

## **Breast Cancer UK Policy Position Paper UK Chemicals Strategy**

**November 2021**

***The UK Chemicals Strategy represents a welcome opportunity to minimise the adverse impacts of exposure to harmful chemicals on the nation's health. The strategy must deliver a comprehensive action plan to support a non-toxic environment and reduce the number of deaths and illnesses from harmful chemicals linked to breast cancer in line with the UN Sustainable Development Goals<sup>i</sup>. We need binding targets to phase out harmful chemicals encountered in everyday life ensuring public health and precaution represent the cornerstones of the strategy.***

### **About Breast Cancer UK**

Breast Cancer UK is dedicated to the prevention of breast cancer by tackling the environmental and lifestyle causes of the disease including exposure to carcinogenic and endocrine disrupting chemicals found in everyday products that enter our environment. We fund research into the environmental and chemical causes of breast cancer. We educate the public on actions individuals can take to reduce their risk and campaign to strengthen public protections from harmful chemicals.

Breast Cancer is the most diagnosed cancer in the UK – over 55,000 women and 370 men are diagnosed every year and countless more are affected by the disease<sup>ii</sup>. 1 in 7 women will get breast cancer during their lifetime, yet over 1 in 4 breast cancer cases are preventable<sup>iii</sup>. We believe it is time for a fresh approach to cancer prevention with a greater focus on environmental risk factors, including actions to reduce public exposure to harmful chemicals linked to breast cancer.

### **Purpose of the UK Chemicals Strategy**

Synthetic chemicals play a vital role in everyday life and can be found in an array of consumer and industrial products. Chemical production globally has increased fiftyfold since 1950 and is forecast to treble in volume by 2050<sup>iv</sup>. Yet we often take the safety of these chemicals for granted, forgetting the potential risks certain chemicals may pose to human health and the environment.

The Government published its 25-Year Environment plan<sup>v</sup> which promised to introduce an ambitious chemicals strategy setting out the UK's approach to managing chemicals with the potential to cause harm. The Government has pledged<sup>vi</sup> to support the safe management of chemicals by:

- Taking account of the impact of chemicals and chemical mixtures on human health.
- Maintaining the UK's high standards of chemical regulation post-Brexit.
- Addressing concerns related to endocrine disruptors and the use of toxic substances in furniture and household goods.

The strategy is a crucial policy initiative that will have significant implications for our efforts to prevent breast cancer. It's impossible for the public to avoid every harmful chemical. The Government must take immediate steps to reduce our exposure to chemicals of concern, thereby improving public health and protecting future generations from increased vulnerability to disease.

Keeping harmful chemicals out of our daily lives and supporting a non-toxic environment must be a post-Brexit priority. Prevention is better than cure!

## **Breast Cancer UK Calls to Action**

### **1. Deliver an action plan to identify and manage the effects of endocrine disrupting chemicals to protect public health and the environment.**

Breast Cancer UK has long been concerned that exposure to endocrine disrupting chemicals (EDCs) is increasing our vulnerability to breast cancer. An EDC is defined as “an exogenous chemical, or mixture of chemicals, that interferes with any hormone action”<sup>vii</sup>, resulting in harm to the health of the individual or that of subsequent generations. The hormone oestrogen is an established breast cancer risk factor. Women with high levels of endogenous oestrogen have twice the average risk of developing breast cancer<sup>viii</sup>. Exposure to compounds that mimic or interfere with the action of oestrogens are used in products and are present in food, water and air pollution, increasing breast cancer risk. Society is exposed to increasing quantities of synthetic chemicals, many have not been tested for adverse health effects including their effects on breast development and breast cancer.

The UN’s Global Chemicals Outlook has stated that harmful chemicals are now “ubiquitous in humans and the environment”<sup>ix</sup>. We ingest them through food and drink, inhale them in the air we breathe and absorb them through our skin. Exposure to EDCs, even at low doses, can trigger reactions in the body that increase our chances of suffering from diseases and health disorders such as hormone dependent cancers, obesity, diabetes, heart disease, reproductive problems, and neuro behavioural difficulties<sup>x</sup>. The “critical windows of sensitivity” include development in the womb, early infancy, childhood, and pregnancy where the risk of developing breast cancer may increase<sup>xi</sup>.

Throughout our lives we are exposed to a cocktail of harmful chemicals. Studies have shown that exposure to chemicals such as bisphenols in plastics<sup>xii</sup>, phthalates in personal care products<sup>xiii</sup>, parabens in cosmetics<sup>xiv</sup>, flame retardants in furniture<sup>xv</sup>, per and polyfluoroalkyl substances in food packaging<sup>xvi</sup> and pesticides such as glyphosate<sup>xvii</sup> are associated with increased breast cancer risk. The Endocrine Society lists over 1000 known, or suspected EDCs<sup>xviii</sup>. A recent In vitro study identified nearly 300 chemicals in consumer products that could increase breast cancer risk<sup>xix</sup>. Yet little information is provided to the public on EDCs in products. Strengthening labelling laws will empower the public to take action to protect themselves and reinforce the consumer’s right to know.

The harmful impacts of EDCs have been recognised for 20 years. Yet regulatory action has been a case of too little too late. In 2020, the EU published its “Chemicals Strategy for sustainability” which committed to updating its EDC regulatory framework to support a zero-pollution ambition by speeding up EDC identification and banning their use in consumer products<sup>xx</sup>. The UK Chemicals Strategy must take similar steps with timelines to prevent and minimise public exposure to EDCs.

#### **Breast Cancer UK calls on the UK Chemicals Strategy to:**

- **1.1 Implement horizontal criteria to identify EDCs based on the WHO definition and introduce a new category of Substance of Very High Concern for EDCs under UK REACH.**
- **1.2 Ensure the identification of EDCs leads to immediate regulatory consequences including bans and restrictions based on the precautionary principle with EDCs treated as non-threshold substances.**
- **1.3 Develop a comprehensive programme of education and practical advice aimed at pregnant and breastfeeding women, to help reduce their exposure to harmful chemicals.**
- **1.4 Take steps to improve product labelling by introducing a permanent warning label in products and packaging containing SVHC ensuring the consumer’s right to know is fulfilled.**

## 2. Improve the Regulation of Chemicals based on the precautionary principle

The Precautionary principle is enshrined in EU law and is incorporated within UK law through the passage of the Environment Bill<sup>xxi</sup>. Under the principle, if there is evidence that a chemical is hazardous and poses a risk to human health or the environment, then action should be taken to restrict or ban its use. If a consensus develops that it does not pose a risk, then action can be taken to lift those restrictions. The principle is fundamental to the protection of human health.

Following the UK's EU departure, calls have been made for the introduction of a so-called 'innovation principle' to inform decision making on chemicals<sup>xxii</sup>. This is usually stated as "when a policy or regulatory decision is under consideration its impact on innovation should be assessed and addressed"<sup>xxiii</sup>. Whilst innovation is a worthwhile objective, the pretence that precaution stifles innovation is misguided. In our view, precaution drives innovation by supporting safer alternatives leading to safer products, healthier foods, and a cleaner environment. Above all, an innovation principle is not an environmental principle and risks diminishing environmental protection measures.

The Government's TIGGR Taskforce has also called for a proportionality principle to be put "at the heart of UK regulation"<sup>xxiv</sup>. In terms of chemicals regulation, we reject suggestions that precaution has led to the "persistence of outdated practices...and is not in line with scientific thinking". A proportionality principle could dilute precaution and weaken protections by declaring them disproportionate. As stated, by the Berlaymont declaration<sup>xxv</sup> "Scientific uncertainty should not delay regulatory action and commercial interests must not take precedent over concerns about risks".

The future pollution of humans and the environment from harmful chemicals must be prevented. Any gaps in scientific knowledge should be acknowledged and limited evidence of harm must not be misinterpreted as 'evidence of limited harm'. Properly applied, the precautionary principle assures that necessary weight is given to public health and environmental risks. Therefore, it is vital that public health and precaution represent the cornerstones of the chemical's strategy.

### Breast Cancer UK calls on the strategy to:

- **2.1 Honour the UK's commitment to the precautionary principle, prioritising public health over commercial interests and supporting the phase out of harmful chemicals.**
- **2.2 Reject calls for the introduction of an innovation and proportionality principle to avoid undermining the application of the precautionary principle.**

## 3. Mirror and keep pace with EU REACH as the 'Gold Standard' of Chemicals Regulation

UK citizens have benefitted from the most comprehensive and stringent chemical protections in the world through EU REACH. Whilst not perfect, it is the 'global standard' of chemicals regulation and the precautionary approach that underpins it has led to the restriction of numerous chemicals linked to breast cancer. These include bisphenol A (BPA) in plastic bottles and thermal paper<sup>xxvi</sup> formaldehyde<sup>xxvii</sup> in cosmetics and phthalates such as DEHP, BBP and DBP in toys and articles<sup>xxviii</sup>.

The new UK REACH regime came into force on 1<sup>st</sup> January 2021. The Government pledged this regime "would be consistent with the fundamental aims of the principles of REACH" including retaining a high level of protection for human health and the environment. Yet the UK is falling behind EU protections, despite ministerial assurances that the UK would not "diverge for divergence's sake"<sup>xxix</sup>. UK citizens are now on course to receive less protection than EU citizens.

In March, the Government published its restriction programme which confirmed the UK would initiate just two restriction proposals in its first year<sup>xxx</sup>, compared to thirteen EU restrictions,

excluding action to restrict the intentional use of microplastics. The UK has already fallen behind the EU's SVHC candidate list with ten new substances<sup>xxxii</sup> added to the EU list, including three flame retardants with carcinogenic properties and bisphenol B<sup>xxxiii</sup>, an EDC linked to breast cancer<sup>xxxiii</sup>.

Without any legislative commitment to keep pace with the EU, UK chemicals controls will rapidly diverge and become weaker putting the UK at risk of becoming a dumping group for harmful chemicals that fail to meet EU Standards. This will reduce public protections from harmful chemicals linked to breast cancer. It remains in the UK's interests to align with EU Controls to ensure Ministers deliver on commitments to maintain and enhance chemical protections post-Brexit.

**Breast Cancer UK calls on the UK Chemicals Strategy to:**

- **3.1 Commit to align with EU chemical controls ensuring no reduction in public protections.**
- **3.2 Ensure deviation from the EU REACH candidate list only occurs when the intention is to raise standards by banning/restricting a chemical of concern where the EU has not acted.**
- **3.3 Commit to publish criteria used by the Health & Safety Executive for developing restrictions proposals and identifying SVHC that are deemed "appropriate to the UK".**

**4. Adopt a grouping approach to speed up the regulation of harmful chemicals**

Chemicals are regulated on a one-by-one basis, which has resulted in multiple instances of regrettable substitution putting the health of future generations at risk. The chemical group bisphenols are a prime example of why there is a need to control groups of EDCs. This group includes BPA, a chemical used extensively since the 1950s and later shown to be an EDC<sup>xxxiv</sup>.

Due to its effects on human health, BPA has been phased out of certain products. It was banned in baby bottles in 2011<sup>xxxv</sup>, identified as a SVHC in 2017<sup>xxxvi</sup> and banned in till receipts in 2020<sup>xxxvii</sup>. Yet BPA is still permitted within food contact materials, despite being shown to act as a mammary carcinogen in rodents, mimic oestrogen, encourage breast cells to divide and affect breast tissue<sup>xxxviii</sup>. Countries such as France, Denmark, and Belgium have adopted measures to restrict BPA in food contact materials<sup>xxxix</sup>. The UK must also legislate to support the transition towards safer alternatives.

As BPA has been subject to regulatory action, companies have substituted BPA for chemicals that are structurally similar and may have similar effects on human health. Research funded by Breast Cancer UK found that bisphenol substitutes also act as oestrogen mimics and some such as BPAF, BPB, and BPF, may be more potent than BPA<sup>xl</sup>. EU countries have recently classified BPB and BPS as EDCs and presumed human reproductive toxicants<sup>xli</sup>. Regulating substances one-by-one has created years of regulatory delays and prolonged exposure to chemicals that threaten public health.

Economically, regrettable substitutions also place a financial burden on manufacturers and retailers who are investing resources in switching to alternative chemicals which may cause harm. The strategy represents the ideal vehicle to move towards a grouping approach to chemicals management. This will improve the efficiency and coherence of regulation, speed up regulatory action to restrict chemicals of concern and support informed substitution towards safer alternatives.

**Breast Cancer UK calls on the UK Chemicals Strategy to:**

- **4.1 Adopt a grouping approach to substance evaluations based on similar structures and properties, where appropriate, to avoid instances of regrettable substitution.**
- **4.2 Ensure identification of a group of harmful chemicals has automatic effects across legislation including: the Control of Pesticides Regulation, Biocides Product Regulation, Cosmetics regulation, the Control of Substances Hazardous to Health and the classification, labelling and packaging regulation, to avoid regulatory loopholes.**

- **4.3 Set out timelines to phase out groups of harmful chemicals linked to breast cancer. These include Bisphenols, Phthalates, Parabens, PFAS and Brominated and organophosphate Flame Retardants.**
- **4.4 Grant Derogations and exemptions only for ‘essential use’ excluding substances used in toys, childcare articles, food contact materials and cosmetics.**

**5. Support a cross-governmental approach, giving public health bodies responsibilities to research and regulate the effects of harmful chemicals to protect the nation’s health.**

Public exposure to harmful chemicals is contributing to a significant rise in incidence rates of public health conditions. The WHO estimates the disease burden from chemical pollution at over 2 million deaths in 2019<sup>xlii</sup>. The Lancet commission concluded “the effect of chemicals on human health are poorly defined...and have the potential to cause global epidemics of disease, disability and death”.

Yet, despite mounting scientific evidence, neither the responsibilities assigned to public health bodies (Department of Health & UK Health Security Agency), nor public health<sup>xliii</sup> and cancer strategies<sup>xliiv</sup> address the need to reduce exposure to harmful chemicals. This omission is completely unacceptable and weakens our battle to prevent disease. The EU ‘Beating Cancer Plan’ acknowledged that “reducing exposure to hazardous substances will contribute significantly towards cancer prevention” and pledged to reduce exposure to EDCs and carcinogens<sup>xliv</sup>. The UK Chemicals strategy’s commitment to “take account of the human health impact of chemicals” is welcome. Yet, to date, no UK public health body is tasked with assessing the human health impact of chemicals.

Without such recognition, the government’s approach to the prevention of ill-health remains inadequate. This has been echoed by the former Chief Medical Officer<sup>xlvi</sup>, the Environmental Audit Committee<sup>xlvii</sup>, WHO<sup>xlviii</sup> and the UN<sup>xlix</sup>. The public too are concerned, with a Eurobarometer survey finding that over 85% of respondents are worried about the impact of harmful chemicals in products on human health<sup>l</sup>. The strategy has a vital role to play in supporting the prevention of ill-health. Action now will contribute towards reducing the estimated 40% of preventable cancers<sup>li</sup> and meeting the WHO target to lower mortality from non-communicable diseases by 25% by 2025<sup>lii</sup>.

**Breast Cancer UK calls on the UK Chemicals Strategy to:**

- **5.1 Acknowledge the public health risks of routine exposures to EDCs and recognise them as preventable cancer risk factors.**
- **5.2 Support a cross-governmental approach to chemicals management with DEFRA working alongside the DoH, BEIS, UKHSA and the HSE to reduce the burden of disease.**
- **5.3 Give the UK Health Security Agency<sup>liii</sup> explicit responsibilities under UK REACH to research and regulate the effects of harmful chemicals, to protect the nation’s health.**
- **5.4 Implement the recommendations of the Environmental Audit Committee 2019 report on “Toxic Chemicals in Everyday Life” without delay.**
- **5.5 Work with DoH to ensure National Cancer Plans align with the strategy’s commitments to reduce exposure to environmental pollutants, to support cancer prevention.**

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- <sup>i</sup> UN Development programme (2021) '[Sustainable Development Goals](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>ii</sup> Breast Cancer UK (2021) '[Facts and Figures](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>iii</sup> Brown, K. F. et al. (2018) '[The fraction of cancer attributable to modifiable risk factors in England, Wales, Scotland, Northern Ireland, and the United Kingdom in 2015](#)', British Journal of Cancer 118: 1130-1141
- <sup>iv</sup> European Environment Agency (2016) '[Chemicals in Europe: understanding impacts on human health and the environment](#)' P.1 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>v</sup> HM Government (2018) '[A Green Future: Our 25 Year Plan to Improve the Environment](#)' P.100 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>vi</sup> DEFRA (2019) '[Toxic Chemicals in Everyday Life: Government Response to the Committee's Twentieth Report of Session 2017-2019](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>vii</sup> Gore, A. C., et al (2015) '[EDC-2 The Endocrine Society's Second Scientific Statement on Endocrine-Disrupting Chemicals](#)'; Endocrine Reviews Volume 36, issue 6 P. 1-150.
- <sup>viii</sup> Key, T.J, Travis, R.C (2003) '[Oestrogen exposure and breast cancer risk](#)' Breast Cancer Research 5(5): 239-247
- <sup>ix</sup> UN Environment Programme (2019) '[Global Chemicals Outlook II from Legacies to Innovative Solution: Synthesis Report](#)' Implement the 2030 Agenda for Sustainable Development P.30 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>x</sup> WHO/UNEP (2013) '[State of the science of endocrine disrupting chemicals](#)' P.2 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xi</sup> WHO (2014) '[Identification of risks from exposure to Endocrine-Disrupting Chemicals at the country level](#)' P.17 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xii</sup> Breast Cancer UK (2018) '[Endocrine disrupting chemicals: background briefing](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xiii</sup> Breast Cancer UK (2015) '[Cosmetics & Personal Hygiene products: background briefing](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xiv</sup> Breast Cancer UK (2018) '[Parabens: background briefing](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xv</sup> Breast Cancer UK (2017) '[Flame Retardants: Background briefing](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xvi</sup> Schneider, J, Stakova, J, Cingotti, N (2021) '[Throwaway Packaging Forever Chemicals, European Wide survey on PFAS in disposable food packaging and takeaway](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xvii</sup> World Health Organisation (2015) '[IARC Monographs Volume 112: evaluation of five organophosphate insecticides and herbicides](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xviii</sup> Endocrine Society (2014) '[Endocrine Society Introduction to EDCs. A Guide for Public Interest Organisations and Policy Makers](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xix</sup> Cardona, B., Rudel, R.A. (2021) '[Application of an in Vitro Assay to Identify Chemicals That Increase Estradiol and Progesterone Synthesis and Are Potential Breast Cancer Risk Factors](#)' Environmental Health Perspectives Volume 129, No 7 Online publication date July 21 2021.
- <sup>xx</sup> European Commission (2020) '[Chemicals Strategy for Sustainability towards a toxic-free Environment](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxi</sup> DEFRA (2021) '[UK World-leading Environment Act becomes Law](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxii</sup> Chemical Industry Association (2020) '[UK Chemicals Strategy: Building a healthier environment and society together](#)' P.4 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxiii</sup> Greener UK (2018) '[Briefing on the precautionary principle](#)' p.1 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxiv</sup> Rt Hon Sir Iain Duncan Smith MP, Rt Hon Theresa Villers MP, George Freeman MP (2021) '[Taskforce on Innovation, Growth and Regulatory Reform](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxv</sup> International Panel on Chemical Pollution (2014) '[The Berlaymont Declaration on Endocrine Disruptors](#)' P.6 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxvi</sup> Chemical Watch (2020) '[Restriction of BPA in thermal paper enters into force in EU](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxvii</sup> Milman, O (2019) '[US Cosmetics are full of chemicals banned by Europe- Why?](#)' The Guardian (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxviii</sup> Erickson, E.B. (2017) '[European Union further restricts four phthalates](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxix</sup> [Letter from Environment Minister Rebecca Pow MP to Rt Hon Phillip Dunne Chair of Environmental Audit Committee \(2020\)](#)
- <sup>xxx</sup> DEFRA (2021) '[Restrictions under new chemicals regime announced for first time](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxxi</sup> ECHA (2021) '[Candidate list updated with two chemicals that are toxic to reproduction](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxxii</sup> Mesnage, R et al (2017) '[Editors Highlight: Transcript profiling reveals Bisphenol A Alternatives Active in Human Breast Cancer Cells](#)' Toxicol Scin1;158(2):431-443
- <sup>xxxiii</sup> ECHA (2021) '[Candidate list updated with eight hazardous chemicals](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxxiv</sup> CHEM Trust (2018) '[From BPA to BPZ a toxic soup? How companies witch from a known hazardous chemical to one with similar properties, and how regulators could stop them](#)' (Accessed: 18th November 2021)
- <sup>xxxv</sup> European Commission (2011) '[Bisphenol A: EU ban on baby bottles to enter into force tomorrow](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxxvi</sup> ECHA (2017) '[MSC unanimously agrees that Bisphenol A is an endocrine disruptor](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxxvii</sup> Chemical Watch (2020) '[Restriction of BPA in thermal paper enters into force in EU](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xxxviii</sup> Stillwater, B et al (2020) '[Bisphenols and Risk of Breast Cancer: A Narrative Review of the Impact of Diet and Bioactive Food Components](#)' Frontiers in Nutrition Volume 7, 581388
- <sup>xxxix</sup> European Parliament (2018) '[New rules on bisphenol A in food contact materials](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xl</sup> Mesnage, R. et al. (2017). '[Editor's Highlight: Transcriptome Profiling Reveals Bisphenol A Alternatives Activate Estrogen Receptor Alpha in Human Breast Cancer Cells](#)'. Toxicological Sciences 158(2):431-443.
- <sup>xli</sup> ECHA (2021) '[Annex XV Report 'Proposal for identification of a Substances of very high concern on the basis of the criteria set out in REACH article 57'](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xlii</sup> World Health Organisation (2021) '[Public Health impact of chemicals: knowns and unknowns](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xliiii</sup> NHS England (2019) '[The NHS Long Term Plan](#)' (Accessed: 18th November 2021)
- <sup>xliiv</sup> Independent Cancer Taskforce (2015) '[Achieving world-class cancer outcomes – A strategy for England 2015-2020](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xli v</sup> European Commission (2021) '[Europe's Beating Cancer Plan', Communication from the Commission to the Parliament and the Council](#)' P.12 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xli vi</sup> Davies, S (2017) '[Annual Report of the Chief Medical Officer 2017: health impacts of all pollution - what do we know?](#)' P.52 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xli vii</sup> Environmental Audit Committee (2019) 'Toxic Chemicals in Everyday Life' 16th July 2019, HC1805. 2017-2019. (Accessed: 22<sup>nd</sup> November 2021)
- <sup>xli viii</sup> WHO (2011) '[Asturias Declaration: A Call to action](#)' (Accessed: 18th November 2021)
- <sup>xli ix</sup> United Nations Human Rights Office of the High Commissioner (2020) '[Special Rapporteurs on the environmentally sound management and disposal of hazardous substances and wastes](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>l</sup> European Commission (2020) '[Attitudes of European Citizens towards the Environment](#)' P.45 (Accessed: 22<sup>nd</sup> November 2021)
- <sup>li</sup> Cancer Research UK (2021) '[Statistics on preventable cancers](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>lii</sup> World Health Organisation (2021) '[Noncommunicable diseases](#)' (Accessed: 22<sup>nd</sup> November 2021)
- <sup>liii</sup> Department of Health (2021) '[Work begins for UK Health Security Agency to protection the nation](#)' (Accessed: 22<sup>nd</sup> November 2021).