

ABERDEEN CITY COUNCIL

COMMITTEE: Enterprise Planning and Infrastructure DATE: 1 September 2009

CORPORATE DIRECTOR : Interim Director of Corporate Governance

TITLE OF REPORT : The Aberdeen City Council (Streets in the Vicinity of
Cults Academy) (Traffic Management) Order 2009
(with associated speed cushions to be established
under the Roads (Scotland) Act 1984)

1. PURPOSE OF REPORT

This report deals with objections received as a result of the statutory advertisement of a traffic order providing for various restrictions in the vicinity of Cults Academy. The public notice is attached, from which members will be able to see the exact content of the order.

2. RECOMMENDATION(S)

That the objections be overruled in the light of the observations presented in Section 6 below, and that The Aberdeen City Council (Streets in the Vicinity of Cults Academy) (Traffic Management) Order 2009 (with associated speed cushions) be introduced as originally envisaged.

3. FINANCIAL IMPLICATIONS

All the road safety measures in the vicinity of this school are being funded under the 3Rs budget.

4. SERVICE & COMMUNITY IMPACT

These are standard traffic management measures to protect safety in the vicinity of a school.

5. OTHER IMPLICATIONS

None.

6. REPORT

The statutory objections are attached as an appendix hereto, along with commentary in the authorship of my roads colleagues.

The speeds here are, in a sense, not too bad, but they are clearly higher than the 20mph the Council is committed to establishing. Central government guidance has always been clear: regulatory signs alone will not change driving behaviour, and a speed limit aimed at reducing speeds to 20mph where at present they are closer to 30mph is a speed limit that needs some sort of help, which is where the speed cushions come in.

In association with this, members will of course be familiar with the publicity campaign a few years ago that drew attention to the statistical but nonetheless compelling fact that a child hit by a car at 40mph is likely to be killed, a child hit at 30mph is likely to be injured, quite possibly seriously, but that a child hit at 20mph will have a good chance of avoiding bad injuries or worse.

All in all, although there is merit in being able to defend a public policy in terms of the concrete conviction of the public that it is sensible, scepticism about speed cushions and speed tables has been expressed in many ways over the years, and the members have usually been struck by the prospect of *actually* getting speeds down to around 20 in streets surrounding schools. Nevertheless, it is also true that, from time to time, speed cushions *have* been abandoned at locations where there was considerable resistance.

On such occasions, the outcome was that regulatory speed limits went in without the necessary back-up from traffic calming, which would technically have been a departure from central government guidelines. Guidelines are only guidelines, not law, and departing from them was never any kind of problem in the past, but the former Environment and Infrastructure Committee was well aware that there would be concerns if (for example) cushions were appearing on roads where traffic was travelling at 25mph but were being abandoned in respect of roads where traffic was travelling at 40mph. In other words, these things are not simply a matter of opinion, and the means by which public policy is to be judged or challenged is still going to be founded upon objective accountability.

7. AUTHORISED SIGNATURE

Interim Director of Corporate Governance

8. REPORT AUTHOR DETAILS

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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

THE ABERDEEN CITY COUNCIL (STREETS IN THE VICINITY OF CULTS
ACADEMY)
(TRAFFIC MANAGEMENT) ORDER 2009
(with associated speed cushions to be established under the Roads (Scotland)
Act 1984)

Aberdeen City Council proposes to make the above-named order in terms of its powers under the Road Traffic Regulation Act 1984 **and also to establish associated speed cushions.**

The order would establish prohibitions of waiting at any time on *certain lengths* of Cairnlee Avenue East, Hillview Crescent, Hillview Terrace, Quarry Road, and on the entire length of the bus turning area within the school's internal roads, and provide for regulatory 20mph speed limits on Cairnlee Crescent South, Cairnlee Crescent North, Cairnlee Road East, Craig Gardens, Hillview Terrace, Quarry Court, and also *certain lengths* of Cairnlee Avenue East, Earlswells Road, Hillview Crescent, Hillview Drive, Netherby Road and Quarry Road.

In association with this, speed cushions are intended on Cairnlee Avenue East, Craig Gardens, Earlswells Road, Hillview Crescent, Hillview Drive, Hillview Terrace, Netherby Road and Quarry Road, along with regulatory school keep clear markings (Monday-Friday 8.00am-5.00pm) on certain lengths of Hillview Crescent, Hillview Drive and Quarry Road.

Each speed cushion will be established under the Roads (Scotland) Act 1984 and 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 10mm transversely and plus or minus 15mm longitudinally. The exact positioning of each cushion can be clarified by telephoning 01224 522641 or by calling at St. Nicholas House (for details of this see below). All residents in the lengths of road where speed cushions are to be established have received the exact specifications by letterbox drop.

Also, "at any time" waiting restrictions and regulatory "school keep clear" markings on Hillview Drive and Hillview Crescent are being *revoked* by the traffic order.

Full descriptions of the lengths of road involved cannot be fitted onto a statutory advertisement of this kind, and so members of the public interested in knowing the detailed provisions are invited to call the above number in the Council's Traffic Operations Team at St. Nicholas House.

Full details of the proposals including the draft of the order, 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 13 July and 17 August 2009, inclusively, in the offices of the Traffic Operations Team on the second floor of St. Nicholas House, Broad Street, Aberdeen.

It is recommended that anyone visiting St. Nicholas House to view the documents should make an appointment to do so, in order that a member of staff can be present to offer an explanation if necessary. The telephone number is again 522641.

Anyone wishing to object to the proposed order, or to the establishment of the associated speed cushions, should send details of the grounds for objection in writing to the undersigned during the statutory objection period which also runs from 13 July until 17 August 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
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Aberdeen City Council
Town House
Aberdeen

Cults Academy
Response to Statutory Consultation Objections and Comments Received

- 1. Speed is not an issue within the area surrounding Cults Academy. Furthermore we have lived or worked in the area for many years and as far as we are concerned, there have been no incidents that would merit the introduction of traffic calming. Why is there a need to implement such measures now when the school has existed without them for so many years?**

There have been proposals for a number of years to introduce traffic calming measures around Cults Academy. In 2004, traffic surveys were conducted on various streets surrounding the Academy. The surveys showed that on some of the streets the 85th percentile speed of the vehicles was 30mph with an advisory 20mph limit. The Scottish Government believes that streets surrounding schools should be subject to a 20mph restriction. Department for Transport (DfT) guidelines indicated that traffic calming measures would be required to reduce the observed speeds to 20mph.

Presently there is an advisory zone around the school. Statistics show that advisory 20mph zones reduce the 85th percentile speed by up to 2mph. Research conducted by the DfT suggests that traffic calming measures can reduce the 85th percentile speed by up to 8mph while Aberdeen City Council's own analyses have shown a reduction of 9mph.

Reductions in vehicle speed, whilst modest, can have a significant effect on road safety. If a child is hit at 40mph there is an 80% chance they will die, if hit at 30mph, there's an 80% chance they will live. At 20mph, the odds of survival further increase and the extent of injury decreases. Furthermore a reduction in speed increases driver reaction time to unexpected situations allowing reduction of severity in any subsequent collision. As a general rule, the Transport Research Laboratory (TRL) states that a 1mph reduction in speed delivers a 5% reduction on the average number of accidents.

The proposals were postponed in view of the uncertainty of the new location of Cults Academy however these were reinstated this year and the scheme was publicly advertised at the start of July.

- 2. The main traffic issue at Cults Academy is congestion, not the speed of vehicles. The cushions will not solve the issue of congestion and they are likely to compound the problem. Parents driving their children to school will be displaced on to surrounding roads that do not contain traffic calming.**

It was never intended that the traffic calming measures would be implemented to solve congestion issues.

The design of the new school incorporates increased parking capacity, a larger drop off area for school buses and a large drop off and pickup point for parents and pupils. It is anticipated that these measures will decrease the number of vehicles that stop on the neighbouring streets and will alleviate the congestion problem. Residents have identified that congestion caused by parked vehicles is forcing drivers to maintain a lower speed. If these provisions within the school grounds alleviate the existing congestion, it is likely that the present vehicle speeds will rise.

The traffic calming measures will be unlikely to cause congestion. In studies conducted by the DfT, it has been demonstrated that in some instances, traffic calming can reduce traffic flows. If vehicles adhere to 20mph, the situation with respect to congestion would be no different with traffic calming than if drivers adhered to the speed limit without the need for calming.

- 3. We are concerned that the cushions will not be constructed to standard. Cushions have thought to be the cause of vehicle damage in the form of increased wear to suspension systems. Additionally experience suggests that cushions leads to increased deterioration of the carriageway around the cushion set and also cause ponding during period of rainfall. We are concerned that vehicles with low suspension (about 4 inch clearance) will not be able to negotiate the cushions without sustaining damage to their underbody.**

The proposed cushions will be constructed to stringent specifications, which will be monitored by the Council's engineering teams.

Vehicles travelling over speed cushions at appropriate speeds should not sustain damage. Studies have been conducted which have found the cushions do not inflict damage to vehicle suspension systems (*Kennedy et al. 2004*) despite repeat passing at 40mph.

During periods of rainfall, water will flow past the cushions. In some circumstances the pavement around the cushion can deteriorate due ageing carriageways where new cushions have been installed but not as direct result of the cushion itself.

- 4. The cushions will result in increased air pollution from the accelerating / braking action of vehicles. The measures will also contribute towards noise pollution.**

Low speed driving that includes frequent braking / accelerating action has been shown to increase vehicle emissions. Smooth, low speed driving in as high a gear as possible will however result in relatively low emissions. Although some traffic calming measures could result in increased emissions, they have also proved to reduce the volume of traffic, thereby offsetting the effect. Furthermore the improvement in performance of emission control

technology over time means that in future, traffic calming will have even less impact on the comparable emissions generated.

The DfT have conducted research in to the noise impact of traffic calming schemes. The study showed that with a traffic composition consisting of 98% cars, 1% buses and 1% commercial vehicles, a noise level increase of 0.5 decibels was observed. Any increase in noise pollution should therefore be minor.

5. The consultation was flawed, the drawings issued to residents did not show the internal plans of the school grounds. The method in which residents were informed was inadequate and insufficient time was permitted to respond with objections to the scheme.

The drawings issued to residents with a letter detailing the scheme at the start of July did not show the internal plans. The plans were issued to consult on the proposals for traffic calming, speed and parking restrictions. The internal layout of the school grounds was not the subject of consultation.

Residents were informed of the proposals in line with Aberdeen City Council's statutory procedures. This included informing residents of the proposals for cushions via a letter on the affected streets. In addition to this, street notices were posted on lamp posts in the affected areas and refreshed on a weekly basis. The public advert on the notices was published in the press at the start of the consultation period, which run from 7th July to 17th August.

6. The design of the traffic calming will affect the response time of ambulances. Cushions have also been known to cause accidents and the combination of waiting restrictions, signage and traffic calming measures can confuse drivers and lead to accidents.

Cushions are favoured over tables in traffic calming terms as they allow emergency vehicles fast access to streets. The Scottish Ambulance Service has been fully consulted on the proposals. A further advantage of cushions over tables is that no additional drainage need be provided, as tables must have additional drainage installed which in some cases is very difficult to implement.

It is proposed that there will be signs at the zone boundaries to indicate the extent of the 20mph restrictions. There will be further time plates to denote the operational hours of the "School Keep Clear" restrictions. These signs and markings are designed in accordance with the Traffic Signs, Regulations and General Directions (TSRGD)(2002) and they would not be confusing or distracting to motorists. The DfT have proven that introduction of such features has a positive impact on the reduction of accident statistics and

there is no evidence to suggest that such measures are the cause of accidents.

7. The Council should focus on travel plans, promote bus usage, walking and cycling to school to minimise congestion instead of introducing traffic calming.

The developer of the 3Rs project is developing a green travel plan for staff and pupils, which will be distributed to the schools for implementation, similar to that being rolled out to all schools in the city. The design of the school includes cycle stands to encourage cycling and improved bus facilities for pupils. The traffic calming remains necessary to ensure road safety for those pupils who choose to walk or cycle to school.

8. The approach to the traffic management around Cults Academy seems to be more extreme than that of Airyhall Primary or Bucksburn Academy. Could flashing part time 20mph signs not be implemented as they have at the other schools?

Each school must be examined on a case by case basis. The measures that are implemented at one school, would not necessarily be suitable at another. There are guidelines for implementing measures on different classes of road for example, which specify that part time 20mph restrictions should only be introduced over a relatively short stretch on distributor roads. Both Bucksburn Academy and Airyhall primary have these within their vicinity (Kepplehills Road and Countesswells Road) Furthermore distributor roads should not have speed cushions implemented so that fast access is maintained for emergency service vehicles and comfort levels are maintained for bus passengers.

9. There are other traffic calming measures that could be more effective than the proposed options.

Residents have suggested the implementation of traffic islands and chicanes. Traffic islands assist pedestrians in crossing roads which have high traffic volumes but have a relatively minor effect on vehicle speeds. The carriageway around the school is not a suitable width for such an island. Chicanes have been considered but are not the most effective measures. Chicanes have to be wide enough to accommodate large vehicles and have relatively minor effects on the speeds of smaller vehicles. They also require the removal of substantial lengths of parking.

10. Pedestrian Crossings would be more effective in increasing road safety than traffic calming.

Pedestrian crossings should only be used on distributor roads and are inappropriate for residential schemes. Pedestrian crossings are subject to PV2 survey, which calculates a factor based on the number of pedestrians crossing at a local point along the road multiplied by the volume of vehicles squared. Based on the volumes, of pupils and vehicles, the factor would not be close to the value required for a pedestrian crossing. It is unlikely that pupils would wait to cross the road at only one or two local points within the area.

11. Why are there so many cushions? Why have they been provided at 80 – 120 metre spacing when the DfT notes that they can be provided at 140m spacing.

The numbers of cushions are determined by the cushion spacing and zone extents. It is not viable to start the extent of the cushions at some measured point along a road so the extents should be selected by the locations of junctions to neighbouring streets. The spacing of the cushion determines the reduction of the speed. A resident queried Local Transport Note 1/07 published by the DfT which notes in a table 4.3 that cushions may be positioned at 140 metre spacing. The table lists average speed reductions but for road safety designs, it is the 85th percentile speed which is considered (approximately 4 – 5 mph above the average speed). To achieve a balance between acceptable speed and the number of cushions proposed, 80 – 120 metres was selected for cushion spacing to effectively reduce the present speeds to 20mph.

References

Department for Transport (March 2007), *Local Transport Note 1/07 – Traffic Calming*.

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