

Claimant  
T J E Crosland  
Amended First  
TC/1  
1 November 2018

Claim No: CO/3149/2018

IN THE HIGH COURT OF JUSTICE  
QUEEN'S BENCH DIVISION  
ADMINISTRATIVE COURT

B E T W E E N :

THE QUEEN  
on the application of  
PLAN B. EARTH

Claimant

- and -

SECRETARY OF STATE FOR TRANSPORT

Defendant

-and-

HEATHROW AIRPORT LIMITED

Interested Party

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EXHIBIT TO THE FIRST WITNESS STATEMENT OF  
TIMOTHY JOHN EDWARD CROSLAND

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This is the amended exhibit referred to in the amended first witness statement of  
Timothy John Edward Crosland.

Signed:



Tim Crosland, 1 November 2018

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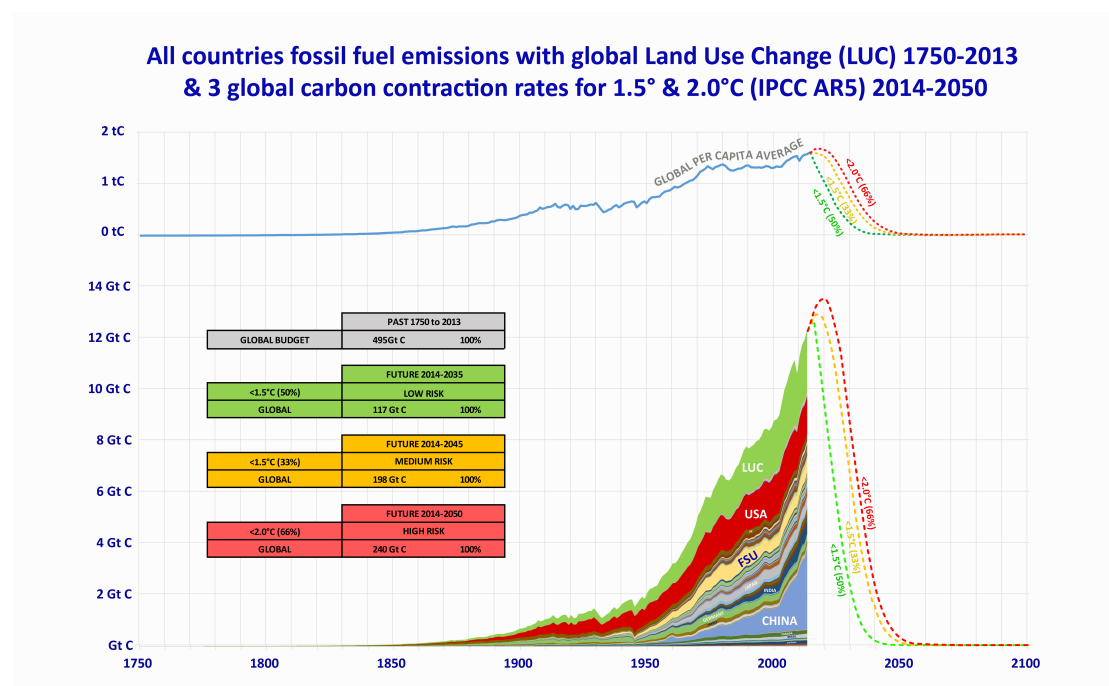
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## TC/1/1 Chart published by Plan B and GCI on the implications of the Paris Agreement

The Chart below, visualising the implications of the Paris Agreement, has been published in a peer-reviewed law journal and referenced in the IPCC Report into 1.5°C:

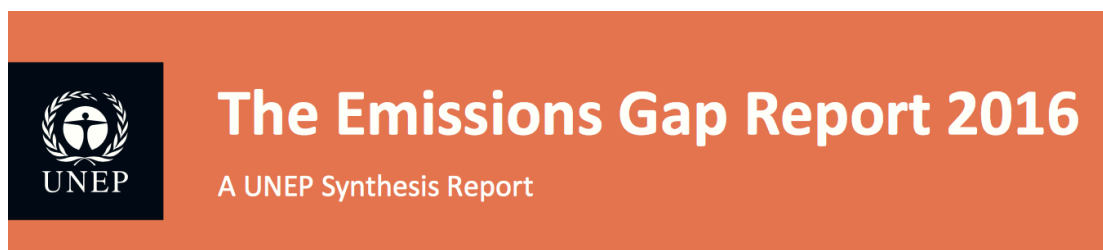
*Environmental Liability, Law, Policy and Practice, Vol 24, Issue 3, 2016*

*The Paris Agreement Implementation Blueprint: a practical guide to bridging the gap between actions and closing the accountability deficit (Part 1), Crosland, Meyer, Wewerink-Singh*



**TC/1/2 UN Environment Programme, Emissions Gap Report, 2016**

[https://wedocs.unep.org/bitstream/handle/20.500.11822/10016/emission\\_gap\\_report\\_2016.pdf](https://wedocs.unep.org/bitstream/handle/20.500.11822/10016/emission_gap_report_2016.pdf)



From the Foreword, page xi:

*“This report estimates we are actually on track for global warming of up to 3.4 degrees Celcius. Current commitments will reduce emissions by no more than a third of the levels required by 2030 to avert disaster.”*

**TC/1/3 Minutes of the CCC’s meeting of 16 September 2016**

**Minutes of CCC Meeting, 16/09/2016**

Present were John Deben, Nick Chater, Sam Fankhauser, Brian Hoskins, Julia King, John Krebs, Corinne le Quere, Jim Skea (item 2), Matthew Bell

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*“2. Long-term ambition after the Paris Agreement*

*The Committee discussed progress with development of the report, due for publication in October, on implications of the Paris Agreement for the UK’s long-term targets to reduce emissions. It had agreed in its January 2016 letter to the Secretary of State on implications for carbon budgets to 2032 to provide further advice on the issues.*

*It was clear that the aims of the Paris Agreement, to limit warming to well below 2°C and to pursue efforts to limit it to 1.5°C, went further than the basis of the UK’s current long-term target to reduce emissions in 2050 by at least 80% on 1990 levels (which was based on a UK contribution to global emissions reductions keeping global average temperature rise to around 2°C).”*

TC/1/4 Excerpts from CCC's 2016 Report, UK Climate Action Following the Paris Agreement

<https://www.theccc.org.uk/wp-content/uploads/2016/10/UK-climate-action-following-the-Paris-Agreement-Committee-on-Climate-Change-October-2016.pdf>



page 8:

*"The Agreement describes a higher level of global ambition than the one that formed the basis of the UK's existing emissions reduction targets:*

- The UK's current long-term target is a reduction in greenhouse gas emissions of at least 80% by the year 2050, relative to 1990 levels. This 2050 target was derived as a contribution to a global emissions path aimed at keeping global average temperature to around 2°C above pre-industrial levels.*
- The Paris Agreement aims to limit warming to well below 2°C and to pursue efforts to limit it to 1.5°C. To achieve this aim, the Agreement additionally sets a target for net zero global emissions in the second half of this century."*

page 12:

*"The existing carbon budgets are designed to prepare for the UK's 2050 target in the lowest cost way as a contribution to a global path aimed at keeping global average temperature to around 2°C. Global paths to keep close to 1.5°C, at the upper end of the ambition in the Paris Agreement, imply UK reductions of at least 90% below 1990 levels by 2050 and potentially more ambitious efforts over the timescale of existing carbon budgets."*

**TC/1/5 Excerpts from CCC's January 2018 Report, *An independent assessment of the UK's Clean Growth Strategy***

<https://www.theccc.org.uk/wp-content/uploads/2018/01/CCC-Independent-Assessment-of-UKs-Clean-Growth-Strategy-2018.pdf>



page 21:

***“Preparing for 2050***

*As well as setting out how carbon budgets to 2032 will be met, the Climate Change Act also requires that the Government's plans should make preparations for meeting the 2050 target. This is currently set in legislation as a reduction of at least 80% on 1990 emissions. However, the Paris Agreement is likely to require greater ambition by 2050 and for emissions to reach net-zero at some point in the second half of the century. It is therefore essential that actions are taken now to enable these deeper reductions to be achieved.”*

Page 22:

*“In our advice on UK Climate Action Following the Paris Agreement, the Committee recommended that the Government wait to set more ambitious long-term targets until it had strong policies in place for meeting existing budgets and the evidence base is firmer on the appropriate level of such targets. The Government has now published its strategy to meet the legislated carbon budgets. The Intergovernmental Panel on Climate Change (IPCC) will produce a Special Report on the implications of the Paris Agreement's 1.5°C ambition in 2018. At that point, the Government should request further advice from the Committee on the implications of the Paris Agreement for the UK's long-term emissions targets.”*

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/693158/25-year-environment-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf)



## A Green Future: Our 25 Year Plan to Improve the Environment

page 6:

*"Internationally, we will lead the fight against climate change"*

page 117:

*"The UK will be at the forefront of global efforts to protect and improve the natural world, driving the international community to adopt higher standards. Our leadership is respected in part because of our enduring commitment to high standards, domestically and internationally, and the depth and quality of our scientific expertise."*

Page 118:

*"Using our leading role in the UNFCCC, through which the Paris Agreement was established, we will urge the international community to meet the goals enshrined in the text – in particular, as a first step, through securing robust and integral rules and standards. This is vital for future environmental security: current global commitments under the Agreement are insufficient to limit average temperature rise to well below 2°C."*

TC/1/7    Announcement of Government review of the UK's climate targets, 17 April, 2018

↻ Claire Perry Retweeted



**Dept for BEIS**  @beisgovuk · Apr 17

.@claireperrymp : "I am pleased to announce that after the IPCC report later this year, we will be seeking advice from the UK's independent advisers, the Committee on Climate Change, on the implications of the Paris Agreement for the UK's long-term emissions reduction targets."



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86



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**TC/1/8 Statement in the House of Commons on behalf of the Government relating to the UK's intention to reach a zero-carbon economy by 2050**

Hansard 1 May 2018, Volume 640

<https://hansard.parliament.uk/Commons/2018-05-01/debates/BAD2B942-B27A-428E-87B5-6F50B699DCBE/OffshoreWindSector>

**Claire Perry**

 Share

Once again, I am amazed at the hon. Gentleman's ability to turn one of the great success stories of this country—in fact, he wrote an article about this last week that was so poor that he did not even retweet it. The point is that we have—*[Interruption.]* If he stopped chuntering, perhaps he might learn something. He is most impolite. We have led the world in decarbonising our economy. As the hon. Gentleman knows, we were the first country to set up statutory carbon budgets, and we are on track to meet the first three, as well as to get close to the budgets, based on current policies and proposals, in 10 and 15 years' time. He will also know that we are the first developed nation to have said that we want to understand how we will get to a zero-carbon economy in 2050, and my request to the committee—*[Interruption.]* He is doing it again, Mr Speaker; his mother would be horrified by this level of discourtesy. We were the first country in the world to ask how we will get to a decarbonised economy in 2050, and I would hope that we could enjoy cross-party support for something so vital.



Secretary of State  
Department for Energy and Climate Change  
Whitehall Place

7<sup>th</sup> October 2008

**From Lord Turner of Ecchinswell**

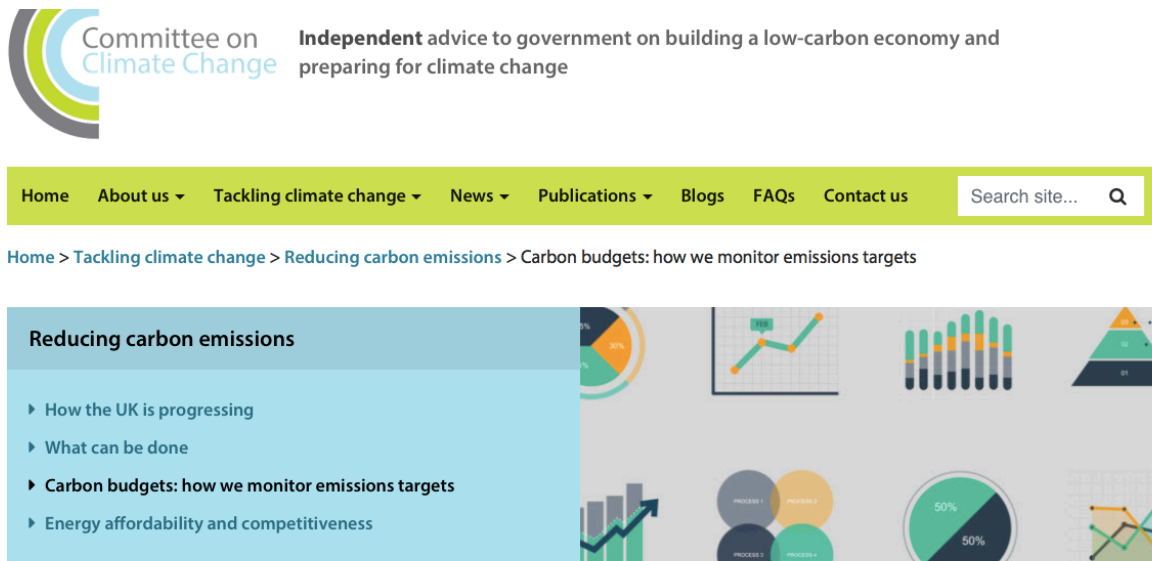
Dear Ed,

To determine a UK emissions reduction target, we first considered what a global target should be and then the UK's appropriate contribution. The global emissions target needs to be based on an analysis of the climate science. The crucial issue is what level of global temperature should the world seek to avoid, and what emissions path will keep us below this temperature. The challenge in this approach is that there are many uncertainties in the relationships between emissions of GHGs, their concentrations in the atmosphere and the local and global temperature and climate impacts that result. The Committee considered three categories of uncertainty:

- Feedback loops in the climate system which may amplify temperature increases (some of which may not be properly captured in models) e.g. release of methane stored in permafrost and oceans;
- Potential impacts which may be effectively irreversible once a temperature threshold is passed e.g. melting of Greenland ice sheets; and
- Uncertainties in the relationship between temperature changes and damages. Some of these may be non-linear – the world may be able to adapt to small changes in temperature change, but once higher increases are experienced damages will exceed the adaptive capacity of many biological, physical and social systems.

Given these uncertainties climate science cannot predict, with absolute certainty, how emissions paths will translate into temperature increases and how temperature increases will translate into damage. Deciding what level of temperature increase is harmful is therefore inherently judgemental. The Committee's judgement, on the basis of the IPCC AR4 report, is that adverse human welfare consequences are likely to increase significantly if global temperature rises more than 2°C relative to pre-industrial temperatures, and that if a 4°C rise were reached, extreme consequences potentially beyond our ability to adapt would arise. We therefore believe that global policy should seek to limit the central expectation of global temperature rise to, or close to, 2°C and that it should ensure that the probability of crossing the extreme danger threshold of 4°C is reduced to an extremely low level (e.g. less than 1%).

## TC/1/10 Screenshot from CCC's website



## Carbon budgets: how we monitor emissions targets

Through the [Climate Change Act](#), the government has committed to:

- reduce emissions by at least 80% of 1990 levels by 2050
- contribute to global emission reductions, to limit global temperature rise to as little as possible above 2°C

**TC/1/11 Letter from CCC to Plan B, 7 August 2017 (excerpt)**



**Independent** advice to government  
on building a low-carbon economy  
and preparing for climate change

Mr Tim Crosland  
Plan B  
62 Sutherland Square  
London SE17 3EL

7 August 2017

Committee on Climate Change advice about the implications of the Paris Agreement

Dear Mr Crosland,

Thank you for your further letter of 19 May. In Lord Deben's absence I am replying. I am sorry for the delay.

As stated in Lord Deben's letter of 2 May, the Committee takes its legal duties very seriously.

We recognise that the Paris Agreement describes a higher level of ambition than the one that formed the basis of the UK's existing legislated emission reduction targets.

We also agree with the Government's intention to set a new target in future that reflects the global need to reach net zero emissions. Our advice, however, has been not to set new UK emissions targets now. The Committee does not believe it had the evidence to set such a target now.

TC/1/12 Letter from Professor James Hansen to Plan B, February 2018 (excerpts)

**Climate Science, Awareness and Solutions, Inc.**

Earth Institute, Columbia University  
475 Riverside Drive, Suite 520  
New York, NY 10115

Timothy John Edward Crosland, Director  
Plan B. Earth  
62 Sutherland Square  
London, SE17 3EL

**Regarding:** Claim No: CO/16/2018

February 20, 2018

Dear Mr. Crosland,

I offer this statement in support of Plan B's demand that the U.K. substantially increase its climate ambition to accord with the dictates of international law

As you noted in your First Witness Statement, pursuant to the United Nations Framework Convention on Climate Change and its subsequent Paris Agreement, national emissions targets must be set to avert dangerous climate change through "appropriate contributions" that aim to limit global warming to 1.5°C or "well below" 2°C – and on the basis of equity and the precautionary principle.

...

I understand, as well, that the Committee on Climate Change, the sole Interested Party in your case, recently changed course and now claims that the current U.K. emissions reduction target for the year 2050 "could be consistent with a 66% probability of limiting warming to 2°C." I trust that the High Court will adequately interrogate the Committee as to its meaning here, but for the nonce I will offer a few observations.

First, to say that a target "could be" consistent with warming of 2°C is really to say nothing at all; it is akin to saying that "it might, or might not be consistent."

Second, the research since 2008 that I have undertaken in conjunction with leading international experts indicates that limiting warming to 2°C will not be adequate, over the long run, to avoid planet-wide disastrous consequences. A target that is "consistent with" a 34 percent chance of exceeding 2°C warming, accordingly, must be deemed beyond the pale.

...

Thank you for your consideration of these points. I am prepared to elaborate on any of them, or otherwise provide the High Court with further support, at your request or the request of the Court.



James E. Hansen, Director  
Climate Science, Awareness and Solutions  
Earth Institute, Columbia University  
New York, New York, USA

TC/1/13 2013 Department of Transport estimate for UK aviation emissions

**Table 6.3: CO<sub>2</sub> emissions from departing aircraft at individual airports (central forecast)**

	Emissions million tonnes CO <sub>2</sub>			Share of Total UK Departure CO <sub>2</sub>		
	2010	2030	2050	2010	2030	2050
Heathrow	18.8	21.4	18.2	57%	49%	39%
Gatwick	3.9	4.7	4.3	12%	11%	9%
Stansted	1.1	3.5	1.9	3%	8%	4%
Luton	0.7	1.3	0.9	2%	3%	2%
London City	0.2	0.5	0.5	1%	1%	1%
London Total	24.7	31.4	25.7	75%	72%	55%
Other UK Airports	6.9	10.3	19.5	21%	24%	42%
Ground APU	0.4	0.5	0.7	1%	1%	2%
Freight	0.8	1.2	0.9	2%	3%	2%
Residual	0.1	0.1	0.1	0%	0%	0%
Total	32.85	43.50	46.97	100%	100%	100%

TC/1/14 Airports Commission Estimate for UK aviation emissions

**Table 2.1 - Carbon emissions, carbon traded: Heathrow Do Minimum, for 2026 – 2050<sup>6</sup>**

Year	Heathrow Airport, Number of passengers	Heathrow Airport, Numbers of ATMs	Heathrow Airport, tonnes CO <sub>2</sub>	UK Aviation Total, tonnes CO <sub>2</sub>	Heathrow as % of UK Total for carbon emissions
2026	82,219,824	482,073	20,566,718	39,791,963	51.7
2030	85,483,664	484,227	20,530,830	40,393,641	50.8
2040	90,472,248	487,646	19,844,858	41,135,703	48.2
2050	94,906,328	472,147	17,145,585	39,944,049	42.9

**Table 2.2 - Carbon emissions, carbon traded: Heathrow NWR, for 2026 – 2050**

Year	Heathrow Airport, Number of passengers	Heathrow Airport, Numbers of ATMs	Heathrow Airport, tonnes CO <sub>2</sub>	UK Aviation Total, tonnes CO <sub>2</sub>	Heathrow as % of UK Total for carbon emissions
2026	92,958,872	558,450	22,218,299	41,327,919	53.8
2030	116,208,352	684,162	24,919,519	43,754,775	57.0
2040	133,862,832	754,164	25,339,658	45,485,931	55.7
2050	137,772,480	748,147	22,050,631	43,519,841	50.7

TC/1/15 2017 DfT estimate for 2050 UK aviation emissions

Baseline				LGW Second Runway			
	low	central	high		low	central	high
2015	36.2	36.2	36.2	2015	36.2	36.2	36.2
2020	37.2	38.9	40.7	2020	37.2	38.9	40.7
2030	36.6	38.6	41.6	2030	37.0	39.1	42.4
2040	36.3	38.1	41.4	2040	36.7	39.3	43.1
2050	35.0	37.0	42.1	2050	36.5	39.3	44.3
LHR Extended Northern Runway				LHR Northwest Runway			
	low	central	high		low	central	high
2015	36.2	36.2	36.2	2015	36.2	36.2	36.2
2020	37.2	38.9	40.7	2020	37.2	38.9	40.7
2030	40.4	42.8	45.2	2030	41.2	43.5	45.7
2040	39.2	41.7	44.4	2040	39.8	42.3	45.1
2050	37.6	39.2	44.0	2050	38.1	39.9	44.1

MtCO<sub>2</sub>, departing flights



TC/1/16 FCO describes climate change as 'existential threat'

## Climate Change Convention:Written question - 904604

**Q** Asked by **Peter Aldous** (Waveney) [N]

Asked on: 27 March 2018

**Foreign and Commonwealth Office**

 904604

### **Climate Change Convention**

What diplomatic steps his Department has taken to support the implementation of the Paris agreement on climate change.

**▶ A** Answered by: **Mark Field**

Answered on: 27 March 2018

Climate change is an existential threat, but also an opportunity to drive a global clean economy revolution. Our diplomats and Climate Envoy are working, with BEIS and international partners, to ensure international implementation of Paris Agreement commitments and project UK leadership including our Clean Growth Strategy and green Industrial Strategy.



## Further, faster, deeper: the UK needs a more ambitious Climate Change Act

March 29, 2018 9.35am BST

Deborah Benbrook / shutterstock

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The UK's [Climate Change Act](#) is a pioneering and far-sighted piece of legislation, ushered in ten years ago by a remarkable cross-party consensus in parliament and clear support across the nation.

As we celebrate its tenth anniversary, it is time to ask, though, whether the central ambition of the Act – reducing carbon emissions by at least 80% from 1990 levels by 2050 – is still adequate in light of changing circumstances, or whether it needs strengthening.

### Authors



**John Krebs**

Emeritus Professor of Zoology,  
University of Oxford



**Joanna Haigh**

Co-Director, Grantham Institute  
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Environment, Imperial College  
London

The government's statutory advisor, the Committee on Climate Change (the CCC, on which one of us used to sit), [advises that](#) in order to stand an evens chance of meeting the 1.5°C aspiration, global emissions of CO<sub>2</sub> need to fall to net zero by the 2040s. The IPCC is producing a special report this year on the case for limiting warming to 1.5°C and pathways for doing so, and is [likely to say the same thing](#).

One of the principles of the UN climate convention is that prosperous nations lead the way. Britain agreed to this back in 1992 and has reaffirmed it many times since. If the science is clear that the global target should be "net zero by 2050", there is no case for the UK setting a later date – and there is a case for making it earlier.