Title: The Motor Vehicles (Obligatory Tests) Order 2022	***Impact Assessment (IA)***
IA No: DfT00454	**Date:** *Sign-off date*
	Stage: Consultation
RPC Reference No: *To be added*	**Source of intervention:Domestic**
Lead department or agency: Department for Transport	**Type of measure: Secondary Legislation**
	Contact for enquiries: MOT411consultation@dft.gov.uk
Other departments or agencies: Driver and Vehicle Standards Agency (DVSA)	

Summary: Intervention and Options

RPC Opinion: Awaiting Scrutiny

Cost of Preferred (or more likely) Option (in 2019 prices)			
Total Net Present Social Value £884.70m	**Business Net Present Value** £197.37m	**Net cost to business per year** £-21.49m	**Business Impact Target Status** Qualifying Provision

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

The MOT test is a government-mandated test which requires owners to submit their vehicles for annual testing at the owner's cost. For most light vehicles (cars, goods and passenger vehicles up to 3.5 tonnes and motorbikes but excluding taxis, ambulances and passenger vehicles that can carry more than 8 passengers), this requirement begins when the vehicle is 3 years old. Vehicle technology has advanced rapidly, enhancing the safety performance of cars. Many more systems provide safety-relevant information to the driver. From data obtained from the DVSA, the percentage of 3-year-old vehicles failing the MOT test has reduced over the last few decades. It is appropriate for government to consider whether a test at 3 years remains appropriate or is now an unnecessary burden on motorists.

What are the policy objectives and the intended effects?

The policy objectives are to ensure that the MOT test (i) continues to provide assurance to the driver and the general public that vehicles are roadworthy in terms of road safety and environmental impact (ii) does not impose unnecessary financial burdens on vehicle owners by requiring tests that are not necessary. The intended effects are to reduce burdens on individuals and businesses during the early life of vehicles to provide a better balance between burden and risk. It is expected that this would unlock benefits around cost savings from the MOT fee. This is based on the premise that individuals are still encouraged to seek a repair when first noticed. The anticipated costs are familiarisation costs with this change but also small changes to the way the MOT testing station sector operates.

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

Three options have been considered (i) do nothing (ii) change the date where a first MOT test is required from 3 to 4 years (iii) change the date where a first MOT test is required from 3 to 5 years.
Our preferred option is option (ii). The failure rate for MOTs increases with age. The increase between 3 and 4-year-old cars is small which means that it is appropriate to move the date of the first test back to 4 years (in line with the practice of a number of countries such as France, Norway and Ireland – as well as Northern Ireland).

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** May 2028

Is this measure likely to impact on international trade and investment?		No		
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:** -0.04	

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 responsibleSELECT SIGNATORY: ..... Date: _____

Summary: Analysis & Evidence **Policy Option 1**

Description: Change the date where a first MOT test is required from 3 to 4 years

FULL ECONOMIC ASSESSMENT

Price Base Year	PV Base	Time Period	Net Benefit (Present Value (PV)) (£m)		
2021	2023	10 Years	**Low:** 681.3	**High:** 1,495.0	**Best Estimate: 1,033.9**

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	10.03		5.31	55.09
High	38.67	1	5.67	86.91
Best Estimate	**21.17**		**5.38**	**66.78**

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

In the transition stage, the monetised costs are the familiarisation costs to individual vehicle owners, MOT providers (MOT testing stations), vehicle retailers and businesses with a fleet of vehicles. There is also expected to be an annual cost of lost revenue for the Driver and Vehicle Standards Agency (DVSA) as a public sector body.

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

Many of the costs are currently unmonetised due to the lack of evidence or because the impacts are not expected to be realised. For businesses, this is relating to the loss of revenues from the MOT fee and the possible reduction in MOT testers. For individuals, there could be a potential decrease in road safety and air quality from vehicles in scope and an impact on raising the cost of insurance premiums and the cost of MOT repairs. The public sector may bear costs of an awareness campaign to mitigate negative outcomes and the administrative costs of enforcement.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0.0		90.60	768.22
High	0.0		182.99	1,550.14
Best Estimate	**0.0**		**129.85**	**1,100.63**

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

For businesses and individuals, there are expected to be moderate benefits in relation to savings on the MOT fee, costs associated with travelling to and from an MOT and time spent waiting for the MOT to be undertaken. For the public, there is expected to be a reduced level of emissions due to fewer trips to and from MOT garages, which may offset an increase in vehicles with higher emissions caused by the change, which are currently non-quantified.

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

The only non-monetised benefits are the potential efficiency savings to businesses through needing fewer MOT testers to conduct fewer MOTs after this change.

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

A number of assumptions are made throughout this analysis and we are reliant on the consultation to fill these gaps. Assumptions have been made on the number of vehicles in scope, that the current maximum MOT fee will not change, the distances and time saved through this measure and how individual behaviour may respond due to the proposed change. Where possible, a sensitivity has been applied on key components to show how variable the final analysis is to the assumptions made.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m: -107.46
Costs: 0.78	**Benefits:** 25.90	**Net:** -25.12	

Summary: Analysis & Evidence **Policy Option 2**

Description: Change the date where a first MOT test is required from 3 to 5 years

FULL ECONOMIC ASSESSMENT

Price Base Year	PV Base	Time Period	Net Benefit (Present Value (PV)) (£m)		
2021	2023	10 Years	**Low:** 1,311.40	**High:** 2,792.26	**Best Estimate: 1,948.19**

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	10.03	1	10.09	94.89
High	38.67		10.27	124.96
Best Estimate	**21.17**		**10.15**	**106.53**

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

The monetised costs are the same as Option 1, as the changes to regulations are the same, however there are more MOTs lost due to an additional year with no MOT required compared to the "do nothing" scenario and therefore a higher reduction in the number of MOTs carried out in a given year.

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

The non-monetised costs are the same as Option 1, as the changes to regulations are the same, however there are more MOTs lost due to an additional year with no MOT required compared to the "do nothing" scenario and therefore a higher reduction in the number of MOTs carried out in a given year.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0.0		170.80	1,436.36
High	0.0		343.59	2,887.15
Best Estimate	**0.0**		**244.40**	**2,054.71**

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

The monetised benefits are the same as Option 1, as the changes to regulations are the same, however there are more MOTs lost due to an additional year with no MOT required compared to the "do nothing" scenario and therefore a higher reduction in the number of MOTs carried out in a given year.

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

The non-monetised benefits are the same as Option 1, as the changes to regulations are the same, however there are more MOTs lost due to an additional year with no MOT required compared to the "do nothing" scenario and therefore a higher reduction in the number of MOTs carried out in a given year.

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

These are the same as Option 1, as the changes to regulations are the same, however there are more MOTs lost due to an additional year with no MOT required compared to the "do nothing" scenario and therefore a higher reduction in the number of MOTs carried out in a given year.

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m: -199.41
Costs: 0.78	**Benefits:** 47.39	**Net:** -46.61	

Contents

1.0 Policy Rationale

Policy background

1. The MOT test[1] has been in place since 1960 and the 3-year threshold for the first MOT test since the late 1960s[2]. The MOT test was first introduced to assure the safety of a vehicle and in practice check the effectiveness of safety-critical components such as tyres and brakes. In recent years, the concept of roadworthiness has expanded to encompass vehicle emissions and effects on the environment.

2. Sections 45 to 48 of the Road Traffic Act 1988[3] ("the Act") set out the MOT requirements for vehicles (other than large goods vehicles). Section 47 of the Act makes it an offence to use a vehicle (or allow one to be used) without a test certificate issued in the appropriate period. For most light vehicles – such as cars, motorbikes and vans up to 3.5 tonnes – a first certificate is needed within 3 years. Section 47 allows Ministers to change (by regulations) the date when a certificate is first required from 3 years. The new date of the first test cannot be more than 10 years after the car was first brought into service.

3. Since the MOT was introduced – and especially in recent years – there have been major advances in vehicle technology. These include the development of hybrid and electric vehicles, as well as rapid progress in systems that automate actions such as parking or provide information to the driver. Looking to the future, rapid progress is being made in developing autonomous vehicles. The consultation explores a change to the first test date. Other questions around the content of the test and frequency of testing are to form part of the associated call for evidence.

4. The vehicles in scope of this assessment are set out in Table 1

Table 1: Vehicles covered by this assessment and maximum MOT fees

Class	Type of vehicle	Fee
1 & 2	**Motorcycles** **Motorcycles with sidecar** (Class 1 engine size up to 200 cm^3)	**£29.65** **£37.80**
Class 3	**3 Wheeled vehicles** (up to 450kg unladen weight)	**£37.80**
Class 4	**Cars** (up to 8 passenger seats) and **3 Wheeled vehicles** (up to 450kg unladen weight) **3 Wheeled vehicles** (over 450kg unladen weight) **Quads** (max unladen weight 400kg – for goods vehicles 550 kg and max net power of 15w)	**£54.85**

[1] The Ministry of Transport (MOT) test will refer to the more commonly known and understood acronym throughout the remainder of the document to avoid confusiong with the Department for Transport which have prepared this IA and succeded this organisation.

[2] History of the UK MOT (archive.org)

[3] Road Traffic Act 1988 (legislation.gov.uk)

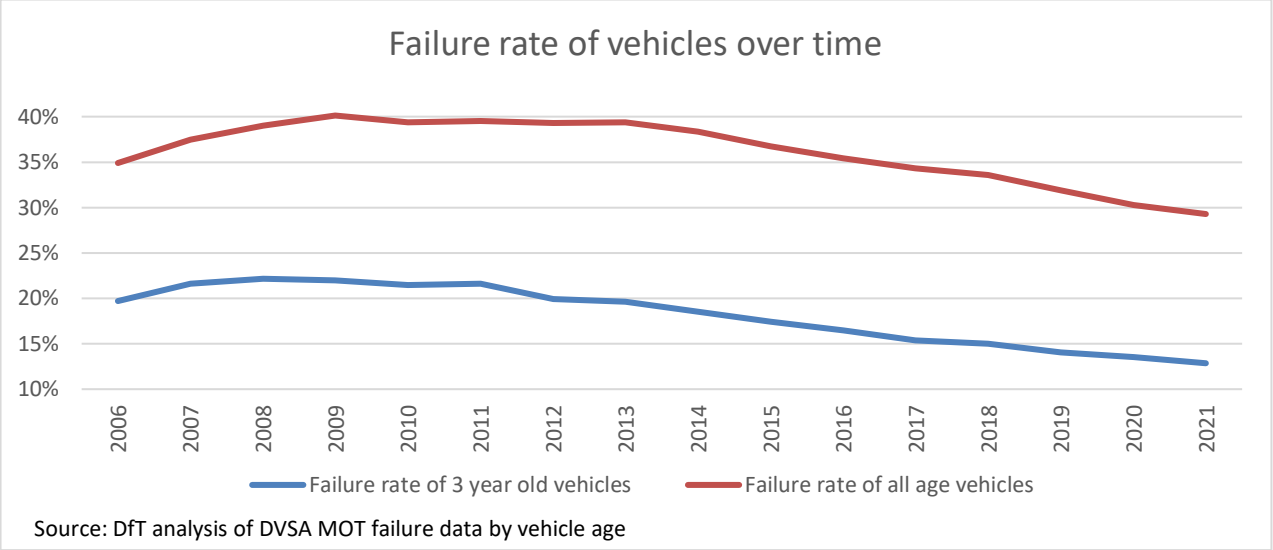
	Dual purpose vehicles **Private hire vehicles and PSVs** (up to 8 seats) **Goods vehicles up to 3,000kg** (Design Gross Weight)	
Class 7	**Goods vehicles over 3,000kg up to 3,500 kg** (Design Gross Weight)	**£58.60**

NB: Table 1 does not cover vehicles such as ambulances, taxis and passenger vehicles that can carry more than eight people which are tested from year one.

Problem under consideration

5. In recent years, the rate of failure at the first MOT testing has been falling, which is shown in Chart 1 below[4]. Vehicles are generally better built than they were in the past. Vehicle technology has advanced rapidly, enhancing the safety performance of cars. Many more systems provide safety-relevant information to the driver.

Chart 1: MOT initial failure rate for vehicles in scope, 2006-2021



Source: DfT analysis of DVSA MOT failure data by vehicle age

6. Chart 1 above shows a comparison of the vehicles in scope of this change and how their MOT initial failure rate has changed over the time. This compares the failure rate for vehicles who currently obtain their first MOT at 3 years old in comparison to the failure rate of all vehicles, irrespective of age. This shows that both have seen a decreasing trend over the last decade or so, but the number of failures for first MOTs is significantly lower than those across all the vehicles. This is also shown later in Chart 3, which presents the failure rates of each vehicle class by individual year.

7. The MOT failure rate is directly related to the components tested as part of the MOT, and because components tested change over time it limits the direct comparison between failure rates. Some minor

[4] Based on data obtained from DVSA on the number of MOT failures by vehicle age. 2006 is the earliest year of data as the MOT system was digitalised in 2005. Several test components were changed over the initial digitised period which may have contributed to the small increases shown in the data.

changes have been made to the MOT test since 2010 that we expected to have increased the failure rate due to added stringency, but overall reductions were still observed and greater weight should be placed on the long run trends rather than yearly fluctuations. We expect this to strengthen our reliance on the reductions observed since 2010 and that broadly these would continue.

8. Therefore, DfT is considering whether it is appropriate for government to require a first MOT test at 3 years to ensure road safety and control of emissions from vehicles, or whether this is now an unnecessary burden on motorists at a time of severe pressure on household budgets.

9. Within this overall problem, we are also considering the issue of mitigating the effects of any change to the requirements for a first MOT test through measures such as reminders to service vehicles.

Rationale for intervention

10. Extending the due date for a first MOT test beyond 3 years after registration for most vehicles under 3.5 tonnes aims to reduce burdens on vehicle owners that have to seek an MOT at the early stage of their vehicle's life. This is expected to provide a better balance between the burden of testing and risk of defect.

11. The burden of an MOT test at 3 years is an example of regulatory failure. While the MOT test since the 1960s has balanced risks and burdens to motorists, we no longer expect this to be the case. Recent developments to vehicle technology and the presence of the MOT test has likely contributed to the improvements in vehicle failures and safety over recent decades, and we now expect that the current requirement on 3-year-old vehicles is unnecessarily burdensome compared to the risks these vehicles present. These improvements and the latest data have prompted the government to intervene to address this failure.

12. There is expected to be only a marginal increase in vehicles being used in an unroadworthy condition from this measure given the marginal increase in the initial MOT period, and hence the current requirement to test vehicles at 3 years old is considered to be burdensome and not reflecting the risks expected from these vehicles. Analysis undertaken for this IA used 2019 data which showed the current initial failure rate for all Classes in scope is 31.9%. It is estimated that this will increase to between 32.2% and 33.2% under Option 1 and to between 32.6% and 34.5% under Option 2.

13. This analysis indicates that the initial MOT test at 3 years creates an excess burden and cost to vehicle owners. Increasing the age for the first MOT test will improve the balance between financial burden to vehicle owners and the wider safety risk to vehicles and the road. The regulatory burden of a test at 3 years can only be tackled through government intervention (i.e. changing the legislation that introduced the requirement for a test at 3 years).

Policy objective

14. The policy objective is to reduce the burden on motorists whilst ensuring that the MOT continues to support the roadworthiness of vehicles, in terms of both road safety and in-use environmental impact. The only possible outcome where the policy objective cannot be met is if this balance is not acheived, but a careful assessment has been made which underpins this regulatory decision to ensure that this does not occur.

15. This work is part of a broader review to understand whether the current MOT testing regime remains appropriate given current and foreseeable changes to motoring. The date of the first MOT test is being considered in advance of other issues because the significant progress in the safety of newer vehicles

and falling MOT failure rates brings into question whether the need for testing 3-year-old vehicles remains.

Options considered

16. We have considered 3 options:

    Option 0 – "Do Nothing": a first MOT will still be necessary for all those vehicles which currently require a test at 3 years (see Table 1).

    Option 1 (preferred) – Change the date when a first MOT test is required from 3 to 4 years.

    Option 2 – Change the date when a first MOT test is required from 3 to 5 years.

17. Our preferred option is Option 1. The MOT test aims to detect whether vehicles have defects that affect road safety or lead to excessive emissions of air pollutants. It also imposes a cost on motorists. While the failure rate for MOTs increases with age, the increase in failure rates between 3 and 4-year-old cars is small and represents a small share of overall MOT failures[5]. The available evidence also suggests that vehicle defects are a contributory factor in few accidents. Taken together, this means that the risk of the change to remove the burden of a mandatory test at 3 years is low. This risk can be further mitigated by additional measures such as advice to motorists on the importance of regular servicing, which through discussions with industry are a key requirement in maintaining vehicle warranties. The change would be in line with the practice of a number of countries such as France, Norway and Ireland – as well as Northern Ireland. The increase in MOT failure rate between 3 and 5 years is higher[6] and consequently the balance between the burden of a mandatory MOT test on vehicle owners on the one hand against increased road safety and environmental risks is different. In our view these risks outweigh the benefits of removing the burden of a mandatory test at 3 years. There is also a possibility that the change from 3 to 5 years (a two thirds increase in the period before a first test is due) might negatively influence motorists' perception of the need to check roadworthiness. This big increase might be taken as a signal from government that makes some motorists over-confident about the resilience of key safety components such as brakes and tyres.

18. The timing of the first MOT test and the frequency of subsequent tests are set out in legislation and cannot be changed without a further legislative instrument. (After the first test, whether that is at 3, 4 or 5 years, MOT tests are required annually.) A non-legislative option has therefore not been considered.

2.0 Costs and Benefits

19. This section explores the anticipated costs and benefits related to the options outlined above. Unless stated otherwise, these impacts and the quantification thereof are in comparison to Option 0 – "Do Nothing" – which is the counterfactual each of the options is being assessed against. The monetised costs and benefits below are all presented as undiscounted values, in 2021 prices.

20. Throughout, the data and analysis have been disaggregated by Class of vehicle, for ease of understanding and tangibility, this is communicated by vehicle type: Motorcycles (Class 1 & 2), Cars

[5] Based on internal analysis of DVSA MOT failure data.

[6] Based on internal analysis of DVSA data from 2019, the current initial failure rate for all Classes in scope is 31.9%, it is estimated that this will increase to between 32.2 – 33.2% under Option 1 and to between 32.6 – 34.5% under Option 2.

(Class 4), Vans (Class 4 & 7) and other vehicles – this includes 3 wheelers (Class 3) and all others in scope of Class 4 vehicles. Further detail is provided in Table 1.

21. Given the similarity of Options 1 and 2, with the only distinguishing factor being the duration between the current and proposed first date of the MOT, both options will carry the same costs and benefits, however the magnitude of each will vary. Therefore, the analysis undertaken within this IA will detail the approaches undertaken under Option 1 in detail, and only the outcomes of the analysis under Option 2 will be presented to avoid duplication.

22. Where possible we have provided quantified and monetised assessments of the impacts associated with each option. Given the early stage of the policy development and the consultation having just been released, further iterations of the IA will be expected ahead of the final submission. A number of areas have incomplete evidence which we are seeking to complete following the consultation which has led to either a non-monetised assessment being used, or indicative figures being used to give a sense of scale. Where we require specific evidence from the consultation, we have clearly explained what evidence we require and how we will obtain this.

Option 0 – Do Nothing

23. This option is considered to be the "counterfactual", where the current regime continues with no change to requirements for the first MOT date. This means that all vehicles in scope, as outlined in Table 1, would be required to continue having a first MOT 3 years after first registration. This leaves the initial MOT testing requirement outdated and risks placing a continued excessive burden and costs for vehicle owners whilst not providing a proportionate balance of safety. Therefore, under this option, the number of vehicles on the road is the same as those considered in Options 1 and 2, with only the number of MOTs required in a given year reducing in Options 1 and 2.

24. MOT testing stations and the DVSA would avoid the anticipated costs originating from Options 1 and 2 as the same level of MOTs would be carried out over the appraisal period. With Options 1 and 2, it is expected that due to the increased duration before an initial MOT test, there could be more unroadworthy vehicles in operation and this could potentially increase the level of collisions. This impact would not be realised under the "do nothing" option as it would remain unchanged over the appraisal period or potentially continue its declining trend. In addition, the financial savings to vehicle owners will not be realised.

25. For the purposes of this assessment, we have not considered the impact of any other future changes to the MOT regime for the vehicles in scope, such as changes to how the MOT is conducted, its content, or the fee associated with the MOT. Therefore, the level of costs will remain the same under this option, and only the reduction in costs will be realised under Options 1 and 2. The charges for the MOT fee have remained unchanged since 2010 and a consultation on increasing these fees was undertaken in 2021[7]. Following that consultation, an increase in fees was not taken forward which justifies our assumption here. Should any changes be made over the appraisal period, this would be subject to a separate IA, but could impact the level of costs and benefits associated with either option.

26. Finally, under this option there would be no other improvements made to the MOT system or how the garages within them operate. While a broader review is currently being undertaken, the impact of

[7] https://www.gov.uk/government/consultations/changing-the-cost-of-dvsa-services-for-2021-to-2022/changing-the-cost-of-dvsa-services-for-2021-to-2022

changes under that review would be assessed separately and it would be impossible to determine the scope of these changes within this IA until that work has concluded.

Option 1 – Change the date where a first MOT test is required from 3 to 4 years

27. This option, as outlined above, would mean that owners of the vehicles in scope (Table 1), must take their vehicle to its first MOT after 4 years rather than 3, and annually thereafter. This will directly cause a reduction in annual tests which, in turn, leads to the impacts described below. Under Option 1 and using 2019 data, it is estimated that the initial failure rate for all Classes in scope will increase from 31.9% to between 32.2% and 33.2%[8].

28. For most of the impacts assessed, we have followed the Regulatory Policy Committee's (RPC) guidance when determining whether impacts are direct or indirect for each of the groups. Some of the impacts have been deemed as indirect due to the number of steps required for the impact to be realised to each of the groups. In some circumstances, businesses will need to make a choice on whether to incur the impact, meaning that these impacts are permissive in nature and therefore indirect.

Summary of Costs and Benefits for Option 1 and Option 2

Monetised Costs

- Familiarisation costs to businesses and public (direct)
- Enforcement costs to government (direct)
- Loss of revenue for the DVSA (direct)

Unmonetised Costs

- Awareness campaign (direct)
- Loss of revenue to MOT testing stations (indirect)
- Potential decrease in road safety (indirect)
- Potential worsened air quality (indirect)
- Impact on insurance premiums (indirect)
- Impact on cost of repairs at MOT (indirect)

Monetised Benefits

- Financial saving for vehicle owners, individuals and businesses (direct)
- Travel time savings for private vehicle owners (indirect)
- Time saving (duration of MOT) for vehicle owners, individuals and businesses (direct)
- Greenhouse Gas (GHG) saving (indirect)

Unmonetised Benefits

- Efficiency savings for MOT testing stations (indirect)

29. The following tables (Table 2 and Table 3), provide a summary of the total quantified costs and benefits of each option, over the 10-year appraisal period. Each cost/benefit total is presented as a nominal total as well as a nominal present value total. The nominal total is the unadjusted value of costs/benefits

[8] Internal analysis undertaken on DVSA MOT failure data. See Appendix 1 for further details.

to account for inflation to prices, whilst the Nominal Present Value Total applies annual discounting (3.5%) which adjusts the future costs/benefits to present value, in 2021 prices and 2022 present value, accounting for social time preference.

Table 2: Summary of costs and benefits arising from Option 1

Option 1 (4-1-1)		Transition / Annual	Impacted actor	Direct / indirect	Nominal total, £m	Nominal Present Value Total, £m
1	Familiarisation cost	Transition	Business	Direct	6.74	6.74
2	Familiarisation cost	Transition	Public	Indirect	14.43	14.43
3	DVSA lost revenue	Annual	Public	Indirect	53.82	45.61
4	**Total cost (calculated before rounding) = (1) to (3)**				**74.98**	**66.78**
5	Cost saving of MOT fee	Annual	Business	Direct	201.43	171.31
6	Cost saving of MOT fee	Annual	Public	Indirect	943.87	799.28
7	Time saving	Annual	Business	Direct	60.71	51.62
8	Time saving	Annual	Public	Indirect	51.46	43.58
9	Journey time saving	Annual	Business	Indirect	17.00	14.45
10	Journey time saving	Annual	Public	Indirect	14.41	12.02
11	Greenhouse gas saving	Annual	Public	Indirect	9.66	8.18
12	**Total Benefits (calculated before rounding) = (5) to (11)**				**1,298.53**	**1,100.63**

Table 3: Summary of costs and benefits arising from Option 2

Option 2 (5-1-1)		Transition / Annual	Impacted actor	Direct / indirect	Nominal total, £m	Nominal Present Value Total, £m
1	Familiarisation cost	Transition	Business	Direct	6.74	6.74
2	Familiarisation cost	Transition	Public	Indirect	14.43	14.43
3	DVSA lost revenue	Annual	Public	Indirect	101.54	85.36
4	**Total cost (calculated before rounding) = (1) to (3)**				**122.71**	**106.53**
5	Cost saving of MOT fee	Annual	Business	Direct	371.58	313.36
6	Cost saving of MOT fee	Annual	Public	Indirect	1,789.32	1,503.06
7	Time saving	Annual	Business	Direct	112.13	94.57
8	Time saving	Annual	Public	Indirect	97.52	81.93
9	Journey time saving	Annual	Business	Indirect	27.31	22.94
10	Journey time saving	Annual	Public	Indirect	31.40	26.47
11	Greenhouse gas saving	Annual	Public	Indirect	14.78	12.41
12	**Total Benefits (calculated before rounding) = (5) to (11)**				**2,444.02**	**2,054.71**

Option 1 - Change the date where a first MOT test is required from 3 to 4 years

Costs

Monetised Transition Costs

Familiarisation costs

30. Changes to the MOT regulations would lead to individuals and businesses needing to familiarise themselves with the new rules to understand when their vehicles would require an MOT or how this could affect their business. This would result in costs to vehicle owners (both businesses with a fleet of vehicles and the public), vehicle repair businesses and vehicle retail businesses. For vehicle repair, businesses need to familiarise themselves with how this regulation will impact their business and make any required adaptions. Vehicle retailers will also need to familiarise their staff with the advice to give customers who are purchasing cars younger than 3 years old in scope of these changes.

31. This impact has been quantified by assessing the amount of time it takes for those needing to familiarise themselves with the change proposed and monetised by estimating the expected cost of their time. For business impacts, the Non-Wage Labour Uplift (NWLU)[9] of 26.5% has been used (which accounts for the wider costs to businesses of employing an individual).

Familiarisation cost for vehicle owners (private)

32. The impact has been estimated by multiplying:
    (1) the number of vehicle owners with a vehicle younger than 3 years old in 2023, using vehicle registration data from the Driver and Vehicle Licensing Agency (DVLA) database (not published) from 2017 to 2022;
    (2) vehicle forecasts of future ownership (using a 25% sensitivity to account for uncertainties in the data which presents a range of privately owned vehicles)[10] to estimate the number of vehicles in scope over the appraisal period;
    (3) the anticipated time taken to familiarise; and
    (4) by their estimated value of time.

33. It is assumed that it would take vehicle owners and vehicle retailers 45 minutes to familiarise themselves with the regulation because the change is not estimated to be complex to understand and hence it will not be time-consuming to familiarise oneself with. A low estimate of 30 minutes and a high estimate of one hour has been used to capture the uncertainty around this impact. This is an initial estimate and may be revised at a later stage once the proposed changes have been finalised.

34. To monetise this impact, the value of public time is given by the perceived market cost value of non-working time as detailed in the Transport Analysis Guidance (TAG) Data Book[11] for the central scenario. For the high and low sensitivities, plus or minus 25% has been used to represent the different ranges of car owners – who will value their leisure time differently.

[9] TAG unit A4.1 social impact appraisal (publishing.service.gov.uk) Paragraph 2.2.4

[10] Internal forecasts obtained from the underlying data to the National Road Projections, yet to be published

[11] TAG Data Book (A1.3.2) https://www.gov.uk/government/publications/tag-data-book

Table 4a: Familiarisation cost to private vehicle owners

	(1)	(2)	(3)	(4) = (1)* (2) * (3)
Estimate	**Number of vehicle owners**	**Hours needed**	**Value of time, £ per hour**	**Total costs (one-off), £m**
Low	3,044,647	0.5	4.74	7.21
Central	3,044,647	0.75	6.32	14.43
High	3,044,721	1	7.90	24.04

35. Table 4a shows the total one-off direct cost to private vehicles owners to be £14.43m (range of £7.21m to £24.04m).

Familiarisation cost for vehicle owners (businesses)

36. The impact has been estimated by multiplying the number of businesses with a vehicle fleet[12] (using a 25% sensitivity to account for reliability of data source), by the anticipated time taken to familiarise and by the hourly wage of administrative staff given by the Annual Survey of Hours and Earnings (ASHE) survey (SOC:41), using the 25th percentile as the low estimate, the median as the central and the 75th percentile as the high value estimate. This is multiplied by the NWLU to calculate the overall cost.

37. It is assumed that one member of staff per business will be required to familiarise themselves with this regulation, as it is anticipated that only the fleet manager will have to in businesses with a large vehicle fleet, and it is assumed that businesses with a small fleet of vehicles will have one member of staff who oversees the running of the fleet as part of their wider role.

Table 4b: Familiarisation cost to vehicle owning businesses

	(1)	(2)	(3)	(4)	(5) = (1) * (2) * (3) * (4)
Estimate	**Number of businesses with a vehicle fleet**	**Number of staff required to familiarise**	**Hours needed**	**Hourly wage (inc. NWLU), £ per hour**	**Total costs (one-off), £m**
Low	126,882	1	0.5	13.16	0.83
Central	169,176		0.75	15.56	1.97
High	211,470		1	19.39	5.13

38. Table 4b shows the total one-off direct cost to businesses owning vehicles to be £1.97m (range of £0.83m to £5.13m).

Familiarisation cost for vehicle repair businesses

[12] This has been estimated by using 2020 market research data from researchandmarkets.com, scaled up to 2021 by using the ratio of businesses to company owned vehicles.

39. For vehicle repair businesses it is assumed that it could take around 4 hours (with 25% sensitivities) to familiarise themselves with the regulation, as they need to understand how this will impact their business in the short and long term, as well as make any associated adaptions to their business such as altering their systems. Four hours has been assumed for this based on internal expectations as it is anticipated that any adaptions required to their systems will not be hugely burdensome or time-consuming. Such adaptations could be altering the date of first MOT reminders to customers, or re-scheduling existing appointments with customers.

40. The impact has been estimated by multiplying the number of staff needing to familiarise themselves per MOT testing station, by the number of MOT testing stations[13] in Great Britain, by the anticipated time taken to familiarise and by the hourly wage of staff, given by the ASHE survey (SOC:5231), using the 25th percentile as the low estimate, the median as the central and the 75th percentile as the high value estimate. Each of these is then multiplied by the NWLU to calculate the overall cost.

Table 4c: Familiarisation cost to MOT testing sites

.	(1)	(2)	(3)	(4)	(5) = (1)* (2) * (3) * (4)
Estimate	**Number of GB MOT testing stations**	**Number of staff required to familiarise**	**Hours needed**	**Hourly wage (inc. NWLU), £ per hour**	**Total costs (one-off), £m**
Low	23,467	2	3	13.80	1.94
Central		3	4	16.45	4.63
High		4	5	19.65	9.22

42. Table 4c shows the total one-off direct cost to MOT testing businesses to be £4.63m (range of £1.94m to £9.22m).

Familiarisation cost for vehicle retail businesses

43. The impact has been estimated by multiplying the number of staff (low estimate – 25% of the vehicle sales workforce, central – 50% of the vehicle sales workforce, high – 75% of the vehicle sales workforce[14]) needing to familiarise themselves by the anticipated time taken to familiarise and by the hourly wage of staff, given by the ASHE survey (SOC:7115), using the 25th percentile as the low, the median as the central and the 75th percentile as the high value. Each of these is then multiplied by the NWLU to calculate the overall cost. Table 4d below shows the total one-off direct cost to vehicle retail businesses to be £0.13m

Table 4d: Familiarisation to vehicle retailers

	(1)	(2)	(3)	(4) = (1) * (2) * (3)
Estimate	**Number of staff**	**Hours needed**	**Hourly wage (inc. NWLU), £ per hour**	**Total costs (one-off), £m**

[13] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1060274/dvsa-mot-06-mot-test-stations-and-testers-.csv/preview

[14] https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=168

	required to familiarise			
Low	6,525	0.5	12.42	0.04
Central	13,050	0.75	13.79	0.13
High	19,575	1	15.34	0.28

Total familiarisation cost for businesses

Table 4e: Total familiarisation cost to business

	(1)	(2)	(3)	(4) = (1) + (2) + (3)
Estimate	**Vehicle owners (business)**	**Vehicle repair businesses**	**Vehicle retail businesses**	**Total costs (one-off), £m**
Low	0.83	1.94	0.04	2.82
Central	1.97	4.63	0.13	6.74
High	5.13	9.22	0.28	14.63

44. Based on the monetised familiarisation costs, it is estimated that there will be a one-off direct cost to private vehicle owners of £14.43m (range of £7.21m to £24.04m) and a total one-off direct cost to businesses of £6.74m (range of £2.8m to £14.63m). The consultation seeks to understand how businesses will be affected generally by changes to the date of the first MOT and their responses could provide further clarity to the time estimates outlined above.

Monetised On-going Costs

Loss of revenue for DVSA

45. For every MOT test, the DVSA receive a 'slot fee' (£2.05) that funds DVSA digital systems used to support the MOT, DVSA enforcement of the MOT and the authorisation of testers, garages and businesses[15]. Extending the first MOT date from 3 to 4 years will reduce the number of MOTs carried out each year and therefore reduce the revenue the DVSA receives from slot fees. DVSA has a strategy to review fees for all services aimed at eliminating deficits by the end of the spending review 2021 period (i.e. by 2024-25) which will resolve this dependency – but in the short term this will require some replacement funding.

46. This impact to the DVSA (and therefore the public sector) has been monetised by multiplying the slot fee (£2.05) by the annual reduction in MOTs that has been modelled, assuming the slot fee does not change over the course of the appraisal period. The charges for the MOT and slot fee has remained unchanged since 2010, which was explained in a consultation on increasing these fees undertaken in 2021[16]. Following that consultation, an increase in fees was not taken forward which justifies our assumption here. Should the slot fee increase/decrease over the appraisal period in nominal terms,

[15] https://www.gov.uk/government/consultations/changing-the-cost-of-dvsa-services-for-2021-to-2022/list-of-proposed-fees-for-dvsa-services-for-2021-to-2022#providing-mot-tests

[16] https://www.gov.uk/government/consultations/changing-the-cost-of-dvsa-services-for-2021-to-2022/changing-the-cost-of-dvsa-services-for-2021-to-2022

this would increase/decrease the total cost to DVSA but would be subject to a subsequent IA and not accounted for here.

47. The annual reduction in the total number of MOTs has been estimated using vehicle registration statistics from 2017-2022, using internal DfT statistics, disaggregated by Class and ownership. To forecast the number of vehicles reaching 3 years old in 2023 and 2024, an average drop-out rate for new vehicles has been applied to those registered in 2020 and 2021, i.e. those vehicles that will not reach their first MOT. To estimate the number of vehicles due an MOT from 2025 onwards, growth factors obtained from the internal National Transport Model (NTM) have been applied to the pre-pandemic (2017-2019) average number of 3-year-old vehicles. There are low, central and high scenarios to account for uncertainties in future vehicle ownership, given vehicle ownership is likely to vary over the appraisal period due to wider factors such as desire to own a vehicle and the cost of running a vehicle. The DfT, currently, only has growth factors for cars and to apply these growth rates to other vehicle types the following assumptions have been made:

    - The growth rate for other Class 4 vehicles and Light Goods Vehicles (LGVs) is the same as cars.

    - The central estimate for the growth rate of cars has been applied as the high estimate for motorcycles, zero as the low estimate, and an average between the high and low for the central estimate which assumes growth in motorcycles will be much slower than for other vehicle types, as indicated by comparing different vehicles licensed in DfT statistics (VEH0103).

Table 5: Impact on yearly requirement for initial MOT

Vehicle registration	Year of first MOT before regulation	Year of first MOT after regulation
Vehicles registered before April 2020	2023	2023
Vehicles registered after April 2020	2023	2024
2021	2024	2025
2022	2025	2026
2023	2026	2027
2024	2027	2028
2025	2028	2029
2026	2029	2030
2027	2030	2031
2028	2031	2032

48. Throughout, it has been assumed that this legislation will be brought into effect as law in April 2023 and hence the first group of vehicle owners to be impacted will be those who registered a new car in April 2020 onwards. Once further clarity emerges on the implementation date, this will be reflected in the modelling for the final-stage IA.

49. Using the logic displayed in Table 5 above, the annual reduction in tests has been modelled by comparing how many MOT tests (total, not just initial MOTs) would have occurred each year during Option 0 and how many MOT tests would now occur as a result of Option 1. The annual reduction in MOT tests increases over time due to the anticipated growth in the number of vehicles obtained from the forecasts.

50. Tables 6a, 6b and 6c below outline the annual reduction in MOT tests for each scenario, quantified using the logic above. The values for 2023 and 2024 are lower than other years, as the two years each capture a share of the vehicles registered in 2020, whereas later years capture a full year of vehicle registrations. The low and high scenarios are defined from the underlying scenarios used within the NTM, reflecting low productivity growth and migration in the low scenario, and levels which return to their long-term average trend in the high scenario[17].

Table 6a: Annual reduction in MOTs low scenario(1a)

Low Scenario	Motorcycles (Class 1 & 2)	Cars (Class 4)	LGVs (Class 4 & 7)	Other Vehicles (Class 3 & 4)	Total
2023	56,483	1,046,178	200,081	12,979	1,315,720
2024	79,974	1,530,092	316,378	21,476	1,947,920
2025	75,384	2,364,446	303,452	29,009	2,772,291
2026	75,384	2,384,043	305,967	29,250	2,794,644
2027	75,384	2,403,803	308,503	29,492	2,817,182
2028	75,384	2,423,727	311,060	29,736	2,839,908
2029	75,384	2,443,816	313,639	29,983	2,862,821
2030	75,384	2,464,072	316,238	30,231	2,885,925
2031	75,384	2,484,495	318,859	30,482	2,909,220
2032	75,384	2,505,088	321,502	30,735	2,932,708

Table 6b: Annual reduction in MOTs central scenario(1b)

Central Scenario	Motorcycles (Class 1 & 2)	Cars (Class 4)	LGVs (Class 4 & 7)	Other Vehicles (Class 3 & 4)	Total
2023	56,483	1,046,178	200,081	12,979	1,315,720
2024	79,974	1,530,092	316,378	21,476	1,947,920
2025	75,756	2,368,185	303,932	29,055	2,776,928
2026	76,131	2,391,589	306,936	29,342	2,803,998
2027	76,507	2,415,225	309,969	29,632	2,831,333
2028	76,885	2,439,095	313,033	29,925	2,858,937
2029	77,265	2,463,200	316,126	30,221	2,886,812
2030	77,646	2,487,544	319,251	30,519	2,914,960
2031	78,030	2,512,128	322,406	30,821	2,943,385
2032	78,416	2,536,955	325,592	31,126	2,972,088

Table 6c: Annual reduction in MOTs high scenario(1c)

High Scenario	Motorcycles (Class 1 & 2)	Cars (Class 4)	LGVs (Class 4 & 7)	Other Vehicles (Class 3 & 4)	Total
2023	56,483	1,046,178	200,081	12,979	1,315,720
2024	79,974	1,530,092	316,144	21,476	1,947,686
2025	76,129	2,375,325	304,615	29,143	2,785,210
2026	76,881	2,406,032	308,556	29,519	2,820,988
2027	77,641	2,437,137	312,547	29,901	2,857,226
2028	78,408	2,468,643	316,591	30,288	2,893,930
2029	79,183	2,500,557	320,687	30,679	2,931,106
2030	79,966	2,532,884	324,836	31,076	2,968,761
2031	80,756	2,565,628	329,038	31,477	3,006,899
2032	81,554	2,598,796	333,295	31,884	3,045,529

[17] NTM, soon to be published.

51. Table 7 applies the slot fee charged by DVSA to the total annual reduction in MOT tests estimated in Tables 6a, 6b and 6c above, to monetise the loss of revenue to DVSA.

Table 7: Total cost to DVSA over 10 years, £m

Loss of revenue to DVSA	Low	Central	High
Total	53.13	53.82	56.73

52. This shows the total direct cost to the DVSA (public sector) per year, the total undiscounted cost to the DVSA across the 10 year appraisal period is £53.82m, with a range of £53.13m to £56.73m. This fall in slot fee payments will reduce revenue for DVSA, whilst costs of delivering services to the MOT industry will not change. This gap in funding will need resolution, but how that is done is out of the scope of this IA.

Unmonetised Costs

Awareness campaign

53. In order to communicate the regulation change with stakeholders (e.g. MOT testing stations and vehicle owners), messaging will be communicated through existing channels, such as newsletters and social media. Therefore, it is estimated that this work will be carried out by an existing employee in a communications and engagement team and hence this cost is realised as the opportunity cost of forgoing other work. This would be a direct one-off cost to the government, however it has not been monetised as it is expected to be accounted for through the wage of existing staff as it is considered as part of their regular duties. It is, therefore, not likely to come at an additional cost to the government and we would not be able to predict the scope of the campaign and budgets at this stage. Should clarity emerge on this point, this will be reflected in the final stage IA.

Administrative Cost of Enforcement

54. The requirement to have a valid MOT for a vehicle is enforced through the Vehicle Excise Duty (VED) regime, also known as road tax. It is illegal to drive on public roads without taxing your vehicle (unless driving it to an MOT centre), which is not possible without a valid MOT. When a motorist renews their VED, the DVLA system checks that there is a valid MOT certificate (and valid insurance) for that vehicle. If a vehicle is less than 3 years old, the system will not require an MOT. The proposed change to the date when an MOT is first required will mean adapting IT systems to reflect that change.

55. It is estimated that the enforcement cost of this change will only be realised as an administrative cost of updating DVSA's systems to reflect the new requirement. This would be quantified by multiplying the anticipated time to update the systems by the hourly wage of government administrative staff given by the ASHE survey (SOC:411), using the 25th percentile as the low, the median as the central and the 75th percentile as the high value. Each of these is then multiplied by the NWLU to calculate the overall cost. At present, we have not received estimates of time required to monetise this from the DVSA so this will be considered in the final stage IA.

56. There is also some level of uncertainty as to whether MOTs will continue to be enforced using VED. This is something being explored in the call for evidence as part of the consultation but it is not expected to be in scope of this regulatory change. Hence there is scope for this cost to change after the consultation but this would be captured under any future planned interventions.

Loss of revenue to MOT testing stations

57. The reduction in the number of MOT tests will be realised by MOT providers as a reduction in custom, as fewer vehicle owners are required to have an MOT each year. The below aims to scope the impact of this change on MOT testing station survival, but due to the assumptions/uncertainties outlined below it is an unmonetized cost.

58. The DVSA understand that in many MOT testing stations, MOTs are sometimes sold at a loss (compared to the maximum prices in Table 1) to attract custom or sell other products/services (e.g. repairs). There is insufficient evidence to understand how many vehicle repair businesses depend on MOTs for revenue and/or custom, the consultation seeks to investigate this. Any information collected will be used in the final stage IA to improve the narrative and understanding of how this change will impact the survival of MOT testing centres and support any further quantification.

Consultation Question: *To what extent does your business rely on MOTs for custom?*

59. As outlined in Tables 6a, 6b and 6c above, there is expected to be an annual reduction in the number of MOT tests undertaken. When comparing the historical average number of MOTs conducted annually between 2015 and 2020 to the forecasted number of MOTs after regulation, it equates to about an 11% reduction in annual MOT tests (range of 10 – 12%) after 10 years, see Table 9 below. This impact is likely to be realised by vehicle repair businesses as a fall in custom. The data used to inform the historical annual average of MOTs does not disaggregate beyond Class type and groups Classes 1 & 2 and Classes 3 & 4 so this data is likely to give a higher estimate for annual MOTs, hence the assumptions in Table 8 have been applied to the data.

60. The current annual number of MOTs is estimated to be around 28 million – this is the historical average of total MOT tests conducted each year (2015-2020) as published on GOV.UK[18]. This dataset disaggregates vehicles by Class, not all of which are in scope. To account for this, we have used the following scenarios for the number of vehicles in scope of each Class, as not all vehicles in Class 4 and 7 are in scope of this regulation change. Further refinement is expected to take place for these scenarios in parallel with the consultation when we understand the number of vehicles from each Class in scope.

Table 8: Assumptions applied to the historical number of MOTs

	Low	Central	High
Class 1	100%	100%	100%
Class 2	100%	100%	100%
Class 3	80%	90%	100%
Class 4	80%	90%	100%
Class 7	80%	90%	100%

Table 9: Annual MOTs after regulation and percentage change

	Low		Central		High	
	Number of annual MOTs	Percentage reduction	Number of annual MOTs	Percentage reduction	Number of annual MOTs	Percentage reduction
2023	23,621,847	-4%	26,618,872	-5%	29,615,897	-5%
2024	22,989,647	-6%	25,986,672	-7%	28,983,931	-8%

[18] MOT test results by Class of vehicle - GOV.UK (publishing.service.gov.uk)

2025	22,165,277	-9%	25,157,664	-10%	28,146,407	-11%
2026	22,142,923	-9%	25,130,595	-10%	28,110,629	-11%
2027	22,120,385	-9%	25,103,259	-10%	28,074,391	-11%
2028	22,097,659	-9%	25,075,655	-10%	28,037,687	-11%
2029	22,074,746	-9%	25,047,781	-10%	28,000,511	-11%
2030	22,051,642	-10%	25,019,632	-10%	27,962,857	-12%
2031	22,028,347	-10%	24,991,208	-11%	27,924,718	-12%
2032	22,004,859	-10%	24,962,504	-11%	27,886,088	-12%

61. Revenue comparison, outlined in Tables 10 and 11 below, has been used to understand the scale of this impact on MOT testing stations, however this analysis is subject to caveats and is based heavily on the following assumptions. At this stage, these are the best estimates but the consultation seeks to understand the relationship between MOTs and revenue for testing centres.

    - It is assumed that the MOT fee is directly proportional to revenue gained from an MOT, however it is likely that associated work/repairs on the back of the MOT provide the MOT testing station with additional incomes.

    - It is also believed that MOTs are sold at lower than the maximum price set out, as mentioned above. Hence it is unlikely that the MOT fee is proportional to revenue and therefore the estimates below are likely to be an understatement. At this stage, these are the best estimates but the consultation seeks to understand the relationship between MOTs and revenue for testing centres.

    - Full employment is assumed, in accordance with microeconomic theory held by the Green Book[19] on opportunity cost and full employment in the economy, which means that any fall in MOT associated work will free up MOT testing station staff time allowing them to complete work elsewhere which might provide a different source of revenue for MOT testing stations.

62. The values used for the cost of an MOT (see Table 19 for MOT fees including the slot fee) are based on the government-set maximum price and anecdotal evidence provided by the DVSA. This impact has been categorised as unmonetised due to the assumption that any time freed up from undertaking fewer MOTs will be repurposed for other work. This would mean the MOT testing station would not experience a net change in revenue and therefore it would have no bearing on the Net Present Value (NPV). Some indicative analysis has been carried out on the scale of impact, but there is moderate uncertainty due to the caveats and assumptions used, and we are seeking to understand the impact of this assumption during the consultation.

> Consultation Question: *To what extent is it fair to assume that any fall in the number of MOTs will free up garage staff and allow them to complete other tasks instead?*
>
> Consultation Question: *Do you have staff purely dedicated to MOT testing?*
>
> Consultation Question: *If Yes (to Question above), what percentage of your employees are only MOT testers?*

[19] Chapter 6 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063330/Green_Book_2022.pdf

63. Table 10 contains low, central and high estimates of MOT fees for Classes 1 and 2, 4 and 7. Table 11 estimates the costs for all vehicles by multiplying the annual reduction in MOT tests (disaggregated by Class, as outlined in Tables 6a, 6b and 6c) by the MOT fee per vehicle type[20]. The DVSA slot fee has been deducted from the totals and considered in the section of this assessment on DVSA income[20].

Table 10: MOT fees (minus the DVSA's slot fee),

	Low	Central	High
Class 1 & 2	21	28	36
Class 4	31	42	53
Class 7	33	45	57

Table 11: Total cost of reduced MOTs to MOT testing stations, £

	Low	Central	High
2023	40,215,589	54,519,861	68,824,133
2024	59,617,377	80,820,915	102,012,107
2025	85,022,858	115,447,612	146,164,879
2026	85,714,679	116,578,020	148,046,331
2027	86,412,234	117,719,548	149,952,023
2028	87,115,571	118,872,304	151,882,268
2029	87,824,737	120,036,401	153,837,384
2030	88,539,781	121,211,949	155,817,690
2031	89,260,752	122,399,063	157,823,512
2032	89,987,698	123,597,854	159,855,179

64. The impact on the survival of MOT testing stations depends on the extent to which they rely on MOTs for their revenue, for example some MOT testing stations may solely rely on MOTs and associated repairs for their stream of revenue (from subsequent repairs) and hence the annual reduction in tests could equate to a proportionate fall in associated revenue. Although this revenue may reduce for testing stations, the expectation is that from a UK perspective, this freed up time will be used elsewhere in the sector or in other sectors in the economy, therefore having no net reduction due to the full employment assumption employed by the Green Book. If MOT testing centres cannot recoup the fall in revenue (estimated at between £90m and £160m per year at the end of the appraisal period, as outlined in Table 11 above), from other work, there is a risk of insolvency and/or staff redundancies. On the latter, it could be considered more likely that fewer new entrants enter the sector and there may be a redistribution of labour and responsibilities rather than insolvencies. The consultation seeks to improve understanding of the reliance on MOTs and the wider impact on MOT testing station revenue and survival. Should the consultation produce evidence on these uncertainties, the final stage IA will incorporate this evidence into the analysis.

65. Some garages could be dependent on the revenue from wider MOT work associated with vehicle failures, and given the reduced number of tests, and therefore failures, wider repair work could also be perceived as being reduced. However, following the Green Book, we assume individual compliance with the law which states that individuals should maintain their vehicles in a roadworthy manner, and therefore, we do not expect there to be the full impact of a reduced number of failures and therefore wider revenue losses.

[20] https://www.gov.uk/getting-an-mot/mot-test-fees

Potential decrease in road safety

66. One of the main effects anticipated from delaying the date of a first MOT is that more vehicles could be operating on the roads in an unroadworthy condition that would have been spotted at their initial 3-year MOT, which results in more vehicles failing their initial MOT a year later. This, in turn, could translate into more collisions on roads where vehicle defects are a key factor. More time and mileage will have passed before vehicles take a first MOT which increases the probability of failure. This, in turn, is expected to cause an increase in collisions and casualties where a vehicle defect is present (and could have been identified and rectified in an earlier MOT).

67. Given this anticipated impact, and as part of this IA, DfT have sought to recreate and update some previous analysis commissioned by DfT and conducted by the Transport Research Laboratory (TRL) in 2011. Their original analysis sought to investigate the prevalence of vehicle defects in accidents and to estimate the likely impact of moving to a different regime on the future level of casualties and accidents. DfT analysts have successfully recreated the approach and used more recent data to provide new estimates as part of this IA to determine the likely outcome of these options.

68. Given the complexity of the methodology, a summary is provided below with more detail being provided at Appendix 1. The analysis undertaken follows 5 steps (outlined below) which estimates the vehicle fleet that would result in an MOT failure, and using data on the relationship between failures and the number of casualties, we quantify the expected increase in the number of casualties involved in collisions from vehicles that would fail their MOT.

    (1) **Estimate the number of vehicles in the fleet with defects.** Using DVSA MOT data for 2019, we have calculated the initial MOT failure rate by the age of the vehicle for each vehicle type in scope (see Table 1). Since the 2011 assessment, the number of MOTs has increased by 16%, while the number of initial MOT failures has fallen from 7% to 32%. (This is before the effects of changing the date of the first MOT is taken into account in step (3).)

    (2) **Estimate the relationship between vehicle defects and collisions by vehicle type and vehicle age by combining road collision (STATS19) and licensing data (from the DVLA).** The data from 2019 shows that where collisions had a contributory factor (CF) assigned[21], around 1.5 – 1.7% were from vehicle defects. The number of collisions where a vehicle defect was assigned has fallen from 2,342 in 2010[22] to 1,455 in 2019 (a reduction of 38%), reflecting a broad improvement in road safety (i.e. there were fewer collisions overall and collisions from vehicle defects reduced in line with that overall trend)[23].

    (3) **Estimate the change in initial MOT failures under each option.** Following the 2011 methodology, we use behavioural assumptions on the likelihood of individuals identifying and seeking a repair to their vehicle without the prompt of their first MOT. If we remove the requirement to have an MOT at 3 years and as a result motorists do not get repairs done, more vehicles will have defects. We consider a range (between 25% and 100%) for the number of vehicle owners who would not seek a vehicle repair without being prompted by an MOT. We use this range to update, for each policy option, the estimate in step (1) of the number of vehicles with defects that would constitute an MOT failure. We are looking to refine these assumptions further after the consultation.

[21] In 2019, around 66% of casualties in collisions had a CF assigned to the collision.

[22] 2010 data has been used as a direct comparator to 2019, as this number was not detailed in the TRL study based on 2009 data.

[23] A small component of this is a reduction in the number of CF's recorded by police officers which may overestimate this reduction.

(4) **Calculate the new collision risk rates and scaling factors.** The first step estimates the 'do nothing' collision rate based on the observed data and then uses the new levels of MOT failures in step (3) to estimate how this rate would change under each of the options presented for each vehicle Class. This creates a scaling factor which is used to convert the number of collisions where a vehicle defect was recorded to the expected number of casualties.

(5) **Scale the 2019 estimates (2) using the scaling factors from (4) to estimate the number of additional casualties because of each option presented.** The outcomes of this analysis are presented in Table 12 below.

Table 12: Casualties in collisions based on STATS19 data for vehicle Classes, adjusted

Casualties in collisions, all Classes identified STATS19, 2019	All casualties in collisions (any known MOT Class)	All casualties where a vehicle defect was assigned
Fatal	1,557	20
Serious*	26,077	333
Slight*	116,019	1,102
All	**143,653**	**1,455**

Table 13: Outcomes of the updated safety analysis, additional annual impact compared to 2019 levels

MOT Test Frequency	Predicted additional casualties involving:				All casualties*
	Class 1**	Class 2	Class 4	Class 7	
4-1-1-1 (Option 1)					
Fatal	0 - 0	0 - 0	0 - 1	0 - 0	0 - 1
Serious	1 - 4	0 - 2	3 - 10	0 - 0	4 - 16
Slight	2 - 7	0 - 1	10 - 39	1 - 2	12 - 48
All*	**3 - 11**	**1 - 3**	**12 - 50**	**1 - 2**	**16 - 65**

*Numbers may not sum to totals due to rounding
**Classes are explained in further detail in Annex A, Table A1.

69. The results of the analysis show that we expect the level of casualties in collisions could increase because of this change, by around 1 – 4% under this option. This represents the collisions where a vehicle defect CF was assigned, and when compared to the overall level of collisions regardless of CF, the overall magnitude is small, around 0.01 – 0.05%. Given the uncertainty associated with the resulting numbers, we have not included these in the NPV, and instead have included the impact of monetising these impacts in the sensitivity analysis section to determine how the NPV would change as a result of accounting for the safety impacts.

70. Several assumptions have been made throughout the analysis which may affect the estimated impacts of the considered options. It has been performed on 2019 data alone and assumes that all vehicle defects identified in STATS19 would constitute a failure in an MOT, which may not be the case. Where possible, the assumptions have associated uncertainty ranges, and further clarification is expected to take place after the consultation.

Consultation Question: *In your view, if you believe that your vehicle had a fault, either through a warning light or your own knowledge, before its MOT due date, how likely would you seek a repair of your vehicle?*

Switching and breakeven analysis for road safety

71. As we have chosen not to place a monetary value on the estimated level of casualties in collisions as a result of these changes due to the associated uncertainties, we have included some brief analysis

below which assesses the impact of including this on the level of benefits and how many of each severity of casualty would need to occur to erode all of the benefits. We will seek to refine this after the consultation, where it might be decided to include this monetisation in the overall Business Impact Target (BIT) calculations.

72. Throughout this analysis, we have utilised TAG Data Book estimates on the Value of Prevented Fatality (VPF)[24], which provides the average value for the loss of output, the human loss and the costs imposed for each severity of casualty. These are then multiplied by the estimated level of casualties under this option and subtracted from the total undiscounted benefits or the cost savings only dependent on the scenario used.

Table 14: Average VPF per casualty by severity, 2021 prices, 2023 values, £

Casualty type	Net output	Willingness to pay*	Medical & ambulance	Total
Fatal	152,796	2,264,595	1,311	2,418,703
Serious	29,433	221,689	17,830	268,952
Slight	3,111	16,228	1,320	20,659
Average, all casualties	9,285	76,780	4,118	90,183

Table 15: Benefits after accounting for monetised safety impact, £m undiscounted

	Option 1	
	Low	High
Total benefits minus safety	1,258.32	1,186.23
Cost savings only minus safety	1,122.09	1,050.00

73. In addition, we have calculated the number of each casualty severity that would be required to erode the total level of benefits for each category in Table 16 below. This divides the overall level of benefits in each scenario by the different levels of the VPF by severity to provide the highest number of casualties of each severity required to erode the benefits. We have scaled the outputs of the safety analysis over the appraisal period using the same growth factors applied to the number of vehicles on the road, assuming no wider improvements to road safety of failure rates are seen over the appraisal period. As shown in Table 16 below, when comparing the number of each casualty by severity required to outweigh the benefits (rows 2 and 3), this is substantially higher than the estimated number of casualties of each severity over the appraisal period (row 1) and therefore not likely to be reached as a result of this regulatory change.

Table 16: Maximum number of each casualty severity required to erode the benefits over 10 years

	Fatal	Serious	Slight	Average casualty
Estimated casualties over appraisal period	3 - 10	43 - 178	132 - 541	-
Number needed to outweigh total benefits	467	4,202	54,709	12,533
Number needed to outweigh cost savings only	418	3,755	48,890	11,200

[24] TAG Data Book, A4.1.1

Potential increase in emissions from vehicles

74. As a result of longer periods between MOT tests under this option, vehicles that would fail their MOT on emissions would go undetected for a longer period of time, increasing the level of emissions produced. While we consider newer vehicles (those in scope) to have some of the best emissions compared to the whole vehicle parc, there is likely to still be some impact on the level of greenhouse gases and human health. The annual number of deaths caused by human-made air pollution in the UK is roughly equivalent to between 28,000 and 36,000 every year. Road transport is estimated to contribute 12.4% of primary particulate matter and 33.6% of nitrogen oxides[25].

75. The MOT test for petrol engines tests carbon monoxide and hydrocarbons at fast idle and idle. Emission tests for diesel engines measure smoke opacity at full throttle position. Detailed information on the emissions testing is set out in the DVSA publication: "In Service Exhaust Emission Standards for Road Vehicles"[26]. Table 17 below shows the data available to the DVSA on vehicles failing the emissions tests for petrol engines in 2021. However, this data only represents a sample of garages and therefore tests and could be misrepresenting the overall effect. Further analysis will take place in parallel with the consultation.

Table 17: Emissions failure rates

Emission test	Initial Fails	Total tests	Initial emission failure compared to total initial failures
Hydrocarbons (HC)	57,622622	33,168,939*	0.58%
Carbon Monoxide (CO)	198,186		1.98%
Diesel smoke (opacity)	118,351		1.18%
Other emissions-related failures	730,138		7.29%
Total emissions initial failures	**1,104,297**		**11.03%**
Total initial failures	**10,010,559**		**30.18%**

*To note, the total number of tests from the data provided by DVSA differ to that used elsewhere in the IA analysis and should be treated with caution, until reconciled ahead of the final stage. Therefore, the percentages are more likely to be robust compared to absolute numbers in this table.

76. Following the change in the regulations, it could be expected that those vehicles that would have failed their initial MOT due to the emissions being produced would continue to pollute at higher levels until this is picked up in their first MOT. Statistics produced by DfT show that in 2021, the average grams of CO2 emitted per kilometre travelled by cars and vans were 120g/km and 198g/km respectively[27].

77. While not all vehicles fail their MOT based on emissions, internal analysis has predicted that the MOT failure rate for cars could increase from 31.9% to 32.2 – 33.2% under Option 1 and 32.6 – 34.5% under

[25] https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health

[26] In service exhaust emission standards for road vehicles: 19th edition (publishing.service.gov.uk)

[27] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1090492/veh0156.ods

Option 2. If the level of MOT failures due to emissions remains the same, this could result in the level of emissions being produced by failing vehicles increasing by a similar amount. Estimates of the increase in emissions failures are provided in Table 18 below, broken down by the emission type where possible. Also included in Table 18 is the total number of failures associated with the broad emissions category to give an upper bound on the estimates. This is based on the level of MOT emission-failures that would have happened in 2019 based on the proposed options for the Classes of vehicles tested.

78. We are currently working with Department for Environment Food and Rural Affairs (DEFRA) colleagues in parallel with the consultation to refine the analysis further to turn the failures in Table 18 below into an estimate of the impact of emissions to determine the net impact on emissions and air quality from this change. Further refinement would be needed to identify failures for the specific vehicles in scope, as the failures above cover all of the vehicle parc and therefore we expect this to overestimate the number of failures due to the smaller scope of this policy.

Table 18: Predicted emissions failures by option

Emission	**MOTs conducted in 2019**	**Initial failures estimated due to emissions**		**Percentage increase (Option 1 vs Current)**
		Current	**Option 1**	
Hydrocarbons (HC)	31,844,172	58,483.97	59,077 – 60,858	1.0 – 4.6%
Carbon Monoxide (CO)		201,150.67	203,190 – 209,315	
Diesel smoke (opacity)		120,121.41	121,339 – 124,997	
Other emissions-related failures		741,060.14	748,572 – 771,137	
Total emissions failures		1,120,816.18	1,132,177 – 1,166,306	

Notes:

- Total emissions failures are the sum of the previous 4 rows to estimate all emissions-related failures. This has been estimated using modelling undertaken on DVSA MOT data. A single vehicle may have more than one emissions failure which will lead to some double counting at present.
- The number of MOTs conducted in 2019 will be different to that in Table 17 due to a data discrepancy which will be investigated in parallel with the consultation. The number here is used to ensure comparability with the safety analysis, and uses the percentages estimated in Table 17 to inform the estimated emissions failures.
- The percentage increase will be the same across all types of failure given the analytical approach used.

Impact on insurance premiums

79. Given this policy could have an impact on road safety and the level of collisions which occur, this could lead to an increase in insurance premiums for motorists to cover the additional cost of these collisions should this be large enough for insurers to pass on these costs. As outlined in the safety section above, it is expected that the regulation change associated with Option 1 could increase the collision rate by 1.55 – 1.60%. More collisions could result in more vehicle owners claiming on their insurance which could increase the price of insurance.

80. It is not possible to predict the level at which insurance prices could rise, however, switching analysis has been used to determine by how much the cost of insurance would have to rise to offset the cost saving to vehicle owners.

81. This has been quantified at an individual level by comparing the cost saving for each vehicle type by the cost of an MOT, shown below, it is assumed that the MOT fee will not change over the course of the 10-year appraisal period. This has only been determined for motorcycles (Class 1 & 2), cars (Class 4) and LGVs/'vans' (Class 4 or 7) using research data from NimbleFins[28], as the scope for 'other vehicles' is too wide to ascertain the average cost of insurance. The minimum, average and maximum values from the industry-provided data have been used for the low, central and high scenario.

Table 19: Switching analysis for insurance premiums

	Average annual cost of insurance, £			MOT Fees, £			% increase in insurance to offset cost saving			
	Class 1 & 2 Motorcycles	Class 4 Cars	Class 4 & 7 LGVs	Class 1 & 2	Class 4	Class 7	Class 1 & 2	Class 4	Class 4 Vans	Class 7 Vans
Low	171	404	£1,359	23	33	35	13%	6%	8%	2%
Central	509	478	£2,004	30	44	47	6%	6%	9%	2%
High	846	516	£2,650	38	55	59	4%	7%	11%	1%

82. Table 19 shows that it would require around a 10% increase in annual car insurance, in the year the saving is realised, to offset the cost saving to vehicle owners. Car insurance data from Nimble Fins shows that between 2018 and 2019 average annual insurance increased by 1%, between 2019 and 2020 this was 4%, before falling by 7% between 2020 and 2021. Given the expected impact on road safety, combined with the expectation there is likely to be many factors in insurance companies' calculations in determining premiums, this is likely to be minor. Whilst it is unlikely that an annual increase to the cost of insurance will offset the one-off cost saving the same year it is realised, there could be a net cost across the 10-year appraisal period from increases to insurance.

Impact on cost of repairs at later MOTs

83. If vehicle defects which would have have been identified and repaired during the 3-year MOT are not noticed until the 4-year MOT, there are likely to be two impacts on the cost of repair:

- **Inflationary price rises**
  Annual inflation will be reflected by MOT testing stations through increased prices for repairs. It is likely that a defect that would have been discovered at the 3-year test will cost more to repair at the 4-year test due to inflationary changes of MOT testing station pricing for repairs.

- **Worsening of defect which will cost more to repairs**
  It is also likely that defects will worsen over the course of 12 months and hence the repair cost at the 4-year MOT is likely to be more costly than it would have been if noticed a year earlier. For example, a minor suspension defect could lead to a more serious problem in the suspension, or wear the tyres quicker, which would be more costly to repair than if it had been repaired earlier. Analysis provided by the DVSA shows that, whilst 58% of vehicles have an annual MOT, the later a vehicle is to get an MOT, the worse the failure rate. Data from 2016 to 2022 shows that the average MOT failure rate for those who MOT annually is 34% compared to 42% for those 3-8 months late (15 to 20 months since last MOT).

[28] https://www.nimblefins.co.uk/average-cost-motorcycle-insurance
https://www.nimblefins.co.uk/average-cost-car-insurance-uk
https://www.nimblefins.co.uk/van-insurance/average-cost-van-insurance

84. Two likely factors contributing to the increase in costs are:
    (1) Behavioural – those who are late to MOT may be less likely to maintain their vehicle effectively.
    (2) Increased mileage i.e. the vehicle will have travelled further which has a direct correlation to MOT failure rate.

85. Delaying the requirement date for the first MOT test from 3 to 4 years will inevitably increase vehicle mileage before MOT. The DVSA have found that failure rate increases based on mileage and vehicle age. The graphs[29] below show (i) the increase in failure rate as the mileage increases for all vehicles which are covered by the DVSA's data and (ii) the change in failure rate by Class and vehicle age.

Chart 2: Failure rate by mileage, all MOT'd vehicles[30]

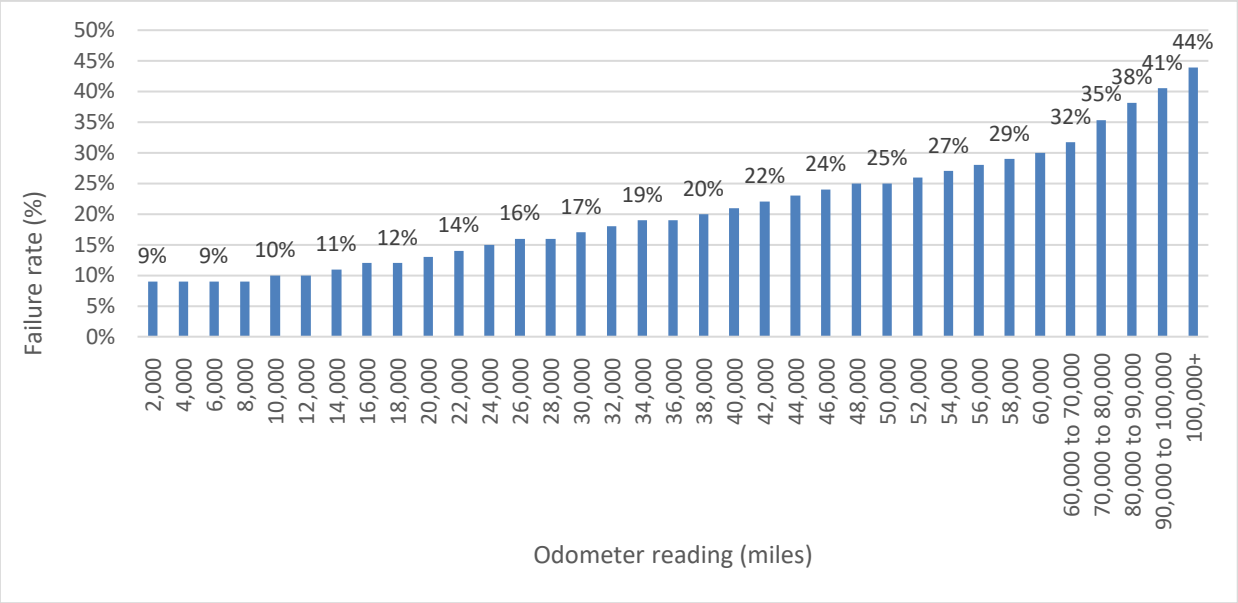
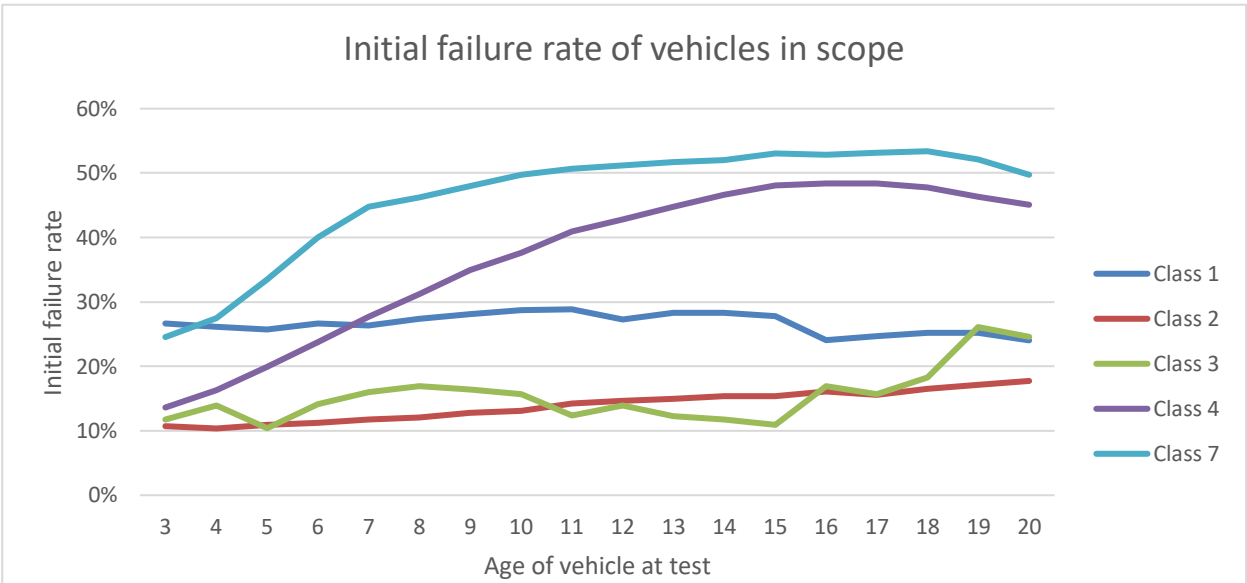


Chart 3: Failure rate by vehicle age[31]



Source: Safety analysis undertaken on DVSA MOT data. In 2019, Class 4 tests represented around 95% of all MOT tests conducted, so although other classes may have higher failure rates, these are on a smaller number of vehicles overall.

[29] Note that 78% of vehicles have done less than 100,000 miles

[30] Data provided by DVSA

[31] Data provided by DVSA on initial MOT failure rates by vehicle age

86. It is assumed that vehicle owners will comply with government advice on seeking repairs as early as possible, rather than waiting for the MOT. However, given that we know that some vehicles fail their MOT, we know that not all vehicle owners will keep their vehicles roadworthy, hence we have estimated an impact on road safety. Given this, this logic should be extended to other impacts such as repair costs ahead of the final stage, but has not been deemed proportionate for the consultation stage.

87. As only newer vehicles are in scope of this regulatory change and some of these vehicles have good fault identification systems to indicate to vehicle owners when there is an issue, it is expected that most vehicle owners would comply. However not all faults that would be picked up by an MOT can be monitored by the increasing use of these identification systems (such as tyre tread depth) so not all faults could be potentially identified. Due to the uncertainty around this, we will explore this in parallel with the consultation with industry bodies and update this at the final stage.

Benefits

Monetised benefits

Cost saving to individuals

88. The MOT is an annual financial cost to vehicle owners starting when the vehicle is 3 years old. Moving the requirement for the first MOT test to 4 years will relieve vehicle owners of some of this burden and could provide a better balance between risk and cost. The impact on vehicle owners depends on psychological biases and the saving will be realised as a cost avoided rather than a cash injection. For some, the nature of saving through cost avoidance – not having to spend money in the future – is not tangible so is less likely to be noticed and valued. However, for those with a loss-averse cognitive bias this form of saving would be more valued than a cash injection. This is because '*loss aversion refers to an individual's tendency to prefer avoiding losses to acquiring equivalent gains*'[32].

89. To monetise the impact of this, the annual reduction in MOTs, disaggregated to privately owned vehicles and split by Class, has been multiplied by the MOT fees outlined above. The number of privately owned vehicles in scope are outlined in Table 20 by Class, this is Table 6b, from above, disaggregated by ownership – derived by applying the 2017-2021 average of privately owned vehicles. To note, this table only shows the central case, there are low and high estimates as outlined above.

Table 20: Annual reduction in MOTs and cost saving for privately owned vehicles, central case

	Reduction in MOTs All Classes	**Cost saving to private vehicle owners, central scenario**
2023	1,059,027	£ 45,778,979
2024	1,553,439	£ 67,202,098
2025	2,307,681	£ 100,330,026
2026	2,330,313	£ 101,318,863
2027	2,353,169	£ 102,317,525
2028	2,376,252	£ 103,326,111
2029	2,399,563	£ 104,344,718
2030	2,423,106	£ 105,373,448
2031	2,446,882	£ 106,412,401

[32] https://thedecisionlab.com/biases/loss-aversion

2032	2,470,893	£	107,461,680
Total	**21,720,325**	**£**	**943,865,850**

90. Table 20 identifies that across the 10-year appraisal period, there will be 21.7m fewer MOTs. By applying the respective MOT rates, as outlined by Class in Table 19, this equates to a direct individual benefit of £944m, (range of £703m to £1.2bn) to private vehicle owners, shown by year in Table 20 above.

91. It is assumed that there is no cost saving associated with fewer repairs as a result of this regulation because it is assumed, as detailed in the 'cost of repairs' section, that vehicle owners will keep their vehicle in a roadworthy condition and seek repairs to their vehicle when required. It is uncertain whether vehicle owners will behave in this way, hence the consultation aims to address the reliability of this assumption and seek evidence as to how proactive vehicle owners will be in maintaining the roadworthiness of their vehicle. It is also assumed that businesses get their vehicles regularly serviced in line with recommendations from vehicle manufacturers and leading industry bodies including Auto Express[33], Halfords[34] and the RAC[35].

Consultation Question: *In your view, if you believe that your vehicle had a fault, either through a warning light or your own knowledge, before its MOT due date, how likely would you seek a repair of your vehicle?*

Cost saving to businesses with a vehicle fleet

92. Businesses with a vehicle fleet will experience the same cost-saving as detailed above for consumers, proportionate to the number of vehicles they own. Businesses are expected to be a significant beneficiary of this regulation change as business-owned vehicles make up 17%[36] of all vehicles in scope. This regulation change will reduce the cost to businesses of keeping their vehicles running. As for private vehicle owners above, the annual reduction in MOTs, disaggregated to business-owned vehicles (this refers to vehicles with a business as their registered keeper, e.g. supermarket delivery van, or a company car) and split by Class, has been multiplied by the MOT fees outlined above in Table 19.

Table 21: Annual reduction in MOTs and cost saving for business owned vehicles, central case

	Reduction in MOTs All Classes	**Cost saving to business vehicle owners, central scenario**	
2023	256,693	£	11,438,109
2024	394,408	£	17,608,847
2025	469,359	£	20,815,210
2026	473,986	£	21,020,588
2027	478,660	£	21,227,994
2028	483,379	£	21,437,448
2029	488,145	£	21,648,971
2030	492,958	£	21,862,582
2031	497,818	£	22,078,303
2032	502,726	£	22,296,154
Total	**4,538,131**	**£**	**201,434,206**

[33] https://www.autoexpress.co.uk/owning-car/356599/car-service-intervals-explained-how-often-should-you-service-your-car

[34] https://www.halfords.com/car-servicing/advice/what-service-does-my-car-need.html

[35] https://www.rac.co.uk/car-care/car-service#:~:text=Most%20manufacturers%20recommend%20having%20a,12%2C000%20miles%2C%20whichever%20comes%20first.

[36] Internal analysis of vehicle licensing data

93. Table 21 shows that businesses will benefit from 4.5m fewer MOT tests across the 10-year appraisal period. By applying the respective MOT rates this equates to a direct benefit of £201m (range of between £150m and £254m). This shows the annual direct benefit to businesses and, as for private vehicle owners, assumes no cost saving associated with fewer vehicle repairs.

Travel time saving for taking a vehicle to its MOT

For personal vehicle owners

94. Currently, vehicle owners have to take their vehicle to an MOT testing station and take time out of their day to do so, hence owners of three year old vehicles will experience a time saving from the associated travel time. The travel time saving only applies to those who do not combine their MOT with their annual service and data obtained internally from one company suggests that this is about 50% of their vehicle services[37]. It has been assumed that the other 50% take their vehicle for their MOT and service simultaneously and hence would not benefit from associated time savings as they will still take their vehicle for its annual service. This has been assumed for privately-owned vehicles only.

95. The scale of this impact depends on user behaviour, and therefore we have considered this to be an indirect benefit because any impact depends on user response to the policy rather than the policy itself. Whilst there is evidence from the company mentioned above to estimate this proportion, due to the risk of bias and the lack of information about the data, it is not robust enough, therefore the consultation aims to improve the reliability of estimates.

Consultation Question: *How do you usually seek your vehicle's annual servicing and MOT?*

96. Similar to the costs, we have assumed throughout that individuals take their vehicle to the MOT station in their personal time (i.e. non-work time), and individuals who would take their vehicle during their work time would make up the time elsewhere. It has been quantified by multiplying those in scope by the personal value of leisure (with a 25% sensitivity) and the amount of time saved from MOT-associated journeys, this accounts for travelling to and from an MOT centre to drop the vehicle off and travelling to and from the MOT centre to collect the vehicle after its MOT, these journeys would not have to take place after this regulation change.

97. The average time to an MOT centre has been estimated by applying speed (20 – 40mph) to the average distance to an MOT centre using data estimated by industry[38] (4.2 miles in the central case, with 15% sensitivity either side). The minimum number of journeys saved would be 2 (one return journey) but could be up to 4 (2 return trips), which depends on whether the vehicle owner leaves their vehicle or waits with it to be completed at the testing site. For some individuals, they may choose to wait with their vehicle (or have no alternative transport) while it is getting the MOT (rather than leaving it for a longer period). While we do not have evidence on this, we have used a similar approach of 75%/50%/25% in each of the scenarios to provide a range (i.e. 75% of people wait with their vehicle in the low scenario and realise the fewer journey time savings). We will seek to gather data on this assumption from industry bodies in parallel with the consultation and refine for the final stage IA. The following tables show the quantification of the calculations explained above and the number of vehicles in scope

Table 22: Quantification steps of journey time saving, using 2025 as an example

[37] Company name redacted due to commercial sensitivity, based on data with around 1.1m MOTs and services.

[38] https://www.whocanfixmycar.com/advice/how-far-will-drivers-travel-for-car-servicing-and-repair

	(1) Time saved from travel to and from MOT testing station, hours	(2) Value of time, £ per hour	(3) Proportion of people waiting with their vehicle	(3) Vehicles in scope 0. currently 50% of privately owned vehicles for each scenario, see the table below	(4) = (1) * (2) * (3) Total value of journey time saving, £m
Low	0.05	4.74	75%	1,151,889	0.80
Central	0.14	6.32	50%	1,153,841	1.64
High	0.22	7.90	25%	1,157,296	1.24

101. Applying the calculations to the vehicles in scope gives the total value of the journey time saving as displayed in Table 23 below.

Table 23: Value of journey time saving for private vehicle owners

	Privately owned vehicles in scope			Total value of journey time saving, £		
	Low	Central	High	Low	Central	High
2023	529,514	529,514	529,514	£ 345,769	£ 702,496	£ 568,142
2024	776,756	776,720	776,720	£ 507,216	£ 1,030,460	£ 833,382
2025	1,151,889	1,153,841	1,157,296	£ 752,175	£ 1,530,780	£ 1,241,722
2026	1,161,182	1,165,156	1,172,146	£ 758,243	£ 1,545,793	£ 1,257,655
2027	1,170,553	1,176,585	1,187,186	£ 764,363	£ 1,560,954	£ 1,273,792
2028	1,180,002	1,188,126	1,202,419	£ 770,533	£ 1,576,266	£ 1,290,137
2029	1,189,529	1,199,782	1,217,848	£ 776,754	£ 1,591,729	£ 1,306,692
2030	1,199,137	1,211,553	1,233,476	£ 783,028	£ 1,607,346	£ 1,323,459
2031	1,208,824	1,223,441	1,249,304	£ 789,353	£ 1,623,117	£ 1,340,442
2032	1,218,592	1,235,447	1,265,336	£ 795,732	£ 1,639,045	£ 1,357,644
Total	**10,785,977**	**10,860,162**	**10,991,245**	**£ 7,043,166**	**£ 14,407,987**	**£ 11,793,067**

102. Table 23 identifies that over the 10-year appraisal period there is an indirect benefit to individuals of £14.41m (range of £7.04m to £11.79m). Post-consultation these values are likely to be more robust as they will be based on better evidenced proportions of when MOTs are undertaken, rather than indicative estimates.

For business vehicle owners

103. The same logic behind the benefit for the personal vehicle owners applies here for the business vehicle owners, instead using the number of business-owned vehicles in scope and the associated value of time for businesses to take their vehicles to and from the MOT testing station as described in the previous section. The rest of the assumptions/data remains the same, except we have assumed that for business owners, there would be arrangements in place for them to leave vehicles at the garage rather than waiting which would mean 4 journeys are made. Using the number of vehicles in scope provides the outcomes in Table 24 below.

Table 24: Value of journey time saving for business vehicle owners

	Business owned vehicles in scope			Total value of journey time saving, £		
	Low	Central	High	Low	Central	High
2023	128,347	128,347	128,347	£ 269,402	£ 961,486	£ 2,610,969
2024	197,204	197,204	197,124	£ 413,935	£ 1,477,321	£ 4,010,112
2025	234,305	234,679	235,309	£ 491,811	£ 1,758,061	£ 4,786,916
2026	236,238	236,993	238,348	£ 495,868	£ 1,775,394	£ 4,848,750
2027	238,187	239,330	241,427	£ 499,958	£ 1,792,898	£ 4,911,384
2028	240,152	241,689	244,546	£ 504,083	£ 1,810,575	£ 4,974,826
2029	242,133	244,072	247,705	£ 508,241	£ 1,828,426	£ 5,039,088
2030	244,130	246,479	250,904	£ 512,434	£ 1,846,454	£ 5,104,180
2031	246,144	248,909	254,145	£ 516,662	£ 1,864,660	£ 5,170,113
2032	248,175	251,363	257,428	£ 520,925	£ 1,883,045	£ 5,236,897
Total	**2,255,014**	**2,269,066**	**2,295,283**	**£ 4,733,319**	**£ 16,998,320**	**£ 46,693,236**

104. Table 24 identifies that over the 10-year appraisal period there is an indirect benefit to businesses of £17.00m (range of £4.73m to £46.69m). Post-consultation these values are likely to be more robust as they will be based on better evidenced proportions of when MOTs are undertaken, rather than indicative estimate.

Duration of MOT time saving

105. The MOT test usually takes around 30 to 40 mins (based on anecdotal discussions), although this varies by Class of vehicle – the estimates are detailed in Table 25 below. This regulation change would mean that new vehicle owners will have to do one less MOT test and this will equate to a saving of time which would have been lost whilst their vehicle undergoes its MOT.

106. This is a direct impact to individuals and businesses as this regulation change removes the requirement to have an MOT test after 3 years. There is no time saving associated with vehicle repairs related to an MOT test as it is assumed that vehicle owners will maintain the roadworthiness of their vehicles.

Impact on private vehicle owners

107. All private vehicle owners are in scope here and are separated into those who take their vehicle to the MOT during work hours and leisure hours. This impact has been quantified by multiplying the average length of MOT based on anecdotal evidence from the DVSA – 45 minutes in the central scenario (range of 30 minutes to 60 minutes[39], to capture the uncertainty in the anecdotal evidence) – by those in scope and by their respective values of time, explained in the previous section on journey time saving. This benefit is likely to only be realised by those individuals who would be waiting for their MOT to take place at the garage. Given the lack of evidence on this, a 25%/50%/75% assumption has been used (indicating 25% of individuals wait with their vehicle in the low scenario and realise the benefits) while we gather further data from industry bodies in parallel with the consultation. Although

[39] https://motcentre.info/about_mot/how-long-does-an-mot-test-take/

the times are based on anecdotal evidence at present, we will work in parallel with the consultation to analyse DVSA data to find a more accurate estimate on the duration of MOT tests.

108. The tables below show the quantification of this impact and those in scope.

Table 25: Quantification steps for time saving for private vehicle owners, using 2025 as an example

	(1) MOT duration (hours)	(2) Value of time, £ per hour	(3) Proportion of people waiting with their vehicle	(4) Vehicles in scope	(5) = (1) * (2) * (3) * (4) Total value of time saving, £m
Low	0.5	4.74	25%	2,303,777	£ 1,364,456
Central	0.75	6.32	50%	2,307,681	£ 5,467,071
High	1	7.90	75%	2,314,593	£ 13,708,615

109. Applying the calculations to the vehicles in scope gives the total value of the time saving as displayed in Table 26 below.

Table 26: Value of time saving for private vehicle owners

	Privately owned vehicles in scope			Total value of time saving, £		
	Low	Central	High	Low	Central	High
2023	1,059,027	1,059,027	1,059,027	£ 627,229	£ 2,508,916	£ 6,272,290
2024	1,553,512	1,553,439	1,553,439	£ 920,097	£ 3,680,215	£ 9,200,537
2025	2,303,777	2,307,681	2,314,593	£ 1,364,456	£ 5,467,071	£ 13,708,615
2026	2,322,364	2,330,313	2,344,291	£ 1,375,464	£ 5,520,688	£ 13,884,510
2027	2,341,105	2,353,169	2,374,372	£ 1,386,564	£ 5,574,836	£ 14,062,665
2028	2,360,003	2,376,252	2,404,838	£ 1,397,757	£ 5,629,520	£ 14,243,110
2029	2,379,059	2,399,563	2,435,697	£ 1,409,043	£ 5,684,747	£ 14,425,875
2030	2,398,273	2,423,106	2,466,952	£ 1,420,423	£ 5,740,521	£ 14,610,989
2031	2,417,648	2,446,882	2,498,609	£ 1,431,898	£ 5,796,848	£ 14,798,482
2032	2,437,185	2,470,893	2,530,672	£ 1,443,469	£ 5,853,734	£ 14,988,385
Total	**21,571,955**	**21,720,325**	**21,982,490**	**12,776,399**	**51,457,095**	**130,195,459**

110. Table 26 identifies that over the 10-year appraisal period there is an indirect benefit to individuals of £51.46m (range of £12.78m to £130.20). Post-consultation these values are likely to be more robust as they will be based on better evidenced proportions of when MOTs are undertaken, rather than indicative estimates.

Impact on businesses

111. Similarly to above, all business-owned vehicles in scope would also face time savings proportionate to the number of vehicles they own. This impact has been quantified by multiplying the average length of MOT by the vehicles in scope and by the value of working time, including NWLU. The approach only differs in that we assume the vehicle is left and a member of staff does not wait for the duration. The monetisation of this impact is shown in Table 27 below.

Table 27: Quantification of time saving to businesses

	(1) Vehicles in scope			(4) = (1) *(2) * (3) (4) = value of cost saving to business		
	Low	Central	High	Low	Central	High
2023	256,693	256,693	256,693	£ 1,466,096	£ 3,433,879	£ 9,608,366
2024	394,408	394,408	394,247	£ 2,252,652	£ 5,276,146	£ 14,757,213
2025	468,610	469,359	470,618	£ 2,676,456	£ 6,278,790	£ 17,615,850
2026	472,476	473,986	476,697	£ 2,698,533	£ 6,340,693	£ 17,843,402
2027	476,373	478,660	482,854	£ 2,720,794	£ 6,403,208	£ 18,073,893
2028	480,303	483,379	489,092	£ 2,743,239	£ 6,466,340	£ 18,307,361
2029	484,265	488,145	495,409	£ 2,765,870	£ 6,530,094	£ 18,543,845
2030	488,261	492,958	501,809	£ 2,788,688	£ 6,594,479	£ 18,783,383
2031	492,289	497,818	508,291	£ 2,811,696	£ 6,659,499	£ 19,026,016
2032	496,351	502,726	514,857	£ 2,834,894	£ 6,725,160	£ 19,271,782
Total	**4,510,029**	**4,538,131**	**4,590,567**	**£ 25,758,917**	**£ 60,708,286**	**£ 171,831,109**

112. This identifies that there is a direct cost saving to business of £60.71m, (range of £25.76m to £171,83m). This is anticipated to be realised by businesses through an efficiency saving, as employee time previously taken up by the duration of an MOT can be redeployed elsewhere.

Greenhouse gas saving (indirect)

113. The reduction in travel associated with taking vehicles for their annual MOT would result in fewer carbon emissions from vehicles. To understand the social impact of this, the total tonnes of carbon saved as a result has been estimated and translated into monetary values using the Non-Traded Values of Carbon from TAG Table A3.4. This has been assessed as an indirect benefit due to the number of causal steps necessary before this benefit can be realised – as with the journey time saving – since it requires vehicle owners to take their vehicle for its MOT separately from its annual service.

114. The reduction in tonnes of carbon has been quantified by estimating the litres of fuel burnt on MOT associated journeys (from average distances to MOT testing centres and fuel consumption estimates[40]) then applying those in scope of reduced travel (50% of vehicles, as explained above) and carbon emissions per litre of fuel burnt[41].

115. When determining the fuel consumption, it is assumed, as above, that the central speed is 30mph with 33% sensitivities to account for geographical differences in speed restrictions. TAG does not have fuel consumption parameters for motorcycles of other vehicles, hence it has been assumed that motorcycles are more efficient than cars (58% more efficient in the central case, with 15% sensitivity, based on data from NimbleFins[42]) and an average of the fuel consumption for LGVs and cars has been used for the Other Vehicle category.

Table 28: Total carbon saved and its associated value.

	Total carbon saved (tonnes)			Value of carbon saving (£ per tonne)		
	Low	Central	High	Low	Central	High
2023	1,010	2,003	2,933	123,489	489,859	1,075,994
2024	1,501	2,979	4,351	183,633	728,574	1,596,490
2025	2,115	3,994	5,136	258,707	977,010	1,884,481
2026	2,133	4,232	6,223	260,823	1,035,071	2,283,340
2027	2,150	4,273	4,985	262,957	1,045,223	1,829,189
2028	2,168	4,315	6,384	265,109	1,055,474	2,342,405

[40] TAG Table A 3.1.8

[41] TAG Table A3.3 an average of diesel and petrol has been used as the vehicle data is not disagreggated to this level

[42] https://www.nimblefins.co.uk/average-mpg-motorcycles-uk#:~:text=In%20general%2C%20motorcycles%20are%20much,57%20mpg%20for%20a%20motorcycle.

2029	2,185	4,357	6,466	267,278	1,065,826	2,372,509
2030	2,203	4,400	6,549	269,465	1,076,281	2,403,001
2031	2,221	4,443	6,634	271,671	1,086,838	2,433,885
2032	2,240	4,487	6,719	273,895	1,097,499	2,465,166
Total	**19,926**	**39,483**	**56,381**	**2,437,027**	**9,657,654**	**20,686,459**

116. Table 28 shows that the total, undiscounted, value of carbon saved over the 10-year appraisal period, and hence the total indirect benefit to the public is £9.66m, equating to around 39,500 tonnes of carbon.

117. This analysis is subject to uncertainty due to the assumptions used in quantification and the multiple intermediate steps before this saving is realised. The forecasts of carbon saving are subject to change in the future as the use of diesel and petrol cars decline over the appraisal period which has not been accounted for at this stage. During the quantification of this analysis, at this stage the breakdown of propulsion type was not applied, however forecasts from TAG on future propulsion type will be applied for the final stage IA.

118. There is the potential that, due to the increased duration before initial MOT as a result of this regulation change, vehicle emissions will increase, as defects in vehicle emissions systems will not necessarily be picked up until the MOT a year later. This is likely to offset any GHG saving from reduced journeys, covered in the earlier air quality section. The call for evidence seeks to better understand the relationship between emissions and the MOT testing requirement and seeks advice on improvements that could be made, however these findings will not impact this regulation change. For the final stage IA, we will seek to quantify and monetise the net impact on emissions, but given there are more vehicles in scope of reduced journeys than those failing due to emissions, the net impact is expected to be positive, but is dependent on mileage driven by those who fail MOTs based on emissions.

Unmonetised Benefits

Cost savings to business (indirect)

119. The reduction in custom realised by MOT testing stations from this policy could result in fewer staff needed as the number of required MOTs fall. The following paragraphs aim to understand the potential impact this policy could have on MOT testing stations and any benefits that could be accrued through saving on staff costs.

120. Given the uncertainty around business reliance on MOTs and the full employment assumption, we do not anticipate there to be a net cost to individuals (or an efficiency saving to businesses) as a result of job losses indirectly caused by this regulation, as it is assumed that a fall in MOT tests frees up staff time. However, to understand the potential impact of the regulation on employment, an estimate of the loss of MOT testing stations staffing has been quantified below.

121. This impact has been quantified by determining the current ratio of MOT tests to MOT testing station employees and applying this to the predicted annual number of MOTs to estimate the fall in employee numbers. It is assumed that businesses operate at a profit maximising level currently and therefore will stay at the current level of productivity. This generates the assumption that the ratio of MOT tests to employees remains consistent.

122. The current annual number of MOTs has been estimated using a historical average as outlined above in paragraph 42. The number of MOT testers, as published by DVSA[43], has been used to quantify the number of MOT testing station employees who work on MOTs. The 2016-2019 average of 65,703 has been used in each scenario. Table 29 below details the quantification of this impact. It is expected that, if this cost were to be realised, it would be a one-off cost occurring in the second appraisal year due to time lags – allowing for the market to adjust to the change and the full reduction in annual MOT tests to be realised.

Table 29: Potential impact on MOT testing station employees

	Low	Central	High
(1) Number of nominated MOT testers ('MOT testing station employees')	59,132	65,703	72,273
(2) Number of annual MOT tests	24,937,567	27,934,592	30,931,617
(3) Ratio of MOT tests to employees = (2) / (1)	380	380	380
(4) New number of annual MOTs (2025-2032 average)	22,085,730	25,061,037	28,017,911
(5) Potential staff reduction = (1) – ((4) / (3))	7,505	7,562	7,668
(6) Annual staff salary, applying NWLU of 26.5%	£28,212	£35,629	£42,059
(7) Salary saving from staff reduction = (5) * (6)	£211,726,640	£269,423,951	£322,491,457

123. Table 29 shows that, if the ratio of MOTs to the number of MOT testing station staff remains consistent, 7,562 less MOT staff (range 7,505 to 7,668) would be required to meet the required number of MOTs. If the efficiency of testing improves, this number could increase as the ratio of MOT tests to employees increases. We have assumed that the ratio of MOT tests to employees would fall and the productivity of MOT testing stations would decrease. Row (7) provides a monetary estimate of the impact of this potential reduction by applying the annual salary for MOT testing station staff to the potential redundancies, given by the ASHE survey (SOC: 5231), using the 25th percentile as the low scenario, the median as the central and the 75th percentile as the high scenario.

124. The total annual indirect cost to businesses from job losses could be £269m (range of £211m to £322m), however since full employment is assumed, if staff cannot be reassigned other work in for their current employer (i.e. as a mechanic), it is anticipated that they will be able to find new employment and hence there becomes a transfer to another business and the impact nets to zero.

Business Impact Target Calculations

125. From the costs and benefits outlined, only the direct costs and benefits to business are considered in the Business Impact Target (BIT) score. These discounted values are detailed in 2021 prices with 2023 value in Table 30 below, but these values may differ from those in the summary sheets as they are presented with different price base/value years.

Table 30: Direct costs and benefits to business – total over 10-year appraisal period, £m

Cost / Benefit	Impact	Low	Central	High

[43] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813912/dvsa-mot-06-mot-test-stations-and-testers.csv/preview

Cost	**Familiarisation cost to business**	2.8	6.7	14.6
Benefit	**Cost saving of MOT fee**	127.7	171.3	216.4
	Time saving to business	21.9	51.6	146.0

126. Familiarisation costs are considered direct as they are unavoidable impacts of this regulation change – businesses must understand the change and consider how it will affect their operation. There is no compliance cost associated with this regulation change as vehicle owners are accountable for compliance, hence the most significant costs on businesses will result from indirect benefits which are dependent on consumer response to this regulation change.

127. The benefit to business from the cost saving of having to do one less MOT for their vehicles in scope is a direct impact from moving the requirement to test at 3 years to 4 years. This is also the case for the time saving to businesses, this directly results from not having to take their vehicles for a MOT at their third year of registration. The business impact outputs from these direct costs and benefits are outlined in Table 31 below.

Table 31: Value of business impact measures, £m (2019 prices, 2020 present value)

Net direct cost to business per year (£m)	BIT score
-21.5	-107.5

128. It is important to note that most of the impacts on businesses are indirect and unmonetised and will therefore not be captured in the NPV of the BIT, which means that these values are a likely underestimate of the true cost to business.

Indirect Costs and Benefits

129. The only indirect and monetised impact of this regulation change is the travel time saving for private vehicle owners. This impact is anticipated to be indirect as it depends on user response (whether vehicle owners service their vehicle at the same time as the MOT) to the policy rather than an unavoidable impact of the regulation change. The undiscounted value of this is presented above in Table 23.

Sensitivity Analysis

130. Sensitivity analysis has been applied to most inputs included in the calculations to reflect outcomes in the central, low and high scenarios to account for the uncertainty with the calculations and assumptions made throughout. Each input value has been carefully determined according to the sources used and assumptions made. Generally where a central estimate is provided, a 25% sensitivity has been applied for low and high estimates, however explicit sensitivities and assumptions have been documented under each impact.

131. Where the data permitted, ranges have been provided (such as percentiles for wages and confidence levels on employment data), however, this is limited given the availability of data throughout and it has been explained where this is used. Given that many assumptions are expected to be evidenced during consultation, the sensitivities used in this IA might not reflect the true scale of impact. Hence, for the final stage IA, if the consultation responses allow, we expect the uncertainty of analysis

to decrease as assumptions become better informed, which could change the sensitivities used throughout.

Option 2 – Change the date where a first MOT test is required from 3 to 5 years

132. This option, as outlined above, would mean that owners of the vehicles in scope (see Table 1) must take their vehicle to its first MOT after 5 years rather than 3. This will directly cause a reduction in the number of annual tests. All the impacts of Option 1 will apply here, just to a larger extent as there are now two MOTs that would not be carried out over the vehicle's lifetime compared to the "do nothing" scenario (requiring an initial test at 3 years old). The same assumptions and caveats outlined for Option 1 apply for Option 2, as does the categorisation of impact.

133. Using data from 2019, this option is expected to increase the current initial failure rate for the first MOT from 31.9% in Option 0 to between 32.6% and 34.5%.

134. The full extent of the impacts have not been detailed in this section as this is explained by the detail in Option 1. The below focusses on quantified outputs and outlines any differences from Option 1.

Summary

135. Option 1 and Option 2 will result in the same costs and benefits, as outlined in the summary section of Option 1, however it is expected that for Option 2 the costs and benefits will be realised to a greater extent. This is because the annual reduction in MOT tests will be larger with a move from 3 to 5 years compared to a move from 3 to 4 years.

Costs

Transition Costs

136. It is expected that both the transition costs from Option 1, familiarisation and enforcement, will be identical in Option 2. For familiarisation, the cost is expected to be the same as Option 1 estimates that the vehicle owners in scope are those with a vehicle less than 3 years old, as any older vehicles will have already had their first MOT. Hence, those in scope do not change in this option. The only difference is the detail of the content they are familiarising themselves with (i.e. 5 years rather than 4 years).

137. For enforcement, the cost is estimated to be the same as Option 1, as the cost is associated with updating the system to reflect the change of MOT requirement. The only difference is the detail of change, 5 years rather than 4, which will not change the time needed to update the system.

Monetised On-going Costs

<u>Loss of revenue for DVSA</u>

138. As the change to 5 years is greater than to 4 years, for the vehicles in scope there is an additional MOT not occurring compared to the "do nothing" scenario (shown in Table 32 below which outlines the change to the requirement year of the initial MOT).

Table 32: Impact on yearly requirement of initial MOT from this regulation change

Vehicle registration	Year of MOT before reg	Year of MOT after reg
Vehicles registered before April 2020	2023	2023
Vehicles registered after April 2020	2023	2025
2021	2024	2026
2022	2025	2027
2023	2026	2028
2024	2027	2029
2025	2028	2030
2026	2029	2031
2027	2030	2032
2028	2031	2033

139. Using this logic, the annual reduction has been modelled using the method outlined in Option 1, the results of this (totals only) are displayed in Table 33 below.

Table 33: Annual reduction in MOTs and costs for all vehicles

	Annual reduction in MOTs			Total cost to DVSA, £		
	Low	Central	High	Low	Central	High
2023	1,315,720	1,315,720	1,315,720	2,697,227	2,697,227	2,697,227
2024	3,263,641	3,263,641	3,263,641	6,690,463	6,690,463	6,690,463
2025	4,720,211	4,724,848	4,733,365	9,676,432	9,685,938	9,703,397
2026	5,566,934	5,580,925	5,606,666	11,412,215	11,440,897	11,493,666
2027	5,611,826	5,635,331	5,678,682	11,504,244	11,552,428	11,641,297
2028	5,657,090	5,690,270	5,751,624	11,597,035	11,665,054	11,790,828
2029	5,702,729	5,745,749	5,825,504	11,690,595	11,778,785	11,942,283
2030	5,748,746	5,801,772	5,900,334	11,784,930	11,893,632	12,095,686
2031	5,795,145	5,858,345	5,976,128	11,880,048	12,009,607	12,251,062
2032	5,841,929	5,915,473	6,052,896	11,975,954	12,126,720	12,408,437
Total	**49223972**	**49532073**	**50104559**	**100,909,142**	**101,540,750**	**102,714,345**

140. Applying DVSA's slot fee of £2.05 gives the loss of revenue to DVSA outlined in Table 33. This identifies that the total direct cost to the public sector (DVSA) across the 10-year appraisal period is £101.54m, with a range of £100.91m to £102.71m.

Unmonetised Costs

Awareness campaign

141. This cost is expected to be identical to the cost outlined for Option 1, since the only difference in the detail of the messaging will be 5 years rather than 4.

Survival of MOT testing stations

142. MOT testing stations will realise a larger fall in custom as a result of Option 2 compared to Option 1. As outlined in Table 33, there is expected to be an annual reduction in MOT tests, when comparing this to the historical average of MOTs annually (2015-2020), it equates to about a 20% reduction in annual MOT tests (average across the central case). Table 34 outlines the cost of reduced MOTs given the reduction in annual MOTs estimated.

Table 34: Total cost of reduced MOTs to MOT testing stations, £

	Low	Central	High
2023	40,215,589	54,519,861	68,824,133
2024	99,832,966	135,340,776	170,848,586
2025	144,640,235	196,268,527	248,201,677
2026	170,737,537	232,025,632	294,235,900
2027	172,126,913	234,297,568	298,023,043
2028	173,527,805	236,591,852	301,858,981
2029	174,940,307	238,908,705	305,744,342
2030	176,364,518	241,248,350	309,679,764
2031	177,800,533	243,611,012	313,665,893
2032	179,248,450	245,996,917	317,703,382

143. To understand the potential impact on MOT testing stations, the loss of revenue resulting from fewer MOTs has been estimated, using the methodology outlined for Option 1. The outputs of this are displayed above in Table 34. This outlines that there is the potential for MOT testing stations to experience an annual fall in revenue of between £179m and £318m per year after 10 years. As with Option 1, the scale of impact depends on the extent to which testing stations depend on MOTs for revenue/custom.

Reduction of MOT testing station employees

144. As with Option 1, to understand the potential impact on MOT testing station employees, the ratio of MOTs to testers has been applied to the forecasted annual number of MOTs (2025-2032 average). The potential reduction in staff and the monetised cost to employees is outlined in Table 35.

Table 35: Potential impact on MOT testing station employees

	Low	Central	High
Loss of staff	14,686	14,787	14,975
Wage cost of staff reduction, £	414,314,178	526,844,677	629,845,904

145. If the ratio of MOTs to the number of MOT testing station employees remains the same, 14,787 jobs (range of 14,686 to 14,975) could become redundant. Applying the annual salary of these employees gives a monetised estimate of the scale of the cost to individuals. The total annual indirect cost to individuals from job losses could be £526m (range of £414m to £629m). As per the assumptions outlined in Option 1, it is anticipated that this cost will not be realised.

Potential decrease in road safety

146. Following the detailed approach under Option 1, the same analysis has been applied under this option to calculate the estimated impact on the level of casualties.

Table 36: Estimated safety impact under Option 2

MOT Test Frequency	Predicted additional casualties involving:				All casualties*
	Class 1**	Class 2	Class 4	Class 7	
5-1-1-1 (Option 2)					
Fatal	0 - 0	0 - 0	0 - 1	0 - 0	0 - 2
Serious	1 - 6	1 - 3	5 - 20	0 - 1	7 - 30

Slight	3 - 10	0 - 2	20 - 78	1 - 4	24 - 94
All*	**4 - 17**	**1 - 4**	**25 - 100**	**1 - 4**	**31 – 126**
*Numbers may not sum to totals due to rounding **Classes are explained in further detail in Annex A, Table 1.					

147. The results of the analysis show that we expect the level of casualties in collisions could increase because of this change, by around 2 – 9% for this option. This represents the collisions where a vehicle defect CF was assigned, and when compared to the overall level of collisions regardless of CF, the overall magnitude is small, 0.02 – 0.09% for this option. As shown in the switching and breakeven analysis, this is not expected to impact the level of benefits realised, nor exceed the level of all of the benefits given the scale of the expected casualties shown below.

Table 37: Benefits after accounting for monetised safety impact, £m undiscounted

	Option 2	
	Low	**High**
Total benefits minus safety	2,368.84	2,232.86
Cost savings only minus safety	2,117.12	1,981.14

Table 38: Maximum number of each casualty severity required to erode the benefits over 10 years

	Fatal	**Serious**	**Slight**	**Average casualty**
Estimated casualties over appraisal period	5 - 20	81 - 333	256 – 1,050	-
Number needed to outweigh total benefits	887	7,884	102,635	23,512
Number needed to outweigh cost savings only	785	7,061	91,922	21,058

Potential decrease in air quality

148. The analysis remains consistent with that detailed above, the only difference being that if the level of emission failures remains the same, internal analysis estimates that the MOT failure rate for cars could increase from 32.2% under Option 0 to 32.8 – 34.7% under Option 2. As estimated earlier, this could result in the below number of failures under this option due to the more vehicles in scope.

Table 39: Predicted emissions failures by option

Emission	**MOTs conducted in 2019**	**Initial failures estimated due to emissions**		**Percentage increase (Option 1 vs Current)**
		Current	**Option 2**	
Hydrocarbons (HC)	31,844,172	58,484	59,667 – 63,218	2.0 – 8.1%
Carbon Monoxide (CO)		201,151	205,219 – 217,433	
Diesel smoke (opacity)		120,121	122,551 – 129,845	
Other emissions-related failures		741,060	756,049 – 801,047	
Total emissions failures		1,120,816	1,143,486 – 1,211,543	

Notes:

- Total emissions failures are the sum of the previous 4 rows to estimate all emissions-related failures. This has been estimated using modelling undertaken on DVSA MOT data. A single vehicle may have more than one emissions failure which will lead to some double counting at present.
- The number of MOTs conducted in 2019 will be different to that in Table 17 due to a data discrepancy which will be investigated in parallel with the consultation. The number here is used to ensure comparability with the safety analysis, and uses the percentages estimated in Table 17 to inform the estimated emissions failures.
- The percentage increase will be the same across all types of failure given the analytical approach used.

Impact on insurance premiums

149. Since the predicted impact on insurance premiums has not been explicitly calculated, the impact has instead been scoped by using switching analysis. The outputs for this option are equivalent to those outlined in Option 1.

Impact on cost of repairs

150. This remains consistent with the analysis outlined under Option 1, although it is likely that any cost rises will be realised to a larger extent. This is because there is an additional year for inflation rises to take affect as well as an increased period of time during which a defect could worsen.

Benefits

Monetised benefits

Cost saving to individuals and businesses

151. In line with Option 1, this has been calculated by applying the MOT fee to the annual reduction of MOT tests for privately owned and business owned vehicles, the outputs of this are detailed in Table 40 below.

Table 40: Annual cost saving to private vehicle owners, £

	Annual cost saving to private vehicle owners			Annual cost saving to business vehicle owners		
	Low	Central	High	Low	Central	High
2023	£ 34,603,419	£ 46,137,892	£ 57,672,365	£ 8,309,397	£ 11,079,196	£ 13,848,995
2024	£ 85,463,894	£ 113,951,859	£ 142,439,824	£ 21,059,535	£ 28,079,380	£ 35,099,225
2025	£ 126,321,082	£ 168,602,774	£ 211,128,407	£ 27,995,585	£ 37,359,820	£ 46,776,667
2026	£ 151,532,918	£ 202,570,954	£ 254,346,955	£ 30,616,834	£ 40,920,147	£ 51,382,611
2027	£ 152,761,400	£ 204,567,503	£ 257,617,994	£ 30,869,757	£ 41,323,881	£ 52,046,347
2028	£ 154,000,064	£ 206,583,889	£ 260,931,152	£ 31,124,776	£ 41,731,603	£ 52,718,657
2029	£ 155,248,994	£ 208,620,311	£ 264,286,971	£ 31,381,908	£ 42,143,350	£ 53,399,654
2030	£ 156,508,276	£ 210,676,969	£ 267,686,001	£ 31,641,172	£ 42,559,164	£ 54,089,449
2031	£ 157,777,996	£ 212,754,064	£ 271,128,799	£ 31,902,585	£ 42,979,083	£ 54,788,156
2032	£ 159,058,239	£ 214,851,802	£ 274,615,929	£ 32,166,164	£ 43,403,149	£ 55,495,890

Total	**£ 1,333,276,282**	**£ 1,789,318,019**	**£ 2,261,854,398**	**£ 277,067,714**	**£ 371,578,773**	**£ 469,645,650**

152. This shows that across the 10-year appraisal period there is expected to be a direct individual benefit to vehicle owners of £1.79bn, (range of £1.33bn to £2.26bn) and £371.58m (range of £277.07m to £469.65m) for businesses.

Travel time saving for vehicle owners

153. As with Option 1, this impact requires feed-in from the consultation to determine those in scope as it depends on the proportion of vehicles taken in for MOTs during the owner's personal/working time. To give a scale of the potential impact, an indicative assumption for the proportion of owners who take their vehicle during leisure time has been used – 25%(low)/50%(central)/75%(high). Applying the vehicle owners in scope by the method outlined in Option 1 gives the total value of journey time saving for individuals or businesses, outlined in Table 41.

Table 41: Vehicle owners in scope of journey time saving and total value

	Annual cost saving to private vehicle owners			Annual cost saving to business vehicle owners		
	Low	Central	High	Low	Central	High
2023	£ 348,268	£ 707,575	£ 572,249	£ 261,367	£ 932,809	£ 2,533,096
2024	£ 859,723	£ 1,746,696	£ 1,412,636	£ 661,676	£ 2,361,498	£ 6,412,781
2025	£ 1,266,766	£ 2,576,396	£ 2,087,377	£ 881,937	£ 3,150,350	£ 8,569,092
2026	£ 1,516,685	£ 3,089,626	£ 2,509,981	£ 967,229	£ 3,460,295	£ 9,439,366
2027	£ 1,528,860	£ 3,119,928	£ 2,542,187	£ 975,207	£ 3,494,410	£ 9,561,254
2028	£ 1,541,136	£ 3,150,530	£ 2,574,807	£ 983,250	£ 3,528,860	£ 9,684,717
2029	£ 1,553,514	£ 3,181,436	£ 2,607,846	£ 991,361	£ 3,563,651	£ 9,809,774
2030	£ 1,565,994	£ 3,212,648	£ 2,641,310	£ 999,539	£ 3,598,786	£ 9,936,447
2031	£ 1,578,578	£ 3,244,170	£ 2,675,204	£ 1,007,784	£ 3,634,267	£ 10,064,755
2032	£ 1,591,266	£ 3,276,004	£ 2,709,533	£ 1,016,098	£ 3,670,098	£ 10,194,721
Total	**£ 13,350,792**	**£ 27,305,008**	**£ 22,333,132**	**£ 8,745,448**	**£ 31,395,025**	**£ 86,206,002**

154. Table 41 shows that over the 10-year appraisal period there is a total indirect benefit to individuals of £27.31m, (range of £13.35m to £22.33m) and businesses of £31.40m (range of £8.75m to £86.21m).

Duration of MOT time saving

155. Applying the number of vehicles in scope of this option to the methodology outlined in Option 1 gives the value of time saving for private vehicle owners and businesses. These outputs are displayed in Table 42 below.

Table 42: Value of cost saving to vehicle owners, £

	Private vehicle owners			Business vehicle owners		
	Low	Central	High	Low	Central	High
2023	£ 631,763	£ 2,527,053	£ 6,317,634	1,422,369	3,331,462	9,321,792
2024	£ 1,559,550	£ 6,238,200	£ 15,595,500	3,600,866	8,433,923	23,599,034
2025	£ 2,297,931	£ 9,201,413	£ 23,044,644	4,799,538	11,251,251	31,534,258
2026	£ 2,751,287	£ 11,034,378	£ 27,710,196	5,263,698	12,358,198	34,736,867
2027	£ 2,773,373	£ 11,142,599	£ 28,065,748	5,307,114	12,480,034	35,185,415
2028	£ 2,795,642	£ 11,251,894	£ 28,425,871	5,350,889	12,603,073	35,639,758
2029	£ 2,818,095	£ 11,362,271	£ 28,790,622	5,395,027	12,727,326	36,099,968
2030	£ 2,840,735	£ 11,473,743	£ 29,160,062	5,439,531	12,852,805	36,566,123
2031	£ 2,863,562	£ 11,586,320	£ 29,534,250	5,484,404	12,979,524	37,038,299
2032	£ 2,886,579	£ 11,700,013	£ 29,913,249	5,529,648	13,107,493	37,516,574
Total	**24,218,519**	**97,517,885**	**246,557,775**	**47,593,083**	**112,125,089**	**317,238,087**

156. Table 42 identifies that across the 10-year appraisal period there is a total direct benefit to individuals of £97.52m, range of (£24.22m to £246.56m) and a direct benefit to businesses of £112.13m, (range of £47.59m to £317.24m).

Greenhouse gas saving

157. The total tonnes of carbon saved and the value of this has been estimated using the method outlined for Option 1, and applying the number of vehicles in scope of this option. The outputs of this are outlined in Table 43 below.

Table 43: Total carbon saved and its associated value

	Total carbon saved (tonnes)			**Value of carbon saving, £**		
	Low	Central	High	Low	Central	High
2023	790	1,488	1,922	96,669	364,077	705,342
2024	1,954	3,867	5,714	239,003	945,828	2,096,424
2025	2,885	5,707	8,421	352,895	1,395,971	3,089,626
2026	3,457	6,842	10,104	422,842	1,673,650	3,707,326
2027	3,486	6,910	8,022	426,293	1,690,224	2,943,265
2028	3,514	6,979	10,365	429,772	1,706,964	3,803,106
2029	3,543	7,048	10,498	433,280	1,723,870	3,851,922
2030	3,572	7,117	10,633	436,817	1,740,946	3,901,366
2031	3,601	7,188	10,770	440,384	1,758,192	3,951,445
2032	3,630	7,259	10,908	443,980	1,775,610	4,002,168

Total	**30,433**	**60,405**	**87,358**	**3,721,935**	**14,775,332**	**32,051,990**

158. This shows that the amount of carbon saved over the 10-year appraisal period is estimated to be 60,400 tonnes, equating to a total indirect benefit to the public sector of £14.78m (range of £3.72m to £32.05m). Further work will be carried out at the final stage IA to estimate the net impact considering any increase to individual vehicle emissions due to the longer duration before the initial MOT is required.

Unmonetised Benefits

Efficiency savings to business

159. To understand the potential efficiency saving to MOT testing stations from staff reductions, the potential staff reduction under this option (Table 35) has been applied to the methodology outlined in Option 1. This quantification equates to an annual indirect benefit to businesses of £526.8m (range of £414.31m to £629.95m) from potential staff reductions.

Business Impact Target Calculations

160. As outlined above, there are only 3 impacts which are direct to business and hence feed into the BIT. The values for these impacts from this option are detailed below in 2021 prices with 2023 value.

Table 44: Direct costs and benefits to business – total over 10-year appraisal period, £m

Cost / Benefit	Impact	Low	Central	High
Cost	**Familiarisation cost to business**	2.8	6.7	14.6
Benefit	**Cost saving of MOT fee**	23.4	31.3	39.6
	Time saving to business	40.1	94.5	267.3

161. The business impact outputs from these direct costs and benefits are outlined in the following table.

Table 45: Value of business impact measures (2019 prices, 2020 present value)

Net direct cost to business per year (£m)	BIT score
-39.8	-199.4

Indirect Costs and Benefits

162. As with Option 1, there is only one indirect and monetised impact of this regulation – travel time saving for private vehicle owners.

Sensitivity Analysis

163. Sensitivity analysis has been undertaken in the same way as highlighted under Option 1.

3.0 Risks and Unintended Consequences

164. Throughout the analysis presented above, specific assumptions have been made which have been detailed and explained where applicable. However there are some underlying assumptions used throughout which are outlined under the headings below.

165. Should any of these risks and unintended consequences materialise this may affect the analysis undertaken throughout this IA and affect the overall benefits achieved or costs incurred as a result of this regulatory change. Where possible, sensitivity analysis has been undertaken to account for the underlying uncertainty, but some assumptions (e.g. full employment and maintaining roadworthiness) would affect the analysis beyond those tested by the sensitivity ranges. While we do not expect them to change over the appraisal period selected, we will re-evaluate these after the consultation and account for these uncertainties explicitly where possible.

Full employment

166. This assumption has been used throughout the analysis to explain the net impact of the policy options, considering that some number of MOT tests will be lost under each option during the appraisal period and could impact aspects such as testing station revenues, wages and employment. This assumption has been repeatedly used in line with Green Book guidance[44], whereby the capacity relinquished from the reduced testing is put to good use elsewhere, be it for the current business (i.e. MOT testers becoming general mechanics) or in the wider economy (e.g. re-training occurs and they work wherever there is a vacancy, or there are fewer new entrants who go elsewhere in the economy). However, there is uncertainty as to how likely this is to hold in practice as anecdotal evidence suggests that some MOT testing stations are reliant on MOTs for their income and MOT testers may be unable to re-train and work in other sectors. There is a lack of evidence held by DfT and hence the consultation seeks to address this through engagement with MOT testing stations. Should this assumption be different in the future, this would mean the indicatively monetised impacts would become realised and affect the overall net total impact of this measure.

Vehicle owners will maintain the roadworthiness of their vehicle

167. While vehicle owners are responsible for ensuring their vehicle is always safe to drive (roadworthy), it can still be unsafe with a valid MOT certificate. This regulation change does not change this requirement, hence it is expected, and therefore assumed that, vehicle owners will still keep their vehicle in a roadworthy condition. There is a risk that this regulation change could signal to vehicle owners that vehicle servicing is less important or valuable than it was before due to the cost of living context it is being presented in. The consultation aims to understand how this regulation change will influence vehicle owners' servicing behaviour which would improve the information around this assumption.

DVSA's slot fee and the maximum MOT fee will not change

168. Where applicable in the analysis, DVSA's slot fee and the MOT fee has been applied. As part of the call for evidence DfT are seeking views on whether the current maximum charges for the MOT are still proportionate/appropriate. As well as this, DVSA launched a consultation in January 2022 on

[44] Chapter 6 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063330/Green_Book_2022.pdf

changing the cost of DVSA services. Whilst no changes have resulted yet, it is important to be aware that there is a risk this slot fee could change, as this would change some of the outputs of the analysis.

Vehicle usage will remain the same despite context of cost of living

169. It has been assumed throughout that historic MOT data is reflective of future years. However, there is anecdotal evidence to suggest that individuals are reducing their vehicle usage due to the cost of living, potential growth in car sharing and a shift to other modes (such as public transport, cycling and walking). If this continues, and the sale of vehicles declines, there is a risk that the analysis will not be representative of future years and that the benefits are lower than initially estimated.

170. There are risks that the policy will not achieve the intended objective of reducing the burden on motorists whilst ensuring that the MOT continues to support the roadworthiness of vehicles, in terms of both road safety and in-use environmental impact. These risks largely arise from unintended changes in behaviour by motorists if they decide not to maintain their vehicles and defects go undetected for longer. This could add to the long term costs that such motorists face and the safety and environmental impacts that result. The nature of the change proposed and the continuing improvement in cars means that these risks are believed to be modest.

171. There are also risks that there could be some reduction in the number of MOT testing stations, reducing the choice for consumers, depending on how much stations rely on income from MOTs and related matters (such as servicing and repairs associated with an MOT). The consultation seeks further information from the sector on the effects of the policy change.

4.0 Wider Impacts

Innovation Test

172. Innovation in car design and car systems has led to a reduction in the number of MOT failures and the number of accidents where vehicle defects are identified as a contributory factor. This has changed the cost/burden assessment for the date on which an initial MOT is required. There are also broader issues about the MOT test arising from the introduction of new types of vehicles such as electric vehicles or autonomous vehicles and advanced driver assistance systems. Alongside the specific change to the date of the first MOT we are carrying out a broad review of MOT testing to consider the implications of such innovations.

Small and Micro Business Assessment (SAMBA)

173. It is expected that there will be impacts faced by Small and Micro Businesses (SMBs) as result of the options outlined above. This will be different for businesses which carry out MOTs, who are expected to incur costs as a result of this change and businesses that own vehicles, who are set to benefit from this regulation. Therefore this SAMBA separates these businesses, respectively.

Businesses anticipated to incur cost – MOT testing stations

174. The Business Population Estimates 2021[45] provides a breakdown on the number of businesses, employees and turnover of businesses by different sizes in the maintenance and repair of motor vehicles industry. The breakdown of businesses by the number of employees is provided in Table 46 below. It shows that the number of SMBs represent 99.2% of businesses within the maintenance and

[45] Table 7, Code 452, Business population estimates 2021 - GOV.UK (www.gov.uk)

repair industry. Despite representing less than 1% of industry, large businesses account for around 28% of industry turnover indicating that there are a high proportion of small businesses operating in the sector which earn distributionally lower revenues than larger firms, potentially leaving them more vulnerable to reductions in revenue.

Table 46: Maintenance and repair of vehicles businesses by size, 2021

Size of business	Number of businesses	Business share (%)	Turnover (£ million)	Turnover share (%)
Micro (1 – 9 employees)	30,010	*90.7*	8,675	*31.3*
Small (10 – 49 employees)	2,805	*8.5*	6,167	*22.3*
Medium (50 – 249 employees)	215	*0.6*	5,171	*18.7*
Large (250 or more employees)	50	*0.2*	7,669	*27.7*
Total	**33,080**	***100***	**27,681**	***100***

175. This data indicates that SMBs could be less resilient to changes resulting from this regulation as they are likely to have fewer revenue streams than larger businesses, however this is dependent on how reliant they are on MOTs for revenue/custom. The consultation seeks to understand how the regulation will tangibly affect SMBs. Such information could include:

- Relationship between revenue, custom and MOTs.
- Ease/ability at which staff can be reassigned to other work within the business.

176. The impacts on businesses are differentiated between direct and indirect. Direct impacts are the most significant as they have to be incurred by businesses, whilst indirect impacts are less important as they will not necessarily be incurred by businesses. As considered by this IA, there are no direct benefits to these businesses and only one indirect benefit, which is anticipated not to be realised. Hence these businesses are likely to face a disproportionate impact from the direct and indirect costs.

177. It is impossible to give any exemptions for SMBs as the regulation change is focussed on vehicle owners so any exemptions would prevent the policy from achieving its intended outcomes. It is expected that SMBs are more reliant on MOTs for revenue and custom than larger businesses and hence this regulation change is likely to place disproportionately higher costs on SMBs.

Businesses anticipated to benefit – businesses with a vehicle fleet

178. Whilst this regulation aims to relieve individuals from cost of living pressures by improving the balance between risk and financial burden of the MOT, businesses with a fleet of vehicles are expected to be a significant beneficiary of this change, owning 17% of vehicles in scope.

179. Industry research[46] says that in 2020, SMBs accounted for 57% of the UK businesses running vehicles and about one third of turnover of UK business. UK businesses with large vehicle fleets, such as Royal Mail who has the largest vehicle fleet in the UK[47], will experience the most significant cost

[46] SME Purchasing Dynamics Report 2020 - Research and Markets

[47] https://www.theclimategroup.org/our-work/press/uks-largest-fleet-operators-tell-government-commit-100-electric-vehicle-sales-2030#:~:text=Latest%20new%20joiner%2C%20Royal%20Mail,business%20fleet%20in%20the%20UK.

saving. The businesses with the largest fleets are expected to be categorised as a large business with 250 or more employees. As we do not know the exact number of businesses who own vehicle fleets who stand to benefit from this change, we can use the Business Population Estimates for all industries as a proxy (shown in Table 47 below). This shows that if the benefitting businesses had the same sizes as we see in the UK, we could expect that a large number of SMBs would stand to gain as a result of these changes from the cost savings, and because they have a lower turnover, these gains could be a greater proportion of overall revenues earned. However, it remains true that larger businesses may still gain more if they have larger vehicle fleets, as the savings will be directly related to the number of vehicles owned, which is likely to be higher for the larger businesses.

Table 47: Maintenance and repair of vehicles businesses by size, 2021

Size of business	Number of businesses	Business share (%)	Turnover (£ million)	Turnover share (%)
Micro (1 – 9 employees)	1,162,155	*82.1*	636,893	*15.4*
Small (10 – 49 employees)	210,550	*14.9*	649,883	*15.7*
Medium (50 – 249 employees)	35,620	*2.5*	720,540	*17.4*
Large (250 or more employees)	7,655	*0.5*	2,139,334	*51.6*
Total	**1,415,980**	***100***	**4,146,651**	***100***

180. It is not appropriate to make any exclusions to mitigate against the anticipated disproportionate nature of the benefits from this change, as the nature of this industry suggests that disproportionately affected businesses are unlikely to interact in markets together.

181. The consultation does not seek to determine the impact on businesses with a vehicle fleet as it is anticipated that most businesses responding will be those anticipated to incur costs i.e. MOT testing stations. Those businesses with a vehicle fleet that do respond are unlikely to be representative of the industry.

Equalities Impact Assessment

182. The policy is neutral in terms of its effect on people with protected characteristics under the Public Sector Equality Duty set out in the Equality Act 2010.

5.0 Post implementation review

1. **Review status:** Please classify with an 'x' and provide any explanations below.

	Sunset clause		Other review clause	x	Political commitment		Other reason		No plan to review

Regulations to be reviewed every 5 years to ensure continued suitability.

2. **Expected review date** (month and year, xx/xx):

0	5	/	2	8

5 years from when the regulations come into force

3. Rationale for PIR approach:

DfT intends to conduct an evaluation of this policy, examining its implementation (process evaluation) and the scale of its impact, and this PIR plan will form the basis of that review. The level of evidence and resourcing for this PIR has been assessed to be medium. This plan has been prepared for the consultation stage IA, and will be subject to further revision at a later date before the final clearance processes.

This PIR will draw on existing data sources where available, outlined in the table below, but may also involve primary qualitative and quantitative data collection (e.g. surveys/interviews) where gaps in existing data are identified. Existing datasets are expected to be collected, and assessed for usefulness, prior to the implementation of the policy so as to form appropriate baselines for monitoring and evaluation purposes once the policy is live.

Taken as a whole, this evidence will inform future policy decisions on whether to retain, renew or rescope the policy. The process evaluation should also provide evidence useful for the optimal implementation of any future changes the DfT wish to make to the MOT testing regime.

Key audiences for the evaluation and PIR are individuals (motorists), businesses affected (e.g. garages, businesses that operate with fleets of vehicles, etc.), and government departments/agencies (the DVSA & the DfT).

This policy's main objectives are listed below along with the suggested research questions that must be addressed in order to determine the success of the policy against these objectives and identify any unintended consequences.

Objective: Reduce the financial and time burden of the current MOT testing regime on motorists

Research questions:

- Has the policy been implemented as planned?
- Has the policy enabled a time-benefit for motorists (e.g. less time being spent waiting for MOT completion and travelling to and from MOT testing for motorists)?
- To what extent has the policy increased costs for repairs to vehicle owners?
- If the MOT failure rate is affected by the implementation of the policy, what effect has this had on the monetary costs incurred by vehicle owners at the first MOT date, and how does this differ by vehicle class or type?
- To what extent has the policy affected the cost of the DVSA slot fee or MOT fee for vehicle owners?

Objective: Ensure that impacts to businesses as a result of the policy are kept to a minimum

Research questions:

- Has the policy affected garages' annual revenue/profits, and if so, how have garages responded (e.g. reduction in staff, cost cutting etc.)?

- To what extent has the policy affected businesses that operate a fleet of vehicles? Has the policy been implemented as planned?

Objective: Assess whether the current MOT testing regime remains appropriate given current and foreseeable changes to motoring

Research questions:

- To what extent has the policy affected failure rates at first MOTs, how does this differ by vehicle Class, and type (e.g. Internal Combustion Engine (ICE), Electric Vehicle (EV), Plug-in Hybrid Electric Vehicle (PHEV), etc.)?
- Has the policy had any impact on the level of vehicle maintenance by vehicle owners?
- What impact has the policy had on the number of average annual MOTs completed after vehicle registration compared to previous years?
- What are the perceptions of motorists, businesses affected, and stakeholders on the policy change, has it been received positively or negatively?
- If the MOT failure rate is affected by the implementation of the policy, are there any differences in which vehicle components are most likely to have caused MOT failures, what the nature of the faults are (e.g. serious or dangerous), and how these faults and component failures differ by vehicle class, and type, when compared to the former MOT regime?

Objective: Ensure the MOT testing regime continues to support the roadworthiness of vehicles both in terms of road safety and environmental impact

Research questions:

- To what extent has the policy affected road safety for road users?
- To what extent has the policy affected the proportion of vehicles that fail an MOT due to emissions?
- To what extent has the policy affected emissions of air pollutants produced?

A more detailed description of the specific research questions, evidence and baseline plans, and the policy objectives they relate to, are outlined in the table below. It is important to note that all plans as outlined here are subject to change, in scope and in method, when it becomes clearer to analysts, after assessment of the available datasets and the methods required in order to effectively monitor and evaluate this policy. This plan should be interpreted as recommendations at this stage.

Key Objectives, Research Questions and Evidence collection plans			
Key objectives of the regulation(s)	**Key research questions to measure success of objective**	**Existing evidence/data**	**Any plans to collect primary data to answer questions?**
Reduce the financial and time burden of the current MOT testing regime on motorists	- Has the policy been implemented as planned? - If the MOT failure rate is affected by the implementation of the policy, what effect has this had on the monetary costs incurred by vehicle owners at the first MOT date, and how does this differ by vehicle Class or type? - To what extent has the policy increased costs for repairs to vehicle owners? - Has the policy enabled a time-benefit for motorists? - To what extent has the policy affected the cost of the DVSA slot fee or MOT fee for vehicle owners?	- DVSA MOT data (how many fewer MOTs will be conducted, e.g. count of MOTs baselined against years pre-policy)	- Interviews/surveys with the DfT, agencies (e.g. the DVSA), businesses affected and motorists to determine effectiveness of policy implementation - Interviews/surveys with motorists on time-benefits and insurance premium rates - Interviews with garages/motorists on increased costs to customers of initial MOTs
Ensure that impacts to businesses as a result of the policy are kept to a minimum	- Has the policy affected garages' annual revenue/profits, and if so, how have garages responded (e.g. reduction in staff, cost cutting etc.)? - To what extent has the policy affected businesses that operate a fleet of vehicles (e.g. increased cost of vehicle maintenance, reduced cost of MOT)?	- DVSA MOT data (the number of annual tests being conducted baselined against years pre-policy) - DVLA vehicle licensing data (e.g. whether factors exogenous to the policy such as vehicle ownership have affected the revenue/profit of garages) - ONS employment data (at SOC-level for garages or higher sub-categories to understand displacements to other industries baselined against years pre-policy) - ONS business data (to assess broader changes in number of businesses affected baselined against years pre-policy)	- Interviews with businesses that operate fleets of vehicles on impacts of policy and their businesses' response - Explore conducting analysis to determine potential differences in the geographical spread of impacts (e.g. garages with less demand for services may be disproportionately affected by new policy)

Assess whether the current MOT testing regime remains appropriate given current and foreseeable changes to motoring	- To what extent has the policy affected failure rates at first MOTs and how does this differ by vehicle Class or type (e.g. ICE, EV, PHEV, etc.)? - If the MOT failure rate is affected by the implementation of the policy, are there any differences in which vehicle components are most likely to have caused MOT failures, what the nature of the faults are (e.g. serious or dangerous), and how these faults and component failures differ by vehicle Class, and type, when compared to the former MOT regime? - Has the policy had any impact on the level of vehicle maintenance by vehicle owners? - What impact has the policy had on the number of average annual MOTs completed after vehicle registration compared to previous years?	- DVSA MOT data (failure rate at first MOT baselined against years pre-policy; data on vehicle components which led to failure and nature of faults baselined against years pre-policy; number of annual MOT tests conducted baselined against years pre-policy) - HMRC MOT enforcement data (data on vehicles driving without valid MOTs baselined against years pre-policy)	- Interviews/surveys with garages on the number of vehicle owners requesting vehicles services and MOTs together. - Interview/surveys with motorists on vehicle maintenance prior to and since implementation of the new policy
Ensure the MOT testing regime continues to support the roadworthiness of vehicles both in terms of road safety and environmental impact	- To what extent has the policy affected road safety for road users? - To what extent has the policy affected emissions produced and air quality? - To what extent has the policy affected the proportion of vehicles that fail at MOT due to emissions?	- DFT Roads Accident In-depth Study (RAIDS) data (e.g. which vehicle component failure led to incidents baselined against years pre-policy) - STATS19 data (e.g. accidents by age of vehicle, aggregate-level accidents by Class, vehicle defects as contributory factor) baselined against years pre-policy - DVLA licensing data baselined against years pre-policy (e.g. link licensing data to STATS19 and DVLA to determine vehicles in scope of policy change) - DVSA MOT data baselined against years pre-policy (e.g. any changes in the ratio and amount of serious and dangerous defects at MOT; what proportion of vehicles are failing their MOT due to vehicle emissions)	- Interviews with individuals (motorists) on their perceptions of road safety prior to and since implementation of the new policy

		- **Caveats and limitations:** the above methodology suggests linking STATS19 and DfT RAIDS data with DVLA licensing data so that safety impacts can be assessed only for vehicles in scope of the policy (e.g. vehicles taking their first MOT). Although the analyst team believe this will be possible, if disentangling these vehicles is too difficult or deemed inaccurate, other data collection methods may have to be explored.	

Appendix 1

Background

183. In 2011, the Transport Research Laboratory (TRL)[1] was commissioned by the Department to investigate the effect of vehicle defects on road traffic collisions, given the expected relationship between the number of MOT failures and the number of collisions which result from a vehicle defect. This is based on the understanding that, due to delaying the initial MOT of a vehicle, there could be more vehicles operating on roads in an unroadworthy condition, which would later go onto fail their first MOT at a later date. This, in turn, is expected to lead to more collisions on roads where vehicle defects are a key factor.

184. For the vehicles in scope[2], the TRL report sought to investigate the:

- prevalence of roadworthiness defects based on MOT failure data by vehicle age (2008-09);
- number of collisions recorded as likely resulting from vehicle defects based on STATS19 and other sources (2009); and
- contribution of MOT-assessed vehicle defects to crash causation and injury outcome (2009).

185. Several datasets were compiled for each of these aspects and to consider the likely impacts to road safety from changing the date of the first MOT and frequency, producing estimates for each option on the number of casualties in collisions by severity. For this impact assessment, DfT have undertaken analysis to recreate the approach undertaken by TRL, and update it with more recent data to provide an updated assessment of the estimated impact on road safety. As the options in the IA only look at changing the first date of the tests to either 4 years (Option 1) or 5 years (Option 2), we have only included estimates of these throughout. The rest of this annex will detail the analysis undertaken and data used to estimate the impact on road safety.

186. The TRL analysis presented outputs based on different vehicle types (e.g. motorcycles up to 50cc, cars, LGVs), however in our update we have aligned these to the MOT Classes of vehicles in scope of the changes, which are shown in Table A1. While this means the results for individual vehicles are not strictly comparable between the two estimates, the total numbers across all vehicle types still provide an informative comparison of the two options.

Table A1: MOT and STATS19 description of the Classes in scope

Class	MOT data	STATS19 data
1	• Motorcycles up to 200cc	• Motorcycles up to 200cc • Motorcycles 125-200cc identified by linking DVLA data
2	• Motorcycles over 200cc	• Motorcycles over 200cc, identified through linking DVLA data
3	• 3-wheel vehicles (up to 450kg unladen weight)	• No vehicles have been identified at present

[1] Effect of Vehicle Defects in Road Accidents (trb.org)

[2] The vehicles in scope were passenger cars, light vans (up to 3.5 tonnes) and motorcycles. For simplicity and to enable a pure comparison, only outputs for cars have been included in this summary.

4	• 3-wheeled vehicles (over 450kg unladen weight) • Cars (up to 8 passenger seats) • Motor caravans • Quad bikes (max unladen weight 400kg – for goods vehicles and max net power of 15kb) • Dual purpose vehicles • *Private hire and public service vehicles (up to 8 seats)* • *Ambulances and taxis* • *Private passenger vehicles and ambulances (9-12 passenger seats)* • Goods vehicles up to 3 tonnes	• 3-wheeled vehicles (over 450kg unladen weight, identified through linking DVLA data) • Cars • Goods vehicles up to 3 tonnes, identified by linking DVLA data • Motor caravans and quad bikes identified through STATS19 free text field
7	• Light Goods Vehicles between 3 - 3.5 tonnes	• Light Goods Vehicles between 3 - 3.5 tonnes, identified through linking DVLA data
The vehicles denoted in italics are excluded from the scope of these changes, however in the MOT data they are included due to difficulties in identifying and omitting these from the MOT data. This means we will be slightly overestimating the impact of the options if the MOT failure rates for these vehicles are higher than the rest of the Class 4 vehicles which are in scope. Further refinement will be sought ahead of the final stage IA by joining DVLA and DVSA data.		

Steps undertaken in the analysis

187. As outlined in the original report by TRL, several steps are undertaken to quantify the effect on road safety, which are summarised below and discussed in more detail throughout the remainder of this annex.

1. Evaluate the number of vehicles in the fleet with defects (based on MOT failure data).
2. Explore the relationship of MOT defects to collisions for different types of vehicles and the vehicle age (based on STATS19 and assumptions).
3. Calculate the likely number of vehicles with defects under each of the potential policy scenarios, including behavioural assumptions of repairs between MOT dates.
4. Using step 3, calculate the percentage increase in MOT failures and calculate a collision risk rate and produce scaling factors for the 2019 collision data.
5. Use the previous steps to quantify the additional annual casualties compared to the 2019 data to determine the increase in casualties by severity.

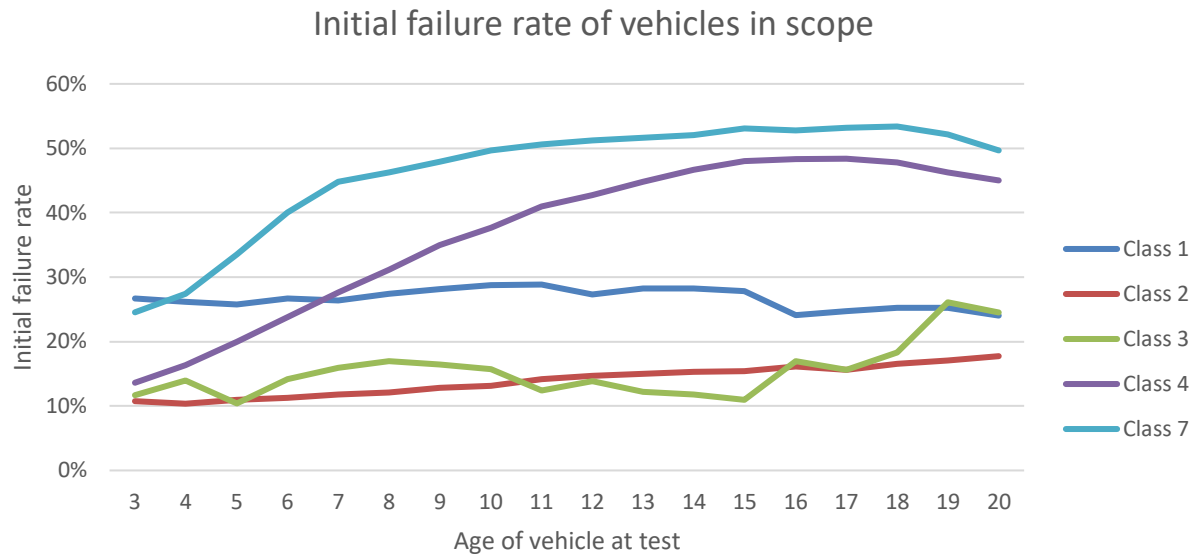
Step 1: Evaluate the number of vehicles in the fleet with defects

188. The first stage of this analysis is to evaluate the number of vehicles operating in the fleet with defects, which could translate into vehicle defect-related collisions. As with the original report, we have obtained bespoke data from the DVSA which provides the number of MOT tests and initial vehicle failures in 2019, by the age of vehicle at time of test and the Class of vehicle. This enables the estimation of initial failure rates for each Class of vehicle by their age to understand the impact on the vehicles in scope of these changes. Throughout, the initial failure rate has been estimated using:

$$Initial\ failure\ rate = \frac{Total\ Fail\ Results + Pass\ with\ rectification}{Total\ tests}$$

189. Using the formula and data above, we calculated the initial failure rate of the vehicles in scope, separating by Classes to show the change in failure rate by the age of vehicle, as shown in Chart 1 below. We have limited the data to 20 years as we are only concerned about vehicles 5 years or younger in this IA, but a slightly longer series of data is useful to describe trends.

Chart 1: Initial failure rate of Classes in scope by age of vehicle



Source: Safety analysis undertaken on DVSA MOT data. In 2019, Class 4 tests represented around 94% of all MOT tests conducted, so although other classes may have higher failure rates, these are on a smaller number of vehicles overall.

190. From the data shown in Chart 1, it shows a general trend where for most Classes, the initial failure rate is lowest for vehicles in their earlier years, which gradually increases with the age of the vehicle. This indicates that in the scope of the options considered, the vehicles at 4 or 5 years of age tend to fail their MOT less frequently than vehicles of older ages[3]. It also suggests that Class 4 vehicles tend to have lower failure rates than Class 1 and Class 7 vehicles for the first date changes being proposed.

191. From the MOT data, the most prominent Class of vehicles tested is those in Class 4, which covers several different types of vehicle, the largest of which is cars. In 2019, Class 4 vehicles represented 94% of all MOTs conducted, while all the other Classes represented a significantly lower proportion, as shown in Table A2 below.

Table A2: Share of MOTs by Class, 2019

Class	MOTs	Share of total
1	224,938	1%
2	722,445	2%
3	10,553	0%
4	30,122,022	94%
7	764,230	2%
Total	**31,887,885**	

192. Over the last decade since the release of the TRL report, the number of MOTs conducted has increased by 16%, a trend seen across most vehicle categories as shown in Table A3 below. Despite there being more vehicles on the road and going through the MOT system, the number of initial vehicle failures has fallen by 7%, indicating that overall, the standards of vehicles when presented at the MOT test have improved from an initial failure rate of 40% to 32%. This finding is the same for all Classes

[3] While Class 3 vehicles are in scope and have more variability in the data, these represent a small portion of MOTs (0.03%). Class 5 vehicles are not in scope and have been removed from tables, though will count in totals but represent a very small proportion (<1%).

except those in Class 7 which have experienced slower declines due to the higher expansion in the rate of vehicles having an MOT test.

Table A3: Change in MOTs and failures by Class, 2009 vs 2019

	2009		2019		Percentage change	
Class	**MOTs**	**Initial failures**	**MOTs**	**Initial failures**	**MOT total**	**Initial failures**
1	241,891	71,182	224,938	57,595	-7%	-19%
2	710,452	132,735	722,445	102,375	2%	-23%
3	13,664	3,870	10,553	1,962	-23%	-49%
4	25,864,102	10,503,829	30,122,022	9,685,837	16%	-8%
7	542,432	271,461	764,230	312,548	41%	15%
Total	**27,409,388**	**10,995,710**	**31,887,885**	**10,172,471**	**16%**	**-7%**

193. Given the improvements in MOT failure rates (as shown above), we would expect fewer failures and therefore fewer vehicle defect-related collisions. Therefore, the impact of delaying the first MOT is likely to be lower than in the original TRL analysis (conducted when underlying MOT failure rates were higher). However, this is dependent on the number of collisions also decreasing or remaining the same.

Step 2: Relationship of MOT defects to collisions for vehicle types and age

194. The next stage of the analysis is to consider the relationship between the existence of vehicle defects and the number of accidents for each of the vehicles in scope. This is done using a bespoke production of STATS19 data for 2019[4] which identifies collisions where vehicle defects were listed as a CF[5].

195. As the Classes of vehicle within scope of the MOT system are broad and cover several different vehicles which are recorded in STATS19, the bespoke product of STATS19 had to be tailored to the vehicles that could be identified. This is explained in Table A1 earlier in this appendix. Where a vehicle Class has not been neatly defined, specific analysis has been undertaken to join the data that is held internally on vehicles registered from the DVLA to the data held in STATS19 to identify the vehicles which would be under each Class. An example of this is with vans, where STATS19 would record these as 'vans', however these would either be in Class 4 or 7 in the MOT system, dependent on their vehicle weight. DVLA data on the maximum permitted weight of the vehicle has been used to identify the characteristics of the vehicle which would classify them in each of the weight categories prescribed. In some instances, not all vehicles have been able to be identified in STATS19 data, and are therefore not included. However, given the prominence of the categories which can be easily identified, the risk of this is fairly low and would ensure the majority of vehicles are captured in this analysis.

196. Once the number of CFs has been identified for each of the vehicle types, we compare this data to the total number of CFs recorded in STATS19 to give a proportion of collisions where vehicle defects were recorded. As vehicle defects is a broad category with some subcategories (such as defective brakes, steering or tyres), we have only considered analysis on the broad category and not with the individual sub-category itself. However, we have excluded the 'overloaded or poorly loaded vehicle or

[4] 2019 data has been used throughout this analysis as the baseline point in time. This is due to the impact of the Covid-19 pandemic on more recent years of data, both on the level of traffic and therefore collisions, but also on the number of MOTs conducted and use of those vehicles.

[5] Contributory factors (CFs) are assigned at the roadside based on an initial inspection by the attending police officer. These are judgement based and many CFs can be assigned to a single collision and not all collisions will have a CF assigned. This assumes that given technological progress that it has not become more difficult/less transparent to assign vehicle defects as a factor.

trailer' from the total vehicle defects, as this is not covered as part of the MOT test, and the change in regulations here would not affect individual behaviour on this aspect. The resulting data for 2019 for each of the Classes has been shown in Table A4 below.

Table A4: Contributory Factors for vehicle defects for each MOT Class as identified

MOT Classes*	Vehicle Defects CF, 2019**				Proportion of total recorded CFs
	Fatal	**Serious**	**Slight**	**All**	**All**
Class 1	2	33	59	94	**1.66%**
Class 2	1	35	21	57	**1.47%**
Class 4	17	258	995	1,270	**1.54%**
Class 7	0	6	28	34	**1.53%**
*Class 3 vehicles haven't been identified in STATS19 at present **Omitting overloaded or poorly loaded vehicles or trailers					

197. As can be seen in Table A4, while each vehicle Class has a varying proportion of vehicle-defect related CFs, these all appear to be low compared to the total number of collisions, indicating that a small share of total collisions recorded are caused by vehicle defects. This is also lower than those identified by TRL in their original report, where they had determined this rate to be around 2% of all CFs but instead used a 3% figure in their analysis based on their understanding that not all vehicle defect-related collisions are directly visible when first attending the scene of a collision. We have sought the use of RAIDS data to give a secondary source of data as these investigations are more detailed and conducted by trained individuals, rather than identifying what is directly visible immediately after the accident. However, this has not been completed at this stage and will be investigated and applied before the final stage IA if possible. This could lead to a higher number of casualties than presented later in this analysis. Despite this, and using comparable data, the number of vehicle defect CFs have reduced[6] compared to the previous assessment by TRL, which is shown in Table A5 below from STATS19 data.

Table A5: Road casualties in collisions associated with vehicle defects for vehicles in scope by severity, STATS19

Casualties in collisions where vehicle defect has been identified involving vehicles identified and in scope by severity	2010[7]	2019	*Percentage change (2019 v 2010)*
Fatal	29	20	*-31%*
Serious	405	333	*-18%*
Slight	1,908	1,102	*-42%*
All	**2,342**	**1,455**	***-38%***

198. While this is indicative of an improvement in the safety record of vehicles, as fewer vehicles have been identified to have caused collisions due to vehicle defects, this has followed the broader trends observed in the number of casualties in collisions more broadly over this time, as shown in Table A6 below. An important caveat to note is that over the last decade the number of CFs recorded in accidents has declined slightly, which may explain some of the reduction of vehicle defect-related collisions in addition to the general reduction in collisions.

Table A6: Comparison of road casualties in collisions for the vehicle Classes identified, 2019

[6] To the Department's knowledge, there have been no changes in the recording of STATS19 contributory factors since 2005 that would affect the recording of defects. However, it should be noted that collisions have seen a declining rate of CFs assigned in recent years due to data collection which has an impact on results. In 2019, a CF was assigned in roughly 66% of all collisions.

[7] At the time of this IA and analysis, we did not have 2009 data so data from the nearest available year has been used.

Casualties in collisions involving vehicles identified and in scope by severity	2009	2019	*Percentage change*
Fatal	2,025	1,557	*-23.1%*
Serious	33,110	26,077	*-21.2%*
Slight	174,478	116,019	*-33.5%*
All	**209,613**	**143,653**	***-31.5%***

199. This data seems to suggest that over the last decade, and in addition to improvements in MOT failure rates, there is also a decrease in the number of collisions where a vehicle defect has been recorded as a CF. This is expected to further decrease the road safety impact of the options being considered in this IA due to the combination of these two effects and present a lower impact compared to the previous analysis by TRL. The remaining steps of this analysis seek to determine a relationship between the MOT failure rate and the number of casualties, and to determine the impact of each option.

Step 3: Estimating the change to MOT failures under each policy option

200. With the now-updated MOT failure data, we can apply the same methodology as TRL did to estimate the impact of each of the options. This is based on how we expect individuals to respond to the changes proposed, given the current MOT regime has been in place since 1960, and is likely to have been one of the factors driving the lower failure rates and the safety record of vehicles which we saw in the previous section.

201. In seeking to ascertain how individuals may react to such a change, we included behavioural science input to help assess how we would make such assumptions and what factors might be driving this. In their engagement, they suggested the use of a 'health-belief' style model which is typically used in health condition scenarios, but most factors would be true for vehicle condition and the potential impact on individual health. Within this model, there are 4 factors that we expect to be at play:

1. **Perceived severity and belief of consequence.** The true cost of the MOT is not the cost in itself, but the possibility of finding an expensive fault which you could have lived with. This factors in loss aversion, where individuals would prefer to avoid losing money than gaining an equivalent amount.
2. **Perceived benefits.** Individuals could foresee the potential benefits of their action, through ensuring a well-functioning vehicle and keeping their vehicle in a roadworthy condition.
3. **Cues to action.** Individuals could see perceived barriers to action, and exposure to factors that prompt action, which mean that the ease of remembering a change and completing the vehicle repairs are important. Passivity plays into this as people seek repairs because they are told to, and if the change lengthens this period, then individuals may not think they need to check their vehicle as often.
4. **Self-efficacy.** Some individuals have confidence in the ability to seek repairs. While some individuals may know when there is a fault with their vehicle to seek repair (or not if they perceive it to be a minor fault), others would rely on guidance from others to tell them, or a warning light.

202. Given the wide range in effects and likely large impact on the resulting analysis, we have chosen to employ a sensitivity-based approach (as did TRL in 2011), which uses a wide sensitivity range to examine the range of potential impacts. The low and high impact boundaries are explained below:

- **Low impact boundary –** a moderate number of individuals focus on the perceived benefits of ensuring roadworthiness and strong self-efficacy or advice from others. This ensures most individuals would seek repairs to their vehicles without an MOT prompt, which is further

enhanced by the technology available to detect faults in newer vehicles. We have therefore assumed 75% of vehicle owners would seek repairs under this scenario, indicating the remainder either do not follow advice or continue to operate vehicles without knowing there is a fault.

- **High impact boundary –** individuals are more focussed on the belief of consequence of a high repair bill, high barriers to seeking repairs and low self-efficacy, whereby individuals are more likely to wait for an MOT to seek or identify repairs. In this scenario, we have assumed that no one would seek repairs before their next MOT and present a high impact scenario.

203. Given these assumptions are at the core of the methodology and have a large determining factor, we have opted for a 25 – 100% range compared to TRL's previous analysis of 50 – 100% for the potential safety impact. As outlined, these are largely behavioural theory-based and therefore subject to a lot of interpretation and predicting how people could react to this change, so there are large amounts of uncertainty associated but we expect the true number to lie somewhere in this range. Given this, we are seeking as part of the consultation to gather information on individuals' likelihood on seeking repairs to update the assumptions that we use. In parallel to the consultation, we are seeking to engage with industry to ascertain the level of repairs which are completed after a customer has identified an issue or a warning light is presented which may inform the assumptions used throughout.

204. With these assumptions on behaviour, we can then seek to apply them under each of the policy options by using the latest MOT failure data available in 2019. Using the same approach as TRL, we would assume that in each of these scenarios, of those who would have failed at Year 3, a proportion would now wait until the next MOT for the defect to be identified and repaired, leading to a higher failure rate at the next MOT. An example is given below for Option 1 (4-1-1-1) for Class 4 vehicles in their fourth year of age:

$$Year\ 4\ failures_{new} = Year\ 4\ failures_{old} + Year\ 3\ vehicles\ not\ repaired$$

$$Year\ 4\ failures_{Low} = 16.3\% + 3.4\% = 19.7\%$$

$$Year\ 4\ failures_{High} = 16.3\% + 13.6\% = 29.9\%$$

205. This would now mean that the failure rate for the first MOT under Option 1 would have increased from 16% to 20 – 30%[8], as those vehicles that would have failed at Year 3 would now wait a year before the issues are identified and repaired with their vehicle. Throughout the analysis we assume that not identifying a failure does not increase the future probability of a vehicle failing its MOT. A fuller table is provided below for the age of Class 4 vehicles, though the same logic applies for all Classes in scope.

Table A7: Estimated initial failure rates by age of vehicle and option, Class 4

Age of vehicle, years (2019)	Option 0 (3-1-1-1)	Option 1 (4-1-1-1)	Option 2 (5-1-1-1)
	Initial failure rate	Initial failure rate	Initial failure rate
3	13.6%		
4	16.3%	**19.8 – 30%**	
5	20.0%	20.0%	**27.4 - 49.9%**
6	23.8%	23.8%	23.8%
7	27.7%	27.7%	27.7%

[8] The same logic is applied for Option 2, however this is the sum of those not repaired from years 3 and 4. Numbers have been rounded to 0 decimal places for ease of understanding.

206. This analysis is conducted for all Classes of vehicle and generates the new initial failure rates for each of the options as described by the IA, the outputs of which are shown below. These rates are then used in the next stage to calculate the change in collision rate and then determine the additional level of casualties that we estimate would occur from each of these options.

Table A8: Estimated initial failure rates by vehicle Class and option

Estimated initial failure rates	Option 0 (3-1-1-1)	Option 1 (4-1-1-1)	Option 2 (5-1-1-1)
	Initial failure rate	Initial failure rate	Initial failure rate
Class 1	25.6%	26.3 – 28.5%	26.7 – 30.2%
Class 2	14.2%	14.3 – 14.8%	14.4 – 15.3%
Class 3	18.6%	18.8 – 19.3%	18.9 – 19.9%
Class 4	32.2%	32.5 – 33.4%	32.8 – 34.7%
Class 7	40.9%	41.6 – 43.9%	42.2 – 46.2%

Step 4: Calculating the new collision risk rates

207. From the previous step, we have estimated what the new level of initial MOT failures would be under both options, based on modelling the anticipated effects for the vehicles in scope. This provides a new overall level of MOT initial failure rate which now accounts for those vehicles that would have failed at the third year, which have not had any repairs done ahead of their next MOT. The new level of failures is presented in Table A8 above for the options set out.

208. Through calculating the initial MOT failures for the options, including the 'do nothing' option, the next stage is to estimate the collision rate based on observed data under the 'do nothing' scenario. As outlined in the TRL approach, this is based on a simple linear relationship which assumes that the MOT initial failures are proportional to the percentage of collisions where vehicle defects were recorded factors. Therefore, the following calculation is performed for each Class:

$$Collision\ Rate_{Class} = \frac{Percentage\ of\ current\ collisions\ with\ a\ vehicle\ defect\ assigned_{Class}}{Percentage\ of\ MOT\ initial\ failure_{Class}}$$

209. Using Class 4 vehicles as an example, the recorded percentage of vehicle defect accidents was 1.54% in 2019 (Table A4), while the 2019 initial MOT failure rate was 32.2% (Table A3), using the formula above, this provides a collision rate of 4.8%. This means that of the Class 4 vehicles that went through an MOT in 2019, 4.8% of the vehicles that fail their MOT were expected to have caused a collision of any severity.

210. Following this logic, this collision rate can be held constant and multiplied by the estimated initial MOT failures from Table A3 to produce the estimated change in the collision rate under each of the proposed options for each Class. Continuing the Class 4 example, multiplying the estimated failure rates obtained of 32.5 – 33.4% (Option 1) for the new failure rate by the collision rate of 4.8%, this yields an increase in the collision rate to 1.56 – 1.64% for Option 1, and 1.58 – 1.73% for Option 2.

211. These estimated increases in the collision rate by vehicle Class is then 'normalised' against the current percentage of collisions where the vehicle defect was assigned in the "do nothing" scenario, to determine how much higher the percentage would be under each option. Using the estimates of 1.55 – 1.60% for Class 4 vehicles above and dividing it by the original 1.54% observed in 2019, this suggests that the new level of casualties would increase between 1.0 – 3.9%. This is performed for each vehicle Class to provide the new level of casualties associated with vehicle defect collisions, and these estimated percentages are outlined below. At this stage, Class 3 vehicles cannot be estimated as in

2019 there were no collisions involving these vehicles identified, so there is not expected to be an increased safety impact from these vehicles.

Table A9: Estimated percentage increase in casualties where a vehicle defect would be assigned, by Class

Estimated percentage increase in casualties involved in vehicle defect collisions	Class 1	Class 2	Class 4	Class 7
Option 1 (4-1-1-1)	2.8 – 11.3%	1.2 – 4.7%	1.0 – 3.9%	1.8 – 7.3%
Option 2 (5-1-1-1)	4.5 – 17.8%	1.9 – 7.6%	2.0 – 7.9%	3.3 – 13.0%

212. The numbers above now provide an estimate of what we would expect the level of casualties involved in collisions where a vehicle defect was assigned in 2019, to increase by in any given year going forwards. This means that the new level would be a fixed increase which assumes that there is no change in the vehicle fleet, the level of MOTs carried out nor any further improvements to road safety. To improve the analysis further, scaling the number of MOTs with the number of predicted vehicles on the road in a given year would provide yearly estimates over the appraisal period, however this has not been performed at this stage but will be considered for the final stage IA.

Step 5: Quantifying the additional annual casualties by severity

213. The final step of the analysis is to use the estimates from Table A9 to calculate the percentage increase in casualties by multiplying them by the number of casualties in collisions where a vehicle defect was assigned in 2019. These 2019 values for each Class are provided in the Table A10 below and resulting calculations from the analysis is provided in Table A11. These can be compared to the total level of casualties in collisions in Table A6 to present a sense of scale.

Table A10: Casualties in collisions where a vehicle defect was assigned, 2019

Casualties in collisions where a vehicle defect was assigned, 2019	Class 1	Class 2	Class 4	Class 7	All casualties
Fatal	2	1	17	0	20
Serious*	33	35	258	6	333
Slight*	59	21	995	28	1,102
All	94	57	1,270	34	1,455
*Adjusted figures are used throughout					

Table A11: Estimated impact of options on casualties in collisions where a vehicle defect was assigned, 2019

MOT Test Frequency	Predicted additional casualties involving:				All casualties*
	Class 1	Class 2	Class 4	Class 7	
Option 1					
Fatal	0 - 0	0 - 0	0 - 1	0 - 0	0 - 1
Serious	1 - 4	0 - 2	3 - 10	0 - 0	4 - 16
Slight	2 - 7	0 - 1	10 - 39	1 - 2	12 - 48
All*	**3 - 11**	**1 - 3**	**12 - 50**	**1 - 2**	**16 - 65**
Option 2					
Fatal	0 - 0	0 - 0	0 - 1	0 - 0	0 - 2
Serious	1 - 6	1 - 3	5 - 20	0 - 1	7 - 30
Slight	3 - 10	0 - 2	20 - 78	1 - 4	24 - 94

All*	**4 - 17**	**1 - 4**	**25 - 100**	**1 - 4**	**31 – 126**
*Numbers may not sum to totals due to rounding					

214. Table A11 shows the estimated number of casualties, by severity, for the two options. As shown in the table, the impact of both options could increase the number of casualties in collisions, as we expect more vehicles will be operating on the roads with vehicle defects over a longer period. As expected, the increase in casualties is greater the longer it is before the first date of the MOT and therefore Option 2 has a larger impact compared to Option 1. This translates to an increase in the 2019 level of casualties associated with a vehicle defects contributory factor identified by 1 – 4% under Option 1, and 2 – 9% for Option 2. In addition, given that the number of collisions where vehicle defects have been identified is low compared to the overall level of casualties involved in collisions, the changes would represent an increase of around 0.01 – 0.05% under Option 1 and 0.02 – 0.09% under Option 2.

215. However, this should be interpreted with caution given the number of assumptions made throughout the analysis and the nature of the change which relies on several behavioural effects which are difficult to determine before the change is made. Therefore, the impact could differ from that shown. Further, the impacts presented here could be reduced by mitigation measures to encourage more frequent checking of vehicles before MOTs.

Caveats

216. As highlighted throughout this analysis, several assumptions have been made to assess these impacts that urge caution when interpreting the individual numbers presented. However, this does not affect the overall message that changing the first date of the MOT is likely to have a low impact compared to the overall level of casualties and it is lower than observed in the previous analysis.

217. The analysis has assumed that an increase in failure rate will lead to an increase in the level of collisions of the same degree, which may not be the case should the CFs associated with vehicle defects change as a result of the policy. This also makes no attempt to quantify the additional effect that longer periods between MOTs may have on the severity of collisions or likelihood of worsening vehicle failure rates in the future and its effect on collisions which could increase the impact further. Not all vehicles in scope of the direct change could be identified in the STATS19 data used so the impact could be slightly higher than presented. In addition to this, the MOT data uses all vehicles in those Classes, not all of which are in scope and if the vehicles not in scope had higher/lower MOT failure rates, this would over/underestimate the final results shown.

218. The contributory factor approach under STATS19 has several limitations as noted in footnote 5 The approach taken to use CFs differs to that used by TRL who opted for a high proportion of accidents, which means that the numbers presented throughout could be an underestimate when directly compared. Further analysis is being performed using RAIDS data to fully align with the previous TRL methodology.

219. This analysis makes the strict assumption that vehicle defects identified in STATS19 would be those which are picked up by the MOT test when these may actually differ. The MOT is a vehicle assessment at a single point in time, and a defect may arise as soon as it leaves the MOT testing station which may or may not have been spotted. This means that we attribute the whole effect on road safety to the impact of the MOT changes, when vehicle defects may actually occur after the MOT and not be identified by an MOT. Hence this could overestimate the impact of changing the MOT requirements.

220. It is important to note that this analysis has been performed based on 2019 data alone and therefore wider effects that we have not observed could be contributing to the lower rates seen, however the impact of this is expected to be low. This is because the analysis undertaken has gone through a thorough validation procedure which has allowed us to determine that the methodology used in this update follows that undertaken by TRL exactly and has taken the approach as given.