

RESOURCE ANALYSIS FOR VAPE ENFORCEMENT IN ENGLAND

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Vape Enforcement in England

A Resource Needs Analysis

The Association of Convenience Stores (ACS) have commissioned this rapid desktop analysis of the resource needs for full enforcement of vape (e-cigarette) non-compliance in England – principally by Trading Standards Officers. The project has been completed by Tony Allen & Rhianne Kiddle, consultants and subject matter experts in the field. Tony is a Chartered Trading Standards Practitioner and the chair of the Expert Panel on Age Restrictions (facilitated by the Office for Product Safety and Standards).

There is no right or single way to develop a model, but this report follows a fairly normal distribution weighted on population estimates, estimated illicit vape seizure levels and the presence of ports and borders within a local boundary. In addition, it establishes a distribution of resources across national, regional and local interventions. It takes into account the costs of professional officers, support functions, leadership, intelligence analysts and legal officers. The expenses associated with detection dogs, seizures, storage, disposal, training and continuous professional development and other ancillary costs are assessed.

A spreadsheet model has been developed to enable ACS and their stakeholders to make changes to parameters and certain assumptions, which in turn will provide a recalculation of the total cost of a five year project. A full breakdown of costs by each local trading standards service, each regional group and national trading standards is shown, with full-time equivalent establishment numbers and individual budget lines.

“The resource needs for Trading Standards in England to fully enforce vape legislation is £140.4m over five years, starting at £30.7m in year one.”

Introduction

Summary of the Project Objectives

Estimate the costs of enforcing trading standards regarding illegal vapes entering the UK. Assess the volume of illegal vapes likely to penetrate borders and propose resource allocation strategies for enforcement. Provide insights on costs related to local, inland, port and border enforcement. Detail expenditure plans covering primary enforcement, data management systems, and legal actions against offenders. Offer projections of initial and ongoing expenses. Consider potential long-term costs based on success rates within a three to five-year timeframe. Deliver a concise summary report with key data, including a headline figure and relevant sub-figures in appendices and a separate data model.

Devolved Administrations

A quick note about the devolved administrations of Scotland, Wales and Northern Ireland. This report only covers the metrics for England based on an analysis of resource needs for English Local Authorities, Regional Groups and National Trading Standards. Vape Regulations and enforcement are devolved matters for consideration by the Scottish & Welsh Governments and the Northern Ireland Executive. Although the challenges faced are similar, the rules, regulations and parameters differ. As a simple guide, the Barnett Formula is a mechanism used by the Treasury in the United Kingdom to automatically adjust the amounts of public expenditure allocated to Northern Ireland, Scotland and Wales. In relation to the headline figures in this report that would amount to an allocation of:

- £14,470,000 for Scotland
- £8,300,000 for Wales
- £5,170,000 for Northern Ireland

This would bring the total cost of the programme for the United Kingdom as a whole to approximately **£168,340,000**.

Contents

Vape Enforcement in England	2
A Resource Needs Analysis	2
Introduction	3
Summary of the Project Objectives	3
Devolved Administrations.....	3
Summary Report.....	5
Overall Analysis	5
Trading Standards Structure	6
Ports and Borders	7
Professional Officers	7
Detection Dogs	8
Estimate of Illegal Vapes Volume.....	9
Vape Seizures by Trading Standards (2023)	9
Profiling Likely Illicit Seizure Rates (2024 – 2029)	10
Storage and Disposal of Seized Vapes	10
Enforcement Effect	11
Proceeds of Criminal Enterprise	11
Inland Enforcement	12
Modelling Assumptions	12
Pay.....	12
Acceleration Factor	13
Summary and Recommendations	14
Annex 1 – Structure of Trading Standards in England	15
Annex 2 – Breakdown of Project Budget by Region	16
Annex 3 – Breakdown of Project Budget by Expenditure Type	17
Annex 4 – Resource Allocation by Full Time Equivalent (FTE)	18
Annex 5 – Analysis of Market Seizures of Illicit Vape Products	19

Summary Report

Overall Analysis

The trading standards service in England would need a significant injection of resources over the next five years to cope with the influx of illegal vapes to the market place and address matters, such as under age sales of the product. In October 2023, the UK government committed to delivering £30 million per year for enforcement agencies in their policy paper; [Stopping the start: our new plan to create a smokefree generation](#).

Our current understanding of the allocation of this funding is £20 million will be provided annually to delivering the new illicit tobacco strategy, leaving £10 million for trading standards service to enforce new vaping restrictions and the generational tobacco ban. Our analysis suggests the trading standards service in England would need three times this amount of funding to enforce just the current vaping regulations.

	Year One	Year Two	Year Three	Year Four	Year Five
ANNUAL BUDGET	£30,703,921	£36,272,410	£29,349,361	£22,981,408	£21,098,634

It is worth noting that this would amount to an initial **28.4%** increase in net budgets for trading standards (taking into account current local authority and National Trading Standards budgets overall standing presently at about £108m). On that basis it would likely be one of the most significant expansions of trading standards capability for at least a generation or more.

The vape industry in the UK is [estimated](#) at £1.7bn in 2023 and is rapidly growing. Adjusting that for England only would be around £1.4bn/year – so the net public expenditure relates to about 2% of the market or around 10% of the taxation revenues from the sale of these products.

“10% of direct taxation from vape supplies”

Trading Standards Structure

There are around 143 local Trading Standards Services in England; with 9 regional coordination groups all supported by National Trading Standards operated by the Association of Chief Trading Standards Officers. Trading Standards Regions in England are structured as follows:

- Central England Trading Standards Authorities (CeNTSA)
- North East Trading Standards Authorities (NETSA)
- Trading Standards East Midlands (TSEM)
- Trading Standards North West (TSNW)
- Trading Standards South East (TSSE)*
- East of England Trading Standards Association (EETSA)*
- London Trading Standards Authorities (LTS)*
- Trading Standards South West (TSSW)
- Yorkshire and Humber Trading Standards Group (YAHTSG)

* TSSE, EETSA & LTS form a single tri-region hub for regional intelligence operations.

National Trading Standards	Regional Coordination Groups	Local Trading Standards
<ul style="list-style-type: none">• Developing national policies and guidelines for consumer protection and trading standards enforcement.• Coordinating and overseeing major national enforcement initiatives targeting specific issues such as counterfeit goods, product safety, and consumer scams, including at ports and borders.• Providing expert advice, training, and support to regional and local Trading Standards Services.• Conducting research and analysis to identify emerging threats to consumer rights and market integrity.• Representing the interests of consumers and businesses at the national and international levels through advocacy and collaboration with government agencies and industry bodies.	<ul style="list-style-type: none">• Nine Regional Coordination Groups in England, based around the Government Regions• Facilitating collaboration, intelligence analysis and information sharing among local Trading Standards Services within a specific region.• Coordinating regional enforcement campaigns and initiatives targeting cross-border trading standards issues, scams and strategic supply chain interventions.• Providing specialist expertise and support in complex investigations and legal proceedings.• Conducting joint operations with other enforcement agencies such as the police, customs, and regulatory authorities.• Providing support with financial investigations and the recovery of the proceeds of crime	<ul style="list-style-type: none">• Enforcing a wide range of consumer protection laws and regulations within the jurisdiction of the local authority, including Vape laws and restrictions.• Conducting inspections, investigations, and enforcement actions to ensure compliance with trading standards legislation including seizure of illegal goods.• Providing advice, guidance, and support to businesses and consumers on their rights and responsibilities.• Licensing and regulating businesses operating in regulated sectors such as food safety, weights and measures, and age-restricted products, such as Vapes.• Collaborating with other local agencies and stakeholders to address local trading standards issues and promote fair trading practices.

The allocation of resources for the model is based upon:

- 5% of activity being at a national level (excluding ports & borders activity) and the procurement of detection dog services being managed at a national level, giving an overall year one budget for NTS of **£2,545,615**.
- 25% of activity being at a regional level (excluding ports & borders activity) and including strategic interventions to disrupt inland manufacture, wholesale and distribution of illicit vape products; bolstering intelligence capabilities; supporting authorized financial investigation to recover the proceeds of crime and providing regional coordination, giving an overall year one budget for the nine regions of England of **£8,234,348**.
- 70% of activity being at local level, including 14 local authorities having been identified as having strategic ports of entry and provided with resource weighting according to the goods throughput of the port. This budget would support illicit vape operations, age restricted sales enforcement and local intelligence-led enforcement and recovery of the proceeds of crime. The year one budget for 143 local trading standards authorities is **£21,228,958**.

Ports and Borders

Taking action to prevent illicit vapes from crossing our borders is an important aspect of an overall strategy, although it should be noted that there are considerable inland manufacturing, bottling and processing facilities. We have identified 14 strategic ports and provided appropriate weighting to the local authorities covering those ports including both sea ports and airports (particularly with freight/parcel hubs). Particular attention has been paid to the distribution of funds to Suffolk County Council (covering the Port of Felixstowe); Kent County Council (covering the port of Dover); London Borough of Hillingdon (covering Heathrow Airport); Thurrock Council (covering the London Gateway) and the City of Coventry Council (covering international air freight mail at Coventry Airport). We have also allocated weighting to nine other authorities with significant ports and borders with goods throughput, including Hartlepool, Newcastle upon Tyne, North Tyneside, Stockton-on-Tees, Liverpool, Manchester, Portsmouth, Southampton and Kingston upon Hull.

Professional Officers

The model indicates a need for 438.2 FTE additional professional officers, covering programme leadership, coordination, enforcement, financial recovery, intelligence and legal requirements. The cost allocations are based on the current (2023) LGA Grading Structure and have been adjusted for inflation throughout. The full salary costs, including pensions, National Insurance and local authority internal recharges have been recognized as **£22,996,651** in year one.

We have also included a budget of **£156,653** for training and professional development (around £357 per FTE officer) recognizing the key feedback we received from our research for this project – that finding suitably trained and qualified officers was likely to be the biggest challenge.

We have allocated **£557,389** for ancillary expenses, such as vehicles, equipment, evidence bags, etc; and we have allocated **£1,378,835** for analysis and expert fees. We have also separately accounted for storage and disposal of seized/test purchased vapes – see further below.

Detection Dogs

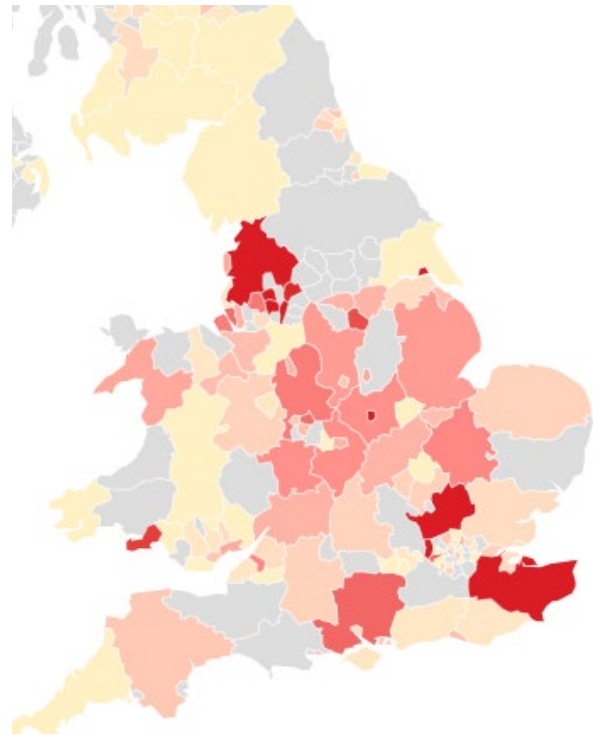
We have provided an allocation for central procurement of detection dogs, which we would anticipate being through a framework public contract. We have provided the budget for detection dogs for ports and borders through National Trading Standards (**£1,305,000** in year one) and for local authorities and regional strategic interventions through each regional group (**£1.449,000** in year one). It is worth noting that (based on one dog have 200 operational days/year (allowing for rest days), approximately 30 detection dogs would be required to service the level of enforcement activity and seizures modelled by the programme.

The total allocation for detection dogs is projected at **£14,621,360** over the five year duration of the project. We have modelled this on one detection dog (including handler) costing £750 per day, which may be on the low side at today's costs, but we take into account the cost-benefit of investment in a central procurement contract for that magnitude of value over a fixed period of time.

Estimate of Illegal Vapes Volume

Vape Seizures by Trading Standards (2023)

An [analysis](#) carried out from 105 responses (around 74%) of Trading Standards Authorities in England carried out by Vape Club identified that since 2020, **4.18 million illegal vapes** have been seized, with 1.57 million seized in 2023 alone, indicating a significant problem with illegal vape sales in the UK. The seizure rate equates to approximately three illegal vapes being removed from circulation every minute, highlighting the scale of the issue. The amount of illegal vape devices seized increased by 19 times between 2020 and 2023, underscoring the growing prevalence of illegal vaping activity. Airports and seaports serve as major hubs for illegal vape imports, with regions such as Kent, Hillingdon, and Manchester accounting for 42% of the total seizures in 2023. London and Greater Manchester are particularly targeted by illegal vape retailers, with these regions contributing 40% of the total seizures in 2023. In London, where 787 sellers were identified, only three faced fines or penalties, indicating a low enforcement rate of 0.38% in the boroughs that responded to the analysis.



[Illegal vape seizures by UK local authority, 2023 | Created with Datawrapper](#)

Further analysis of this data shows that between 2022-2023, Trading Standards Officers in England were seizing around 36.6 illegal vapes per 1,000 population. For typical non-port/border authorities, this sits at around 27.1 illegal vapes per 1,000 population. Extrapolation of these figures for England as a whole would tend to indicate that Trading Standards Officers will have seized a little over 1.5m vapes in local distribution and approximately 0.5m at ports and borders in 2022-2023.

Of course, this only covers the illegal vapes discovered by Trading Standards Officers rather than the overall number in the market as a whole. CTSI [estimate](#) that 1 in 3 vape products are illegal (this may include having the wrong health warning, the wrong tank size, a higher concentration of nicotine, containing CBD, incorrect labelling).

Profiling Likely Illicit Seizure Rates (2024 – 2029)

We have used the 2023 data as a baseline and then applied an enforcement effect coefficient to generate a model of volumes of seizures. The recruitment and deployment of more than 400 officers to focus on this task will have an initial impact, but the effect of that level of enforcement is likely to drive eventual compliance – if not complete compliance.

As such we have profiled the level of illicit vape seizures as 2.1m in year one, rising to nearly 7m in year two before dropping down to 4.6m, 4.5m and 2.3m respectively. It is widely accepted that the current level of enforcement (despite removing more than 1.5m illicit vapes from circulation) is merely scratching the surface of the problem.

	Year One	Year Two	Year Three	Year Four	Year Five
TOTALS	2068253	6963958	4642639	3481979	2321319

Storage and Disposal of Seized Vapes

Our modelling recognizes that there is a significant challenge of storage and disposal of seized and illegal vape products. They count as hazardous waste. Our research has indicated that storage can cost upwards of £40 per sq. ft per year (industry averages are £27.19 per sq. ft, Self-Storage Association figures) due to the additional security, fire safety and control requirements. In our modelling, we have worked on an assumption that one sq. ft can comfortably accommodate 100 vapes and have applied a multiplier of £0.633/per seized vape which can be adjusted on the parameters tab. This provides an annual storage budget of **£1,309,204** rising to £2,931,195 and £3,145,130 before dropping back as lower volumes are seized to £2,436,225 and £1,675,735 in the final two years.

The fees for disposal are very difficult to identify. We have seen references to costs at £1/vape; but others suggesting a figure around £0.60 - £0.70/vape are appropriate when being disposed of at scale. It is worth noting that we have identified a need for **£14.5 million** over the five year programme just to cover the cost of disposing of seized illicit vape products. The precious metals in vape sticks make them suitable for materials reprocessing, but they also present significant fire and biohazards. In our modelling, we have applied a multiplier of £0.75/per vape which can be adjusted on the parameters tab. This provides an annual disposal budget of £1,551,189 in year one rising to £4,425,780 then £3,688,318, £2,843,616 and £1,947,329.

The total budget we have allocated for storage and disposal of these illegal products is some **£26 million** over five years. It accounts for one fifth of the whole budget for the project.

Enforcement Effect

The project at this scale should lead to a substantial shift in market dynamics. The costs of non-compliance would become prohibitive, removing **20 million** illicit vapes from the market at a likely retail value of £160 - £210 million. Whilst that remains a fraction of the estimated £560 million annual value of illicit vapes in circulation (based on it being one third of the market as set out by CTSI, UKVIA and others¹), such a high level of enforcement activity will have an impact.

That impact could be to push the practice underground or through ever more complex and ingenious methods of concealment or circumvention of controls. However, we have modelled on an enforcement coefficient to show an initial surge in activity, but tapering this off over the five-year modelling.

Proceeds of Criminal Enterprise

We have also modelled for limited recoveries of the proceeds of criminal enterprise. This is notoriously difficult to achieve and our modelling is based on only being able to recover 10% of the nominal criminal proceeds based on each seized vape indicating around £30 in illicit gain by the enterprise. We do not recommend making this a target or relying on it too much, but there is an opportunity to recover around 17% of the cost of the project from fines, proceeds of crime or recovery of legal fees. We have included this in the modelling, but not for year one. It is unlikely that the recovered amounts would exceed the cost of the lawyers, authorized financial investigators and enforcement personnel needed to progress the claim.

¹ See numerous reports including: Vaping in England [Report](#); [Use and sale of illegal vapes - House of Commons Library \(parliament.uk\)](#); [Youth vaping in England - House of Commons Library \(parliament.uk\)](#) and CEBR [Report](#) on Economic Impact of Vaping

Inland Enforcement

Tackling illicit vape products in the UK poses multifaceted challenges across various stages of the supply chain, from ports and borders to inland distribution. At ports and borders, the influx of illegal vape imports requires vigilant enforcement to intercept shipments. Inland, clandestine manufacturing and bottling facilities evade regulatory oversight, complicating detection and enforcement efforts. Additionally, sophisticated distribution networks exploit gaps in enforcement, facilitating the illicit market's proliferation. Strategic interventions must prioritize collaboration among enforcement agencies, industry stakeholders, and international partners to enhance intelligence-sharing, strengthen regulatory frameworks, and deploy targeted enforcement actions. Addressing these challenges demands a comprehensive approach encompassing regulatory measures, enforcement strategies, and international cooperation to disrupt illicit vape supply chains and safeguard public health.

Modelling Assumptions

Our report sets out a structured approach to the deployment of resources for this project. The modelling assumptions are based primarily on three key influencing factors:

- Distribution by population estimates (2021 census data)
- Profile of seizures extrapolated and normalized through the FoI data set on 2023 seizures (which had a 70% response rate so should be statistically sound rationale)
- Profile of strategic ports and borders (air and sea) and their presence or otherwise in local authority boundaries.

In addition, to our core assumptions (which are built into the modelling tool provided) we have also provided the following adjustable inputs which can be altered on the parameters tab:

Pay

We have used the Grade Midpoints as per the LGA pay and grading structure 2023 (exc. Pensions, Emp NI, Management and Corporate Recharges - which are accounted for with the multiplier on the parameters tab). For the purposes of this modelling we have assumed pay at:

- National Programme Director Grade G008 (Midpoint £89,994)
- Regional Lead Grade G006 (Midpoint £62,379)
- Principal Officer/Legal Officer/Programme Coordinator Grade G005 (Midpoint £49,498)

Summary and Recommendations

This report presents a comprehensive examination of the resource requirements for enforcing vape (e-cigarette) compliance in England, primarily by Trading Standards Officers. The analysis spans various aspects, including estimating enforcement costs, assessing the volume of illegal vapes, and proposing resource allocation strategies for enforcement activities.

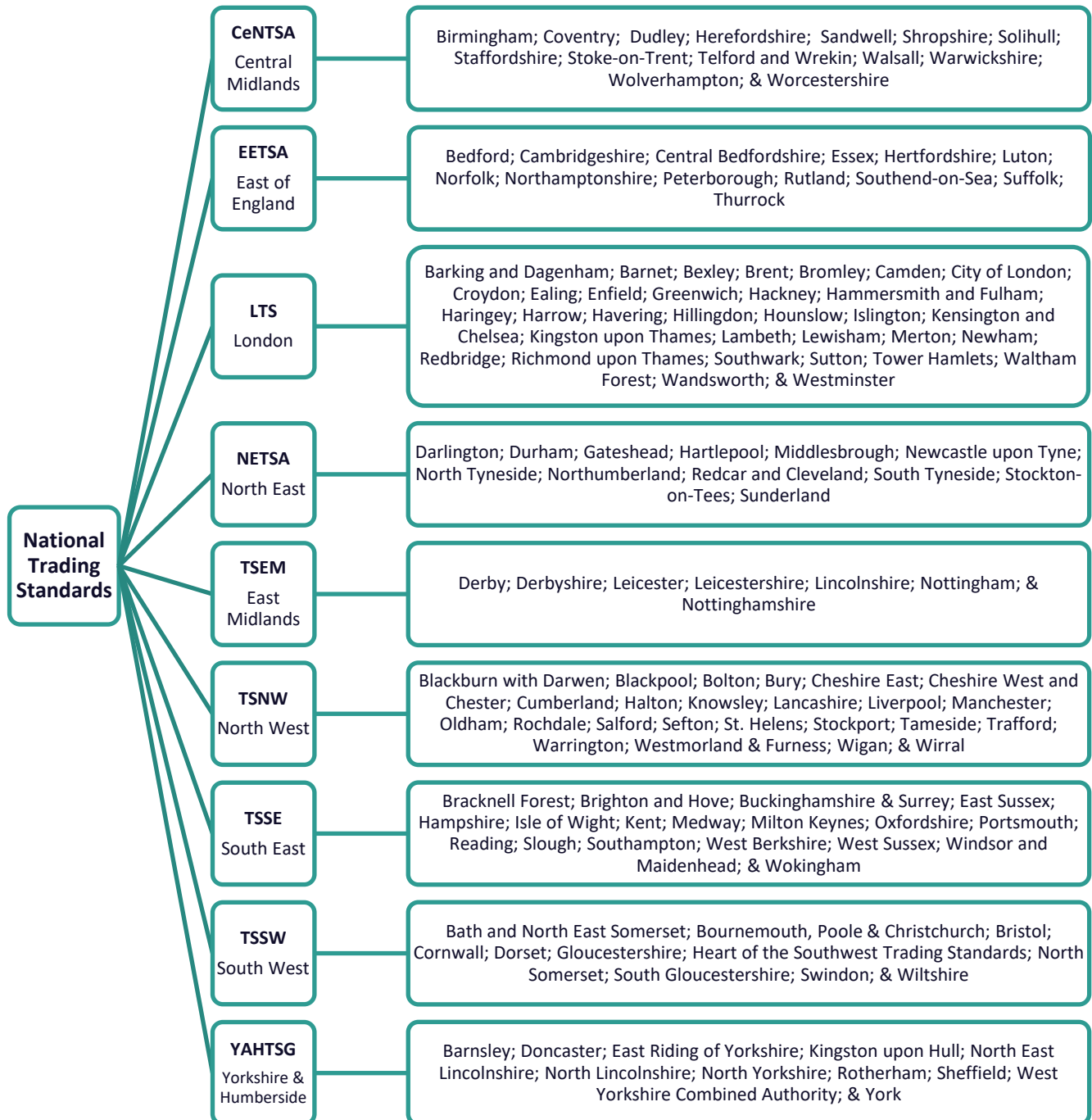
The analysis reveals a significant need for increased resources over the next five years to address the influx of illegal vape products and combat issues like underage sales. An initial 28.4% increase in net budgets for trading standards is proposed, representing one of the most substantial expansions in capability in recent years. The estimated annual budget required for trading standards enforcement ranges from **£21 million to £36 million** over the five-year period.

England comprises 143 local Trading Standards Services, coordinated by nine regional groups supported by National Trading Standards. Resource allocation is distributed across national, regional, and local levels, with specific attention to areas with strategic ports and borders.

Since 2020, approximately 4.18 million illegal vapes have been seized in the UK, with 1.57 million seized in 2023 alone. Analysis indicates a surge in seizure rates, with significant concentrations in regions like Kent, Hillingdon, and Manchester. Despite increased enforcement focus, only a fraction of illegal vape sellers face fines or penalties, highlighting a need for more effective enforcement measures.

The report employs population estimates, seizure rates, and regional structures to develop resource allocation models. Recommendations include enhancing collaboration among enforcement agencies, strengthening regulatory frameworks, and deploying targeted enforcement actions to disrupt illicit vape supply chains.

Annex 1 – Structure of Trading Standards in England



1. This list is regularly affected by local government reorganization, including in Cumbria, Northamptonshire recently, this report uses the latest available figures for the structure, which may differ from the current structure.
2. There are examples of local cross-border working; but three examples of significant combined trading standards services; the Heart of the South West (Devon, Plymouth, Somerset and Torbay); West Yorkshire Combined Authority (Bradford, Calderdale, Kirklees, Leeds and Wakefield) and Buckinghamshire & Surrey.

Annex 2 – Breakdown of Project Budget by Region

	Year One	Year Two	Year Three	Year Four	Year Five
Central (CeNTSA)	£2,742,073	£3,181,286	£2,515,234	£1,912,682	£1,713,016
East of England (EETSA)	£2,963,238	£4,089,179	£3,133,412	£2,311,692	£2,030,613
London (LTS)	£6,232,237	£5,601,527	£4,606,297	£3,728,776	£3,688,002
North East (NETSA)	£1,893,089	£1,836,579	£1,601,626	£1,355,141	£1,409,736
East Midlands (TSEM)	£1,501,739	£1,866,043	£1,459,822	£1,088,022	£987,357
North West (TSNW)	£4,179,774	£4,136,433	£3,367,314	£2,666,361	£2,579,722
South East (TSSE)	£4,246,543	£5,837,360	£4,534,205	£3,370,414	£2,917,150
South West (TSSW)	£2,212,532	£2,940,711	£2,245,272	£1,640,954	£1,434,103
Yorks & Humber (YAHTSG)	£2,187,083	£2,965,945	£2,307,639	£1,687,570	£1,476,159
National Programme Management	£2,545,615	£3,817,346	£3,578,541	£3,219,796	£2,862,775

Annex 3 – Breakdown of Project Budget by Expenditure Type

	Year One	Year Two	Year Three	Year Four	Year Five
Total Gross Pay	£15,665,293	£16,742,317	£14,237,359	£13,400,387	£12,368,373
Total Pay (Inc. On Costs)	£22,996,651	£24,577,721	£20,900,443	£19,671,768	£18,156,772
Seizure Storage Costs	£1,309,204	£2,931,195	£3,145,130	£2,436,225	£1,675,735
Disposal Costs	£1,551,189	£4,425,780	£3,688,318	£2,843,616	£1,947,329
Training Costs	£156,653	£167,423	£142,374	£184,988	£123,684
Analysts Costs	£1,378,835	£4,642,639	£3,095,092	£2,321,319	£1,547,546
Project Ancillary Costs	£557,389	£679,812	£579,819	£534,250	£480,943
Detection Dog Costs	£2,754,000	£2,836,620	£2,921,719	£3,009,370	£3,099,651
Legal Costs Recovery	£0	-£3,071,991	-£2,544,290	-£4,581,137	-£2,064,161
Proceeds of Crime Recovery	£0	-£2,149,370	-£2,579,244	-£3,438,992	-£3,868,865
TOTALS	£30,703,921	£35,039,829	£29,349,361	£22,981,408	£21,098,634

Annex 4 – Resource Allocation by Full Time Equivalent (FTE)

	Year One	Year Two	Year Three	Year Four	Year Five
Programme Director	1.0	1	1	1	1
Regional Lead & Deputy National Lead	11.0	11	11	11	11
Principal Officer	34.0	29.3	18.8	17.2	15.7
Regional Programme Coordinator	8.4	6.8	3.4	4.3	2.8
Trading Standards Officers	172.2	183.1	176.1	145.6	106.2
Intelligence/ Authorised Financial Inv	82.2	88.1	53.5	45.3	36.6
Trading Standards Assistants	112.4	127.7	101.8	94.5	88.4
Legal Officers	17.0	18.3	18.8	28.7	41.8
TOTALS	438.2	465.3	384.4	347.7	303.6

Annex 5 – Analysis of Market Seizures of Illicit Vape Products

	Year One	Year Two	Year Three	Year Four	Year Five
Central (CeNTSA)	177496	582204	388136	291102	194068
East of England (EETSA)	213926	859387	572925	429694	286462
London (LTS)	262220	611309	407540	305655	203770
North East (NETSA)	78900	166858	111239	83429	55619
East Midlands (TSEM)	120727	400750	267167	200375	133583
North West (TSNW)	221259	592164	394776	296082	197388
South East (TSSE)	277082	1142610	761740	571305	380870
South West (TSSW)	170232	644432	429621	322216	214811
Yorks & Humber (YAHTSG)	163401	674622	449748	337311	224874
Principal Ports & Borders	383010	1289622	859748	644811	429874
TOTALS	2068253	6963958	4642639	3481979	2321319