PART 2 – REGULATORY IMPACT ASSESSMENT

Preferred option summary

A summary of the costs and benefits for the preferred proposal is set out below. Calculations have been rounded to the nearest £100, some totals may not sum due to this rounding.

Prevention of excessive consumption of high-caffeine energy drinks by children, to mitigate the potential negative effects on children's health		
Preferred option: Option 2 - Statutory regulation banning under-16 sales of high-caffeine energy drinks		
Stage: Consultation	**Appraisal period:** 2027 – 2051 (25 years)	**Price base year:** 2025
Total Costs **Total: £100.5m** **Present value: £65.6m**	**Total Benefits** **Total: £66.6m plus health benefits** **Present value: £523.5m**	**Net Present Value (NPV):** **£457.8m**

Administrative cost

Costs:

Trading Standards services in the 22 Welsh local authorities will need to become familiar with the restriction and enforce it. Officer time is valued at £89.69 an hour based on a survey by the Association of Chief Trading Standard officers referenced in the DHSC Impact Assessment for England[1] of £86.56 in 2024 prices, updated to 2025 prices. It includes employment costs and service overheads and is used as an estimate of the Welsh cost.

Transitional - familiarisation

One officer in each local authority is assumed to spend one working day of seven hours becoming familiar with the requirements.

22 local authorities × 1 officer × 7 hours × £89.69 = £13,800

[1] Department of Health and Social Care (June 2025) Impact Assessment: Banning the sale of high-caffeine energy drinks to children under the age of 16 years

Recurrent - enforcement

The Association of Chief Trading Standards Officers report 570 test purchases a year across England and Wales for comparator products (fireworks, knives, games). Based on the DHSC impact assessment we assume that the restriction adds one-third to this activity as agreed with the Association. Wales is allocated its share of the England and Wales population, approximately 5.12%.

570 × 1/3 = 190 × 5.12% = 9.73 =10 additional Welsh test purchases a year

Working back from 10 test purchases, and the DHSC assumption that 10% of reports lead to a test purchase, gives 100 reports of non-compliance a year. Of these reports, 70% lead to informal action, and 20% of test purchases fail. Failed tests lead to a warning in 20% of cases, a fixed penalty in 60%, and prosecution in 20%.

Reports: 100 per year

Informal actions: 100 × 70% = 70 a year

Failed tests: 10 × 20% = 2 a year, giving approximately 0.4 warnings, 1.2 fixed penalties and 0.4 prosecutions.

Each activity is costed by multiplying the number of cases by officer time and the hourly cost, then adding any other cost per case. The DHSC assumed legal and court costs of £5,000 and £3,000 are uprated to £5,180.56 and £3,108.34 respectively in 2025 prices.

Informal action: 70 × 2 hours × £89.69 = £12,600

Test purchases: 10 × 2 officers × 3.5 hours × £89.69 = £6,300

Warnings: 0.4 × 2 hours × £89.69 = £100

Fixed penalties: 1.2 × 4 hours × £89.69 = £400

Local authority prosecutions: 0.4 × (14 hours × £89.69 + £5,180.56) = £2,600

HMCTS court costs: 0.4 × £3,108.34 = £1,200

Total enforcement = £23,200 a year

These case numbers are modelled estimates based on Wales population share, not observed Welsh energy-drink enforcement activity. Fixed penalty receipts are transfers and are not counted as a cost.

Transitional: £0.01m	**Recurrent: £0.02m pa**	**Total: £0.59m**	**PV: £0.41m**
Cost-savings: *NA*			
Transitional: £0	**Recurrent: £0**	**Total: £0**	**PV: £0**
Net administrative cost: £0.59m			

Compliance Costs

Transitional Costs - Familiarisation

Many retailers already apply a voluntary restriction on sales of energy drinks to under-16s. Using the same assumption as the DHSC Impact Assessment, businesses with a voluntary restriction are assumed to incur half the normal preparation cost. The DHSC assumptions are that 79% of retail businesses and 84% of stores are already covered based on ONS data. Applying the DHSC method to Welsh store and business counts gives 79.0% of businesses and 83.8% of stores, in effect the same as England (Annex A, Table A9).

On this basis in Wales, the 79% of businesses operating a voluntary ban will incur half the cost versus if they were starting a ban from scratch. The same is assumed for stores and staff (84%).

(79% × half cost) + (21% × full cost) = 60.5% of the full preparation cost.

(84% × half cost) + (16% × full cost) = 58% of the full preparation cost.

The resulting business-level cost factor is 60.5% and the store and staff-level factor is 58%. All transitional costs fall in 2027.

Retail

Retailers will need to prepare guidance and shelf labels, train staff and update electronic point of sale (EPOS) systems. Seventy-nine per cent of retail businesses and staff are assumed to use EPOS based on the Association of Convenience Stores Local Shop Report (2025). Staff with an EPOS prompt require 30 minutes of training and those without require one hour.

Head-office tasks use the DHSC business-level hourly cost, updated to £27.07 in 2025 prices. Store staff are valued at £14.53 an hour and delivery drivers at £14.88 based on Welsh ASHE 2025 wages plus a 19% allowance for non-wage employment costs based on DHSC. Staff numbers are taken from the Business Register and Employment Survey for Wales (2024, the latest available). Numbers may not add up due to rounding.

Guidance: 2,045 × 2 hours × £27.07 × 60.5% = £67,000

Guidance, online-only retailers: assumed no cost for Wales as done separately at UK level

Creating shelf labels: 2,045 × 2 hours × £27.07 × 60.5% = £67,000

Installing shelf labels: 3,503 × 1 hour × £14.53 × 58% = £29,600

Staff training with EPOS: 60,975 staff × 79% × 0.5 hours × £14.53 × 58% = £203,400

Staff training without EPOS: 60,975 × 21% × 1 hour × £14.53 × 58% = £108,100

Grocery delivery drivers: 132,000 UK drivers × 4.57% × 32% × 0.5 hours × £14.88 = £14,400 (based on Wales population share of UK as drivers will be cross border)

EPOS updates: 2,045 × 79% × (10 / 60) hours × £27.07 × 60.5% = £4,400

Total retail transition costs £493,800.

Small and micro businesses: the average one-off retail cost is about £100 per micro business and £253 per small business. Micro firms are 87% of Welsh-registered retail businesses and carry 36% of the retail one-off cost.

Online

No additional Welsh cost is included for online knowledge sharing or IT system changes. The assessment assumes that, by the time the Welsh restriction takes effect, retailers serving Wales will have completed the necessary systems work for England and that the same systems will cover Welsh sales. This depends on sufficiently aligned requirements. Additional costs would need to be assessed if Welsh requirements differ or retailers need separate work for Wales.

Online knowledge sharing: £0

Online IT system changes: £0

Total retail and online transition: £493,800

Out of home

Restaurants, cafés, takeaways, pubs, sports facilities and visitor attractions selling energy drinks are assumed to require guidance, staff training, EPOS updates and a sign. We assume each business requires two manager hours for guidance and one sign costing approximately £4.14. Customer-facing staff require 30 minutes of training where EPOS is used and one hour otherwise. Each EPOS business requires 10 minutes to update its system.

Hourly employment costs are £16.59 for restaurant and catering managers, £18.10 for publicans, £14.53 for waiting and other customer-facing staff, and £14.55 for bar staff. These use Welsh ASHE rates, except for publicans, where a UK rate is used because a suitable Welsh figure is unavailable. Wales has slightly more out-of-home local units than its population share would suggest: 5.7% of the England count against a 5.4% population share. Its share is higher for micro units (5.9%) than for large units (2.7%, based on five Welsh units). On employment, BRES puts Wales at about 5% of England. On balance, we apply the 5.4% population share to the DHSC England figures[2].

Sector cost = 5.40% × [(businesses × 2 hours × manager rate) + (EPOS staff × 0.5 hours + other staff × 1 hour) × staff rate + (EPOS businesses × (10 / 60) hours × staff rate) + (businesses × sign cost)]

Licensed restaurants: £163,200

Unlicensed restaurants and cafés: £22,400

Takeaways and mobile food stands: £187,800

Pubs and bars: £23,800

Sports facilities: £14,100

Visitor attractions and cinemas: £1,000

[2] ONS UK Business Counts 2025 (local units) and BRES 2024, via Nomis.

Total out of home = £412,500

Vending

The model assumes that energy drinks are removed from vending machines. Operators need to brief managers, share instructions with client sites and plan replacement stock. Vending managers are valued at the DHSC rate, updated to £20.49 an hour in 2025 prices. Stock staff are valued at the Welsh stock-control employment cost of £17.68 an hour. Figures are based on the Welsh population share of England.

Manager familiarisation: 211 businesses × 5.40% × 1 hour × £20.49 = £200

Knowledge sharing: 47,748 client sites × 5.40% × [(2 hours × £20.49) + (0.5 hours × £17.68)] = £128,400

Stock replanning: (47,748 / 2 sites per stock manager) × 5.40% × 18.25 hours × £17.68 = £415,800

Total vending = £544,400

Total business transition costs = £1,450,700

Ongoing Costs - ID Checking

Staff will need to check the age of young customers attempting to buy restricted drinks. Following DHSC assumptions, children's consumption is used to estimate additional checks, including checks on customers aged 16-25. This is a proxy rather than a direct measure of Welsh transactions or Challenge 25 activity.

Children drinking energy drinks monthly but not weekly are counted separately from weekly consumers. Each drink is treated as one transaction. A 23% deduction represents the assumed share bought through other people at retailers already operating a voluntary restriction.

There are 224,809 Welsh children aged 10 to 15 (mid-2024). At DHSC consumption rates (15.7% drink weekly, 3.12 drinks a week; 12.6% drink monthly, 2.87 drinks a month), they drink about 6.70m energy drinks a year. After the 23% deduction, 5.16m transactions a year need an age check.

Each check is assumed to take one minute, valued at the Welsh cashier employment cost of £14.53 an hour.

Annual age-check cost: 5.16 million checks × (1 / 60) hours × £14.53 = £1,249,700

The number of checks and the cost per check are held constant in real terms throughout 2027-2051.

Ongoing Costs - Training new staff

New delivery drivers and customer-facing staff in selected out-of-home businesses require training, assuming staff turnover of 18% a year. Following DHSC assumptions, no additional recurring training is costed for shop staff, licensed restaurants or pubs, where existing age-restricted sales procedures are assumed to cover new starters.

New delivery drivers: 132,000 × 4.57% × 32% × 18% × 0.5 hours × £14.88 = £2,600 a year

New out-of-home staff: England staff × 5.40% × 18% × training time × £14.53.

Unlicensed restaurants and cafés: £2,900 a year

Takeaways: £20,200 a year

Sports facilities: £2,000 a year

Visitor attractions: £200 a year

Total new out-of-home staff training = £25,300 a year

Total ongoing compliance costs = £1,249,700 + £2,600 + £25,300 = £1,277,600 a year

These costs remain constant in real terms throughout the appraisal period. Ongoing compliance totals £31.94m undiscounted, or £21.79m PV.

Transitional: £1.45m	**Recurrent: £1.28m pa**	**Total: £33.4m**	**PV: £23.2m**

Other Costs

The model estimates lost profits for retailers and energy-drink manufacturers from reduced sales to under-16s. It calculates the margin lost on these sales, rather than treating the full sales value as a cost.

It is acknowledged that a ban on sale of high-caffeine energy drinks to children under 16 years will result in lost sales to retailers and lost profits to manufacturers. However, it is likely that these losses will be displaced by purchases of other drinks instead. Where children in Wales buy energy drinks is not known. Nielsen data show that symbol grocers take 29% of energy-drink sales in Wales but only 5% of grocery sales, about six times their grocery share (Annex B Table B2). These smaller stores are less likely to apply the voluntary restriction used by the large multiples.

At the economy level, we agree with the DHSC assumption that sales of high-caffeine energy drinks are displaced by purchases of carbonated soft drinks or other goods of equal value, either within the retail sector or elsewhere in the economy. This results in no net loss to the overall economy.

However, the redistribution of spending leads to uneven impacts across sectors, with retailers and high-caffeine energy drink manufacturers experiencing a reduction in sales. This estimated reduction in retailer and high-caffeine energy drink manufacturers' profits is shown below. The estimated increase in profits for manufacturers of alternative drinks/goods is recorded in the benefits section of this table.

Transitional: £0	**Recurrent: £1.5m in 2027 rising 4.5% per year**	**Total: £66.6m**	**PV: £42.0m**

Unquantified costs and benefits

Caffeine-related effects on sleep, mental health, education and wellbeing are not monetised. Evidence shows associations between energy-drink consumption and adverse outcomes, but

does not establish the causal effect of the proposed Welsh restriction or provide a sufficient basis for valuing these effects.

Children's consumption is used as a proxy for additional age checks, including checks on customers aged 16-25. The model does not separately estimate the number or duration of Challenge 25 checks in Wales.

No Welsh online knowledge-sharing or IT development cost is included. The assessment assumes that, by the time the Welsh restriction takes effect, retailers serving Wales will have completed the necessary systems work for England and that the same systems will cover Welsh sales. This depends on sufficiently aligned requirements. Additional costs would need to be assessed if Welsh requirements differ or retailers need separate work for Wales.

Banning the sale of high-caffeine energy drinks to under-16s will result in a reduction in their consumer surplus, this will only be partially offset by the consumption of carbonated soft-drinks or other products.

Benefits

Gained mark-up to non-energy manufacturers

The model assumes that 90% of spending displaced from energy drinks moves to carbonated soft drinks at the same retailer and 10% elsewhere. Carbonated soft-drink manufacturers gain the margin on these replacement sales. The net benefit is assumed as zero at the economy level but included in the model as both a cost and a benefit.

Health Benefits

The policy may reduce sugar and calorie intake where children stop drinking sugar-sweetened energy drinks or switch to lower-calorie alternatives. The model monetises this calorie-related effect using the DHSC assessment for England which relies on the DHSC Calorie Model[3]. It does not monetise the direct health effects of reduced caffeine consumption.

The central estimate assumes an average reduction of 3.41 kilocalories per child per day. The DHSC benefits are scaled using 533,900 Welsh children aged 0 to 15 versus 10,531,400 English children aged 0 to 15 (5.07%). In the absence of a Welsh weekly-consumption rate, the model applies the English rate.

The central illustrative Welsh health benefit is £481.5m PV in 2025 prices over a 100-year appraisal period. This comprises:

- Monetary value of quality-adjusted life years gained: £405.5m PV
- NHS savings: £6.7m PV
- Social-care savings: £4.4m PV

[3] https://www.gov.uk/government/publications/department-of-health-and-social-care-dhsc-calorie-model

- Increased economic output: £64.9m PV

The corresponding health outcome is approximately 5,577 quality-adjusted life years gained. Their monetary value represents improved health and wellbeing rather than a cash receipt or NHS budget saving.

The lower and higher calorie-reduction scenarios give illustrative benefits of £414.7m and £602.2m PV. If the calorie reduction does not continue into adulthood, the estimated benefit falls to £304.3m PV. These are sensitivity scenarios, not confidence intervals.

The estimates retain the DHSC assessment's 100-year appraisal period and 2027 present-value base. Quality-adjusted life years and NHS savings are discounted at 1.5%; social-care savings and economic output are discounted at 3.5%. The estimate is not the result of a separate Welsh calorie-model run and relies on English consumption and health evidence.

The current model includes the illustrative health benefit in net social value and the benefit-cost ratio. This treatment means health benefits are assessed over 100 years, as sales prevented during the 25 year appraisal period provide longer term health benefits.

£66.6m plus health benefits			**Total PV:** **£523.5m (displaced spending gains £42m + health £481.5m)**

Key evidence, assumptions and uncertainties

The assessment uses the methods and assumptions in the 2025 DHSC impact assessment for England as its basis. Welsh population, business numbers, employment and wage data are used where available from official sources such as Office of National Statistics.

Where Welsh counts are unavailable, England, England and Wales, or UK values are scaled using the matching mid-2025 population ratio as below.

England quantities: 3,175,181 / 58,834,812 = 5.4%

England and Wales quantities, including enforcement: 3,175,181 / 62,009,993 = 5.12%

UK quantities, including delivery drivers: 3,175,181 / 69,483,939 = 4.57%

GB quantities (ACS convenience stores, Annex A): 3,175,181 / 67,555,493 = 4.70%

All headline monetary results are in calendar-year 2025 prices. DHSC monetary inputs in 2024 prices are updated once using the June 2026 GDP deflator series:

2025 value = 2024 value × (100 / 96.5146) = 2024 value × 1.036

ASHE April 2025 median hourly wages are used to estimate 2025 pay. The model adds 19% for non-wage employment costs, following DHSC. Wales wages are used where available or UK/England/England and Wales alternatives e.g. Trading Standards officers. Specified DHSC business and service rates are retained where used in the model.

Costs and displaced-spending effects are assessed over 25 years, from 2027 to 2051. They are discounted at 3.5% to a 2027 present-value base. The first year is undiscounted. The timetable is a modelling assumption and does not confirm when the restriction would begin in Wales. Health benefits are discounted at 1.5% (QALYs and NHS savings) and 3.5% (social care and economic output).

One-off preparation costs fall in 2027. Enforcement, recurring training and age-check costs remain constant in real terms. Age-check volumes are held at their first-year level. The 4.51% annual growth used in the English age-check calculation is not included in the Welsh calculation.

The market used to calculate lost business margins and replacement-spending gains 4.51% in real terms following DHSC. Losses and gains grow at the same rate so they still offset.

Age checks account for £21.3m PV. The calculation assumes one drink per transaction, one minute per check and a 23% deduction for purchases associated with existing voluntary restrictions. Children's consumption is used as a proxy for checks that also affect older customers. The estimate may overstate costs, but there is insufficient evidence to determine a precise correction.

Keeping other assumptions unchanged, reducing check duration to 30 seconds reduces net PV cost to approximately £13m. Increasing it to two minutes raises net PV cost to £45m. No-growth and growth-stopping scenarios for age checks are not presented separately because age check volumes are held flat in the central case.

Online knowledge sharing and IT changes are costed at £0 (see page 4). The assessment assumes that, by the time the Welsh restriction takes effect, retailers serving Wales will have completed the necessary systems work for England and that the same systems will cover Welsh sales.

The enforcement estimate assumes 10 additional Welsh test purchases annually, a 20% failure rate and prosecution following 20% of failures based on England and Wales data from Trading Standards. Test purchases are rounded up. Other case numbers are kept as fractions.

Lost margins and gains elsewhere use a common 53% mark-up on cost, equivalent to a 34.64% margin on selling price. The model assumes that all displaced spending remains in the economy, with 90% moving to carbonated soft drinks at the same retailer and 10% elsewhere. The same margin assumptions are applied to replacement activity.

The zero net business effect follows from the assumptions about replacement spending and margins. It is not an observed outcome. Sensitivity tests may vary mark-ups, proxy purchasing and displacement, while the central calculation holds the market constant in real terms and assumes that gains balance losses.

The assessment shows £42m PV of lost margins within total costs and £42m PV of gains within total benefits. These gross business effects offset each other, leaving a net cost of £23.7m PV. The common 53% mark-up remains provisional. Displayed totals may differ slightly from component sums because calculations use unrounded inputs and summary amounts are rounded.

The costed option covers retail, online and out-of-home sales and assumes complete removal of high-caffeine energy drinks from vending machines.

Reduced Calorie and Sugar Benefits:

Replacing sugar-containing energy drinks with lower-sugar products could reduce calorie intake and associated ill health. The effect depends on which products are replaced, the alternatives chosen and how long changes in consumption last.

The central health illustration uses the English assumption of a reduction of 3.41 kilocalories per child per day. It scales the published English outcomes by number of

children aged 0-15, giving an illustrative benefit of £481.5m PV in 2025 prices over 100 years.

No dental or caffeine-related benefit has been monetised. The health illustration scales the published DHSC results for England to Welsh children. It is not a separate Welsh calorie-model run.

Options

Option 1: Do nothing

The Soft Drinks Industry Levy (SDIL) has increased the retail prices of energy drinks containing sugar. This has partially reduced their consumption. However, it will not eliminate consumption of sugar-sweetened energy drinks, and the market has many sugar-free energy drinks which still contain high levels of caffeine and other stimulants.

Following media attention and a public campaign, all major supermarkets have agreed to ban the sale of drinks containing over 150mg of caffeine per litre to under-16s. However, many independent retailers may not voluntarily restrict sales. Nielsen data (Annex B) show that these retailers over-index by 600% in sales of energy drinks in Wales. As many major retailers have now subscribed to the ban, we believe voluntary action has progressed as far as it is feasible to expect.

A statutory ban is due to apply in England from April 2027, subject to Parliamentary scrutiny.[4] Doing nothing in Wales would leave different rules either side of the border and would still allow under-16s in Wales access to drinks with high levels of caffeine, meaning the policy objective is not achieved.

Option 2: Statutory regulation banning under-16 sales

For costing purposes, this option comprises a ban on sales of high-caffeine energy drinks to under-16s through retail, online and out-of-home channels, together with complete removal of these drinks from vending machines. It aims to reduce access and consumption among under-16s. The extent of the reduction depends on compliance, proxy purchasing and the products chosen instead. The final Welsh policy must match the scope used in this assessment.

Retailers that have already imposed voluntary bans have used the age of 16, so adopting this age limit for a statutory ban would mean that these retailers could continue to use existing processes to implement it. It would also align with the restriction in England.

This policy option would have an impact on businesses through one-off preparation costs, the staff time needed for age checks and lost sales, net of the voluntary action already in place. We have considered this using the best available evidence.

[4] Department of Health and Social Care (2026). Banning the sale of high-caffeine energy drinks to children: consultation outcome, 16 July 2026. https://www.gov.uk/government/consultations/banning-the-sale-of-high-caffeine-energy-drinks-to-children

Option 3: Statutory regulation banning under-18 sales

We should consider what the appropriate age to ban energy drinks is. Sales of some other restricted substances, such as alcohol and tobacco, are restricted for those under the age of 18.

Latvia and Lithuania have already banned the sale of energy drinks to children and have used the age limit of 18.

Extending the restriction to under-18s could increase compliance costs, although existing procedures may reduce the additional work required. This option has not been quantified in the current model.

Alternative Options Considered

In addition to the policy options under consideration in this Impact Assessment, several other options to achieve the policy objectives have been considered and not quantified. The table below sets out the consideration of these alternative options. We will consider evidence from the consultation and assess whether these need revisiting and fully quantifying at the final stage.

Option	**Consideration**
A minimum price for energy drinks that contain 150mg/l of caffeine or more	• This would impact upon consumers of all ages, rather than affecting only children. The impact on adults could be considered disproportionate given the policy objective is to limit children's consumption • This may not restrict children's consumption and so would not necessarily tackle the issue of high levels of consumption and linked health impacts amongst children
A levy upon energy drinks that contain 150mg/l of caffeine or more	• Energy drinks with added sugar are already in scope of the Soft Drinks Industry Levy that came into force on 6 April 2018. The aim of the levy is to incentivise reformulation to reduce sugar content in drinks • A caffeine levy would impact upon consumers of all ages, rather than affecting only children. The impact on adults could be considered disproportionate given the policy objective is to limit children's consumption • This may not restrict children's consumption and so would not necessarily tackle the issue of high levels of consumption and linked health impacts amongst children

Option	Consideration
A limited portion size for individual servings of energy drinks	• The size of the can does not indicate the level of caffeine the product contains. Small cans may still have high concentrations of caffeine • This may not restrict children's consumption and so would not necessarily tackle the issue of high levels of consumption and linked health impacts amongst children • This would impact upon consumers of all ages, rather than affecting only children. The impact on adults could be considered disproportionate given the policy objective is to limit children's consumption
Limit the level of caffeine that can be contained in one portion	• This may not restrict children's consumption and so would not necessarily tackle the issue of high levels of consumption and linked health impacts amongst children • This would impact upon consumers of all ages, rather than affecting only children. The impact on adults could be considered disproportionate given the policy objective is to limit children's consumption
An educational campaign on the impacts of caffeine consumption	• Despite labelling on energy drinks saying that these products are not recommended for children, we know that children are still drinking them • Health and diet already feature in the school curriculum at different key stages • It would be likely to be of limited impact in isolation, but could be important in the implementation of other potential approaches
Exclusion zones around schools in which the sale of energy drinks to children is restricted	• This may make it harder for children to buy energy drinks before, during or after school • Children may still be able to buy energy drinks on their way to and from school, and outside of school hours • This would have differential impacts for business, restricting sales only in some shops. This could potentially cause significant unintended consequences

Costs and Benefits

Costs Summary

Total gross costs are estimated at £100.5m over 2027-2051, or £65.6m in present value, in 2025 prices. This includes lost margins for retailers and energy-drink manufacturers of £66.6m undiscounted, or £42.0m PV.

The model includes equal offsetting gains to other businesses. After these effects offset each other, the net cost is £34.0m undiscounted, or £23.7m PV. Totals may differ slightly from component sums because calculations use unrounded inputs and displayed amounts are rounded.

Business transition and ongoing compliance account for £33.4m undiscounted, or £23.2m PV. The largest component is age checking at £21.3m PV, approximately 90% of net

present-value cost. Annual age-check costs are held constant at approximately £1.25m in real terms throughout the appraisal period.

One-off business transition costs total £1.45m. Online knowledge sharing and IT changes are costed at £0 (see page 4). The assessment assumes that, by the time the Welsh restriction takes effect, retailers serving Wales will have completed the necessary systems work for England and that the same systems will cover Welsh sales. This depends on sufficiently aligned requirements. Additional costs would need to be assessed if Welsh requirements differ or retailers need separate work for Wales.

Trading Standards familiarisation and enforcement total £0.6m undiscounted, or £0.4m PV, including court costs.

Benefits Summary

The model assumes that spending displaced from energy drinks moves to carbonated soft drinks or other goods and services. The resulting gains in business margins total £66.6m undiscounted, or £42.0m PV. Of the present-value total, £32.8m goes to carbonated soft-drink manufacturers and £9.2m to other businesses. These are gained margins, not the full value of replacement sales.

These gains offset the lost margins reported under Other Costs, giving a zero net business effect in every year. This follows from the assumptions about replacement spending and margins; it is not an observed outcome and does not mean that individual businesses or sectors are unaffected.

Scaling the English calorie-related benefits to Welsh children aged 0 to 15 gives a central estimate of £481.5m PV in 2025 prices, with lower and higher scenarios of £414.7m and £602.2m.

Caffeine-related effects on sleep, mental health, education and wellbeing are not monetised.

The current model quantifies the under-16 option only. It does not establish the additional costs or benefits of extending the restriction to 16- and 17-year-olds. Some datasets group 16- and 17-year-olds with adults. This does not mean the same caffeine safety thresholds apply to them.

Including the illustrative health benefit, net present value is £457.8m and the benefit-cost ratio is about 20 (Table A).

10. Post implementation review

We will be conducting a post-implementation review of the Regulations within three years of them being introduced and at regular intervals thereafter. Our post-implementation reviews will consider the impacts of the policy on different groups, including manufacturers, retailers, enforcement bodies and consumers themselves. They will consider both the intended impacts of the policy in relation to obesity prevention and public health improvement, as well as any unintended impacts that may arise.

Annex A: Retail Sector Methodology

Number of retail stores in scope

We have used a combination of Institute of Grocery Distribution (IGD) retail data, the Association of Convenience Stores (ACS) Local Shop report and 2025 ONS business count data accessed via Nomis to calculate the number of stores in scope of the ban in Wales. All store and business figures in this annex relate to 2025. Employee figures relate to 2024, the latest year available from the ONS Business Register and Employment Survey at the time of analysis.

Data from the IGD found a total of 23,651 grocery retail stores within the UK. However, the IGD count of convenience stores only covers named retailers and so undercounts the sector. ACS data, which cover Great Britain, were therefore used for convenience stores. We have applied Wales's share of the GB population (4.70%) to the ACS count and its share of the UK population (4.57%) to the IGD counts as shown in Table A1.

Table A1: Estimated number of grocery stores in Wales, by store type, 2025

Store type	Source count	Coverage	Wales share	Wales stores
Convenience stores incl. forecourts	50,486	GB	4.70%	2,373
Supermarkets and hypermarkets	6,161	UK	4.57%	282
Discounters	4,782	UK	4.57%	219
Total grocery stores				2,873

Source: ACS Local Shop Report 2025, IGD (2025), ONS mid-2025 population estimates. Figures are rounded and may not sum.

To calculate the burden on small and micro businesses, we have grouped the stores based on the size of the business they belong to, according to number of employees. Table A2 shows the grocery retail sector split by size; micro (0 to 9 employees), small (10 to 49 employees), medium (50 to 249 employees) and large (250 or more employees).

Table A2: Estimated number of grocery stores in Wales, by store type and business size, 2025

Store type	Micro	Small	Medium	Large	Total
Convenience incl. forecourts	1,533	840	0	0	2,373
Supermarkets and hypermarkets	0	0	2	279	282
Discounters	0	0	2	217	219
Total	1,533	840	4	496	2,873

Source: Table A1. Size split follows DHSC (2025) Table 71. Figures are rounded and may not sum.

For convenience stores, DHSC use sales space in-store data from the ACS Local Shop Report, which categorises stores based on the amount of floor space dedicated to selling products, to estimate the proportion of stores that are considered small (35%) and micro (65%). We have applied these proportions to our estimate of 2,373 convenience stores in Wales, giving 1,533 micro and 840 small stores. Consistent with DHSC, we assume there are no medium-sized convenience stores, as ACS data show none in this sub-sector of the market.

In addition, we assume that supermarkets, hypermarkets and discount stores in Wales are part of medium or large businesses. DHSC assumed that businesses with more than 25 stores were large (corresponding to 10 employees per store) and checked smaller businesses on Companies House to determine their size. This placed just under 1% of supermarket, hypermarket and discount stores in medium-sized businesses. We have applied the same proportions to Wales. This gives an estimated 2 supermarkets and hypermarkets and 2 discount stores belonging to medium-sized businesses, with the remaining 279 and 217 stores belonging to large businesses. Given the small numbers involved, we have not repeated the Companies House check for Wales.

In addition to the grocery retail stores estimated from ACS and IGD data, these regulations would also affect any specialist retail stores in Wales which sell high-caffeine energy drinks. We have used the UK Business Counts 2025, which contains information on the number of local units in all industry sectors, to estimate the number of additional specialist retail stores in scope. These data are available for Wales, so we have counted Welsh local units directly rather than applying a population share.

We have used the same SIC codes as DHSC to identify specialist retailer groups which may sell high-caffeine energy drinks. We assume that the ACS and IGD data include stores in SIC codes 4711 ‘Retail sale in non-specialised stores with food, beverages or tobacco predominating’ and 473 ‘Retail sale of automotive fuel in specialised stores. The 2,430 and 255 Welsh local units in these codes are therefore not added, to avoid double counting. The other SIC codes are set out in Table A3. We are uncertain how many businesses in some of these industries sell high-caffeine energy drinks, so, following DHSC, we have reduced the number of local units by 50% in four of the five codes to reflect this uncertainty. This gives an estimated 630 specialist retail stores in Wales, from 1,115 local units.

Table A3: Specialist retail SIC codes in scope, and local units in Wales, 2025

SIC 2007	Description	Weight	Wales local units	Counted in scope
47240	Retail sale of bread, cakes and confectionery in specialised stores	50%	420	210
47250	Retail sale of beverages in specialised stores	100%	145	145
47260	Retail sale of tobacco products in specialised stores	50%	105	52.5
47290	Other retail sale of food in specialised stores	50%	235	117.5

47620	Retail sale of newspapers and stationery in specialised stores	50%	210	105
Total			1,115	630

Source: ONS UK Business Counts 2025 (local units), via Nomis. Weights follow DHSC (2025) Table 72.

We have applied down weighting on some sectors to provide estimates of the total number of specialist retailer stores in scope of the ban, by employment size. These are set out in Table A4.

Table A4: Estimated number of specialist stores in Wales, by employment size band, 2025

Employment size band	Stores
Micro	505
Small	125
Medium	0
Large	0
Total	630

Source: ONS UK Business Counts 2025 (local units by employment size band), via Nomis. Size bands refer to employees at each site.

Collectively, these calculations provide an estimate of the total number of retail stores in Wales which are in scope of the ban (3,503 stores). Table A5 sets out how these stores are split by business size, based on number of employees (micro 0-9, small etc).

Table A5: Estimated total number of stores in scope in Wales, by store type and business size, 2025

Store type	Micro	Small	Medium	Large	Total
Convenience incl. forecourts	1,533	840	0	0	2,373
Supermarkets and hypermarkets	0	0	2	279	282
Discounters	0	0	2	217	219
Specialist	505	125	0	0	630
Total	2,038	965	4	496	3,503

Source: Tables A2 and A4. Figures are rounded and may not sum.

Number of Businesses in scope of the ban

To estimate the number of retail businesses that the stores in Wales belong to, we used the Inter Departmental Business Register, which contains information on the number of different businesses in all industry sectors. We have used the number of enterprises registered in

Wales. Businesses are recorded where they are registered, so retailers with stores in Wales but registered elsewhere in the UK, including most national supermarket chains, are counted in England rather than Wales.

We used the same SIC codes as DHSC to identify relevant industries and calculate the number of businesses in scope of the ban. There are 2,310 enterprises registered in Wales in these industries. We are uncertain how many businesses in some industries sell high-caffeine energy drinks, so, following DHSC, we have reduced the number of businesses by 50% in four of the seven codes to reflect this uncertainty. This gives an estimated 2,045 businesses in scope in Wales (Table A6).

Table A6: Retail business SIC codes in scope, and enterprises registered in Wales, 2025

SIC 2007	Description	Weight	Wales enterprises	Counted in scope
47110	Retail sale in non-specialised stores with food, beverages or tobacco predominating	100%	1,510	1,510
47300	Retail sale of automotive fuel in specialised stores	100%	140	140
47240	Retail sale of bread, cakes and confectionery in specialised stores	50%	155	77.5
47250	Retail sale of beverages in specialised stores	100%	130	130
47260	Retail sale of tobacco products in specialised stores	50%	90	45
47290	Other retail sale of food in specialised stores	50%	185	92.5
47620	Retail sale of newspapers and stationery in specialised stores	50%	100	50
Total			2,310	2,045

Source: ONS UK Business Counts 2025 (enterprises), via Nomis. Counts are rounded to the nearest 5 by ONS.

Table A7 shows these business by size band.

Table A7: Estimated number of retail businesses in scope in Wales, by business size, 2025

Business size	Employees	Businesses
Micro	0 to 9	1,790
Small	10 to 49	238
Medium	50 to 249	13

Business size	Employees	Businesses
Large	250+	5
Total		**2,045**

Source: Table A6. Figures are rounded and may not sum.

Number of businesses with an online offering and online only retailers

We have estimated the number of retailers in Wales with an online offering by business size.

Consistent with DHSC, we have assumed that 60% of medium and large businesses would have an online offering. DHSC based this on its stakeholder engagement with the retail sector and noted that it is not a conclusive estimate representing the whole sector. We have not identified any Welsh evidence to suggest a different proportion, so we have kept this assumption.

We assume that 47% of small and micro businesses would have an online offering. This is based on the Association of Convenience Stores Local Shop Report 2025, which estimates that 47% of independent convenience stores provide a home delivery service. DHSC used the equivalent figure of 34% from the 2024 report but the sector is in considerable growth. Applying these proportions gives an estimated 963 businesses in Wales with an online offering, of which 841 are micro businesses. In line with DHSC assumptions, micro businesses are not included in the number of businesses that would need to update their IT systems. Much of the home delivery offered by micro businesses is likely to run through third-party delivery platforms, which manage ordering and age checks themselves. This leaves 122 businesses with physical stores in Wales that would need to update their IT systems. No cost is included for these changes as we assume systems changed for England will also cover Welsh sales (page 4).

Data on the number of online only retailers is not available. DHSC's stakeholder engagement identified two large online-only retailers, and we assume both sell to customers in Wales. Neither is registered in Wales, so they are not counted as Welsh businesses. We assume their preparation is done once at UK level, so no Welsh cost is included (page 4). As DHSC notes, two retailers may be an underestimate.

Table A8: Estimated number of retail businesses in Wales with an online offering, by business size, 2025

Business size	Businesses	Share with online offering	Businesses with online offering
Micro	1,790	47%	841
Small	238	47%	112
Medium	13	60%	8
Large	5	60%	3
Total	**2,045**		**963**
Online-only retailers			2

Source: Table A7; ACS Local Shop Report 2025; DHSC (2025) Table 77. Figures are rounded and may not sum.

Number of Stores with an Existing Ban

According to DHSC's stakeholder engagement with the British Retail Consortium, several major retailers have already voluntarily banned the sale of high-caffeine energy drinks to children under 16 years. These include Tesco, Sainsbury's, Waitrose, Asda, Morrisons, The Co-operative, Lidl, Aldi, Booths, BP, Iceland, M&S and all Co-operative Societies. As in the DHSC assessment, the figures in this section exclude any other retailers which may have introduced a voluntary ban, and any non-grocery retailers with a voluntary ban, such as Boots and WH Smith. DHSC's figures imply that these retailers operate 17,441 stores across the UK. Applying Wales's share of the UK population (4.57%), we estimate that 797 stores in Wales belong to retailers with a known voluntary ban. This uses DHSC's 2023 store count for these retailers, which has not been updated.

Many convenience stores also implement voluntary bans. The Association of Convenience Stores estimated that 79% of convenience stores already implement a voluntary ban, based on its 'Voice of Local Shop' polling in 2022. We have not identified a Wales figure, so we apply the same assumption to Wales. By combining the proportion of major retailers and convenience stores with voluntary bans, we estimate that 84% of all stores in Wales (2,935 out of 3,503) currently implement a voluntary ban. This is the same proportion as DHSC's estimate for England.

Table A9: Estimated number of stores and businesses in Wales with a voluntary ban, 2025

	Stores	Businesses	Online-only retailers
Total in scope	3,503	2,045	2
Known voluntary ban	797	1	1
Assumed voluntary ban (79% of the rest)	2,138	1,615	0
Total with a voluntary ban	2,935	1,616	1
Share with a voluntary ban	83.8%	79.0%	50%

Source: Tables A5 and A7; DHSC (2025) Table 78.

The major retailers set out above were also counted as businesses with a voluntary ban (excluding Boots and WH Smith). Of these, only Iceland is registered in Wales. The others are registered in England, so they are not included in the Welsh business count. We again assume that 79% of the remaining 2,044 Welsh businesses have a voluntary ban in place. This gives an estimated 1,616 businesses (79%) with a voluntary ban.

Of the two online-only retailers identified by DHSC, one has a voluntary ban on high-caffeine energy drink sales, but the other does not specify. Following DHSC, we assume that 50% of online-only retailers implement a voluntary ban. The total number of stores and businesses in Wales that we estimate have a voluntary ban are set out in Table A9.

Table A10: Summary of retail stores and businesses in scope in Wales, by business size, 2025

Business size	Stores	Stores with voluntary ban	Businesses	Businesses with voluntary ban	Businesses needing online IT changes
Micro	2,038	1,707	1,790	1,414	Excluded
Small	965	808	238	188	112
Medium	4	4	13	10	8
Large	496	415	5	4	3
Total	3,503	2,935	2,045	1,616	122

Source: Tables A5 to A9. Figures are rounded and may not sum.

Number of employees employed by businesses in scope of the ban

DHSC calculated the total number of employees in the retail sector by multiplying the number of businesses in each employment size band on the Inter Departmental Business Register by an assumed average number of employees per business. We have taken a different approach for Wales, for the reasons set out below.

DHSC used the midpoint of each employment size band as the average for that band, apart from the largest (1000+). For businesses with 1000+ employees, DHSC used the average number of employees at the major grocery retailers in Kantar's grocery market share report, 82,787 per business. This average was applied to all 30 businesses in that band, giving 2,488,698 employees, or 88% of DHSC's total of 2,813,871. Many of the businesses in the 1000+ band are likely to be far smaller than the major grocers, so this approach is likely to overstate employment considerably. DHSC's total is around three times the number of employees recorded in the Business Register and Employment Survey (BRES) for the same industries in England (912,525). It also exceeds the BRES figure for the whole English retail sector (2.26 million).

Instead, we use BRES, which records the number of employees by industry and location. The latest BRES data available at the time of analysis (October 2026) relate to 2024 and are provisional. Employee numbers are therefore one year behind the 2025 store and business counts used elsewhere in this annex. BRES is the only official source of employee numbers by detailed industry for Wales, so we have used it despite this gap. Even a substantial change in employment between 2024 and 2025 would not close the gap between our estimate and the population-scaled DHSC figure set out below.

We use the same SIC codes as for businesses and apply the same 50% down-weighting. BRES counts employees where they work, so staff at Welsh branches of national retailers are included, even though those businesses are registered in England.

This gives an estimated 60,975 employees in scope in Wales (Table A11). By comparison, scaling DHSC's England figure by population would give 151,858. BRES records 7,000 petrol station employees in Wales, which is 18% of the England and Wales total, compared with 8% of petrol station sites. If this figure is overstated, the Welsh total would be nearer 57,000. BRES 2024 figures are provisional.

Table A11: Estimated number of retail employees in scope in Wales, by SIC code, 2024

SIC 2007	Description	Weight	Wales employees	Counted in scope
47110	Non-specialised stores, food predominating	100%	50,000	50,000
47300	Petrol station shops	100%	7,000	7,000
47240	Bread, cakes and confectionery	50%	4,000	2,000
47250	Beverages	100%	700	700
47260	Tobacco products	50%	400	200
47290	Other food	50%	1,250	625
47620	Newspapers and stationery	50%	900	450
Total			64,250	60,975

Source: ONS Business Register and Employment Survey 2024 (provisional), via Nomis.

Table A12 shows a comparison of what the figures would be on a population scaled basis versus Welsh specific data sources. It can be seen that there is a good match except for retail staff and businesses needing online IT changes. We have used Welsh specific data for retail staff and IT businesses needing online changes.

Table A12: Retail figures used in the Welsh cost model, population-scaled and Welsh data compared

Figure	Population-scaled DHSC figure for Wales	Welsh data (this annex)	Change
Retail businesses in scope	2,102	2,045	-57
Retail stores in scope	3,358	3,503	+145
Retail staff in scope	151,858	60,975	-90,883
Businesses needing online IT changes	719	122	-597
Businesses with a voluntary ban	79%	79.0%	No change
Stores with a voluntary ban	84%	83.8%	-0.2 points

Source: DHSC (2025) Tables 70 to 81, scaled by Wales's population relative to England (5.4%); Tables A1 to A11. Staff figures relate to 2024. All other Welsh figures relate to 2025.

Annex B: Nielsen data on Energy Drink Sales

The rationale for this policy is that despite a voluntary ban on sales of energy drinks by major retailers, there are substantial sales to young people in smaller stores e.g. convenience stores.

Energy drinks are typically drunk on the go so it would be expected that convenience stores would over-index in these sales. However, the sales figures may also represent the fact that larger retailers have the voluntary ban in place.

Tables B1 and B2 show the sales values by channel (retailer type) for Energy Drinks and Total Grocery Market for GB and Wales. GB Energy Drink sales were £899m in the 52 weeks to 13th June 2026. This allows the over-index or under-index of Energy Drink sales to be calculated by channel. It can be seen that the Symbol Grocers over index by 7.5 times for energy drink sales in GB relative to total grocery market sales. Other channels over index by 2.5 times. For Wales, the figures are less pronounced with only Symbol Grocers over indexing significantly by 6 times relative to total grocery market. There are £14.4m of annual sales of Energy Drinks in these stores in the latest year.

Table B1 GB Retail Sales of Energy Drinks versus Total Grocery sales (52 weeks to 13th June 2026)

Channel	Energy Drinks Value (£)	Energy Drinks Channel Share %	Total Market Value (£)	Total Market Channel Share %	Over or Under Index (100 = avg)
Grocery Multiples & Discounters	£508,120,200	56.5%	£127,547,048,717	84.8%	**67**
Symbol Grocers	£228,832,054	25.4%	£5,078,159,562	3.4%	**754**
Other Channel	£134,013,221	14.9%	£8,921,417,907	5.9%	**251**
Bargain Stores	£26,743,471	3.0%	£4,502,072,615	3.0%	**99**
Chemists/Drugstores	£1,641,334	0.2%	£3,790,099,633	2.5%	**7**
Pet Shops	£2,625	0.0%	£567,498,787	0.4%	**0**
Total GB	**£899,352,905**	**100.0%**	**£150,406,297,220**	**100.0%**	

Source: Copyright © 2026 Nielsen Consumer LLC. All Rights Reserved. Accessed via Welsh Government Insight Programme.

Table B2 Wales Retail Sales of Energy Drinks versus Total Grocery sales (52 weeks to 13th June 2026)

Channel	Energy Drinks Value (£)	Energy Drinks Channel Share %	Total Market Value (£)	Total Market Channel Share %	Over or Under Index (100 = avg)
Grocery Multiples & Discounters	£30,296,968	61.5%	£6,522,216,706	83.0%	**74**
Symbol Grocers	£14,376,805	29.2%	£383,014,645	4.9%	**598**
Other Channel	£2,494,387	5.1%	£424,091,466	5.4%	**94**
Bargain Stores	£2,106,038	4.3%	£331,959,500	4.2%	**101**
Chemists/Drugstores	£10,933	0.0%	£167,937,967	2.1%	**1**
Pet Shops	-	-	£29,053,636	0.4%	**-**
Total Wales	**£49,285,132**	**100.0%**	**£7,858,273,920**	**100.0%**	

Source: Copyright © 2026 Nielsen Consumer LLC. All Rights Reserved. Accessed via Welsh Government Insight Programme.

Table B3 shows that Wales slightly over-indexes for Energy Drinks with a retail sales value at 5.5% relative to 5.2% of the total GB Grocery market.

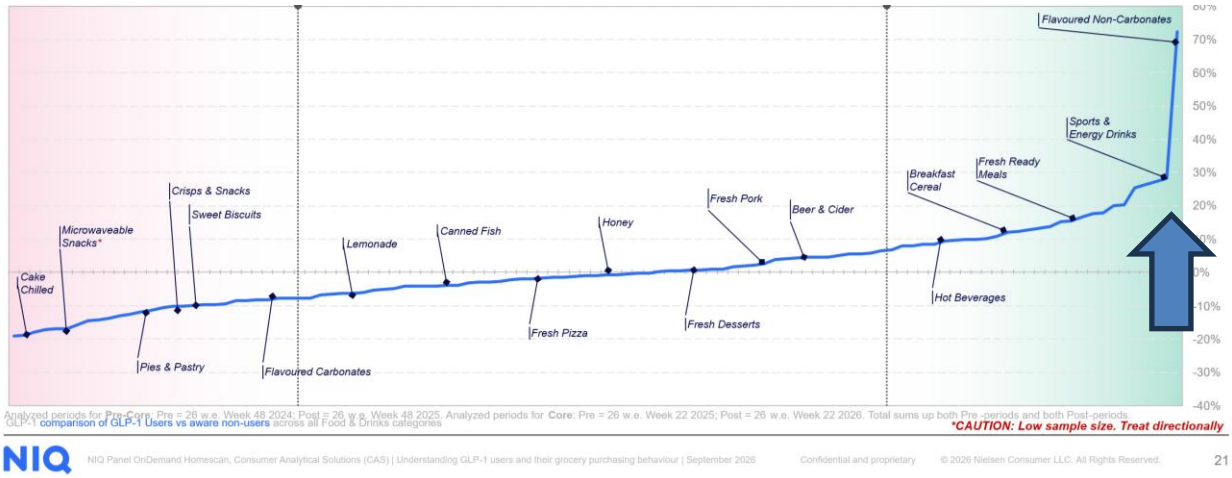
Table B3 Wales versus GB as % of sales for Energy Drinks and Total Grocery Market

	Energy Drinks Value (£)	Total Market Value (£)
Wales as % of GB	5.5%	5.2%

Source: Derived from Nielsen. Copyright © 2026 Nielsen Consumer LLC. All Rights Reserved. Accessed via Welsh Government Insight Programme.

No specific data are available for Wales for energy drink sales to children. However recent research commissioned by the Insight Programme for Public Health Department shows that energy drinks are a category in strong demand amongst GLP-1 users who are looking for easy energy sources as appetites wain. GLP-1 users are estimated at 16% of Welsh households (GB 11%). Latest energy drinks sales in Wales are up 8% year on year.

Figure B1 Change in demand for different categories amongst GLP-1 users in GB (similar picture seen in Wales)



© 2026 Nielsen Consumer LLC. All Rights Reserved.