ABERDEEN CITY COUNCIL

COMMITTEE: Enterprise, Planning and Infrastructure DATE: 12 January 2010

CORPORATE DIRECTOR : Director of Corporate Governance

TITLE OF REPORT :
(1) The Aberdeen City Council (Inchgarth Road/ Westerton Road/Primrosebank Avenue/ Primrosehill Avenue/Primrosehill Road/Den of Cults/Station Road/Ashfield Road/Deeview Road South/Park Brae/Park Road/Loirsbank Road/West Cults Road) (20mph Speed Limits) Order 2009 (with associated speed cushions on Inchgarth Road)
(2) The Aberdeen City Council (Golf Road, Bieldside, and Pitfodels Station Road) (20mph Speed Limits) Order 2009 (with associated speed cushions on both roads)

REPORT NO : CG/11/135

1. PURPOSE OF REPORT

This report deals with objections received after the statutory advertisement of 20mph speed limits on Inchgarth Road, Westerton Road, Primrosebank Avenue, Primrosehill Avenue, Primrosehill Road, Den of Cults, Station Road, Ashfield Road, Deeview Road South, Park Brae, Park Road, Loirsbank Road and West Cults Road, ***with associated speed cushions on Inchgarth Road***. The public notice is attached, from which members will be able to see the exact content of the proposals.

The report also deals with objections received after the statutory advertisement of 20 mph speed limits on Golf Road, Bieldside, and Pitfodels Station Road, ***again with associated speed cushions***. Once more the public notice is attached.

These projects were advertised separately but are closely related in terms of considering the value judgements raised in the objections. Accordingly, this report proposes dealing with them as a unified set of proposals.

The objectors' names and addresses are also attached, just after the public notices but before the appendix (which is a set of technical observations on the objections, prepared by the roads officials).

Just to complicate matters further, a *third* current order - containing new waiting restrictions for Westerton Road - has also been drawn into the overall balance of value judgements. This order – The Aberdeen City Council (Various Roads in South Aberdeen) Traffic Management Order 2009 - is actually "on standby" for

confirmation, having been approved by this Committee in all respects other than the Westerton Road element.

2. RECOMMENDATION(S)

That the objections be overruled and the speed limit orders and associated speed cushions introduced as originally envisaged, that the intended new waiting restrictions for Westerton Road be abandoned in the meantime – i.e. dropped from the current order that is otherwise ready for confirmation – but that the need for those restrictions be kept under consideration in the coming year.

3. FINANCIAL IMPLICATIONS

All these measures are being funded within existing budgets.

4. SERVICE & COMMUNITY IMPACT

These are standard traffic management measures to protect road safety in general and pedestrian safety in particular. However, as is not unfamiliar, the perception of local people is that the situation is nothing like as straightforward as that, and the differing views are rehearsed in section 6 below.

5. OTHER IMPLICATIONS

None.

6. REPORT

The appendix to this report is in the authorship of my roads colleagues, who have summarised the objections and offered commentary on the main points raised in them. Copies of the original communications are available for inspection.

There are no legal or procedural issues of note. The central thrust of the objections is to do with traffic calming, not the regulatory speed limits.

However, there is one broad issue of public policy and public perception which should be clarified at the outset. Increasingly in recent years, objections to traffic calming have been able to be thematised in terms of a particular type of scepticism about whether the measures in question are being pursued out of piety rather than hard-edged traffic management rationale. This is an intellectually respectable debate which should be rehearsed where it is relevant, but it is not particularly apposite here. In this case, recorded speeds are high – sometimes distinctively so.

In fact, the objections from Westerton Road are founded on the assumption that traffic calming *does* work, and, indeed, that it is precisely because it works that the proposals for Inchgarth Road and Pitfodels Station Road will displace traffic back onto Westerton Road - even though it *already has* speed cushions.

So scepticism that the virtue of traffic calming is largely abstract, and lacks concrete conviction, is *not* at the heart of the representations from Westerton Road. To the extent that such scepticism has been expressed by objectors from Inchgarth Road, members should be aware that the 85 percentile speeds at the top end of that road have come in at 37-40 mph. Accordingly, it does not seem to be particularly abstract to look at those recorded speeds and to imagine that it would be very desirable to reduce them to something closer to 20mph.

I think I am representing the views of the Westerton Road residents fairly if I say that they are critics of the bald proposal to establish traffic calming on *all* the relevant routes in this particular case, on the grounds that that will mean that motorists will have no choice but to use a road with traffic calming on it, and will therefore revert to *their* road to an unfair level.

As is indicated above, Westerton Road already has speed cushions on it. Before the installation of those cushions, a rough breakdown of traffic on the three routes used for rat running between North Deeside Road and Garthdee/Altens was (roughly) 20% on Inchgarth Road, 32% on Pitfodels Station Road and 48% on Westerton Road.

After the establishment of traffic calming on Westerton Road, the levels there fell back to 30% (Pitfodels 49% and Inchgarth 21%). Residents now fear that levels on Westerton will go back up again.

The roads officials accept this, but think that, once all the roads have been made the subject of traffic calming, motorists will experiment with the three options, and that, in a kind of natural selection, the vehicular burden borne in each case will end up being *at worst* 20% on Inchgarth and 40% each on Pitfodels and Westerton.

On the other hand, residents of Westerton Road believe that their road will look like the best option of the three, and end up suffering unfair disadvantages in a scheme predicated on the assumption of achieving a reasonable share of the burdens at stake.

Not only do the residents believe their road will end up being used much more heavily than at present, but, also, they think that the physical setting of some of the houses on Westerton Road is such that the safety of pedestrians is actually going to be *more* compromised at their location - even though they have footways.

In contrast, Pitfodels Station Road, when walking southwards from the North Deeside Road, has only a small section of narrow substandard footway on the west side for a distance of approximately 105m. There are *no* footways over the remaining 240m to the junction with Garthdee Road, and the route is not only

used by residents but by students walking to and from the Robert Gordon University.

The observations of the roads officials here are fairly clear; experience dictates that, if a number of roads are treated by traffic calming, motorists may well choose the route that looks most like a main road, or the route that looks likely to be the quickest, but, that, if that is a common perception, the favoured route will then become congested and attract tailbacks, *and those tailbacks will cause some drivers to move away again.*

Needless to say, the idea of a new road altogether at this location, although a well-known desire, is not at stake vis-à-vis traffic management measures under consideration in the here and now, as a matter of some urgency.

It should also be said that it is by no means clear that pedestrians (residents and also students) walking on Pitfodels Station Road without the protection of footways are a lesser consideration than residents on Westerton Road who have the protection of footways but who may live in properties that are distinctively close to the road. A sense of vulnerability in the latter situation – notwithstanding the existence of footways – is a concrete reality, and not in dispute. However, *driving* on a footway is a serious offence, and a footway continues to be a considerable and significant place of legitimate refuge. We tell our children that on all accounts they should remain on the pavement. The feeling that a sense of vulnerability remains even when walking on a footway is an admissible and compelling idea, but it should not be exaggerated.

7. AUTHORISED SIGNATURE

Stewart Carruth
Director of Corporate Governance
scarruth@aberdeencity.gov.uk
(01224) 522550

8. REPORT AUTHOR DETAILS

David Wemyss, Committee Services Officer (Roads Legislation),
dwemyss@aberdeencity.gov.uk (01224 522523)

9. BACKGROUND PAPERS

No background papers were used as a point of departure for writing this report (other than the statutory objections themselves).

ABERDEEN CITY COUNCIL

ROAD TRAFFIC REGULATION ACT, 1984
and
ROADS (SCOTLAND) ACT 1984

20 MPH SPEED LIMITS ON INCHGARTH ROAD/WESTERTON ROAD/ PRIMROSEBANK AVENUE/PRIMROSEHILL AVENUE/PRIMROSEHILL ROAD/DEN OF CULTS/STATION ROAD/ASHFIELD ROAD/DEEVIEW ROAD SOUTH/PARK BRAE/PARK ROAD/LOIRSBANK ROAD AND WEST CULTS ROAD, ***WITH ASSOCIATED SPEED CUSHIONS ON INCHGARTH ROAD***

Aberdeen City Council proposes to make The Aberdeen City Council (Inchgarth Road/Westerton Road/Primerosebank Avenue/Primrosehill Avenue/Primrosehill Road/ Den of Cults/Station Road/Ashfield Road/Deeview Road South/Park Brae/Park Road/Loirsbank Road/West Cults Road) (20mph Speed Limits) Order 2009, which would provide for regulatory 20mph speed limits on each of the roads named in the title.

The Council is also proposing to introduce associated speed cushions on Inchgarth Road. Each cushion would be established under the Roads (Scotland) Act 1984 and would be 0.075 metres in height and 1.9 metres in length. Tolerances for the construction height of a speed cushion are plus or minus 10 millimetres transversely and plus or minus 15 millimetres longitudinally. The exact positioning of each cushion can be clarified by telephoning Mr. Graham McKenzie at Aberdeen (01224) 523471, or by calling at St. Nicholas House (details of this see below). All parties in the affected streets will receive the exact specifications by letterbox drop.

Full details of all the proposals are to be found in the draft order and in the schedules of speed cushion positionings which, together with maps showing the intended measures and an accompanying statement of the Council's reasons for promoting them, may be examined during normal office hours on weekdays between Monday, 24 August, 2009 and Monday, 21 September, 2009, inclusively, in the offices of the Traffic Operations Team on the 2nd floor of St. Nicholas House, Broad Street, Aberdeen.

It is recommended that anyone visiting St. Nicholas House to view the documents should use the above number to make an appointment to do so, in order that a member of staff can be present to offer an explanation if necessary. Anyone unable to visit St. Nicholas House can telephone the above number to speak to one of the roads officials.

Anyone wishing to object to the proposed order, or to the intended establishment of speed cushions, or both, should send details of the grounds for objection in writing to the undersigned during the statutory objection period which also runs from 24 August until 21 September, 2009, inclusively. Any objection should state (1) the name and address of the objector, (2) the matters to which it relates, and (3) the grounds on which it is being made. The signatories of petitions or standard forms will not ordinarily be treated as objectors (in the sense in which statutory objectors are contacted by the Council about the possibility of informal

negotiations, etc.) but petitions and standard forms are always brought to the attention of the relevant Committee.

Any person who submits an objection should note that, as a rule, the correspondence will end up in the public domain. Generally, this is because the Committee agendas are public documents, available in libraries and also distributed to the press. Also, when objectors are sent papers later in the procedure, these papers may refer to the complete set of objectors' names and addresses, along with summaries of their observations. If any member of the public is concerned about his or her objection entering the public domain in this way, this should be stated clearly in the objection submitted. Otherwise it will be assumed that an objector has no such concern. It may also be appropriate to indicate that, in fact, objections are very rarely publicised beyond their being read by Councillors, and so, unless any member of the public has a strongly-held or distinctive concern about confidentiality, it is probably in the public interest to observe that there is an element of technicality about this part of the statutory notice. Guidance on these issues can be obtained from Democratic Services at 522523.

Roderick MacBeath
Head of Democratic Services
Aberdeen City Council
Town House
Aberdeen

ABERDEEN CITY COUNCIL

ROAD TRAFFIC REGULATION ACT, 1984
and
ROADS (SCOTLAND) ACT 1984

20 MPH SPEED LIMITS AND ASSOCIATED SPEED TABLES ON GOLF ROAD (BIELDSIDE) AND PITFODELS STATION ROAD

Aberdeen City Council proposes to make The Aberdeen City Council (Golf Road, Bieldside, and Pitfodels Station Road) (20mph Speed Limits) Order 2009, which would provide for regulatory 20mph speed limits on the two roads named in the title.

The Council is also proposing to introduce speed tables on each of those roads. Each table would be established under the Roads (Scotland) Act 1984 and would be 0.075 metres in height and 5.0 metres in length. Tolerances for the construction height of a speed table are plus or minus 10 millimetres transversely and plus or minus 15 millimetres longitudinally. The exact positioning of each table can be clarified by telephoning Mr. Graham McKenzie at Aberdeen (01224) 523471, or by calling at St. Nicholas House (details of this see below). All parties in the affected streets will receive the exact specifications by letterbox drop.

Full details of all the proposals are to be found in the draft order and in the schedules of speed table positionings which, together with maps showing the intended measures and an accompanying statement of the Council's reasons for promoting them, may be examined during normal office hours on weekdays between Monday, 24 August, 2009 and Monday, 21 September, 2009, inclusively, in the offices of the Traffic Operations Team on the 2nd floor of St. Nicholas House, Broad Street, Aberdeen.

It is recommended that anyone visiting St. Nicholas House to view the documents should use the above number to make an appointment to do so, in order that a member of staff can be present to offer an explanation if necessary. Anyone unable to visit St. Nicholas House can telephone the above number to speak to one of the roads officials.

Anyone wishing to object to the proposed order, or to the intended establishment of speed tables, or both, should send details of the grounds for objection in writing to the undersigned during the statutory objection period which also runs from 24 August until 21 September, 2009, inclusively. Any objection should state (1) the name and address of the objector, (2) the matters to which it relates, and (3) the grounds on which it is being made. The signatories of petitions or standard forms will not ordinarily be treated as objectors (in the sense in which statutory objectors are contacted by the Council about the possibility of informal negotiations, etc.) but petitions and standard forms are always brought to the attention of the relevant Committee.

Any person who submits an objection should note that, as a rule, the correspondence will end up in the public domain. Generally, this is because the Committee agendas are public documents, available in libraries and also distributed to the press. Also, when objectors are sent papers later in the procedure, these papers may refer to the complete set of objectors' names and addresses, along with summaries of their

observations. If any member of the public is concerned about his or her objection entering the public domain in this way, this should be stated clearly in the objection submitted. Otherwise it will be assumed that an objector has no such concern. It may also be appropriate to indicate that, in fact, objections are very rarely publicised beyond their being read by Councillors, and so, unless any member of the public has a strongly-held or distinctive concern about confidentiality, it is probably in the public interest to observe that there is an element of technicality about this part of the statutory notice. Guidance on these issues can be obtained from Democratic Services at 522523.

Roderick MacBeath
Head of Democratic Services
Aberdeen City Council
Town House
Aberdeen

Statutory objectors

Westerton Road

Objector	Address
Mrs J Johnson	299 North Deeside Road Cults Aberdeen AB15 9PA
Dr Shan Parfitt	7 Westerton Road Cults Aberdeen AB15 9NR
Mr Ian Roche	7 Westerton Road Cults Aberdeen AB15 9NR
Dr Alan Thomson	10 Westerton Road Cults Aberdeen AB15 9NR
Dr Jennifer Cleland	10 Westerton Road Cults Aberdeen AB15 9NR
Mr Ron Sawdon	6 Westerton Road Cults Aberdeen AB15 9NR
Kathleen Burgess	5 Westerton Road Cults Aberdeen AB15 9NR
Mr Andrew Pyle	15 Westerton Road Cults Aberdeen AB15 9NR
Mrs S. E. Pyle	15 Westerton Road Cults Aberdeen AB15 9NR
Mr W Wood	9 Westerton Road Cults Aberdeen AB15 9NR
Mr T P Littlefield	Lochnagar 2 Westerton Road Cults Aberdeen AB15 9NR

Objector	Address
Audrey Sheal	1 Westerton Road Cults Aberdeen AB15 9NR
Clare Harris	4 Westerton Road Cults Aberdeen AB15 9NR
Ian Roche	7 Westerton Road Cults Aberdeen AB15 9NR
Dawne Adams	301 North Deeside Road Cults Aberdeen AB15 9PA
Richard Adams	301 North Deeside Road Cults Aberdeen AB15 9PA
Dave Thompson	8 Westerton Road Cults Aberdeen AB15 9NR
Anne Thompson	8 Westerton Road Cults Aberdeen AB15 9NR
David McKay	13 Westerton Road Cults Aberdeen AB15 9NR
Linda McKay	13 Westerton Road Cults Aberdeen AB15 9NR

Statutory objectors

Inchgarth Road Area

Objector	Address
Mr Malcolm S Webster	8 Loirsbank Road Cults Aberdeen AB15 9NE
Dr Alan Knox	16 Primrosehill Avenue Cults Aberdeen AB15 9NL
Dr Robert Ede	9 Inchgarth Road Cults Aberdeen AB15 9NJ
Mr Alan Grattidge	3 Loirsbank Road Cults Aberdeen AB15 9NE
Mr Kevin Flanagan	5 Primrosehill Avenue Cults Aberdeen AB15 9NL
Mr Andrew Wilson	6 Primrosebank Avenue Cults Aberdeen AB15 9PD
Mrs Helen Wilson	6 Primrosebank Avenue Cults Aberdeen AB15 9PD
Mr Erik Dalhuijsen	13 Inchgarth Road Cults Aberdeen AB15 9NJ
Mr Adrian Stewart	33 Deeview Road South Cults Aberdeen AB15 9NA
Mr C. Bruce Miller	11 South Avenue Cults Aberdeen AB15 9LQ
Quail45@hotmail.com	Primrosehill Avenue Cults Aberdeen
Mr James Noel	54 Leggart Terrace Aberdeen AB12 5UD

Objector	Address
Alison Jermieson	49 Deeview Road South Cults Aberdeen AB15 9NA

Proposed 20mph speed limits on Inchgarth Road, Westerton Road, Primrosebank Avenue, Primrosehill Avenue, Primrosehill Road, Den of Cults, Station Road, Ashfield Road, Deeview Road South, Park Brae, Park Road, Loirsbank Road, and West Cults Road, *with associated road humps on Inchgarth Road*

Proposed 20mph speed limit and road humps on Pitfodels Station Road.

Summary of objections received during the public consultation and thereafter a response from roads officials

Please note the comments below are not indicative of the number of objections received, and have been chosen as they highlight recurring themes throughout the correspondence received.

1. **"Traffic calming measures on Inchgarth Road and Pitfodels Station Road will cause a redistribution of traffic flow to Westerton Road. All three roads carry traffic between North Deeside Road and Inchgarth/Garthdee Road, and any measures to restrict traffic on both Inchgarth and Pitfodels Station Roads are very likely to result in more traffic using Westerton Road…"**

   "…the net effect will have will have a most adverse impact on safety and amenity for the residents of Westerton Road. I believe that the proposals will dramatically increase the volume, type and speed of traffic passing in both directions. In fact I would say this appears to be a deliberate plan to transfer traffic on to Westerton Road."

   "The measures as proposed will not make Westerton Road safer. Quite the opposite. Increasing the volume of traffic will make things considerably worse…"

   To set the background, Westerton Road, Pitfodels Station Road, and Inchgarth Road have traditionally been used as links between the North Deeside Road and Garthdee Road/Bridge of Dee. The drivers utilising these routes can generally be classed in two distinct categories; commuters who travel to/from the Bridge of Dee and beyond, and those who are visiting the various commercial premises on the route e.g. Asda, Sainsburys, B&Q, David Lloyd, Robert Gordon University Campus etc.

Commuters, of course, utilise these roads in peak times to avoid the congestion at the Great Western Road/Anderson Drive Junction. Also, is the direct nature of these routes, whilst the North Deeside Road and South Anderson Drive are more comfortable to negotiate, the perception of many local drivers is that these roads, even in off-peak periods, will offer a more convenient journey.

As a result, various residents in the vicinity of these roads have expressed concerns over some years, with regard to both the speed and volume of traffic on their road. Consequently, in the summer of 2003, traffic calming in the form of road humps was installed on Westerton Road.

Historic surveys, prior to the introduction of road humps on Westerton Road, indicate the 7am to 7pm 'normal working day' distribution of traffic on Westerton Road, Pitfodels Station Road, and Inchgarth Road (west of its junction with Westerton Road) to be 48%, 32% and 20% respectively. After the introduction of traffic calming on Westerton Road the balance shifted in favour of Pitfodels Station Road, with Westerton Road carrying 34%, Pitfodels Station Road 42%, and Inchgarth Road 24%.

Thereafter, in September 2004, traffic signals were installed at the narrow bridge over the Old Deeside Line, to manage vehicular movements. Of note, with regard to the traffic signals, is that whilst it has been suggested they act as a traffic calming measure, they have not deterred the majority of drivers from utilising Pitfodels Station Road. The aforementioned is based on traffic surveys in 2006 that indicated Pitfodels Station Road was now carrying 49% of the traffic, whilst Westerton Road and Inchgarth Road were carrying 30% and 21% respectively.

An explanation for the aforementioned, is that prior to the introduction of the traffic signals, there would have been a greater number of stop/start movements, with drivers approaching the bridge cautiously and negotiating who has right of way. In contrast, each green phase of the signals now lets an orderly queue over the bridge, and it can thereby be suggested that traffic flows have been improved. Whilst considering the traffic signals, it is worth noting observations, from residents on Pitfodels Station Road, that there may have been an increase in peak vehicular speeds on the road, with some drivers running at the green or amber light.

With regard to the current proposals, it is difficult to predict how drivers will react. Drivers will face crossing four traffic calming features on Pitfodels Station Road, similarly six features on Westerton Road, and six features on Inchgarth Road. Thus is could be the case the traffic distribution remains relatively consistent, or else becomes more balanced across the three routes.

On the basis of recent surveys traffic distribution appears to have remained consistent with the 2006 survey. With Westerton Road carrying 29%, Pitfodels Station Road 47%, and Inchgarth Road 24%. The overall

traffic volume was down approximately 2%, however such a decrease is likely to be down to the usual fluctuations in the road network.

Using the higher average traffic volume recorded in 2006, and assuming Inchgarth Road continues to carry approximately 20% of the traffic, a scenario where the remaining distribution becomes completely balanced between Westerton Road and Pitfodels Station Road, could result in an increase of approximately 83 vehicles per hour over the 7am to 7pm working day. The assumption that Inchgarth Road (west of its junction with Westerton Road) will continue to carry approximately 20% of the traffic is applied on the basis that many drivers prefer to access/egress the North Deeside Road further west thereby avoiding queues at the North Deeside Road / St Devenick's Place / Kirk Brae Junction.

Ultimately, as previously stated, it is difficult to predict how drivers will react. It could be that drivers would still consider Pitfodels Station Road as being the route of least resistance, with only four road humps, compared to the six on each of the alternative routes. Consequently, there may only me a small displacement of traffic back to Westerton Road. Or, as highlighted in the previous paragraph, traffic flow may become more balanced across these three routes. The scenario where Westerton Road reverts to being the favoured route is not envisaged.

It must be stressed that there is no deliberate plan to transfer traffic on to Westerton Road. Indeed, whilst Westerton Road is classed as a distributor road, it is recognised that the street has acquired such status by virtue of location, as opposed to being designed for such purpose. However, residents on both Pitfodels Station Road and Inchgarth Road have been stating, for some years now, the same concerns that Westerton Road residents expressed prior to the introduction of traffic calming.

When considering Pitfodels Station Road, the 85% tile speeds of vehicles are in the region of 29 to 34mph. The 85%tile speed is the speed at which 85% of the recorded vehicles were travelling at or below. Such speeds have to be considered in the context of the road layout, the road is very narrow, and there is only a small section of sub-standard footway on the west side north of the bridge. Thus, pedestrians are afforded little, or in fact, for the majority of the road, no segregation from moving vehicles. It is therefore preferable to bring vehicular speeds down to the lower 20mph region. Physical traffic calming measures are the most effective way of doing so, and as a result have a twofold impact with regard safety. They are preventative by giving drivers more time to react to an unexpected event thus enhancing the ability to avoid an accident, and in the scenario where an accident does occur they substantially reduce the severity of any personal injury to those individuals involved.

On Inchgarth Road, the 85%tile speeds have been assessed at two locations. Just west of the junction with Westerton Road the 85%tile speed in both directions is 36mph. Whilst further west, near the junction with Primrosehill Avenue, the 85%tile speed for westbound traffic was 40mph, and similarly eastbound traffic was 46mph. The latter survey

utilised a handheld radar gun and the peak recorded speeds were 44mph eastbound and 46mph westbound.

2. **"The proposed plan is based on a traffic survey undertaken three years ago. Any planned changes to the traffic systems must be based on data which reflects the current volume, type and speed of traffic using the routes being examined."**

   "For any data to be sound, it needs to have been gathered according to the standard methodology applicable to all scientific surveys. A Westerton survey were carried out over only a 1 week period would fail to meet this criterion, and therefore the Westerton residents would not be being treated equitably if a comparison of traffic over the 3 roads were carried out on that basis."

   As stated previously, recent surveys indicated the overall traffic distribution has remained relatively consistent with the 2006 surveys. The data collected from Westerton Road was based on a visual count over the working day hours of 7am to 7pm. The aforementioned visual count being instigated after it was discovered there were discrepancies in the data collected by an automated counter. Thus, at the time of writing, there is not a new spread of data covering the working week for Westerton Road.

   However, the 7am to 7pm visual count on Westerton Road is within the region of the 2006 count. The table below summarises and compares the data between the automated count in 2006 and the recent visual count. Overall the recent visual count is 5.4% lower than the automated 2006 count.

   Westerton Road - Summary of data collected on 7am to 7pm working days

	April 2006	**Nov/Dec 2009**
7am to 7pm (Average Hourly)	244	231
8am to 9am Peak	360	351
4pm to 6pm Peak (Average Hourly)	315	307
Total vehicles recorded from 7am to 7pm	2929	2771

   There have recently been operational issues with the automated counting equipment and further counts are planned. Thus, if possible, a summary of any new data will be conveyed at the January Committee. Nevertheless, the assumptions with regard to current traffic distribution are reasonably, and the possible scenarios with regard future distribution stand.

3. **"I am totally in favour of the 20mph speed limit on all the roads within the enclosed plan but totally opposed to speed humps in any of the roads in this area."**

   "While I wholly endorse the proposal to introduce a mandatory 20mph speed limit in the area designated, I must object to the planned introduction of road humps."

   Signs alone are being recommended for the wider area where the road layout and gradient of the existing roads already limit vehicular speeds. Thus, the mandatory 20mph will further highlight the need for caution when negotiating these roads. However, it must be emphasised signs alone will only have a minimal effect, perhaps reducing speeds by at most a few miles per hour. Consequently the only sure method to bring vehicular speeds down on the section of Inchgarth Road where high vehicular speeds have been recorded is to introduce physical traffic calming measures.

4. **"…there is no real evidence to show that speed bumps reduce accident rates, on the other hand, there are many reported cases of speed bumps causing accidents."**

   Reducing speeds in residential areas can reduce accidents significantly and make injuries much less severe, particularly so when considering vulnerable road users such as pedestrians, cyclists and motorcyclists.

   In 1996, the Transport Research Laboratory reviewed 20 mph zones in Great Britain (Webster and Mackie 1996). The uncontrolled study included seventy-two 20 mph schemes and used 5 years of before data and at least 1 year of after data (the average was 30 months). The researchers found that overall collision rates decreased 61%, pedestrian collision rates decreased 63%, child pedestrian collision rates decreased 70% and overall child casualty rates decreased 67%.

   The London Road Safety Unit commissioned the Transport Research Laboratory to undertake a research project investigating 20 mph zones in London (Webster and Layfield 2007). The study evaluated 78 zones in an uncontrolled before and after study design with 5 years of before data and at least 1 year of after data (average was 3 years). Though the study did not have a formal comparison group, the authors were able to adjust estimates of casualty reductions to account for background trends on unclassified roads and found substantial casualty reductions in London's 20 mph zones.

Reduction in casualty frequency in 20 mph zones (adjusted) - London Study 2002

User group	All Casualties	KSI (Killed or Seriously Injured)
All road users	45%	54%
Children	42%	45%
Pedestrians	36%	39%
Pedal cyclists	21%	30%
Powered 2 wheelers	58%	79%

With regard to impact speed and the severity of injury to pedestrians a study (Ashton and Mackay, 1979) calculated impact speed distributions from at-the-scene pedestrian accidents for car and car derivatives. They found that 5 percent of fatalities occurred at impact speeds below 20mph, 45 percent occurred at less than 30mph and 85 percent occurred at speeds below 40mph. About 40 percent of pedestrians who are struck at speeds below 20mph sustain non-minor injuries, however this rises to 90 percent at speeds up to 30mph. Age effects also mean that elderly pedestrians are more likely to sustain non-minor injuries than younger people in the same impact conditions.

The Royal Society for the Prevention of Accidents indicates that: -

- Hit at 40mph, 90 per cent of pedestrians will be killed;
- Hit at 35 mph, 50 per cent of pedestrians will be killed;
- Hit at 30mph, 20 per cent of pedestrians will be killed;
- Hit at 20mph, 3 per cent of pedestrians will be killed.

Of further interest is recent research published in the British Medical Journal titled 'Effect of 20mph traffic speed zones on road injuries in London, 1986-2006: controlled interrupted time series analysis". The paper found the introduction of 20mph zones was associated with a 41.9% reduction in road casualties, after adjustment for time trends. The percentage reduction was greatest in younger children and greater for the category of killed or seriously injured casualties than for minor injuries. The conclusion therefore was that 20mph zones are effective measures for reducing road injuries and deaths.

5. "The historical lack of accidents undermines any need for such aggressive measures as speed bumps." (Inchgarth Road)

"There does not seem to be a history of accidents on this road." (Inchgarth Road)

It is the case that there is no significant history of collisions on Inchgarth Road (west of Westerton Road) or Pitfodels Station Road. However, it is the potential consequences of a collision at the vehicular speeds recorded on these roads that is of concern. As indicated previously the severity of an injury is correlated with impact speed, and any collision at

speeds in the region of the 85%tile speeds recorded on these streets is likely to have severe consequences.

6. **"Enforcing the current speed limit would achieve the same result…"**

   "Given that the Police never patrol the roads in this locality and they never set up speed traps, it can be concluded that no-one has ever attempted to enforce the current 30mph speed limit…"

   Grampian Police will target their limited resources towards the distributor routes in Grampian Region with a significant history of both accidents and vehicular speeding; speeds at which, in the event of a collision, would cause major injuries/damage. Thus, on roads such as Inchgarth Road and Pitfodels Station Road the ideal method of speed control is the installation of physical traffic calming measures to self-enforce the mandatory 20mph speed limit.

7. **"I would propose that instead of these measures, the introduction of speed cameras to back up the mandatory speed limit would be more effective and less invasive to local residents."**

   There is strict guidance with regard the installation fixed 'safety' cameras, as set out in the 'Scottish Safety Camera Programme Handbook'. Thus, to install a fixed camera there must be a minimum number of collisions over the preceding three years within a 1000m stretch of road. Of these collisions there must be a minimum of 3 fatal or serious collisions. As such, Inchgarth Road would not meet the criteria for the installation of fixed cameras. Similarly, the road would also not meet the criteria for enforcement by the Mobile Unit of the North-East Safety Camera Partnership. In conclusion, safety cameras are generally utilised on distributor roads with a recorded history of both high vehicular speeds and collision rates.

8. **"This, I suggest, is an unnecessarily weighty approach to citizen control in response to a minimal issue (for which little real evidence of need has been demonstrated), perhaps more appropriately addressed by discarding the overall 20mph zone and the installation of a single radar speed warning sign as now found throughout many of the Shire's villages."**

   Aberdeen City Council is currently introducing Vehicle Activated Signs similar to those recently installed in Aberdeenshire. However the City Council will be taking a different approach from Aberdeenshire Council, as whilst there will be specific sites with a fixed column to accommodate the sign, the signs will in fact be portable and rotated periodically around the sites. This method is intended to address the familiarity issue where drivers initially pay due attention to the signs, but thereafter on becoming familiar with the sign, revert to their original behaviour. Thus, it is hoped by periodically rotating the signs, the signs may prove more effective, as well as highlighting the issue of speeding on a greater number of distributor roads.

Taking into account the above, speed activated signs are appropriate on distributor routes that carry significant volumes of traffic, and where physical traffic calming measures would be wholly inappropriate. In contrast, road humps are the ideal method of ensuring a mandatory 20mph speed limit is self-enforcing, on a road that should mainly be serving vehicles associated with local residents

9. **"It is widely suspected that speed bumps can cause damage to vehicles, even when negotiated at legal and 'sensible' speeds, and there have been links to broken suspension, failed wheel bearings and tyre wall failures (causing blow outs at higher speeds)…"**

   Vehicles travelling over road humps at appropriate speeds should not suffer damage, provided the humps conform to the Highways (Road Hump) Regulations. In a study (Kennedy et al., 2004e) various types of vehicle were driven over road humps, and despite repeated passes at speeds up to 40mph no damage to the vehicles was observed. It was also seen that that the forces generated when traversing road humps were comparable to those likely to be sometimes experienced during normal driving activities, such as driving over a very irregular surface or pothole, or mounting a kerb.

10. **"…there are a large number of sports cars with a ground clearance of less than 7.50 cm. From a personal point of view, my road car has a ground clearance of less than 7.5cm, I also have a classic car with a ground clearance of less than 7.5cm. Further to this, I tow one of my classic cars on a trailer on regular basis along Inchgarth Road which has the effect of making my car even lower."**

    United Kingdom legislation for vehicle construction does not require a minimum clearance to be provided between the underside of a vehicle and the carriageway surface. Vehicle manufacturers, including those adapting vehicles for particular purposes, e.g. for disabled people, are expected to take into account the need to negotiate a variety of features likely to be found on the highway, including road humps. However, it is appreciated that a few sports cars can have unladen ground clearances as little as 100 to 120mm (Webster, 1993b) and, when such cars are fully laden, ground clearances can be approximately 30mm lower.

    The likelihood of grounding can be minimised by suitable hump design and is one reason why a maximum height of 75mm is recommended for individual road humps that are not raised junctions. Similarly, the length and breadth of the speed cushions will affect the likelihood of low vehicles grounding on them. In this regard, it is the intention to modify the speed cushions to speed table road humps, albeit with drainage channels running either side of the features. These features will be 5m in length and allow an easier transition for vehicles with a low ground clearance. Thus, providing the driver of such a vehicle approaches the road hump at an appropriate speed, there should be no issues traversing the feature.

11. **"Inchgarth Road is the only viable road for fire engines, ambulances and other emergency vehicles heading for the various Primrosehill and Inchgarth Roads and Loirsbank Road. The introduction of road humps here will increase response times and could cause accidents."**

    The Transport Research Laboratory found that delays to emergency vehicles per traffic calming measure are relatively small (Boulter, Hickman et al. 2001). Of course, the journey of the emergency vehicle must be considered in detail, and in this regard the driver of such a vehicle will utilise distributor routes to arrive at the destination concerned, thus the number of traffic calming features to be negotiated will be very small. The overall effect on response times will therefore be negligible.

12. **"The total exhaust related emissions on this section of road would more than double…"**

    A study by Boulter et al. (2001) investigated the impact of various traffic calming measures, comparing the difference in emissions recorded from 15 types of passenger cars before and after the measures were introduced. The results showed that for the petrol non-catalyst, petrol catalyst and diesel cars tested, the mean emissions of carbon monoxide, hydrocarbons, and carbon dioxide increased by 20 per cent to 60 per cent. For oxides of nitrogen emissions, only the diesel cars showed a substantial increase, about 30 per cent. Emissions of total particulate matter from the diesel cars increased by 30 per cent.

    However, any increase in emissions must be considered in the context of the overall journey of a vehicle. In this regard, drivers will utilise distributor roads for the vast majority of their journey, and roads with traffic calming features will form a small part of the overall journey. Thus, the extra emissions produced will generally be negligible in the context of the overall journey.

    When also considering the increased emissions at a local level, the study by Boulter et al. (2001) found the pollution concentrations associated with various types of traffic calming schemes were well below the 2000 Air Quality Strategy standards.

13. **"…due to the continuous braking and acceleration of vehicles the noise loading would increase dramatically…"**

    When considering roads that generally accommodate light vehicles, the overall traffic noise level usually reduces. The aforementioned is based on studies made alongside road humps in Slough and speed control cushions in York (Abbott et al., 1995a and 1997). Certainly, on a road with a significant proportion of buses and commercial vehicles noise levels can rise, but the vast majority of vehicles utilising Inchgarth Road / Pitfodels Station Road are light vehicles.

However, vehicle noise emissions may also depend upon the way vehicles are driven. A passive style of driving, at a lower but constant speed, contributes to lower noise levels. Most drivers will adopt such a driving style. Whereas, an aggressive style, with excessive braking and acceleration between road humps, gives rise to a fluctuating noise level. So, whilst the overall traffic noise may decrease, there may be increased peak volumes due to the aforementioned aggressive style.

14. **"During winter months, Inchgarth Road west of Westerton Road has always has a low priority for gritting and snow ploughing. It is not unknown for eastbound vehicles to get stuck when negotiating the incline between Primrosebank Avenue and Westerton Road, and this situation will only worsen if speed bumps prevent drivers 'getting a run' at the incline and then maintaining their speed."**

    "Based on our experience, in winter when there is snow and ice it is extremely difficult, even at times impossible, to drive up the incline / hill from Primrosebank Drive to the junction of Westerton Road."

    Road humps have been installed on roads with similar gradients in the City and there have been no issues raised with regard vehicles traversing the features in snow/ice. The particular road hump of concern will not prevent a 'run up' on the approach. Presumably most drivers are already exercising caution when negotiating the gradient in snow/ice and are thereby driving at speeds below 20mph. The approach speed to the feature would therefore be unaffected.

    As previously stated, it is intended to modify the design from speed cushions to speed table road humps, and therefore provide an easier transition. Also, to take into account the gradient, the road hump, east of Primrosebank Drive, will be reduced in height to 50mm.

15. **"Part of the problem with speeding on Inchgarth Road when heading west is that as you leave Garthdee the limit changes from 30mph to 40mph and back to 30mph just before Westerton Road. There is however no 40mph sign on the left hand side of the road here while the one on the right is almost concealed in foliage…I can understand why motorists miss it. This does not excuse them from speeding down the hill towards the Shakin Brig but some may genuinely believe they are still in a 40mph zone."**

    The issue of the small section of Inchgarth Road with a 40mph speed limit was considered prior to the recent consultation, and consequently an extension of the 30mph speed from Garthdee is being promoted. If approved, the speed limit will remain a consistent 30mph from Garthdee to Cults, and will abut the proposed 20mph mandatory speed limit just east of the Westerton Road junction.

16. **"Please will you tell me why money can be spent on speed bumps, traffic islands, 20mph zones, at a time when the roads in Aberdeen are cratered with potholes."**

    "If safety is a priority then I believe it is far better to spend any money available on the maintenance of the road as it is."

    There is no doubt that a dedicated yearly budget allocated specifically for road safety proposals has been crucial in lowering the number of collision related injuries throughout the City over many years. A measure of success is that the number of road collision casualties within Aberdeen City has fallen by approximately two-thirds since the late eighties. Collisions are reduced through engineering, education and enforcement. In this regard, when you consider the unnecessary hurt and loss road accidents cause to victims and their families, a dedicated budget is a valuable resource. Of course, road maintenance is also crucial, and the maintenance budget is prioritised on the road network city-wide.

17. **"Maybe a concern for you is where this displaced traffic is now going to manifest itself, does all traffic from the North Deeside Road wanting to access the south of the city now choose to use Leggart Terrace which you must agree is over capacity now."**

    With regard to the displacement of traffic, should the proposals for Pitfodels Station Road and Inchgarth Road be implemented, it would be expected most vehicles would be displaced to South Anderson Drive. However, the displacement of vehicles to South Anderson Drive or Leggart Terrace would not be expected to be significant. Most drivers when faced with the peak time congestion at the aforementioned junctions will still choose to travel a route where traffic is moving freely, particularly so where traffic calming features are limited. Thus, whilst the proposals for Pitfodels Station Road and Inchgarth Road will effectively reduce vehicular speeds, any displacement to the wider network will be limited.

18. **"Pifodels Station Road doesn't have a pavement and is populated on occasions by students, does not have residential properties facing on to the road on both sides, and it seems to me that your decision to spend hard earned council tax on this project really needs to be revisited."**

    Certainly, whilst pedestrian flows will be low on Pitfodels Station Road, it does not negate the issue that pedestrians are in the vicinity of moving vehicles without the segregation provided by a dedicated footway. The aforementioned when considered in the context of the volume and speed of traffic, and thereafter the narrow width of the road, justify the physical measures needed to reduce vehicular speeds.

References

Abbott P G, Phillips S M and Layfield R E (1995a). Vehicle and traffic noise surveys alongside speed control cushions in York. TRL Project Report PR 103. Transport Research Laboratory, Crowthorne.

Abbott P, Taylor M and Layfield R (1997). The effect of traffic calming measures on vehicle and traffic noise. Traffic Engineering and Control, 38(9) 447-453.

Ashton S.J. and Mackay G.M. (1979) Some characteristics of the population who suffer trauma as pedestrians when hit by cars and some resulting implications. 4th IRCOBI International Conference, Göthenborg.

Boulter P G.,Hickman AJ, Latham S, Layfield R, Davison P, Whiteman P. (2001) The impacts of traffic calming measures on vehicle exhaust emissions. TRL Report 482.

Grundy C, Steinbach R, Edwards P, Green J, Armstrong B, Wilkinson P (2009) Effect of 20mph traffic speed zones on road injuries in London, 1986-2006: controlled interrupted time series analysis. BMJ 2009;339:b4469

Kennedy J V, Oakley C, Sumon S, Parry I (TRL) and Wilkinson E, Brown (Millbrook) (2004e) Impact of road humps on vehicles and their occupants. TRL Report 614. Transport Research Laboratory, Crowthorne.

Webster, D. and R. Layfield (2007). Review of 20 mph zones in London Boroughs, TRL. PPR243.

Webster D C (1993b)The grounding of vehicles on road humps. Traffic Engineering and Control, July/August 1993.

Webster D C and Mackie A M (1996). *Review of traffic calming schemes in 20 mph zones.* TRL Report 215. Transport Research Laboratory, Crowthorne.

Suggestions put forward by residents on Westerton Road to mitigate possible change in traffic distribution

1. **"Absolutely reject 'double yellow' lines."**

   Concerns were originally raised regarding vehicles being parked in close proximity to the bridge and thereby forcing southbound drivers on to the northbound side of the road to pass. The issue being a lack of forward visibility leaves a driver blind to the presence of an oncoming northbound vehicle. However, given the near vicinity of traffic calming measures, it is proposed 'double yellow' lines are withdrawn. Given the low speeds, and the fact that there has been no collisions in the close proximity of the bridge, the problem is perhaps more perceived than being a real issue. In essence the slow vehicular speeds allow drivers time to react and if necessary give way.

2. **"Accept legally enforceable 20mph zone."**

   The proposed mandatory 20mph zone applies to Westerton Road and thus technically, if the proposal is implemented, Grampian Police could enforce the speed limit.

3. **"Improve existing humps. Average 85%tile speeds have increased in both directions since 2006 (Up 2mph northbound and up 3mph southbound). This is to be expected given the poor condition of the speed bumps."**

   The condition of the existing road humps will come under the remit of the Maintenance Team. So, whilst the Road Safety Team will seek to have the road humps repaired as a priority, it will ultimately depend on the level of urgency when compared against other priorities on the road network.

4. **"Put in additional humps at: nos 1-3, brow of railway bridge, no 9, halfway between bottom 2 humps."**

   Currently there are six traffic calming road humps on Westerton Road, including the two associated with the Give Way/Priority system on the lower section. These features are spaced apart at intervals of between approximately 30 to 70m. The 85%tile speed of vehicles on the section north of the bridge are 19mph northbound and 23mph southbound. On the section south of the bridge, based on the 2006 survey, the average 7am to 7pm 85%tile speeds were 25mph southbound, and 24mph northbound.

   Given, the aforementioned, there are no proposals to add additional features. Road humps within traffic calming schemes in the City are generally installed with spacing in the region of 60 to 80m, in accordance with Department for Transport Guidance. The traffic calming has effectively brought the mean speeds on Westerton Road down to 21mph and below.

5. **"Remove Garthdee and Braemar signs."**

   The 'Garthdee' sign on the North Deeside Road directing traffic down Westerton Road will be removed. It is recommended the 'Braemar' sign at the Westerton Road/Inchgarth Road junction remains, as any drivers unfamiliar with the area will be directed toward the North Deeside Road before entering Deeview Road South.

6. **"Additional and clearer weight limit signs, especially at the North Deeside Road end, and by Auchinyell Road."**

   Additional weight limit 'ahead' signs will be implemented on the North Deeside Road. In tandem, there will also be a review of current signs, and where warranted improvements implemented.

7. **"Width restriction (e.g. bollard with key), possibly by Auchinyell Road."**

   Of course, the area is already covered by a weight limit restriction, albeit with an 'except for access' relaxation. The relaxation is essential when you consider the vehicles that will service the properties in the area i.e. delivery vehicles, removal vans, refuse vehicles etc. A system with a bollard entry would be unworkable, and would simply lead to frustration and many complaints.

8. **"Inform Satnav companies of weight limit."**

   A satellite navigation system does not exonerate drivers from disobeying regulatory signs. In this regard, the weight limit is clearly indicated at Garthdee Road, Pitfodels Station Road, and Westerton Road. As such, it is hoped the additional 'weight limit' signs will have a positive effect. In an effort to improve the situation the Road Safety & Traffic Management Team will also engage further with companies providing mapping information.

9. "**Extend the traffic calming road humps along Inchgarth Road, to its junction with Garthdee Road. This would serve to reduce speed right along this road without incurring significant redistribution of vehicular flow."**

   Such a proposal would require the installation of a significant number of road humps, and would be likely to attract a significant number of objections from the community. The emergency services, would also have concerns, as whilst they would mainly utilise the North Deeside Road, they may use Inchgarth/Garthdee Road and road humps over such a distance could lead to delays.