

News story: New tool calculates NHS and social care costs of air pollution

The health and social care costs of air pollution in England could reach £5.3 billion by 2035 unless action is taken, according to a new report and cost tool published today by Public Health England (PHE). Last year, the costs were £42.88 million. Local authorities will be able to use it to inform their policies to improve air quality.

The report and tool are part of the wider government strategy to reduce air pollution which was announced today, Tuesday 22 May 2018, by the Department for Environment, Food and Rural Affairs.

Working with the UK Health Forum and Imperial College London, PHE's report and tool highlight the potential costs to the NHS and social care system of exposure to Particulate Matter (PM2.5) and Nitrogen Dioxide (NO2), 2 of the pollutants to be dealt with under the government strategy.

The costs are for diseases where there is a strong association with air pollution: coronary heart disease; stroke; lung cancer; and child asthma.

When diseases with weaker evidence of association are also added, including chronic obstructive pulmonary disease; diabetes; low birth weight; lung cancer (for NO2 only); and dementia, the costs were £157 million in 2017 and could reach £18.6 billion by 2035.

There could be around 2.5 million new cases of all of the above diseases by 2035 if current air pollution levels persist.

A relatively small reduction in the population's exposure to PM2.5 and NO2 could lead to a significant reduction in costs. Modelling was carried out at the national level and for 2 local authorities, Lambeth and South Lakeland, which represent areas with high and low levels of PM2.5 and NO2 respectively.

If there was a 1µg/m3 reduction in PM2.5 and NO2 over a year, relative to the 2015 baseline, the cumulative number of new cases of all diseases and NHS and social care costs avoided could be:

Years	Region	1µg/m3 reduction in PM2.5	1µg/m3 reduction in PM2.5	1µg/m3 reduction in NO2	1µg/m3 reduction in NO2
		New cases avoided (per 100,000)	Costs avoided (£m/100,000)	New cases avoided (per 100,000)	Costs avoided (£m/100,000)
2015 to 2025	England	146	0.72	32	0.19
	Lambeth	153	0.72	28	0.15

Years	Region	1µg/m3 reduction in PM2.5	1µg/m3 reduction in PM2.5	1µg/m3 reduction in NO2	1µg/m3 reduction in NO2
		New cases avoided (per 100,000)	Costs avoided (£m/100,000)	New cases avoided (per 100,000)	Costs avoided (£m/100,000)
2015 to 2035	South Lakeland	119	0.6	33	0.3
	England	314	2.42	59	0.6
	Lambeth	310	2.35	57	0.54
	South Lakeland	204	2.05	70	0.75

All local authorities can use the tool to estimate the impact on health and the savings to the NHS and social care under different air pollution scenarios.

Professor Paul Cosford, Medical Director and Director of Health Protection at PHE, said:

Air pollution is a growing threat to the public's health, evidence shows it has a strong causal association with coronary heart disease, stroke, lung cancer and childhood asthma.

PHE has created a new air pollution tool so, for the first time, local authorities can calculate the cost of air pollution, providing impetus to act to improve air quality.

Local authorities are ideally placed to introduce policies to minimise air pollution, especially given the legal air quality powers they have to tackle it locally. The areas where they can act – health, housing, transport, education, local economies, green space and quality of life – are all relevant to local government policy.

Until now, there has been no simple way for local authorities to estimate the potential savings to the public purse from taking local action on PM2.5 and NO2. This tool may help local authorities make a more fully developed economic and financial case for reducing emissions.

The government's Clean Air Strategy provides further support to local authorities.

Press release: April 2018 Transaction Data

In April:

- HM Land Registry completed more than 1,625,090 applications to change or query the Land Register
- the South East topped the table of regional applications with 373,677

The transaction data shows HM Land Registry completed 1,625,098 applications in April compared with 1,688,244 in March and 1,386,147 last April, of which:

- 346,788 were applications for register updates compared with 359,219 in March
- 804,157 were applications to get an official copy of a register compared with 824,859 in March
- 196,560 were search and hold queries (official searches) compared with 211,464 in March
- 28,161 were postal applications from non-account holders, compared with 26,228 in March

Applications by region and country

Region/country	February applications	March applications	April applications
South East	376,385	384,760	373,677
Greater London	313,340	337,656	314,534
North West	185,253	193,405	184,504
South West	158,433	159,147	159,528
West Midlands	143,338	142,764	140,096
Yorkshire and the Humber	122,513	128,654	121,756
East Midlands	115,725	119,374	115,347
Wales	74,301	76,650	75,111
North	71,772	75,246	73,765
East Anglia	71,764	70,448	66,644
Isles of Scilly	75	79	69
England and Wales (not assigned)	70	61	67
Total	1,632,969	1,688,244	1,625,098

Top 5 local authority areas

Top 5 local authority areas	February applications	Top 5 local authority areas	March applications	Top 5 local authority areas	April applications
Birmingham	26,256	Birmingham	26,895	Birmingham	25,990
City of Westminster	21,991	City of Westminster	24,562	City of Westminster	22,505
Leeds	18,730	Leeds	19,505	Leeds	18,630
Manchester	16,972	Manchester	17,708	Manchester	16,698
Cornwall	16,606	Cornwall	17,174	Cornwall	16,343

Top 5 customers

Top 5 customers	February applications	Top 5 customers	March applications	Top 5 customers	April applications
Enact	50,488	Enact	50,160	Enact	48,943
Optima Legal Services	27,904	Optima Legal Services	28,113	Optima Legal Services	26,741
O'Neill Patient	23,851	O'Neill Patient	26,056	O'Neill Patient	25,473
Devonshires	20,684	Infotrack Limited	22,948	Infotrack Limited	24,411
TM Group (UK) Ltd	19,558	TM Group (UK) Ltd	19,320	TM Group (UK) Ltd	18,058

[Access the full dataset on data.gov.uk](https://data.gov.uk)

Notes to editors

1. Transaction Data is published on the 15th working day of each month. The May Transaction Data will be published at 11am on Thursday 21 June 2018 at [HM Land Registry Monthly Property Transaction Data](https://data.gov.uk).
2. The monthly Transaction Data showing how many applications for new titles, leases, splitting titles, updating existing titles, official copies of the register and search and hold queries (official searches) were received, reflects the volume of applications lodged by customers using an HM Land Registry account number on their application form.
3. We are challenging ourselves to reassess our language to make our terms understandable to both our commercial and citizen customers. This is in line with our commitment set out in the [Business Strategy 2017-2022](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/682222/Business-Strategy-2017-2022.pdf) under the 'simplicity' element of our ambition.
4. Completed applications in England and Wales shown by region and by local authority include postal applications as well as those sent electronically.

5. Transaction Data excludes: pending applications, bankruptcy applications, bulk applications, discharge applications (to remove a charge, for example a mortgage, from the register).
6. Transactions for value are applications lodged involving a transfer of ownership for value. For an explanation of other terms used, see [abbreviations used in the transaction data](#).
7. Most search and hold queries (official searches) carried out by a solicitor or conveyancer are to protect the purchase and/or mortgage. For example, a search and hold query will give the buyer priority for an application to HM Land Registry to register the purchase of the property. This can give an indication of market activity.
8. Reasonable skill and care is used in the provision of the data. We strive to ensure that the data is as accurate as possible but cannot guarantee that it is free from error. We cannot guarantee our data is fit for your intended purpose or use.
9. Transaction Data is available free of charge for use and re-use under the [Open Government Licence](#) (OGL). The licence allows public bodies to make their data available for re-use.
10. If you use or publish the Transaction Data, you must add the following attribution statement: *Contains HM Land Registry data © Crown copyright and database right 2017. This data is licensed under the Open Government Licence v3.0.*
11. HM Land Registry's mission is to guarantee and protect property rights in England and Wales.
12. HM Land Registry is a government department created in 1862. It operates as an executive agency and a trading fund and its running costs are covered by the fees paid by the users of its services. Its ambition is to become the world's leading land registry for speed, simplicity and an open approach to data.
13. HM Land Registry safeguards land and property ownership worth in excess of £4 trillion, including around £1 trillion of mortgages. The Land Register contains more than 25 million titles showing evidence of ownership for some 85% of the land mass of England and Wales.
14. For further information about HM Land Registry visit www.gov.uk/land-registry

15. Follow us on Twitter [@HMLandRegistry](#) our [blog](#) and [LinkedIn](#) and [Facebook](#)

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[News story: New IPO steering board chair appointed](#)

The appointment follows the retirement of Bob Gilbert from the role at the end of March 2018.

He is a member of the Ofcom Board and was previously a non-executive director on the Intellectual Property Office (IPO) Steering Board. As chair, Tim will provide effective strategic leadership to the Steering Board and support to the executive team.

[Tim](#) brings a wealth of experience to the role.

Commenting on his appointment Tim Suter said:

I'm delighted to have been appointed to this important role and look forward to working with Tim Moss and his team. The IPO has an

excellent reputation for the quality of rights it delivers for customers. Part of the reason this reputation is down to the value it places on its people. I will work to ensure the IPO continues to deliver for both its customers and its' staff.

The role of our Steering Board is to advise ministers, through our Director General, on our strategies and performance (including targets) as set out in our corporate plan. It provides guidance from a commercial standpoint on our operation and development across a range of issues.

During the last 12 months, the Steering Board has provided advice and guidance on a wide range of topics. These include our corporate plan, agency targets, intellectual property policy, accounts and risk management. The Steering Board meets six times a year.

[Speech: Foreign Secretary's keynote speech at chemical weapons conference](#)

I'm grateful to the French Chair of the Partnership for convening this important meeting.

We gather at a moment when the rules that guarantee the security of every country – including the global ban on chemical weapons – are gravely imperilled.

Almost a century ago, the world united to prohibit the use of chemical weapons with the Geneva Protocol of 1925.

More recently, 165 countries have signed the Chemical Weapons Convention of 1997 and agreed never to develop, manufacture or stockpile these munitions.

Banning this terrible category of weapon must rank among the seminal diplomatic achievements of the last century.

And yet I have the unwanted distinction of representing a country which has experienced the use of chemical weapons on its soil, not in a 20th century conflict but on 4th March this year,

when a nerve agent struck down a father and daughter in Salisbury.

Sergei and Yulia Skripal were rushed to hospital after being found reeling and distressed on a park bench.

In the days that followed, our experts had to seal off nine locations in Salisbury – including a restaurant and a cemetery – in order to screen them for possible contamination.

A police officer, Detective Sergeant Nick Bailey, was hospitalised after suffering the effects of exposure to the nerve agent.

Scores of unwitting bystanders had to be checked for symptoms.

Their only involvement was that chance had placed them in certain areas of Salisbury on 4th March;

they could have been from any country – including those represented here – for Salisbury ranks among the most popular tourist destinations in Europe.

The fact that no bystander was seriously harmed owed everything to luck and nothing to the perpetrators, who clearly did not care how many innocent people they endangered.

I am glad to say that Mr Skripal was released from hospital earlier today – though he is still receiving treatment. His daughter and Detective Sergeant Bailey were discharged last month.

Our experts analysed samples taken from the scene and identified them as a fourth generation, military-grade “Novichok” nerve agent.

The highest concentration was found on the handle of the front door of Mr Skripal’s home.

We sent samples to the Organisation for the Prohibition of Chemical Weapons, whose experts independently confirmed this identification.

“Novichok” nerve agents were first developed in the Soviet Union in the 1980s.

The British Government has information that within the last decade, Russia has produced and stockpiled small quantities of “Novichok” under the same programme that also investigated how to deliver nerve agents, including by application to door handles.

The fact that such a pure nerve agent was used narrows down the list of culprits to a state actor.

And there is only one state that combines possession of Novichoks with a record of conducting assassinations and an obvious – indeed publicly avowed – motive for targeting Sergei Skripal.

We are left with no alternative conclusion except that the Russian state was responsible for attempted murder in a British city, using a banned nerve agent in breach of the Chemical Weapons Convention.

Our friends around the world shared our assessment and 28 countries and NATO acted in solidarity with Britain by expelling over 130 Russian diplomats – the biggest coordinated expulsion in history.

Many of those countries are represented here today; once again, I thank them from the bottom of my heart.

This resolute action demonstrated our shared determination to ensure there can be no impunity for the use of chemical weapons, whether by a state or a terrorist group, whether in the UK or Syria or anywhere else.

On 7th April, barely a month after the Salisbury incident, the Asad regime used poison gas in the Syrian town of Douma, killing as many as 75 people, including children.

Britain, France and the United States responded by launching targeted, precise and proportionate strikes against the chemical weapons infrastructure of the Syrian regime.

Even before the atrocity in Douma, a joint investigation by the UN and the OPCW had found the Asad regime guilty of using chemical weapons on four separate occasions between 2015 and 2017.

Russia's response was not to enforce the ban on chemical weapons but to use its veto in the Security Council to protect Asad by shutting down the international investigation.

That is all the more tragic when you consider that Russia is a permanent member of the Security Council with special responsibility for upholding peace and security, including the global ban on chemical weapons.

Given that the Kremlin seems determined to block any international investigation empowered to attribute responsibility for chemical attacks in Syria, then we must work together to develop another mechanism.

In the meantime, we have it within our power to impose sanctions on any individuals or entities involved in the use of chemical weapons.

We can collect and preserve the evidence of these crimes.

We can call for a special session of the Conference of States Parties to the Chemical Weapons Convention, in order to consider how best to support the Convention and its implementing body, the OPCW.

And we can make clear our resolve that the global ban on chemical weapons shall not be allowed to fade into irrelevance.

If that moral calamity were to happen, the security of every nation would be at risk.

My goal is to be the last foreign minister who attends a gathering like this as the representative of a country that has witnessed the use of chemical weapons.

Thank you.

News story: Underpinning data science – request for information

The Ministry of Defence (MOD) seeks to use cutting-edge data science techniques to develop novel approaches to sort, manage, store, fuse and exploit the vast range of data available now and in the future.

Such capabilities will help improve understanding and situational awareness from all available and pertinent information, improving decision makers' understanding, and thus improving their ability to make better decisions. We (Dstl) wish to gauge the current state of the art and capability across industry and academia to inform our project planning.

We are interested in capabilities that can be applied across defence and security. We also want to understand potential crossovers from other areas that have similar technical challenges (e.g. the legal, health and finance sectors).

Therefore, we are seeking information on the experience, capabilities, products, facilities and resources that industry and academia have in the following areas:

- The management of uncertainty: Support decision makers by exploiting multiple data feeds with methods for tracking and visualising uncertainty.
- Information science (including information theory): The ability to understand the nature of information; its inherent value; the extent to which questions can be tackled with the data available; and appropriate data reduction techniques to reduce the burden on users.
- Fusion and understanding of information: The fusion of multiple sources of data and information, in order to represent the same real-world objects in a consistent, accurate and useful manner, and to reduce uncertainty. This includes (but is not limited to): aspects of association and correlation; information normalisation; entity disambiguation; summarisation; and supporting the identification and inference of new knowledge.
- Predictive analysis: From rudimentary forms of prediction, such as temporal pattern mining, to predictive analytics, which includes identifying and selecting optimum courses of action for a given future scenario. Interest extends from operational and intelligence functions (e.g. inference of intent and campaign planning outcomes) to wider

business needs (e.g. complex scenarios and/or predicting maintenance schedules in support of logistics).

- Hypothesis generation and evaluation: Approaches for generating, describing and evaluating hypotheses in support of decision making – in particular, methods that could improve the currently manual and human-led approach and improve corporate memory.
- People data analytics: Predictive workforce planning, specifically focussing on analysing personnel records and methods, and the wider ethical risks and issues in exploiting data analytics for workforce planning and management (note, that this is not the only applied example we have interest in and information on other applications is welcome).

Your response should detail the nature of the technologies where you have expertise, as well as the current technology readiness level (TRL) and the maturity these might be expected to reach within a two-year timeframe with realistic funding levels.

This is a request for information to support research activity only, and it is not the start of any formal procurement process. Dstl is looking to assess and understand the scope of the markets capability to formulate its plan for the multi-year research project. Submissions should not contain proprietary or commercially sensitive information.

We may choose to follow up submissions with a 'without commitment' discussion to further understand and explore the information submitted.

Please respond to this request for information no later than six weeks from its release date by emailing: DSTLUDSRFI@dstl.gov.uk.

If you would like to receive further information in the future, please let us know; any project-level communications will augment the standard open advertising of research opportunities.