

Impact Assessment, The Home Office

Title: Control of nitrous oxide under the Misuse of Drugs Act 1971.

IA No: HO0445

RPC Reference No: N/A

Other departments or agencies: N/A

Date: 4 September 2023

Stage: FINAL

Intervention: Domestic

Measure: Secondary legislation

Enquiries:

nitrousoxideconsultation@homeoffice.gov.uk

RPC Opinion: Not applicable

Business Impact Target: Not a regulatory provision

Cost of Preferred Option (in 2023/24 prices)

Net Present Social Value NPSV (£m)	-67.9	Business Net Present Value BNPV (£m)	0.0	Net cost to business per year EANDCB (£m)	0.0
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What is the problem under consideration? Why is government intervention necessary?

Given widespread availability for illegitimate use, including increased availability of higher harm larger canisters and high rates of usage, including amongst children and young people, the Government has decided to introduce legislation to control nitrous oxide under the Misuse of Drugs Act 1971 as a Class C drug. Given that nitrous oxide has legitimate uses, the Government does not intend to unduly burden those seeking to continue doing so for legitimate purposes. The chosen approach is to exempt activities where the purpose is not for consumption of nitrous oxide by individuals (other than in legitimate settings such as in medicine or dentistry).

What is the strategic objective? What are the main policy objectives and intended effects?

The strategic objective is to reduce nitrous oxide misuse and associated antisocial behaviour, such as littering, while continuing to enable the legitimate use. By placing nitrous oxide under schedule 5 of the Misuse of Drugs Regulations 2001 (with the addition of a possession and importation and exportation offence), whilst also including an exemption for legitimate uses, the Government intend to avoid placing undue burden on those seeking to use nitrous oxide for legitimate purposes. At the same time the public will be clearer as to the law and can be deterred from misuse of this drug, while law enforcement will have the ability to directly address user behaviour with the introduction of an offence of possession.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 1: 'Do Nothing'.

Option 2: Control nitrous oxide under the Misuse of Drugs Act 1971 as a Class C drug. Exempt from licensing requirements the import, export, possession, production, supply and offer to supply of nitrous oxide for legitimate purposes. This would mean no licensing requirements for legitimate purposes. **This is the Government's preferred option.**

Main assumptions/sensitivities and economic/analytical risks

Discount rate (%)

3.5

The main sensitivities and risks of the analysis centre around the estimated change in the prevalence of nitrous oxide use for its psychoactive effects following the legislative change and how the police will target such behaviour and assign outcomes under the new possession offence (Class C offence involving nitrous oxide). The uncertainty in the volumes is reflected in the wide range of costs estimated in the appraisal of the preferred option.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** 3 years after implementation

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:

Chris Philp

Date: 4th September 2023

Summary: Analysis & Evidence

Policy Option 1

Description: Control nitrous oxide under the Misuse of Drugs Act 1971 as a Class C drug.

FULL ECONOMIC ASSESSMENT

Year(s):	Price Base	2023/24	PV Base	2023/24	Appraisal	10	Transition	1
Estimate of Net Present Social Value NPSV (£m)						Estimate of BNPV (£m)		
Low:	-19.6	High:	-178.1	Best:	-67.9	Best BNPV	0.0	

COSTS, £m	Transition Constant Price	Ongoing Present Value	Total Present Value	Average/year Constant Price	To Business Present Value
Low	2.0	17.6	19.6	2.3	0.0
High	15.8	162.3	178.1	20.8	0.0
Best Estimate	6.5	61.4	67.9	7.9	0.0

Description and scale of key monetised costs by 'main affected groups'

The majority of costs are estimated fall to the Ministry of Justice, between £14.1 to £124.5 million (PV), with a central estimate of £48.1 million (PV) over 10 years. The central estimate is split between £18.4 million to the prison system, £16.3 million to legal aid, and £13.3 million to the courts. There are also costs of £19.8 million to the police.

Other key non-monetised costs by 'main affected groups'

In the absence of relevant cost estimates, investigation costs to the Police have not been estimated. It is likely that these will increase given the increase in volume of offenders being recorded by the Police and prosecuted. As the majority of offenders are not charged and investigations for possession should be simple, investigation costs are expected to be minimal.

BENEFITS, £m	Transition Constant Price	Ongoing Present Value	Total Present Value	Average/year Constant Price	To Business Present Value
Low	0.0	0.0	0.0	0.0	0.0
High	0.0	0.0	0.0	0.0	0.0
Best Estimate	0.0	0.0	0.0	0.0	0.0

Description and scale of key monetised benefits by 'main affected groups'

There are a range of benefits associated with this measure such as greater awareness of the potential harms associated with persistent and high misuse of nitrous oxide, and lower levels of littering, but these could not be quantified due to a lack of unit costs and understanding of the scale of impact.

Other key non-monetised benefits by 'main affected groups'

There are expected to be a range of non-monetised benefits following intervention including a greater awareness of the harms associated with nitrous oxide misuse, leading to a potential reduction in harms through a reduction in nitrous oxide misuse for its psychoactive effects. Reduced use may also have positive impacts on the environment through reduced littering.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:										
Cost, £m	0.0	Benefit, £m	0.0	Net, £m	0.0					
Score for Business Impact Target (qualifying provisions only) £m:					-					
Is this measure likely to impact on trade and investment?					N/A					
Are any of these organisations in scope?			Micro	N	Small	N	Medium	N	Large	N
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)					Traded:	N/A	Non-Traded:	N/A		

PEOPLE AND SPECIFIC IMPACTS ASSESSMENT (Option 2)

Are all relevant Specific Impacts included?	Y	Are there any impacts on particular groups?	Y
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Evidence Base

A. Strategic objective and overview

A.1 Strategic objective

1. The objective of this policy intervention is to reduce the use of nitrous oxide recreationally for its psychoactive effect and associated anti-social behaviour without unduly hindering legitimate use. This will be achieved by the proposed classification and scheduling of the drug under the Misuse of Drug Act 1971¹ (MDA 1971) and the Misuse of Drugs Regulations 2001² (the 2001 Regulations). In line with the Home Office's Outcome Delivery Plan³, the strategic objective of this intervention is to reduce crime. Controlling nitrous oxide was announced as part of the Government's Anti-Social Behaviour Action Plan⁴ which sets out an ambitious new approach to working with local agencies to tackle the blight of anti-social behaviour facing communities across England and Wales. In addition, the policy is intended to result in a reduction in the health harms that are associated with nitrous oxide misuse.

A.2 Background

2. Nitrous oxide, also known as 'laughing gas', is a colourless, sweet-tasting gas. When combined with oxygen it is used as an anaesthetic and analgesic in medical and dental settings. It also has many other legitimate industrial and commercial uses, for example, as a food additive, propellant in catering and component of vehicle fuel. When inhaled nitrous oxide can produce euphoria and mild perceptual changes. When used for non-medical purposes, nitrous oxide is commonly inhaled directly from canisters, balloons or plastic bags containing the gas.
3. The production, supply, possession with intent to supply, import, export (and possession in a custodial institution) of nitrous oxide for its psychoactive effect are currently offences under the Psychoactive Substances Act 2016 (PSA 2016). Under PSA 2016 it is an offence to supply nitrous oxide if a person knows, or is reckless as to whether, it will be used for its psychoactive effects.
4. In June 2023 the Advisory Council on the Misuse of Drugs (ACMD) published an updated harms assessment of nitrous oxide⁵, in which they did not recommend the control of nitrous oxide under MDA 1971. However, the ACMD did cite anecdotal reports of an increase in some social harms such as drug driving and littering and reports of an increase in neurological harms which may be associated with exceptionally heavy and persistent use of nitrous oxide.
5. Despite its status under PSA 2016, nitrous oxide remains widely available, and through the Antisocial Behaviour Action plan, the Government took the decision to go further than the recommendation of the ACMD and tackle illicit supply and use by using the stronger powers in MDA 1971.
6. When deciding to control nitrous oxide, the Government recognised the number of legitimate uses it has and decided to not place undue burden on those seeking to continue to use it for legitimate purposes. The public consultation *Nitrous oxide: legitimate uses and appropriate controls*⁶ was launched on 2 May and closed on 27 June. The consultation sought to understand the full range of legitimate uses of nitrous oxide and proposed three options to enable the legitimate use of nitrous oxide under MDA 1971.

¹ Misuse of Drugs Act ,1971. Available here: <https://www.legislation.gov.uk/ukpga/1971/38/contents>

² The Misuse of Drugs Regulations, 2001. Available here: <https://www.legislation.gov.uk/uksi/2001/3998/contents/made>

³ Home Office, 2021, Home Office Outcome Delivery Plan. Available here: <https://www.gov.uk/government/publications/home-office-outcome-delivery-plan>

⁴ DLUHC and Home Office, 2023, *Anti-Social Behaviour Action Plan*. Available here: <https://www.gov.uk/government/publications/anti-social-behaviour-action-plan>

⁵ ACMD, 2023, *Nitrous oxide: updated harms assessment*. Available here: <https://www.gov.uk/government/publications/nitrous-oxide-updated-harms-assessment#full-publication-update-history>

⁶ Home Office, 2023, *Nitrous oxide: legitimate uses and appropriate controls*. Available here: <https://www.gov.uk/government/consultations/nitrous-oxide-legitimate-uses-and-appropriate-controls>

A.3 Groups affected

7. The main groups that would be affected by this policy have been identified as follows:
- Those who possess and use nitrous oxide for its psychoactive effects.
 - Those who produce, supply, import, export, and possess with intent to supply, (and those who possess in a custodial institution) nitrous oxide for its psychoactive effects.
 - People or businesses who supply nitrous oxide for medical and other legitimate uses.
 - People or businesses who use nitrous oxide for legitimate purposes⁷.
 - Members of the public who may witness nitrous oxide misuse or be affected by the littering of canisters.
 - Police forces in the UK who would need to familiarise themselves with the implications of the control of nitrous oxide under MDA 1971 and the 2001 Regulations, through reading guidance. Police forces will also be affected by a potential increase in the volume of offences involving the possession of a controlled drug under Class C of MDA 1971.
 - Criminal Justice Systems (CJS) in the UK which would be affected by a potential increase in the number of offences for the possession of a drug controlled under Class C of MDA 1971. This would include HM Prisons and Probation Service (HMPPS) which would face costs in constructing and maintaining new prison places; HM Courts and Tribunals Service (HMCTS) which would face costs in holding Magistrates' and Crown Court trials; the Legal Aid Agency which would fund legal aid for defendants in Magistrates' and Crown Court trials; and the Crown Prosecution Service (CPS) which would prosecute cases.

A.4 Consultation

Within government

8. The Home Office has consulted the Ministry of Justice (MoJ), the Cabinet Office throughout the development of the policy, the Department for Health and Social Care (DHSC) about medical applications, the Department of Transport (DfT) about drug driving, the Department for Business, Energy and Industrial Strategy⁸ (BEIS) about industrial uses, the Department for Environment, Food and Rural Affairs (Defra) about the environmental impact, including littering, and the Department for Health in Northern Ireland (DHNI).

Public consultation

9. The Home Office launched an 8-week public consultation on 2 May 2023, which closed on 27 June, to seek the views of the public, businesses, and other organisations on the design of the proposals. The consultation sought to understand the full range and scale of legitimate uses of nitrous oxide to enable the design of a legal framework to permit its use for legitimate purposes once controlled under Class C of MDA 1971. The consultation received 101 responses, most of which were from, or on behalf, of organisations. Responses were also received via email from relevant interested parties, including ambulance trusts, neurologists, and dentistry bodies. These responses have informed this Impact Assessment (IA) where relevant and a report summarising the responses to the consultation will be made available to the public.
10. Additional consultation was undertaken by officials, including engagement with police, the Food Standards Agency (FSA), and the Food Standards Scotland (FSS). The British Compressed Gases Association (BCGA) was also consulted, whose members largely supported tighter controls on

⁷ Legitimate uses include but are not limited to the following industries: medical, dentistry, veterinary, food/ catering, automotive, electronics, aerospace, oil and gas industry, pharmaceutical, research and development.

⁸ At the time of consultation, the department was BEIS. This has now however known as the Department for Business and Trade.

nitrous oxide. Officials engaged with the Night Time Industries Association to understand the impact of nitrous oxide misuse on the sector.

11. The Government had a statutory duty to consult the ACMD before making a decision as to whether to control nitrous oxide under MDA 1971 and on the appropriate scheduling under the 2001 Regulations. The ACMD published an updated harms assessment of nitrous oxide on 6 March 2023 in which they did not recommend control⁹. The Government published the response to this report later in March 2023¹⁰. The Government sought further advice from the ACMD on changes to the 2001 Regulations to enable legitimate use of nitrous oxide. The ACMD advised nitrous oxide to be placed under schedule 5 of the 2001 Regulations on 11 August 2023¹¹.

B. Rationale for intervention

12. The conventional approaches to government intervention are based on efficiency or equity arguments. Governments may consider intervening if there are strong enough failures in the way markets operate (for example, monopolies overcharging consumers) or there are strong enough failures in existing government interventions (for example, waste generated by misdirected rules) where the proposed new interventions avoid creating a further set of disproportionate costs and distortions. The Government may also intervene for equity (fairness) and distributional reasons (for example, to reallocate goods and services to more vulnerable groups in society).
13. The primary rationale for intervention in this instance is due to the negative externalities imposed on both the individual and wider society when nitrous oxide is misused for its psychoactive effects. The individual may be subject to a variety of harms when inhaling nitrous oxide, varying depending on the personal characteristics of the individual themselves and the frequency and intensity of nitrous oxide misuse. These include in the most extreme cases: strokes, blackouts, seizures, heart attacks, and death. These health impacts also have a wider impact on society through the increased demand on the NHS and drug treatment services.
14. There are further negative externalities imposed on wider society, including environmental and community impacts through littering of balloons and cartridges associated with nitrous oxide misuse. There are also concerns surrounding individuals driving while under the influence of nitrous oxide and associated traffic accidents, a primary rationale for intervention in the Netherlands to control nitrous oxide from January 2023.
15. The ACMD harms assessment¹² references concerns about increased neurological harms associated with heavy and persistent misuse of nitrous oxide, suggesting that intervention may assist in preventing future, more impactful harms, if the legislation has its desired effect.
16. Due to the design of the preferred option, the private sector should not be impacted by the intervention as exemptions have been designed to ensure legitimate use and supply of nitrous oxide is maintained without disruption. The main impacts are on individuals, wider society impacted by the negative externalities of nitrous oxide misuse, the police and the CJS.
17. The Government is best placed to intervene in the market as they are the only ones able to make amendments to the relevant Acts needed to implement both control of nitrous oxide as a controlled drug, and regulations to allow legitimate use to continue.

⁹ ACMD, 2023, *Nitrous oxide: updated harms assessment*. Available here: <https://www.gov.uk/government/publications/nitrous-oxide-updated-harms-assessment#full-publication-update-history>

¹⁰ ACMD, 2023, *Government response: ACMD nitrous oxide review*. Available here: <https://www.gov.uk/government/publications/nitrous-oxide-updated-harms-assessment/government-response-acmd-nitrous-oxide-review-accessible>

¹¹ ACMD, 2023, *Advice on scheduling and lawful access to nitrous oxide*. Available here: <https://www.gov.uk/government/publications/advice-on-scheduling-and-lawful-access-to-nitrous-oxide>

¹² ACMD, 2023, *Nitrous oxide: updated harms assessment*. Available here: <https://www.gov.uk/government/publications/nitrous-oxide-updated-harms-assessment#full-publication-update-history>

C. Policy objective

18. The policy objectives are to:
- Reduce the harms associated with nitrous oxide misuse. These include the harms to individuals, such as health impacts, and to wider society, such as littering.
 - Ensure legitimate access to nitrous oxide for purposes including medical, industrial and catering, can continue without disruption or undue burdens. This will allow businesses to maintain operations without additional costs.

D. Options considered and implementation

19. **Option 1: 'Do-nothing'**. Under **Option 1** no change would be made to the law. Nitrous oxide would continue to be controlled under PSA 2016, with no control on possession of nitrous oxide for its psychoactive effects (other than in a custodial institution). It would be expected that the volume and behaviour of individuals who misuse nitrous oxide would not change in this option. This does not meet the Government's objective to reduce the harms associated with nitrous oxide misuse.
20. **Option 2: Classifying nitrous oxide as a Class C drug under MDA 1971 and scheduling under Schedule 5 to the 2001 Regulations with an exemption for legitimate use.**
21. Controlling nitrous oxide under Class C of MDA 1971 will make it an offence to possess, supply, manufacture, import and export nitrous oxide for illegitimate purposes. As a Class C drug those in possession of nitrous oxide for non-exempted purposes could face a maximum sentence of two years in prison, an unlimited fine or both. Furthermore, those who supply or produce nitrous oxide for non-legitimate purposes could face a maximum sentence of 14 years in prison, an unlimited fine or both.
22. Drugs are placed into schedules (1 to 5) to the 2001 Regulations, and the schedule dictates the degree of lawful access and administrative requirements applicable. Following the advice of the ACMD, nitrous oxide will be placed under schedule 5 of the 2001 Regulations (with the addition of a possession and importation and exportation offence). An exemption for legitimate use will also be included to ensure that persons carrying on activities which do not relate to the consumption of nitrous oxide for its psychoactive effects (outside of legitimate settings, such as medicine or dentistry), are not criminalised.
23. **Option 2 is the Government's preferred option** as it meets the Government's objectives.

Preferred option and implementation date

24. **Option 2** will be implemented by an amendment to MDA 1971 to control nitrous oxide under Class C of that act, and an amendment to the 2001 Regulations to schedule nitrous oxide within Schedule 5 of those Regulations, enabling legitimate access to nitrous oxide for largely medical purposes. The amendments to the 2001 Regulations will exclude nitrous oxide from the general exemption from possession and import/export offences for Schedule 5 drugs but will create a bespoke exemption from offences for the use of nitrous oxide for legitimate purposes. Control under MDA 1971 confers stronger enforcement powers for illegitimate use and makes it an offence to possess nitrous oxide unless it is authorised or permitted by the 2001 Regulations.
25. Control is intended to commence before the end of 2023. It is for the police, who are operationally independent of the Home Office, to enforce drug controls regarding illicit use. The Home Office have committed to the ACMD, to review the policy in no less than three years.

E. Appraisal

General assumptions and data

26. The main assumptions and data sources used in this IA are listed below, with more detail on the cost and benefit assumptions given in the relevant sections. The net present value is estimated over 10 years using a 3.5 per cent discount rate, in line with HM Treasury *The Green Book* guidance¹³. The appraisal assumes implementation starts in November 2023, with costs presented in 2023/24 prices.
27. The effects of the preferred option are modelled relative to the counterfactual 'Do-nothing' baseline. In essence, the costs and benefits are those that only exist because of the preferred option being chosen over doing nothing, with **Option 1** having zero costs and zero benefits by definition.
28. It is assumed that the policy will reach steady state in year three of the appraisal period. It is assumed that the policy will be operating at 50 per cent in year one, and 75 per cent in year two, before reaching 100 per cent in year three onwards. Once the policy reaches steady state, volumes are kept constant throughout the appraisal period.
29. This IA refers to nitrous oxide users as either legitimate, for example businesses who use it in manufacturing, or illegitimate users, who are those who use the drug for its psychoactive effects. Illegitimate users may also be referred to as those who 'misuse' the drug or 'recreational users' throughout the IA. This IA refers to the production, import, export, supply, offer to supply and possession with intent to supply nitrous oxide as 'supply and production' offences for simplicity.
30. The appraisal estimates that there will be no impact on businesses who legitimately use nitrous oxide. This is due to the design of the policy to introduce an exemption for legitimate use to ensure that persons carrying on activities which do not relate to the consumption of nitrous oxide for its psychoactive effects are not criminalised.

Prevalence of nitrous oxide misuse

31. To estimate the prevalence of nitrous oxide misuse in the UK, the following data sources were used:
 - **Crime Survey for England and Wales (CSEW)**¹⁴: The CSEW provides estimates of the number of recreational nitrous oxide users in England and Wales, between 16 and 59 years old. This estimates that there were 781,000 nitrous oxide users in 2019/20, and 444,000 users between October 2021 and June 2022.
 - **Smoking, Drinking and Drug Use (SDD)**¹⁵: The SDD provides estimates of the proportion of recreational nitrous oxide users in England, between 11 and 15 years old. This estimates that 4.1 per cent of 11 to 15 year olds in England used nitrous oxide in 2018, and 1.8 per cent in 2021. These proportions are applied to population estimates¹⁶ to estimate the volume of nitrous oxide users.
 - **Scottish Health Survey**¹⁷: The survey provides estimates of the proportion of recreational nitrous oxide users in Scotland, between 16 and 75 years old. This estimates that 1 per cent of 16 to 75 year olds in Scotland used nitrous oxide in 2021. These proportions are applied to population estimates to estimate the volume of nitrous oxide users.
 - No data was identified for Northern Ireland.

¹³ HMT, 2022, *The Green Book*. Available here: <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020>

¹⁴ ONS, 2022, *Drug misuse in England and Wales - Appendix table*. Available here:

<https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/drugmisuseinenglandandwalesappendixtable>

¹⁵ NHS, 2022, *Smoking, Drinking and Drug Use among Young People in England, 2021: Data tables*. Available here:

<https://digital.nhs.uk/data-and-information/publications/statistical/smoking-drinking-and-drug-use-among-young-people-in-england/2021/data-tables>

¹⁶ ONS, 2022, *Estimates of the population for the UK, England, Wales, Scotland, and Northern Ireland*. Available here:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>

¹⁷ Scottish Government, 2021, *Scottish Health Survey 2021: supplementary tables*. Available here:

<https://www.gov.scot/publications/scottish-health-survey-2021-supplementary-tables/>

32. These data sources are used alongside the following assumptions to estimate a low, central and high estimate for nitrous oxide use in **Option 2**:
- The appraisal assumes that nitrous oxide misuse, as a proportion of the population, is the same across the UK where data is otherwise unavailable. Therefore, the proportions from the CSEW are applied to the Northern Ireland population for 16 to 59 year-olds. Likewise, proportion estimates from the SDD are applied to the Northern Ireland and Wales populations for 11 to 15 year-olds.
 - The appraisal assumes that those under the age of 11 and over the age of 59 (under the age of 16 and over the age of 75 for Scotland due to differences in data collection) do not misuse nitrous oxide. Data available by age breakdown supports this assumption.
 - **High Estimate:** This estimate assumes that nitrous oxide misuse will not change in **Option 2**. This uses estimates prior to March 2020, after which nitrous oxide misuse has decreased and assumes nitrous oxide misuse will return to these levels.
 - **Central Estimate:** This estimate assumes that nitrous oxide misuse will remain consistent with data post-2020 or post COVID-19. This assumes that recreational users who have previously stopped using nitrous oxide, possibly due to lockdown restrictions, will also stop using nitrous oxide due to the legal changes in **Option 2**.
 - **Low Estimate:** This estimate assumes a further reduction in usage, assuming the same reduction ratio as that between the high and central estimates.
33. The low, central, and high estimate of nitrous oxide misuse in **Option 2** and presented in Table 1. Estimates are presented for ages 17 and under (children), and 18 and over (adults) due to differences in crime outcomes for these age groups.

Table 1, Low, central, and high estimates of the volume of nitrous oxide ‘recreational’ users in Option 2.

Users of nitrous oxide for its psychoactive effect.		Low	Central	High
England and Wales	Children	54,000	115,000	245,000
	Adults	230,000	394,000	677,000
	Total	284,000	509,000	922,000
Scotland	Children	4,000	9,000	19,000
	Adults	22,000	38,000	65,000
	Total	26,000	47,000	84,000
Northern Ireland	Children	2,000	4,000	9,000
	Adults	7,000	12,000	22,000
	Total	9,000	16,000	31,000
United Kingdom (Total)	Children	60,000	128,000	273,000
	Adults	259,000	444,000	764,000
	Total	319,000	572,000	1,037,000

Source: Home Office estimates, August 2023. Estimates rounded to the nearest 1,000. Estimates may not add up due to rounding. Estimates are annual, taken from the ‘steady state’.

Appraisal

34. There are assumed to be two main impacts of the intervention:

- **Increased volumes of possession of a Class C drug offence:** Nitrous oxide will be controlled under Class C of MDA 1971. Due to the high estimated volumes of nitrous oxide use for its psychoactive effects, it is expected that its control under MDA 1971 will increase the number of possession offences recorded by the police and processed through the CJS.
- **Increased sentencing lengths of production, import, export, supply, offer to supply, and possession with intent to supply Class C drug offences:** The sentencing guidelines under MDA 1971 indicate a maximum custodial sentence length of 14 years for these offences. Under PSA 2016, related offences have a maximum sentence length of seven years. This is expected to have an impact on the prison system.

Possession of a Class C drug offence volumes

35. It is assumed that between two per cent and six per cent, with a central estimate of four per cent, of nitrous oxide recreational users will be recorded by the police for the possession of a drug controlled under Class C of MDA 1971. This assumption is based on current proportion of police-recorded offences for possession of Class C drugs relative to total estimated Class C drug users (see the below calculation, which gives four per cent). A range of two per cent was applied to either side of this estimate to reflect the uncertainty about how the police will target and record nitrous oxide possession. The estimate was also sense checked comparing it with figures on cannabis users and possession of cannabis offences, which leads to a similar proportion (four per cent). The volume of police recorded crime (PRC) is presented in **Table 2**.

$$\frac{\text{Possession of Class C drug offences (PRC)}}{\text{Estimated Class C drug users (CSEW)}} \times 100$$

Table 2, Low, central, and high estimates of the volume of additional possession of a Class C drug offences in Option 2, UK.

Additional Possession of a Class C PRC	Low	Central	High
Children	1,200	5,100	16,400
Adults	5,200	17,800	45,800
Total	6,400	22,900	62,200

Source: Home Office estimates, August 2023. Estimates rounded to the nearest 100. Estimates are annual, taken from the 'steady state'.

36. To estimate how many recorded offences will be charged and progress through the CJS, the appraisal uses two proxy offences:

- **Possession of a controlled drug – Cannabis** (offence code 92E). It is assumed that due to the similarities in prevalence and age profile of users, possession of nitrous oxide will be policed similarly to that of a cannabis possession offence.
- **Possession of a controlled drug – Class C** (offence code 92D.03). It is assumed that possession offences will be treated similarly to that of existing Class C offences by the courts, given that nitrous oxide is to be added to the Class C drug offence list.

37. As nitrous oxide has a large proportion of users aged 17 and under who consume it for its psychoactive effects, the appraisal splits proxy offence data into children and adults at every stage. For crime outcomes, data by the age of offender is not published, therefore an internal data exercise was conducted to request data from police forces on the age of offenders and the crime outcomes given for possession of a controlled drug – cannabis offences. Overall, 28 per cent of police forces in England and Wales provided recent data, ranging from 2017 to 2023, on almost 50,000 recorded possession offences. Outcomes across police forces were consistent, and data was checked against

published crime outcomes data to validate the quality. The volumes of offenders given each crime outcome is presented in **Table 3**.

Table 3, Low, central, and high estimates of the volume of additional possession of a Class C drug offences, by crime outcome, in Option 2, UK.

Crime Outcomes		Low	Central	High
Charge	Children	100	600	2,000
	Adults	1,100	3,800	9,900
	Total	1,300	4,400	11,800
Diversionary Activity	Children	100	500	1,600
	Adults	100	200	600
	Total	200	700	2,200
No Further Action	Children	300	1,200	3,700
	Adults	800	2,600	6,700
	Total	1,000	3,800	10,400
Conditional Caution	Children	100	500	1,600
	Adults	600	2,100	5,300
	Total	700	2,600	6,900
Community Resolution	Children	600	2,400	7,500
	Adults	2,600	9,000	23,300
	Total	3,200	11,400	30,800

Source: Home Office estimates, August 2023. Estimates rounded to the nearest 100. Estimates may not add up due to rounding. Estimates are annual, taken from the 'steady state'.

38. Following a charge and prosecution, cases will be tried in either the Magistrates' Court or Crown Court. For adults, 99 per cent of cases are expected to be dealt with in the Magistrates' Court, with the other 1 per cent being tried in the Crown court. For children, 100 per cent of trials are expected to be held in the Magistrates' court. These estimates are based on the average court splits for possession of a controlled drug – Class C offences, from 2017 to 2021¹⁸.
39. Of those convicted and sentenced by the courts, it is estimated that six per cent of adults will be given a custodial sentence. No children are expected to be given a custodial sentence for this offence. These estimates are based on the average sentencing outcomes for the offence of the possession of a drug controlled under Class C of MDA 1971, from 2018 to 2022¹⁹.
40. The estimated volumes of offenders proceeded against in each court, sentenced by the courts and sentenced to immediate custody are presented in **Table 4**.

Table 4, Low, central, and high estimates of the volume of additional possession of a Class C drug offences, across the CJS, in Option 2, UK.

¹⁸ MoJ, 2022, *Criminal Justice System statistics quarterly: December 2021 Magistrates' Court data tool*. Available here: <https://www.gov.uk/government/statistics/criminal-justice-system-statistics-quarterly-december-2021#full-publication-update-history>

¹⁹ MoJ, 2022, *Criminal Justice System statistics quarterly: June 2022 Outcomes by Offence data tool*. Available here: <https://www.gov.uk/government/statistics/criminal-justice-system-statistics-quarterly-june-2022>

CJS Volumes		Low	Central	High
Magistrates' Court Trials	Children	100	600	2,000
	Adults	1,100	3,800	9,800
	Total	1,200	4,400	11,800
Crown Court Trial	Children	-	-	-
	Adults	10	40	100
	Total	10	40	100
Out of these: Sentenced	Children	100	500	1,500
	Adults	1,000	3,400	8,900
	Total	1,100	3,900	10,400
Immediate Custody	Children	-	-	-
	Adults	60	200	500
	Total	60	200	500

Source: Home Office estimates, August 2023. Estimates rounded to the nearest 100. Totals may not add up due to rounding. Estimates are annual, taken from the 'steady state'.

Supply and Production offences

41. The supply and production of nitrous oxide for its psychoactive effects is already a crime under PSA 2016. The only legislative effect of controlling nitrous oxide under MDA 1971 is that the maximum custodial sentence for the offences of the production, import, export, supply, offer to supply, and possession with intent to supply nitrous oxide, will increase from 7 years to 14 years as per sentencing guidelines.
42. **Option 2** is not expected to increase the volume of criminal offences for the supply and production of nitrous oxide recorded by the police or prosecuted. This is because the offence is already illegal under PSA 2016. The new legislation will, however, increase the maximum sentence for convicted offenders.
43. To estimate the number of additional custodial sentences related to supply and production under **Option 2**, data on the following offences, under PSA 2016, has been used:
 - Produce a psychoactive substance (Home Office offence code 09341)
 - Supply a psychoactive substance (Home Office offence code 09342)
 - Offer to supply a psychoactive substance (Home Office offence code 09343)
 - Possess a psychoactive substance with intent to supply (Home Office offence code 09344)
 - Import a psychoactive substance (Home Office offence code 09345)
 - Export a psychoactive substance (Home Office offence code 09346)
44. Data on offences related to the production, import, export, supply, offer to supply and possession with intent to supply nitrous oxide is not available. Available data covers all 'psychoactive substances', of which nitrous oxide is one. It is therefore unknown what proportion of these offences are related to nitrous oxide as the main substance. To reflect this uncertainty a range has been estimated for the volumes of offenders sentenced to immediate custody. Using data from 2019 to 2022, the high estimate uses the year with the maximum number of custodial sentences, while the low estimate takes the year with the minimum number. The central estimate takes an average of the two. Volumes estimates are presented in **Table 5**.

Table 5: Low, central, and high estimates for the volume of offenders sentenced to immediate custody for the supply and production of nitrous oxide, in Option 2.

Supply and Production Offences	Low	Central	High
Volume of custodial sentences	4	9	14

Source: Home Office estimates, August 2023. Estimates are annual, taken from the 'steady state'.

COSTS

Monetised costs

Set-up costs: Familiarisation costs

- 45. Police officers will need to familiarise themselves with the new legislation. Documentation associated with this legislative change is expected to be between 500 and 1,500 words long, with a central estimate of 1,000 words²⁰.
- 46. It has been assumed that a range between **43 and 215 senior police officers, with a central estimate of 129**, from 43 police force areas²¹ will need to read and comprehend the legislation. This uses a range of one to five senior officers, with a central estimate of three, per force, in the absence of any other evidence on how many officers would be impacted²².
- 47. The median hourly wage for a senior police officer is £28.31²³ (2021/22). This is uplifted by the rate of inflation as estimated by His Majesty’s Treasury²⁴ (HMT) and adjusted to account for non-wage labour costs, estimated to be 22 per cent for public sector workers²⁵. This estimates the cost to be £37.74 in 2023/24 prices.
- 48. The Readingsoft calculator²⁶ was used to calculate low, central, and high estimates for the time required to read and comprehend the changes. The formula used to estimate familiarisation costs are as follows:

$$time\ taken\ to\ read\ \times\ median\ officer\ wage\ \times\ number\ of\ officers\ \times\ (1\ +\ (non\ wage\ uplift))$$

- 49. Total familiarisation costs are estimated to be between **£30 and £1,600, with a central estimate of £340**. These costs are only incurred in Year 1 of the appraisal period.

Set-up costs: Cost of a prison place

- 50. At the request of MoJ, to account for the current prison capacity, a set up cost of £250,000²⁷ is estimated for the building of a new prison place. This unit cost is crude and is likely to underplay actual build costs which will depend on a number of factors. These costs only apply in Year 1 of the appraisal period and a prison place can be reused in future years.

Possession of nitrous oxide

²⁰ The legislative documentation is being finalised. Therefore, the word count of the associated documents is based on guidance for a similar intervention. A range is taken around the estimates to reflect uncertainty.

²¹ Police.UK 2023, *Find a police force*. Available here: <https://www.police.uk/pu/find-a-police-force/#:~:text=There%20are%2045%20%27territorial%27%20forces.3%20%27special%27%20police%20forces>.

²² It is assumed that senior officers will read the guidance and disseminate as required to the wider force. As this policy option is adding an additional drug type to an existing offence (class c drug offence), it assumed to be a minimal change for police to become familiar with.

²³ ONS, 2022, *Earnings and hours worked, occupation by four-digit SOC: ASHE Table 14*. Available here: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/occupation4digitsoc2010ashetable14>

²⁴ HMT, 2023, *GDP Deflators at market prices and money GDP June 2023*. Available here: <https://www.gov.uk/government/collections/gdp-deflators-at-market-prices-and-money-gdp>

²⁵ ONS, 2020, *Index of Labour Costs per Hour, seasonally adjusted*. Available here: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/indexoflabourcostsperhourilchseasonallyadjusted>

²⁶ Readingsoft, 2023, *Speed Reading Guide*. Available here: <https://readingsoft.com/speed-reading-guide/>

²⁷ Estimate provided internally by MoJ, 2023.

51. The number of custodial sentences for possession offences each year is estimated to range between **56 and 496, with a central estimate of 192.**
52. As per sentencing guidelines²⁸, those given a custodial sentence serve on average 50 per cent of their sentence in custody. Therefore, the sentence length served in prison of a Class C possession offence is assumed to be approximately **1.4 months.**
53. Using this value to account for a prison place being reused over a year, the number of additional prison places needed for possession offences is **between 6 and 57, with a central estimate of 22.**

Supply and production of nitrous oxide

54. The number of custodial sentences given per year for nitrous oxide supply and production offences is estimated to be between **4 and 14, with a central estimate of 9.**
55. **Option 2** is not expected to increase the volume of criminal offences for the supply and production of nitrous oxide. The new legislation will, however, increase the maximum sentence for convicted offenders. The maximum custodial sentence for the supply and production of nitrous oxide under PSA 2016 is seven years. Under MDA 1971, this will increase to 14 years. While this is the maximum sentence, the average custodial sentence length awarded for this offence over the past four years has been 10 months.
56. The analysis accounts for the potential extra time in prison by doubling the expected custodial sentence lengths of the supply and production offences under PSA 2016. As per sentencing guidelines, those handed a custodial sentence serve on average 50 per cent of their sentence. The additional sentence length served is therefore estimated to be **5.0 months** per offender.
57. To account for the additional 5.0 months served per offender, and the fact that prison places can be reused over a year, the number of additional prison places needed for supply and production offences is **between 2 and 6, with a central estimate of 4.**

All offences

58. It is estimated that **between 8 and 63, with a central estimate of 26** additional prison places will need to be built.
59. Prison set up costs are estimated to be between **£2.0 and £15.8 million, with a central estimate of £6.5 million (2023/24 prices) in Year 1 only.**

Set-up costs: Total cost

60. Set up costs in total are estimated to be between **£2.0 million to £15.8 million, with a central estimate of £6.5 million (2023/24 prices).** These costs are only incurred in Year 1 of the appraisal period.

Ongoing costs

61. The majority of ongoing costs relate to possession of nitrous oxide offences. As the supply and production of nitrous oxide for its psychoactive effect is already an offence under PSA 2016, it is assumed that the only additional costs will be prison costs resulting from the longer custodial sentences.

Ongoing costs: Out of court disposal costs

62. There will be additional costs to the police following the increase in reported possession of a controlled drug - Class C offences and associated crime outcomes. These volumes are presented in **Table 3.**

²⁸ Sentencing Council, 2023, *Determinate prison sentences*. Available here: <https://www.sentencingcouncil.org.uk/sentencing-and-the-council/types-of-sentence/determinate-prison-sentences/>

63. Unit costs are available for community resolutions and conditional cautions, which are both crime outcomes defined as out of court disposals (OOCs). There are no unit costs available for no further action, diversionary activity, or charges. It is estimated to cost police forces **£154 per offender** (2023/24 prices) to issue a community resolution²⁹ and **£339 per offender** (2023/24 prices) to issue a conditional caution³⁰.
64. OOCs costs are estimated to be between **£5.5 to £53.6 million (PV)**, with a central estimate of **£19.8 million (PV)** over the 10 year appraisal period.

Ongoing costs: Police station legal aid costs

65. There will be additional costs to the police following the increase in reported possession of a controlled drug - Class C offences, through the increased demands on police station legal aid. It is estimated that 60 per cent of adult and 80 per cent of child offenders arrested will take up police station legal aid³¹. As arrest data is not available to the granularity required, it is assumed that the volume of offenders charged is a suitable proxy for the volume of offenders brought to and questioned at a police station. Unit costs for police station legal aid have been provided internally by MoJ.
66. Police station legal aid costs are estimated to be between **£1.5 to £14.8 million (PV)**, with a central estimate of **£5.5 million (PV)** over the 10 year appraisal period.

Ongoing costs: Court costs

67. There will be additional costs to the courts following the increase in reported possession of a controlled drug - Class C offences which are then tried in court. This increase is presented in **Table 4** and estimated to be between 1,250 and 11,750 offences for Magistrates' Courts, and 11 and 95 offences for Crown Courts.
68. Unit costs for both courts have been provided internally by the MoJ and inflated to 2023/24 price year. A 20 per cent optimism bias adjustment has been applied to the unit costs given the uncertainty in the estimates.
69. Court costs are estimated to be between **£3.8 and £35.5 million (PV)**, with a central estimate of **£13.3 million (PV)** over the 10 year appraisal period.

Ongoing costs: Legal aid costs

70. There will be additional costs to the Legal Aid Agency following the increase reported possession of a controlled drug - Class C offences, which are then tried in court.
71. It is estimated that 50 per cent of adult offenders and 100 per cent of child offenders will be eligible for support in the Magistrates' courts. In the Crown courts, it is estimated that 100 per cent of offenders are eligible. These estimates have been provided by the MoJ. Unit costs for both Crown and Magistrates' legal aid have been internally provided by the MoJ.
72. Total legal aid costs are estimated to be between **£3.0 and £29.5 million (PV)**, with a central estimate of **£10.8 million (PV)** over the 10-year appraisal period.

Ongoing costs: Prison costs

73. There will be additional costs to the prison service following the increase reported possession of a controlled drug - Class C offences, which are then convicted in court and lead to a custodial sentence, and the increase in sentencing lengths for supply and production offences under MDA 1971.

²⁹ MoJ, 2018, *Adult Out of Court Disposal Pilot Evaluation – Final Report*. Available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718947/adult-out-of-court-disposal-pilot-evaluation.pdf

³⁰ MoJ, 2018, *Adult Out of Court Disposal Pilot Evaluation – Final Report*. Available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718947/adult-out-of-court-disposal-pilot-evaluation.pdf

³¹ Estimate provided internally by MoJ, 2023.

74. The annual cost of a prison place is estimated to be £46,696³² (2021/22). This is inflated to 2023/24 prices and divided by 12 months, with a 20 per cent optimism bias applied as per MoJ guidance. This results in a monthly estimated cost per prison place of £5,029 (2023/24).

Possession of nitrous oxide

75. The number of custodial sentences for possession offences each year is estimated to range between 56 and 496, with a central estimate of 192.
76. As per sentencing guidelines³³, those given a custodial sentence serve on average 50 per cent of their sentence in custody. Therefore, the sentence length served in prison of a Class C possession offence is assumed to be approximately **1.4 months**. These estimates are calculated using data on the average custodial sentence length for possession of a controlled drug - Class C offences.
77. The monthly unit cost is multiplied by the average sentence length served, and the volume of offenders estimated to be handed down a custodial sentence.

Supply and production of nitrous oxide

78. The number of custodial sentences for supply and production offences each year is estimated to range between 4 and 14, with a central estimate of 9. The volume of offences is not estimated to increase in **Option 2**.
79. The analysis accounts for the potential extra time in prison by doubling the expected custodial sentence lengths of the supply and production offences under PSA 2016. As per sentencing guidelines, those handed a custodial sentence serve on average 50 per cent of their sentence. The additional sentence length served is therefore estimated to be 5.0 months per offender.
80. The monthly unit cost is multiplied by the average sentence length served, and the volume of offenders estimated to be handed down a custodial sentence.

All offences

81. Ongoing prison costs are estimated to be between **£3.7 to £28.9 million (PV)**, with a central estimate of **£11.9 million (PV)** over the 10 year appraisal period.

Ongoing costs: Total cost

82. Ongoing costs in total are estimated to be between **£17.6 to £162.3 million (PV)**, with a central estimate of **£61.4 million** over the 10 year appraisal period.

Total costs

83. Total costs across all monetised set up and ongoing costs are estimated to be between **£19.6 to £178.1 million (PV)**, with a central estimate of **£67.9 million (PV)** over the 10-year appraisal period.
84. The wide range on the costs estimates is driven by the uncertainty in how the intervention will impact use of nitrous oxide for its psychoactive effects and how police will target and record possession of a controlled drug - Class C offences related to nitrous oxide.

Non-monetised costs

85. Costs of police investigations into possession of a controlled drug - Class C offences have not been estimated due to a lack of unit costs. It is likely that these will increase costs given the increase in crimes recorded by the police. This is explained further in the risk section.

³² MoJ, 2023, *Costs per place and costs per prisoner by individual prison*. Available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1140557/costs-per-place-and-costs-per-prisoner-2021-to-2022-summary.pdf

³³ Sentencing Council, 2023, *Determinate prison sentences*. Available here: <https://www.sentencingcouncil.org.uk/sentencing-and-the-council/types-of-sentence/determinate-prison-sentences/>

86. There may be increased demands on youth offending teams (YOT) who may be involved throughout the legal process as a young person is arrested, charged and or convicted for a crime. As the analysis estimates that a number of young people will progress through the CJS for possession of a controlled drug offences related to nitrous oxide, YOT may incur greater demands on their services and increased costs. However, there are no cost estimates available for YOT to inform this cost impact.
87. Children who are progressing through the CJS may go through a youth court, which is a special type of Magistrates' court for people aged between 10 and 17 years old. These courts commonly deal with drug offences. However, there are no specific unit costs available to estimate the costs of a child going through the youth court. To ensure a cost is accounted for, the analysis instead uses the costs for the Magistrates' court, which adults will progress through. It is not known if this is an over or underestimate compared to the youth courts.

BENEFITS

Monetised benefits

88. Potential benefits could not be monetised for **Option 2** due to the difficulty quantifying the impact of the legislation. Society may accrue the non-monetised benefits explained below if the legislation results in a decrease in recreational nitrous oxide use, supply, and production.

Non-monetised benefits

89. There are expected to be a range of non-monetised benefits following implementation of the new legislation. These are explained below:
- **Reduction in drug misuse.** The criminalisation of nitrous oxide possession, alongside greater awareness of its harms, is expected to encourage people to stop using the drug for its psychoactive effects and for potential new users to be more likely to be deterred from starting misuse. Enforcement of the new legislation will have consequences for those in possession of nitrous oxide for its psychoactive effects, which may deter individuals from misusing nitrous oxide or reduce the frequency of their misuse. Reducing the misuse of nitrous oxide may lead to a wide range of further benefits, including reduced harm and littering.
 - **Reduction in drug-related harm.** Nitrous oxide misuse has been reported to immediately reduce the amount of oxygen flowing to the brain and other vital organs. In extreme cases, misuse can lead to strokes, blackouts, seizures, and heart attacks. Between 2001 and 2020, the Office for National Statistics (ONS) reported 56 registered deaths involving nitrous oxide in England and Wales, with 45 of these deaths having been registered since 2010³⁴. It is estimated that the cost of a drug-related death is approximately £2.9 million (2023/24 prices)³⁵. Therefore, if one drug-related death is avoided as a result of the new legislation, then a large benefit is estimated. There are other concerns over the long-term effects of consuming nitrous oxide, particularly in the depletion of vitamin B12 which can cause brain and nerve damage³⁶.

³⁴ ONS, 2022, *Deaths related to volatile substances, helium and nitrogen in England and Wales: 2001 to 2020 registrations*. Available here:

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/deathsrelatedtovolatilesubstancesheliumandnitrogeninenglandandwales/2001to2020registrations>. Note: Deaths from nitrous oxide are not necessarily related to recreational use of the drug.

³⁵ Home Office, 2018, *The economic and social costs of crime*. Available here:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/732110/the-economic-and-social-costs-of-crime-horr99.pdf. Note: Estimate takes a total of the following unit costs estimated as a consequence of homicide: Physical and emotional harm, Lost output, and Health services.

³⁶ Alcohol and Drug Foundation, 2023, *Nitrous oxide – uses, impacts, and risks*. Available here:

<https://adf.org.au/insights/nitrous-oxide/#:~:text=Regular%20use%20or%20prolonged%20exposure%20to%20nitrous%20oxide,during%20pregnancy%29%208%20weakened%20immune%20system%20More%20items>

If the legislation is successful in reducing nitrous oxide misuse, then its associated harms should also fall.

- **Reduction in anti-social behaviour.** Nitrous oxide misuse has, anecdotally, been linked to anti-social behaviour (ASB), such as nuisance behaviour and the littering of canisters. The CSEW shows an increasing trend since 2014 in public experience of ASB. In 2019/20, 40 per cent of people aged over 16 in England and Wales (around 18.9 million people) experienced or witnessed ASB in their local area over the previous 12 months³⁷. Nitrous oxide is reported to be used at 'anti-social gatherings', involving large groups of young people in public spaces, such as parks. Although there is no quantitative evidence available for nitrous oxide related ASB, reports such as that of Tower Hamlets council: *Nitrous Oxide- No laughing matter*³⁸ allude to locals feeling intimidated by groups using nitrous oxide, as well as mentioning related noise nuisance and littering of small canisters. Internal research suggests councils have nitrous oxide Public Spaces Protection Orders (PSPOs)³⁹ in place, which aim to prevent nitrous oxide related ASB in their local area. **Option 2** removes the reliance on targeted PSPOs to reduce ASB, as possession of nitrous oxide will become an offence UK-wide.
- **Reduction in littering.** There are widespread reports of littering associated with nitrous oxide misuse⁴⁰. The ACMD's public call for evidence received several submissions which reported littering of nitrous oxide in their local areas⁴¹. The metal canisters which contain nitrous oxide, and the rubber balloons commonly used for inhalation of the gas, are often discarded after use, creating litter when discarded in public spaces. A reduction in nitrous oxide misuse and possession should lead to a reduction in nitrous oxide-related litter.
- **Clearer framework for police and the CJS.** By controlling nitrous oxide under MDA 1971, the police and CJS will have a clear and consistent understanding of how they can intervene in cases of possession of nitrous oxide for its psychoactive effects.

³⁷ ONS, 2020, *Crime Survey for England and Wales (CSEW) estimates of personal and household crime, anti-social behaviour, and public perceptions, by police force area, year ending March 2020*. Available here:

<https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/adhocs/12032crimesurveyforenglandandwalescsewestimatesofpersonalandhouseholdcrimeantisocialbehaviourandpublicperceptionsbypoliceforceareayearendingmarch2020>

³⁸ Tower Hamlets, 2023, *Nitrous oxide - No laughing matter*. Available here:

https://www.towerhamlets.gov.uk/lgnl/community_and_living/community_safety_crime_preve/Nitrous_Oxide_No_laughing_matter.aspx

³⁹ PSPOs are powers granted to councils under the Anti-social Behaviour, Crime and Policing Act 2014. More information available here:

https://www.towerhamlets.gov.uk/lgnl/community_and_living/community_safety_crime_preve/Nitrous_Oxide_No_laughing_matter.aspx

⁴⁰ Home Office, 2021, *Home Secretary seeks expert advice on 'laughing gas'*. Available here:

<https://www.gov.uk/government/news/home-secretary-seeks-expert-advice-on-laughing-gas>

⁴¹ ACMD, 2023, Nitrous oxide: updated harms assessment. Available here: <https://www.gov.uk/government/publications/nitrous-oxide-updated-harms-assessment#full-publication-update-history>

Total costs and benefits, NPSV, BNPV and net cost to business

90. Total costs are estimated to be between **£19.6 to £178.1 million (PV)**, with a central estimate of **£67.9 million (PV)** over the 10-year appraisal period. Total monetised benefits are estimated to be zero due to the lack of data which would enable any benefits to be monetised
91. The NPSV is therefore estimated to be between **-£19.6 to -£178.1 million (PV)**, with a central estimate of **-£67.9 million (PV)** over the 10 year appraisal period.
92. As there is no cost to business, both the Business Net Present Value (BNPV) and the net cost (EANDCB⁴²) to business is zero.

Table 6, Summary costs, benefits, NPSV, BNPV and EANDCB £ million (PV), 10 years.

Summary of Costs and Benefits	Low	Central	High
Costs			
Set-up costs			
Private sector set-up costs	0.0	0.0	0.0
Public sector set-up costs	2.0	6.5	15.8
Total set-up costs	2.0	6.5	15.8
Ongoing costs			
Private sector ongoing costs	0.0	0.0	0.0
Public sector ongoing costs	17.6	61.4	162.3
Total ongoing costs	17.6	61.4	162.3
Total costs	19.6	67.9	178.1
Benefits			
Private sector benefits	0.0	0.0	0.0
Public sector benefits	0.0	0.0	0.0
Total benefits	0.0	0.0	0.0
Net Present Social Value	-19.6	-67.9	-178.1
Business Net Present Value	0.0	0.0	0.0
Equivalent Annual Net Direct Cost of Business	0.0	0.0	0.0

Source: Home Office estimates, August 2023. Figures may not add up due to rounding.

F. Proportionality

93. The analysis in this IA contains the best estimates for the cost and benefits of the proposed policy. Every effort has been made to ensure the analysis presents the best possible estimate of the likely impact of the options, given the time, resource and data available. These have been quantified where

⁴² The net direct cost to business is defined as the Equivalent Annual Net Direct Cost to Business (EANDCB) and is a measure used by the Regulatory Policy Committee (RPC) to assess the regulatory burden on business.

data is available, with risks highlighted in Section G. This is a proportionate effort to appraise the proposed policy change.

G. Risks

94. There is limited evidence available to estimate how nitrous oxide misuse may change following the intervention. The analysis therefore estimates a wide range for the number of individuals who continue to misuse nitrous oxide for its psychoactive effects. This ranges from no change compared to 2019/20 when misuse was high in England and Wales, to a continued decrease in nitrous oxide misuse as seen following the COVID-19 pandemic. The range is likely to capture any likely scenario. If nitrous oxide misuse was to not decrease or change in frequency and setting following legislation, some of the benefits outlined in this IA may not be realised.
95. Data on nitrous oxide misuse for Scotland is limited, and no public data was identified on nitrous oxide misuse for Northern Ireland. To ensure estimates were included, the analysis assumes that misuse as a proportion of the population will be the same in England and Wales, as it is in Scotland and Northern Ireland. This is likely to be a good estimate in the absence of other data and a range has been applied, but there is a risk that this approach may be over or under-estimating the total number of individuals misusing nitrous oxide in the UK.
96. Due to the low volume estimates of offences in Scotland and Northern Ireland, the analysis is based on police, courts and prisons data from England and Wales as these were readily available. Assumptions have been made that unit costs and other inputs used for England and Wales will reflect those of Scotland and Northern Ireland. Given the devolved regions have their own policing and courts systems, their processes may differ from that of England and Wales, which may affect costs.
97. The estimate for how many possession offences related to nitrous oxide which are recorded by the police is estimated using proxy data for both Class C possession offences and cannabis possession offences. Both of these proxies estimate that four per cent of estimated users are recorded by the police for possession offences. This does not account for reoffending in a single year or being caught with multiple different drugs, due to lack of data. A range of two per cent has been applied to this estimate to indicate the uncertainty.
98. There may be an additional burden on police if they are responsible for determining whether nitrous oxide possession is for legitimate or recreational use. The police time spent investigating this has not been included in the analysis due to a lack of evidence and unit costs. It is unlikely that police will spend a substantial amount of time investigating nitrous oxide possession offences, but if so, this could represent a large non-monetised cost in the analysis.
99. There is an evidence gap on the number of individuals currently supplying and producing nitrous oxide for its psychoactive effects, and how this may change following intervention. The analysis assumes that the volume of offenders will remain the same following intervention. This is because supply and production of nitrous oxide for its psychoactive effects is already an offence in Option 1, with the impact of the intervention only increasing the maximum sentence length. There is limited evidence on the deterrent effect of a longer custodial sentence length, so this increase is not assumed to deter current offenders. If offenders were to stop supplying or producing nitrous oxide following the intervention, potentially due to lower demand from illegitimate users or the increased sentence length, this would reduce police and CJS costs. However, if more offenders were to start supplying or producing nitrous oxide for its psychoactive effects, potentially due to a rise in the demand of individuals sourcing nitrous oxide from the illegal drug market or increased profit margins for illegal suppliers, this could increase costs to both the police and criminal justice system.
100. The analysis does not consider any displacement effect in which individuals stop misusing nitrous oxide, but instead start or increase their use of other substances. This is not included due to a lack of evidence on the likelihood of a displacement effect following drug control, both across all controlled

drugs and specific to nitrous oxide, and evidence on which substances individuals may use instead. Substances could include controlled drugs such as cannabis, or legal, but age restricted, substances such as alcohol and tobacco. If individuals were to stop misusing nitrous oxide, but start using a more harmful substance, this could increase health harms and wider costs.

H. Direct costs and benefits to business calculations

101. There are no expected direct costs and benefits to businesses as part of this intervention.

I. Wider impacts

Drug Treatment

102. The number of people in treatment reporting problems with nitrous oxide is very low but has increased over the past 10 years, from 12 in 2013/14 to 80 in 2020/21⁴³.
103. There is limited evidence to suggest how changes to the classification of a drug affects drug treatment. It is possible that police enforcement of nitrous oxide possession will increase diversionary outcomes, where a user is referred to treatment for their drug misuse. This would increase the number of people in drug treatment, at a cost to the public sector. If misuse of nitrous oxide was to decrease, this should reduce potential demands on drug treatment services.

Environmental Impacts

104. There are concerns around the environmental impact of nitrous oxide canisters, primarily through the littering of canisters and associated paraphernalia, such as balloons. However, no quantitative evidence has been found on the extent of such littering.
105. Due to the nature of the gas, incorrect disposal of nitrous oxide canisters in mixed recycling bins could lead to canisters exploding or setting on fire when put through recycling facilities. This concern was raised during discussions with SUEZ recycling and recovery UK⁴⁴, though quantitative data on the scale or likelihood of this impact is not available.
106. If the new legislation leads to either a dumping of unused nitrous oxide tanks and canisters by individuals as possession becomes illegal, or a large number of seizures by law enforcement, then this may create negative environmental outcomes and increase disposal costs due to the hazardous gas. However, it is unclear how realistic this outcome is. It is also possible that the legislation leads to a decrease in use of recreational nitrous oxide over time. In this case, it is possible that the production and therefore waste of nitrous oxide canisters will fall.

Business Impacts

107. The preferred option has been designed in a way in which disruption to legitimate users of nitrous oxide is avoided. This will ensure individuals and businesses can continue using nitrous oxide for legitimate reasons without additional costs to meet licensing requirements, or concern that they will be targeted by police.
108. There are some businesses that sell nitrous oxide canisters directly to consumers at a retail level, for example through online retailers or corner shops, although the exact number of these is not known. Under PSA 2016, these businesses have a responsibility to reject the sale of nitrous oxide if they know or are concerned that it will be used for its psychoactive effects. However, there may be some businesses who are unaware what their customers are using nitrous oxide for and may be

⁴³ OHID, 2021, *Substance misuse treatment for adults: statistics 2020 to 2021*. Available here: <https://www.gov.uk/government/statistics/substance-misuse-treatment-for-adults-statistics-2020-to-2021>

⁴⁴ SUEZ recycling and recovery UK. Available here: <https://www.suez.co.uk/en-gb/who-we-are/suez-in-the-uk/about-us>

unknowingly selling to individuals who go on to use the product for its psychoactive effects. If nitrous oxide misuse was to decrease, these businesses may see a reduction in sales. This is not included in the appraisal as the sales are unlawful in both Option 1 and Option 2, and the utility of criminals is not considered in appraisal. If sales were to fall for this reason, some retail suppliers may exit the market, and reduce the availability of nitrous oxide to legitimate users, for example individuals who use nitrous oxide as a propellant for whipping cream. While this is a potential risk, there is no evidence to suggest if it will or will not happen and, if it does, to what scale.

J. Trade Impact

109. There is no expected trade impact as part of this intervention.

K. Monitoring and evaluation plan

110. The impacts of Option 2 will be monitored via existing data sources. The best measures of success would be:

- A reduction in the prevalence of nitrous oxide misuse. This can be measured using existing sources including CSEW, SDD, and Scottish Health Survey.
- A reduction in registered deaths involving nitrous oxide. This can be measured using existing data from the ONS.

111. There are no data sources available that clearly measure ASB or littering in relation to nitrous oxide. However, data collected via the CSEW on ASB should be tracked as part of the wider ASB Action Plan which the control of nitrous oxide is an element of.

112. There are no readily available data sources on the number of patients undergoing treatment for neurological harms associated with nitrous oxide in the UK. However, the NHS has recently added Systematized Nomenclature of Medicine (SNOMED) codes (specific clinical terms within electronic patient record systems) to record nitrous oxide use, which may enable this to be recorded in the future.

Impact Assessment Checklist

Mandatory specific impact test - Statutory Equalities Duties	Complete
<p>Statutory Equalities Duties</p> <p>The public sector equality duty requires public bodies to have due regard to the need to eliminate discrimination, advance equality of opportunity, and foster good relations in the course of developing policies and delivering services.</p> <p>The Home Office are satisfied that the Equalities IA demonstrates compliance with section 149 of the Equality Act 2010 and that due regard has been made to the need to: eliminate unlawful discrimination; advance equality of opportunity; and foster good relations. All of the protected characteristics have the potential for positive or negative impact, however, further information is needed to determine this for the following characteristics: Disability, Gender Reassignment and Pregnancy and Maternity.</p> <p>Some of the key findings include: 16-24 year olds are most likely to use nitrous oxide, so are likely be disproportionately affected by restrictions on its use; 16 per cent of people who are single reported using a drug in the last year, compared with 3 per cent of people who were married or in a civil partnership; black people are stopped and searched for drugs at a rate six times higher than white people; There is anecdotal evidence that nitrous oxide use is increasing within some Asian communities and a response to the consultation from a well-known London hospital stated that the control of nitrous oxide might disproportionately affect people from these communities; the prevalence of nitrous oxide use is higher for men than women aged 16-59 overall in every year of available CSEW data; From October 2021 to June 2022, 8 per cent of heterosexual adults reported using a drug in the last year, this compares with 30 per cent of gay/lesbian adults, and 31 per cent of bisexual adults.</p> <p>Any disproportionate impact is expected to be objectively justified on health, safety and welfare grounds owing to the risk of health harms related to the inhalation of nitrous oxide. For the age, disability, race, religion or belief, sex and sexual orientation characteristics, any impact may have a positive effect by reducing drug use and thereby health and social harms. Action to address the potential negative impacts include education through FRANK⁴⁵, and awareness campaigns which are sufficiently accessible and targeted at all groups.</p> <p>The SRO has agreed these summary findings.</p>	<p style="text-align: center;">Yes</p>
<p>Justice Impact Test</p> <p>The justice impact test is a mandatory specific impact test, as part of the impact assessment process that considers the impact of government policy and legislative proposals on the justice system. [Justice Impact Test Guidance]</p>	<p style="text-align: center;">Yes</p>

⁴⁵ FRANK, 2023, *Honest information about drugs*. Available here: <https://www.talktofrank.com/>