

Joint Response to the Home Office's October 2015 Revised Proposals for Reform of Police Funding Arrangements from the Office of the Police and Crime Commissioner for Devon and Cornwall and the Isles of Scilly and Devon and Cornwall Police

5th November 2015

Introductory Remarks

We welcome the opportunity to provide further comments to the Home Office on the proposed reform of police funding arrangements. We recognise that this is a challenging issue and requires the balancing of a range of issues and interests. We also share the desire of the Home Office to replace the existing formula that is opaque, outdated and discriminates against rural areas.

We have engaged constructively with this process at all times and continue to do so. Our detailed arguments are set out following this short introduction but we cannot respond without being clear about the process shortcomings that have been apparent so far.

The revised proposals issued in October 2015 are extremely disappointing. Whilst we recognise that you have provided further information to support your proposals this is piecemeal and in many cases such as bar density simply highlight the lack of argument for its retention.

We are very disappointed that our constructive and well evidenced proposals in our response to the original consultation have been ignored with little explanation and most of the specific questions we raised in our response have been left unanswered.

While we can support the Minister's decision to endorse the Funding Principles set out in their original July 2015 consultation we must stress that several of the factors chosen to allocate funding are in direct contravention to those Funding Principles. It is simply not acceptable to proceed on the basis of the current proposals. The combination of these four factors, two of which that are so closely correlated that in practice you only have three factors to assess something as complex as police demand, fails to provide a model which is robust, stable or transparent.

We are particularly concerned about:

- The poorly thought out bar density measure which leads to perverse and skewed outcomes due to the focus on geographic size. **Action must be taken to either:**

- **Adopt the alternate proposal set out in our response to the July 2015 consultation**
 - **Remove empty geographic land from the calculations by adopting the proposed ‘super sparsity’ measure set out below**
 - **Remove the bar density measure all together and allocate the additional 8% of funding via the general population factor**
- The limited focus on two deprivation measures – which overlap and which only provide a very singular view of deprivation. **The broader nature of deprivation needs to be reflected – the focus on unemployed families with children should be widened to ‘unemployed adults with/without children’ and the ‘Urban Adversity’ measure should be combined with ‘Financially Stretched’ datasets**
 - The relative weightings applied to the proposed factors which have not been justified or evidenced and which significantly underweight the impact of population. **In the absence of specific factors for non crime demand a greater proportion of funding should be allocated on the basis of population – as this is the truest determinant of police demand.**
 - The lack of focus on true predictors of crime, non crime demands and rurality means that many areas will be significantly underfunded. **A sparsity factor needs to be introduced and the population weighting should be increased as a better determinant of non crime demand.**

We also wish to lodge our considerable concerns about the consultation process which is deeply flawed. The original consultation failed to meet Government’s own guidelines in many respects. It did not provide the information we required to properly assess the proposals – either in terms of the rationale and justification for the choice of particular measures or their impact. This second round of consultation has also been inadequate. Three weeks is far too short given that this is the first time that data on the impact on forces has been released. Our analysis of the revised proposals has also been severely hampered by the fact that the Government has not provided any detailed information or rationale on the decisions that have been made nor have they explained how the new measures on urban adversity and bar density will work. We recognise that the Home Office have now provided some of that additional information in a letter from Mary Calam on 28th October – but we have had just 7 working days to consider that information.

In addition, the original information issued in the Minister’s letter – in particular the exemplifications for each policing area – is incorrect. We originally pointed out that there was no allocation for Durham within bar density. This has been corrected in Mary Callum’s letter without any acknowledgement of the mistake or a revised exemplification resulting from this or other corrections. We have now also been advised in a letter from Mary Calam (dated 5th November) in response to a query we

raised on the Technical Notes that the wrong dataset was used to calculate percentages for Urban Adversity for every policing area in England and Wales. We believe that this error could see significant variations in funding for a number of forces.

Finally, if changes are to be made then adequate and fair transition arrangements must be put in place. The scale of potential cuts as a result of the proposed changes to the funding formula will be deep for some forces. Such cuts will also come on top of any additional budgetary cuts which arise from the 2015 Comprehensive Spending Review. Any transition period must be decided in consultation with the affected policing area and recognise the pressures that it faces. In some cases, like our own, it will be necessary for that transition to take place over a number of years to ensure the continued viability of the police force. We believe that it is likely to require a period of around 10 years.

Section 1 – The Overall Model

The narrow range of factors used means that small changes in data distribution have significant impact on force area funding.

The proposed model is not simple, it is simplistic. In our discussions with officials at the Home Office they have openly acknowledged that they would have included other measures but can't find a suitable statistical set to use. Instead you have chosen to use two deprivation factors that are simply a proxy for recorded crime. We agree that the previous formula was highly complex – but the main problem with it was that it was opaque and outdated. While simplification should be one of the overall goals of the reform – this should not be at the expense of quality. We believe that the Home Office has gone too far – favouring simplicity over the identification of a robust set of factors that would properly allocate funding based on demand.

The revised model proposes allocating billions of pounds of funding on the basis of just four factors. The use of such a small set of factors means that the formula is unstable – which is in direct contravention of the Minister's Funding Principles. This instability is clear from the Technical Notes provided on 28th October by Mary Calam which set out the extent of change over time in the distribution of 'workless households with dependent children'. While those Technical Notes state that the variances are small – less than 1% point change for each force over the ten years between censuses – the allocation of such a large weighting to this factor mean huge swings in funding in cash terms. For example the funding allocation for Merseyside would reduce by £20m and for Cleveland by £13m. Only 10 forces would not see financial changes as a result of these movements – with the remaining forces affected by between £2m and £20m. This effect appears to be even more marked for the Urban Adversity factor.

The use of a small number of factors and thus the large weightings applied to them mean that the model fails the ‘stability’ test set by Ministers, namely that *‘The model should not cause force level funding allocations to change significantly year on year.’*

Benchmarking against the existing Police Allocation Formula is wholly inappropriate.

The Technical Notes state that the revised model has been benchmarked against police recorded crime and against the existing allocation delivered by the Police Allocation Formula. However throughout the whole review and consultation process the Home Office has argued that the existing Police Allocation Formula is not a suitable basis on which to allocate funding, in particular because the formulae and supporting data sets are out of date – failing to represent current relative need and non-crime activity and demand. In addition you have contended that the existing funding method does not sufficiently accord with the principles of a good funding model as it cannot fully reflect changes to relative need over time. What rationale can there be for benchmarking the allocations and factors being considered against the existing Police Allocation Formula. To do so will simply perpetuate the issues that you have already highlighted and limits the scope of the revised model.

The focus on statistical validity rather than the realities of policing mean that the formula is too simplistic and unbalanced

By taking a highly statistical approach to identifying factors for inclusion and to validate your model you have created a simplistic and unbalanced division of funding which pays no regard to the actual demands faced by policing. The continued focus on using police recorded crime to validate the model is directly at odds with evidence provided by the College of Policing and has the potential to perversely reward poor performance and incentivise poor recording practice.

Not only is police recorded crime a poor reflection of the totality of policing activity – it is also not a true reflection of the true level of crime or victimisation within an area as its accuracy is highly dependent on local recording practices and the confidence of the public to report crime. We must find a way to provide a more accurate picture.

Methodological issues – in correlation

We have several concerns with the methodological approach to validation:

- While in practical terms it may make little difference, when seeking to validate the model the approach should be to look at victim based crime not total crime as many of the offence categories included in ‘other crimes against society’ are a function of police activity.
- Given that the Metropolitan force area is an extreme outlier in all correlational calculations, we suggest that they should be removed from any analysis intended to validate the model.

- Our own analysis shows that there is a much weaker correlation between the factors and local crime estimates derived from the Crime Survey for England and Wales – which gives us serious reservations about the approach adopted and would hope that these concerns are reflected in the peer review.

A failure to understand and reflect true police demand

In developing the proposed model you have failed to properly consider the wider policing context, non crime activity and the changing nature of crime. The broad body of evidence about the drivers of crime and victim vulnerability have been condensed into two factors – deprivation which receives the lion’s share of the allocation (62%) and bar density, a factor that is particularly poorly implemented.

There is a growing body of evidence on policing demand and the evolution of crime that could be used to support a police funding model, including the work currently being carried out by the London School of Economics on behalf of the College of Policing¹. We have already drawn your attention to this work and believe that it will provide the foundation that you need to better understand and reflect police demand beyond that provided by police recorded crime data. We would urge you to pause these changes while that work is completed and then incorporate them in a revised approach

In the Technical Notes circulated on 28th October you provide correlations between a number of potential measures of non-crime demand and the selected factors in the proposed model. However this analysis lacks any real-world relevance and we are greatly concerned that it gives a false picture, for example:

- The demand data for the number of looked after children, children in need and children subject to a child protection order are all more strongly correlated with the bars factor than A&E alcohol-related hospital admissions. This seems perverse.
- The MARAC demand data is not strongly correlated with any of the factors in the model. Domestic abuse incidents account for more than 10% of all reported crime and incidents in Devon & Cornwall. They are generally difficult cases that generate significant demand for the police in preventing acute harm and potentially death, investigating complex and largely hidden offender behaviours and supporting vulnerable victims and their children. The dismissal of the lack of correlation with this data on the basis that it is self-generated demand is yet another example of the simplistic and sterile approach that you have taken.

Peer Review Process

This lack of focus on the wider context of crime and policing is also notable factor in the recent peer review process. While we welcome the Home Office’s decision,

¹ http://www.excellenceinpolicing.org.uk/wp-content/uploads/2015/10/Plenary_Kirchmaier.pdf

announced in September 2015, to conduct a peer review process we are concerned about the approach that has been taken and the nature of that review. We understand that the model has been shared with professors from two academic disciplines; economics and statistics. We do not understand why it has not been reviewed by an expert in crime or policing given that the challenges being made by us and others relate mainly to the failure of the model to reflect the true context of policing and crime. The critical issue here is whether the model provides a solid basis for the allocation of police funding according to need. We also note that there is no intention to publish or otherwise share the peer review or to have the peer review subject to independent evaluation. As a minimum we would expect the Home Office to submit the peer review to independent assessment. What was the purpose of carrying out such a narrow peer review process, which has done nothing to boost confidence that the proposed model is an appropriate one in the context of policing (as opposed to it being economically and statistically sound).

The lack of publication of any peer review information also means that we have no basis for understanding what elements were supported or challenged from the original proposals.

The allocation of over £4 billion in funding on the basis of a skewed picture of deprivation – due to the narrow focus

While we would agree that deprivation is linked to some types of offending, the evidence² suggests that more diverse factors are increasingly driving criminality and victimisation. We would therefore contend that this area of the revised model needs further consideration. It fails the real world test of validity to a spectacular degree and does not reflect current knowledge of police demand, never mind the evidence of changing trends.

The current Police Allocation Formula contains a range of population and socio-economic indicators that are used to describe the relative vulnerability of the population to crime. These include population density, income support and pension credit claimants, long term unemployment benefit claimants, young male unemployment benefit claimants, single parent households, residents in semi-routine or routine occupations or long-term unemployed, overcrowded households, ACORN Hard Pressed category, terraced housing and student households. These clearly describe a wide range of population characteristics that lend the population to be more vulnerable to crime and while admittedly adding a level of complexity to the formula, there is research evidence to support the validity of each of these indicators as proxies for vulnerability to either offending or victimisation. In other words they have real world context and therefore strong construct validity. We would agree that the evidence base needs reviewing and updating, however this range of

² http://www.college.police.uk/Documents/Demand_Report_21_1_15.pdf

characteristics lends a depth to the allocation and degree of robustness that the revised four factor model does not share.

In the proposed new model this broad range of descriptive characteristics has been replaced by just two factors in the new model. The Technical Notes circulated on 28th October suggest that a much wider range of factors were considered in preparing the proposals and that up to 10 different socio-economic indicators could be used independently and in combination. The Home Office has not however been clear as to what other indicators were considered in this analysis or whether the indicators that produced the best fit were selected. The Technical Notes also explain that these were then reliability tested and finally subject to Principal Components Analysis to establish the relative weightings. However rather than running three separate statistical processes it would be much more robust to carry out a single Factor Analysis of the 10 variables would have provided a more robust approach. Recognising the organic nature of the way that the model has developed, we still find the selection of the variables to be opaque and less well evidenced than the data sets that underpinned the original Police Allocation Formula.

There is significant duplication between the two deprivation factors.

The two factors that have been selected for the October 2015 revised proposals are workless households with dependent children and the ACORN category Urban Adversity. These factors are highly inter-correlated ($R^2=0.97$) meaning that in effect the broad range of indicators in the current formula, have been replaced by deprivation related factors that represent a much narrower range of the population and vulnerability to crime and criminality. This narrow range of the population accounts for the distribution of 62% of police funding in the new model.

The Technical Notes circulated on 28th October suggests that when two indicators are highly inter-correlated they would be assigned a similar weight of importance in the model, and this is certainly the case with the two socio-demographic factors, each attracting 31% of the allocation. It further states that the combined weight for two highly inter-correlated indicators would broadly equate to the weight that one of these indicators would receive if included as a standalone in the model. This suggests that if either of these two factors were included in isolation then they would attract 62% of the funding allocation. In the real world this would never be acceptable. Yet because of the high inter-correlation between the two factors this is in effect what is proposed.

This strong inter-correlation between the two factors also seems at odds with the Minister's statements in the October 2015 revised proposals. That letter explains that a number of alternative variables were deemed not to be suitable for inclusion in the model due to high levels of correlation with the population and/or population characteristics data already included in the model. How are such high-correlations acceptable in this instance but not in other situations?

Relative Weightings attributed to the Four Factors

The relative weightings attributed to each of the different factors cannot be objectively justified. While they may reflect a statistically valid method of assigning weightings to each of the factors they fail to hold water in the real world. The most direct measure of police demand in the round is overall population, however this attracts only 30% of the latest model allocation. By contrast workless households with dependent children which represent only 4% of the population will account for 31% of the allocation under the revised proposals. Given the high levels of correlation between the two deprivation measures, how can it be justified to allocate such a high proportion of the total funding envelope (62% or over £4 billion) towards this grouping?

Compliance with the public sector equality duty.

We are concerned that the narrow focus on young people within the deprivation measures will negatively impact on older people living in deprivation. Older people place a significant level of demand on the policing service, in particular with regards to public safety and concerns for welfare. In areas such as Devon and Cornwall which has a considerably older population than the national average (21% compared to national average of 17%) we believe that we will be left significantly underfunded to meet that demand. Both of the deprivation factors focus almost exclusively on young families and people. How can this be justified and what assessments have been made of the impact of this approach on elderly people? The Government needs to publish its Equality Impact Assessment for the proposals which is still outstanding.

We note point 6 of the Technical Notes from 28th October which states that shares for sub-groups of the population including the elderly and ethnicity are consistent with the distribution of the total population across force areas. However the proportion of the population that are over the age of 65 represented within individual police force areas varies between 11% in the Metropolitan Police to 22% in Dorset – but the current socio-demographic factors fail to recognise these wide differences in distribution of a highly vulnerable sub set of the population that generate considerable non-crime demand.

Rurality

In our response to the July 2015 consultation we highlighted the specific challenges that face rural forces and proposed a mechanism for how these factors could be taken into account which have been ignored (attached again here at Annex 1). No explanations have been given about why rurality is not considered to be important and the revised proposals continue to ignore the additional cost of delivering an effective police service across large geographic area such as ours.

The current funding formula does contain a factor that reflects and adjusts for this additional cost, however this has been lost in both of the proposals put forward. In a large and rural force area such as ours there are obvious additional costs such as the cost of petrol required to attend incidents and the additional time spent traversing our large geography. We must also maintain a larger infrastructure, more buildings, a larger and more diverse vehicle fleet and more radio masts than a force of smaller geographic size. There are also less obvious additional burdens such as the lack of guardians and witnesses among our isolated communities to support an effective police response and investigations and the partnership landscape that we must engage with in order to address the needs of our most vulnerable communities. For example, the large number of partners that we need to support in order to provide an effective safeguarding response requires more time and travel in order to build and support the relationships that are essential to effective delivery.

Annex 2 contains a map which shows the estimated response time at blue light speeds on our roads network to attend firearms incidents over the last 12 months from our current five service hubs across the force area. From this it is clear that there is a large area of North Devon/North Cornwall in red that would take more than 30 minutes to reach. The current funding proposal does not reflect the challenge which is evident within this map – in order to adequately protect public safety we have to maintain these five hubs. To remove any one would be very likely to increase the very real risk that is posed within our force area from firearms incidents. This would put our public at real risk. Our force area has the highest number of licensed firearms and shotguns in the country. Many of these are owned by our farmers, a community that is at increasingly high risk of suicide or mental health episodes. This presents a real threat to public safety, one that is not recognised in the current model.

Of course the art of modern policing lies not in responding to such incidents but rather in effective prevention in the first place. In the illustrative example here that prevention effort is provided through effective firearms licensing processes, local intelligence gathering largely provided by neighbourhood teams working in collaboration with other partner agencies and an effective response to domestic abuse. The challenges and demand of maintaining these preventive functions over such a large geography are simply not recognised in the current proposal.

The same risks relate to how we address road traffic accidents such as killed and serious injured and indeed to any incident requiring an emergency response. There is a very real limit on how much we can reduce operational coverage without having a very real and direct impact on response times and public safety.

Bias towards metropolitan areas

We believe that the revised October 2015 model has created a preferential bias towards the metropolitan forces and which disregards the focus placed by the Home

Office on recorded crime. This bias is overt in places including the focus on Urban Adversity and bar density. Furthermore it is not mitigated as it was in the original model by inclusion of a sparsity factor.

The extent of the bias is made clear from comparison of the estimated allocations to forces from the first model to the changes in allocation to forces after the second proposal. Using estimates produced by both Devon and Cornwall OPCC and by PACCTS we can highlight some significant shifts in allocation between the models for particular forces. The table below shows the movement between funding models for selected forces. We would particularly draw attention to those forces that gained under the first model and subsequently lost to the same or even greater extent under the second model. These include Bedfordshire, Cumbria, Dyfed-Powys, Leicestershire and North Yorkshire. By contrast all of the big 5 metropolitan forces benefited from the changes between model 1 and model 2, with Greater Manchester, West Midlands and West Yorkshire swinging from significant losses under the original proposal to significant gains under the revised model. In cash terms these swings are not trivial with Greater Manchester gaining over £68m, Merseyside gaining over £7m, West Midlands gaining nearly £69m and West Yorkshire gaining over £28m. The Metropolitan Police gained more than £508m between models. Also of note is the scale of movement for Thames Valley Police, the home force for both the Prime Minister and Home Secretary.

	Est change between current PAF and model 1		Est change between current model 1 and model 2		Change between current PAF and model 2	
	£	%age	£	%age	£	%age
Bedfordshire	£21,290,280.00	33.31%	-£21,290,280.00	-24.99%	£0.00	0.00%
Cleveland	£28,777,364.00	33.77%	-£23,806,384.00	-20.88%	£4,970,980.00	5.51%
Cumbria	£8,256,001.00	13.84%	-£17,487,821.00	-25.75%	-£9,231,820.00	-18.31%
Dyfed-Powys	£12,510,656.00	24.81%	-£13,220,796.00	-21.01%	-£710,140.00	-1.43%
Greater Manchester	-£52,101,795.00	-12.69%	£68,435,015.00	19.10%	£16,333,220.00	3.83%
Leicestershire	£13,787,950.00	13.03%	-£14,498,090.00	-12.12%	-£710,140.00	-0.68%
Merseyside	-£12,380,576.00	-5.24%	£7,409,596.00	3.31%	-£4,970,980.00	-2.15%
Metropolitan Police	-£692,530,698.00	-42.73%	£508,604,438.00	54.81%	-£183,926,260.00	-12.80%
North Yorkshire	£10,808,397.00	15.69%	-£14,359,097.00	-18.02%	-£3,550,700.00	-5.43%
Thames Valley	-£26,729,300.00	-12.34%	£21,048,180.00	11.09%	-£5,681,120.00	-2.69%
West Midlands	-£32,049,956.00	-7.39%	£68,977,236.00	17.17%	£36,927,280.00	7.84%
West Yorkshire	-£22,645,995.00	-7.49%	£28,327,115.00	10.12%	£5,681,120.00	1.84%

Table 1. Shifts in funding allocations to selected forces between models. The model 1 allocation has been based on figures provided by PACCTS, however we get a similar effect using our own estimate.

Comparing the percentage allocation under model 2 to the distribution of crime nationally – as per Table 2 below - highlights a significant anomaly. If recorded crime is the principal benchmark being used to validate the statistical model then it might be reasonable to expect the distribution of funds to be closely aligned to the distribution of recorded crime. However, comparing the percentage allocations suggests that under the new model a number of forces receive rather more funding

than might be expected from the volume of recorded crime while others appear to be under funded. The table below shows selected highlights from the calculations. As can be seen 5 of the metropolitan forces are funded to a level that significantly exceeds that supported by their levels of victim based crime. This has been achieved at significant expense to a few non-metropolitan forces.

Table 2- percentage allocations compared to crime levels

	%age from model 2	%age of victim based crime	Difference	Cash equivalent £m
Avon & Somerset	2.29	2.76	-0.47	-£33.37
London, City of	0.74	0.14	0.60	£42.40
Greater Manchester	6.01	5.75	0.26	£18.65
Hampshire	2.62	3.07	-0.45	-£32.20
Kent	2.53	3.27	-0.74	-£52.31
Lancashire	2.20	2.72	-0.52	-£36.98
Merseyside	3.26	2.63	0.63	£44.53
Metropolitan Police	20.23	19.52	0.71	£50.08
Northumbria	3.11	2.05	1.06	£75.18
Sussex	2.04	2.51	-0.47	-£33.54
Thames Valley	2.97	3.45	-0.48	-£34.35
West Midlands	6.63	5.09	1.54	£109.58

Section 2 – The Four Factors

Factor 1 – Population

This is the strongest factor identified within the proposal but greater weight needs to be attributed to population.

We remain extremely disappointed that the Home Office refuses to recognise the additional demand generated in forces such as ours and the Metropolitan Police by the large numbers of overnight visitors or tourists that stay with us every year. They do not leave their vulnerability or their offending behind when they come and often such issues are exacerbated by population density and alcohol. Devon and Cornwall is particularly affected by this oversight – as over 11% of all overnight stays in England and Wales takes place in our two counties. Only the Metropolitan police area has more overnight stays than us with 21% of visits. Robust datasets exist and should be included within the model. The argument that this data selectively affects only specific force areas is spurious as 15 police force areas would receive allocations that are greater than 2% and only 9 forces would receive allocations of less than 1%. By contrast 20 forces would receive no allocation at all from the Area Cost Adjustment.

In summary, we propose that greater weight should be given to the population element of the formula

Factor 2 - Workless households with dependent children.

The Minister's Funding Principles state that to be robust a factor must be analytically sound, use objective indicators based on robust data and allocate funding on the basis of relative need. **This factor is not robust.**

This proposed measure which focuses exclusively on deprived young families represents only 4.2% (n=982,464) of all households in England & Wales (23,366,044). We do not believe that it is robust to allocate 31% (over £2.2 billion) of the funding allocation on the basis of such a narrow segment of the population. By contrast the alternative factor that was proposed by Devon and Cornwall in our response to the July 2015 consultation - workless households (with or without dependent children) - represents 34.6% of households in England & Wales.

We understand that households with no working adult and dependent children was chosen by the Home Office on the basis of its close correlation with the patterns of crime seen between different areas over time. However correlation does not equal causation. Their approach fails to recognise other forms of deprivation, including isolated rural deprived communities and pensioner deprivation. Evidence suggests that pensioners (14% of the pensioner population) experience more poverty than children (10% of children). Further evidence suggests that while the risk of poverty is greatest among those who are single with children (34%), 23% of single pensioners are at risk of poverty and 20% of single adults³.

Broadening this factor to include all workless households rather than just those that have dependent children would increase the proportion of the population represented in this factor to 34.6% of all households and would mitigate against the discriminatory effect of focusing solely on the narrower factor at the expense of the elderly deprived. Broadening the population base would also reduce the susceptibility of this factor to change over time and improve its stability. Furthermore it offers the potential to reflect drugs and alcohol related vulnerability to a far greater extent than the existing factor. We propose that such an amendment is made – broadening this factor to include unemployed persons without dependent children. We recognise that in doing so the correlation of the original factor to victim-based crime is strong ($R^2=0.98$) would be weakened to a small degree by broadening the factor but the correlation would remain a strong one ($R^2=0.95$).

In summary, we propose that the factors used to allocate this part of the formula be broadened to include all workless households.

Factor 3 - Urban Adversity:

This factor is not robust, transparent or stable – failing to meet three of the Minister's five Funding Principles. Many of the same objections noted above in relation to the unemployed adults with dependent children also apply to this factor. The new Urban

³ <http://www.bristol.ac.uk/poverty/downloads/keyofficialdocuments/CONDEM%20-poverty-report.pdf>

Adversity factor skews heavily in favour of urban forces, ignoring the needs of deprived rural communities and again selectively favours deprived young families at the expense of the elderly and vulnerable poor.

While we retain our strong opposition to the use of commercially provided data in the process, if the Home Office are to remain committed to using such datasets they must address the bias towards urban deprivation. The robustness of this factor could be improved by including the ACORN “Financially Stretched” population sub-category alongside it. This additional dataset will incorporate a broader demographic including a larger proportion of elderly – providing a much more appropriate measure for deprivation while maintaining a strong correlation to victim based crime and recorded crime.

The ‘hard-pressed’ ACORN category (like the other deprivation measure on workless families) was originally identified by the Home Office on the basis of its close correlation with the patterns of crime seen between different areas over time. In our response to the July 2015 consultation we raised a series of concerns about that proposed measure, due to the lack of transparency and its bias towards urban areas and its overlap with the other deprivation factor.

The October 2015 revised proposals replace this original measure with a new ‘Urban Adversity’ category. Like the ‘hard pressed’ dataset this is commercially provided data that was developed initially to support targeted approaches to marketing. The ACORN profile for the Urban Adversity category suggests that the age profile is weighted predominantly to the 0-34 years age-range with a low weighting for the elderly.

The Urban Adversity dataset is, by its very titling, self evidently focused on urban areas.

- It fails to reflect isolated rural deprivation or the considerable deprivation contained in market towns and smaller urban conurbations.
- It has a high proportion of lone parent families and single occupancy homes with less representation of couples with no children and pensioners.
- It contains a high proportion of unemployed people and those looking after family which replicates the population in the workless households with dependent children factor.
- The Ethnicity factors within the dataset are weighted towards BME populations.
- The housing stock considered within the dataset is typically flats or maisonettes and terraced houses with a high weighting on social renting and shared/equity ownership.

The Minister’s Funding Principles state that to be robust a factor must be analytically sound, use objective indicators based on robust data and allocate funding on the

basis of relative need. **This factor is not robust.** It is not analytically sound and it fails to allocate according to need.

The population covered by this proposed measure represents only 17.7% (n=10,204,885) of the population in England & Wales (n=57,638,899). It focuses on a very narrow range of the population, again representing deprived young families, but also urban ethnic minority communities and young single people. The elderly are significantly under-represented within the category with only 11.9% of the urban adversity population over the age of 65 compared to 17.9% of the overall population suggesting that this factor shares the same discriminatory qualities apparent in the workless households with no dependent children.

We believe that a change could be made to make this factor robust. An additional ACORN category “Financially Stretched” exists which represents 21.7% (n=12,527,389) of the population in England & Wales and has a larger proportion of elderly (16.5%). This alternative measure also better reflects the broader context of deprivation – reflecting students and pensioners, families and manual and semi-skilled households. By capturing a broader vulnerability base and reflecting many of the same demographic types that were included in the original Police Allocation Formula adding this additional ACORN category to the factor would provide a much more robust reflection of the in-work poverty as well as out-of-work poverty and thus be far more consistent with the Government’s own wider policy objectives in this area. This would also reflect the current available evidence base concerning the links between crime and poverty which links crime and victimisation to in-work poverty, an area of growth rather than to worklessness which has shown consistent reductions^{4 5 6}.

We accept that including the financially stretched category will reduce the correlation with both victim-based and total recorded crime to a small degree. However it will remain a strong relationship. For example the correlation between victim-based crime and urban adversity is $R^2=0.98$ while for the combined categories of urban adversity and financially stretched it only reduces to $R^2=0.95$.

The Minister’s Funding Principles require that to be transparent a factor should be clear and easy to understand, supported by partners and supported by appropriate governance and accountability. **This factor is not transparent.**

We retain our opposition to the use of commercial datasets for the funding formula given their lack of transparency. We recognise that the Home Office are negotiating wider access to the dataset for policing areas but we object to bearing any of the

⁴ <http://www.ons.gov.uk/ons/rel/lmac/working-and-workless-households/2014/stb-working-and-workless-households-2014.html>

⁵ <http://www.bristol.ac.uk/poverty/downloads/keyofficialdocuments/CONDEM%20-poverty-report.pdf>

⁶ http://eprints.lancs.ac.uk/71188/1/JRF_Final_Poverty_and_Crime_Review_May_2014.pdf

costs of such data and still consider that there will be a significant lack of public transparency.

In our discussions with officials over the past few weeks, we have raised objections on the basis of the stability of this factor. Our analysis and that of the company providing the data had failed to reconcile the base data to the percentages provided by the Home Office in the Minister's revised proposals from October 2015 and the Technical Notes circulated on 28 October by Mary Calam. We were originally advised by the Home Office that the difficulty in reconciling the figures was because they had used 2013 Urban Adversity data while the dataset we had purchased from CACI to aid our analysis was 2015. We compared the two datasets and while there were only small percentage changes between the two datasets - this translated into a huge cash impacts because of the 31% weighting allocated to the factor. This saw swings in the non metropolitan forces of as much as £30million between the two years and variances of as much as £164million for London which caused us great concern. Having raised this issue with Home Office officials we have now been advised in a letter by Mary Calam dated 5th November that the percentages allocated in the Minister's October 2015 revised proposals for Urban Adversity were in actual fact the percentages from the Hard Pressed dataset. This is of considerable concern and means that the exemplifications provided for every policing area by the Home Office are wrong (in some cases fairly significantly given the high weighting attributed to this factor). We are concerned that similar variances will arise year on year with the Urban Adversity data to those we modelled for the original dataset – given the 31% weighting – whereby small percentage shifts lead to swings of similar magnitude. The use of the wrong data raises yet another question mark over the quality and robustness of the whole process. While accepting that smoothing the data by using a moving three year average may influence the magnitude of these swings it is not clear that this approach will mitigate the impact of this to a manageable extent.

In summary, we propose that this factor is merged with the ACORN data set “financially stretched”.

Factor 4 – Bar Density:

This factor is not robust – and thus fails to meet the Minister's Funding Principles. It is not analytically sound and it fails to allocate according to need. While we agree that alcohol is one of the key drivers of crime the proposed factor is not a reliable proxy for allocating funding on the basis of alcohol related crime and harm. The use of hectares in the calculation leads to wild distortions in the formula – and penalises areas that have large geographical expanses as well as busy urban centres.

The July 2015 consultation proposed that a specific factor was introduced to reflect the impact of alcohol on policing demand, citing a strong association between alcohol and violent crime and disorder and indicated that there was strong evidence

to correlate the density of bars within an area with police demand and crime levels. We can understand the Home Office's desire to reflect the impact of alcohol on police demand. The Police and Crime Commissioner for Devon and Cornwall leads nationally for PCCs on alcohol harm and is well aware of the pressures placed on policing by the misuse of alcohol. The Crime Survey for England and Wales 2013-14 estimated that 53% of all victims of violent incidents in 2013/14 believed the perpetrator to be under the influence of alcohol and that 70% of violent incidents occurring in the evening or night were alcohol-related. Almost all police forces across the country cite the pressures that are placed upon policing by the night time economy. While we note that policing demand from alcohol is much broader than night time economy activity we also recognise that the Home Office has made a conscious decision to focus on this particular area.

While we note that some small adjustments were made in the revised proposal for October 2015 the Bar density factor still produces perverse results and does not reflect the true density of bars in a force area.

For example in Devon & Cornwall we have 1855 bars which equates to 1.2% or £6.8m of funding allocation. West Yorkshire have exactly the same number of bars yet get 6.0% or £34.1m. Cheshire has 915 bars but receives the same funding allocation as Devon and Cornwall. Merseyside have 975 bars yet get 5.1% or £29m. West Midlands have 1500 bars but get 8.5% or £48.3m. This is not because the bars in Devon and Cornwall are all in our rural reaches, we have a large number of pockets of densely packed bars, including Plymouth, Exeter, Torquay, Newquay, Truro, Barnstaple and Penzance. Indeed many of our popular tourist locations are characterised by densely gathered licensed premises. The map contained in Annex 3 shows the wards with the most densely packed night-time economies in shades of red. In contrast to this those areas with less dense populations of bars are shown in blue. The unshaded areas within our force boundary represent unpopulated areas of moorland which have no bars at all. Yet the area that is represented is included in the current formula, effectively diluting the impact of the areas of densely packed bars on our funding allocation.

This is not an issue that just affects Devon and Cornwall. Our analysis suggests that with the exception of the London forces every police force in England & Wales contains some sparsely populated areas.

While we would agree that alcohol is a significant driver of crime, the factor proposed does not reflect either the true risk that it poses in Devon and Cornwall nor does it reflect the dense distribution of bars within specific areas across a force area. We accept that busy night time economies with high traffic between establishments, to fast food areas and on routes away from the night time economy represent an increased risk of violence and disorder, but the proposal does not reflect this risk.

In our response to the July 2015 consultation we proposed an alternative measure for this factor that would more accurately reflect bar density. Calculating bar density

at Local Authority level and then aggregating this back up to force level would ensure that all areas with a high Bar Density received the funding required to police them. This approach would significantly reduce, albeit not eliminate, the diluting effect of large expanses of rural land and would distribute funding more equitably across forces, in a way that truly reflects likely demand. It would also avoid some smaller geographic forces receiving undeserved windfall gains and allow those areas which have a significant volume of bars to deploy appropriate resources to deal with the challenges posed by alcohol within our communities. For example, in the case of Thames Valley force area which has the 4th highest number of bars and clubs in a force area and large urban conurbations including Reading, Milton Keynes, Oxford and Slough – calculating bar density at Local Authority level and aggregating up would result in Thames Valley receiving the 6th highest allocation of funding (rather than the 24th highest). Our proposed new measure was fully compliant with the Minister's Funding Principles. It can be calculated using the same datasets as the original proposal set out by the Home Office, namely NOMIS Standard Industries Classification 2007 (56.30) Beverage Serving Activities data which is then combined with hectare data drawn from the Census and ONS population density data.

We still believe that this is a suitable alternative measure but recognising that the Home Office have already rejected this measure we have identified another option. Our new proposal set out below fully meets the Minister's Funding Principles. It is based upon robust, transparent, nationally available datasets –and will ensure an allocation on the basis of relative need – fully compliant with the Minister's Funding Principles.

Devon and Cornwall's Revised October 2015 Proposal on Bar Density

We have identified a proposal that will meet the true objective of the factor – namely to allocate funds to the areas within a force area which create the demand linked to this measure.

The current proposed methodology would not allocate the same level of funding to two forces which have the same environmental make up in terms of areas of bar density (and the associate clusters of shops and other businesses) and therefore identical demand. This is because where there is large geographic expanse that does not contain bars or generate demand its size is factored in to the current calculation. Our proposed new measure will remove this anomaly and ensure that forces facing the same levels of demand will receive comparable funding. It does this by excluding areas of rurality/sparsity from the calculation so that funding is allocated based on actual bar density of relevant areas of the police force area that create demand.

The Home Office's October 2015 proposal on bar density would result in 36 police forces being under funded when compared to population. Our proposal to exclude areas of sparsity from the calculation will remedy this and provide a much fairer distribution based on true relative need.

The calculation remains as per the revised proposal contained in the revised proposals from October 2015 but basing the area calculation (hectares) on Output Areas which have a population density greater than 0.5. This is an accepted and well used measure within government and has credibility nationally.

Previous Department of Communities and Local Government measures have used the definition of ‘Super Sparsity’ as Output Areas with 0.5 or fewer residents per hectare and ‘Sparsity’ as Output Areas with more than 0.5 but less than or equal to 4 residents per hectare. For the purpose of our analysis we have used the ‘Super Sparsity’ definition as a means to identify areas to be excluded from the calculation. Once the Output Areas categorised as ‘Super Sparsity’ have been identified, the area (in hectares) is taken from the total police force area. By only focussing on the relevant populated areas, the calculation becomes far more robust and reliable and will properly meet the stated aim of the Home Office.

In fact the correlation between funding allocation and Total Crime, Violence Against the Person, Victim Based Crime and Public Order Offences all increase as a result of excluding areas of sparsity from the calculation. This effect is magnified when, for analytical purposes, the Metropolitan Police Force is excluded as it is an extreme outlier.

Annex 4 contains a schematic illustration of how this would differentially affect different force models.

We accept that there is a small negative impact of this proposal on the metropolitan forces, but far less than a proposal focused on local authority density. In any event – it is wholly unacceptable for this to be used as a justification for retaining a measure that is not robust and discriminates against areas with a large geography.

Force	HO Proposal Model 2		Bars ² /Hectare (excl. Super Sparsity) %		Impact of D&C proposal on selected forces		Est change between model 1 and model 2
	%age allocation	Funding (£m)	%age allocation	Funding (£m)	%pt Diff	Funding Diff (£m)	Funding Diff (£m)
Bedfordshire	0.4%	£2.27	0.5%	£2.94	0.1%	£0.67	-£21.29
Cleveland	0.9%	£5.11	1.1%	£6.28	0.2%	£1.17	-£23.81
Cumbria	0.2%	£1.14	1.2%	£6.99	1.0%	£5.86	-£17.49
Dyfed-Powys	0.2%	£1.14	1.0%	£5.49	0.8%	£4.36	-£13.22
Greater Manchester	10.4%	£59.08	7.0%	£39.82	-3.4%	-£19.27	£68.44
Leicestershire	0.9%	£5.11	1.1%	£6.10	0.2%	£0.99	-£14.50
Merseyside	5.1%	£28.97	3.5%	£19.72	-1.6%	-£9.26	£7.41
Metropolitan Police	36.3%	£206.22	21.6%	£122.56	-14.7%	-£83.66	£508.60
North Yorkshire	0.4%	£2.27	1.9%	£10.79	1.5%	£8.52	-£14.36
West Midlands	8.5%	£48.29	5.3%	£30.39	-3.2%	-£17.90	£68.98
West Yorkshire	6.0%	£34.09	4.9%	£27.91	-1.1%	-£6.18	£28.33

Table 3. Comparison of the percentage and cash allocations to selected forces under the revised Home Office model and the Super-sparsity adjusted factor showing the difference between these

two allocations and comparing this with the cash change in overall allocation between the first and second Home Office proposals.

There are other options that could also be employed – which would be significantly more robust than the current proposal from the Home Office, for example available Geographical Information Systems (GIS) to map the locations of bars it is possible to identify those hotspots of bars and to selectively fund for their true distribution.

If, despite the clear evidence above, the Home Office is unwilling to adopt either of the measures listed above we urge you to drop this factor entirely. The retention of a factor that is so fundamentally in conflict with the Minister's Funding Principles is simply not justified.

In summary, we believe this factor should be replaced with our original proposals to aggregate up the bar data from local authority. If the Home Office is not persuaded by this proposals then we urge that one of our other measures is considered.

Section 3 – Area Cost Adjustment

We understand that the Area Cost Adjustment (ACA) calculation remains the same as the current ACA. This 'Area Cost Adjustment for Police' is a factor calculated to reflect differences in the cost of providing police services across the country. It is generally based on information derived from the following sources:

- The 2009, 2010 and 2011 Annual Survey of Hours and Earnings provided by ONS
- Subjective Analysis Return 2005-06 and 2007-08
- Base Estimate Returns 1992-93
- Rateable values per square metre for offices in administrative areas in England and Wales from the VOA statistical release Business Floorspace 2012
- Gross non-domestic rates and increases and reductions in rate yields, as supplied by authorities to the Secretary of State on the National Non-Domestic Rates Provisional Contributions Return 2012-13
- The total resident population as at 30 June 2011, as estimated by ONS.

In the final stages of the Police Allocation Formula an Area Cost Adjustment to compensate for the differing labour and rental costs in each police force area is applied followed by scaling factors to ensure the sum of police allocations meets the total funding pot available.

All Forces which are assigned Area Cost Adjustment Factors of greater than 1 which indicates labour (and materials) are more expensive than the national average.

The current factor focuses on the cost of inputs – i.e. the impact on the costs of employing staff etc there is no recognition of the cost of providing outputs. In the

past there has been comment that the factors are not appropriate for police where other than the London supplement there is one common pay scale for police officers across the country. This is also largely true for most police staff that are covered by a national negotiating arrangement.

If such an adjustment is to be included then it should reflect some of the broader costs associated with delivering policing in particular local areas. These would include rurality, large geography, length of road and average travel times as well as the impact of visitor numbers. The environmental elements that we are proposing directly reflect the increased costs of policing a large rural area such as ours and are clearly lacking in other elements of the funding model proposals. The need to reflect the significant impact of visitor numbers on the cost of delivering policing is compounded within the current proposal by its strong focus on population or population characteristics. Clearly these factors representing 92% of the funding allocation under the latest model do not reflect the impact of the 11m overnight visitors that we receive in Devon and Cornwall each year. We contend that if the model is going to place such strong emphasis on population then the need to ensure that shifts in population that translate into additional demand should be reflected within this element.

In summary, we propose that the Area Cost Adjustment is revised to reflect the cost impacts that are relevant to policing organisations.

Section 4 – Transition

The Government has accepted that there should be transitional arrangements that gradually move forces from their current funding allocations to the proposed target allocations. The changes are to be introduced at the same time as the reductions expected in the overall departmental allocation contained in the CSR which for some PCCs will mean that the severity of cutting national funding will coincide with significant changes in formula funding. Any transition scheme that is proposed needs to be developed in view of the total funding envelope to forces not just that element relating to formula funding.

CSR reductions at the lowest level are expected to reduce government departmental expenditure by 25% and losses through formula funding could reduce funding further by up to 13.5% for some forces. It is therefore impossible at this stage to comment on a transition process without knowing its overall size and impact at individual policing area level.

Any transition regime that is introduced therefore needs to recognise the size of the overall adjustment and then tailor proposals to forces that are more or less significantly affected. This flexibility will allow the practical transition to take place between the existing and target level of funding. This flexibility is critically important for those forces who do not have any further capacity in the reduction of officer numbers and through that of natural wastage. The consultation document proposes

three methods for introducing transitional arrangements. The first two methods rely on either capping the level of reduction or increase and the second method method limits the effect by the number of years. The third proposal, or 'required option' proposes a flexible approach to transition taking into account the individual circumstances of forces into account

For example there needs to be a cut off point of say a 20% loss(dependent on the final level of CSR reduction)of total funding below which a four year transition is allowed with forces losing more than 20% of their total funding being allowed to transition over 7 to 10 years. This would effectively cover most PCCs who are losers from both the CSR and funding allocation exercise and enable the size of the loss to be incorporated into the consultation options.

In order to assist transition it is also important that PCCs, especially in those areas that are losers from both the CSR and formula funding, are given freedom to set their own Council Tax increases in their own areas. A position that is currently under separate consultation by the Home Secretary.

Section 5 - The consultation process

We have considerable concerns about the consultation process which we believe has been wholly inadequate for a policy proposal of this importance.

The original consultation failed to meet Government own guidelines in many respects. It did not provide the information we required to properly assess the proposals – either in terms of the rationale and justification for the choice of particular measures or their impact. The Home Office failed to engage policing leaders in discussions until an extremely late stage in the development process and sought our views over a short period of time across the summer holidays. Given the fundamental importance of this policy to the safety and security of communities across the country we do not feel that consultation has been carried out in a proper manner.

The second round of consultation is also inadequate. It commenced on 8th October and runs until 30th October – allowing just three weeks. This is far too short given that this is the first time that data on the impact on forces has been released. The Home Office have also failed to provide any explanations as to why they do not agree with proposals made by a number of forces to reflect the costs involved in policing a rural area. Our analysis of the revised proposals has also been severely hampered by the fact that the Government has not provided any detailed information or rationale on the decisions that have been made nor have they explained how the new measures on urban adversity and bar density will work. Indeed, the allocation calculations for one factor, Urban Adversity, does not appear to be based on the most recently available data. In addition, the Urban Adversity data set is only available through commercial subscription and thus we have had to pay a substantial sum to gain access to it for the purposes of analysis.

A meaningful explanation of the basis for the changes in relative weightings between the factors has also not been published, nor has the academic peer review of the proposal. Furthermore, the percentage allocations for each policing area set out in the revised October 2015 proposals contain basic errors and data inconsistencies. How can we accurately assess the impact on individual forces or have any confidence in the figures provided by the Home Office?

A technical note was issued on 28th October which contained some further exemplification of the approach taken by the Home Office. However providing this additional information so late in the consultation process and then allowing just 7 days in which to consider the complex material and respond fully to the proposals has been unhelpful.

The speed at which these proposals are being pushed are disturbing. There are huge swings in position for policing areas, between the two proposals – which further reinforces the inadequacy of the second round of consultation and the quality of the original proposals. We have calculated – using funding projections from the Police Treasurers Association (PACCTs) for the July 2015 consultation – that the position of individual policing areas have moved by as much as 33% from one set of proposals to the other – a huge shift. For example, under the original proposals:

- Bedfordshire were expecting to see an increase in their funding of around 33% from existing levels (£21million) but will now remain largely unchanged.
- West Midlands who were predicted to lose over 7% of their funding (£32million) will now see an increase in funding of nearly 8% (£37 million) compared to their existing settlement.
- North Yorkshire who were predicted to gain 16% (£11 million) from the original proposals now face a reduction of 5% from their existing funding (a cut of £3.5million).

We would urge you to reconsider your plans to implement these changes in 2016/17 as we believe that the review process is fundamentally flawed and needs to be carried out again.

Annexes

Annex 1 – Rurality: Proposed measure submitted in September 2015 by Devon and Cornwall

Annex 2 - Rurality: Map showing average estimated response times at blue light speed

Annex 3 – Bars: Map showing density of bars and clubs at ward level

Annex 4 – Bars : Table setting out impact of proposed new bars measure on all policing areas

5 November 2015