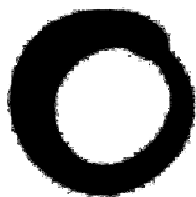


Number
89

Spring
2020



Nottingham
Friends of
the Earth

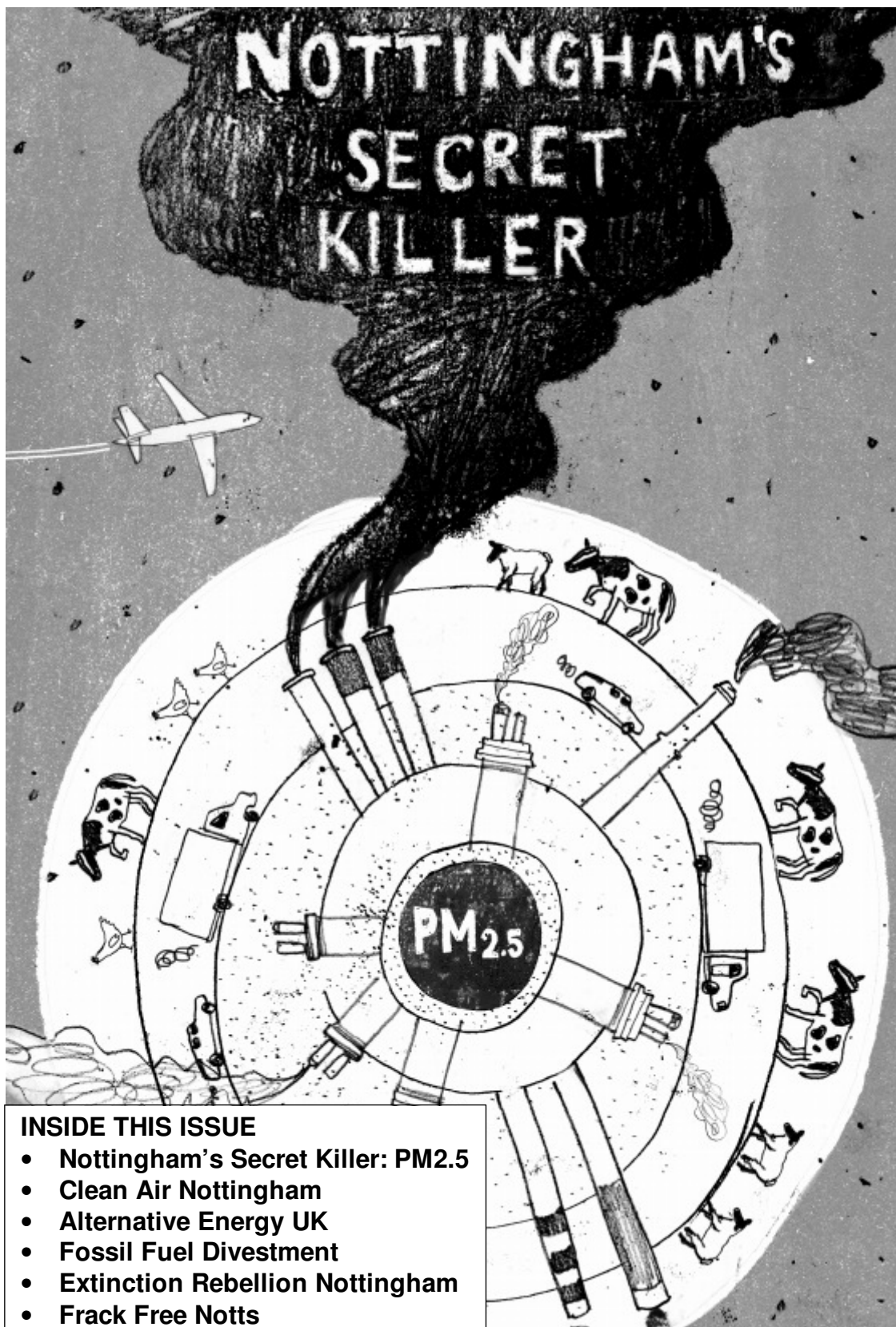
NOTTINGHAM FRIENDS OF THE EARTH

Down to Earth

Welcome to Nottingham Friends of the Earth. We are one of around 150 local Friends of the Earth groups campaigning for a better environment locally as well as nationally and internationally. **Friends of the Earth** has a reputation for effective campaigns backed up by authoritative research.

Another fine mess

Nottingham PM2.5 particulate levels exceed World Health Organisation limits



INSIDE THIS ISSUE

- Nottingham's Secret Killer: PM2.5
- Clean Air Nottingham
- Alternative Energy UK
- Fossil Fuel Divestment
- Extinction Rebellion Nottingham
- Frack Free Notts

Nottingham's secret killer

A secret killer is claiming around 130 lives each year in Nottingham (1). This secret killer is invisible and hardly known – it's the fine particles in the air known as PM2.5 (also known as fine particulate matter). Alarming, it is not known exactly what is causing this filthy air in Nottingham.

Particulate matter (PM) is a term used to describe the mixture of solid particles and liquid droplets in the air. Particulate matter (including soot) is emitted during the combustion of solid and liquid fuels, such as for power generation, domestic heating and in vehicle engines. Sources of particulate matter can also include from manufacturing industrial processes, and ammonia from farming.

PM2.5 means the mass per cubic metre of air of particles with a size (diameter) generally less than 2.5 micrometres (μm). That's equivalent to a thirtieth of a human hair.

A scientific review carried out this year by the Forum of International Respiratory Societies concluded air pollution might be damaging every organ and virtually every cell in the human body. And the key contributor to ill health and death is PM2.5. Yet Nottingham City only has one monitor for PM2.5 situated on Parliament Street near to the Victoria Centre.

Early in 2019 CAN (Clean Air Nottingham) set out to find out where the worst areas were in Nottingham and the sources and health risks of PM2.5. The group was loaned a special handheld monitor from the University of Nottingham and carried out measurements around the city.

The World Health Organisation (WHO) sets an annual limit for average readings of $10 \mu\text{g.m}^{-3}$ and a daily limit of $25 \mu\text{g.m}^{-3}$. The WHO is currently updating their guidelines but almost all scientists agree there is no safe limit. CAN found:

- Readings between $7\text{--}15 \mu\text{g.m}^{-3}$ throughout the city
- Readings on some housing estates similar to those by busy roads
- The highest readings by the Queens Medical Centre

- A general problem of PM2.5 throughout the city

Nottingham's Secret Killer - PM2.5

www.nottfoe.gn.apc.org/CAN-SecretKiller.html

- an 18 page report - details the findings but was unable to pinpoint the sources of this pollutant. It highlighted one Government report ("Fine Particulate Matter (PM2.5) in the United Kingdom" (DEFRA, 2012)) which shows Nottingham had approximately 10% lower concentrations of PM2.5 than London, and over three quarters of Nottingham's PM2.5 comes from distant sources, including urban pollution from Birmingham and beyond.

Alarming, such results are all built on modelled data and not actual readings. Yet all pollution experts agree PM2.5 must be tackled with monitoring, targets and timetables. So CAN's report called for citywide monitoring of PM2.5, a plan to reduce PM2.5 levels, an analysis of sources affecting Nottingham and a medical investigation of effects of PM2.5 on local hospital admissions.

The report received coverage in the *Post*, and was featured in *Air Quality News*. Since it's publication, PM2.5 has risen higher up the local political agenda. The City Council published its five-year plan and has vowed to cut air pollution by 20% in this period. CAN have met officers and Deputy Leader of the City Council Sally Longford. They say there are now plans for an extra high quality PM2.5 monitor in the city, to monitor air quality near schools and provide education on air pollution. The awkward truth is this. Cutting the present mix of road traffic can substantially decrease nitrogen dioxide air pollution. However, based on DEFRA's data even removing ALL road traffic from Nottingham would not meet this 20% target. Other actions are necessary.

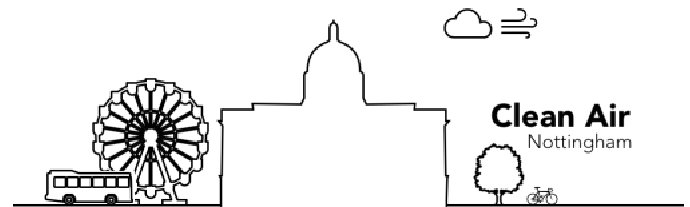
(1) Deaths calculated by the Birkett Index App based on DEFRA statistics. Full explanation of methodology described in App

Find CAN on Facebook:

<https://www.facebook.com/cleanairnottingham/>

Roger Critchley

Clean Air Nottingham



As reported in issue 88 of *Down to Earth* (2019), Nottingham is one of six UK cities in the UK with illegal levels of nitrogen dioxide (NO₂) that exceed the EU limit of 40 microgrammes per cubic metre of air.

Recent research carried out by the Environmental Research Group at King's College London has quantified the likely impacts of air pollution in Nottingham on a range of important health conditions, including heart attacks, hospitalisations for stroke and emergency asthma admissions amongst adults and children. The research found that there is a correlation between days when there are high levels of air pollution in Nottingham and increases on those particular days in the number of Nottingham area residents attending Nottingham hospitals with illnesses known to be caused by or worsened by poor air quality.

The King's College report also found that if air pollution in Nottingham was cut by just one fifth, every year we would see:

- 175 fewer children suffering with low lung function
- 3 fewer babies being born underweight
- 97 fewer children suffering with a chest infection and 84 fewer asthmatic

children suffering with bronchitis symptoms (cough and phlegm)

- A decrease in the risk of coronary heart disease by around 3.7% which would result in 52 fewer cases a year
- A decrease in lung cancer cases by around 6.7%, which would result in 15 fewer cases every year

In recent years, Nottingham City Council (NCC) has put in place measures to reduce air pollution – for instance, lower emission buses and taxis and extending air quality management areas. There are bold targets to reduce nitrogen dioxide levels by 23% by 2023/2024 (on a 2009 baseline). However, it is questionable whether the measures taken by NCC will be sufficient. Stronger legislation from central government with funding is needed to enable NCC to fully address the problem.

Nottingham FoE is actively working with newly-formed action group Clean Air Nottingham (CAN). The group was set up in 2019, with aims to increase awareness of air quality issues, and to lobby and campaign for change. Find Clean Air Nottingham on Facebook.

Karl Barrow



Shedding some light: more than 2,500 LEVC TX plug-in hybrid electric taxis operate in London, and are now a familiar sight in the capital. Similar vehicles have recently been introduced in Nottingham

Alternative Energy in UK - a mixed picture

Confusing, inspiring, disappointing, astonishing... all these could describe the complex green energy situation into the 2020s.

For one thing, greenwash and misleading advertising muddy the waters. A case in point ... some energy supply deals are marketed as 100% renewable, but their suppliers don't make renewable energy, nor buy it directly from those who do! Under a loophole they buy cheap 'renewable energy certificates' (issued by the regulator to renewable energy developers for each megawatt-hour generated). These sell separately from the electricity - for much less. Identified by consumer group Which?, this dodge qualifies the deals, at best, as 'pale green'.

Conversely, the Co-Op has announced Community Power, the first tariff sourced exclusively from 90 UK community wind and solar projects, and has pledged reinvestment to maintain and extend them.

Aiming for impartial, evidence-based analysis of the energy and climate position, an independent group Carbon Brief <www.carbonbrief.org> has been formed. Its reports are detailed, with clear sources and methodologies. Early reports disclose interesting findings.

Something unprecedented happened in the third quarter of 2019 - the UK's windfarms, solar panels, biomass and hydro plants made more electricity than the combined output from power stations burning coal, oil and gas. What is behind this? The main reason for rising renewable generation has been rising capacity - as new offshore windfarms have opened. The 1.2 gigawatt Hornsea One project was recently completed, becoming the world's largest offshore windfarm. More than 2.1 GW of UK offshore started up in 2018. The mid-decade total will be about 20 GW, to rise to 30GW by 2030. Electricity from wind is beginning to compete on price with that from gas (the chief fossil fuel today) and may potentially even undercut it in a few years. Wind energy exponents also point to a fact of nature: in winter, when energy demand rises, there tend to be stronger winds!

Another alternative energy source, biomass, has also undergone developments. It

accounted 11% of UK electricity generation in 2019, nearly a third of the total from all renewables. Some two-thirds of the biomass output is from "plant biomass", primarily wood pellets burnt at Lynemouth in Northumberland and the Drax plant in Yorkshire. The remainder was from an array of smaller sites based on landfill gas, sewage gas and anaerobic digestion. There's a 'but' ... biomass-derived electricity is not zero-carbon. In some circumstances it could lead to higher emissions than from fossil fuels. Biomass feedstock may, anyway, be too precious to burn - one better use might as a carbon store.

National Grid performs a continuous balancing act between its mix of available generators and the varying nationwide demand. It sometimes has to ask windfarm operators to switch off and gas plants to start running in order to keep the electricity grid stable. The Grid aims, within five years, to be able to run stably without fossil fuels, at least for short periods.

Another record was broken in 2019 - coal accounted for just 2% of UK generation. As recently as 2012 it met 40% of UK needs, but no coal station is planned to remain by 2025; they are increasingly uneconomic due to CO₂ prices and pollution rules.

Over the last decade, electricity generation from renewable sources has more than quadrupled. At the same time, electricity demand has fallen – leaving fossil fuels with a shrinking share of the total. The Climate Change Act embodies a 30 year timescale to achieve the objective of net-zero greenhouse gas emissions. Since 1990, UK has cut its CO₂ emissions by around 40%, with almost all of its recent progress coming from the electricity sector. To maintain this rate will be challenging: it has been starkly observed that you can only abandon coal once.

As yet another component in the green energy mix, solar photovoltaic electricity generation continues to develop, both technically and by area, one interesting example in Nottingham being that on Gedling Country Park. The expansion of domestic solar was undoubtedly dealt a blow with the government's lesser economic incentive for installation.

Alternative energy is only one among several necessary strategies against climate change. Progress to date, though tangible, is yet insufficient. Simon Evans of Carbon Trust has pointed out, soberingly, that 'lack of progress in other parts of the economy means the UK remains far off track against its upcoming legally-binding carbon targets, let alone the recently adopted goal of net-zero greenhouse gas emissions by 2050.'

UN Environment Programme has an even starker warning. Unless the world begins to rapidly reduce greenhouse gas emissions, the 1.5C goal of the Paris Agreement 'will slip out of reach.' Since 2010, global CO₂ emissions have increased by around 11%. Each year of growing global emissions means that deeper and faster cuts are needed to meet the Paris Agreement targets.

Jeremy Jago

Notts Pension Fund Divestment

Notts is still a laggard on climate change

In 2018, Friends of the Earth produced a report on local authority pension funds which found that Nottinghamshire's Pension Fund is one of the "laggards", doing very little to protect its members' pensions from the financial risks of climate change.

We worked with Frack Free Notts to ask questions at the Fund's AGM in 2018.

Now Extinction Rebellion Nottingham have taken up the campaign to get the Fund to divest from fossil fuel company investments, and shift funds into renewable energy and local sustainable infrastructure.

At the AGM in October 2019, people sang "divest now . . . there's no time to waste", with Captain Fossil sailing to climate oblivion

throwing out dud £20 notes.

We first took up this campaign in 2015 when the Bank of England warned that over two thirds of coal, oil and gas reserves will have to be left in the ground becoming worthless "stranded assets".

More recently a UN report has warned that leading oil and gas companies could lose 31% of share value by 2025 (UN Principles for Responsible Investment "Equity Markets Impacts").

But Notts is still a laggard, with around £180m still invested just in Shell and BP.

Links to a campaign briefing are at www.nottfoe.gn.apc.org/divest-2019AGM.html

Nigel Lee



Captain Fossil at the helm: following questions asked at Notts Pension Fund AGMs in 2015 and 2018, Extinction Rebellion Nottingham organised a demonstration at the AGM in October 2019.

Extinction Rebellion Nottingham Divestment Campaign

Extinction Rebellion Nottingham (XRN) Actions and Divestment working groups have been planning a campaign of actions designed to push Nottinghamshire County Council pension scheme to divest from fossil fuel investments. XR Nottingham will execute a rolling and escalating campaign of actions, raising public awareness regarding what is a scandal in the making and applying pressure to the institution responsible for investment decisions.

The campaign began on the 20th January, where XRN made a solemn, assertive declaration of our intentions at a pension committee meeting (see page 5). Going forward, the committee's meetings will be held under scrutiny and there will prominent actions to promote the campaign.

XRN believe this campaign and this issue has the power to directly connect the climate emergency to local issues and to individual self-interest. The threat of environmental collapse may seem distant to some, but a threat to pension pots and local services should the pension scheme be damaged by irresponsible investment decisions should engage many more. XRN believe that this is a legitimate public interest piece, as the risk that the pension fund is taking with their continued investment in fossil fuel assets is a scandal in

the making. The tide is turning, with influential voices, such as Mark Carney, and influential institutions, such as Black Rock, joining calls for divestment. Furthermore, it is understood that the decisions and practices of Nottinghamshire's scheme are observed and respected by other local government pension schemes and so if XRN were to be successful in making it divest, it could be the first domino in the line, leading to divestment by other schemes.

More broadly, XR will be focusing on growing its base, up-skilling and empowering its members and preparing for what promises to be an incredible opportunity to create the momentum for change at COP26 later in the year in Glasgow.

XRN welcomes anyone to its actions and we'd love to see Friends of the Earth members lending their weight and expertise to our divestment campaign and our other activities. Please see our website (<https://xrnottingham.org>) and Facebook (<https://www.facebook.com/XRNottm>) for information on trainings, events and actions, or sign up to our email list and get it delivered to you.

Etienne Stott

Have we seen the end of fracking?



2019 started with an increased threat of fracking in Nottinghamshire. It ended with the fracking companies in retreat.

In March, IGas declared that its exploratory drilling at Misson, North Notts, had found a "highly encouraging" shale gas resource. The question at that time was whether IGas would first drill a second borehole to better quantify this resource. Or whether they would go straight to developing a wider gasfield between Retford and Scunthorpe.

But 2019 ended with a government moratorium on fracking and no progress by IGas at Misson. IGas' share price was down around 50% over the year, as was that of IGas partner Egdon Resources.

Egdon also has a licence to frack the area between Loughborough and Nottingham – with

no progress reported over the year. And no progress was reported by Warwick Energy which has a licence to frack the area between Derby and Nottingham.

Meanwhile chemical company Ineos, which has licences to frack large areas around Sherwood Forest, also appeared to make no progress during 2019 in Notts. But Ineos is still pursuing exploratory sites in North East Derbyshire (Marsh Lane) and Rotherham (Woodsetts and Harthill).

Just before the general election in December, the government said it would not allow any more hydraulic fracturing consents unless scientific evidence shows that it can be done safely. (We wait to see whether the evidence will have changed after the election.) That is because renewed fracking by Cuadrilla in 2018 and 2019 at a site near Blackpool had caused a large number of tremors, one of which was large enough to damage people's houses.

The only previous high volume hydraulic fracturing in the UK was by Cuadrilla in 2011 which also caused tremors and led to a seven year moratorium. The Oil and Gas Authority has now admitted that current technology

cannot accurately predict where fracking might cause tremors.

During the year the High Court ruled that a pro-fracking rule in national planning policy was illegal because scientific evidence hadn't been properly considered. And the government also backed down on proposals to fast-track planning applications.

In August, a study by Nottingham University and British Geological Survey found that shale gas reserves could be much lower than previously estimated. In October the Environment Agency admitted that emissions of unburnt methane from flares at oil and gas sites could be higher than previously estimated.

In June, Nottinghamshire Police admitted that policing protests at two IGas sites in North Notts at Misson Springs and Tinker Lane had cost £900,000.

For a review of fracking stories in 2019 see:
www.drillordrop.com/2019/12/28/review-of-2019

Nigel Lee



Frack Free Notts campaigning outside Nottinghamshire County Council's offices

Contacts

Co-ordinator: Jeremy Jago (c/o Sumac Centre, address as below)
Membership Officers: Nigel Lee, 0115 9788059; Jeremy Jago
Newsletter Editor: Roger Steele, 07474 257029
Website Editor: Nigel Lee, 0115 9788059

Campaigns:
Nottm ProWA: Roger Steele, 07474 257029
Anti-fracking: Nigel Lee, 0115 9788059
Clean Air: Karl Barrow, 07973 187851
Trees: Hannah Evans
Waste & Resources: Nigel Lee, 0115 9788059
Plastics: Karl Barrow

For general information, please visit our website (see below), or write with an SAE to Nottingham Friends of the Earth, c/o Sumac Centre, 245 Gladstone Street, Nottingham NG7 6HX.

For information about joining the group, please mark the envelope "Membership".

For latest campaign news and contact details, visit
www.nottfoe.gn.apc.org

National Friends of the Earth: The Printworks, 131-143 Clapham Road, London SW9 0HP (020 7490 1555), or email info@foe.co.uk.

See national website www.friendsoftheearth.uk for easy online actions.

From September 2019 we meet on the second Tuesday of each month, between 7.30pm and 9.30pm, in the Visitors Centre of the Vat & Fiddle, Queensbridge Rd NG2 1NB (the Visitors room is at the left hand end of the pub with direct access from the outside and wheelchair accessible). Please come and join us. You would be very welcome.

Printed on recycled paper.

If you would like to receive future editions of this newsletter electronically to save paper, please let us know your email address. You can contact us by email via our website (see above), or alternatively nottinghamfoe@hotmail.com. Please note that the file size can be over 1MB.

AGM Announcement

Our next Annual General Meeting will be on Tuesday, 10th March 2020 (7:30pm, Vat & Fiddle – see above for address).

We look forward to seeing you there.