, meeting the 2050 emissions reduction target will require elimination of almost all fossil fuel use in power generation, transport and buildings.

8 CONCLUSION

8.1 In the light of the foregoing I would answer the questions posed of me in the Memorial for the Opinion of Counsel as follows:

(1) Yes. It is within the legislative competence of the Scottish Parliament to legislate to prohibit/ban onshore unconventional oil and gas development in Scotland. The power to make legislation on the granting and regulation of licences to search and bore for and get petroleum that, at the time of the grant of the licence, is within the Scottish onshore area was expressly devolved to the Scottish Parliament by the Scotland Act 2016. By virtue of Section 54(2) SA it is therefore within the devolved competence of the Scottish Ministers to make any provision by

subordinate legislation on these matters and to confirm or approve any subordinate legislation containing such provision.

- (2) Yes the Scottish Parliament can legislate to provide that the Scottish Ministers must not issue a “well consent” - for a well situated in the Scottish onshore area that is required by an onshore licence for Scotland - unless that well consent imposes or contains a condition which prohibits any use by or for the licensee of the technique of hydraulic fracturing. If such legislation is passed the Scottish Ministers would be bound in law to respect it and would be acting *ultra vires* if and insofar as they purported to issue a well consent without such a condition prohibiting any use by the licensee of the technique of hydraulic fracturing
- (3) Such a legislative prohibition/ban can be given effect to in relation to all and licences and well consents which are given after the legislation comes into force to prevent new PEDL licenses for UOG development from being granted. The question as to whether such a condition can be imposed retrospectively - or in relation to already issued Petroleum Exploration Development Licenses which may have been sought and obtained by an undertaking on the basis of the understanding/expectation that the licence would permit specific extraction techniques being used, albeit subject to conditions and continued regulatory supervision - raises potentially complex issues around the absolute requirement on the Scottish Parliament and the Scottish Ministers to respect the undertakings Convention rights under A1P1 ECHR to respect for their property and possessions. It is impossible to answer this matter in the abstract as it is highly individual fact specific.
- (4) One way of forestalling any such challenge to primary legislation passed, however, might be for the imposition by the Scottish Parliament of mandatory conditions expressly prohibiting the use of specified techniques falling within the general description of “unconventional oil and gas extraction” to be subject to a “sunset clause”. Such a clause might allow for a review of the operation of these provisions in practice after a specified period, say after five years. Such a sunset clause was certainly regarded by the UK Supreme Court in *Scotch Whisky Association v Lord Advocate* [2017] UKSC 76, 2018 SC (UKSC) 94 as a

significant factor in favour of upholding the proposed minimum pricing regime as Lord Mance there noted (at paras 62-3):

“62. In any assessment which is appropriate of the general proportionality of the proposed system of minimum pricing, due weight must be given to the requirement under the 2012 Act that the system be reviewed after five years, and the ‘sunset’ provision that it will expire after six years unless renewed by a ministerial decision receiving the positive approval of the Scottish Parliament. The proposed system was therefore explicitly provisional, requiring the authorities to take stock of its effectiveness after a period of years and placing the onus of justifying its continuation in the light of experience firmly on the Scottish Parliament at the end of that period. Both the Advocate General (para 85) and the Court of Justice (para 57: see para 13) regarded these provisions as relevant on the issue of proportionality. The Advocate General (para 85) described the proposed system as ‘somewhat experimental’. The Court referred (para 57) to ‘the possible existence of scientific uncertainty as to the actual and specific effects on the consumption of alcohol of a measure such as the MUP for the purposes of attaining the objectives pursued.’ When using the word ‘scientific’, it cannot have been referring to chemistry or physics. It was clearly referring to the uncertainties experienced even by experts in predicting the precise reactions of markets and consumers to minimum pricing. As the examination above of the available material shows, this applies as much to the effect on EU trade as to any other aspect. The logic of paras 85 and 57 applies as much to the issue presently under discussion as to any other aspect of the proposed system.

Conclusion

63. ... That minimum pricing will involve a market distortion, including of EU trade and competition, is accepted. However, I find it impossible, even if it is appropriate to undertake the exercise at all in this context, to conclude that this can or should be regarded as outweighing the health benefits which are intended by minimum pricing. In the overall context of the Scottish or, on the face of it, any other market, it appears that it will be minor, though it will hit some producers and exporters to the Scottish market more than others. Beyond that, the position is essentially unpredictable. Submissions that the Scottish Government should have gone further to predict the unpredictable are not realistic. *The system will be experimental, but that is a factor catered for by its provisions for review and ‘sunset’ clause. It is a significant factor in favour of upholding the proposed minimum pricing regime.”*

Equally however the Scottish Parliament may well consider any sunset clause to be unnecessary in the case of its legislating to prohibit unconventional oil and gas activities in Scotland. This is because the current scientific consensus on the urgent need to implement measures

to respond to climate change would appear to be, for all the reasons outlined above, unequivocally in favour of a straightforward and comprehensive ban on unconventional oil and gas extraction.

(5) Separately, it is clearly also within the powers of a Scottish public body exercising planning related functions, to adopt a general policy stance against granting permission in Scotland for unconventional oil and gas development on climate change grounds, in fulfilment of its duties under Section 44 CCSA 2009.

(6) Further, under the law as it stands – and without an express legislative ban on unconventional oil and gas extraction in Scotland – it would be open to a planning authority to decide that the climate impacts of unconventional gas arising from a particular planning application (whether through fugitive emissions and/or the eventual anticipated usage of the gas for heating or power generation) are such that denying planning permission is the way best calculated to contribute to the delivery of Scotland’s GHG targets. Against scientific uncertainty as to the extent of the increased impact on climate change targets which unconventional oil and gas might represent (for example in relation to fugitive emission) the precautionary principle may also properly be prayed in aid against permitting such development in Scotland (or at the very least imposing a moratorium pending further scientific research).

As the 1992 Rio [UN Declaration on Environment and Development](#) notes:
 “In order to protect the environment, the precautionary approach shall be widely applied by States ... Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

(7) Finally, paragraph 7 in Part I of Schedule SA specifies that the observation and implementation in Scotland of the UK’s “international obligations and obligations under the Human Rights Convention and EU law” falls within the domestic competence of the Scottish Parliament and the Scottish Ministers Against that background an express legislative ban by the Scottish Parliament on unconventional oil and gas extraction in Scotland – or pending such legislation a moratorium on granting the necessary planning permission for any unconventional oil and gas exploitation in Scotland – may be said not only to be lawful but may

indeed be positively required to ensure compliance with Scotland's climate change obligations.

8.2 I have nothing more to add at this stage. I hope the foregoing is sufficient for the clients. My instructing solicitors should not hesitate to contact me if there is anything arising from the above on which I might usefully further advise, whether in writing or at a consultation.

AIDAN O'NEILL QC
20 March 2019