## Title:

Examining the Speed Limit for Military Armoured Track Laying Vehicles on Public Roads in England and Wales

IA No: DfT00328
Lead department or agency:
Department for Transport
Other departments or agencies:
Ministry of Defence

## Impact Assessment (IA)

Date: 08/06/2015
Stage: Final
Source of intervention: Domestic
Type of measure: Secondary legislation
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## Summary: Intervention and Options

RPC Opinion: Not Applicable

| Cost of Preferred (or more likely) Option |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
| Total Net Present | Business Net | Net cost to business per | In scope of One-In, Measure qualifies as |  |  |
| Value | Present Value | year (EANCB on 2009 prices) | Two-Out? |  |  |
| $£ 0.51 \mathrm{~m}$ | $£ 0 \mathrm{~m}$ | $£ 0 \mathrm{~m}$ | No | NA |  |

What is the problem under consideration? Why is government intervention necessary?
The speed limit for track laying vehicles is 20 mph . However, we believe that military vehicles should be exempt from this restriction. Primarily, this is because it is not possible to train vehicle crews to an adequate operational standard at 20 mph whereas a higher limit of 40 mph would permit that. Secondly, there is no discernible safety benefit from restricting properly trained military crews to a 20 mph limit. Thirdly, removing the 20 mph limit would reduce fuel consumption and lead to time savings by drivers of military tanks and other road users. Government intervention is necessary because it regulates speeds for heavy vehicles to reduce the potential damage caused to drivers and other parties in the event of accidents.

## What are the policy objectives and the intended effects?

The intention is to increase the speed limit on public roads in England and Wales to that at which Tracked Armoured Vehicles $(A V(T) s)$ operated prior to October 2013. This meets the MoD operational need to train vehicle crews to drive safely and effectively at speeds to be used on public roads when deployed.
This measure may also reduce the incidence of potentially dangerous overtaking manoeuvres by other road users following slow moving $\mathrm{AV}(\mathrm{T})$ by reducing the speed differential.
A higher speed limit will also reduce MoD costs due to lower fuel consumption/emissions, and less time taken to complete driver training and testing road miles.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
Two options are considered in this impact assessment:
0) Do nothing - retain the 20 mph speed limit (the baseline comparison).

1) Increase the current 20 mph speed limit for military $A V(T)$ on public roads in England and Wales to 40 mph (The Military will continue to use Armoured Vehicle Standing Orders to set appropriate speed limits for classes of vehicles based on vehicle specific safety cases, and any local lower road speed limits will take precedence over the revised $\mathrm{AV}(\mathrm{T})$ limit). This is the preferred option.

The speed limit cannot be changed without a change in legislation.

| Will the policy be reviewed? It will not be reviewed. If applicable, set review date: Month/Year |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Does implementation go beyond minimum EU requirements? |  |  | N/A |  |  |
| Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base. | $\begin{aligned} & \hline \text { Micro } \\ & \text { No } \\ & \hline \end{aligned}$ | $\begin{aligned} & <20 \\ & \text { No } \end{aligned}$ | Small No | Medium No | Large No |
| What is the $\mathrm{CO}_{2}$ equivalent change in greenhouse gas (Million tonnes $\mathrm{CO}_{2}$ equivalent) |  |  | Traded: N/A | NonN/A | raded: |

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Summary: Analysis \& Evidence
Description: Increase the current 20mph speed limit for military AV(T) on public roads in England and Wales to 40mph FULL ECONOMIC ASSESSMENT

| Price Base <br> Year 2015 | PV Base <br> Year 2015 | Time Period <br> Years 10 | Net Benefit (Present Value (PV)) (£m) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Low: 0.44 |  | High: 0.56 | Best Estimate: 0.51 |  |
| COSTS (£m) |  | Total Transition (Constant Price) Years |  | Average Annual (excl. Transition) (Constant Price) |  | Total Cost (Present Value) |  |
| Low |  | Optional |  |  | Optional | Optional |  |
| High |  | Optional |  |  | Optional | Optional |  |
| Best Estimate |  | £0.01m |  |  | £0m | £0.01m |  |
| Description and scale of key monetised costs by 'main affected groups' <br> There may a small transition cost to MoD in reverting its standing orders back to a 20 mph limit of approximately $£ 10,000$, according to a Ministry of Defence estimate. There are no anticipated road safety costs. |  |  |  |  |  |  |  |
| Other key non-monetised costs by 'main affected groups' None |  |  |  |  |  |  |  |
| BENEFITS (£m) |  | Total Transition (Constant Price) Years |  | Average Annual (excl. Transition) (Constant Price) |  | Total Benefit (Present Value) |  |
| Low |  | N/A |  |  | £0 | £0.44m |  |
| High |  | N/A |  |  | £0.1m | £0.56m |  |
| Best Estimate |  | £0m |  |  | £0.1m | £0.51m |  |
| Description and scale of key monetised benefits by 'main affected groups' <br> A fuel saving estimated between 5\% and 7\% from travelling in higher gears when training on public roads or transiting between barracks and training areas at ARMCEN of $£ 17,500-£ 24,500$ per annum (2015 prices), other training areas $£ 13,304-£ 19,021$ per annum. <br> Benefit from time saved for trainee vehicle crews to complete training and testing (at ARMCEN) - £10,979 per annum in 2015 prices. |  |  |  |  |  |  |  |
| Other key non-monetised benefits by 'main affected groups' <br> MoD will be able to fully train $A V(T)$ vehicles crews to to be competent and confident when operationally deployed. (The primary reason for increasing the speed limit). <br> The increase will likely help reduce congestion and the incidence of potentially dangerous overtaking manoeouvres by other road users. Incidence of ill health effects experienced by $A V(T)$ crews due to higher vibration levels at 20 mph will reduce. |  |  |  |  |  |  |  |
| Key assumptions/sensitivities/risks Discount rate 3.5\% <br> 1) An $\mathrm{AV}(\mathrm{T})$ driver test at $A R M C E N$ test takes one hour. <br> 2) Training courses at ARMCEN and other centres are similar |  |  |  |  |  |  |  |

## BUSINESS ASSESSMENT (Option 1)

| Direct impact on business (Equivalent Annual) $£ m$ : |  |  | In scope of OITO? |  |
| :--- | :--- | :--- | :--- | :--- |
| Costs: N/A | Benefits: N/A | Net: N/A | No | NA |

## Evidence Base (for summary sheets)

## Problem under consideration

Since 1977, Tracked Armoured Vehicles (AV(T)s) (generally tanks and armoured personnel carriers) have operated on UK public roads under an understood dispensation from the 20mph restriction for track laying vehicles. Consequently, when travelling to and from training areas ${ }^{1}$ and during driver training, some vehicles were operating at speeds of up to 40 mph if they weighed less than 40 tonnes and up to 30 mph for those over 40 tonnes, in accordance with Ministry of Defence (MoD) Armoured Vehicle Standing Orders². In October 2013, investigations revealed that military $\mathrm{AV}(\mathrm{T}) \mathrm{s}$ were not exempt from the 20 mph speed limit for track laying vehicles. Army headquarters then imposed a 20 mph restriction for military $\mathrm{AV}(\mathrm{T}) \mathrm{s}$ in the UK.

Armoured vehicles drive approximately $45,000 \mathrm{~km}$ on public highways per year at ARMCEN in Bovington and there is an estimated additional $35,560 \mathrm{~km}$ of public road training by the field army. This is indicative of the limited scale of the problem under consideration. Movement to training areas is almost always possible without accessing public roads - barracks normally back onto tracked vehicle training areas (in UK) or movement is done by low loaders. Sometimes $A V(T)$ cross public roads during training events and in limited instances may share transit roads with the public (the crossings over the River Avon) on Salisbury Plain are the most notable example.

In November 2014 the MoD approached the Department for Transport requesting the speed limit for MoD AV(T) be raised to 40mph from the 20mph national speed limit for track laying vehicles. The Military would continue to use Armoured Vehicle Standing Orders to set appropriate speed limits for classes of vehicles, and any local 30mph or 20 mph speed limits would take precedence over the revised $\mathrm{AV}(\mathrm{T})$ limit. The proposed increase will apply to military $\mathrm{AV}(\mathrm{T}) \mathrm{s}$ only. Non MoD track laying vehicles will continue to be restricted to the existing 20 mph maximum speed limit.

## Rationale for intervention

The speed limits for tracked vehicles are set out in Schedule 6 part III of the Road Traffic Regulation Act 1984. Tracked vehicles fitted with-(a) springs between its frame and its weightcarrying rollers, and (b) resilient material between the rims of its weight-carrying rollers and the surface of the road are limited to a maximum speed of 20 mph on public roads in England and Wales.

However, given available evidence an exception to this rule should be applied to military vehicles.

The primary reason for increasing the speed limit for military $A V(T)$ on public roads to 40 mph is an operational need for $\mathrm{AV}(\mathrm{T})$ crews to be competent and experienced in driving and manoeuvring their vehicles on public roads in GB at the speed of traffic and amongst civilian

[^0][^1]drivers. This is so that they can realistically train to do so safely on operations both at home and worldwide. This training need cannot realistically met under the 20 mph restriction. MoD records indicate that in the 38 years when $\mathrm{AV}(\mathrm{T})$ have been travelling at up to 40 mph on public roads in the GB, there have been no serious accidents where the speed of the AV(T) was a causal factor.

It is likely to be safer for other road users and the crews of $\operatorname{AV}(T)$ if they travel at speeds in excess of 20 mph , thereby reducing the hazard caused by large slow moving vehicles transiting on fast-flowing public roads. The MoD report long tailbacks have developed since $A V(T)$ were restricted to 20 mph .

Before driving on public roads, drivers and vehicle crews undertake comprehensive driver and vehicle operation training, on simulators, as well as on roads and tracks within military training areas and are required to drive a minimum of 90 miles both on and off road before being considered for a test.

All military $\mathrm{AV}(\mathrm{T}) \mathrm{s}$ are crewed by at least a driver and commander (routinely also a qualified and experienced $\mathrm{AV}(\mathrm{T})$ driver). There will also normally be a third crew member. The driver remains legally responsible for the $\mathrm{AV}(\mathrm{T})$ whilst on UK roads. However, the commander (and third crew member if present) assist the driver with all-round situational awareness and the safe passage of the vehicle. They are located in elevated positions with good all-round vision which enables them to observe the driver's blind spots around the vehicle and pass commands accordingly. All members of the crew communicate through a live intercom system over which commands and direction can be clearly passed. 20mph is below the optimum operating speed for $\mathrm{AV}(\mathrm{T}) \mathrm{s}$ making most of them less manoeuvrable/responsive than at their higher design speeds.

Travelling at 30 or 40 mph also allows $\mathrm{AV}(\mathrm{T})$ to operate at optimum speeds for the vehicles' gear ratios, with the resultant reduced engine revolutions, fuel consumption (since the speed restrictions, fuel usage has increased by $5-7 \%$ at one Army base in Bovington) and exhaust emissions, thereby reducing wear on engines and drive trains. Increased speeds will also increase vehicle availability, where the increased time taken to achieve training mileage is resulting in one less $A V(T)$ test being carried out per day, with associated costs.

## Policy objective

The policy objective is to increase the speed limit for military $A V(T)$ on public roads in England and Wales to a maximum 40 mph (individual vehicle type speed limits within this maximum limit will be determined by MoD vehicle standing orders based on risk assessments and specific vehicle type safety cases as was the case prior to enforcement of the 20 mph limit in October 2013). The increased speed limit will permit $A V(T)$ vehicles crews to be trained and acquire the experience necessary to operate safely on public roads when operationally deployed.

## Territorial extent

As vehicle class speed limits are devolved in Scotland (current AV(T) speed limit 20mph) and Northern Ireland ( $\mathrm{AV}(\mathrm{T}$ ) speed limit set by MoD standing orders), this impact assessment is for a speed limit increase for $\mathrm{AV}(\mathrm{T})$ on public roads in England and Wales only.

## Consultation

The Department ran a six week consultation on raising the speed limit for military AV(T) from 20 mph to 40 mph in England and Wales, or to do nothing (retain the existing 20 mph limit for these vehicles). As $\mathrm{AV}(\mathrm{T})$ movements are generally limited to specific geographical locations (in the vicinity of the key training camps) to encourage responses from those with experience of military $\mathrm{AV}(\mathrm{T})$ travelling on public roads, press notices advising of the consultation were sent to
local media and a notification was sent to local authorities and police forces advising of the consultation launch.

The consultation received 347 responses of which a large majority (95\%) were in support of the proposal to increase the speed limit for military armoured track laying vehicles on public roads in England and Wales from 20mph to a maximum 40mph (subject to MoD risk assessment and safety cases for individual vehicle type). The main reasons given for supporting this option were operational training benefits and potential improvements in traffic flow, congestion and road safety as a result of a reduced speed differential between $\mathrm{AV}(\mathrm{T})$ and other traffic.

Supporters of the increase included two out of the three road safety groups and the three identified police forces responding to the consultation.

11 (3\%) respondents (including one road safety group) supported option 1, to retain the 20 mph limit. The main reasons given were road safety and road maintenance concerns.

Six (2\%) respondents suggested other options. Suggestions under 'other options' included A higher speed limit than that proposed and increasing the speed limit for AV(T) 30mph or have local speed limits to suit the type of road in particular areas.

Note: Percentage figures shown below are for numbers of respondents offering a view.

## Operational need

284 (96\%) thought that operational benefits would result from the proposed increase in speed limit and 296 (95\%) that the increase was necessary to allow proper training of vehicle crews.

## Road congestion

296 (94\%) respondents thought the 20mph limit contributed to congestion with 291(93\%) thinking an increase in speed limit would reduce congestion

Road safety
292 (94\%) respondents thought an increase in speed limit would reduce the incidence of potentially dangerous overtaking manoeuvres and 284 ( $92 \%$ ) thought the 20mph restriction for $\mathrm{AV}(\mathrm{T})$ represented a bigger hazard to other road users than the proposed 40 mph limit.

## Costs:

Road maintenance
208 (89\%) of respondents offering a view agreed with the Department's preliminary assessment that an increase in speed limit would not result in a significant increase in road maintenance, with 27 of these thinking that road wear and tear would be less at higher speeds due to greater friction and lesser manoeuvrability at lower speeds. 25 disagreed with the Departments assessment. One respondent thought there would be more road wear as an $A V(T)$ travelling at 40 mph rather than 20 mph would double the track speed and also the acceleration and deceleration as the pads contact and leave the road surface.

Fuel consumption and engine component wear
Due to vehicles travelling in lower gears and therefore there would be more engine revolutions for distance travelled 252 (95\%) respondents offering a view thought that fuel consumption would be higher at 20 mph than at the proposed higher limit and 241 (93\%) thought there would be more wear to engine components.

270 (95\%) respondents thought an increase in speed limit would result in significant time savings.

There was no actual data on $\mathrm{AV}(\mathrm{T})$ miles travelled on public roads in England and Wales submitted by consultation respondents. Two respondents said that it would be possible to provide data with one questioning the value to do so as annual mileage totals fluctuate significantly. The Department therefore consider it would be disproportionate to pursue further data in addition to that already provided by the MoD.

Other impacts:

## IIl health effects

42 of 247 reported experiencing ill health effects after travelling on public roads in $A V(T)$ restricted to 20 mph . The most common symptoms reported being tingling in hands and/or feet temporary hearing impairment/tinnitus and stiffness to joints. The MoD report 6 student drivers requesting to see a doctor.

Impacts not included in the consultation
47 (16\%) thought there were impacts of the speed limit increase not discussed in the consultation document. Of those impacts suggested which were actually not mentioned in the consultation document, noise ( 4 respondents expecting higher noise levels and 2 lower) and damage to armed forces' public image when restricted to 20 mph on public roads ( 4 respondents), were the most common.

## Description of Options

Option 0 - Do nothing. Retain the existing 20 mph limit - this option is taken as the baseline.
Option 1 - Increase the national speed limit for military AV(T) in England and Wales to 40mph to reflect operating speeds before October 2013.
This is the preferred option

## Monetised and non-monetised costs and benefits of each option (including administrative burden)

## Costs

## Transition costs

There may be a one off transition cost to the MoD to re-issue armoured vehicle standing orders. The associated costs to reissue the Armoured Vehicle Standing Orders (AVSO) are likely to be "soft costs" or "opportunity costs" for the time apportioned by individuals to update AVSOs and to distribute and cascade the change in policy to all $A V(T)$ users. MoD estimates are that this would not be more than $£ 5,000$. There may also be costs to vehicle signage, again estimated at £5,000, making £10,000 total.

The MoD also tell us there may be some costs related to the update of a large document called JSP800. These costs cannot be monetised as they are contingent on whether the document is updated before or after the proposed changes to legislation take place.

Road safety - none

- There is no increase in the incidence of accidents expected as a result of the increase in speed limit given that MoD have recorded no serious accidents where speed was a causal factor and only four incidents where speed may have been a causal factor (all involving no injuries), during the period when the higher limit was in operation (up to October 2013).
- However, an increase in speed means that when accidents do occur, they are likely to be more severe.
- Military $\mathrm{AV}(\mathrm{T})$ are designed to operate safely at speeds of over 20 mph and within the speed limits in their Safety Cases. Also, where appropriate and feasible, the capabilities of components and fittings, such a brakes, steering systems, external lights and rear-view mirrors, are increased over and above that required for the $\mathrm{AV}(\mathrm{T})$ 's operational roles, so that they can operate as safely as possible on public roads.
- Before driving on public roads, drivers and vehicle crews undertake comprehensive driver, and vehicle operation, training on simulators, as well as on roads and tracks within military training areas before travelling on public roads.
- $\quad$ All $\mathrm{AV}(\mathrm{T})$ are crewed by at least a driver and commander (also a qualified and experienced $\mathrm{AV}(\mathrm{T})$ driver) who will be in an elevated position with good all-round vision to assist in the safe passage of the vehicle.
- There is no evidence that frequency or severity of incidents has significantly reduced since the operating speed limit was reduced to 20 mph .

Road maintenance - none
It is the Department's assessment that there should be no appreciable increased road wear and tear due to a speed limit increase from 20 mph to 40 mph for military $\mathrm{AV}(\mathrm{T})$. This is because of the manner in which the weight of the vehicle is distributed and cleaner pick up and putdown of track links when compared to tyre tread blocks on wheeled vehicles.

Additionally, track components incorporate complex rubber compounds to prevent damage caused by metal to road contact.

## Benefits

Operational
It is not possible to monetise this benefit but properly trained, competent and experienced $A V(T)$ crews are essential to safely meet operational needs when deployed.

Road Safety
$\mathrm{AV}(\mathrm{T})$ vehicle crews have reported an increase in 'near misses' from cars overtaking slow moving $\mathrm{AV}(\mathrm{T})$ s since the 20 mph restriction and introduced a daily log to record these.
Unfortunately as there is no data prior to the 20 mph restriction there is no baseline to permit analysis.

However, it is anticipated that by reducing the speed differential between $A V(T) s$ and other road users the incidence of overtaking manoeuvres will decrease.

## Traffic flow

At 20 mph , long queues of other road users often build up behind $A V(T)$. A 40 mph limit should reduce the journey times for these road users but it is not proportionate to monetise this.
$\mathrm{AV}(\mathrm{T})$ crew ill health effects
Six $A V(T)$ crew have reported sick suffering from severe 'pins and needles' and two driving instructors had made compensation claims following enforcement of the 20 mph limit. This is due to the increased vibration levels experienced when travelling at slower speeds. Following
mitigation measures to reduce continual exposure to this effect (by shorter periods of road driving interspersed with off road driving) the compensation claims have been withdrawn.

39 respondents to the consultation reported experiencing ill health effects after travelling for prolonged periods at low speed in $\mathrm{AV}(\mathrm{T})$ s on public roads. Symptoms reported included tingling in the hand and/or feet and stiffness to joints. A higher speed limit should further mitigate these effects.

## Time savings

MoD estimate a time saving of 40 minutes for every $\mathrm{AV}(\mathrm{T})$ driver trained and that at least one additional driving test per day would be possible at the higher speed limit resulting in an estimated $£ 10,979$ saving per year at ARMCEN (Armour Centre, Bovington, Dorset - data for other training camps is not available). This figure was derived by a pro-rata working using figures supplied by the MoD for annual pay of troopers and staff sergeants. Assumptions used are outlined in the risks and assumptions section.

Further savings will be made in transit times between barracks and training areas. It has not been possible to monetise this saving as data for the actual number of vehicle movements is not available.

## Fuel Usage

MoD ARMCEN report an estimated increase of fuel consumption of between $5 \%$ and $7 \%$ since enforcement of a 20 mph limit. Under a higher maximum speed limit of 40 mph the MoD estimate this would equate to an annual saving of between $£ 17,500$ and $£ 24,500$ - the mid-point best estimate being $£ 21,000$ per annum for training at ARMCEN. Please note the original MoD estimated increased cost of $£ 54,000$ referred to in the consultation document was calculated using fuel consumption for wheeled as well as tracked vehicles.

A conservative central estimate of the saving for the remaining 6 key training areas is $£ 16,303$ in 2015 prices. This figure is based on a scaling up of data supplied from ARMCEN. The Ministry of Defence supplied figures for vehicle kilometres on public roads both within and outside of ARMCEN. Combined with other figures outlined in the risks and assumptions section, this figure was derived by DfT analysts.

## Emissions

Linked with lower fuel consumption a small positive benefit is expected. It would however be disproportionate to monetise this benefit.

## Wear and tear

Insufficient time has elapsed since the enforcement of the 20 mph limit to enable any meaningful data collection for vehicle wear and tear but it would seem reasonable to suggest that if a vehicle will be travelling in higher gears at the higher speed limits, engine revolutions for a given distance driven will be less and therefore wear on components will be reduced, but this cannot be confirmed in this timescale.

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

The primary benefits of this policy have been assessed qualitatively and some remain unmonetised. To complete the analysis necessary analysis to monetise these in full would be disproportionate.
The scale of this problem is limited by the small number of army vehicle movements on public roads. There are limited instances in which tracked army vehicles need to use public highways. This is mostly a localised problem, particularly at the test centre in Bovington.
This policy is not considered sensitive and does not impose costs on businesses. The consultation confirmed this measure to be non-contentious with $95 \%$ of those responding in favour of the preferred option to increase the speed limit. Only (3\%) respondents (including one road safety group) supported retaining the 20 mph limit. The main reasons given were road safety and road maintenance concerns. Other key stakeholders contradicted this view.
In considering the impact of this measure, given that the policy represents a return to the situation operating prior to October 2013 where there were no serious incidents recorded where speed was a causal factor, the fact that the principal benefit of the speed limit increase to the MoD, that of adequately trained and experienced $A V(T)$ vehicle crews is non-monetary and the difficulty in monetising likely other benefits, a proportional approach has been taken.
Data provided by the MoD and consultation respondents where available has been used to evaluate impacts where possible but given the limitations to the extent of available monetised evidence, time and resources required to pursue additional evidence would be disproportionate to the benefit. Additionally, given the MoD operational need and the available evidence it would be difficult to justify delaying the progress of this measure.

## Risks and assumptions

Our core assumption is that a return to pre-2013 vehicle speeds will not cause an increase in accidents. This is consistent with the evidence we have seen. The risk will be managed by the appropriate setting of Ministry of Defence Standing Orders.

In the absence of full records following the consultation we used the following assumptions to complete the analysis. These include:

- Tank crew students save 40 minutes per day without the 20 mph restriction.
- Removing the 20 mph restriction allows an army training centre one extra test per day, which last approximately one hour.
- Tank crews consist of two troopers and one staff sergeant. The MoD supplied us with army rates of pay for use in these calculations.
- Values of time are adjusted according to WebTAG assumptions for rates of growth in per capita GDP. These are found in the databook annual parameters.
- Army staff sergeant rates of pay are equivalent to those of ARMCEN instructors.
- Prices of red diesel used in the calculations for centres outside of ARMCEN are taken from WebTAG section A.1.3.7. However, the fuel savings for ARMCEN are taken directly from a total figure quoted directly by the MoD of $£ 17,500$ to $£ 24,500$ per annum ( 2015 prices).
- Rates of fuel consumption for UK military tanks are based on average figures supplied to us by the Ministry of Defence (in litres per kilometre).
- Fuel savings for tanks in training centres outside ARMCEN are similar to those inside ARMCEN. To estimate these we applied a scale factor of 2.8 reflecting the proportionate difference in known road miles used in these other centres.
- Ranges of fuel savings benefits depend reflect the ranges presented by the Ministry of Defence. (5 to 7\% of total costs).

Our estimates of monetised benefits are based on conservative assumptions and in keeping with a proportionate approach.

Plausible adjustments to these assumptions would not alter the key conclusion that raising the speed limit would be good value for money as there are no costs in terms of reduced safety.

## Direct costs and benefits to business calculations (following OITO methodology)

There are no direct costs or benefits to business from this policy. The main beneficiaries will be the British military. Therefore this proposal is not in scope of the one in - two out framework.

## Wider impacts

Our central core assumption is that this policy will have no economic impacts on business and no reductions in safety. There are no benefits or costs that are particularly likely to fall on disadvantaged social groups.

Training centres are mainly in less densely populated rural locations (Wiltshire and Hampshire, Dorset, Cumbria, Yorkshire, Northumberland, Norfolk, Pembrokeshire). The effects of this policy are beneficial for these areas as tailbacks caused by tanks moving at 20 mph are less likely.

Environmental benefits are not monetised in this analysis. However, the reduced fuel consumption would reduce greenhouse gases, particulate matter. Local air quality near army training centres would be improved. The anticipated impact on noise is ambiguous.

Table of monetised costs and benefits

|  | Annual Benefit | $\mathbf{1 0}$ Year Present Value |
| :--- | :--- | :--- |
| Transition Costs | One off transition cost of <br> $£ 10,000$ | $£ 0.01$ million |
| Time savings | Central estimate $=£ 10,979$ | $£ 0.19$ million |
| Fuel Savings At ARMCEN | Central estimate=$£ 21,000$ <br> $($ Lower bound=$£ 17,500)$ <br> (Upper bound= $=24,500)$ | $£ 0.18$ million |
| Fuel Savings Outside <br> ARMCEN | Central estimate $=£ 16,304$ <br> (Lower bound=£13,586) <br> $(U p p e r ~ b o u n d=£ 19,021) ~$ | $£ 0.14$ million |
| Net Benefit |  | $£ 0.51$ million |

These figures indicate that option 1 has a positive net benefit and therefore is the preferred option. The benefits are far greater than the relatively small transition cost that would be borne by the Ministry of Defence.

## Implementation plan and review

This impact assessment accompanies the public consultation response report. Responses to the consultation have been taken into account in deciding the way forward.

Speed limits for track laying vehicles are specified in Schedule 6, Part III of the Road Traffic Regulation Act 1984 and therefore changes to the speed limit cannot be made without legislative change.

We will now seek to make the changes to the Road Traffic Regulation Act 1984 by an amending statutory instrument to increase the maximum speed limit for military $A V(T)$ on public roads in England and Wales from 20mph to 40mph expected to come into force in autumn 2015.

Given that there is no impact on business and no other costs associated with the speed limit increase and this increase essential represents a return to the situation prior to the enforcement of the 20 mph limit when for over thirty years military $\mathrm{AV}(\mathrm{T})$ were regularly travelling on public roads at speeds of up to 40 mph with no serious accidents reported where speed was a causal factor, it would be disproportionate to include a requirement for formal review of this measure.


[^0]:    ${ }^{1}$ There are seven geographically widespread key training areas in England and Wales

    | Wiltshire and Hampshire | Salisbury Plain |
    | :--- | :--- |
    | Dorset | Bovington and Lulworth |
    | Pembrokeshire | Castlemartin |
    | Cumbria | Warcop |
    | Yorkshire | Catterick |
    | Northumberland | Otterburn |
    | Norfolk | Thetford |

[^1]:    ${ }^{2}$ Armoured vehicle standing orders impose a speed limit for a class of vehicles based on vehicle specific safety cases.

