Consultation stage impact assessment

Title: Standardising packaging for vaping products and nicotine products

Type of measure: Secondary Legislation

Stage: Consultation

Source of intervention: Domestic

Department or agency: Department of Health and Social Care

Other departments or agencies: N/A

IA number:

RPC reference number: RPC-DHSC-25094-OA

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Date: July 2026

Summary: Intervention and Options

Summary of impact assessment

This impact assessment (IA) considers standardising packaging for vaping products and nicotine products.

It should be noted that due to evidence limitations, a significant proportion of benefits of the proposed policy are not quantified or monetised in this analysis. Additionally, where products in scope are novel, this creates further challenges and uncertainties in assessing the potential scale of benefits. For example, the long-term health harms of vaping products are still unknown.

As a result, we have not presented a Net Present Social Value (NPSV) as we do not think it would provide a fair reflection of the overall net impact on society from this policy.

This IA was completed in October 2025. Therefore, the data and evidence used in the IA reflects the best available evidence at the time of completion. Following the consultation, we will update the IA as appropriate, including consideration of information we gather through responses and any new data and evidence made available since the IA was published.

What is the problem under consideration? Why is government action or intervention necessary?

Evidence suggests that, in the short to medium-term, vaping is less harmful than smoking. However, while less harmful than smoking, vaping is not risk-free and data on longer-term health harms is still emerging. Because of this, children and adult non-smokers should never vape. However, the prevalence of vaping and nicotine use amongst young people has risen substantially in recent years and in 2023, 25% of 11- to 15-year-olds had tried vaping.

Evidence suggests that packaging that is appealing to children, design and flavour descriptors are amongst the key contributors to this trend. Voluntary action by businesses is not sufficient to address the colourful marketing and promotion of vape packaging. Given this and the fact the Government committed in its manifesto to end the promotion of vaping and nicotine products to children, regulatory action is therefore necessary to protect future generations from the risks of nicotine addiction.

What are the policy objectives of the action or intervention and the intended effects?

The UK Government, as well as the devolved governments in Scotland, Wales and Northern Ireland, have a duty to protect and improve the health of their citizens. Specifically, all nations are committed to our ambition for a smoke-free UK and tackling the rise in young people vaping. The aims to reduce young people vaping needs to be balanced against the objective to support adult smokers to quit, in which the evidence shows vaping can play a key role.

The specific policy objectives for introducing standardised vape and nicotine product packaging include:

Objective 1: To reduce vaping product and nicotine product prevalence amongst young people by reducing the appeal amongst young people and attractiveness of nicotine and vaping product packaging.

Objective 2: To continue to enable vapes as a smoking cessation aid to help adult smokers quit smoking by maintaining a level of differentiation between tobacco and vaping/nicotine products packaging and avoid unintended consequences on smoking rates or other tobacco usage.

A key indicator of success will be whether uptake of these products, and prevalence amongst young people, decreases.

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

- **Option 1: Do nothing / BAU: Packaging subject to current regulations.** This option would not limit the logos, colour or branding presented on packaging, enabling harm to continue and does not meet either of our objectives.
- **Option 2: To introduce plain white packaging, permit one regulated form of branding and restrict flavour names. (Preferred option)** This would prohibit logos, promotional text and images and permit minimal branding differentiation. Packaging must be child-resistant, in uniform shapes, contain warning labels, consistent nicotine descriptors and age restriction symbols and must not use irregular texture or materials, and includes an instruction leaflet on risks. Flavour descriptions are limited to a single flavour name.
- **Option 3: Introduce plain white packaging, restricting flavour names but with no brand differentiation permitted.**
  This option is similar to above but with no branding. The white colour packaging will likely reduce the appeal for children, but the lack of branding could impact on the ability of adult smokers to make informed decisions on which product is right for them.
- **Option 4: To introduce dissuasive packaging (for example, Pantone 448C), similar to that of tobacco packaging.** This will likely dissuade adult smokers as it could risk conflating the level of harm between tobacco and vaping products.

These options are assessed against the objectives and the critical success factors to determine which option would be the preferred choice. The preferred option would remove promotional and child-appealing features of packaging, whilst maintaining a distinction from tobacco packaging. Restricting branding on packaging to one regulated form will allow brands to be identified but reduce the appeal to young people.

Will the policy be reviewed? It **will** be reviewed. If applicable, set review date: **TBC**				
Is this measure likely to impact on international trade and investment?		Yes		
Are any of these organisations in scope?	Micro **Yes**	Small **Yes**	Medium **Yes**	Large **Yes**
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)		Traded: N/A	Non-traded: N/A	

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 Sheran Hodgson Date: 18/06/2026

Summary: Analysis & Evidence

Policy Option 1

Full economic assessment

Description key costs by 'main affected groups' The costs of this option are zero, as this is the option that costs of all other options are compared against.	
Key benefits by 'main affected groups' The benefits of this option are zero, as this is the option that costs of all other options are compared against.	
Distributional impacts N/A	
Key assumptions/sensitivities/risks **Discount rate**	3.5%
• Current legislation will remain in place for vaping and nicotine products packaging • Vape prevalence remains constant as a proportion of the population, but as population increases this means the estimated number of people vaping also increases • Nicotine pouch prevalence remains constant as a proportion of the population, but as the population increases this means the estimated number of users also increases	

Summary: Analysis & Evidence

Policy Options 2,3 and 4

Full economic assessment

Description of key costs by 'main affected groups'

The monetised costs are:

- Familiarisation costs (£2.7m)
- Training costs (£5.7m)
- Reconfiguration costs (£57.3m)
- Redesign costs (Option 2: £112.3m, Option 3: £64.2m, Option 4: £144.4m)
- Transaction costs (£0.3m for businesses, £0.2m for consumers)
- Leaflet costs (£59.0m)
- Lost profits for retailers, wholesalers and manufacturers (£403.6m)

The non-monetised costs identified are:

- Disposal costs of non-compliant vapes
- Reduced profits for businesses associated with the design and manufacturing of vape and nicotine product packaging
- Health impacts to individuals of fewer people using vapes to quit smoking
- Potential increase in litter

Key benefits by 'main affected groups'

The non-monetised benefits identified are:

- Health benefits
- Reduced health and social care costs
- Cost savings for businesses
- Environmental benefits
- Reduced fires
- Consumer surplus

Distributional impacts

For consumers, due to a lack of data we are unable to assess any geographical differences in the use of products. Regulations will cover the whole of the UK, therefore consumers in different regions are unlikely to be impacted differently. Some evidence suggests that vape prevalence is higher in less advantaged social grades. Therefore, the policy may impact this group and have a positive distributional impact.

For businesses, evidence suggests that there are more vape shops in deprived areas, therefore businesses in these areas may be disproportionately impacted.

Key assumptions/sensitivities/risks	**Discount rate**	3.5%

The key risks identified are:

- Interactions with other policies. This has not been quantified due to a lack of evidence.
- Uncertainty in forecasts of vape and nicotine product prevalence. This has been tested in sensitivity analysis.

Evidence Base

Problem under consideration and rationale for intervention

Context

1. Vapes (also known as e-cigarettes) are devices that heat substances to create vapours that are inhaled by the user. They are mostly used to deliver nicotine, though some products contain no nicotine at all (non-nicotine vaping products). However, nicotine can be added manually to non-nicotine products and some non-nicotine products have been found to contain nicotine. There are different types of vaping devices, such as refillable pods or tank devices, as well as more novel devices like e-hookah, which are designed to mimic the experience of smoking a traditional hookah.

2. Separately, there are non-medicinal nicotine products that enable nicotine to be delivered into the human body. Examples include nicotine pouches, nicotine strips and nicotine pearls. These are different to medicinal nicotine replacement therapies (NRTs), such as licensed nicotine pouches or nasal spray, which are licensed medicines to aid smoking cessation. Medicinal NRTs are licensed and regulated by the Medicines and Healthcare products Regulatory Agency (MHRA) and are not in scope of the measures within the Tobacco and Vapes Act.

3. Evidence suggests that, in the short to medium-term, vaping is less harmful than smoking. This is because vaping products do not contain tobacco or carbon monoxide and thus expose users to far fewer toxins and at lower levels than cigarettes[1,2]. There is also evidence that vaping can be an effective quit aid for adult smokers when combined with behavioural support. According to a Cochrane systematic review, smokers using vapes had increased quit rates in comparison to those using nicotine replacement therapy (NRT)[3] and in a UK randomised control trial, smokers using vapes to quit tobacco were almost twice as likely to be smokefree after 12 months, compared to those using NRT, at one fifth of the cost[4].

4. However, while less harmful than smoking, vaping is not risk-free and data on longer-term health harms is still emerging[5]. It is for this reason that the Government's advice on vaping is clear: if you smoke, you should switch to vaping. But if you don't smoke, don't vape, and children should never vape.

5. One of the health risks of nicotine-containing vapes is posed by their nicotine content. Nicotine is a highly addictive drug[6]. Withdrawal symptoms include cravings, irritability, anxiety, trouble concentrating and other mental and physical symptoms[7].

[1] OHID. 2022. Nicotine vaping in England: an evidence update including health risks and perceptions, 2022;
[2] Royal College of Physicians (RCP). 2024. E-cigarettes and harm reduction: An evidence review
[3] Lindson and others 2025. Electronic cigarettes for smoking cessation
[4] Hajek and others. 2019. A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy
[5] Scottish Government. 2024. Vaping- Health harms: evidence briefing.
[6] NHS. Vaping myths and the facts - Better Health - NHS (accessed October 2025)
[7] NHS. Withdrawal symptoms include cravings, irritability, anxiety, trouble concentrating, headaches and other mental and physical symptoms (accessed October 2025)

6. As outlined in the Office for Health Improvement and Disparities (OHID) 2022 evidence review[8] there is substantial evidence that using vaping products can result in symptoms of nicotine dependency. Whilst the review found that robust evidence regarding the effects of nicotine on human health aside from dependency is currently limited, it did conclude an association between increased blood pressure and nicotine vaping.

7. There are also some health risks associated with the other ingredients in vapes. For example, propylene glycol and glycerine (components of e-liquids) can produce toxic compounds if they are overheated[9]. There is emerging evidence that suggests vaping is associated with a higher risk of developing respiratory illness[10], gastrointestinal disorders[11], and could present dangers from metals in the devices[12].

8. A recently conducted umbrella review investigating the short and long-term health effects of vaping on young people reported consistent associations between vaping and alcohol intake, asthma and other respiratory outcomes, and mental health outcomes[13]. It also found significant associations between vaping and lower total sperm counts in young men, dizziness, headaches, migraines and oral health harms, but this evidence largely derived from limited surveys or case series/reports.

9. Despite these potential health harms and the clear advice that children should not vape, vaping amongst young people has become an issue of concern within the UK. Data gathered by NHS England shows that 25% of 11–15-year-olds had tried vaping in 2023, and that the proportion of young people vaping more than doubled between 2018 and 2023[14]. Action on Smoking and Health (ASH) data for Great Britain shows a similar picture, although rates are beginning to flatline in 2024 and 2025[15]. According to ASH, 66% of current youth vapers in Great Britain in 2025 reported using a vape containing different levels of nicotine, with only 4% reporting that they use non-nicotine products. In Northern Ireland in 2022, one-fifth (21%) of young people reported ever having used an e-cigarette, a small increase from 2016 (19%)[16]. The proportion indicating that they regularly used e-cigarettes showed an increase from 3% in 2016 to 6% in 2022 (regular use is defined as at least once a week).

10. There is less research available on the use of non-medicinal nicotine products, such as nicotine pouches. Some evidence suggests that nicotine pouches have recently increased in popularity, particularly among men and younger adults[17]. While they are likely to be less harmful than smoking due to the absence of tobacco, nicotine products can deliver very high doses of nicotine and thus share the potential nicotine-related health harms outlined above. There is also the potential of harm to

[8] OHID. 2022. Nicotine vaping in England: 2022 evidence update.
[9] Komura M and others. 2022. Propylene glycol, a component of electronic cigarette liquid, damages epithelial cells in human small airways.
[10] Zavala-Arciniega and others. 2024. Longitudinal associations between exclusive, dual and polytobacco use and respiratory illness among youth.
[11] Wal and others. 2023. An Updated Review of Nicotine in Gastrointestinal Diseases
[12] Salazar and others. 2025. Elevated Toxic Element Emissions from Popular Disposable E-Cigarettes: Sources, Life Cycle, and Health Risks
[13] Golder and others. 2025. Vaping and harm in young people: umbrella review | Tobacco Control
[14] NHS Digital. 2024. Smoking, Drinking and Drug Use among Young People in England, 2023 - NHS England Digital
[15] ASH. 2025. Use of Vapes Among Young People in Great Britain 2025
[16] Department of Health. 2022. Young Persons Behaviour & Attitudes Survey 2022
[17] Moodie and others. 2024. Chasing a buzz: developments in the nicotine pouch market in the UK; Smoking in England. 2025. Discover Major Findings Relating to Smoking in England

oral health[18]. In contrast to vapes, there is currently limited evidence to indicate whether these novel products can support with smoking cessation[19].

11. The Smoking Toolkit Study, a monthly nationally representative cross-sectional survey, indicates that nicotine pouch usage has risen sharply among young people (16–25-year-olds) in Great Britain, quadrupling since 2022[20]. According to the latest YouGov data commissioned by ASH, the awareness of nicotine pouches has also grown amongst children aged under eighteen from 38% to 43% between 2024 and 2025, with nearly 4% of young people in Great Britain (equivalent to around 210,000 children) reporting having tried nicotine pouches[21]. There also appears to be a gender divide, with men under 40-years-old three times more likely to use nicotine pouches than women of the same group (3.5% vs. 1.2%). Whilst there is some data on the use of nicotine pouches, we are not aware of current data on the use of other novel nicotine products such as nicotine strips and pearls, as these products have only just entered the UK market.

12. Given the potential health risks and the challenges around growing use of vaping products and nicotine products amongst young people, the World Health Organization has called on governments globally to strengthen their regulatory measures to prevent uptake and reduce the risk of nicotine addiction for this group.

13. In response to these challenges, on 4 October 2023 the Department of Health and Social Care published a Command Paper followed by a UK-wide consultation on 12 October 2023 entitled 'Creating a smokefree generation and tackling youth vaping'[22]. This was a four-nation consultation and the Government's response was published on 29 January 2024[23]. This led to the introduction of the first Tobacco and Vapes Bill to Parliament. After the last General Election, the Government introduced an updated Tobacco and Vapes Bill to Parliament in November 2024[24]. The Act received Royal Assent on 29 April 2026 and includes powers to regulate tobacco and vaping products and aims to address both the issue of adult smoking and young people vaping.

14. The Government's aim to reduce the appeal of vaping and nicotine product packaging sits alongside several other measures we propose to introduce using powers within the Tobacco and Vapes Act. The upcoming consultation will address these areas collectively and, therefore, there are other Impact Assessments covering:

[18] Rungraungrayabkul and others. 2024. What is the impact of nicotine pouches on oral health: a systematic review
[19] Jackson and others. 2024. Moderation of the real-world effectiveness of smoking cessation aids by mental health conditions: A population study.
[20] Harry Tattan-Birch and others. 2025. Rising oral nicotine pouch use in Great Britain: a representative study 2020-2025 [Pre-print]
[21] ASH. 2025. ASH calls for legislation on nicotine pouches as new data shows surge in youth awareness
[22] GOV. 2023. Stopping the start: our new plan to create a smokefree generation
[23] GOV. 2024. Creating a smokefree generation and tackling youth vaping - GOV.UK
[24] GOV. 2024. The Tobacco and Vapes Bill: What you need to know

- introducing new restrictions on the display of tobacco devices, vaping and nicotine products;
- introducing new restrictions on the packaging of all tobacco products (excluding cigarettes and hand rolling tobacco), cigarette papers, herbal smoking products, tobacco related devices; and
- introducing new restrictions on the design of vapes and heated tobacco devices.

15. The Act also bans all non-nicotine vapes and nicotine products from being sold to under 18s, which is already in place for nicotine vapes. Additionally, it bans the advertising, promotion and sponsorship of vapes and nicotine products, mirroring restrictions on tobacco, as well as end the sale of these products from vending machines.

Current legislative requirements

16. The following regulations contain provisions relating to packaging for vaping products and nicotine products:
    - Nicotine vapes - The Tobacco and Related Products Regulations 2016 (TRPR)
    - Non-nicotine vapes and other nicotine products - The General Product Safety Regulations 2005 (GPSR)
    - All relevant products containing nicotine - Classification, Labelling and Packaging of Chemicals Regulations 2015 (CLP)
17. Under the Windsor Framework Directive 2014/40/EU, the Tobacco Products Directive (TPD), continues to apply in relation to Northern Ireland. This means that we need to ensure that new packaging requirements are compatible with what is required under the TPD. This consideration has been reflected in this Impact Assessment.
18. The TRPR, which came into effect on 20th May 2017, implemented the EU's TPD. The TRPR sets requirements relating to the labelling and presentation of nicotine vaping products. It sets out what can be written on a packaging unit or container pack of a vape or refill container. Products may not, for example, suggest that a particular vape is less harmful than other vapes or refill containers; has revitalising, energising, healing, rejuvenating, natural, or organic properties; and/or has other health or lifestyle benefits. Nicotine vaping product packaging must also include a health warning. However, non-nicotine vaping and nicotine products are not covered under the TRPR. There are also no requirements in TRPR on how flavours should be described on nicotine vaping product packaging.
19. The packaging of non-medicinal nicotine products (e.g., nicotine pouches, gums, pearls) and non-nicotine vapes are regulated under the GPSR. This subjects these products to a lower level of regulation compared to nicotine vaping products, providing requirements on safety information labelling and instructions for use.

20. All products and vapes containing nicotine are also subject to specific requirements under the CLP as nicotine is considered a hazardous substance[25]. Whilst this requires nicotine products to carry hazard warnings about the toxicity of nicotine, labelling on the addictive nature of nicotine is not required on the front of the packaging[26].

Problem under consideration

21. The branding (logo, colour, descriptors) and functional design (size, shape, opening) of packaging are powerful marketing tools that influence the appeal of vaping products[27]. In 2014, Sir Cyril Chantler undertook an independent review of standardised tobacco packaging and found that "branded packaging plays an important role in encouraging young people to smoke and in consolidating the habit irrespective of the intentions of the industry"[28]. The same is being seen in relation to vaping and nicotine products.

22. Nicotine products packaging is often brightly coloured, featuring sleek designs and appealing flavours and there are growing concerns about how they are marketed to appeal to children and non-smokers[29]. Evidence demonstrates that packaging design and flavour descriptions are key contributors to the rising prevalence of young people vaping[30]. A study led by the University of Stirling found that brightly coloured eye-catching vapes were appealing to young people, who also felt that such products are 'for them'.[31] Evidence also suggests that flavour blend names play a significant role in attracting young people to vape. Retail vape packaging often accentuates sweet, or fruit flavours[32], includes vibrant colours[33], features cartoons[34] or is designed to resemble food or drink products (sweets, sugar drinks) that are mostly marketed to young people.

23. The use of enticing packaging is part of a wider effort by industry to market vaping and nicotine products in ways that appeal to young people including through online media, motorsport sponsorship, and out-of-home adverts[35], often using footballers and male influencers[36]. They are increasingly advertised as discrete, convenient products which can be used in environments where smoking or vaping is discouraged[37]. Collectively, these factors increase the appeal of these products to young people and promote nicotine initiation[38].

24. Beyond visual appeal, there is a lack of legislation on how product information should be communicated on vaping and nicotine product packaging. This is particularly the case regarding nicotine strength, which can be stated as a percentage, in ml, per mg of nicotine, or textual information regarding the dose[39].

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[25] Health and Safety Executive. 2025. GB classification and labelling
[26] Arcus Compliance. 2025. Nicotine Pouch Packaging Compliance- Assured Advice.
[27] Gomes and others. 2024. The effect of branded versus standardized e-cigarette packaging and device designs
[28] Chantler. 2014. Standardised packaging of tobacco: Report of the independent review undertaken by Sir Cyril Chantler
[29] Mays and others. 2023. The Effects of Oral Nicotine Pouch Packaging Features on Adult Tobacco Users' and Non-Users' Product Perceptions;
[30] Taylor and others. 2025. Association of fully branded, standardized packaging and limited flavor and brand descriptors of e-liquids with interest in trying products among youths in Great Britain
[31] Smith and others. 2023. Youth's engagement and perceptions of disposable e-cigarettes
[32] Laestadius and others. 2019. From Apple to Werewolf: A content analysis of marketing for e-liquids on Instagram.
[33] Tobacco Tactics. 2023. E-cigarettes: British American Tobacco
[34] Allem and others. 2019. Return of cartoon to market e-cigarette related products.
[35] Sun and Tattan-Birch. 2024. Sports, Gigs, and TikToks: Multichannel Advertising of Oral Nicotine Pouches
[36] ASH. 2025. ASH calls for swift legislation on nicotine pouches as new data shows surge in youth awareness
[37] Czaplicki and others. 2024. Content analysis of marketing features in US nicotine pouch ads from 2021 to 2023
[38] Clark and others. 2023. Qualitative perspective on nicotine pouches from adults who smoke cigarettes in North Carolina
[39] Ford and others. 2024. A Content Analysis of Nicotine Descriptors on the Front of Vape Packaging in the United Kingdom

This has led to confusion amongst consumers around the nicotine strength of products[40]. A consistent way of communicating nicotine strength may help consumers to make informed purchases, particularly aiding adult smokers on their quitting journey as they often need to transition over time to lower nicotine strength products. Evidence suggests that a consistent approach to information on nicotine strength has minimal impact on adult interest in trying nicotine products or their perceptions of harm[41].

25. Other inconsistencies across vape packaging include the use and non-use of age verification symbols, as well as clear instructions on appropriate waste disposal. Age restriction symbols (e.g., the 18+ marking) provide visual clarity about who can legally be sold a product.

26. Waste disposal has also been a growing issue regarding vaping products given incidents of fires in waste collection lorries and depots[42]. Under the Waste Electrical Equipment (WEE Regulations) manufacturers have a responsibility to protect the environment and human health against waste from electrical and electronic equipment. This includes a requirement to ensure producers mark vape devices or packaging with the wheelie bin symbol. Although not mandatory, some businesses include additional, clearer waste-disposal instructions on packaging. However, there is inconsistency in how this information is communicated across packaging and surveys suggest there is a lack of consumer knowledge around the safe disposal of vapes[43]. A consistent way to communicate this information on the packaging could improve consumer awareness.

27. Reduced use of vaping products resulting from stricter packaging rules would also lessen waste overall, cutting down on discarded devices and associated environmental harm, while lowering the risk of battery-related fires in recycling facilities.

Powers in the Act

28. The Tobacco and Vapes Act includes new regulation-making powers to enable legislation that will reduce the harms from tobacco and the number of young people vaping. Specifically, the Act provides the Secretary of State with powers to make regulations on the retail packaging of vaping and nicotine products. These powers are UK wide and requires the consent of the devolved governments when making regulations.

29. Other policies implemented through secondary legislation as part of the Tobacco and Vapes Act are likely to interact with each other. This includes regulations on smokefree, vape-free and heated tobacco-free places (which the Government has recently consulted on); tobacco, vaping and nicotine product display; tobacco packaging; and vaping and heated tobacco devices. These policies will also likely interact with other external factors and any future tobacco and vaping interventions such as changes to smoking cessation services, evolving long-term health evidence

[40] Thirlway and others. 2023. E-Cigarette Appeal in Context: A Qualitative Study in Deprived Areas Into the Role of Packaging in e-Cigarette Purchasing and Use.
[41] Taylor and others. 2025. Investigating the Appeal of Nicotine Pouch Packaging, Flavour, and Nicotine Descriptors Among Adults in the UK: An Online Experiment
[42] NFCC. 2024. Over 1,200 battery fires in bin lorries and waste sites across the UK in the last year.
[43] Zurich Munipal Research 2023: Single use vapes spark surge in blazes as three dumped every second

on vaping and other nicotine products, introduction of novel nicotine delivery products or potential changes in population behaviours or trends. There is limited evidence on how different policies will interact with each other and external factors. How policies interact will also depend on the options taken forward to final impact assessment stage following consultation. Therefore, this impact assessment considers the costs and benefits of the policy on vaping packaging in isolation.

Rationale for intervention

Evidence to support the need for intervention

30. In 2016, the UK introduced stringent packaging requirements for combustible tobacco cigarettes. This required cigarettes and hand-rolling tobacco packs to be manufactured and sold in Pantone 448C with a matte finish, with no branding, imagery or logos, and larger health warnings and the brand name in standard font and no brand imagery or logos[44]. Research supports that standardising features of packaging reduces the appeal of tobacco products, reduces smoking uptake in children and improves the effectiveness of health warnings[45]. A post-implementation review of the Standardised Packaging of Tobacco Products Regulations 2015 (SPoT) was published in March 2022[46]. This review sets out that prohibiting tobacco branding reduced the appeal of tobacco products to children, with young non-smokers and occasional smokers potentially affected the most. This review concluded that legislation continues to be relevant and needed to reduce appeal. However, the review also reported vape use by all 16+ age groups in Great Britain and secondary school pupils in England had increased in the same period[47]. This suggests further action is required to reduce the appeal of these products' packaging to young people to deter them from vaping.

31. A systematic review exploring consumer, tobacco company and retail response to the implementation of standardised packaging for cigarettes and rolling tobacco in May 2017 found that compliance was high[48] with evidence suggesting that standardised packs accounted for 96% of total volume sales in June 2017[49].

32. A study by Kings College London researchers and ASH explored how vape packaging design influences interest in trying vaping[50]. The study randomly assigned a sample of 2,469 adolescents (aged 11-18 years old) and 12,026 adults in Great Britain to view a set of three vape products from one of three packaging conditions: fully branded packs, standardised white packaging with brand name and standardised olive coloured packaging with brand name. Researchers reported that young people had a lower interest in trying vapes in standardised olive colour packaging, in comparison to branded packaging. Importantly, standardisation of packaging did not affect interest in trying vapes among adult respondents, including adults who smoke. This suggests that regulating vape packaging to reduce branding

[44] GOV. 2016. The Tobacco and Related Products Regulations 2016
[45] Breton and others. 2021. Was the implementation of standardised tobacco packaging legislation in England associated with changes in smoking prevalence?
[46] GOV. 2022. Post-Implementation Review of Tobacco Legislation The Standardised Packaging of Tobacco Products Regulations 2015
[47] GOV. 2022. Post-Implementation Review of Tobacco Legislation: The tobacco and Related Products 2016
[48] Crawford and others. 2019. A systematic review of research exploring the response of consumers, retailers and tobacco companies to standardised packaging in the United Kingdom
[49] Breton and others. 2019. Cigarette brand diversity and price changes during the implementation of plain packaging in the United Kingdom
[50] Taylor and others. 2023. Association of fully branded and standardised e-cigarette packaging with interest in trying products among youths and adults in Great Britain.

elements may make products less appealing to young people without deterring adults from trying vapes to stop smoking.

33. Another study that utilised a cross-sectional online survey to explore interest in trying and the harm perceptions of vaping products in plain packaging also found that standardised vape packaging reduced the appeal of vaping products among young people aged 16 to 19 years in England, Canada and the US[51]. This study found that compared with branded vape packaging, 16-19-year-olds reported lower interest in trying e-liquids in white (odds ratio = 1.48) or olive coloured standardised packaging (odds ratio = 1.62) compared to branded packaging, especially among non-smokers and younger participants, and that standardised packaging reduced product appeal and increased perceptions of harm. Young people exposed to standardised packaging (white or olive) were less likely to express interest in trying these products. Nicotine levels displayed on e-liquid packs were not associated with youth interest in trying or with harm perceptions[52]. The effects were consistent across England, Canada and the USA and align with recent findings reported by another online experimental study[53]. This suggests that removing imagery and branding elements in the form of standardised packaging may help reduce interest in trying vapes among this age group.

34. An experimental study conducted in Great Britain examined how standardised packaging with coded brand names and limited flavour descriptions influences interest amongst young people (11–18-year-olds) in trying e-liquids[54]. For example, changing the brand 'Moreish Puff' to 'RT56' and the flavour 'Mango Slush' to 'Mango'. Researchers found that compared to standardised packaging with usual descriptors, young people's interest in trying vapes was significantly lower when standardised packaging is combined with limited flavour and brand descriptions (odds ratio = 1.87). These findings are broadly consistent with a recent study (under peer-review) which also reported that standardised packaging with limited flavour descriptors significantly reduced peer interest in trying the products compared to branded packs[55]. The effect was strongest among never smokers and never vapers. Conversely, for adults, interest remained largely unchanged across most conditions and harm perceptions were not significantly affected by packaging type.

35. Furthermore, restricting flavour representation (e.g., flavour colour or image, such as an 'apple') on vape packaging can reduce how fun and interesting young people perceive these products to be and how susceptible they are to using them[56].

36. Similar to vapes, nicotine products come in a wide variety of flavours often using conceptual flavour descriptors (e.g., Purple Haze, Electric Green) and evidence suggests these can appeal to young people. Evidence suggests that limiting flavour descriptions on vape packaging can significantly reduce appeal amongst young people but not adult smokers' interest in trying them. We can likely assume this will

[51] Simonavicius and others. 2024. Impact of E-liquid Packaging on Vaping Product Perceptions Among Youth in England, Canada, and the United States: A Randomized Online Experiment

[53] Gnomes and others. 2025. The effect of branded versus standardised e-cigarette packaging and device designs: an experimental study of youth interest in vaping products.

[54] Taylor and others. 2025. Association of fully branded, standardized packaging and limited flavor and brand descriptors of e-liquids with interest in trying products among youths in Great Britain

[55] Taylor and others. 2025. The effect of standardised packaging and limited flavour descriptors of vape pods among adults and youth - online experiments

[56] Katz and others. 2023. Vaping Flavors and Flavor Representation: A Test of Youth Risk Perceptions, Novelty Perceptions, and Susceptibility

have a similar impact on nicotine products for this age group. Furthermore, it is necessary to take consistent action across all products to limit potential product substitution.

37. There are currently no legal restrictions on the use of colours, imagery, branding or logos on packaging for nicotine products and non-nicotine vapes. Additionally, there is no requirement for age-restriction symbols or nicotine strength on the front of the packaging. There is also a discrepancy in how nicotine concentrations are depicted on nicotine products packaging with some brands featuring a visual scale of dots, whilst others use text labels like 'extra strong'. Whilst some businesses are including this in their packaging voluntarily, we need to ensure consistency across brands for consumer safety and to allow users to make informed decisions.

38. A recent large study among adults in the UK randomised 2,967 participants to view nicotine pouch packaging under four conditions: branded, standardised with usual flavour descriptors, standardised with limited flavour descriptors and standardised with both limited flavour and standardised nicotine descriptors[57]. Researchers found that the packaging conditions had minimal effect on adults' interest in trying nicotine pouches and little effect overall on the relative harm perceptions of nicotine pouches. The only significant finding was that current vapers (adults who reported vape use in the past 30 days) were more interested in the limited-flavour standardised packs than in the branded packs, whilst this was not observed among former vapers and never vapers. This suggests that it may be possible to deter nicotine use amongst young people with plain packaging and limited descriptors without deterring adult interest. We are not aware of current evidence on the packaging or promotion of other nicotine products such as nicotine strips or nicotine pearls.

39. We are commissioning further specific research on our proposed regulatory approach via the National Institute for Health and Care Research.

Stakeholder support

40. There is strong stakeholder and public support for imposing stronger requirements on vaping and nicotine product packaging and limiting flavour descriptors to reduce their appeal to young people. In the Youth Vaping Call for Evidence (2023), respondents highlighted the role of bright colours, child-friendly images, sweet-themed branding and misleading flavour names in driving uptake amongst young people in recent years[58].

41. In October 2023, the Government launched a consultation on Creating a Smokefree Generation, which also demonstrated strong support for regulatory action. The most popular option among consultation respondents was to bring in a full range of restrictions on packaging, with 46% supporting the prohibition of all colours, imagery and branding on vape packaging[59]. There was also support for extending these regulations to cover non-nicotine vapes as well as to other consumer nicotine products, such as nicotine pouches, to avoid loopholes and support stronger enforcement, with 53% of respondents agreeing that nicotine products should be

[57] Taylor and others. 2025. Investigating the appeal of nicotine pouch packaging, flavour and nicotine descriptors among adults in the UK: An Online Experiment.
[58] GOV. 2023. Youth vaping call for evidence analysis.
[59] GOV. 2024. Creating a smokefree generation and tackling youth vaping

regulated under a similar framework as vapes[60]. Additionally, a YouGov poll commissioned by ASH in 2023, also found broad public support with 75% of adults in Great Britain in favour of limiting the use of sweet names, cartoons and bright colours on vape packaging[61].

42. Several key stakeholders in the UK have called for stronger requirements on packaging for vaping and nicotine products, including restrictions on flavour descriptors. In the 2024 evidence review, the Royal College of Physicians (RCP) recommended standardised packaging as part of a broader strategy to reduce product appeal. This includes removing branding elements and playful or sweet-themed names that glamorise products. Additionally, in its February 2025 submission to the Tobacco and Vapes Bill Committee, the Association of Directors of Public Health (ADPH) supported extending standardised packaging requirements to all tobacco and nicotine products to protect young people[62]. Similarly, Action on Smoking and Health (ASH) has long advocated for standardised packaging to all nicotine products to reduce brand-driven appeal and has advocated for restrictions on flavour names.

International context

43. Countries have taken varied approaches to regulating vapes and nicotine products; while some, like India and Brazil, have banned them outright, others have introduced regulations to reduce their use and appeal, and many have taken action to restrict retail packaging[63]. For example, Finland, Denmark, and Israel have used a dissuasive colour (brown/green), whilst Australia has mandated therapeutic vapes to adhere to plain pharmaceutical packaging (e.g., standardised fonts, no bright colours or images)[64.] New Zealand and Canada have prohibited the use of youth-appealing imagery on packaging.

44. Additionally, there are examples of countries taking legislative action to restrict how vape flavours can be described on retail packaging to curb the marketing appeal to children. For example, New Zealand has mandated the use of only generic flavour descriptions from a set list[65] and Canada's federal law prohibits using branding that explicitly links the flavour to candy, cola or other youth-oriented flavours on the packaging. Other countries have implemented flavour bans that restrict certain e-liquid flavours, such as China, Finland, Denmark and the Netherlands.

45. There has been some international action to regulate other, more novel nicotine products (i.e. nicotine pouches), including marketing restrictions, health warning labels and minimum age sale requirements[66]. Australia (for tobacco derived nicotine pouches), New Zealand (unless approved as medicines) and Singapore, for example, have banned outright nicotine pouches. Other countries have implemented or are moving towards plain packaging regulations for nicotine pouches, with Germany introducing mandatory health warnings and restrictions on branding and

[60] GOV. 2024. Creating a smokefree generation and tackling youth vaping consultation: government response
[61] ASH. 2023. Public support for Government action on tobacco in Great Britain
[62] The Association of Directors of Public Health. 2025. ADPH gives evidence on smoking
[63] World Health Organization. 2024. Tobacco: E-cigarettes
[64] 2025. Tobacco Control Laws. Find by Policy | Tobacco Control Laws
[65] Ministry of Health. 2023. Restrictions on colours and flavours of vaping products
[66] Duren and others. 2022. Nicotine pouches: a summary of regulatory approaches across 67 countries

imagery; Ukraine enforcing strict packaging and labelling rules; and Israel implementing plain packaging aligned with tobacco regulations.

46. Additional information on international examples on vape and nicotine product packaging regulation can be found in Annex A.

Why is Government intervention required?

47. Voluntary action by businesses is not sufficient to address the colourful marketing and promotion of vape packaging. Whilst industry pledges to act responsibly and have mostly adhered to the legal requirements set by TRPR, CLP and GPSR, they have not been restrained on the more influential elements of packaging, such as the use of bright colours, pictures and branding elements. Indeed, there is no commercial incentive for them to do so in a market where there has been significant growth in recent years and where there is a lot of competition for market share amongst many thousands of products.

48. The UK's Public Health Responsibility Deal (2011–2015) demonstrates the limitations of relying on voluntary action to protect public health. While companies signed pledges to reformulate products, provide calorie information, and reduce harmful ingredients, many commitments were superficial, inconsistently applied, or designed to avoid meaningful change. There was no enforcement mechanism to hold businesses accountable. This failure illustrates that commercial interests often conflict with public health goals, as profit-driven industries have little incentive to make changes that might reduce sales[67].

49. Communication campaigns can have some impact. In February 2025, DHSC launched a nation-wide campaign to reduce the appeal of vaping amongst children and young people[68.] The relationships and sex education (RSE) and health education guidance has also been updated to teach children on the risks and harms of vaping and use of nicotine products[69]. However, whilst public health campaigns can raise awareness of the health harms of these products and inform consumers, vibrant and attractive packaging will continue to appeal to children and attract them into vaping and nicotine use. Indeed, communication campaigns should be used in tandem with other forms of action to help ensure successful implementation.

50. Given this and the fact that the Government committed in its manifesto to end the promotion of vaping and nicotine products to children to protect future generations from the harms of nicotine addiction, regulatory action is, therefore, considered necessary to successfully tackle the issue of young people vaping. This would reduce the appeal and attractiveness through restricting imagery, colouring and branding; better inform users of products and their relative harms; and strengthen health messaging. We have also seen the effectiveness of regulating packaging for cigarettes and hand rolled tobacco to reduce appeal in order to achieve public health benefits, and a similar approach to vaping products and nicotine products is now needed.

[67] Durand and others. 2015. An evaluation of the Public Health Responsibility Deal
[68] GOV. 2025. 10-year study to shed light on youth vaping
[69] GOV. 2025. Relationships Education, Relationships and Sex Education and Health Education guidance

Rationale and evidence to justify the level of analysis used in the IA (proportionality approach)

51. The evidence base for the impact of packaging on vaping is limited compared to evidence for cigarettes and hand rolling tobacco. Where it is not possible to use evidence for vapes, the assumptions made for the tobacco market have been used as a proxy, and any potential differences have been noted.

52. Other nicotine products such as nicotine pouches are currently not as popular as vapes or tobacco products, so the evidence base is even more limited in comparison to both vapes and tobacco products. Where it is not possible to use evidence for nicotine products, the assumptions made for the vape market have also been used as a proxy, and any potential differences have been noted.

53. There are additional nicotine products in scope such as nicotine pearls and nicotine strips, however there is limited evidence and data on the use of these products, therefore they have not been included in the cost benefit analysis. At final stage impact assessment, we will review if there is any additional data available to include these products.

54. Due to the limited evidence base, we have had to make assumptions in our analysis to provide monetised cost estimates. Where assumptions have been made, they are clearly outlined in the impact assessment and where they have been identified as key assumptions, they have been tested in sensitivity analysis.

55. Given the limited evidence base in some areas, we have not been able to identify all differences in impacts between different short-listed options. It has been clearly outlined where impacts between different options differ.

56. Several of the assumptions have not been tested with industry at this stage. The UK Government is committed to upholding Article 5(3) of the FCTC which requires FCTC members to protect public health policy from the vested interests of the tobacco industry. Whilst some vaping organisations have taken steps to remove tobacco industry influence this is not the case across the industry as a whole and it can be difficult to verify where stakeholders are free from tobacco industry influence unless this is stated and proven outright. This is particularly the case with industry partners involved in the production and sale of more novel products. Due to this consideration, wide engagement outside of an open government consultation can be difficult. To test the assumptions, we have provided thorough quality assurance and sensitivity analysis to provide a robustness check and show their influence on the quantified costs and benefits.

57. We will aim to collect additional data for Final Stage IA through consultation and further research.

58. The appraisal period used in this IA is 10 years. We have used the default time horizon as suggested by HMT Green Book[70] as we do not think there is rationale for extending the appraisal period as the long-term impacts of products in scope are unknown. In addition, some estimates are based on projected consumption. Forecasting these figures beyond a 10-year appraisal period would likely decrease the robustness of the estimates. We expect the majority of the non-monetised benefits to arise within the appraisal period, however we are uncertain on when the

[70] HMT. 2022. The Green Book: appraisal and evaluation in central government - GOV.UK

health gains to individuals may arise and therefore, they could also arise outside of the appraisal period.

59. We have assumed the appraisal period for this policy will be from 2027 to 2036. This is illustrative and assumes the policy will be implemented in 2027. In practice this may not be the case. In addition, there is likely to be an implementation period, this has not been included in the modelling as it will be consulted on during the consultation.

60. For this IA we are using a 2024 price base year and a 2027 present value base year. The interpretation of these figures throughout the impact assessment is '*if this measure was introduced in 2027, the costs and figures in 2024 prices would be this much'.*

61. As outlined in the HMT Green Book, a discount rate of 3.5% per year has been used for all costs and benefits.

62. Due to evidence limitations, a significant proportion of the benefits of the policy are not quantified or monetised in this analysis. Additionally, where products in scope are novel, this creates further challenges and uncertainties in assessing the potential scale of the benefits. For example, the long-term health harms of vaping products are still unknown.

63. As a result, we do not think the presentation of a Net Present Social Value (NPSV) would provide a fair reflection of the overall net impact on society from this policy.

Interactions

64. As explained in paragraph 9, the Government's aims to tackle youth vaping and the use of nicotine products sits alongside several other measures we propose to introduce using powers within the Tobacco and Vapes Act and there will be other IAs covering any other measures consulted on.

65. This IA considers the costs and benefits of the policy in isolation. However, we recognise that other policies implemented through secondary legislation as part of the Tobacco and Vapes Act are likely to interact with each other.

66. The policy will also likely interact with other external factors and any future tobacco and vaping interventions such as changes to smoking cessation services, evolving long-term health evidence on vaping and other nicotine products, introduction of novel nicotine delivery products or potential changes in population behaviours or trends.

67. There is limited evidence on how different policies will interact with each other and external factors. How policies interact will also depend on the options taken forward to final impact assessment stage following consultation.

Potential interactions

68. Vaping and nicotine product policies will aim to reduce the number of young people and non-smokers that vape or consume nicotine products.

69. Policies aiming to make vapes and nicotine products less appealing to young people such as restrictions on packaging and devices should be seen as mutually reinforcing. They could be expected to have a larger impact on youth vaping and nicotine product use rates compared to implementing them in isolation, if implementing them together is assumed to have a larger impact on the appeal of vapes to young people.

70. Restrictions on the display of vapes and other nicotine products further reinforces these policies by limiting youth exposure to vaping products. By limiting visibility and access, these restrictions could reduce youth vaping further.

71. However, it is possible that the total impact on youth vaping rates is less than the sum of individual policies, as the policies will be targeting the same groups of people. For example, in the worst-case scenario the impact could be the estimated impact size of one policy, and any additional policies have no additional impact.

72. Due to these potential interactions, there may be overlap between the costs and benefits identified creating a risk of double counting. Some cost estimates across the options are unlikely to be independent and therefore should not be added together. If the full impacts of each policy were aggregated, the total costs and benefits could be overstated. For example, familiarisation costs have been calculated separately for each policy, but if measures are implemented simultaneously, businesses subject to multiple policies may face a lower overall burden than the sum of the individual costs, for instance if guidance is combined.

73. Benefits have not been monetised in the IAs, so there is not the same risk of double counting of quantified benefits. However, for the non-monetised benefits considered, it is important to note that they should not be assessed in isolation. Many of these benefits may arise from multiple policies and may apply to overlapping populations. As a result, the benefits of individual policies cannot be combined.

Unintended consequences

74. A possible unintended consequence of vaping restrictions is that it could shift harm perceptions of vaping products, leading to individuals switching or trying more harmful products. It could also reduce the number of smokers willing to use vapes for smoking cessation. However, using packaging as an example, preliminary evidence from recent studies, suggests that changes to packaging are unlikely to impact adults' appeal.

75. To further mitigate similar unintended consequences, the Tobacco and Vapes Act will bring forward restrictions on more harmful products, notably including age of sale restrictions for tobacco products. The tobacco policies in the Act are intended to reduce the proportion of people that tobacco can be sold to. We would expect these policies to at least partially mitigate any potential unintended consequences that might see an increase in people trying tobacco products.

Description of options considered

Policy objectives

76. The UK Government, as well as the devolved governments in Scotland, Wales and Northern Ireland, have a duty to protect and improve the health of their citizens[71]. Specifically, all nations are committed to our ambition for a smoke-free UK and tackling the rise in young people vaping. The aim to reduce young people vaping needs to be balanced against the objective to support adult smokers to quit, in which vaping can play a key role.

77. The specific policy objectives for introducing standardised vape and nicotine product packaging include:

[71] GOV. 2006. National Health Service Act 2006

- Objective 1: To reduce vaping product and nicotine product prevalence amongst young people by reducing the appeal amongst young people and attractiveness of nicotine and vaping product packaging.
- Objective 2: To continue to enable vapes as a smoking cessation aid to help adult smokers quit smoking by maintaining a level of differentiation between tobacco and vaping/nicotine products packaging and avoid unintended consequences on smoking rates or other tobacco usage.

78. These objectives align with wider HMG objectives such as:

- The Government's manifesto commitment to '*create a smoke-free generation'* and '*stop the next generation from being hooked on nicotine*'. We also expect these objectives to contribute to the wider government commitments to 'build a National Health Service fit for the future', 'support economic growth' and 'reduce waste'[72].

79. The Government's 10 Year Health Plan for England, which aims to "halve the gap in healthy life expectancy between the richest and the poorest regions, while increasing it for everyone, and to raise the healthiest generation of children ever"[73]. Many of the described health harms associated with the products in scope contribute to the gap in healthy life expectancy, and preventing the initiation and use of these products by children will contribute to this goal. Scotland and Northern Ireland are also aligning with this plan. In Wales, both "A Healthier Wales"[74] and the "Towards a Smoke Free Wales strategy"[75] align with these objectives in improving health outcomes for children and certain priority groups.

- The public health objectives within the Government's Health Mission to 'support people to stay healthier for longer', 'shorten the time people spend in ill health' and 'shift the health system away from a focus on treatment to one focused on prevention'[76]. The described products have associated health harms as detailed in the evidence section. By reducing their use, particularly by stopping the initiation of use in children and young people, we are aiming to prevent long-term health conditions which will improve overall population health in the UK.

- The objective within the Growth Mission to make 'improvements to economic activity as a result of ill health'[77]. Many of the described health harms associated with the products in scope carry substantial economic harms driven by potential reductions in economic activity as a result of long-term health conditions. Preventing the initiation and use of these products aims to improve associated economic inactivity.

80. Other indicators for success include:

- Strategic fit – the timing and content are complementary to other regulations to be made using powers under the Tobacco and Vapes Act, as well as other strategic government aims, such as the 10-Year Health Plan for England,

[72] Labour. 2024. Change – The Labour Party
[73] GOV. 2025. Fit for the future: 10 Year Health Plan for England
[74] Welsh Government. 2024. A Healthier Wales.
[75] Welsh Government. 2023. Tobacco control strategy for Wales
[76] Labour. 2024. 5 Missions for a Better Britain
[77] Labour. 2024. Kickstart economic growth

which Scotland and Northern Ireland are also aligning to, as well as the 'A Healthier Wales' strategy for Wales.

- Potential value for money – the correct balance between indicators such as individual and population level health gains, environmental gains, productivity gains, cost savings to government and individuals, and risks such as; cost to businesses, net business profit loss, deliverability risks.
- Capacity, capability and achievability amongst businesses who need to deliver this policy in the required time and enforcement agencies who will be required to implement necessary measures to enforce this change.

81. Additional metrics that can be used to assess whether the objectives have been achieved are outlined in the monitoring and evaluation section of this impact assessment - for example, monitoring vaping and smoking prevalence.

Policy options

82. The policy options were selected by assessing long-list options against a range of factors, such as, products in scope, geography, size of businesses, how to deliver change, and implementation.

83. The policy options considered in this IA are:

- **Option 1:** Business as usual. As highlighted in the evidence section above, the prevalence of vaping and nicotine use among young people has been rising and evidence indicates that vapes can appeal to children through their appearance. To do nothing means that this option would not limit the logos, colour or branding presented on packaging, enabling harm to continue and does not meet either of our objectives.
- **Option 2: To introduce plain white packaging, permit one regulated form of branding and restrict flavour names. [Preferred]** This would prohibit logos, promotional text and images and only permit minimal branding differentiation. The packaging must be child-resistant and tamper-evident in uniform shapes. Packaging must not use irregular texture or materials. All packaging must contain the appropriate warning labels and information, including consistent nicotine descriptors and age restriction symbols, as well as an instructions leaflet, including information on risks and possible adverse effects for relevant products. Flavour descriptions on the packaging are limited to a single flavour name. This is our preferred option and would remove the promotional and child-appealing features of the packaging, whilst maintaining a distinction from standardised tobacco packaging. This would meet our objectives.
- **Option 3: To introduce plain white packaging, restricting flavour names but with no brand differentiation permitted.** The white colour packaging will likely reduce the appeal for children but not impact adult smokers, although the lack of branding could impact on the ability of adult smokers to make informed decisions on which vaping product or nicotine product is right for them given the wide range of options on offer. All packaging must contain the appropriate warning labels and information, including consistent nicotine descriptors and age restriction symbols, as well as an instructions leaflet, including information on risks and possible adverse effects.

- **Option 4: To introduce dissuasive packaging (for example, Pantone 448C), similar to that of tobacco packaging.** This will likely dissuade all groups, including adult smokers, given the evidence on the effect that this approach has had for tobacco products, and could risk conflating the level of harm between tobacco and vaping products. This would not meet both our objectives. All packaging must contain the appropriate warning labels and information, including consistent nicotine descriptors and age restriction symbols, as well as an instructions leaflet, including information on risks and possible adverse effects.

84. Other options considered but discounted included voluntary schemes or guidance, limiting the scope to certain vaping and nicotine products only, and more stringent restrictions such as coded brand names and flavours, as well as more limited measures such as requiring relative risk health messages, prohibiting the use of certain imagery and colours, and restricting logos while permitting elements of branding design. All options considered but not taken through to the short-list options did not meet the policy objectives and other indicators of success outlined above.

Option 1: 'Business as usual'

85. The business as usual constitutes the baseline against which changes to vape and nicotine product packaging are assessed.

86. In the absence of implementing this policy, current legislation for vape and nicotine product packaging would still apply. We would expect the existing policies to remain in place.

- In relation to nicotine vapes, current legislation would still apply, as per The Tobacco and Related Products Regulations 2016 (TRPR)[78].
- In relation to non-nicotine vapes and other nicotine products, current regulations would still apply, as per The General Product Safety Regulations 2005 (GPSR).

Baselines

87. The options considered cover a number of products in scope:

- Vaping products
- Other nicotine products

88. Where data is available, a baseline for prevalence and total spend has been estimated. Baselines consider only those aged 18 and over for the purpose of profit losses, as sales of nicotine vapes to those under 18 is currently illegal.

Vapes (including non-nicotine vapes)

89. For the purposes of this Impact Assessment, we need to estimate the size of the vape market, for the appraisal period 2027-2036.

90. In the Tobacco and Vapes Act IA[79], we estimated the vape market size using sales data from a Defra commissioned report by the consultancy Eunomia[80]. This research

[78] The Tobacco and Related Products Regulations 2016
[79] DHSC. 2024. Tobacco and Vapes Bill Impact Assessment.
[80] Eunomia. 2023, Analysis of the Market for Vapes: Exploring the environmental impacts of single-use vapes.

was conducted in 2023 to develop the evidence base on the single-use / disposable vape market and its environmental impacts in the UK.

91. It was estimated that 360 million single-use vapes were placed on the market in the UK in 2023[81]. This figure was then projected forward by Eunomia to show that 1 billion disposable vapes could be placed on the market by 2030. Based on the number of vapes on the market, we were then able to estimate the projected business profit from sales using the estimated price of a vape (£5.38 in 2024[82]) and the profit margins of manufacturers, wholesalers and retailers outlined in Defra's single use vape ban impact assessment[83].

92. However, Defra's single-use vape ban came into force on the 1st June 2025, which makes it illegal to offer to sell or supply single-use vapes or to stock single-use vapes that you plan to sell or supply[84]. Based on this, we would expect the future market to change, with people who vape changing their behaviours by quitting, swapping to reusable vapes or switching to other nicotine products. Therefore, we judged it no longer representative to use the existing baseline from the Tobacco and Vapes Act IA. In addition, the baseline previously used was predominantly underpinned by assumptions based on the disposable vapes market, which following the ban may no longer apply.

93. At the time of drafting this Impact Assessment (July 2025), we could not identify data or forecasts on specific changes to the market as the ban had just come into force (June 2025). Therefore, our vape baseline has been based on existing data with additional assumptions from the Defra Impact Assessment on how consumers might change their behaviours.

94. A recent study by UCL[85] explored the single use vape ban announcement and found that the recent increase in vaping prevalence in Great Britain has stalled and there has been a shift away from using disposable vapes, with people opting to use reusable vapes instead. However, this study was still only considering changes to vaping prevalence prior to the disposable vape ban coming into force. As a result, we did not consider it appropriate to rely solely on these findings to make assumptions about how the vape market might change following the single-use vape ban.

Updated methodology

95. The updated methodology to estimate the vape baseline uses a bottom-up approach with the following steps:

    A. Estimate the total number of people vaping using population estimates and vape prevalence

    B. Apply percentages for different behaviours that will switch to different products following the disposable vape ban

[81] Material Focus. 2023. Number of disposable single-use vapes thrown away have in a year quadrupled to 5 million per week.
[82] Defra research conducted in 2023 based on a sample (a compiled list of approximately 40 products that were deemed to be disposable vapes based on the definition given in paragraph 80) of products for sale from both online and in-store retailers, including vape stores, newsagents and supermarkets.
[83] DEFRA. 2024. Ban on the sale and supply of disposable vapes in England.
[84] DEFRA. 2025. Single-use vapes ban: information for businesses
[85] Jackson and others. 2025. Changes in vaping trends since the announcement of an impending ban on disposable vapes: A population study in Great Britain.

C. Estimate the yearly spend on vapes per person

D. Multiply the total yearly vape spend by the total number of people vaping to get total vape sales

A. Estimate the total number of people vaping using population estimates and vape prevalence

Population estimates

96. The total number of people that vape has been estimated using ONS population projections[86]. We have split the populations into two groups, young people (11–17) and adults (aged 18+) to identify different impacts by age. These projections also take into account population growth over time.

97. When producing the population estimates for example, for profit loss, we should exclude the youth population from the analysis, given the purchase of nicotine vapes for those and by those under 18 is illegal and hence the lost profit to businesses should not be considered.

98. However, for the purposes of understanding the impact on vaping prevalence and estimating the potential impact on reducing young people vaping, we consider the reduction in the vaping population for this age group.

Vape prevalence

99. The vaping prevalence applied for 11–17 year olds is based on data from NHS Digital's report Smoking, Drinking and Drug Use in England 2023[87], which estimates current e-cigarette prevalence of 8.7% of 11–15-year-olds in 2023. The prevalence for 11-15 year olds in England has been used as a proxy for 11-17 year olds and has been applied to the UK population.

100. For adults, the prevalence that has been applied is based on ONS data[88] on adult vape usage in Great Britain in 2023, which was estimated to be 9.8%, made up of daily users (5.9%) and occasional users (3.9%).

101. For the baseline we assume prevalence is constant across all years. Despite growth over recent years, we expect that this is likely to slow, due to measures such as the single-use vape ban. It would not seem feasible to apply previous growth rates used, based on the disposable vape market to the future market. The UCL study[89] also referenced in paragraph 94, found that prevalence has stalled following the announcement of the single-use vape ban.

102. It is possible that the market may still experience growth over time and the stalling of increases in prevalence is only temporary. This scenario is considered unlikely given planned future measures such as the vaping products duty[90] and other secondary legislation.

103. Based on the population estimates and the prevalence explained above, we have estimated the number of people that vape, before we assume anyone has changed their behaviour following the single-use vape ban.

[86] ONS. 2022. Population Projections.
[87] NHS England. Smoking, Drinking and Drug Use among Young People in England, 2023.
[88] ONS. 2024. E-cigarette use in Great Britain.
[89] Jackson and others. 2025. Changes in vaping trends following the announcement of an impending ban on disposable vapes: a population study in Great Britain.
[90] HMRC. 2025. Prepare for Vaping Products Duty and the Vaping Duty Stamps Scheme.

Table 1: Number of people that vape before switching has been applied (millions)

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Number of adults vaping	5.53	5.57	5.62	5.66	5.70	5.74	5.78	5.82	5.85	5.88
Number of young people vaping	0.50	0.50	0.49	0.49	0.48	0.48	0.47	0.46	0.45	0.45
Total number of people vaping	6.04	6.07	6.11	6.15	6.18	6.22	6.25	6.28	6.30	6.33

B. Apply percentages for different behaviours that will switch to different products following the disposable vape ban

Switching behaviours

104. As discussed in paragraphs 101 and 92, we would expect the vape market to change in the future. We have adjusted the number of people who vape, accounting for the number of people that would quit, move to alternative products or switch to reusables following the single-use vape ban. Defra estimates percentages of switching behaviour in the disposable single use vape ban IA[91]. They make assumptions on behaviour based on disposable vape user smoking status outlined in Table 2 and Table 3. Table 2 is based on data from The Smoking Toolkit Study[92], identifying the smoking status of disposable vape users.

Table 2: Share of disposable vape users by smoking status

Disposable vape user category by smoking status	Proportion of disposable vape users
Never smokers	20%
Current smokers	49%
Recent ex-smokers	10%
Previous smokers	20%

105. Table 3 has then been derived using the proportion of disposable vape users by smoking status (Table 2) and making assumptions about users switching behaviour based on their smoking status. Defra assumed that:

[91] DEFRA. 2024. Ban on the sale and supply of disposable vapes in England.
[92] UCL. Smoking Toolkit Study.

- Never smokers will end up quitting vaping.
- Long-term previous smokers are more likely to switch to reusables given they are likely to have been long-term users of vapes.
- For current smokers and recent ex-smokers Defra used data from ASH, around satisfaction levels for vapes compared with cigarettes, to make assumptions about their switching behaviour. ASH found that 52% of current smokers and 28% of ex-smokers are less satisfied with vapes compared with cigarettes[93]. Defra applied these proportions to current smokers and ex-smokers and assumed they will not transition to reusable vapes following the ban.

106. However, these are broad assumptions about the switching behaviours of disposable vape users which may not hold in practice due to the addictive nature of nicotine. Disposable vape users may find it challenging to quit following the single use vape ban. In the absence of additional data on the switching behaviours, we have applied these to the baseline. We have also tested this assumption in sensitivity analysis.

Table 3: Share of disposable vape users by assumed switching behaviour

Disposable vape user category by smoking status	Switching behaviour assumption	Proportion of disposable vape users
Never smokers	Quit vaping	20%
Current smokers	Quit vaping	26%
	Transition to reusable vapes	24%
Recent ex-smokers	Quit vaping	3%
	Transition to reusable vapes	7%
Previous smokers	Transition to reusable vapes	20%
Total		100%

107. Taking into account the percentages outlined in Table 3, the total percentage of disposable vape users that will no longer vape is 49%. This is made up of 20% never smokers, 26% current smokers and 3% recent ex-smokers. Based on this, we have applied a 49% reduction to the total number of people that use disposable vapes.

108. As the switching rate is applied to disposable users, we have assumed, based on ASH 2024 data, that 30% of adults use disposable vapes[94] and 54% of young people use disposable vapes[95]. Our analysis assumes that the remaining proportion

[93] ASH. 2023. Use of e-cigarettes (vapes) among adults in Great Britain.
[94] ASH. 2024. Use of vapes (e-cigarettes) among adults in Great Britain.
[95] ASH. 2024. Use of vapes (e-cigarettes) among young people in Great Britain.

of people that vape, use reusable vapes, however this also includes respondents who stated they did not know which device type they used. The proportion of people that responded 'don't know' (8% for young people and 2% for adults) have been included in the reusables category, to avoid overestimating the number of people that leave the market following the single-use vape ban.

109. More recent data on the type of device used has been published by ASH[96] [97]. This data shows that the proportion of individuals using disposable vapes has fallen. In 2025, 42% of young people use disposable vapes and 24% of adults use disposable vapes. Whilst the field work for the surveys was conducted before the single-use ban came into force, there may be some anticipatory switching effects included in the 2025 figures. To avoid capturing switching behaviours twice, we have used the 2024 figures in this analysis.

110. The total number of people that vape, adjusting for the single-use vape ban has been outlined in Table 4.

Table 4: Number of people vaping following the disposable vape ban (millions)

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Number of adults vaping	4.72	4.75	4.79	4.83	4.86	4.90	4.93	4.96	4.99	5.02
Number of young people vaping	0.37	0.37	0.36	0.36	0.35	0.35	0.35	0.34	0.33	0.33
Total number of people vaping	5.09	5.12	5.15	5.19	5.22	5.25	5.27	5.30	5.32	5.35

111. However, in practice there may be differences in the switching behaviours of individuals in the market. We have therefore tested a scenario in sensitivity analysis, where 100% of disposable users switch to reusables, to represent the maximum number of people continuing to vape following the single-use ban.

C. Estimate the yearly spend on vapes per person

Vape expenditure

112. A recent paper by UCL[98] based on data from the Smoking Toolkit Study estimated weekly vape expenditure. The average weekly vape expenditure is shown in Table 5. These figures can be multiplied to estimate the average yearly expenditure and

[96] ASH. 2025. Use of vapes among young people in Great Britain.
[97] ASH. 2025. Use of vapes among adults in Great Britain.
[98] Jackson, S and others. 2025. Changes in expenditure on vaping in the context of the rise of disposable vapes and impending regulatory changes: a population study in Great Britain, 2021-2025.[pre-print]

used to estimate total sales value of vapes. This study is currently in pre-print and yet to be peer reviewed.

Table 5: Average weekly spend on vapes (adjusted to 2024 prices)

Device Type	Average weekly expenditure
Reusable	£7.28
Disposable	£11.02

113. Based on these figures, the estimated average yearly spend on vapes is £378 for reusable and £573 for disposable vapes. This has been adjusted to be in 2024 prices using GDP deflators[99].

114. Other studies on vape expenditure, including a report by HMRC[100] conducted in 2023 stated that people that currently vape reported spending an average of £8.60 (£8.94 in 2024 prices) a week on vaping products. With disposable vape users spending £10.85 (£11.28 in 2024 prices), compared to reusable users spending £6.95 (£7.23 in 2024 prices) a week. This is similar to that estimated by UCL. Our assumptions are based on the UCL paper, as this uses more recent data and has a larger sample size.

D. Multiply the total yearly vape spend by the total number of people vaping to get total vape sales

Total vape sales

115. Based on the assumptions outlined above we can estimate the total sales value of the vape market for the appraisal period (2027-2036). This is done by multiplying the total number of estimated people that vape (as in Table 4) by the average yearly spend (£378). The total sales value can be seen in Table 6.

Table 6: Total vape sales value

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Total spend (£bn)	£1.93	£1.94	£1.95	£1.96	£1.97	£1.99	£2.00	£2.01	£2.02	£2.02

116. As outlined, we have estimated the market value using a prevalence / bottom-up approach. Previously we had estimated the market value using the number of products on the market, therefore we have also tested this approach in sensitivity analysis.

117. Given uncertainty on future vaping prevalence and switching behaviours following the single-use vape ban, there remains uncertainty in the final estimates. We will review any updated data following the single-use vape ban for final stage impact assessment.

[99] HMT. 2025. GDP deflators at market prices and money GDP June 2025 (Quarterly National Accounts)
[100] HMRC. 2023. Understanding the vaping market.

Other nicotine products

Background

118. The evidence and data available for nicotine products is more limited than the vape market. Up until recently, prevalence remained low. This impacts our ability to estimate the baseline for nicotine products. The information and figures that we have identified are of mixed quality. The main nicotine product we are able to consider at this stage is nicotine pouches. We have reviewed the following information on the market size or market turnover:

119. As reported by the Tobacco Reporter[101], Euromonitor estimated that UK consumers purchased 92.1 million nicotine pouches in 2022, with sales growing by 53% in 2023.

120. Wholesale Nicotine Pouches[102] also state in the Nicotine Pouches Market Report 2025, that the nicotine pouch market in 2023 was estimated to be $268.4m and is projected to grow at a compound annual growth rate (CAGR) of 38.9% from 2024 to 2030, according to Grand View Research.

121. Another website, Conveniencestore.co.uk[103], quotes the head of marketing of Scandinavian Tobacco Group UK and states that nicotine pouches are worth £131m in annual retail sales (excluding online sales) which reflects growth of 82% in 2024.

122. Nicotine pouch prevalence is currently much lower than vape prevalence. This means it may not be accurate to use the vape market as a proxy in some instances. However as noted above from various sources, the nicotine pouch market is expected to grow. We will review any additional data on the nicotine pouch market for final impact assessment stage.

Methodology

123. To estimate the size of the nicotine pouch market, we will use a similar approach to that used for the vape market above. In the Tobacco and Vapes Bill Impact Assessment, we estimated the impact on profit of prohibiting the sale and proxy purchasing of nicotine products to under 18s. This has also helped inform the baseline used in this Impact Assessment. We have used the following approach to estimate the baseline:

   A. Estimate the number of individuals using nicotine pouches
   B. Estimate the number of pouches consumed
   C. Use the average cost of nicotine pouches to estimate yearly spend on nicotine pouches
   D. Multiply the yearly spend on nicotine pouches by number of people using pouches

A. Estimate the number of individuals using nicotine pouches

Population estimates

[101] Rossel, S. 2024. The potential of pouches. Tobacco Reporter.
[102] Wholesale Nicotine Pouches. 2025. Nicotine Pouches Market Report 2025.[Accessed July 2025]
[103] Convenience Store. 2025. Six things about tobacco, vaping and next gen products. [Accessed July 2025]

124. To estimate the number of users of nicotine pouches we have used the same ONS population projections, as outlined in Paragraph 96[104].

Other nicotine product prevalence

125. To estimate the number of people that use nicotine pouches we apply prevalence estimates to the total population. A study based on ASH's Smokefree survey GB Adult Surveys 2024[105], found that prevalence of ever use of nicotine pouches in 2024 was 1% for adults and 1.2% for young people. The estimated number of nicotine pouch users can be seen in Table 7. We have estimated the number of young people to include 11–17-year-olds and adults as 18+.

Table 7: Number of nicotine pouch users (millions)

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Number of adult nicotine pouch users	0.56	0.57	0.57	0.58	0.58	0.59	0.59	0.59	0.60	0.60
Number of youth nicotine pouch users	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06
Total number of nicotine pouch users	0.63	0.64	0.64	0.65	0.65	0.65	0.66	0.66	0.66	0.66

B. Estimate the number of pouches consumed

126. The spend on nicotine pouches is estimated by using data on the consumption rate of nicotine pouches. Haypp report that the average nicotine pouch user uses 3 cans a week[106]. At the time of producing this Impact Assessment (July 2025) we are not aware of other data that shows the rate of consumption of nicotine pouches. Therefore, we have used 3 cans a week to estimate the consumption rate.

127. We have also explored methodology used in the Tobacco and Vapes Bill IA[107] based on Nicotine Inhaling Products Impact Assessment[108]. This method used the consumption of nicotine inhaling products as a proxy for the consumption of nicotine pouches. This assumed that people that use nicotine pouches often, consumed

[104] ONS. 2022. Population Projections.
[105] Brose, L and others. 2025. Prevalence of Nicotine Pouch Use Among Youth and Adults in Great Britain- Analysis of Cross-sectional, Nationally Representative Surveys.
[106] Haypp. 2024. Nicotine Pouch Report The UK 2024.
[107] DHSC. 2024. Tobacco and Vapes Bill Impact Assessment.
[108] DHSC. 2015. The Nicotine Inhaling Products (Age of Sale and Proxy Purchasing) Regulations 2015

around 1 pack per week[109][110]. However, nicotine inhaling product consumption rates may not be a good proxy for nicotine pouch consumption. This has been included in the sensitivity analysis to reflect the uncertainty in this estimate.

C. Use the average cost of nicotine pouches to estimate yearly spend on nicotine pouches

128. The price of nicotine pouches is dependent on the size, strength and brand. In the absence of data on nicotine pouch prices, we have reviewed product pricing from leading brands[111]. On the websites of the leading brands, we have filtered by bestselling / most popular products where possible and taken the average price of the top five products. Based on this, we assume nicotine pouches cost £5.56 on average.

129. Adjusting this to 2024 prices, the cost of a pack of nicotine pouches is £5.39. Based on a consumption rate of 3 packs a week, the estimated average yearly spend is £841 per person per year.

Table 8: Summary of leading nicotine pouch brands pricing

Brand	Most popular products	Price	Average price of products
Velo[112]	Freezing peppermint	£6.50	£6.20
	Icy Berries	£6.50	
	Mango Flame	£6.50	
	Orange Spark	£6.50	
	Creamy Latte	£5.00	
Nordic Spirit[113]	Spearmint regular 6mg	£6.50	£6.50
	Mint Regular 6mg	£6.50	
	Spearmint Strong 9mg	£6.50	
	Spearmint X-Strong 11mg	£6.50	
	Spearmint Mini Regular	£6.50	
Zyn[114]	Spearmint X-Low 1.5mg	£6.50	£6.50
	Spearmint 3mg	£6.50	
	Citrus 3mg	£6.50	
	Apple Mint 3mg	£6.50	
	Cool Mint 3mg	£6.50	
XQS[115]	Black Cherry #4	£4.35	£4.35
	Soft Toffee #2	£4.35	
	Tropical #4	£4.35	
	Soft Toffee #4	£4.35	
	Black Cherry #2	£4.35	
On![116]	Mint 3mg Mini Normal	£4.49	£4.23
	Mint 6mg Mini Strong	£4.49	

[110] Based on 632 pouches being consumed a year and an average of 20 pouches in a pack.
[111] Haypp. 2025. Best Nicotine Pouches and Snus 2025 [Accessed July 2025]
[112] Velo. 2025. www.velo.com [accessed July 2025]
[113] Nordic Spirit. 2025. Nordicspirit.co.uk [accessed July 2025]
[114] Zyn. 2025. www.zyn.com [accessed July 2025]
[115] XQS products accessed on www.nicpouch.co.uk [accessed July 2025]
[116] On! 2025. Product prices accessed on haypp.com [accessed July 2025]

	Spearmint 6mg Mini Strong	£4.49	
	Island Twist 6mg Mini Strong	£4.49	
	Plus Citrus Slim Strong	£3.19	
Average price across all products			**£5.56**

130. In practice, the estimated price may be different to the price of nicotine pouches purchased in person in stores and where any promotional discounts are applied. It may also be skewed by only including a selection of the most popular brands and most popular products. However, in the absence of additional data we assume these online prices reflect the average price of nicotine pouches.

D. Multiply the yearly spend on nicotine pouches by number of people using pouches

131. Based on an average spend of £841 per person per year, we can estimate the total sales value of the market across the appraisal period.

Table 9: Total sales value of nicotine pouches

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Total spend on nicotine pouches (£m)	533	536	539	542	545	548	550	553	555	557

Limitations

132. There is uncertainty associated with assumptions used to estimate the total sales value of nicotine pouches. For example, there is uncertainty around the assumption that on average each nicotine pouch user consumes 3 packs of pouches per week, therefore we have tested this assumption in sensitivity analysis.

133. Another assumption that has been tested in sensitivity analysis is the growth rate of the market. In the absence of sufficient data and evidence, we have assumed that this is constant across the appraisal period. We realise that in practice this may not be the case. Consumers may be switching from vapes to nicotine products such as nicotine pouches as a result of the disposable vape ban. However, the estimates produced by Defra in Table 3, do not provide data on the proportion of people that will switch to nicotine pouches specifically. Instead, in the sensitivity analysis, we have used the average growth rate of vape prevalence in the market across 10 years (2014-2023) and applied this to nicotine pouches, to illustrate the market if it does experience the same growth.

Option 2, Option 3 and Option 4

Description of options

134. **Option 2:** To introduce plain white packaging, permit one regulated form of branding and restrict flavour names. [Preferred]

135. **Option 3:** To introduce plain white packaging, restricting flavour names but with no brand differentiation permitted.

136. **Option 4:** To introduce dissuasive packaging (for example, Pantone 448C), similar to that of tobacco packaging.

Potential impact size

Vapes

Evidence of impact size

137. There is a lack of data on the potential impact of standardised packaging specifically on the use of vapes, therefore we have reviewed evidence and previous analysis on the standardised packaging of tobacco to use as a proxy.

138. The impact assessment on standardised packaging of tobacco[117] estimated an 11% reduction in the prevalence of ever smoking as a result of restrictions on tobacco packaging. If this effect were applied to vaping and using the 25% prevalence of ever vaping among 11-to-15-year-olds from Smoking Drinking and Drug use among Young People Survey (SDD)[118], the prevalence could potentially decrease to 22%.

139. Expert elicitation in the same impact assessment suggested a 4.8% reduction in adult smoking prevalence over two years (2.4% annually). After accounting for other tobacco policies (e.g. changes to packaging warnings), the isolated impact of standardised packaging was adjusted to 3.8% over two years (1.9% annually). The expert survey outlined by Pechey[119] asked respondents to state their expectations of change in prevalence two years after implementation.

140. The Standardised Packaging of Tobacco Products Regulations 2015[120] PIR showed reductions in both adult and youth prevalence, and a sustained increase in quit success rates. However, these trends reflect the combined impact of SPoT, TRPR and other tobacco control measures, making it challenging to isolate the effect of packaging alone.

141. In the first year, smoking prevalence fell by around 1.4 percentage points, and the average annual decline post-implementation was slightly higher than previous years (-4.8% vs -4% pre-implementation). In addition, a 2021 study[121] reported a significant step reduction in the odds of being a smoker after May 2017 (odds ratio: 0.93).

Impact size applied

142. In the absence of direct evidence on the impact of standardised vape packaging on vaping prevalence, we use the adjusted tobacco packaging impact size of 1.9% per year over two years as a proxy. We assume half of the reduction occurs in the first year and half in the second, based on the available evidence. It would be unrealistic to assume no change followed by a sudden drop and while decreases may persist beyond two years, we have not modelled further reductions due to lack of evidence. Given the uncertainty in this figure, we have tested the impact size in sensitivity analysis, to reflect a scenario with both higher and lower prevalence reductions.

[117] DHSC. 2015. Standardised Packaging of Tobacco Products Regulations 2015.
[118] NHS Digital. 2024. Smoking Drinking and Drug Use among Young People in England.
[119] Pechey and others. 2013. Impact of plain packaging of tobacco products on smoking adults and children: an elicitation of international experts estimates.
[120] DHSC. 2022. The Standardised Packaging of Tobacco Products Regulations 2015: post-implementation review
[121] Opazo Breton and others. 2021. Was the implementation of standardised tobacco packaging legislation in England associated with changes in smoking prevalence? A segmented regression analysis between 2006 and 2019

143. The impact size of 1.9% is being used, instead of the 2.4% as similar to the tobacco regulations, there are also other vaping policies being implemented at similar times, such as the vaping product duty.

Limitations

144. We recognise that regulating vape packaging may not have the same impact on vaping prevalence as tobacco packaging had on smoking. For example, vaping products are highly differentiated by colour, flavour, device design and branding. Standardised packaging may reduce visual appeal, but the underlying product diversity could also influence uptake and prevalence, therefore the reduction could be lower than that estimated for tobacco.

145. Between the different short-listed options outlined in Section 6 there are likely to be different potential impact sizes, with the most stringent policy option having the maximum impact size on prevalence. However, as there is limited evidence on the potential impact size of standardised packaging specifically for vapes we are unable to model the impact size between different options. Through consultation we will look to seek additional evidence to support estimating the impact size or scale of different policy options.

146. In this impact assessment we conduct sensitivity analysis on key elements including the impact size on prevalence, which is likely to provide a range which may cover the different short list options.

147. Whilst in this impact assessment we are modelling the impact of packaging regulations, there are also likely to be interactions with other policies also being considered or implemented at the same time. We do not have data to determine the effect that different policies will have on the impact size for vape packaging specifically.

Other nicotine products

148. At consultation impact assessment stage, we have not been able to identify evidence on the potential impact size specific to nicotine products. Given the similarities of the brightly coloured packaging between vapes and nicotine products, and for the purposes of this impact assessment, we will assume the potential impact size will be the same as that modelled for vapes (1.9% per year for the first 2 years). In practice, this may differ, and we will look to seek additional evidence and data for final stage impact assessment through consultation.

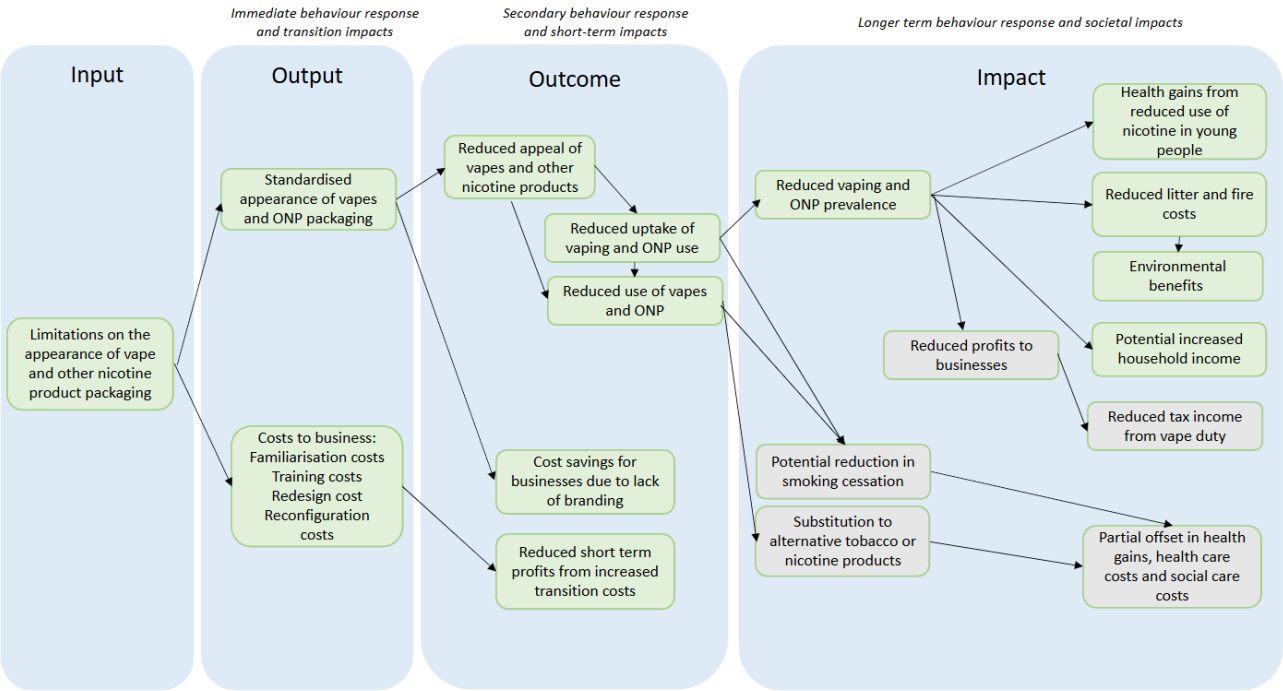
149. Given that the current prevalence of nicotine products, such as nicotine pouches, is relatively small compared to vapes, it may mean a proportion of the impact could come through reduced uptake for those who would be likely to take up nicotine pouches in the future.

150. For this impact assessment, we will assume the same impact size as vapes, based on the standardised packaging of tobacco of 1.9% per year for 2 years. This has also been tested in sensitivity analysis.

Costs and benefits

151. The costs and benefits of these options were identified through the production of the logic model in Figure 1.

Figure 1: Logic model



152. The expected costs and benefits for each option are outlined in Table 10.

153. Whilst it has not been possible to quantitatively assess a difference between options, except for reconfiguration costs, when discussing impacts in this IA we have indicated where costs and benefits would be expected to differ.

Table 10: Summary of economic costs and benefits to the UK, by option

Impact	Option 2	Option 3	Option 4
Costs	Familiarisation costs: £2.7m Training: £5.7m Reconfiguration: £57.3m Redesign: £112.3m Transaction costs (business): £0.3m Transaction costs (consumers): £0.2m Leaflet costs: £59.0m Lost profits: £403.6m	Familiarisation costs: £2.7m Training: £5.7m Reconfiguration: £57.3m Redesign: £64.2m Transaction costs (business): £0.3m Transaction costs (consumers): £0.2m Leaflet costs: £59.0m Lost profits: £403.6m	Familiarisation costs: £2.7m Training: £5.7m Reconfiguration: £57.3m Redesign: £144.4m Transaction costs (business): £0.3m Transaction costs (consumers): £0.2m Leaflet costs: £59.0m Lost profits: £403.6m
Benefits	Health benefits due to a reduction in current vaping amongst young people Health and social care savings from reduced vaping Cost savings for businesses associated with loss of scope for branding Environmental benefits from reduced litter of vapes Reduced fire costs Consumer surplus	Benefits are expected to be at least as large as Option 2	Benefits are expected to be at least as large as Option 2
Transfers	Vaping product duty VAT	Transfers are expected to be at least as large as Option 2	Transfers are expected to be at least as large as Option 2.

Non-monetised benefits

154. Due to the level of evidence available on the harms associated with vape and nicotine products there are no monetised benefits. Non-monetised benefits have been provided and where possible relevant evidence has been drawn upon to provide a sense of scale.

Health benefits associated with reduction in young people vaping

155. As discussed in paragraphs 4-8, there are health risks associated with young people vaping, mainly due to the presence of nicotine in vapes.

156. The potential impact section in this impact assessment outlines that standardising vape packaging is expected to reduce the number of people that vape. There could also be a reduced uptake of vaping, including uptake in young people vaping. If this were the case, standardising vape packaging could provide health benefits through reduced uptake of vaping among young people.

Reduced health and social care costs

157. If prevalence of vaping falls there could be health benefits for individuals. If so, it is possible that demand on health and social care services is reduced.

158. Based on preliminary NHS data for 2024/25, vaping is reported as the primary or secondary cause of around 280 hospital admissions per year[122]. We do not have equivalent data for any hospital admissions relating to other nicotine products.

159. The unit cost per day of NHS hospital beds in 2020/21[123] ranged from £345 to £2,349. Assuming every person admitted to hospital with vaping as the primary or secondary cause only spent 1 day in hospital, the bed costs associated with 280 hospital admissions could range from £96,600 to £657,720 in 2020/21.

160. It should be noted that this cost is illustrative and highly uncertain. This cost could differ based on length of stay, prevalence rates, population rates, or other external factors. There may also be additional hospital admissions for which vaping is a risk factor, that has not been captured in this data.

161. There may also be additional health and social care cost savings through a reduction in engagement with other health care services, such as fewer GP appointments relating to vaping related issues.

Environmental benefits from reduced litter associated with fewer people using vapes

162. With the reduction in the number of people using vapes we would expect that there would be reduced litter from people disposing of vapes. Whilst the single-use vape ban has been put in place, there could still be some associated litter from reusable vapes such as the packaging, refill pods, e-liquid containers and coils.

163. Research by YouGov, commissioned by Material Focus[124] found that almost 5 million disposable vapes were either littered or thrown away in general waste every week. We are not aware of data on the number of reusable vapes that are littered.

[122] NHS England. 2024. Hospital admissions for vaping-related disorders.
[123] UK Parliament. 2023. Hospital Beds: Costs.
[124] Material Focus. 2023. Number of disposable single-use vapes thrown away have in a year quadrupled to 5 million per week.

164. Due to the lack of data on litter associated with reusable vapes, we are unable to monetise this impact. However, if reduced litter does arise as a result of the policy, we would expect there to be environmental benefits.

Reduced fire costs from battery powered devices

165. If vaping prevalence falls, we can assume that the number of related fires may also fall. This will reduce the fire costs to the government. Vape devices often contain lithium-ion batteries.

166. According to the National Fire Protection Association (NFPA)[125], the likelihood of lithium-ion batteries overheating, catching on fire, or causing explosions increases when damaged, improperly used, charged or stored. If disposed of in household waste or recycling they can cause fires in transport landfill or recyclers.

167. In 2024, Material Focus[126] estimated that the number of battery fires in the waste system had increased to over 1,200 in the past year. It is estimated that 19% of lithium batteries placed on the market were accounted for by single-use vapes[127].

168. Whilst we can assume rechargeable vapes, and heated tobacco devices are not disposed of at the same rate as disposable vapes were, there could still be a fire risk if not disposed of correctly.

169. The unit cost of a lithium-ion fire is assumed to be £45,900, based on Home Office estimates of the average cost of all fires in 2020[128].

170. In May 2025 the BBC[129] reported that Essex Fire and Rescue have seen a rise in charger fires associated with reusable vapes, often because of unsafe charging.

Cost savings to businesses through reduced branding of products

171. The IA for Standardised Packaging of tobacco products identified that there could be cost savings for businesses as branding costs would no longer be incurred. The RAND Europe study[130] argued that the ongoing administrative burden of introducing plain or generic packaging is 'probably negative' because of lower production costs with standardised packaging, although the impact was not quantified. Analysis of Canada's regulations of standardised packaging also expected that there would be long-term savings for manufacturers for reduced printing costs[131].

172. In the case of vapes and other nicotine products, there could also be potential for cost savings due to a lack of branding. Depending on the option, businesses will no longer design multiple different designs on packaging, potentially saving them money on design agencies. In addition, the process of producing the packaging

[125] NFPA. Lithium-Ion Battery Safety.
[126] Material Focus. 2024. 1,200 battery fires in the waste system reported last year.
[127] Eunomia. 2023. Analysis of the market for vapes: exploring the environmental impacts of single-use vapes. Based on Environment Agency. 2023. UK Portable Batteries Data Summary for the 2022 Compliance Period. Final. and Allied Market Research. 2021. Portable Battery Market Outlook-2030.
[128] Home Office. 2023. Economic and social cost of fire.
[129] BBC. 2025. Rechargeable vape fire warning ahead of disposable ban
[130] Tiessen, J. and others. 2010. Assessing the impacts of revising the Tobacco Products Directive: study to support a DG SANCO Impact Assessment. Cambridge: RAND Europe.
[131] Government of Canada. 2019. Canada Gazette, Part 2, Volume 153, Number 9: Tobacco Products Regulations (Plain and Standardized Appearance)

could potentially be more efficient due to not having to produce multiple different designs.

173. In addition, the Impact Assessment for standardised packaging of tobacco products also identified that there could be a reduction in the number of SKUs. This could result in manufacturing savings and potential production efficiencies if manufacturers are producing fewer SKUs.

174. However, we do not have data on this potential impact therefore we have not monetised it in this impact assessment. At final stage impact assessment, we will review any additional data that may become available.

Consumer Surplus

175. The branding of vaping products and nicotine product packaging may contribute to the pleasure associated with the use of these products and users may be willing to pay a premium for the branding, as was found with tobacco products[132]. Removal of desired features can be considered as a loss to the consumer, termed as a loss of 'consumer surplus'. However, due to the addictive nature of tobacco products, applying the concept of consumer surplus is more complex.

176. It is expected that rational consumers would consider a trade-off between the utility gained from use of products in scope and the potential health harms. Activities that make products less appealing or reduce the pleasure of use, such as removal of branding, would alter the trade-off and a lower level of product use would become optimal. However, with addictive products, from the first use, individuals can lose autonomy through addiction to nicotine. The trade-off between the utility and harms of the use of vapes and other nicotine products may not be based on rational decisions but influenced by addiction.

177. Furthermore, for addictive goods, branding can act as a cue that can stimulate cravings[133]. Removing this cue could help those that use vaping products and nicotine products identify their true preferences for the consumption of these products.

178. Therefore, measuring the impact of standardised packaging on consumer surplus is highly uncertain. We acknowledge that under 'rational choice' assumptions, the removal of branding may result in a loss of consumer surplus. However, it can also be argued that becoming free of addiction improves consumer surplus and that branding may have negative impacts on welfare as well as positive. Given the level of uncertainty of the direction and scale of impact of standardised packaging on consumer surplus, it has not been quantified in this impact assessment.

Monetised Costs

179. Options 2, 3 and 4 are expected to have an impact on businesses, and through the IA process, including developing the logic model in Figure 1, stakeholders and costs have been identified.

[132] Gendall and others. 2015. Estimating the 'consumer surplus' for branded versus standardised tobacco packaging
[133] Chantler and others. 2014. Standardised packaging of tobacco.

180. There are also some methodological points that are replicated throughout and apply to multiple cost areas, such as a non-wage labour cost uplift, and the calculation for this is described here.

Identified stakeholders

181. Based on the identified costs above, the following stakeholders were identified that may incur costs, and the number of these are described here:

- Vape manufacturers
  - Based on information provided by MHRA from vape product notification data, there are 323 manufacturers of vapes in the UK, and around 71 importers of vapes.
- Vape retailers
  - Data we have identified suggests that in the UK there are:
    - 51,931 convenience stores[134], of which 71% are independently operated.
    - 5,831 supermarkets[135], excluding discounters that generally do not sell vapes
    - 3,573 vape shops[136].
    - 12,852 pharmacies[137]
  - We do not have data on the proportion of retailers that sell vapes, so to reduce the risk of underestimating the impact, we assume that all do. Based on this, we estimate that there are 74,187 retailers in the UK that sell vapes.
- Vape wholesalers
  - For wholesalers, data from ONS UK Business Counts[138] shows that there are 16,080 food, beverage, and tobacco wholesalers in the UK. Due to lack of specific data for vape wholesalers, it is assumed that this is also the number of vape wholesalers in the UK. However, this may be an overestimate if not all of them sell vapes.
- Other nicotine product manufacturers
  - We have been unable to identify data on the number of manufacturers of other nicotine products in the UK.
- Other nicotine product retailers
  - We assume that other nicotine pouches are sold at the same locations as vapes. This means we assume there are 74,187 other nicotine product retailers.

[134] ACS. 2024. The Local Shop Report. Of which 50,387 convenience stores in mainland UK, has been uplifted using population estimates to account for the whole of the UK.
[135] IGD. 2024. UK Grocery Store Numbers 2024.
[136] Local Data Company. 2023. Accessed via Tobacco Reporter here: Number of U.K. Vape Shops Up in 2023 - Tobacco Reporter
[137] Based on 10,405 pharmacies in England. NHSBSA. 2025. Pharmacy Openings and Closures.
1,250 pharmacies in Scotland. Scottish Government. Primary Care Services.
689 pharmacies in Wales. Welsh Government. 2024. Community pharmacy services: April 2023 to March 2024
511 pharmacies in Northern Ireland. Department of Health. 2024. Publication of General Pharmaceutical Services for Northern Ireland, Annual Statistics 2023/24
[138] ONS. NOMIS. 2024. UK Business Counts- enterprises by industry and employment size band.

- Other nicotine product wholesalers
    - We assume that wholesalers we have identified for vapes may also be likely to sell nicotine pouches. This means we assume there are 16,080 other nicotine product wholesalers.

Non-wage labour costs

182. Many of the costs identified are a time cost associated with complying with this option. To estimate the costs, the hourly wages of relevant persons for each cost are sourced from the Annual Survey of Hours and Earnings[139].

183. These only represent the wage costs of the employees, and there are additional hourly costs associated with employment (such as national insurance contributions).

184. To account for this additional cost, the proportion of labour costs that are non-wage costs are estimated using the Index of Labour Costs per hour, seasonally adjusted[140].

185. The labour costs per hour across the whole economy in 2020 Q3 was reported to be £22.80. The wage costs per hour across the whole economy in 2020 Q3 was reported to be £19.20. Based on this, the non-wage labour costs are calculated as 1 minus the wage costs per hour divided by the labour costs per hour, or 16%.

$$Non - wage\ labour\ cost = 1 - \frac{19.2}{22.8} = 16\%$$

186. To uplift hourly wage to account for this non-wage labour cost, wages are divided by 1 minus the non-wage labour cost of 16% or multiplied by 1.19.

$$Wage\ uplift = \frac{1}{1 - 16\%} = 1.19$$

Familiarisation Costs

187. To comply with regulations on standardised packaging, vape and other nicotine product manufacturers, retailers and wholesalers would need to review guidance to become familiar with regulations. Time spent reviewing takes time away from other activities and therefore presents a cost to businesses.

188. The total cost of businesses to review the guidance is estimated by multiplying the number of businesses that would need to review guidance by the time to review the guidance and the median hourly wage per employee.

189. We estimate that the time taken for a person to familiarise themselves with the legislation is based on typical technical text reading speeds (75 words per minute)[141]. Based on guidance that exists on tobacco packaging[142] we would expect the new guidance that manufacturers review to be around 7,000 words. We would expect it to take each person around 1.5 hours to read the guidance.

Vape manufacturers

[139] ONS. 2024. Earnings and hours worked, occupation by four-digit SOC: ASHE Table 14.
[140] ONS. 2020. Index of Labour Costs per Hour, seasonally adjusted.
[141] EFTEC. 2013. Evaluating the cost savings to business from revised EA guidance – method paper as quoted in BEIS. 2017. Business Impact Target Appraisal of guidance: assessments for regulator-issued guidance.
[142] DHSC. 2021.. Tobacco packaging guidance: Guidance for retailers, manufacturers and distributors of tobacco products, enforcement agencies and the public on tobacco packaging in Great Britain

190. We have assumed that a director would need to review the guidance as well as a production manager who would need to implement the changes.

191. ONS' Annual Survey of Hours and Earnings (ASHE)[143] provides a median hourly wage for production managers and directors in manufacturing of £26.05. Adjusting this hourly wage by 19% to account for non-wage labour costs[144,145], the estimated hourly wage for a manager for a vape manufacturer is £30.93.

192. Based on this, Table 11 shows the estimate of the one-off cost to vape manufacturers in the UK to familiarise themselves with the new regulations on vape packaging.

Table 11: Familiarisation costs to vape manufacturers for the vape packaging regulations

Option	Cost
Option 2, 3 and 4	£36,000

Vape retailers

193. We have assumed that guidance would only be read by the shopkeeper and owners in each shop that sells vapes. We do not expect that they would need to pass the information to other staff, as the shopkeeper and owners are most likely to be responsible for ensuring that products in their stores are compliant with any new regulations.

194. ONS' Annual Survey of Hours and Earnings (ASHE) provided a median hourly wage for shopkeepers and owners (retail and wholesale) of £15.36. Adjusting this hourly wage by 19% to account for non-wage labour costs[146 147], the estimated hourly wage for a shopkeeper and owner is £18.24. This is applied to vape stores, supermarkets and convenience stores.

195. For pharmacies, ASHE provides a median hourly wage for pharmacists of £25.70. Adjusting this hourly wage by 19% to account for non-wage labour costs, the estimated hourly wage for pharmacists is £30.52. We have assumed that the majority of pharmacies are small and micro businesses and are therefore likely to be owned by a pharmacist.

196. Based on this data, Table 12 shows the estimate of the one-off cost to vape retailers in the UK to familiarise themselves with the new regulations on vape packaging.

[143] ONS. 2024. Annual Survey of Hours and Earnings (ASHE)
[144] ONS. 2020. Index of Labour Costs per Hour, UK: July to September 2020.
[145] Based on non-wage labour costs as a percentage of total labour costs. ONS estimated that the value of labour costs was estimated at £22.80 per hour at whole economy level and wage costs contributed £19.20, with non-wage costs, such as pensions and National Insurance contributions, making up the rest. Based on this estimate we have uplifted wage costs by 19% to account for non-wage costs
[146] ONS. 2020. Index of Labour Costs per Hour, UK: July to September 2020.
[147] Based on non-wage labour costs as a percentage of total labour costs. ONS estimated that the value of labour costs was estimated at £22.80 per hour at whole economy level and wage costs contributed £19.20, with non-wage costs, such as pensions and National Insurance contributions, making up the rest. Based on this estimate we have uplifted wage costs by 19% to account for non-wage costs. However, this may be an underestimate due to increases in national insurance.

Table 12: Familiarisation costs to vape retailers for vape packaging regulations

Option	Cost
Option 2, 3 and 4	£2,300,000

Vape wholesalers

197. As with vape retailers, we have assumed only one person within each vape wholesaler would be required to read the guidance.

198. As mentioned in Paragraph 194, ASHE provided a median hourly wage for shopkeepers and owners (retail and wholesale) of £15.36. Adjusting this wage by 19% to account for non-wage labour costs, the estimated hourly wage for a shopkeeper or owner manager of a retailer that sells vapes is £18.24.

199. Based on this data, Table 13 shows the estimate of the one-off cost to vape wholesalers in the UK to familiarise themselves with the new regulations on vape packaging.

Table 13: Familiarisation costs to vape wholesalers for regulations on vape packaging

Option	Cost
Option 2, 3 and 4	£440,000

Other nicotine product manufacturers

200. It is likely that manufacturers of other nicotine products will have to familiarise themselves with this legislation. However, as previously outlined, we have been unable to identify additional data on the number of manufacturers in the UK.

201. If we were to assume there are the same number of nicotine pouch manufacturers as vape manufacturers, the familiarisation cost would be the same as Table 11. In practice, it is unlikely that there are the same number of manufacturers, given they are producing different products. Given this uncertainty and lack of data we have not estimated familiarisation costs for nicotine pouch manufacturers.

Other nicotine product retailers

202. We assume that vape retailers also sell other nicotine products. It is likely these businesses will be able to familiarise themselves with the regulations for vapes and other nicotine products at the same time. As a result, the familiarisation costs for retailers of vapes also includes familiarisation costs for retailers of other nicotine products.

Other nicotine product wholesalers

203. We assume that vape wholesalers also sell other nicotine products. Wholesalers would therefore be able to familiarise themselves with the regulations for vapes and other nicotine products at the same time. As a result, the familiarisation costs for

wholesalers of vapes also includes familiarisation costs for wholesalers of other nicotine products.

Trading standards

204. Any restrictions on vape and other nicotine product packaging could require additional enforcement activity to ensure that non-compliant products do not remain on the market.

205. To enforce standardised packaging regulations and ensure that non-compliant vape and other nicotine products do not remain on the market, it is expected Trading Standards (or equivalent) will familiarise themselves with guidance. To estimate the costs of this familiarisation, the number of people needing to review the guidance has been multiplied by the median wage and the time taken to read the guidance.

206. We have estimated that all Trading Standards officers will need to review guidance on standardised packaging. Based on the Chartered Trading Standards Institute Workforce Survey there were 197 Trading Standards services in the UK, and each service is estimated to have 9.4 FTE qualified Trading Standards officers in 2018/19[148]. Therefore, it is estimated that there are 1,852 Trading Standards officers that are required to familiarise themselves with the guidance.

207. ASHE[149] provide a median hourly wage for community and civil enforcement occupations of £16.27. Adjusting this wage to account for non-wage labour costs, the estimated wage for a Trading Standards officer is £19.32.

208. Based on this, Table 14 shows the costs for all Trading Standards officers in the UK to review standardised packaging guidance. We assume there are no ongoing enforcement costs as any change in activity would be included in the existing workload of Trading Standards.

209. Costs for familiarisation of enforcement agencies may differ for different nations.

Table 14: Familiarisation costs for Trading Standards

Option	Cost
Option 2, 3 and 4	£54,000

Total familiarisation costs

210. Table 15 shows the estimated total cost of £2.7m for options 2, 3 and 4 alongside a breakdown by stakeholder. These costs could be an overestimate if stakeholders have familiarised themselves with previous legislation, therefore reducing the time for familiarisation.

[148] Chartered Trading Standards Institute. 2019. Workforce Survey 2018-2019.
[149] ASHE. 2024. Earnings and hours worked, occupation by four-digit SOC: ASHE Table 14.

Table 15: Total familiarisation costs

Stakeholder	Cost
Vape manufacturers	£36,000
Vape and nicotine product retailers	£2,300,000
Vape and other nicotine product wholesalers	£440,000
Trading Standards	£54,000
Total	**£2,700,000**

Cost of redesigning and manufacturing packaging

Vape manufacturers

211. To comply with standardised packaging, it is expected that there will be costs to the vape industry to make changes to the packaging of the products.

212. To redesign packaging, there are expected to be administrative costs to manufacturers. This includes labour costs to redesign the label, receive pre-print and work with packaging suppliers to approve the new label design.

213. The exact cost to manufacturers would depend on the extent to which they need to change their packaging and product design, and the number of products, known as Stock Keeping Units (SKUs).

214. To estimate the number of SKUs, we have identified some data. Data from MHRA notification system suggests that there are over 500,000 notified vaping products for supply in the UK market. However, a lot of these products are unlikely to still be produced by manufacturers due to the single-use vape ban, so the number of products that vape manufacturers would have to redesign the packaging for is likely to be much lower than this.

215. Additional data from ECigIntelligence[150] shows that as of Q4 2024, there were a total of 13,063 vaping products on the market. We have used this to estimate the redesign costs.

216. Estimates for the cost of redesign are based on a European impact assessment on food labelling[151], which is also used by RAND Europe in their assessment of the impact of revising the Tobacco Products Directive[152]. It estimates that a minor redesign costs approximately €2,000-€4,000 and a major redesign cost between €7,000 - €9,000 per SKU.

[150] ECigIntelligence. 2025. Non duplicated SKUs in the UK Vape Market.
[151] Commission of the European Communities. 2008. SANCO/3599/2007-EN
[152] RAND Europe. 2011. Assessing the impacts of Revising the Tobacco Products Directive: Study to support a DG SANCO Impact Assessment | RAND

217. It is expected that there will be higher redesign costs for some policy options, depending on the changes being made. To capture the differences across policy options we have applied different redesign costs. The lowest cost has been applied to Option 3, which allows for no branding and hence we assume will be more straight forward to design. The highest cost has been applied to Option 4, as this is likely to be the most significant change from the BAU. Table 16 shows the cost used per SKU for each policy option.

Table 16: Redesign costs of vape packaging per SKU

Option	Cost per SKU (2008)	Cost per SKU (2024)[153]
Option 2	€7,000	£8,279
Option 3	€4,000	£4,731
Option 4	€9,000	£10,645

218. This may be an overestimate of costs. We have assumed that every SKU requires an extensive redesign, however many of the labels have similar layouts. Therefore, it may be that each brand faces one extensive redesign cost and each product within that brand has a much lower redesign cost.

219. Table 17 shows the estimated costs of redesign for each option.

Table 17: Costs of redesign for vapes

Option	Cost of redesign
Option 2	£108,100,000
Option 3	£61,800,000
Option 4	£139,000,000

220. Based on MHRA data, we assume there are 394 vape manufacturers in the UK. Table 18 shows the estimate of the one-off cost per vape product to redesign the packaging. This assumes that all manufacturers produce the same number of products. In practice the number of products that each manufacturer produces may vary.

Table 18: Costs of redesign per vape manufacturer

Year	Cost per manufacturer (£m)
Option 2	£0.27
Option 3	£0.16

[153] Exchange rate of €1 = £0.79 based on 2008 exchange rate. ONS. 2025. Average Sterling Exchange Rate: Euro XUMAERS

Option 4	£0.35

Other nicotine product manufacturers

221. Manufacturers of other nicotine products will also be required to make changes to the design of product packaging.

222. There is limited data on the number of nicotine pouch products in the UK that will need to be updated. Some of the major UK manufacturers include British American Tobacco that manufacture Velo and LYFT nicotine pouches. In the absence of data on the number of SKUs of nicotine pouches we have reviewed websites selling multiple brands of nicotine pouches and taken the total number of products on the website. For example, Haypp[154] (as of July 2025) stocked 504 different nicotine pouch products. Another website, www.vapeclub.co.uk[155] stocked 314 different nicotine pouch products, in multiple different strengths, therefore meaning the total SKUs is likely to exceed this number.

223. In the absence of additional data on the maximum number of SKUs for nicotine pouches, we have assumed 504 products based on Haypp's website. However, this could be an underestimate and there may be significantly more nicotine pouch products on the market.

224. In addition, in the absence of data on cost of redesign for nicotine product packaging we have assumed the same costs as applied for vapes, outlined in Table 16. Table 19 shows the estimated redesign costs for nicotine pouch manufacturers in each option.

Table 19: Costs of redesign for other nicotine product manufacturers

Option	Cost assumption applied	Cost
Option 2	£8,279	£4,200,000
Option 3	£4,731	£2,400,000
Option 4	£10,645	£5,400,000

Additional transition costs

225. There may also be additional costs to manufacturers in their production process of packaging. For example, an additional cost could be retooling of printing machines with new cylinders. In the impact assessment for Canada's Plain and Standardised Appearance legislation[156], it was estimated that measures on tobacco packaging would require rotogravure cylinders, that are used to print brand labels, to be replaced, requiring investment from manufacturers.

226. In subsequent analysis to amend the Tobacco Products Regulations in Canada, it was estimated that each cylinder cost $2,000 - $4,000 per cylinder and that 5 cylinders are needed per SKU.

[154] Haypp. Nicotine Pouches. (accessed July 2025)
[155] Vape Club. www.vapeclub.co.uk (accessed July 2025)
[156] Government of Canada. 2019. Canada Gazette, Part 2, Volume 153, Number 9: Tobacco Products Regulations (Plain and Standardized Appearance)

227. At this stage, we are not aware of evidence that vaping product, and other nicotine packaging is produced using rotogravure printing techniques, therefore it is uncertain whether these costs will apply to vape and other nicotine product manufacturers.

228. In addition, much of the evidence used to estimate the retooling costs is based on international evidence, particularly from Canada. This includes estimates, price of cylinders, and number of cylinders required per SKU. There may be differences in these markets which result in the estimates not being applicable to the UK.

229. It is also not known how frequently labels are voluntarily changed for the vape and other nicotine product markets. Should manufacturers also voluntarily change the labels, this would reduce the costs to business of implementing standardised packaging compared to the baseline, as the costs of replacing labels will be incurred in both scenarios.

230. Based on the limitations and evidence gaps at this stage, we have not monetised the costs of retooling.

Total redesign cost

231. Table 20 shows the estimated total cost of redesign for options 2, 3 and 4 alongside a breakdown by stakeholder.

Table 20: Total redesign cost

Stakeholder	Option 2	Option 3	Option 4
Vape manufacturer	£108,100,000	£61,800,000	£139,000,000
Other nicotine product manufacturer	£4,200,000	£2,400,000	£5,400,000
Total	**£112,300,000**	**£64,200,000**	**£144,400,000**

Transaction costs for retailers

Vape retailers

232. If packaging for vaping products becomes more standardised, we could expect it to take longer for shop assistants to identify and serve a customer that is purchasing a vape compared to branded packaging. If this is the case, there could be additional time costs to retailers.

233. To estimate the cost of additional time taken to serve customers, we multiply the additional serving time by the estimated number of vape transactions and by the average hourly wage of a sales assistant.

234. In the Standardised Packaging of Tobacco Products Regulations impact assessment[157], it was expected that there would be a 2.59 second increase in transaction times for one month post implementation. This was based on a study from Australia[158], where standardised packaging was introduced before it was in the UK.

[157] DHSC. 2015. Standardised Packaging of Tobacco Products Impact Assessment.
[158] Wakefield and others. 2013. Product retrieval time in small tobacco retail outlets before and after the Australian plain packaging policy: real-world study.

235. This study found that the retrieval time had increased by 2.59 seconds per pack in December when standardised packaging was introduced compared to pre-implementation in September 2012. However, by February 2013 pack retrieval time was not significantly different to any other month. Therefore, it is expected that retailers quickly become accustomed to the new packaging and that increased transaction times endure for one month after implementation.

236. While international evidence regarding the effect of standardised packaging on retail transaction is varied and uncertain, the estimate of increased transaction times of 2.59 seconds per transaction that lasts for one month is based on a peer review study and is consistent with estimates used in Australia's post-implementation review of tobacco plain packaging[159], Canada's impact assessment of plain and standardised appearance of tobacco products[160], and the UK's Standardised Packaging of Tobacco Products impact assessment[161]. Therefore, we consider this to be the current best estimate of increased transaction times.

237. To estimate the number of transactions, we use the average weekly spend on vapes based on a recent study by UCL[162] as in Table 5. This assumed that the yearly spend on reusable vapes was £378 in 2024 prices. From this we have then estimated the number of vapes that would be purchased a year, based on the price of each component and the frequency of use.

238. Based on estimates in Defra's single use vape impact assessment[163] on the price of reusable vapes, as outlined in Table 21, we subtract a one-off device cost from the total yearly spend and use the remaining spend to estimate how many refills would be purchased per year. We have taken an average of the number of transactions for the different types of reusable vapes (cartridge and refillable) as there remains uncertainty in the proportions of people using each type of these products.

Table 21: Price of reusable vapes

Reusable vape type	Component	Price
Cartridge vape	Rechargeable vape with pre-filled cartridge (i.e. device with no-refills)	£9.00
	Refill cartridges (pack of 2)	£7.00
Refillable vape	Rechargeable vape with tank (i.e. device with no e-liquid)	£17.00
	Bottle of e-liquid (10ml)	£3.00

[159] Australia Department of the Prime Minister and Cabinet, Siggins Miller. 2016. Tobacco Plain Packaging PIR – Appendix C
[160] Government of Canada. 2019. Canada Gazette, Part 2, Volume 153, Number 9: Tobacco Products Regulations (Plain and Standardized Appearance)
[161] DHSC. 2015. Standardised Packaging of Tobacco Products Regulations 2015.
[162] Jackson, S. and others. 2025. Changes in expenditure on vaping in the context of the rise of disposable vapes and impending regulatory changes: a population study in Great Britain, 2021-2025
[163] DEFRA. 2024. Ban on the sale and supply of disposable vapes in England. Impact Assessment.

Table 22: Number of purchases per device type

Reusable vape type	Number of devices purchased per year	Number of refills purchased per year	Total number of purchases
Cartridge vape	1	53	54
Refillable vape	1	120	121
Average	1	86.5	88

239. We assume that one product is purchased per transaction.

240. Based on the information above, we estimate average number of transactions per person per year as 88. This is equivalent to around 7 transactions per person per month. This estimate is multiplied by the total number of adults that vape, to estimate the number of transactions per month.

241. We have reduced the number of transactions to account for a proportion of people that will buy their products online instead of in store. Data from the Smoking Toolkit Study[164] from 2024 showed that 23.8% of people purchase vapes online, therefore the number of transactions has been reduced by this percentage.

242. The total number of in person transactions per month was estimated to be approximately 26 million.

243. As a result, an increase of 2.59 seconds per transaction will result in an extra 18,893 hours of serving time across all retailers selling vapes.

244. ONS ASHE[165] provide an estimate for sales assistants and retail cashiers hourly wage of £11.96. Adjusting this wage by 19% to account for non-wage labour costs, the estimated hourly wage for a sales assistant and retail cashier is £14.20.

245. Based on this, Table 23 shows the estimated cost to vape retailers in the UK of additional serving time following changes to vape packing regulations.

Table 23: Transaction costs for vape retailers

Option	**Cost**
Option 2, 3 and 4	£270,000

246. This could be an overestimate. The estimate for the number of transactions assumes that each person purchases one vape at a time. If people buy multiple vapes in one transaction, this could reduce the total number of vape transactions and may reduce the cost.

Other nicotine product retailers

247. We can also estimate the increase in the transaction time for nicotine pouches based on the above methodology used for vapes. We can estimate the number of transactions for nicotine pouches using assumptions from the nicotine pouch baseline.

248. We have assumed that the average nicotine pouch user uses 3 packs of nicotine pouches a week. This totals 156 packs a year or 13 a month. Multiplying this by the

[164] UCL. 2025. Smoking Toolkit Study. Source of Purchase (2016-2024)
[165] ONS. 2024. Earnings and hours worked, occupation by four-digit SOC: ASHE Table 14.

total number of nicotine pouch users equals an estimated 7.3 million transactions per month.

249. Assuming it takes 2.59 seconds longer per nicotine pouch transaction for the first month and there is an uplifted salary for sales assistants of £14.20 as assumed for vapes, Table 24 shows the cost of increased transaction times for nicotine pouch retailers.

Table 24: Transaction costs for other nicotine product retailers

Option	Cost
Option 2, 3 and 4	£75,000

250. This is also likely to be an overestimate of the cost in transaction time as this assumes that individuals buy only one pack of nicotine pouches at a time. In practice they may buy multiple which would reduce the cost of increase in transaction time.

251. It is also likely to be an overestimate because some nicotine pouches may be purchased online. We have not been able to account for the percentage that purchased nicotine pouches online due to lack of data.

Total transaction costs for retailers

252. Table 25 shows the estimated total cost for options 2, 3 and 4 of additional transaction costs for retailers, alongside a breakdown by retailers.

Table 25: Total transaction costs for retailers

Stakeholder	Cost
Vape retailers	£270,000
Other nicotine product retailers	£75,000
Total	**£345,000**

Transaction costs for consumers

253. There are also likely to be costs incurred by consumers as a result of an increase in the time taken for them to be served products. The cost to consumers of increased transaction times is estimated by multiplying the increase in time taken per transaction by the number of transactions and the value of leisure time.

254. The value of leisure time is estimated using Department for Transport TAG data book[166], which estimates the perceived cost per hour for a non-working person using their time for 'other purposes' e.g. not commuting is £7.32 (in 2024 prices).

255. Using this value makes no wider assumptions on what a consumer's time is worth based on their wage and represents a consistent and fair approach to monetising additional transaction costs to consumers.

Vape consumers

256. Based on the increase in transaction times and number of vape transactions explained in paragraph 242 and the value of leisure time, Table 26 shows the estimated cost to consumers of vapes of increased transaction times.

[166] Department for Transport. 2018. TAG data book.

Table 26: Transaction costs for consumers of vapes

Option	Cost
Option 2, 3 and 4	£140,000

Other nicotine product consumers

257. Following the same methodology for nicotine pouches and based on the estimated number of nicotine pouch transactions explained in paragraph 248, we can estimate the transaction costs for other nicotine products.

258. Based on the increase in transaction times, number of other nicotine product transactions and the value of leisure time, Table 27 shows the estimated cost to consumers of other nicotine products of increased transaction times.

Table 27: Transaction costs for consumers of other nicotine products

Option	Cost
Option 2, 3 and 4	£40,000

Total transaction costs for consumers

259. Table 28 shows the estimated total cost for options 2, 3 and 4 of additional transaction costs for consumers, alongside a breakdown by consumers.

Table 28: Total transaction costs for consumers

Stakeholder	Cost
Vape consumers	£140,000
Other nicotine product consumers	£40,000
Total	**£180,000**

Leaflet costs

260. If non-nicotine vapes and nicotine products require leaflets to be included, there may be an additional cost to manufacturers for materials and printing to produce leaflets.

261. To estimate the costs of producing leaflets, the number of people that purchase non-nicotine vapes and nicotine pouches is multiplied by the number of transactions. This is then multiplied by the cost per leaflet. This is a similar methodology outlined in the consultation stage impact assessment for pack inserts for cigarettes and hand-rolling tobacco[167].

262. The Tobacco and Related Products Regulations (TRPR) 2016 impact assessment[168] assessed the impact of information leaflets being introduced for vapes and vape liquids. Responses to the consultation suggested a cost between 1p and 10p per leaflet, with an average of 4p used in this impact assessment. In 2024 prices this would be around 5p per leaflet.

263. Based on this, we can estimate that similar costs would be incurred if the leaflet requirements were extended to additional non-nicotine and other nicotine products.

[167] DHSC. 2016. Tobacco Products Directive.
[168] UK Government. 2016. The Tobacco and Related Products Regulations 2016

Non-nicotine vapes

264. In the transaction costs section, we calculated the number of vaping product transactions each year. In this calculation, we estimated that each person that uses vapes, makes 88 transactions per year.

265. A paper by UCL found that 8.7% of adults between 2022-2024 used nicotine-free vapes[169]. This may not be an accurate proxy for the proportion of non-nicotine vapes used by people that vape, as consumers may consume products at different rates and hence a different proportion of non-nicotine products may be produced. However, we have not identified any additional data and therefore we have assumed this is equivalent to the proportion of transactions of vape products that are nicotine free.

266. Based on this assumption, the estimated number of transactions for non-nicotine vapes in 2027 is 35.9m. This is then multiplied by 5p to calculate the total cost of including leaflets in these products. Based on this, Table 29 shows the estimated discounted cost to manufacturers of non-nicotine vapes to produce leaflets over the appraisal period.

Table 29: Cost of producing leaflets for non-nicotine vapes (discounted)

Option	Cost
Option 2, 3 and 4	£17,100,000

Nicotine Pouches

267. We can also estimate the cost of producing leaflet for nicotine pouches.

268. In the transaction costs section, we calculated the number of nicotine pouch transactions each year. In this calculation, we estimated that each person that used nicotine pouches makes 156 transactions per year.

269. Based on this, we multiply the number of transactions per person by the number of people who use these nicotine products, to estimate the total number of products per year. We can then multiply this by the cost per leaflet of 5p to calculate the total cost of including leaflets in products per year.

270. Based on this, Table 30 shows the estimated cost to manufacturers of nicotine pouches to produce leaflets over the appraisal period.

Table 30: Cost of producing leaflets for nicotine pouches

Option	Cost
Option 2, 3 and 4	£41,900,000

Total leaflet costs

271. Table 31 shows the total cost for leaflets for both non-nicotine vapes and nicotine pouches.

[169] Jackson and others. 2024. Nicotine strength of e-liquids used by adult vapers in Great Britain: A population survey 2016 to 2024.

Table 31: Total cost of producing leaflets for nicotine free vapes and nicotine pouches

Option	Cost (£m)
Option 2, 3 and 4	£59

Training and reconfiguration

272. Retailers may incur costs to retrain their employees, reconfigure their inventory and reorganise their stock rooms.

Training

273. To estimate the cost of training staff, the total number of staff required to be trained is multiplied by the time taken to train and the hourly salary of staff.

274. As there is limited evidence on the time taken for vape retailers to carry out these activities, we have used tobacco products regulations as a proxy. Evidence is based on Canada's Tobacco Product Regulations[170] and Australia's post implementation review for plain packaging legislation[171].

275. From surveys conducted among retailers in Canada and Australia, it is assumed that 30% of convenience retailers would incur training costs. We have assumed that this estimate also applies to supermarkets due to the more general nature of these stores and the diversity of products sold.

276. Given that vape stores mostly stock vape related products, we have assumed that 100% of stores will incur training costs. We have also assumed that 100% of pharmacies will incur training costs, given the nature of the stores.

277. As outlined, we have estimated that there are 74,187 retailers of vapes. Analysis from Canada and Australia assumed that an average of 8 employees in the convenience stores and supermarkets would need to be trained per store. Without any further evidence we have assumed this estimate is the best available and applicable to the UK vape market.

278. For vape shops it is assumed that all employees will need training given the specialist nature of the products sold. Based on Nomis data on Business Counts[172] and those employed in the 'retail sale of tobacco products in specialised stores' category[173], there are estimated to be approximately 4 staff per store. In the absence of SIC code for vape shops, we have used specialist tobacco stores as a proxy.

279. We have also assumed that all employees in pharmacies will need training. Based on data from the total number of pharmacies in England[174] and the total pharmacy workforce headcount[175], we estimate that the average number of staff for pharmacies to be approximately 9 per store.

280. The Australian post-implementation review estimates that the average length of training per employee to be 0.97 hours while the Canadian study assumed the length of training to be two hours per employee. We have used the lower estimate of

[170] Government of Canada. 2019. Canada Gazette, Part 2, Volume 153, Number 9: Tobacco Products Regulations (Plain and Standardized Appearance)
[171] Australian Government. Department of Health. 2016. Post-Implementation Review of Tobacco Plain Packaging 2016.
[172] ONS Nomis. 2024. UK Business Counts - Data Sources - home - Nomis - Official Census and Labour Market Statistics
[173] ONS. 2025. Business Register and Employment Survey/Annual Business Inquiry - Data Sources - home - Nomis - Official Census and Labour Market Statistics
[174] NHSBSA. 2025. Pharmacy Openings and Closures.
[175] NHSE. 2024. Community Pharmacy Workforce Survey.

time for training for more general convenience stores and supermarkets and the higher estimate of two hours per member of staff for specialist stores which are assumed to sell a wider range of vaping products (vape shops and pharmacies).

281. As outlined in paragraph 244, the average hourly wage for sales and retail staff is estimated at £14.20, including non-wage costs.

282. Based on this, Table 32 shows the total estimated costs of training for retailers of vape products for options 2, 3 and 4, broken down by retail settings.

Table 32: Total training costs

Retailer	Cost
Supermarkets	£190,000
Convenience stores	£1,720,000
Vape Stores	£360,000
Pharmacies	£3,460,000
Total	**£5,730,000**

Reconfiguration

283. To estimate the reconfiguration cost of stores, the number of stores that require reconfiguration has been multiplied by the number of hours per day to reconfigure, the number of days required for reconfiguration, the number of staff required for reconfiguration and the hourly wage of a sales assistant.

284. Also, as part of Canada's Tobacco Products Regulation[176] a survey was conducted by the Canadian Convenience Stores Association (CCSA) to estimate the reconfiguration costs. The survey suggested that 88% of convenience stores will incur costs to reconfigure inventory and facilitate the identification of products. It was also estimated that staff require 2 hours per day to order, receive and stock products. Canada assume that the costs will continue for 30 days following the implementation of the policy.

285. We have assumed that 88% of convenience stores and supermarkets will need to reconfigure, whereas 100% of vape stores will need to configure due to the nature of their stores. We have also assumed 100% of pharmacies will need to reconfigure their stores. We have assumed the number of hours taken and the number of days is consistent across all stores, meaning each store will spend a total of 60 hours on reconfiguration.

286. As in paragraph 281 the hourly wage of sales assistants including uplifts for non-wage costs is estimated to be £14.20.

287. Based on these assumptions and our estimates for the number of retailers, Table 33 shows the estimated cost for reconfiguration of stores for options 2, 3 and 4, broken down by retailer type.

[176]Government of Canada. 2019. Canada Gazette, Part 2, Volume 153, Number 9: Tobacco Products Regulations (Plain and Standardized Appearance)

Table 33: Reconfiguration costs for retailers

Retailer	Cost (£)
Convenience stores	£39,000,000
Vape stores	£3,000,000
Supermarkets	£4,400,000
Pharmacies	£11,000,000
Total	**£57,300,000**

Other nicotine product retailers

288. As with familiarisation costs, it is assumed that the number of stores that we have identified that sell vape products also stock other nicotine products. It seems reasonable to assume that training and reconfiguration costs will not occur multiple times for different product types. Therefore, the costs estimated for vape retailers are also inclusive of the training and reconfiguration costs of other nicotine products.

Lost profits

289. As discussed in the potential impact section, standardising vape packaging is expected to reduce the number of people who vape. As a result, standardising vape packaging is expected to reduce the profits for vape retailers, wholesalers and manufacturers, through reduced vape sales. This section provides estimates for the loss of profits based on a reduction in sales among all vape users. However, it should be noted that it is already illegal for those aged 17 and under to purchase nicotine vapes so they are excluded from the profit loss.

290. This section relies on the methodology from the vape baseline, outlined earlier in the impact assessment, which estimated the total sales value. Future years costs are discounted at a rate of 3.5% in line with the Green Book[177].

291. To estimate the profit loss, we have first estimated the reduction in the number of people vaping as a result of this policy. We have estimated the total number of adults that vape (as outlined in Table 4) and then apply a 1.9% reduction for the first two years (as outlined in paragraph 139). In 2027 it is estimated that a 1.9% reduction in the number of adults vaping is equivalent to approximately 90,000 adults.

292. Whilst we have only quantified a reduction in the number of people using vaping and nicotine products for 2 years, it is assumed that those who quit within these 2 years will not purchase these products for the duration of the appraisal period. Therefore, we have estimated a reduction in profits from reduced sales of vaping and nicotine products each year of the appraisal period.

293. Then the sales value associated with the reduction in number of people vaping is calculated by multiplying the reduction in number of people vaping by the yearly average spend on vapes.

294. The profit margins are then applied to the total reduction in sales value, to calculate the total profit loss.

Vapes

Vape retailers

295. In the Tobacco and Vapes Bill IA[178] we assumed that vape retailer profit margins are 45%, which came from Defra's IA on disposable vapes. This was based on a

[177] HMT. 2022. The Green Book: appraisal and evaluation in central government.
[178] DHSC. 2024. Tobacco and Vapes Bill Impact Assessment.

stakeholder engagement process conducted by Defra in Spring 2024. These profit margins are based on disposable and reusable vapes including the different components which may have different profit margins. Profit margins may vary between these products.

296. Additional data identified, includes a report by the University of Edinburgh[179]. This report identified gross profit margins across all vaping products to be 37.1%, but they do vary across product types. For the purpose of this impact assessment, we use a profit margin of 45% to reduce the risk of underestimating the profit loss to retailers. This is also tested in sensitivity analysis using figures from the University of Edinburgh.

297. We apply a 45% profit margin to total reduction in sales value as outlined above. Table 34 shows the estimated profit loss for vape retailers.

Table 34: Loss in profit for vape retailers (discounted)

Option	Cost
Option 2, 3 and 4	£243,800,000

Vape wholesalers

298. It will be expected that profit loss for vape retailers will be passed on to vape wholesalers through reduced sales.

299. To estimate the loss in profit to vape wholesalers we multiply the vape profit margin for wholesalers by the estimated total sales value reduction from adults that vape.

300. For the vape wholesaler profit margin we use the same assumption as in Defra's impact assessment on disposable vapes[180]. It is assumed that the profit loss for wholesalers is 12%.

301. Taking into account the retailers profit and the 12% profit margin that wholesalers get, this equates to a 6.6% profit margin on the total sales value. Therefore, we apply a 6.6% profit margin to the calculated reduction in total sales value. To estimate the 6.6% we took price at the previous step of the supply chain (retail price) and subtracted the retailer profit to estimate the wholesale sales price. Applying the 12% profit margin we estimated the value of wholesale profit, and from this we could use retail price to estimate the wholesale profit percentage as share of the total sale figure.

302. Based on these assumptions, Table 35 shows the estimated total profit loss for vape wholesalers.

Table 35: Loss in profit for vape wholesalers (discounted)

Option	Cost
Option 2, 3 and 4	£35,800,000

Vape manufacturers

303. As assumed in Defra's impact assessment on disposable vapes, manufacturer profit margins are 15%, based on stakeholder engagement. We have not identified any additional data on manufacturer profit margins; therefore, we assume the same for this impact assessment.

[179] Tunstall and others. 2024. Tobacco and vape profits: analysis of EPOS data from small retailers in the United Kingdom in 2019 and 2022.
[180] DEFRA. 2024. The Environmental Protection (Single-use Vapes) (England) Regulations 2024

304. Taking into account, the profit of retailers and wholesalers and the 15% profit margin for manufacturers, this translates to 7% of the total sales value. Therefore, we apply a 7% profit margin to the calculated reduction in total sales value.

305. Based on these assumptions, Table 36 shows the estimated total profit loss for vape manufacturers.

Table 36: Loss in profit for vape manufacturers (discounted)

Option	Cost
Option 2, 3 and 4	£39,300,000

Other nicotine products

306. The methodology used to estimate the profit loss for nicotine pouch retailers, wholesalers and manufacturers is the same as the methodology used to estimate profit loss for vapes. We estimate the reduction in total sales value and apply the profit margins for retailers, wholesalers and manufacturers.

307. To estimate the reduction in total sales value, we calculate the reduction in number of adults using nicotine pouches and multiply the reduction in number of adults using nicotine pouches by the total yearly spend on nicotine pouches.

308. The reduction in sales value is multiplied by the profit margins to estimate the reduction in total sales.

Other nicotine product retailers

309. In the Tobacco and Vapes Bill IA, the profit margin assumption was based on the Nicotine Inhaling Products Impact Assessment[181], which assumed retailer profits margins were 40% in the first year and 20% in year two and three and for the final seven years, the forecasted profits were estimated to be 10%. However, the profit margins for NIPs may no longer be a suitable proxy for the profit margins for nicotine pouches.

310. In addition, an article by Better Retailing[182], states that profit margins on nicotine pouches such as Nordic Spirit and BluX could offer profit margins of up to 19.5%, which we assume is for retailers.

311. In the absence of robust data, we have used the vape retailer profit margin of 45% for retailers, to reduce the risk of underestimating the profit loss.

312. Based on these assumptions, Table 37 shows the estimated profit loss to nicotine pouch retailers.

Table 37: Loss in profit for other nicotine product retailers (discounted)

Option	Cost
Option 2, 3 and 4	£64,800,000

[181] DHSC. 2015.The Nicotine Inhaling Products (Age of Sale and Proxy Purchasing) Regulations 2015
[182] Better Retailing. 2021. How to sell nicotine pouches. [accessed July 2025]

Other nicotine product wholesalers

313. In the Tobacco and Vapes Bill IA, a specific profit margin for wholesalers of nicotine pouches was not identified. Instead, it was assumed that the profit margin was the same as manufacturers of nicotine pouches (15%). In the absence of data, an alternative assumption would be to use the vape wholesaler profit margin (12%) as a proxy.

314. As with vapes, taking into account the retailers' profit, a 12% profit margin on the price that wholesalers receive translates to 6.6% of the total sales value. Therefore, 6.6% is applied to the reduction in total sales value.

315. Based on these assumptions, Table 38 shows the estimated profit loss to nicotine pouch wholesalers.

Table 38: Loss in profit for other nicotine product wholesalers (discounted)

Option	Cost
Option 2, 3 and 4	£9,500,000

Other nicotine product manufacturers

316. In the Tobacco and Vapes Bill IA, when producing indicative estimates for prohibiting the sale and proxy purchasing of nicotine products to under 18s and prohibit their free distribution, the profit margin for manufacturers of nicotine pouches was assumed to be 15% based on financial records from Companies House[183].

317. In addition, Haypp group, who own Haypp, produced financial reporting[184] which outlines that gross margin for the full year of 2024 was 15%. However, it should be noted this is for the group and may not be representative of the profit margins in the UK.

318. Based on the data above and using the vape manufacturer profit margin as a proxy, we have applied a 15% profit margin. Taking into account, the price that manufacturers receive, this translates to 7% of the total sales value. Therefore, 7% is applied to the reduction in total sales value.

319. Based on these assumptions, Table 39 shows the estimated profit loss to nicotine pouch manufacturers.

Table 39: Loss in profit for other nicotine product manufacturers (discounted)

Option	Cost
Option 2, 3 and 4	£10,500,000

Non-monetised costs

Disposal costs

320. It is possible that retailers may need to dispose of non-compliant vapes and other nicotine products. The extent to which this would be a cost to retailers would depend on the transition period that retailers have to sell any non-compliant products. It

[183] Companies House. NICOVATIONS LIMITED. [accessed July 2025]
[184] Haypp Group. 2025. Full Year Report January- December 2024.

would also depend on the stock of vapes and other nicotine products that retailers hold in reserve.

321. It should be noted that for the impact assessment on standardised packaging of tobacco[185], for which there was a 12-month period to sell any non-compliant stock it was assumed there would not be any significant disposal costs for retailers. This was mainly due to retailers, particularly small retailers, not carrying large stocks of tobacco in reserve due to the high cost of tobacco products.

322. The duration of the implementation period will be tested at consultation stage.

Health impacts for those using vapes or other nicotine products as quit aids

323. The potential impact section showed that adults that vape could be affected by a restriction on vape packaging. This could include a proportion of adults that use vapes as a smoking quit aid. ASH reported[186] that 2.7 million people in Britain used a vape as a quit aid in the last five years.

324. Evidence has found that vaping poses a small fraction of the risks of smoking[187] and vapes can be an effective tool in supporting smoking cessation, especially when combined with expert support[188]. Therefore, an unintended consequence of the regulations could be that fewer adults use vapes as smoking cessation tools and hence continue to smoke.

325. There would be costs to individuals if they continue to smoke. This includes health costs, such as, increased risk of heart disease, stroke and heart failure[189].

326. However, due to limited data and evidence it has not been possible to estimate the potential number of individuals that would no longer quit smoking or return to smoking as a result of packaging restrictions.

Reduction in vaping products duty

327. At Autumn Budget 2024, the Government confirmed a Vaping Products Duty would be introduced from 1 October 2026. The duty will be a flat rate of £2.20 per 10ml of vaping liquid, applied to all vaping products regardless of nicotine content. Given that we expect standardising vape packaging to reduce the prevalence and hence consumption of vape products, this would likely have a knock-on effect and reduce the total revenue collected as part of the duty.

328. However, this represents a transfer from the government collecting the duty to the people in society previously buying the products. The people that no longer vape because of this policy benefit from an increase in the amount they can spend on other goods and services, and the government loses an equal amount that they can spend. Therefore, this reduction in tax revenue does not make society as a whole better or worse off.

Reduction in VAT

329. Vapes and other nicotine products are also subject to Value Added Tax (VAT). As we would expect there to be a reduction in sales of vapes and other nicotine

[185] DHSC. 2015. Standardised packaging of Tobacco Products Regulations 2015.
[186] ASH. 2024. Nearly 3 million people in Britain have quit smoking with a vape in the last 5 years.
[187] OHID. 2022. Nicotine vaping in England: 2022 evidence update.
[188] Boyce and others. 2022. Electronic cigarettes for smoking cessation.
[189] Global Burden of Disease. VizHub - GBD Results (healthdata.org)

products as a result of the regulations, we would also expect there to be a reduction in VAT revenue.

330. However, this reduction in tax revenue represents a transfer from government collecting the revenue to consumers paying the VAT. The consumers that no longer vape or use nicotine products benefit from an increase in the amount they can spend on other goods or services. This reduction in tax revenue does not make society as a whole better or worse off.

Loss of business for design, printing and manufacturing businesses

331. Manufacturers may outsource the design, printing and manufacture of packaging to specific design and packaging businesses. As a result of the policy we would expect there to be reduced demand for vapes and other nicotine product packaging design, which may reduce the profits of these businesses. The full extent of the impact on these businesses will be dependent on their ability to diversify.

332. We are unable to identify data on the number of design businesses and therefore have not been able to quantify the impacts on these businesses. We will review whether there is additional data at final IA stage.

Increased litter due to leaflets

333. If leaflets are included in non-nicotine vapes and other nicotine products, this could increase the overall amount of packaging included in each vape and other nicotine product, and in turn could increase the potential volume of litter.

334. However, the policy is expected to reduce the number of people using these products, which could reduce the overall litter associated with the products as there would be fewer sold each year. It is possible that the increase in litter due to leaflets would outweigh a reduction in litter due to fewer products sold as a result of the policy, in which case, there would be an overall increase in litter.

335. It has not been possible to quantify the specific impact of leaflets on litter costs from leaflets and therefore remains non-monetised.

Break-even analysis

336. For this measure it has been possible to estimate the costs to businesses to implement the measure, while the benefits such as improved health outcomes and reduced demand on services are harder to quantify. Break-even analysis provides a way of identifying the level of benefits required to offset the quantified costs and assess the point at which an intervention would deliver value, even when the precise monetisation of the benefits is not possible.

Calculating the break-even point

337. To calculate the break-even point, the overall quantified costs is divided by the potential health benefits associated with children not taking up the products in scope, or adults quitting using the products in scope. The evidence and analysis used to estimate the health benefits is outlined in the non-monetised benefits section and comes from previous tobacco and vaping impact assessments for the number of QALYs, and the Government of Canada for the relative health harms of vaping. This is used to produce a range of ‘QALY gain’ values to calculate break-even points against the monetised costs.

338. For children, the estimated QALY gain of not taking up vaping and nicotine products is 0.2 QALYs[190].

339. For adults quitting vaping and nicotine products, the estimated QALY gain value is 0.24 QALY[191].

340. The Green Book places a value of £70,000 on a QALY.

Break-even results

341. Based on the quantified costs of -£626m in Option 2, -£578m in Option 3 and -£658m in Option 4 in Table 40 shows the number of fewer children and young people required to not take up each of the products in scope, or adults required to quit, to break even.

Table 40: Break-even results

Break-even scenario	Option 2	Option 3	Option 4
Children not taking up vaping or nicotine products	45,806	42,368	48,098
Adults quitting vaping or nicotine products	38,172	35,306	40,082

342. Realistically, the break-even point will more likely be a combination of all of the above, which would reduce the number required in each of the break-even scenarios above.

343. The estimated fewer number of adults using vaping products (compared to the baseline) is around 175,000 and the estimated reduction in the number of adult nicotine pouch users is around 20,000. The break-even analysis demonstrates that the point at which costs would be covered falls below the estimated effect size.

Sensitivity analysis

344. Given there are uncertainties throughout the impact assessment we have tested some of the key assumptions in sensitivity analysis. This includes:

- Vape baseline methodology
- Vape switching behaviours
- Nicotine pouch methodology
- Consumption rate of nicotine pouches
- Impact size
- Profit margins for vape retailers
- Reconfiguration costs

Vape baseline methodology

Market size

[190] Based on DHSC. 2015. The Standardised Packaging of Tobacco Products Regulations 2015 and Government of Canada. 2021. Canada Gazette, Part 1, Volume 155, Number 25: Order Amending Schedules 2 and 3 to the Tobacco and Vaping Products Act (Flavours).
[191] Based on DHSC. 2023. Tobacco pack inserts and Government of Canada. 2021. Canada Gazette, Part 1, Volume 155, Number 25: Order Amending Schedules 2 and 3 to the Tobacco and Vaping Products Act (Flavours).

345. As discussed in the vape baseline methodology section, we have updated the methodology to estimate vape market baseline, from the methodology used in the Tobacco and Vapes Bill IA.

346. To test how this change impacts the analysis, we have also modelled the impact of the policy using a similar methodology used in the Tobacco and Vapes Bill IA. This is using a top-down approach but is heavily reliant on estimates from assumptions on the disposable vape market that may no longer apply.

347. To calculate the market size using a top-down approach we:
   A. Estimate the number of disposables vapes on the market
   B. Multiply number of disposables vapes on the market by the price of a disposable vape to get the total sales value for disposables
   C. Multiply the total sales figure by 2 to get the total market size (assumption that disposables make up 50% of the market value)
   D. Convert the disposable vape market value to an equivalent reusable market value following the ban, by applying conversion rates between disposables and reusables
   E. Apply Defra switching proportions to the disposable market value to account for those who may quit or switch to other products
   F. Total the existing reusable market (pre disposable ban) to the new converted reusable market.

A. Estimate the number of disposables vapes on the market

348. Based on a report by Material focus[192] it is estimated that 360m vapes were placed on the market in 2023. In the Tobacco and Vapes Bill IA, the number of vapes on the market was projected forward using growth rates estimated by Eunomia[193] to account for growth in the market. However, to make this scenario comparable with the scenario presented and to reflect prevalence in the market stabilising we have assumed that the number of vapes in the market stays constant from 2025 onwards. For the appraisal period, this would translate to 520m vapes on the market per year.

B. Multiply number of disposables vapes on the market by the price of a disposable vape to get the total sales value for disposables

349. To get the total sales value the total number of vapes is multiplied by the average price of a vape. This was estimated to be £5.38 by Defra[194]. This translates to a total sales value of £2.8bn per year.

C. Multiply the total sales figure by 2 to get the total market size

350. Given the estimate for products on the market was based on disposable vapes only, we need to also account for reusable vapes. The reusable vapes market was estimated to be 50% of the total market value[195], therefore the total market value is estimated to be £5.6bn.

D. Convert the disposable vape market value to an equivalent reusable market value following the ban, by applying conversion rates between disposables and reusables

[192] Material Focus. 2023. Number of disposable single-use vapes thrown away have in a year quadrupled to 5 million per week
[193] Eunomia. 2023. Analysis of the market for vapes: exploring the environmental impacts of single-use vapes
[194] Defra research conducted in 2023 based on a sample (a compiled list of approximately 40 products) of products for sale from both online and in-store retailers, including vape stores, newsagents and supermarkets
[195] Eunomia. 2023. Analysis of the Market for Vapes. Exploring the environmental impacts of single-use vapes.

351. For the 51% that switch to reusables, the disposable vape value should be converted to the equivalent value of reusable vapes. This is because typically reusable vapes are cheaper than disposables. This is based on conversion rates outlined by Defra's single-use vape ban impact assessment.

Table 41: Conversion of disposable vapes to reusable vapes

Product	Disposable vape equivalent
Reusable device	300
Pack of cartridges (2 per pack)	2
E-liquid (10ml)	5

352. Based on these conversion rates and based on the assumption that 50% of disposable users will use cartridges and 50% will use e-liquid (in the absence of data), we can estimate the equivalent number of reusables vapes that would be consumed.

353. Based on the estimate that there would have been 520m vapes on the market from 2027 onwards we can estimate the equivalent value of this.

Table 42: Estimated number of reusable products and value in 2027

Number of products	**Number of products (millions)**	**Price per unit**	**Value (£m)**
Reusable device	0.87	£9.00	£8
Cartridge	130	£3.50	£455
Reusable device	0.87	£17.00	£15
E-liquid	52	£3	£156
Total			**£634**

E. Apply DEFRA switching proportions to the market value to account for those who may quit or switch to other products

354. To account for the impact of the disposable vape ban, we assume the same switching behaviours as that outlined Table 3. This assumes 51% of disposable users will move to reusable vapes, 20% will quit and 29% will switch to other products. Therefore, the disposable vapes market value should be reduced by 49%.

F. Total the existing reusable market (pre disposable ban) to the new converted reusable market

355. To get the total value of the market, we combine the value of the previous reusable value (£2.8bn), with the new converted disposable value market value (£323m) to get a total market value per year across the appraisal period of £3.1bn in 2024 prices.

Lost profit

356. Table 43 shows the estimated profit loss for vape manufacturers, wholesalers and retailers if we were to use this baseline instead of the baseline using the bottom-up methodology. All other assumptions, such as, profit margins, are held constant.

Table 43: Comparison of lost profit from vape baseline methodologies

Business	Top-down methodology (£m)	Bottom- up methodology (£m)
Manufacturer	£68	£39
Wholesaler	£62	£36
Retailer	£424	£244
Total	£555	£319

Limitations

357. Using the top-down methodology results in a much higher profit loss estimate than that of the bottom-up approach. The methods are not directly comparable, making it challenging to isolate the main driver of the differences in the approaches, however it could be driven by the estimate of the number of products on the market or the conversion rates between disposable and reusable vapes.

358. Whilst both methods are based on data available, we have opted for the bottom-up approach in our main scenario, given it uses more recent data and does not rely on significant assumptions, such as, conversion rates between disposable and reusable vapes, as well as starting from a point of number of disposable vapes on the market.

359. Given that the top-down methodology is a much higher figure, this could be presented as our maximum scenario in modelling the profit loss.

Switching behaviours

360. For the vape baseline, switching behaviours were applied based on assumptions Defra used in the single use vape ban impact assessment. We applied a 49% reduction in the number of disposable vape users following the single-use vape ban. Given the lack of data following the single-use vape ban, some uncertainty exists on switching behaviour. Therefore, as part of the sensitivity analysis we have tested a scenario where all disposable users switch to reusable products. This represents a maximum scenario.

361. Table 44 shows the total number of people vaping, if we assume all disposable vape users switch to reusable products.

Table 44: Number of people vaping if all disposable users switch to reusable vapes

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Number of adults vaping (millions)	5.53	5.57	5.62	5.66	5.70	5.74	5.78	5.82	5.85	5.88
Number of young people vaping (millions)	0.50	0.50	0.49	0.49	0.48	0.48	0.47	0.46	0.45	0.45
Total number of people vaping (millions)	6.04	6.07	6.11	6.15	6.18	6.22	6.25	6.28	6.30	6.33

362. Using the estimates of the number of adults vaping, we then estimate the profit loss associated with a reduction in the number of people vaping. This follows the same methodology outlined in the profit loss section of the impact assessment and also uses a 1.9% reduction per year in the number of adults that vape for 2 years.

363. Table 45 shows the associated profit loss, in the scenario where there are a higher number of adults that vape, compared to the scenario where 49% of disposable users quit.

Table 45: Comparison of lost profit from switching behaviour assumptions

Business	All disposable users switch to reusable vapes (£m)	DEFRA switching behaviours applied (£m)
Manufacturer	£46	£39
Wholesaler	£42	£36
Retailer	£286	£244
Total	£374	£319

Other nicotine product baseline

Market growth rate

364. As outlined in the other nicotine product market section of the OA, we have limited data on the market size in the baseline across the appraisal period. As a result, in the scenario presented above, we have assumed that the prevalence has remained constant over the appraisal period. However, in practice this may not be the case.

An alternative would be to assume that the nicotine pouch market grows at the same rate as the vape market.

365. The growth rate in vape prevalence has been calculated using ONS vaping data[196] from 2014 to 2023. Over 10 years there was an average annual growth rate of 12%. Applying this to nicotine pouch prevalence across the appraisal period would result in nicotine pouch prevalence increasing to 3.87% for adults in 2036.

366. As using the nicotine pouch baseline with the vape growth rate applied results in nicotine pouch prevalence being higher in the baseline the estimated profit loss for nicotine pouch manufacturers, wholesalers and retailers is also higher.

367. Table 46 shows the estimated loss in profit for nicotine pouch manufacturers, wholesalers and retailers using this alternative nicotine pouch baseline and applying a 1.9% reduction in the two years following the implementation of the policy.

Table 46: Comparison of lost profit from different assumptions on nicotine pouch growth rate

Business	No growth in the market (£m)	Growth assumption applied (£m)
Manufacturer	£10.5	£15.5
Wholesaler	£9.5	£14.1
Retailer	£64.8	£96.0
Total	**£84.7**	**£125.6**

Consumption rates

368. Another uncertain assumption in the other nicotine product baseline is the rate of consumption of nicotine pouches. Based on information from Haypp[197] it was assumed that consumers use 3 packs a week. However, in the Nicotine Inhaling Products Impact Assessment it is assumed users consume 632 pouches per year, equivalent to around 12 pouches per week or 0.6 packs per week, given there are typically 20 pouches per pack.

369. Adjusting for this rate of consumption, equates to weekly spend being £3.27 and yearly spend being £170.28. Table 47 shows the total spend on nicotine pouches using this alternative assumption.

Table 47: Total nicotine pouch spend

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Total spend (£m)	£108	£109	£109	£110	£111	£111	£112	£112	£113	£113

[196] ONS. 2024. E-cigarette use in Great Britain.
[197] Haypp. 2024. Nicotine Pouch Report The UK 2024.

370. Table 48 shows the estimated profit loss for nicotine pouch manufacturers, wholesalers and retailers using the different assumptions on consumption rates.

Table 48: Comparison of lost profit from different nicotine pouch consumption rate assumptions

Consumption Rate (packs per week)	Manufacturers profit loss (£m)	Wholesalers profit loss (£m)	Retailers profit loss (£m)	Total profit loss (£m)
0.6	£2.1	£1.9	£13.1	**£17.1**
3	£10.5	£9.5	£64.8	**£84.7**

Impact size

Vapes

371. In the central scenario we have used 1.9% as our impact size, based on the effect size used in the standardised packaging of tobacco products IA. To reflect uncertainty in this estimate we can also apply an impact size of 2.4%. This is the impact size from the standardised packaging post implementation review, not accounting for other policies implemented at the time. This could be seen as a potential maximum impact size for standardising vape packaging.

372. Alternatively, the impact size may be lower than 1.9%, given that whilst tobacco can be used as a proxy there are differences in the market that may influence the impact size. For example, adults using vapes as a smoking cessation tool may not be influenced by the packaging restrictions, therefore we wouldn't anticipate prevalence to decrease in the same way as that for tobacco. In the absence of data on a low scenario, a 1.4% prevalence drop has been modelled to indicate the impact plus or minus 0.5% percentage points of the central scenario.

373. Table 49 shows the results on profit loss of applying these different impact sizes to the number of adults that vape for the first two years.

Table 49: Comparison of profit loss for vapes from impact size assumptions

Impact Size	Manufacturers profit loss (£m)	Wholesalers profit loss (£m)	Retailers profit loss (£m)	Total profit loss (£m)
1.4%	29	27	182	238
1.9%	39	36	235	319
2.4%	50	46	310	406

Other nicotine products

374. As above, we can also apply the same sensitivity assumptions to the nicotine pouch market.

Table 50: Comparison of profit loss for nicotine pouches from impact size assumptions

Impact Size	Manufacturers profit loss (£m)	Wholesalers profit loss (£m)	Retailers profit loss (£m)	Total profit loss (£m)
1.4%	8	7	48	63
1.9%	10	10	64	85
2.4%	13	12	82	108

Profit margins

375. In the central scenario for profit loss we assume a 45% profit margin for retailers. This is based on stakeholder engagement conducted by Defra on disposable vapes[198]. The profit margins may differ for reusable vapes, therefore we have explored additional evidence. A report by the University of Edinburgh[199] that analysed profit margins for vape retailers found an average profit margin of 37.1%. They break this down further by product.

Table 51: Alternative profit margins

Product type	Gross margins (September 2022)
E-liquid	47.3%
Pod / cartridge refill	24.6%
Disposable device	36.8%
Vape kit	27.4%
Vape unclassified	37.8%
Total	**37.1%**

376. Given the profit margins for retailers used were based on disposable vapes (45%), we have tested this in sensitivity analysis using the data from the University of Edinburgh study, excluding disposable devices. The average profit margin would be 34.3%.

377. Table 52 shows the estimated profit loss for vape retailers using this alternative assumption for vape retailer profit margins.

[198] Defra. 2024. The Environmental Protection (Single-use Vapes) (England) Regulations 2024

[199] Tunstall. 2024. Tobacco and vape profits: analysis of EPOS data from small retailers in the United Kingdom in 2019 and 2022.

Table 52: Comparison of vape retailer lost profit from different profit margin assumptions

Profit Margin	**Total profit loss (£m)**
34.3%	186
45%	244

Reconfiguration costs

378. We have estimated reconfiguration costs based on the assumption that 88% of stores are likely to reconfigure their stores based on responses to surveys conducted for Canada's implementation of plain packaging. We also identified additional evidence from Australia's post-implementation review of plain packaging legislation. From this costing survey 33% of respondents incurred increased costs associated with actions to avoid increased time with stock handling, transaction times and error.

379. Based on an estimate from a retail representative body in Australia, the reconfiguration could take approximately four hours per week. We have assumed that it also lasts 4 weeks.

380. Based on this, Table 53 shows the scenario where 33% of convenience stores and supermarkets spend four hours a week for four weeks using the same methodology as the main scenario.

Table 53: Comparison of reconfiguration costs from different varying assumptions

Retail setting	Reconfiguration costs (main scenario) (£m)	Reconfiguration costs (sensitivity analysis) (£m)
Convenience store	39	4
Supermarkets	4	0.4
Vape stores	3	0.8
Pharmacies	11	3
Total	**57**	**8**

Small and Micro Business Assessment (SaMBA)

381. For the SaMBA, we have presented the costs to small and micro businesses for the preferred option only. However, as we have not been able to estimate different costs for each option the estimates presented in this section could apply to all options.

382. This policy will apply to all size businesses, including small and micro businesses. The policy extends to all businesses as it would not be possible to exempt small businesses from this policy while still achieving its aims and objectives.

383. Allowing small businesses to produce or sell vapes or other nicotine products that do not have standardised packaging, would mean that children and non-smokers would still be exposed to these products. This undermines the overall policy objective to

reduce young people vaping, therefore, small businesses should not be excluded from the policy.

384. The main businesses that will be impacted by these regulations are:

- Vape manufacturers
- Vape wholesalers
- Vape retailers
- Other nicotine product manufacturers
- Other nicotine product wholesalers
- Other nicotine product retailers

385. For this Small and Micro Business Assessment (SaMBA), only impacts on retailers and wholesalers have been quantified, as it is not expected that manufacturers are small or micro businesses due to the nature of their business. The regulations will be placed on manufacturers; however, costs will be passed through the supply chain to wholesalers and retailers.

386. Costs considered in the SaMBA for retailers include:

- Profit loss
- Familiarisation cost
- Training costs
- Reconfiguration costs
- Transaction costs
- Reduced footfall and associated profit loss

387. Costs considered for wholesalers include:

- Familiarisation
- Profit loss

Retailers

388. As outlined in paragraph 181, we estimate there to be a total of 74,187 retailers including:

- 51,931 convenience stores[200], of which 71% are independently operated.
- 5,831 supermarkets[201], excluding discounters that generally do not sell vapes
- 3,573 vape shops[202].

[200] ACS. 2025. The Local Shop Report.
Of which 50,486 convenience stores in mainland UK, has been uplifted using population estimates to account for the whole of the UK.
[201] IGD. 2024. UK Grocery Store Numbers 2024.
[202] Local Data Company. 2023. Accessed via Tobacco Reporter here: Number of U.K. Vape Shops Up in 2023 - Tobacco Reporter

- 12,852 pharmacies[203]

389. We have assumed that all supermarkets are not small or micro businesses.

390. To estimate the total number of convenience stores in the UK that are small or micro businesses we use information from the ACS Local Shop Report 2025[204]. The report estimates that 71% of the convenience stores are independent retailers. Independent retailers include unaffiliated and symbol groups. We assume that multi-operated stores are not small and micro businesses and assume that all independent convenience stores are small or micro businesses. Therefore, we estimate that there are 36,871 convenience store retailers in the UK that are small and micro businesses.

391. In addition, there is limited data on vape stores and their size, therefore we assume that all 3,573 vape stores in the UK are small and micro businesses. In practice this could be an overestimate as some of the stores could be larger businesses or chains.

392. To estimate the number of pharmacies that are small and micro businesses we have used estimates from the impact assessment on the extension of hub and spoke dispensing[205]. This impact assessment estimated that 95% of the pharmacies in the impact assessment were small and micro businesses.

393. Based on these estimates, we estimate that there is a total of 52,653 vape retailers in the UK that are small and micro businesses. This equates to 71% of the total number of retailers in the UK that we have estimated.

394. We do not have specific data on the proportion of sales of vapes that are attributed to small and micro retailers. For the purpose of this SaMBA we have assumed it will be uniform across all businesses. In practice small and micro retailers may have less revenue and less profit than that of large businesses that are more likely to benefit from economies of scale. As such the costs that fall on small and micro businesses may differ, relative to large businesses.

Lost profit

395. Due to limited evidence, we are unable to distinguish if profit margins differ between different sized retailers, so we have therefore assumed that all retailers have the same profit margin of 45% for vapes and nicotine pouches.

396. As outlined in the monetised cost section, over the ten-year appraisal period, we estimate a profit loss to retailers to be £244m for vapes and £65m for nicotine pouches. Dividing this through by the total number of retailers would equate to £3,286 profit loss per store for vapes and £873 for nicotine pouches over the appraisal period. Total profit loss per store would be £4,159.

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[203] Based on 10,405 pharmacies in England. NHSBSA. 2025. Pharmacy Openings and Closures.
1,250 pharmacies in Scotland. Scottish Government. Primary Care Services.
689 pharmacies in Wales. Welsh Government. 2024. Community pharmacy services: April 2023 to March 2024
511 pharmacies in Northern Ireland. Department of Health. 2024. Publication of General Pharmaceutical Services for Northern Ireland, Annual Statistics 2023/24
[203] ONS. 2025. Non-financial business economy. UK: Sections A to S.
[203] ONS. 2024. Earnings and hours worked, occupation by four-digit SOC: ASHE Table 14.
[204] ACS. 2025. The Local Shop Report.
[205] DHSC. 2025. Extension of hub and spoke dispensing to different legal entities.

397. As outlined, we estimate 71% of retailers to be small and micro businesses, which is equivalent to 52,653 retailers. Multiplying the profit loss per store, by the total number of small and micro retailers in scope, Table 54 shows the estimated profit loss for small and micro businesses.

Table 54: Lost profit for small and micro retailers

Option	Lost profit for small and micro vape retailers (£m)	Lost profit for small and micro nicotine pouch retailers (£m)	Total lost profit for small and micro retailers (£m)
Option 2, 3 and 4	173	46	219

398. For small and micro convenience stores, we can contextualise these profit losses using the ACS local shop report publication[206]. The total revenue for the sector was forecast to be £49bn in mainland UK. If we divide this by the number of convenience stores (50,486 in mainland UK) the annual revenue per store in 2024 is c. £970,000. The ACS publication reports that 18.8% of sales in 2024 were due to tobacco and vape sales.

399. Based on this, we can estimate that £181,722 of revenue per store can be attributed to tobacco and vapes.

400. Assuming all products sold under 'Tobacco and Vapes' in the ACS publication have a profit margin equivalent to that assumed for vapes (45%), we estimate profit per store in 2025 to be £81,775 per year in the counterfactual scenario. Taking the first year of the appraisal period as an example, estimated profit loss for vapes and nicotine pouches equates to £258 profit loss per store, this is equivalent to 0.3% of annual tobacco and vapes profits. However, revenue and profit may differ in our appraisal period, compared to those provided by ACS for 2025, so these estimates should be taken as indicative only.

401. Likewise, if we assume profit margins for all goods sold in convenience stores match 45% profit margins, we can multiply this by 2025 revenue per convenience store (£970,000) to estimate total profit for convenience store to be approximately £435,000 in 2025. In reality we expect profit margins to differ between products so this estimate may not be an accurate reflection of the proportion of total convenience store profits that it represents. The estimated total profit loss (£258 per store) is therefore estimated to be equivalent to 0.1%.

402. We do not have the same data to estimate profit loss per store for vape shops as we do not have data on their annual revenue or profit. This means we are not able to provide equivalent estimates.

Familiarisation costs

403. The estimated costs per business for familiarisation would be the same as each business would be subject to the same regulations. However, this may represent a

[206] Association of Convenience Stores. 2025. The Local Shop Report 2025.

larger burden on small and micro businesses that will have fewer staff available to undertake this familiarisation.

404. Total familiarisation costs to retailers are estimated to be £2.3m. To estimate familiarisation cost, we multiply the estimated familiarisation costs for retailers by the percentage of those that are estimated to be small and micro businesses for each business type. As outlined above, we estimate 52,653 retail stores to be small and micro businesses, which is equivalent to 71% of all businesses in scope.

405. Table 55 shows the estimated familiarisation costs for small and micro businesses.

Table 55: Familiarisation costs for small and micro businesses

Option	Familiarisation costs for small and micro retailers
Option 2, 3 and 4	£1,700,000

406. For context, this is estimated to be equivalent to £27 per convenience store or vape store and £46 per pharmacy. This differs due to different wage assumptions.

Training costs

407. To estimate the training costs for small and micro businesses, we multiply the training costs for all retailers by the percentage of those that are small and micro businesses. For all retailers, in the monetised cost section we estimate a cost of £5.7m for training.

408. We assume that only 30% of convenience stores and supermarkets will be required to undertake training and 100% of vape stores and pharmacies. Therefore, the number of retailers impacted by the regulations would be lower than that of other costs incurred.

Table 56: Number of small and micro businesses expected to conduct training

Retailer	Number of stores conducting training	Number of small and micro businesses expected to undertake training
Convenience store	15,579	11,061
Supermarket	1,749	0
Vape Store	3,573	3,573
Pharmacies	12,852	12,209

409. Based on these estimates, 80% of the businesses conducting training are likely to be small and micro businesses. This assumes that small and micro businesses are as likely to conduct training as larger businesses. In practice, this may differ between stores and small or micro businesses could be more or less likely to conduct training.

410. Table 57 shows the estimated training costs incurred by small and micro businesses.

Table 57: Training costs for small and micro businesses

Option	Training costs for small and micro retailers
Option 2, 3 and 4	£4,600,000

411. For context, this is estimated to be equivalent to £170 per small and micro retailer.

Reconfiguration costs

412. To estimate reconfiguration costs for small and micro businesses we multiply the reconfiguration costs for all retailers by the percentage of small and micro businesses that undertake reconfiguration. Total reconfiguration costs for all businesses was estimated to be £57.3m. In estimating the reconfiguration, we assume that 88% of convenience stores and supermarkets and 100% of vape stores and pharmacies will reconfigure their stores/stock rooms. Based on this, Table 58 shows the estimated number of these stores that are small and micro businesses.

Table 58: Number of small and micro businesses expected to reconfigure stores

Retailer	Number of stores conducting reconfiguration	Number of small and micro businesses expected to reconfigure store
Convenience store	45,699	32,446
Supermarket	5,131	0
Vape Store	3,573	3,573
Pharmacies	12,852	12,209

413. Based on these estimates 71% of the businesses that reconfigure their stores or stock rooms would be small or micro businesses. However, similar to training costs, this assumes that small and micro businesses are as likely to reconfigure their stores as larger businesses. In practice, this may not be the case. For example, vape stores may face a higher cost as they predominately sell vaping products, which may require more reconfiguration of the whole store and stock. This could be a larger burden on smaller stores that will have fewer staff available for restocking.

414. Table 59 shows the estimated reconfiguration costs incurred by small and micro businesses.

Table 59: Reconfiguration costs for small and micro businesses

Option	Reconfiguration costs for small and micro retailers
Option 2, 3 and 4	£41,100,000

415. For context, this is estimated to be equivalent to £852 per small and micro retailer.

Transaction costs

416. To calculate the total transaction costs to small and micro businesses we multiply the total transaction cost to all businesses by the proportion of businesses that are small and micro businesses. In practice this may be an overestimate as small and micro businesses are likely to have fewer transactions than larger stores.

417. In the monetised cost section, we estimated that there would be 26 million vape transactions and 7 million nicotine pouch transactions per month. The estimated total cost for the increase in transaction time is £270,000 for vapes and £75,000 for nicotine pouches. Given that we have estimated 71% of stores are small and micro businesses, we would expect there to be around 453 transactions per store and an increase in total serving time across these transactions of around 20 minutes.

418. Table 60 shows the estimated cost of this increase in transaction time to small and micro businesses.

Table 60: Transaction costs for small and micro businesses

Option	Transaction costs for small and micro retailers
Option 2, 3 and 4	£244,000

419. For context, this is estimated to be equivalent to £5 per small and micro retailer.

Reduced footfall

420. Small and micro retailers may also incur lost income from reduced footfall related sales. These are sales of goods bought in addition to vapes and other nicotine products. If the products in scope of this policy are the primary reason for customers entering retailers, there could be reduced profit if the secondary items are also not purchased.

421. It could be assumed that this is more likely to impact small and micro retailers, if a smaller number of items are typically purchased in small and micro retailers compared to supermarkets. The ACS estimate that the average number of items purchased in convenience stores is 2.7, with an average sales amount of £7.81[207]. If the items in scope of this policy are the intended purchase item and an additional 1.7 items are no longer purchased due to reduced footfall, this could result in additional lost profits.

422. However, there is not sufficient evidence on whether the products in scope of this policy, are the main reason that individuals visit the convenience stores. As a result, we cannot conclude that this policy would also lead to reduced footfall for small and micro retailers.

423. Additionally, using tobacco as a proxy, a 2016 report by ASH[208] reviewed data from 1,400 small retailers across the UK using an electronic point of sale system and compared tobacco and non-tobacco transaction rates. The majority of transactions did not include any tobacco (79%), 13% of transactions included both tobacco and non- tobacco products, and 8% were for tobacco products only.

424. The analysis compared the average values of the different types of transaction and concluded that there was no relationship between the sales of tobacco products and

[207] Association of Convenience Stores. 2025. The Local Shop Report 2025.
[208] ASH. 2016. Counter Arguments – How important is tobacco to small retailers?

non-tobacco products, and that "smokers approach the till with a similar basket of everyday items to those who come into the shop with no desire to buy tobacco." Although not specifically in relation to vapes or other nicotine products, this is evidence that there is not a single item that is the primary reason customers enter small retailers. This suggests that the impact of lost income from reduced footfall-related sales for small and micro retailers as a result of this policy may be limited.

Total impact on small and micro retailers

425. Table 61 shows the estimated impact on small and micro retailers for Options 2, 3 and 4.

Table 61: SaMBA summary for Option 2, 3 and 4

Impact	Total cost for small and micro businesses (£m) over appraisal period (10 years)	Cost per store (£) over appraisal period
Familiarisation costs	£1.7	£27-£46[209]
Training costs	£4.6	£170
Reconfiguration costs	£41.1	£852
Transaction costs	£0.2	£5
Profit loss	£219.0	£4,158
Total	**£266.6**	**£5,212-£5,231**

Wholesalers

426. NOMIS data[210] estimates that there are a total of 16,080 wholesale of food, beverages and tobacco businesses in the UK. This includes a total of 13,050 micro businesses and 2,440 small businesses. This is a total of 15,490 small and micro wholesalers, which equates to 96% of wholesalers. We can calculate the proportion of costs that are likely to fall on small and micro wholesalers. The costs incurred by wholesalers are familiarisation costs and lost profits.

Familiarisation costs

427. Total familiarisation costs to wholesalers are estimated to be £0.4m. To estimate familiarisation cost, we multiply the estimated familiarisation costs for all wholesalers by the percentage of those that are estimated to be small and micro businesses. As outlined above, we estimate 15,490 wholesalers to be small and micro businesses, which is equivalent to 96% of all wholesalers in scope. Table 62 shows the estimated familiarisation costs for small and micro wholesalers.

[209] Cost per convenience and vape store is £27 and cost to pharmacies is £46 per store.
[210] ONS. NOMIS. 2024. UK Business Counts- enterprises by industry and employment size band.

Table 62: Familiarisation costs for small and micro wholesalers

Option	Familiarisation costs for small and micro wholesalers
Option 2, 3 and 4	£400,000

Lost profits

428. The total lost profit is estimated to be £35.8m for vape wholesalers and £9.5m for nicotine pouch wholesalers. To estimate the cost, we multiply the estimated profit loss by the percentage of wholesalers estimated to be small and micro businesses. Table 63 shows the estimated profit loss for small and micro wholesalers.

Table 63: Profit loss to small and micro wholesalers

Option	**Lost profit for small and micro vape wholesalers (£m)**	**Lost profit for small and micro nicotine pouch retailers (£m)**	**Total lost profit for small and micro wholesalers (£m)**
Option 2, 3 and 4	£34.4	£9.1	£43.6

Total impact on small and micro wholesalers

429. Table 64 shows a summary of the estimated cost to small and micro wholesalers, including a cost per business. Given we have not been able to estimate varying costs for each of the options for lost profit or familiarisation costs, the below table applies to all options in the impact assessment.

Table 64: Summary of costs for small and micro wholesalers

Cost	Total cost for small and micro businesses (£m) over appraisal period (10 years)	Cost per business (£) over appraisal period
Familiarisation costs	£0.4m	£27
Profit loss	£43.6m	£2,815
Total costs	**£44.0m**	**£2,842**

Total impact on small and micro businesses

430. Table 65 shows the estimated impact on small and micro businesses.

Table 65: SaMBA summary

	Small and micro retailers	**Small and micro wholesalers**
Total cost	£267m	£44m

Potential disproportionate impacts

431. In addition to the costs, it could be possible that some of the costs to businesses of this policy will have a disproportionate impact on small and micro businesses.

432. One example of this is time and opportunity cost when familiarising with themselves with the policy. As small and micro businesses have fewer employees, the opportunity cost on their time could be greater as they have fewer employees to cover the shifts of those familiarising themselves with the policy. However, whilst medium and large businesses may have more employees to assist with this, due to the size of their business it is logical to assume they will spend more time disseminating guidance to more employees which could be an additional burden to medium and large businesses. This means familiarisation costs could potentially vary in proportion with the size of the business and not result in disproportionate impact on small and micro businesses.

433. For small and micro retailers in scope of this policy, it could be possible for them to substitute the sale of vapes and other nicotine products for other products they sell. However, this may not be possible for vape stores who we assume only sell vape and other nicotine products. It may also be easier for medium and large stores to also sell other products, assuming they already sell a wider range of products.

434. Another example where there could be disproportionate impacts on small and micro businesses is on their profit margins. Throughout this IA, we have assumed a retail profit margin of 45% to estimate potential impacts on profit. Due to limited data, we cannot distinguish profit margins between different sized businesses. If we assume small and micro businesses hold a smaller number of products and less diversified stock than medium and larger businesses, it could be possible that these products account for a larger share of the business profit compared to medium and large businesses.

435. Whilst we are aware small and micro businesses could be disproportionately impacted, we have considered mitigations for them below.

Potential mitigations for small and micro businesses

Lead-in times

436. Potential impacts on SMBs can be mitigated by lead-in times. The restrictions on vape and other nicotine product packaging will come into place on a date specified by the Secretary of State. An appropriate lead-in time can be given to allow businesses enough time to produce compliant packaging and sell through existing stock. Appropriate lead-in times and implementation periods will be tested during the consultation.

Stakeholder engagement

437. More specific engagement with stakeholders is difficult because the UK is a member of the World Health Organisation Framework Convention on Tobacco Control. Article 5.3 of the convention states “In setting and implementing their public health policies with respect to tobacco control, Parties shall act to protect these policies from

commercial and other vested interests of the tobacco industry in accordance with national law". This recognises the conclusion from the World Health Assembly that the tobacco industry has operated for years with the express intention of subverting the role of governments and of WHO in implementing public health policies to combat the tobacco epidemic. In practice, this means that we do not engage with the tobacco industry unless we deem it necessary and then ensuring the highest level of transparency within those interactions.

438. The tobacco industry do respond to consultations and calls for evidence. Many Tobacco companies are diversifying as a result of the decreasing prevalence of smoking, this diversification has led to many Tobacco companies owning, having shares in, or having links with vaping companies. We therefore need to be mindful of the balance between engaging and protecting public health policy from the influence of the tobacco industry.

439. Whilst some vaping organisations have taken steps to remove Tobacco Industry influence this is not the case across the industry as a whole and it is difficult to verify where stakeholders are free from Tobacco Industry influence unless this is stated and proven outright. Due to this consideration, engagement outside of an open government consultation is very difficult.

Distributional and wider impacts

Distributional impacts

Consumers

440. This policy is aimed at improving population health by reducing uptake and prevalence of vaping and nicotine products among children and young people. Vaping prevalence is higher among people in routine and manual occupations compared with managerial and professional occupations therefore there may be larger benefits in these areas[211].

441. A report by UCL[212] also identified that those from a less advantaged occupational social grade had lower weekly expenditure (£8.03) on vapes than those from a more advantaged social grade (£8.86).

442. If there are any adverse impacts on low-income groups policy would seek to mitigate these by working closely with the relevant local authorities and regional network to ensure any effects are closely monitored.

Children and young people

443. Particularly among children and young people who are more sensitive to the effects of nicotine[213], this measure will reduce the appeal of vaping and other nicotine products.

Adult smokers using vapes as a quit aid

444. Adults that vape could be affected by restrictions on vape and other nicotine product packaging. This could include a proportion of adults that use vapes as a smoking quit aid. There would be health and economic costs to individuals if they continue to smoke including increased risk of morbidity and mortality, and increased costs of smoking compared to other products.

[211] UCL. Smoking Toolkit Study: Vaping across the social gradient.
[212] Jackson and others. 2025. Changes in expenditure on vaping in the context of the rise of disposable vapes and impending regulatory changes: a population study in Great Britain, 2021-2025.
[213] NHS. Young people and vaping.

445. If there are any adverse impacts on adult smokers, we would seek to mitigate these by tailored, targeted communication interventions on the benefits of vaping and nicotine products for them as alternatives to tobacco products. If there are any adverse impacts on young people, we will continue to maximise the impact of communication and educational programmes on the specific health harms to young people.

Regional

446. We are unable to assess whether there are regional impacts, due to a lack of geographical data on people who vape and use nicotine products. Where prevalence of vaping and other nicotine products is higher in young people, there may be greater benefits in these regions where higher reductions in prevalence may be experienced.

447. If there are any adverse regional impacts policy would seek to mitigate these by undertaking targeted interventions, for example targeted campaigns or by using the expertise provided in specific local authority level services.

Businesses

448. Business sectors that are likely to be impacted by the policy include:

- Vape and nicotine product manufacturers
- Vape and nicotine product wholesalers
- Vape and nicotine product retailers (vape stores, supermarkets, convenience stores and pharmacies)
- There may also be indirect effects on other businesses associated with the vape industry such as design agencies used for branding of vapes and nicotine products.

449. The impacts are likely to be realised by the businesses specifically identified above, however, due to the nature of some businesses there may be knock on effects. For example, if additional products purchased when buying vapes or nicotine products are no longer purchased.

450. DHSC has undertaken broad engagement on reducing the appeal and availability of vaping products. We will conduct further engagement with industry and association bodies to ensure the regulations strike the right balance between achieving the desired public health benefit and minimising burden on industry. During consultation, we will ask for evidence on feasibility to identify reasonable transition periods and sell by periods.

Regional impacts

451. We are unable to identify specific data on the regional impacts for manufacturers. However, there is some data on the regional distribution of vape retailers and wholesalers.

452. A report by Health Equity North[214], identified some of the regional differences in vape shops. The report found that there are over three times more vape shops in the most deprived areas of England compared to the least deprived areas. The report found that there are double the concentration of vape shops in the north (0.6 per 10,000 people) when compared to the south (0.3 per 10,000 people). This could indicate that the policy may have a disproportionate effect on areas such as in the

[214] Health Equity North. 2025.Ghost Towns. The Decline of the High Street and Health Inequalities.

north where there are more vape stores, and hence a larger proportion of the costs to businesses could apply in those areas.

453. In analysis of costs to convenience stores in this IA, we have used data from the Associates of Convenience Stores (ACS)[215]. However, this does not provide a breakdown on the regional distribution of stores. Instead, ONS data on UK business counts[216] in the industry 'retail sale in non-specialised stores with food, beverages or tobacco predominating' provides a regional breakdown of stores. The area with the highest proportion of these stores is London with 20.5% of all stores in this category, followed by South East with 11.1% of stores and the North West with 10.9% of stores. Northern Ireland had the lowest proportion with 2.5% of stores in this category. This could indicate that the policies may have a disproportionate effect on areas such as in London, South East and North West where there are more stores, and hence a larger proportion of the costs to businesses could apply in those areas.

454. In addition, a CEBR report[217] shows the regional breakdown of direct turnover of the UK vaping industry in 2020. It is likely that the market has changed since 2020, however this could still give an indication of regional differences. The report identified that the largest contributor in 2020 to direct turnover was the South East (16.3%), whilst the smallest contributor was Northern Ireland (2.9%). Areas with a higher proportion of turnover may incur a higher proportion of the costs that businesses face.

455. UK Business Counts[218] provides data on the number of wholesalers of food, beverages and tobacco, which we assume also sell vaping products and nicotine products. Based on this data there are 28% based in London, 12% based in the South East and 10% based in the North West. Wholesaler industries in these regions may face a higher proportion of the costs, relative to other areas that have a lower proportion of businesses

Wider impacts

Business environment

Attractiveness of business environment

456. Ongoing costs such as profit loss are likely to impact the longer-term attractiveness of the business environment for vapes and other nicotine products. Costs on businesses may lead to some businesses who are unable to compete exiting the market.

Market concentration and competition

457. Whilst the policy does not directly limit the number of businesses or the ability for businesses to compete in the domestic market, the policy may increase barriers to entry into the market.

Foreign investment

458. The measure is not expected to have a significant impact on foreign investment.

Scope for business to bring innovative products and services to market

[215] Association of Convenience Stores. 2025. The Local Shop Report 2025
[216] ONS Nomis. 2024. UK Business Counts- enterprises by industry and employment size band
[217] CEBR. 2022. Economic impact assessment of the vaping industry.
[218] ONS Nomis. 2024. UK Business Counts- enterprises by industry and employment size band

459. The regulation does not directly impact business' ability to bring innovative products and services to market; it does however restrict the packaging on any innovative products and potentially the marketability of these products.

International trade considerations

460. The regulation does not directly impact international trade but may indirectly impact international trade by creating a barrier to importing. Vapes and nicotine products imported into the UK will need to comply with the UK packaging regulations. As such, costs may be incurred by international manufacturers, similar to costs outlined in this IA, whereby they will need to ensure their products are suitable for a UK market.

461. The extent to which this impacts trade depends on the global regulatory landscape. Other countries are also regulating packaging on vapes, which may further influence the relative attractiveness of exporting to the UK.

462. A summary table of international interventions can be found in Annex A.

463. The UK Government will need to notify the WTO of proposed regulatory changes. During this notification period, other WTO members are able to engage with the UK to raise objections or to discuss the details of the new legislation in relation to businesses in their jurisdictions that export to the UK market.

Natural capital and decarbonisation

464. This measure is unlikely to have an impact on UK natural capital and decarbonisation of the economy, and no estimates on the changes to greenhouse gas emissions have been made.

Monitoring and Evaluation of preferred option

Background

465. This section sets out our provisional plans for monitoring and evaluation; informed by HM Treasury's Green Book[219], Magenta Book[220] and the Department for Business and Trade Better Regulations guidance on post-implementation reviews (PIRs)[221].

466. As set out in the Small Business Enterprise and Employment Act 2015, we must carry out a post-implementation review within 5 years of commencement of secondary legislation that has a significant impact on businesses. If we assume that the policy is implemented in 2027, a PIR would be required by 2032. This allows sufficient time for implementation and for the Department to commission any additional research, for example to better understand any emerging issues or policy changes needed to inform the post implementation review.

467. Based on previous experience we expect that the research is likely to take one year to commission and an additional 2-3 years to be conducted. Taking the maximum time available to evaluate will ensure that the full implementation can be evaluated

[219] HMT. 2022. The Green Book (2022)
[220] HMT. 2020. Magenta Book. Central Government Guidance on Evaluation.
[221] Department for Business & Trade. 2024. Producing post-implementation reviews: principles of best practice.

and impacts and unintended consequences that may develop over time can also be captured.

468. The aim of the PIR would be to establish whether the regulation:

- Has achieved its objectives
- Has objectives that remain appropriate
- Is still required and remains the best option for achieving objectives
- Could objectives be achieved in another way which involves less onerous regulatory provision to reduce the burden on business and/ or increase overall societal welfare

469. An example PIR is the Standardised Packaging of Tobacco Regulations 2015 Post Implementation Review[222] which can be drawn on to inform the evaluation of vaping and nicotine product packaging. The PIR included the following key questions:

- To what extent have the policy objectives been achieved? The extent to which expected / additional benefits were achieved. The extent to which expected / additional costs were incurred.
- Were there any unintended consequences?
- Could the objectives be achieved in another way which involves less onerous regulatory provision to reduce the burden on business.

470. The PIR included:

- Peer-reviewed evidence on findings of studies undertaken across the UK in relation to standardised packaging;
- Reviewing publicly available health metrics that were relevant to the regulations;
- Running a public consultation to gather views from a range of stakeholders; and
- Assessing the economic impacts in terms of cost to businesses and anticipated health benefits.

Monitoring and evaluation

471. The Act provides a number of powers to bring in secondary legislation, which we will be required to evaluate. As appropriate we will form more detailed evaluation plans, including regulations that will benefit from being evaluated together.

472. For example, where regulations have common research approaches, we could gather data from key respondent groups (e.g. smokers, people that vape, public, small business owners) to collect data for multiple regulations at the same time. In practice some of the regulation timelines and implementation periods may differ so it may not always be possible to evaluate them together.

473. Any independent evaluations commissioned for this policy will likely include all aspects of the magenta book methodologies, including process evaluation, outcome/impact evaluation, and economic evaluation. Additional information on how

[222] OHID. 2022. The Standardised Packaging of Tobacco Products Regulations 2015: post-implementation review.

this work could be commissioned is outlined in Paragraph 507. This will aim to assess:

- How well did the intervention meet its objectives?
- Were there unexpected outputs, outcomes or unintended effects?
- Were costs, benefits and delivery times as predicted?
- Was delivery achieved as expected and were any changes needed?
- What can be learnt for future interventions?

474. Given the proposed structure of the regulations, it may not be possible for experimental (randomised designed) to be used. For example, if policies are implemented uniformly across nations and all businesses are in scope of the policies, therefore not allowing a control to be established. Therefore, it would be expected that non-experimental observational and cost-effectiveness designs will be used.

475. The evaluation is likely to use a mixed approach influenced by issues such as timelines and data availability. It is also likely that the evaluation will be a multi-phased study or studies given that it is likely to look at multiple regulations implemented across different time periods. In addition, it may be challenging to isolate the policy impacts from other related policies, some impacts could be considered across a range of policies.

Policy objectives

476. As part of the monitoring and evaluation for restricting the appearance of vapes and heated tobacco products, we will need to assess whether the policy has met the objectives that were set out in the *Policy objectives* section of this IA.

477. The expected impacts, including unintended impacts, outlined in the logic model in Figure 1, where possible, should be monitored and evaluated.

478. We consider the main external factors that may affect the success of the policy to include compliance by retailers and enforcement of the policy.

479. Due to the long-term nature of some of the impacts of the policy, there is likely to be a time-lag between when the policy is implemented and when some of the impacts occur. For example, there are unlikely to be any health impacts within five years, therefore the evaluation is likely to focus on short- and medium-term impacts. As such, it will also be important to use a range of research methods and approaches to ensure that long-term outcomes are being captured alongside short-term outcomes.

Monitoring

480. We have identified data needs and areas to monitor to understand if the policy objectives have been achieved. These can be split into consumer, businesses and enforcement.

Consumers

481. For consumers, we intend to use several metrics to monitor changes in the number of people using vapes and nicotine products, cessation rates, people using vapes and nicotine products to quit smoking, and public attitudes to products. We will do this by measuring:

- Youth and adult vaping prevalence
- Number of vaping quits

- Youth and adult nicotine product prevalence
- Youth and adult smoking prevalence
- Smoking cessation rates
- Proportion of people using vapes and nicotine products to quit smoking
- Vaping cessation rates
- Attitudes and perceptions to vaping

Businesses

- The costs incurred by manufacturers, wholesalers and retailers: We intend to understand whether the costs to business have been significant.
- Number of businesses: We intend to understand whether the number of businesses has changed, for example the number of stores that predominately only sell vapes and nicotine products (vape stores) or the number of vape manufacturers.

Enforcement

- Enforcement / Trading Standards cases on non-compliant products: We intend to monitor this to understand if there has been an increase in the illicit market and to understand if businesses are complying with regulations.

482. We have identified some existing data that can be used to monitor these areas. More robust surveys, such as those with larger sample sizes and greater frequency, are likely to support more robust monitoring and evaluation over time. Monitoring can be done internally using publicly available sources, or alternatively can be commissioned, where additional data could be collected to fill in any gaps.

483. This monitoring can be done both internally, within the department, by using the publicly available sources to look at trends and changes or alternatively can be commissioned as part of the evaluation and additional data, not currently available, can be collected to fill any gaps.

Young people and adult vaping prevalence

484. Smoking Drinking and Drug use among Young People Survey (SDD)[223] shows smoking and vaping prevalence for 11- to 15-year-olds. This survey is currently conducted every two years.

485. The Adolescent Health Study[224] will track young people over 10 years to collect behaviour data on health and wellbeing, including the impact of smoking and vaping. The two-year pilot phase is expected to commence in 2026, which could mean data is available for the monitoring and evaluation of vaping regulatory measures.

486. ONS Adult Smoking Habits in the UK[225] provides smoking prevalence data for adults aged 18 and over, split by age, gender, location socio-economic status and other demographics. This could be used to monitor the impact of increased regulations on vaping to understand if there is either an increase in adults smoking or vaping.

[223] NHS Digital. 2024. Smoking Drinking and Drug Use among Young People in England.
[224] UKRI. 2025. Adolescent Health Study.
[225] ONS. 2023. Adult smoking habits in the UK: 2023.

487. ASH annual survey on young people vaping[226] contains data on vaping prevalence among 11- to 17-year-olds and information on sources of vapes, awareness of vapes and reasons for vaping. This is an annual survey, which could be used to provide monitoring of vaping policies.

488. Health Survey England[227] is a survey that collects data on cigarette smoking and vape use. However, it should be noted that this survey is undergoing a transition and there will be future data collection plans from 2027 onwards[228].

489. Additional data that can also support on the monitoring of young people and adult vaping prevalence includes the Health Survey for Northern Ireland[229], National Survey for Wales[230] and School Health Research Network[231]

Nicotine Product Prevalence

490. The Smoking Toolkit Study (STS)[232] is a survey that collects data on smoking behaviour and smoking cessation. This could monitor vapes being used as smoking cessation tools, use of nicotine products and vaping and smoking prevalence. The STS collects monthly data but also monitors the same cohort of people over time.

Smoking prevalence

491. ONS Adult Smoking Habits in the UK[233] provides smoking prevalence data for adults aged 18 and over, split by age, gender, location socio-economic status and other demographics. This could be used to monitor the impact of increased regulations on vaping, to understand if there is either an increase in adults smoking or vaping.

492. Smoking Drinking and Drug use among Young People Survey (SDD)[234] shows smoking and vaping prevalence for 11- to 15-year-olds. This survey is currently conducted every two years.

Smoking cessation and people using vapes to quit

493. ONS Adult Smoking Habits in the UK also provides data on the number of people quitting smoking.

494. NHS England's Statistics on Local Stop Smoking Services in England[235] is a quarterly report which includes information on quit rates including the type of aids used to quit. This is broken down by age, ethnic group, socioeconomic classification and at local authority level.

Attitudes and perceptions on vaping

495. ASH's Smokefree GB Young Peoples Survey[236] tracks the perceptions of harm of vapes compared to cigarettes over time for young people (age 11-17). The survey also asks about young people's intention to try vapes or cigarettes.

496. It should be noted that some datasets and surveys identified may evolve over time, with the potential for questions to change. Sources of data will be kept under review as plans for monitoring and evaluation are developed.

[226] ASH. 2024. Use of vapes (e-cigarettes) among young people in Great Britain.
[227] NHS Digital. 2024. Health Survey for England.
[228] NHS Digital. 2025. Health Survey for England- Health, social care and lifestyles.
[229] Department of Health. 2025. Health Survey Northern Ireland.
[230] Welsh Government. 2025. National Survey for Wales.
[231] The School Health Research Network.
[232] UCL. 2025. Smoking Toolkit Study.
[233] ONS. 2023. Adult smoking habits in the UK: 2023.
[234] NHS Digital. 2024. Smoking Drinking and Drug Use among Young People in England.
[235] NHS England. Statistics on Local Stop Smoking Services in England.
[236] ASH. 2025. Use of vapes among young people in Great Britain.

Additional data to consider

497. Some gaps in data remain and there may be additional sources of data that can be used in the future to monitor the impact of the policy. We consider additional sources to fill any gaps. For example:

- **Vaping Cessation:** There is currently limited data on vaping cessation. Whilst this can be inferred from changes in prevalence data, there is not specific data available on the number of people who quit and quit attempts. We should seek to fill this gap or further identify sources.
- **Impact on businesses:** To monitor the impact on business we could conduct similar research to that conducted by the Kings Fund Research[237] for tobacco standardised packaging to understand the impact of the regulations on businesses. This research collected qualitative evidence of the impact of standardised packaging of tobacco and related product regulations on small businesses.
- **Vaping Products Duty:** When the Vaping Products Duty is in place (October 2026) it is likely HMRC will obtain data on the volume of vaping products and the number of manufacturers. This data could be used to monitor products being manufactured, imported and packaged for retail. Access to HMRC data for monitoring and evaluation purposes is pending and would be subject to data sharing agreements.
- **Enforcement:** To monitor the enforcement of the policy we would work with Trading Standards, to identify the level of compliance with the regulations. This could be either quantitative or qualitative data.

498. We could also undertake periodic systematic evidence reviews to assess any additional data being published elsewhere, covering any of the identified areas or other emerging areas.

Evaluation

499. Following on from the monitoring, we would seek to answer research questions on the regulations. These have been designed to cover objectives, understanding the impacts and understanding any unintended consequences of the policy:

- Has the policy achieved its objectives? Do the objectives remain appropriate?
- Does the policy remain the best way to achieve the objectives?

500. To further breakdown whether the objectives have been achieved we would want to explore the following questions:

Young people vaping

- Has vaping amongst young people and use of nicotine products declined as a result of the regulations?
- Has there been any substitution effect between products as a result of the regulations?

Smoking Cessation

[237] The Kings Fund. 2021. Qualitative assessment of the impact of the Standardised Packaging of Tobacco and Tobacco and Related Products Regulations on small businesses.

- Have smoking rates changed as a result of the regulations?
- Are fewer adults using vapes or nicotine products as smoking cessation tools?

Unintended consequences

- Have there been any unintended consequences as a result of the policies?

501. Unintended consequences that could arise as a result of the regulations refer to outcomes that are not foreseen or intended by a particular action or policy. The evaluation will seek to explore whether any unintended consequences have occurred. Potential unintended consequences include the market adapting and finding new innovative ways to attract young people to their vaping and nicotine products.

502. Another unintended consequence of the policy could be consumers, in particular young people, being deterred from using vapes and nicotine products but instead switching to other addictive or harmful products such as cigarettes or drugs or taking part in other harmful activities in place of the use of nicotine.

503. Adults could be deterred from using vapes or nicotine products as smoking cessation aids, therefore there is potential for there to be fewer quits and an increase in smoking rate.

504. It could also be considered that there could be an increase in illicit activity as a result of the regulations.

External factors

- Are there any external factors that have influenced the impact of the policy?

505. There are also external factors that could influence the impact of the regulations. For example, compliance. The success of the policy is reliant on compliance from businesses. If non-compliant products are still sold, it is likely young people will still be exposed to brightly coloured packaging which may influence their decision to vape.

506. Other external factors could include market trends, consumer trends and behaviours and interactions with future government policies. For example, we recognise that there will be other vape and other nicotine product policies implemented through secondary legislation as part of the Tobacco and Vapes Act, which will directly or indirectly impact this legislation and the vape and nicotine product market. The interaction with other vape and other nicotine product policies and the impact other policies have on the vape and nicotine product market at the same time as this policy could make it challenging to distinguish the effects of different policies.

Economic and other impacts

- What were the economic impacts of the policy? (this could cover both labour market impacts as well as household impacts such as expenditure on vapes and nicotine products).
- What has been the cost to business of implementing the policy?
- Has there been any environmental impacts of the policy?

507. The evaluation will be likely to involve a mix of internal / DHSC resources, commissioned teams via the NIHR, and locally commissioned work. These different

sources allow for work to be undertaken flexibly at different times and at appropriate scales.

508. Given the proposed structure of the regulations, it may not be possible for experimental or randomised designs to be used. For example, if policies are implemented uniformly across nations and all businesses are in scope of the policies, therefore not allowing a control to be established. Therefore, it would be expected that non-experimental observational and cost-effectiveness designs will be used. The evaluation is likely to use a mixed approach influenced by issues such as timelines and data availability. It is also likely that the evaluation will be a multi-phased study or studies given that it is likely to look at multiple regulations implemented across different time periods.

How DHSC will respond to adverse effects and unintended consequences

509. DHSC will engage with industry association bodies, Trading Standards and public health stakeholders to ensure we mitigate unintended consequences with effective communication and respond to any issues efficiently. DHSC will work closely with local authorities and the regional network to ensure effects are closely monitored in regions.

Annex A: International Examples

Table 66: International Examples

Country	Description
New Zealand	Vapes: No promotional elements that might appeal to youth (e.g., cartoons, bright graphics), flavour naming restrictions, no loyalty rewards or promotional inserts, not visible from outside stores or on websites, and clearly visible nicotine warning label[238]. Nicotine products: No packaging restrictions yet, calls for regulatory updates as part of its broader Smokefree strategy[239].
Canada	Vapes: Nicotine warning label covering at least 35% of the main display panel, standardised nicotine content display (mg/mL), tamper-evident packaging, ingredient list, no misleading claims, no youth-appealing designs, language, or flavour names (e.g., cartoons) [240][241]. Nicotine products: No packaging restrictions yet, Trading Standards and health advocates warn that these are being marketed to youth and calls for urgent regulatory action[242].
Australia	Vape: Plain, pharmaceutical-style packaging for therapeutic vapes (only available from pharmacies), can only include tobacco and mint/menthol flavours[243]. Nicotine products: Prohibits sale of nicotine products (e.g., pouches), except for medicinal purposes.
Israel	Vapes: All vape products must use Pantone 448C with no logos, images or promotional elements, with a nicotine warning label and no flavour imagery[244]. Nicotine products: No specific packaging restrictions, Israeli Ministry of Health considering reforms.
Netherlands	Vapes: Pantone 448C coloured packaging, no logos, implemented a flavour ban[245-246]. Nicotine products: Nicotine pouches banned from sale; no packaging permitted.

[238] New Zealand Ministry of Health. About the Smokefree Act
[239] Ball and others. 2024.Legalising smokeless tobacco and/ or oral nicotine products: some implications for population health
[240] Government of Canada. Industry Guide to Vaping Products Subject to the Canada Consumer Product Safety Act
[241] Government of Canada. Regulating tobacco and vaping products: Vaping products regulations
[242] Talking retail. 2025. CTSI warns public about nicotine pouches being sold to children
[243] Generation Vape. 2025. Vaping and young people: assessing early impacts of Australia's comprehensive approach to vaping product control
[244] Tobacco Control Laws. Legislation by Country- Israel
[245] Mp Medic Pro. Vape laws in The Netherlands - 2024
[246] European Commission. 2025. TRIS- European Commission

Finland	Vapes: Pantone 448 coloured packaging, no logos, implemented a flavour ban[247]. Plain packaging for refill containers and packaging must display a health warning. Nicotine products: implemented a flavour ban, health warnings required[248].
Denmark	Vapes: Pantone 448 coloured packaging, no logos, implemented a flavour ban[249]. Nicotine products: Pantone 448C coloured packaging, implemented a flavour ban[250].
Iceland	Vapes: Must display a health warning, no requirement to have plain packaging. Packaging must not appeal to minors. Nicotine products: Must provide a health warning, plain packaging not required but packaging may not appeal to minors.
Ireland	Proposed packaging restrictions on nicotine inhaling products or vapes, including prohibiting all flavour descriptions, restricting colours and imagery on vapes[251].

[247] Tobacco Journal. Finland introduces plain packaging.
[248] Vejpkollen.se. 2024. Finland regulations nicotine pouches- banning flavours and online
[249] Tobacco control laws. 2023. Legislation by Country / Jurisdiction. Denmark.
[250] Danish Safety Technology Authority. New Danish regulation on nicotine and tobacco products from 1 July 2025
[251] Department for Health. 2024. Minister for Health secures Government approval to introduce greater restrictions on vapes