

Toppan Best-set Premedia Limited	
Journal Code: REEL	Proofreader: Mony
Article No: REEL12059	Delivery date: 21 Jan 2014
Page Extent: 10	

# Reviving Rylands: How the Doctrine Could Be Used to Claim Compensation for Environmental Damages Caused by Fracking

Róisín Áine Costello

*Contemporary societies are characterized by complex interdependence, with industrial activity increasingly having the potential to cause effects beyond local and national borders. Courts have previously illustrated that liability for injurious action must lie with the individual who created the risk of damage under the common law rule of Rylands v. Fletcher. Having fallen out of favour in the twentieth century, this article proposes a re-articulation of the rule to cover situations in modern society in which invasive methods are used in the extraction of volatile fuels from the earth, specifically in the case of 'fracking'. The article examines recent rulings from the United States and the United Kingdom, as well as precedent from the United Kingdom and Ireland to establish the manner in which the rule of Rylands v. Fletcher might be successfully rearticulated in the context of contemporary common law jurisdictions – specifically focusing on Ireland – as a means for redressing environmental damage.*

The article will undertake a comparative evaluation of the laws and regulations governing fracking in place in the common law jurisdictions in which *Rylands* first emerged and enjoyed general application – namely the United Kingdom, Australia and Ireland.

The article first defines fracking and examines its emergence and current use both in the United States and Europe. It then outlines the emergence of the rule in *Rylands v. Fletcher*, its uses and adoption throughout common law jurisdictions and its decline in use during the late twentieth century. The article next considers the case of Dimock, Pennsylvania, as a specific example of situations in which fracking may lead to a cause of action under the rule in *Rylands*. Finally, the article turns to Ireland as an example of the current legal and regulatory context of fuel extraction laws in common law jurisdictions, and speculates as to the potential revival of the rule in *Rylands* to cover damages sustained as a result of the escape of fracking fluids in Ireland and, thus in other common law jurisdictions.

## INTRODUCTION

In an increasingly interdependent society, ultimate liability for injury or damage arising from industry should lie with those who engage in the potentially injurious activity. Common law courts have previously illustrated that, insofar as society approves of the distribution of burdens of responsibility to certain individuals or groups, liability for injurious action must lie with the individual who created the risk of damage. However, the increasingly invasive methods used in the extraction of volatile fuels from the earth, particularly through 'fracking', pose significant challenges to balancing the protection of the environment and the property rights of individuals with conditions that do not stifle industry.

This article will examine attempts to regulate this new industry and will seek to locate 'fracking' within the constellation of activities with potentially negative environmental implications that should be accorded strict liability status under the rule in *Rylands v. Fletcher*.<sup>1</sup>

## WHAT IS FRACKING?

Hydraulic fracturing or 'fracking' involves the injection of large quantities of water, sand and chemicals (usually a significant quantity of which is methane) deep into the ground at high pressure in order to force small, dispersed gas deposits to the surface where they are extracted and stored.<sup>2</sup> Fracking has proved controversial and has been the subject of study in respect to its potential environmental consequences.<sup>3</sup> Such consequences potentially include pollution of groundwater

<sup>2</sup> For a brief explanation of fracking, see BBC, 'What is Fracking: The Process Explained in 15 Seconds', *BBC News* (13 December 2012), found at: <<http://www.bbc.co.uk/news/uk-20710481>>. Gas extracted through fracking is commonly referred to as 'shale gas'.

<sup>3</sup> BBC, 'What is Fracking and Why is It Controversial?', *BBC News* (27 June 2013), found at: <<http://www.bbc.co.uk/news/uk-14432401>>. A recent poll carried out by *The Economist*, supported by Statoil found that 51% of those surveyed disagreed with the statement that the benefits derived from shale gas outweigh the drawbacks of hydraulic fracturing., See 'Join the Debate', *The Economist* (2 March 2013), found at: <<http://www.economist.com/debate/overview/246>>.

<sup>1</sup> *Rylands v. Fletcher*, [1868] UKHL 1.

1 and land by the chemicals used in fracking fluids.<sup>4</sup>  
2 Although fracking fluid is typically more than 99%  
3 water and sand, the United States Environmental Pro-  
4 tection Agency cautions that 2–5 million gallons of  
5 water may be necessary to extract the gas or oil in any  
6 one operation, and the extractor must thus use tens of  
7 thousands of gallons of hazardous chemicals in a single  
8 well, much of which will remain deep in the earth after  
9 the gas is forced to the surface.<sup>5</sup> Other concerns include  
10 fracking's potential to cause earth tremors – a concern  
11 evidenced in recent seismic activity near a test well in  
12 Britain.<sup>6</sup>

13  
14 In the United States, shale gas extracted through the  
15 fracking process has had a significant impact on the  
16 energy market, with production reaching 4.9 trillion  
17 cubic feet (a quarter of the country's total gas output)  
18 since 2000.<sup>7</sup> Europe, too, has considerable reserves  
19 (some 639 trillion cubic feet); however, these remain  
20 largely untapped.<sup>8</sup> It is contended that one of the  
21 primary reasons for this continental imbalance in  
22 extraction levels is America's lengthy history of fuel  
23 exploitation, which has fostered an innovative and  
24 competitive fuel services industry. In comparison,  
25 Europe has few infrastructural or human resources  
26 engaged in the energy sector, barring some countries'  
27 offshore activities in the North Sea.

28  
29 America's competitive market has also driven down  
30 costs. Deutsche Bank has estimated a single gas well in  
31 Europe could cost US\$14 million to sink – three-and-  
32 a-half times more than its American equivalent.<sup>9</sup> Low  
33 costs in America are aided by the less overt regulation  
34 the American industry faces, as well as Europe's lack of  
35 large-scale distribution frameworks and open-access  
36 rules, making it less attractive and amenable to devel-  
37 opments in fuel extraction.<sup>10</sup> It is thus unsurprising that

38  
39  
40 <sup>4</sup> D.C. Holzman, 'Methane Found in Well Water Near Fracking Sites',  
41 119:7 *Environmental Health Perspectives* (2011), 289.

42 <sup>5</sup> Bureau of Oil and Gas Regulation, New York State Department of  
43 Environmental Conservation, *Preliminary Revised Draft Supplemental*  
44 *Generic Environmental Impact Statement on the Oil and Gas and*  
45 *Mining Regulatory Program* (2009), found at: <<http://www.dec.ny.gov/data/dmn/ogprdsgeisfull.pdf>>, Chapter 6; United States Environmental  
46 Protection Agency, Office of Research and Development,  
47 *Hydraulic Fracturing Research Study* (2010), at 1.

48 <sup>6</sup> M. McCarthy, 'Fracking for Gas Allowed in UK Despite Earth-  
49 quakes', *The Independent* (17 April 2012), found at: <<http://www.independent.co.uk/news/uk/home-news/fracking-for-gas-allowed-in-uk-despite-earthquakes-7648265.html>>.

50 <sup>7</sup> By 2035 the proportion could rise to half. See 'Shale Gas in Europe  
51 and America: Fracking Here, Fracking There', *The Economist* (26  
52 November 2011) ('Fracking Here, Fracking There').

53 <sup>8</sup> H. Rogers, 'Shale Gas: The Unfolding Story', 27:1 *Oxford Review of*  
54 *Economic Policy* (2011), 117, at 118; 'The Hunt for Shale Gas in  
55 Europe', *The Economist* (3 December 2009) ('The Hunt for Shale  
56 Gas').

57 <sup>9</sup> 'The Hunt for Shale Gas', n. 8 above.

58 <sup>10</sup> *Ibid.*

62 in 2008, at the height of gas extraction activity, 1,600  
63 rigs were in operation in North America while in  
64 Europe there were fewer than 150.<sup>11</sup>

65  
66 However, the disparity in exploitation of shale gas  
67 deposits may be changing. Poland, which potentially  
68 possesses Europe's largest deposits of shale gas, has  
69 sunk test wells and estimates that commercial produc-  
70 tion will begin in 2014.<sup>12</sup> France, which potentially has  
71 reserves similar to Poland, has imposed a moratorium  
72 on fracking while potential dangers are assessed.<sup>13</sup>  
73 French concerns over environmental impacts may be  
74 greater than those of their American counterparts due  
75 to the region's high population density and the atten-  
76 dant risk of greater disruption to citizens and a greater  
77 pool of potential victims were incidents to occur.

78  
79 The legal framework at play with respect to fuel extrac-  
80 tion is also of fundamental relevance in the imbalance  
81 in the use of fracking. In the United States, mineral  
82 rights are the property of the landowner while in  
83 Europe such rights are generally held by the State.<sup>14</sup>  
84 Thus, while American landowners see potential profit,  
85 Europeans may not realize the same level of personal  
86 gain from discovery and exploitation. In Ireland, for  
87 example, individuals with rights to land where oil or gas  
88 deposits exist are entitled to one third of the value of  
89 the fuel extracted.<sup>15</sup> Standard American leases oblige  
90 extraction firms to continue production regardless of  
91 market prices; as a result, landowners continue to  
92 receive royalties regardless of the driller turning a  
93 profit.<sup>16</sup> In Europe, no such standard provisions exist.

94  
95 Although this may paint an unpromising picture for the  
96 future of potential fracking industries in Europe, this  
97 is not the case. Europeans have reason to be equally  
98 concerned as their American counterparts about the  
99 security of their energy supply, and its political and  
100 economic cost. Currently, many European countries  
101 buy gas from Russia – a country whose influence many  
102 in Europe would be content to see reduced or removed  
103 through securing alternate energy sources. Indeed,  
104 such concerns may play a part in Poland, as well as in  
105 Ukraine's haste to embrace shale gas exploration and  
106 energy independence. They may also lead others, such  
107 as Ireland, to begin fracking in order to meet goals for  
108 reducing dependency on foreign energy.

109  
110  
111 <sup>11</sup> 'Fracking Here, Fracking There', n. 7 above.

112 <sup>12</sup> *Ibid.*

113 <sup>13</sup> *Ibid.*

114 <sup>14</sup> *Ibid.*

115 <sup>15</sup> Irish Petroleum and Other Minerals Development Act 1960, Section  
116 35. For the full text of the Act, see: <<http://www.irishstatutebook.ie/1960/en/act/pub/0007/index.html>>.

117 <sup>16</sup> *Ibid.*

## THE RULE IN RYLANDS V. FLETCHER

### THE CASE THAT GAVE RISE TO THE RULE

The facts of the case from which the rule in *Rylands v. Fletcher* emerged were as follows. Rylands employed contractors to build a reservoir, during the construction of which the contractors discovered a series of disused coal shafts underneath Rylands' land. The contractors chose to continue work rather than backfilling the shafts. Shortly after being filled, the reservoir built for Rylands burst and the water having escaped into the shafts below flooded a neighbouring mine, run by Fletcher, causing damage subsequent to which Fletcher brought an action under negligence. The case on being heard by the court of first instance was resolved in favour of Rylands,<sup>17</sup> though one judge of the court in a dissenting judgment argued that Fletcher had the right to enjoy his land free of interference from water, and that as a result the defendant was guilty of trespass and nuisance. This dissenting argument was affirmed on appeal by both the Court of Exchequer and the House of Lords, holding that where the occupier of land accrues on it an unnatural substance which then escapes causing damage to the land of another, he will be liable for the damage caused subsequent to such escape.

### DEVELOPMENT OF THE RULE

The rule in *Rylands v. Fletcher*<sup>18</sup> has subsequently been recognized as a cause of action in its own right in common law. The rule imposes strict liability upon an owner or occupier of land who introduces to, and keeps on, their land anything liable to do damage if it escapes.<sup>19</sup> The rule's aim, as stated in *Transco plc v. Stockport Metropolitan Borough Council*,<sup>20</sup> is to require an entrepreneur to provide by insurance or compensation for the risks their enterprise creates, on the basis that their use of land be non-natural, extraordinary or unusual.<sup>21</sup> This duty's aim – to insure against consequences, remote as well as proximate, attached to the original act of bringing into existence conditions which might eventually do harm – has been criticized and led to the doctrine's fall out of favour during the twentieth century.

*Rylands v. Fletcher* has been disclaimed in various jurisdictions, including Australia, where the High Court

chose to extinguish the doctrine's use in their courts with their ruling of *Burnie Port Authority v. General Jones Pty Ltd*.<sup>22</sup> Within England and Wales, however, *Rylands* remains valid, although unfavoured, law according to the decisions in *Cambridge Water Co Ltd v. Eastern Counties Leather plc*<sup>23</sup> and *Transco*.<sup>24</sup> *Cambridge Water* altered the rule by establishing the principle that nuisance claims under *Rylands v. Fletcher* must include a requirement that the damage be foreseeable, with the court further suggesting *Rylands* was in fact a sub-set of nuisance as opposed to an independent tort.<sup>25</sup>

The facts of *Cambridge Water Company* are salient in relation to the potential application of *Rylands* to the escape of fracking fluid. Cambridge Water was responsible for providing water to the inhabitants of Cambridge and the surrounding areas. In 1976, they purchased a borehole to meet rising water demands. It was subsequently found that the borehole had levels of perchloroethene (PCE) exceeding those allowed under European regulations. The PCE was found to have originated in a tannery owned by Eastern Counties Leather.

Cambridge Water thus argued that Eastern Counties Leather was liable in three ways: first, in negligence; second, in nuisance; and third, under the rule in *Rylands v. Fletcher*. In the High Court, the judge dismissed all three of the company's claims, noting that for negligence and nuisance, the damage had to be reasonably foreseeable, per *Overseas Tankship*,<sup>26</sup> and that in this case the damage was not. On the third claim, the court held that the use of industrial chemicals was not 'non-natural', given that it was on an industrial site and that, for the claim to succeed under *Rylands*, the use must be one bringing increased danger to others, and not merely be the ordinary use of the land or a use proper for the general benefit of the community.<sup>27</sup> This decision was overturned on appeal to the Court of Appeal.

On appeal in the House of Lords, the ruling of the original court – namely, that the rule under *Rylands* was applicable and the plaintiff's claim was successful – was restored. The House of Lords noted in their judgment that the Court of Appeal's reliance on *Ballard v. Tomlinson*<sup>28</sup> was erroneous, and suggested that the case

<sup>17</sup> *Ibid.*

<sup>18</sup> *Rylands v. Fletcher*, n. 1 above.

<sup>19</sup> *Ibid.*, in the judgment of Lord Cranworth.

<sup>20</sup> *Transco plc v. Stockport Metropolitan Borough Council*, [2003] UKHL 61 ('*Transco*'), at paragraph 29.

<sup>21</sup> *Ibid.*, at paragraph 11.

<sup>22</sup> *Burnie Port Authority v. General Jones Pty*, [1994] 179 CLR 520.

<sup>23</sup> *Cambridge Water Co. Ltd v Eastern Counties Leather plc*, [1994] 1 All ER 53 ('*Cambridge Water*').

<sup>24</sup> *Transco*, n. 20 above.

<sup>25</sup> A debate eventually laid to rest in *Transco*, *ibid.*

<sup>26</sup> *Overseas Tankship (UK) Ltd v. Morts Dock and Engineering Co Ltd.*, [1961] UKPC 1.

<sup>27</sup> *Ibid.*

<sup>28</sup> *Ballard v. Tomlinson*, [1885] 29 ChD 115.

1 should be distinguished on its facts.<sup>29</sup> As a result, the  
2 Lords held that the lower court had neither established  
3 a rule that there was a right to clear water, nor that  
4 there was strict liability attached to that right.<sup>30</sup> The  
5 court also noted, however, that there were similarities  
6 between the principle of ‘non-natural use’ under  
7 *Rylands* and that of the ‘reasonable user’ in nuisance. It  
8 was therefore concluded that ‘it would lead to a more  
9 coherent body of common law principles if the rule in  
10 *Rylands* were to be regarded essentially as an extension  
11 of the law of nuisance’.<sup>31</sup>

12  
13 In the subsequent case of *Transco*, the court upheld the  
14 rule in *Rylands*, though under strict limits as to what  
15 constituted non-natural use. In this case, the plaintiff  
16 took an action under *Rylands* for damages covering  
17 repairs to one of its gas mains after the surrounding  
18 ground had been washed away by the escape of signifi-  
19 cant quantities of water from a leaking water pipe of the  
20 council. In the House of Lords, the court held that the  
21 escape of large volumes of water from an ordinary pipe  
22 did not satisfy the criteria of *Rylands*, as the transport –  
23 even of large quantities – of water was neither a dan-  
24 gerous nor an unnatural use under the rule. As a result,  
25 the council was not liable.<sup>32</sup> In the context of environ-  
26 mental law it is a potentially useful legal tool not only  
27 for its application through strict liability, but also for  
28 the fact that its application is not limited to adjoining  
29 occupiers but extends to any person who sustains  
30 damage because of the escape.<sup>33</sup>

## 31 32 **ROADBLOCKS TO REVIVING** 33 **RYLANDS**

34 Perhaps the most overt impediment to the application  
35 of the doctrine in circumstances in which fracking is in  
36 use can be found in the judgment by the House of Lords  
37 in *Transco*:

38 [I]t is tempting to see, beneath the surface of the rule, a  
39 policy of requiring the costs of a commercial enterprise to be  
40 internalised; to require the entrepreneur to provide, by  
41 insurance or otherwise, for the risks to others which his  
42 enterprise creates.<sup>34</sup>

43 However, many have considered that the public interest  
44 in promoting economic development made it undesir-  
45 able to hold an entrepreneur liable when he had not

58 been negligent.<sup>35</sup> More recently, the English case of  
59 *Stannard v. Gore*<sup>36</sup> has lent support to the hope that  
60 *Rylands* may re-emerge as a remedy for damage and,  
61 potentially, as a remedy effects of fracking leaks.<sup>37</sup>  
62 *Stannard* concerned damage to the claimant’s land  
63 caused by the ‘escape’ of a fire which spread through the  
64 defendant’s premises, fed by the large stack of tyres  
65 which the defendant had brought onto the land on  
66 which he carried out the business of a motor vehicle  
67 tyre supplier and fitter.

68  
69 The court of first instance held that all requirements of  
70 the rule in *Rylands* were satisfied and accordingly ruled  
71 for the claimant. The defendant appealed, and the judge  
72 delivered his ruling in the Court of Appeal that although  
73 the Fires Prevention (Metropolis) Act 1774 limited a  
74 defendant’s liability to non-accidental fires:<sup>38</sup>

75 [W]here a fire arose from something dangerous that the  
76 defendant had brought onto his land there could be nothing  
77 accidental about any fire that arose as a result, and what  
78 became the rule in *Rylands v Fletcher* continued to apply  
79 with full force, although of course it is the fire itself that is  
80 the dangerous thing that escapes the defendant’s land,  
81 rather than whatever caused the fire to arise in the first  
82 place.<sup>39</sup>

83 Delivering his judgment, Lord Ward noted there was  
84 thus ‘plainly an escape within the meaning of the  
85 *Rylands v. Fletcher* rule’ and liability thus turned on  
86 whether or not Stannard’s activities were dangerous  
87 and a non-natural use of the land.<sup>40</sup> Specifically relating  
88 to the non-natural use requirement, Ward noted  
89 storing and enlarging the tyre storage area was out of  
90 the ordinary, was not normal and not routine and thus  
91 satisfied the standard. However, two other members of  
92 the court, applying the *Transco* precedent, agreed that  
93 the rule in *Rylands* should not apply and that the court  
94 of first instance had erred as it was not the items  
95 brought onto Stannard’s land (i.e., the tyres) that had  
96 escaped.<sup>41</sup>

97  
98 Lord Etherton noted that it is necessary in cases involv-  
99 ing such escapes (in this case of fire) to restate the  
100 classic statement of *Rylands v. Fletcher*. However,  
101 there is no consensus as to how this should be done. In  
102 some of the fire cases it was regarded as sufficient that  
103 the defendant brought onto his land something that  
104 was (at the time) considered inherently dangerous,  
105 such as a train<sup>42</sup> or a car.<sup>43</sup> In other cases, such as

48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
<sup>29</sup> ‘Precedent and Analogy in Legal Reasoning’, in: *The Stanford Encyclopedia of Philosophy* (2006), paragraph 2.1.2, found at: <<http://plato.stanford.edu/entries/legal-reas-prec/index.html#PreLayDowRul>>.

<sup>30</sup> *Cambridge Water*, n. 23 above, at 7.

<sup>31</sup> *Ibid.*

<sup>32</sup> *Transco*, n. 20 above, at paragraphs 8–9.

<sup>33</sup> *Healy v. Bray UDC*, [1962/1963] 3 Ir Jur Rep 9; *Mullen v. Forrester*, [1921] 2 IR 412.

<sup>34</sup> *Transco*, n. 20 above, at paragraph 29.

107  
108  
<sup>35</sup> *Wildtree Hotels Ltd v. Harrow London Borough Council*, [2001] 2 AC 1, at 8–9 (*‘Wildtree Hotels’*).

109  
110  
<sup>36</sup> *Mark Stannard (t/a Wyvern Tyres) v. Robert Raymond Harvey Gore*, [2012] EWCA Civ 1248.

111  
<sup>37</sup> *‘Wildtree Hotels’*, n. 36 above, at paragraph 2.

112  
<sup>38</sup> *Ibid.*, at paragraph 10.

113  
<sup>39</sup> *Ibid.*, at paragraphs 22–23.

114  
<sup>40</sup> *Ibid.*

115  
<sup>41</sup> *Ibid.* at paragraphs 24–25.

116  
<sup>42</sup> *Jones v. Festiniog Railway Company*, [1868] LR 3 QB 733.

117  
<sup>43</sup> *Musgrove v. Pandelis*, [1919] 2 KB 43.

1 *Mason v. Levy Auto Parts of England Ltd*,<sup>44</sup> it was the  
2 particular danger presented by the flammable nature of  
3 the materials brought onto the land by the defendant  
4 which was regarded as critical.

5  
6 The rule in *Rylands* is recognized by many – notably  
7 Binchy<sup>45</sup> – as instituting a high threshold for claimants  
8 to surmount. Coupled, in the context of environmental  
9 actions, with the precautionary principle, and the  
10 nature of fracking – itself a regulated activity in those  
11 jurisdictions where it is performed – the application of  
12 *Rylands* in the context of fracking may seem problem-  
13 atic. However, it is contended that the decision in  
14 *Stannard* may offer some insights into how the rule  
15 might be revived.

16  
17 It is clear from the dicta of Lord Hoffman in *Transco*  
18 that there are only limited situations in which the rule  
19 may be successfully pleaded. However, the ruling of the  
20 court of first instance in *Stannard*, though overturned,  
21 would seem to offer a potential for the requirements of  
22 ‘naturalness’ of land use and ‘danger’ to be severed by  
23 allowing claims to succeed under *Rylands*, despite the  
24 naturalness of land use not being in question. As such,  
25 the heightened risk of the activity or use engaged in,  
26 which led to damage pursuant to escape, would trigger  
27 a successful use of the rule in an environmental law  
28 context. Though *Stannard* relates to the escape of fire,  
29 a similar view might apply to the use of the rule in  
30 fracking – in which a license is granted to engage in the  
31 activity, and the chemicals used may be naturally occur-  
32 ring but due to the quantities and manner of their use  
33 become unnatural, thus inviting the use of the rule in  
34 *Rylands*.

35  
36 The following section examines the case of Dimock,  
37 Pennsylvania and American law relating to escape  
38 of dangerous materials which cause damage, before  
39 moving on to draw together the scenario presented by  
40 this case study, and examining the regulatory context  
41 and application of the rule in *Rylands* to fracking.

## 42 43 **CASE STUDY: DIMOCK, 44 PENNSYLVANIA**

45  
46 In 2008, residents of Dimock, a town in northeastern  
47 Pennsylvania in the United States, where fracking is  
48 used by Cabot Oil and Gas to collect gas, reported their  
49 water had turned brown and was staining crockery and  
50 clothing. Residents in close proximity to fracking wells  
51 also experienced dizziness while showering.<sup>46</sup> Subse-

52  
53 <sup>44</sup> *Mason v. Levy Auto Parts of England Ltd*, [1967] 2 QB 530 per  
54 MacKenna J, at 542.

55 <sup>45</sup> W. Binchy, ‘Recent Developments in the Law of Torts’, 4:1 *Judicial*  
56 *Studies Institute Journal* (2004), 8.

57 <sup>46</sup> *Fiorentino v Cabot & Gas Corp*, 50 F.Supp. 2d. 506 (M.D. Pa. Nov.  
58 15, 2010) (*‘Fiorentino’*).

59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100  
101  
102  
103  
104  
105  
106  
107  
108  
109  
110  
111  
112  
113  
114  
115  
116  
117  
118  
119  
120  
121

quent tests performed by the Pennsylvania Department of Environmental Protection (DEP) found elevated levels of methane, iron and aluminium in the area’s water supply.<sup>47</sup> There were also allegations that independent investigations had revealed levels of the chemicals trimethylbenzene and toluene exceeding maximum state standards in ground and drinking water in the area.<sup>48</sup> In nearby Susquehanna County, barium, manganese and strontium were detected in drinking water near fracking wells.<sup>49</sup>

Although methane and small amounts of other chemicals in water are not geologically uncommon in certain areas, including Pennsylvania, the DEP determined that the methane in Dimock’s water supplies was thermogenic rather than biogenic in origin, meaning it came from the rock layers beneath the Earth’s surface rather than from biological sources such as cattle, and was therefore attributable to Cabot’s activity.<sup>50</sup> The DEP observed ‘bubbling gas and high pressure readings from a number of wells that proved poor well construction, and excessive gas levels that could only exist in wells that were leaking’.<sup>51</sup>

A year after these events, in 2009, a further series of escapes of fracking fluid occurred in Dimock.<sup>52</sup> The well’s operator, Cabot, used hay bales and earth dams in attempts to contain the spill and determined that migration of the fluid to surface waters was unlikely.<sup>53</sup> Nevertheless, the fluid reached and contaminated nearby creeks and wetlands and two weeks later an order was issued requiring Cabot to cease its fracking operations.<sup>54</sup>

In the subsequent litigation, *Fiorentino v. Cabot Oil & Gas*,<sup>55</sup> the plaintiffs included strict liability among their

<sup>47</sup> C. Bateman, ‘A Colossal Fracking Mess’, *Vanity Fair* (21 June 2010), found at: <<http://www.vanityfair.com/business/features/2010/06/fracking-in-pennsylvania-201006>>.

<sup>48</sup> See *Fiorentino*, n. 46 above. These chemicals are also subject to federal reporting requirements. Emergency Planning and Community Right-to-Know Act, 342 USC §313 (1986). Toluene and many of its derivatives are also subject to the reporting requirements of the Comprehensive Environmental Response, Compensation, and Liability Act, 40 CFR §302.4.

<sup>49</sup> L.S. Rubin, ‘Frack to the Future: Considering a Strict Liability Standard for Hydraulic Fracturing Activities’, 3:1 *George Washington Journal of Energy and Environmental Law* (2012), 117, at 121.

<sup>50</sup> Press Release, Pennsylvania. Department of Environmental Protection, ‘DEP Secretary Issues Open Letter to Citizens of Susquehanna County Community Impacted by Ongoing Gas Migration Issues’ (19 October 2010), found at: <<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=14827&typeid=1>>.

<sup>51</sup> See L.S. Rubin, n. 49 above, at 120.

<sup>52</sup> *Ibid.*

<sup>53</sup> *Ibid.*, at 118. See also URS Corporation, *Engineering Study* (2009), found at: <<http://www.pressconnects.com/assets/pdf/CB1446181016.PDF>>, at 1–3.

<sup>54</sup> Cabot, however, was allowed to resume operations three weeks later. Subsequently, the DEP ordered Cabot to install water treatment systems in several homes and permanently close three wells.

<sup>55</sup> See *Fiorentino*, n. 46 above.

causes of action, alleging that the chemicals used in fracking fluid are abnormally dangerous. Cabot filed a motion to dismiss the strict liability cause of action for failure to state a claim upon which relief might be granted, arguing that the Superior Court of Pennsylvania had held, as a matter of law, that petroleum-related storage and transmission activities are not abnormally dangerous or ultra hazardous.<sup>56</sup> The plaintiffs counter-argued there was no precedent pertaining to the drilling and operation of gas wells. The judge agreed with the plaintiffs and declined to dismiss the cause of action for strict liability.<sup>57</sup> Relying on precedents concerning fracking in the county – namely *Berish v. Southwestern Energy Production Co.*<sup>58</sup> – the court concluded that ‘the determination of whether or not an activity is abnormally dangerous is fact-intensive’.<sup>59</sup> The Dimock case establishes a promising precedent for use in other common law jurisdictions in Europe through its invocation of the language of abnormally dangerous activities and escape. Although the United States has not and did not explicitly embrace the rule in *Rylands v. Fletcher* as in the United Kingdom and other commonwealth countries,<sup>60</sup> the judgments in both *Berish* and *Fiorentino* would furnish persuasive authority<sup>61</sup> for the use of the rule in the context of fracking in Europe.

Courts in Oregon, Oklahoma, Louisiana and Washington have also concluded that strict liability concepts may apply to ‘inherently’ or ‘abnormally’ dangerous activities carried out on lands which then damage neighbouring property, though they have also not invoked the rule in *Rylands* directly.<sup>62</sup> An Oregon court applied strict liability to pesticide drift in the 1961 case of *Loe v. Lenhardt*<sup>63</sup> – a judgment reaffirmed in the

1977 case of *Bella v. Aurora Air*.<sup>64</sup> The case involved the spraying of 24-D, a pesticide, over broad-leafed crops.<sup>65</sup> The court stated: ‘[I]f the activity could be carried out only with a substantially and uncontrollable likelihood that the damage will occur the activity could be classified as abnormally dangerous.’<sup>66</sup>

Notwithstanding the financial and industrial considerations that, arguably, make fuel extraction more necessary than crop dusting due to its lack of viable alternatives the escape of fracking fluids presents a situation at least as perilous as the storage of water in large quantities or aerial spreading of pesticide warranting its classification as an ultra-hazardous activity under the rule in *Rylands*.

For the past 65 years, courts in the United States have refused to apply the common law *ad coelunz* doctrine, which states that ownership is the same on, above, and below the surface.<sup>67</sup> This rejection has created a legal regime in which courts generally do not apply the law of trespass to oil and gas cases unless harm takes place on the surface. In *Coastal Oil & Gas Corporation v. Garza Energy Trust*,<sup>68</sup> the Texas Supreme Court found that trespass would apply if chemicals were spilled on the surface, but held that subsurface fracking did not constitute trespass. Similarly, the Kansas Supreme Court held in *Crawford v. Hrabe*<sup>69</sup> that a well operator had the right to inject salt water into the ground to increase production and that this injection was not a trespass.<sup>70</sup> In *Crawford*, as in *Garza*,<sup>71</sup> the Kansas Supreme Court, in holding for the defendants, referred to the economically beneficial nature of drilling.<sup>72</sup> However, in *Starrh Cotton Growers v. Area Energy*,<sup>73</sup> a Californian court held migration of water from an energy company’s drilling activities onto cotton-growers’ land was a continuing sub-surface trespass.<sup>74</sup> Similarly, in *Beck v Northern Natural Gas Co.*,<sup>75</sup> the Tenth Circuit held that

<sup>56</sup> Memorandum of Law in Support of Defendants’ Motion to Dismiss Plaintiffs Second Amended Complaint, *Fiorentino*, *ibid.*, at 1.

<sup>57</sup> *Ibid.*

<sup>58</sup> *Berish v. Southwestern Energy Production Co.*, 2011 WL 382420 (MD Pa. 3 February 2011).

<sup>59</sup> *Ibid.*

<sup>60</sup> This is largely attributed to the historical context of the rule development in Europe, which took place in the context of mining. This was an industry on which the United States was highly dependent at the time of the rules’ emergence, discouraging the adoption of rules in the United States for fear of a ‘chilling effect’ on business and industry. See F.C. Woodside III, M.L. Silbersack, T.L. Fliehm and D.J. Feichtner, ‘Why Absolute Liability under *Rylands v. Fletcher* is Absolutely Wrong!’, 29:1 *Dayton Law Review* (2003), 1.

<sup>61</sup> Under common law, previous decisions of higher courts in the jurisdiction are considered binding precedent pursuant to which lower courts are bound to decide. By contrast, foreign precedents or those of lower courts are considered to carry only persuasive authority and courts are not required to consider nor decide in accordance with such decisions. See R. Byrne and P. McCutcheon, *Byrne and McCutcheon on the Irish Legal System*, 5<sup>th</sup> edn (Bloomsbury, 2009), at 403.

<sup>62</sup> *Bella v. Aurora Air Inc.*, 279 Or. 13, 566 P.2d 489 (1977); *Gotreaux v. Gary*, 232 La 373, 94 So 2d 293 (1957); *Young v. Darter*, 363 P.2d 829 (Okla. 1961).

<sup>63</sup> *Loe v. Lenhardt*, 227 Or. 242, 362 P.2d 312 (1961).

<sup>64</sup> See *Bella v. Aurora Air Inc.*, n. 62 above.

<sup>65</sup> C.A. Kennedy, ‘Liability in the Aerial Application of Pesticides’, 22:1 *South Dakota Law Review* (1977), 75. See also *Boroughs v. Joiner*, 337 So. 2d 340 (Ala. 1976) and *Christensen v. Midstate Aerial Applicators Corp.*, 166 N.W.2d 386 (ND 1969).

<sup>66</sup> See *Bella v. Aurora Air Inc.*, n. 62 above, at paragraph 24.

<sup>67</sup> *United States v. Causby*, 328 US 256 (1946).

<sup>68</sup> *Coastal Oil and Gas Corp USA v. Garza Energy Trust et al.*, No. 05-0466, 2008 WL 3991029 (Tex. 29 August 2008) (*Coastal Oil and Gas Corp USA*).

<sup>69</sup> *Steve Crawford, S&M Oil Company v. Marvin Hrabe, Bruce Krob, Lucille Rogers and Patricia Irej* (2002) Kan Sup Ct No 87/624 (*Steve Crawford, S&M Oil Company*).

<sup>70</sup> *Ibid.*

<sup>71</sup> See Justice Willett’s concurrence in *Coastal Oil and Gas Corp USA*, n. 68 above.

<sup>72</sup> See *Steve Crawford, S&M Oil Company*, n. 69 above, at paragraph 7.

<sup>73</sup> *Starrh & Starrh Cotton Growers v. Area Energy LLC*, [2007] Sup. Ct. No. CV 245287.

<sup>74</sup> *Ibid.*, at 26.

<sup>75</sup> *Northern Natural Gas Company v. Tract No. 1062710 et al.*, Case No. 10-1232-MLB-DWB.

1 there was sufficient evidence for a lower court to con- 59  
2 clude that the migration of gas from one subsurface 60  
3 formation to another was a trespass.<sup>76</sup> 61  
4

5 Finding a common thread in these cases that could have 63  
6 directly appreciable persuasive authority in European 64  
7 common law jurisdictions is difficult. In cases such as 65  
8 *Crawford* and *Garza*, courts have adopted a broad 66  
9 interpretation of the rights of mineral lessees and 67  
10 allowed continuation of activities such as underground 68  
11 injection due, in part, to the economic benefits in which 69  
12 they result. Conversely, in cases like *Starrh* and *Beck*, 70  
13 courts have held companies responsible for the conse- 71  
14 quences of water and gas migration. In light of such 72  
15 conflicting rulings, the availability of strict liability 73  
16 under the rule in *Rylands*, as used in *Cabot Oil and* 74  
17 *Gas*, may prove an adept legal tool in cases involving 75  
18 surface and subsurface escape and pollution of water 76  
19 and land. 77

20  
21 The ambiguous status of the *ad coelunz* doctrine, as 79  
22 well as the exemptions fracking currently enjoys from 80  
23 provisions of major national statutes in the United 81  
24 States, including the Clean Air Act,<sup>77</sup> Clean Water Act<sup>78</sup> 82  
25 and Safe Drinking Water Act,<sup>79</sup> leaves significant doubt 83  
26 around the ability of individuals to recover damages 84  
27 through traditional legal avenues in situations such as 85  
28 in *Dimock*.<sup>80</sup> Furthermore, if the risks of fracking are 86  
29 as low as its proponents claim, such disparities in 87  
30 fracking's treatment under American legislation are 88  
31 unnecessary; it should be held to standards equal to 89  
32 similar industries. 90

33  
34 **APPLYING THE RULE IN RYLANDS** 94

35  
36 This section examines how current legislative and regu- 95  
37 latory provisions are insufficient to cover fracking 96  
38 activities, and how *Rylands* may be invoked by refer- 97  
39 ence to Ireland where the rule arguably enjoyed the 98  
40 most sustained support and where shale deposits have 99  
41 been located and are the subject of local criticism from 100  
42 public representatives.<sup>81</sup> The section first considers the 101  
43 existing legal provisions applicable to fracking. It then 102  
44 examines how the rule in *Rylands* might be invoked in 103  
45 the context of fracking fluids by examining the case law 104  
46 of the jurisdiction which offers binding precedential 105  
47 authority as well as those of other jurisdictions which 106  
48 offer persuasive authority. 107

51 <sup>76</sup> *Ibid.* 108

52 <sup>77</sup> *Clean Air Act*, 42 USC §§7401ff. (1970). 109

53 <sup>78</sup> *Clean Water Act*, 33 USC §§1251ff. (1972). 110

54 <sup>79</sup> *Safe Drinking Water Act*, 42 USC §300ff. (1974). 111

55 <sup>80</sup> See comments by M. Brume, Executive Director of the Sierra Club, 112  
56 found at: <<http://www.economist.com/debate/days/view/934>>. 113

57 <sup>81</sup> M. Hennessy and D. Keenan, 'Tax Breaks Encourage Search for 114  
58 Shale Gas; Exploration', *Irish Times* (21 March 2013). 115

In 2011, three companies were granted two-year petro- 59  
leum licensing options by the Irish Department of Com- 60  
munications, Energy and Natural Resources in the 61  
midwest and northwest of Ireland. The licenses are for 62  
the potential extraction of the deposits of shale gas in 63  
those regions through fracking. If fracking were to be 64  
undertaken pursuant to such a license at a later date, an 65  
integrated pollution prevention control license under 66  
the Environmental Protection Agency Act 1992 would 67  
be required and the area would be subject to an envi- 68  
ronmental impact assessment.<sup>82</sup> Historically, activities 69  
held to pose unreasonable risks to the community, 70  
which were therefore heavily regulated or precluded, 71  
include the storage of explosives, blasting and crop 72  
dusting. 73

74  
75 In Ireland, three local authorities – the counties of 75  
76 Leitrim, Clare and Roscommon – have sought to ban 76  
77 fracking by including prohibitions in their develop- 77  
78 ment plans. However, Convery and Scannell<sup>83</sup> have 78  
79 noted fundamental difficulties with this approach, as 79  
80 it is potentially illegal following the precedent in 80  
81 *Glencar v. Mayo County Council*,<sup>84</sup> in which the court 81  
82 found that a ban on mining previously implemented 82  
83 by Mayo County Council under its development plan 83  
84 was unlawful.<sup>85</sup> 84

85  
86 The situation in the United States where fracking is 86  
87 currently banned or allowed on a state-by-state basis 87  
88 will hardly be appropriate in the Irish context, in which 88  
89 environmental policy is set and enforced nationally. 89  
90 However until such time as there is such national policy 90  
91 or legislation, rather than the tacit acceptance of 91  
92 fracking, it would appear that, as in *Glencar*, local 92  
93 authorities retain the authority to make decisions on 93  
94 grants of permission for such activities in accordance 94  
95 with their development plans and applicable adminis- 95  
96 trative law standards. 96

97  
98 Convery and Scannell have further noted that explora- 98  
99 tion for fuel sources enjoys cross-party support and is 99  
100 essential if Ireland is to reduce its 86% dependence 100  
101 on imported energy. Thus, although fracking may be 101  
102 unpopular among the public, this may be outweighed 102  
103 by political will to generate economic capital. The gov- 103  
104 ernment enjoys the liberty to adopt an approach similar 104  
105 to that taken in other European jurisdictions and issue 105  
106 a moratorium or ban on fracking. Until it does so, those 106

107  
108 <sup>82</sup> D. Healy, *Hydraulic Fracturing or 'Fracking': A Short Summary of* 108  
109 *Current Knowledge and Potential Environmental Impacts* (Environmental 109  
110 Protection Agency 2012); and 'No "Fracking" until Further 110  
111 Study, Says Rabbitte', *Irish Times* (14 May 2012). 111

112 <sup>83</sup> F. Convery and Y. Scannell, 'Fracking and Local Credibility in 112  
113 Ireland' (30 May 2012), found at: <[http://www.irishenvironment.com/](http://www.irishenvironment.com/commentary/frank-convery-and-yvonne-scannell-fracking-and-local-credibility-in-ireland) 113  
114 [commentary/frank-convery-and-yvonne-scannell-fracking-and-local-](http://www.irishenvironment.com/commentary/frank-convery-and-yvonne-scannell-fracking-and-local-credibility-in-ireland) 114  
115 [credibility-in-ireland](http://www.irishenvironment.com/commentary/frank-convery-and-yvonne-scannell-fracking-and-local-credibility-in-ireland)>. 115

116 <sup>84</sup> *Glencar Exploration plc v. Mayo County Council*, [2002] 1 ILRM 116  
117 481. 117

118 <sup>85</sup> *Ibid.* 118

1 engaged in prospecting for natural resources are  
2 entitled to have their cases assessed by qualified State  
3 bodies on the basis of environmental risk and relevant  
4 legal considerations. Unless and until the *Oireachtas*<sup>86</sup>  
5 takes such actions, there is no power, at a local political  
6 level, to refuse permission for fracking.<sup>87</sup>

## 8 **CURRENT LEGAL PROVISIONS** 9 **GOVERNING FUEL EXTRACTION** 10 **IN IRELAND**

### 11 **The Petroleum and Other Minerals Act**

12 The policy of successive Irish governments in relation  
13 to the extraction of fossil fuels has been to endeavour to  
14 attract international corporations to undertake explo-  
15 ration activities.<sup>88</sup> Under the Petroleum and Other  
16 Minerals Act 1960, both oil and gas are defined as  
17 'petroleum',<sup>89</sup> meaning that fracking activities could  
18 presumptively be encompassed by existing legislation.  
19 However, difficulties could emerge in relation to impos-  
20 ing liability and claiming compensation for damage  
21 under the Act in circumstances where leaks of frack-  
22 ing liquids polluted neighbouring property. The Act  
23 imposes liability on the holder of a permit for the  
24 exploitation of petroleum<sup>90</sup> who causes nuisance or  
25 damage to surface land or water through their work<sup>91</sup> on  
26 site. However, it makes no express provision for claims  
27 by neighbouring property owners and does not provide  
28 for compensation.<sup>92</sup>

29 While such an omission (liability without provision for  
30 compensation) may be politically advantageous in pro-  
31 viding a degree of superficial assurance for an industry  
32 seeking to temporarily locate and explore in Ireland, as  
33 well as those who could immediately envisage them-  
34 selves as claimants, it also creates ambiguity and  
35 uncertainty relating to damages and signals a lack of  
36 transparency unwelcome in the modern regulatory  
37 State. Should fracking begin in Ireland, further regula-  
38 tory and legislative provisions taking adequate account  
39 of the associated risks and protective measures would  
40 thus be required.

41 <sup>86</sup> The Irish legislature.

42 <sup>87</sup> See F. Convery and Y. Scannell, n. 83 above.

43 <sup>88</sup> See: <<http://www.dcenr.gov.ie/Natural/>>.

44 <sup>89</sup> *Irish Petroleum and Other Minerals Act* 1960, n. 15 above, Section  
45 2.1 reads: 'any mineral, oil or relative hydrocarbon and natural gas  
46 and other liquid or gaseous hydrocarbons and their derivatives or  
47 constituent substances existing in its natural condition in strata and  
48 includes any other mineral substance contained in and natural gas  
49 brought to the surface with them in the normal process of extraction'.

50 <sup>90</sup> *Ibid.*, Section 28.1.

51 <sup>91</sup> *Ibid.*, Section 16.1–2.

52 <sup>92</sup> *Ibid.*, Section 35.

### 53 **EU Environmental Liability Directive**

54 Directive 2004/35 on Environmental Liability<sup>93</sup> estab-  
55 lishes a framework based on the polluter pays prin-  
56 ciple<sup>94</sup> to prevent and remedy measurable direct or  
57 indirect damage to European sites (and any other sites  
58 designated by Member States), water and soil.  
59 However, the Directive does not directly address  
60 damage to persons or property. Furthermore, indi-  
61 vidual Member States may afford defences deemed  
62 appropriate to operators under Annex III (that are oth-  
63 erwise strictly liable), leading to a situation in which the  
64 Directive could be transposed in a sufficiently industry-  
65 orientated manner so as to make it challenging to  
66 succeed in claims for environmental damage.

67 Under the Directive, the operator whose occupational  
68 activity causes the imminent threat or occurrence of  
69 environmental damage is liable for the costs incurred  
70 in carrying out the preventive or remedial measures  
71 required as a result of the threat or damage.<sup>95</sup> However,  
72 as the Environmental Liability Directive deals only with  
73 'pure ecological damage' and is based on administrative  
74 penalties as distinct from a civil liability system such as  
75 that generally covered under the law of tort, it is unclear  
76 whether individual property owners affected would be  
77 afforded redress under its auspices. Thus, a need for a  
78 means of seeking a remedy for damage to property not  
79 covered by the Directive or its implementing legislation  
80 remains. This means of redress may be found by  
81 employing the rule in *Rylands*.

## 82 **REVIVING RYLANDS**

83 As evidenced by the decision in *Glencar*, as well as the  
84 national and European legislative provisions outlined  
85 above, fracking in Ireland remains largely unregulated,  
86 with provisions for its regulation implicitly provided for  
87 at best and little certainty as to the manner in which  
88 damage to property might be redressed should its use  
89 commence. In seeking to regulate fracking in the future,  
90 the precautionary principle may perhaps offer the most  
91 prudent standard of guidance for the development and  
92 use of fracking. The principle states that if an action or  
93 policy is suspected of presenting a risk of harm to the  
94 public or the environment then, in the absence of full  
95 scientific certainty, the burden of proof shall fall on  
96 those seeking to engage in the activity to disprove sus-  
97 pecting deleterious effects per Article 191.2 of the  
98 TFEU.<sup>96</sup> The principle has, through its application in

99 <sup>93</sup> Directive 2004/35/CE of 21 April 2004 on Environmental Liability  
100 with Regard to the Prevention and Remedying of Environmental  
101 Damage, [2004] OJ L143/56.

102 <sup>94</sup> Consolidated Version of the Treaty on the Functioning of the Euro-  
103 pean Union, [2010] OJ C83/47, Article 191.2.

104 <sup>95</sup> Directive 2004/35/CE, n. 93 above, Article 17.1 and 17.2.

105 <sup>96</sup> *Ibid.*



1 case law – notably in the cases of *Pfizer*<sup>97</sup> and *Dutch*  
2 *Vitamins*<sup>98</sup> – become a ‘general principle of EU law’.<sup>99</sup>

3  
4 It is clear from *Dutch Vitamins* that in exercising their  
5 discretion relating to the protection of public health,  
6 Member States must comply with the principle of pro-  
7 portionalty. The case suggests that, following a risk  
8 assessment, if the Member State finds a likelihood of  
9 real harm then, based on the precautionary principle, it  
10 can ban a good or activity. In the Irish context, the  
11 environmental legislation currently in place requires  
12 that development plans drawn up by local authorities  
13 adequately assess the risks, pursuant to which an envi-  
14 ronmental impact assessment may be required.<sup>100</sup>

15  
16 While the precautionary principle may offer guidance  
17 for best practices in new regulation or legislation at a  
18 national or European level, in cases where fracking is in  
19 use it offers little succour to those whose property is  
20 damaged through escapes of fracking fluids. The best  
21 means of redress, which this article has identified, is the  
22 revival of the rule in *Rylands* for application in situa-  
23 tions in which such escapes and damages do occur. The  
24 rule in *Rylands* has been accepted and applied by the  
25 Irish courts – notably in *Superquinn v. Bray UDC*<sup>101</sup> –  
26 and has been deemed to include, within the scope of the  
27 non-natural use requirement, escapes of methane from  
28 landfills,<sup>102</sup> escapes of large volumes of water,<sup>103</sup> storage  
29 of large quantities or of smaller individual quantities on  
30 a large scale, of chemicals,<sup>104</sup> and sewage.<sup>105</sup> Although  
31 the case of *Hanrahan v. Merck Sharp and Dohme*<sup>106</sup>  
32 might seem to present an impediment to the revival of  
33 *Rylands*, it is contended that *Hanrahan* should be dis-  
34 tinguished on its facts and is thus not applicable to the  
35 use of the rule in relation to fracking. The distinguish-  
36 ing facts centre on problems faced by the plaintiffs in  
37

38 <sup>97</sup> ECJ, Case T-13/99, *Pfizer Animal Health v. Council*, [2002] ECR  
39 II-3305, at paragraph 149. In that case the European Court of Justice  
40 (ECJ) established that ‘risk assessment includes for the competent  
41 public authority . . . a two-fold task . . . first, determining what level of  
42 risk is deemed unacceptable and, second, conducting a scientific  
43 assessment of the risks’. *Ibid.* It is thus for the Community institutions  
44 to determine the level of protection which they deem appropriate for  
45 society and by reference to that level of protection they must then  
46 determine the level of risk based on available scientific knowledge.

47 <sup>98</sup> ECJ, Case C-41/02, *Commission v. Netherlands (Dutch Vitamins)*,  
48 [2004] ECR I-11375.

49 <sup>99</sup> M.A. Recuerda Girela, ‘Risk and Reason in the European Union  
50 Law’, 1:5 *European Food and Feed Law Review* (2006), 270.

51 <sup>100</sup> *Irish Planning and Development Act 2000*, found at: <<http://www.irishstatutebook.ie/2000/en/act/pub/0030/>>, Articles 3, 4.1 and  
52 4.2.

53 <sup>101</sup> *Superquinn v. Bray UDC*, [1998] 3 IR 542.

54 <sup>102</sup> *Gertsen v. Municipality of Metropolitan Toronto*, [1973] DLR (3d)  
55 641.

56 <sup>103</sup> *Dockery v. Manor Park Homebuilders Ltd*, High Court 10 April  
57 1995 (O’Hanlon J). Cf. *Poplar Homes Ltd v. Society of African Mis-*  
58 *sions Trustees*, [1997] Ir L Log W 367 (Laffroy J).

59 <sup>104</sup> *Cambridge Water*, n. 23 above.

60 <sup>105</sup> *Smeaton v. Ilford Corporation*, [1954] Ch 450.

61 <sup>106</sup> *Hanrahan v. Merck Sharpe and Dohme (Ireland) Ltd*, [1988] IESC  
62 1.

63  
64 the case in establishing causation and escape. The  
65 plaintiffs’ claims under *Rylands* rested primarily on the  
66 alleged air pollution by emissions from the defendant’s  
67 factory, yet establishing both escape and causation  
68 proved impossible under *Rylands*. In the case of  
69 fracking, where escape and damage are clearly evi-  
70 denced by soil and water samples containing unaccept-  
71 able quantities of chemicals outside the defendant’s  
72 land, such impediments are surmountable.  
73

74 The difficulty experienced by the plaintiffs in  
75 *Hanrahan* in establishing causation, and thus proving  
76 that the ill health and damage they suffered was due to  
77 the defendant’s activities, was central to the failure of a  
78 cause under *Rylands* in that case. By contrast, as evi-  
79 denced in cases such as *Fiorentino*, in the event of the  
80 escape of fracking fluids the presence of the dangerous  
81 element is easily established and its effect more easily  
82 appreciable. Such precedents that deem the escape  
83 of water and methane accumulations to fall under  
84 *Rylands* offer promising potential for the application  
85 of the rule in cases where fracking fluid escapes  
86 and causes damage. While the English precedents of  
87 *Transco* and *Stannard* would indicate – for that juris-  
88 diction – a decline in the judiciary’s regard of the rule,  
89 in Ireland both judgements enjoy only persuasive  
90 authority before the courts. In the presence of Ameri-  
91 can cases, such as *Fiorentino*, which offer persuasive  
92 authority, the case for the revival of *Rylands* in Ireland  
93 remains open.  
94

## 95 CONCLUSION

96  
97 In summer 2013, British Chancellor of the Exchequer  
98 George Osborne announced major tax breaks to  
99 encourage early investment in shale gas exploration in  
100 the United Kingdom following the positive economic  
101 impacts of the shale gas boom on the American gas  
102 industry and its reduction in fuel prices.<sup>107</sup> Osborne pro-  
103 jected that, by July 2013, the United Kingdom Depart-  
104 ment for Energy and Climate Change would produce  
105 detailed rules to govern exploration for the shale gas  
106 discovered in Northern Ireland, Lancashire and south-  
107 ern England. The announcement came soon after a  
108 company exploring in Lancashire withdrew its planning  
109 application delaying drilling by a year following mild  
110 tremors that occurred in the area following fracking  
111 activity.  
112

113 The provision of fuel is of high and increasing social and  
114 economic value, yet such benefits must be weighed  
115 against the associated risks inherent in the production  
116 process. Modern technology has not dealt effectively  
117 with accidental spillage – a risk that would appear to be  
118

119 <sup>107</sup> ‘There’s Gold in Them There Wells’, *The Economist* (21 December  
120 2013), found at: <<http://www.economist.com/news/christmas-specials/21591748-theres-gold-them-there-wells>>.  
121

1 increasing with the emergence of fracking whose pro-  
2 duction process carries a high risk of accidental dis-  
3 charges. The explosion at the BP Deepwater Horizon  
4 well in the Gulf of Mexico during 2010 intensified calls  
5 for sweeping changes in American energy and environ-  
6 mental law and regulation, and heightened global calls  
7 for reform of fuel extraction. However, the wide-  
8 ranging changes the incident promised to precipitate  
9 have yet to transpire and momentum has, conversely,  
10 shifted to a more permissive regime of aggressive oil  
11 and gas development with the former regulatory  
12 scheme largely intact.

13  
14 The failure to adapt to changing fuel extraction tech-  
15 nologies is unsurprising, as the prevailing legal and  
16 policy architecture is designed to withstand changing  
17 circumstances, even those as extreme as the BP  
18 blowout. Changing or improving safety and environ-  
19 mental stewardship practices, requires concerted and  
20 focused action that may only take root after repeated  
21 future disasters.<sup>108</sup> Ireland, which relies so heavily on its  
22 natural landscape and environment to attract tourism  
23 as well as its industry-friendly policies to attract invest-  
24 ment from multinationals, as well as numerous Ameri-  
25 can industries, can ill-afford to suffer from such an  
26 imbalance in environmental protection and industrial  
27 soft-touch regulation, either in exploiting fuel reserves  
28 through traditional methods or through increased use  
29 of fracking.

30  
31 A revival of the rule in *Rylands* has the potential to  
32 maintain the current industry-friendly standards, while  
33 providing a powerful deterrent against irresponsible  
34 practices through the threat of both monetary and  
35 reputational damage. This may serve as the most mutu-  
36 ally acceptable resolution to popular fears of damage  
37 that cannot be easily remedied before the courts.

38  
39 The private sector plays a crucial role in the exploitation  
40 of the global commons yet its actions also harbour the  
41 potential to adversely affect the local and global envi-  
42 ronment and thus the person and property of citi-  
43 zens.<sup>109</sup> As more knowledge and understanding is  
44 gained in respect of the benefits and risks posed by fuel  
45 extraction, national legal and regulatory frameworks  
46 must evolve to reflect the rights and responsibility that  
47 the parties involved bear. In light of the current absence  
48 of explicit regulations, the *Rylands* rule provides an  
49 indispensable tool for those whose use and enjoyment of  
50 their land and health is jeopardized or damaged by

non-accidental environmental contamination subse-  
quent to fracking.

Róisín Áine Costello graduated from Trinity College  
Dublin with a first class honours LLB in 2013. During  
this time, she served as editor-in-chief and senior editor  
for the *Trinity College Social and Political Review* and  
*Trinity College Law Review*, respectively, and worked  
for several public bodies and as a trainee with the Par-  
liamentary Assembly at the Council of Europe. She is  
currently studying for her MPMP at the Institut d'Études  
Politiques de Paris, where her research interests focus on  
the impact of governance and policy on law, specifically  
in the areas of international trade and communications,  
health care regulation and environmental policy. She  
will be spending 2014–2015 pursuing her LLM at the  
Georgetown Law Centre in Washington, DC, where her  
specific focus will be on technology law and regulation, in  
particular how evolving technologies affect international  
trade and the potential impacts of communications tech-  
nologies on national and international governance  
architectures and traditional civil rights. Her previous  
publications have addressed issues such as climate  
change and statelessness, Southeast Asian politics and  
the sale of State assets in Greece.

<sup>108</sup> M. Davis, 'Lessons Unlearned: The Legal and Policy Legacy of the BP Deep-water Horizon Spill', 3:2 *Washington and Lee Journal of Energy, Climate and Environment* (2012), 155.

<sup>109</sup> A Nolkaemper 'Responsibility of Transnational Corporations in International Environmental Law: Three Perspectives', in: G. Winter (ed.), *Multilevel Governance of Global Environmental Changes: Perspectives from Science Sociology and the Law* (Cambridge University Press, 2006), 179, at 179–180.