

ABERDEEN CITY COUNCIL

COMMITTEE: Enterprise, Planning and Infrastructure DATE: 26 November 2009

CORPORATE DIRECTOR : Director of Corporate Governance

TITLE OF REPORT : Victoria Street, Dyce – Proposed Zebra Crossing
with associated prohibition of waiting at any time

REPORT NO : CG/11/136

1. PURPOSE OF REPORT

At its meeting on 27 October, the Committee approved The Aberdeen City Council (Various Roads in North Aberdeen) (Traffic Management) Order 2009 in all respects other than a set of waiting restrictions being promoted in association with an intended zebra crossing at Victoria Street in Dyce.

It was agreed on that occasion that those waiting restrictions – and indeed the intended crossing – be made the subject of a fresh traffic survey, and a report back. This survey has now been completed, and my roads colleagues have furnished me with the narrative in section 6 below.

2. RECOMMENDATION(S)

That the intended crossing be affirmed and the associated prohibitions of waiting (at any time) approved as originally envisaged, with the effect that the above-named traffic order would be implemented as advertised.

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.

5. OTHER IMPLICATIONS

None.

6. REPORT

VICTORIA STREET, DYCE – PROPOSED ZEBRA CROSSING **SURVEY DATA – 27 OCTOBER 2009**

Background

Following concerns raised relating to the necessity of the provision of a zebra crossing adjacent to the Tesco Express store on Victoria Street, Dyce a further PV² survey was undertaken on Tuesday 27th October 2009.

When considering possible sites for a pedestrian facility, Council officers utilise methods outlined by the Department for Transport. This method not only measures both traffic and pedestrian flow, but also other factors such as carriageway width, accident history, and local facilities such as schools, shops etc. Various numerical factors are obtained using this method and ultimately a final value combining these factors is used to ascertain whether or not there is justification for the installation of a facility.

A previous survey had been carried out on 26 August 2008 over the course of the three busiest periods of the day (i.e. AM Peak, PM Peak and lunchtime). The survey which was undertaken is referred to as a PV² survey. The number of vehicles passing (V) is squared and multiplied by number of pedestrians (P) crossing the carriageway at the point in question. The figures are calculated for an hourly period, and typically the figures from the two highest hourly periods during a single day are averaged to provide the final PV² figure. The result of this survey, once all factors had been considered indicated that a zebra crossing could be justified to aid pedestrians at the location in question and the scheme was included for implementation through the CWSS budget for financial year 2009/10. Associated with the scheme are the provision of additional waiting restrictions to facilitate a loading area for the Tesco store and also to provide clear visibility for traffic at the adjacent junctions with John Street and Glenhome Terrace.

During the final stage of the legal process to promote the waiting restrictions, concerns were raised over whether the crossing was in fact justified at this location and it was felt that the removal of kerbside parking was particularly onerous. Additionally it was highlighted to roads officers that the majority of pedestrians crossing the road at this point were originating from parked vehicles on the opposite side of the road from the store. The argument was that if these vehicles were no longer permitted to park in close proximity to the store, the pedestrian demand would be lower and therefore a crossing would not be justified. It should be noted that the DfT guidance makes no mention of pedestrians crossing from parked vehicles, it only refers to pedestrians crossing or attempting to cross from one side of the road to another and therefore those crossing from parked vehicles were, rightly in the opinion of Roads officers, included within the original survey.

PV² Survey – Tuesday 27th October 2009

Following discussions between Roads officers one of the local members for the area it was agreed that a further survey should be undertaken with the specific aim of assessing how many pedestrians were crossing to / from parked vehicles. The results of this survey are outlined in Table 1.

Time Period	Veh N'bnd*	Veh S'bnd*	Ped E'bnd*	Ped W'bnd*
0700-0715	130 (7)	94 (6)	9 (7)	11 (9)
0715-0730	94 (3)	116 (3)	14 (5)	10 (7)
0730-0745	134 (6)	142 (8)	15 (9)	9 (6)
0745-0800	132 (4)	131 (7)	12 (10)	15 (7)
TOTALS	490 (20)	483 (24)	50 (31)	45 (29)
0800-0815	141 (3)	135 (2)	6 (4)	11 (6)
0815-0830	151 (2)	132 (5)	8 (4)	13 (6)
0830-0845	115 (5)	136 (3)	5 (4)	3 (2)
0845-0900	121 (3)	122 (3)	4 (4)	8 (3)
TOTALS	528 (13)	525 (13)	23 (16)	35 (17)
1200-1215	120 (3)	141 (4)	9 (5)	7 (4)
1215-1230	111 (5)	136 (7)	9 (5)	12 (8)
1230-1245	126 (5)	117 (1)	5 (3)	8 (5)
1245-1300	115 (6)	94 (5)	11 (5)	6 (4)
TOTALS	472 (19)	488 (17)	34 (18)	33 (21)
1300-1315	118 (6)	135 (8)	11 (5)	11 (4)
1315-1330	114 (3)	112 (2)	12 (3)	20 (4)
1330-1345	117 (5)	100 (4)	17 (2)	5 (5)
1345-1400	93 (5)	119 (3)	12 (6)	9 (4)
TOTALS	442 (19)	466 (17)	52 (16)	45 (17)
1600-1615	133 (2)	171 (6)	15 (7)	10 (5)
1615-1630	101 (4)	147 (2)	6 (3)	4 (3)
1630-1645	127 (6)	122 (3)	5 (0)	1 (1)
1645-1700	114 (7)	111 (4)	8 (5)	7 (4)
TOTALS	475 (19)	551 (15)	34 (15)	22 (13)
1700-1715	115 (6)	136 (4)	7 (1)	2 (2)
1715-1730	95 (3)	116 (2)	5 (2)	6 (1)
1730-1745	101 (3)	142 (5)	9 (3)	8 (4)
1745-1800	90 (3)	122 (4)	9 (4)	7 (3)
TOTALS	401 (15)	516 (15)	30 (10)	23 (10)

Table 1 – Raw Data

*Figures in brackets in the vehicles column indicate the number of vehicles which parked at the store during the survey. Figures in brackets in the pedestrian columns indicate the number of pedestrians crossing to and from parked vehicles.

Resulting from this raw data, PV² figures for hourly periods throughout the day can be calculated using both the total number of pedestrians and also discounting those pedestrians crossing to and from parked vehicles. The resultant data is displayed in the table below:

Time Period	PV ² Counting All Peds	PV ² Discounting Peds From Parked Vehicles
0700-0800	0.899x10 ⁻⁸	0.331x10 ⁻⁸
0715-0815	0.967x10 ⁻⁸	0.452x10 ⁻⁸
0730-0830	1.073x10 ⁻⁸	0.506x10 ⁻⁸
0745-0845	0.840x10 ⁻⁸	0.403x10 ⁻⁸
0800-0900	0.643x10 ⁻⁸	0.377x10 ⁻⁸
1200-1300	0.617x10 ⁻⁸	0.258x10 ⁻⁸
1215-1315	0.662x10 ⁻⁸	0.308x10 ⁻⁸
1230-1330	0.728x10 ⁻⁸	0.442x10 ⁻⁸
1245-1345	0.762x10 ⁻⁸	0.500x10 ⁻⁸
1300-1400	0.800x10 ⁻⁸	0.528x10 ⁻⁸
1600-1700	0.589x10 ⁻⁸	0.295x10 ⁻⁸
1615-1715	0.379x10 ⁻⁸	0.199x10 ⁻⁸
1630-1730	0.359x10 ⁻⁸	0.219x10 ⁻⁸
1645-1745	0.450x10 ⁻⁸	0.259x10 ⁻⁸
1700-1800	0.446x10 ⁻⁸	0.277x10 ⁻⁸

Table 2 – Hourly PV² Figures

Using the DfT guidance, the average of the two highest hours are calculated to give the resultant unfactored PV² value. These are the values highlighted in yellow in the table above and result in figures of 0.934x10⁻⁸ when counting all pedestrians and 0.517x10⁻⁸ when discounting pedestrians crossing to and from parked vehicles.

The additional factor to be taken into consideration when using the DfT guidance is the road width. Victoria Street is 9.3 metres in width at the location of the proposed crossing. The guidance document states that if the road is greater than 7.3 metres in width, the PV² figure should be multiplied by a factor of 7.3 divided by the width of the road. In this case the factor used should be 9.3 divided by 7.3 which results in a factor of 1.27.

For reference, at sites where a PV² figure of 0.700x10⁻⁸ or more is recorded, there is justification for the provision of a pedestrian refuge or a zebra crossing.

The final PV² figures when taking this factor into consideration are therefore 1.186x10⁻⁸ when counting all pedestrians and 0.657x10⁻⁸ where the pedestrians crossing to and from parked cars are discounted.

Aberdeen City Council has adopted an approach which uses the four highest hourly figures during the survey period. Using this criteria, the unfactored PV² figures where all pedestrian are counted and where those crossing to and from parked vehicles are 0.740x10⁻⁸ and 0.397x10⁻⁸ respectively.

Applying the road width factor these figures increase to 0.940x10⁻⁸ and 0.504x10⁻⁸.

Further Additional Survey Tuesday 3rd November 2009

Due to the fact that the 27th October survey was undertaken during a day of heavy rain, a further survey was undertaken on the morning of the 3rd November. The weather on this date was drier with rainfall between 0725hrs and 0815hrs.

The results of this additional survey are outlined in Tables 3 and 4 below:

Time Period	Veh N'bnd*	Veh S'bnd*	Ped E'bnd*	Ped W'bnd*
0700-0715	101 (5)	97 (7)	11 (7)	15 (9)
0715-0730	115 (6)	109 (6)	13 (9)	12 (7)
0730-0745	141 (8)	127 (7)	16 (8)	15 (8)
0745-0800	128 (3)	120 (2)	7 (4)	8 (3)
TOTALS	485 (22)	453 (22)	47 (28)	50 (27)
0800-0815	121 (2)	122 (2)	18 (10)	13 (8)
0815-0830	127 (3)	77 (3)	9 (5)	10 (5)
0830-0845	114 (5)	127 (1)	13 (2)	6 (2)
0845-0900	166 (2)	116 (8)	10 (5)	14 (7)
TOTALS	528 (12)	442 (14)	50 (22)	43 (22)

Table 3 – Raw Data

*Figures in brackets in the vehicles column indicate the number of vehicles which parked at the store during the survey. Figures in brackets in the pedestrian columns indicate the number of pedestrians crossing to and from parked vehicles.

Resulting from this raw data, PV² figures for hourly periods throughout the day can be calculated using both the total number of pedestrians and also discounting those pedestrians crossing to and from parked vehicles. The resultant data is displayed in the table below:

Time Period	PV ² Counting All Peds	PV ² Discounting Peds From Parked Vehicles
0700-0800	0.853x10 ⁻⁸	0.370x10 ⁻⁸
0715-0815	0.986x10 ⁻⁸	0.435x10 ⁻⁸
0730-0830	0.890x10 ⁻⁸	0.417x10 ⁻⁸
0745-0845	0.736x10 ⁻⁸	0.394x10 ⁻⁸
0800-0900	0.704x10 ⁻⁸	0.461x10 ⁻⁸

Table 4 – Hourly PV² Figures

Again, the additional factor to be taken into consideration when using the DfT guidance is the road width. Victoria Street is 9.3 metres in width at the location of the proposed crossing. The guidance document states that if the road is greater than 7.3 metres in width, the PV² figure should be multiplied by a factor of 7.3 divided by the width of the road. In this case the factor used should be 9.3 divided by 7.3 which results in a factor of 1.27.

This results in a PV² figure for the busiest hourly period of 1.252x10⁻⁸ when all pedestrians are counted and 0.585x10⁻⁸ where pedestrians crossing to and from parked vehicles are discounted.

Recommendations

On the basis that the DfT guidance does not give any indication that pedestrians crossing to and from parked vehicles should be discounted from survey results, and the fact that using both the DfT guidance and Aberdeen City Council's criteria for the provision of pedestrian road crossings this site would qualify for the provision of a pedestrian crossing facility, the installation of a zebra crossing on Victoria Street, Dyce in the vicinity of the Tesco Express store should go ahead as originally envisaged. Vehicles currently parking on Victoria Street associated with the Tesco store will simply be displaced further to the north with their occupants able to use the crossing to access the front door of the Tesco store. A number of

pedestrians were observed parking to the north of the proposed crossing location and walking down the eastern footway to cross at the door of the store. As a result of a crossing being provided, the delay experienced by pedestrians attempting to cross the road will be vastly reduced as pedestrians will be given priority over vehicular traffic. It is expected that pedestrians crossing to and from parked cars will find using the crossing a more attractive proposition than waiting for an adequate gap in the traffic which, during the survey, in some instances could last up to 45 seconds.

Survey Notes

The survey was carried out during a day of heavy rain which may have resulted in a larger than usual volume of pedestrians originating from vehicles rather than walking in the adverse weather conditions.

It should be noted that between 1710hrs and 1730hrs the southbound traffic stream was queued through the area of the survey. This queue began at the roundabout junction of the A947 and Riverview Drive (Marriott Hotel) and stretched back beyond the junction of Victoria Street and Glen Road. Due to parked vehicles on both sides of the road in the vicinity of the proposed crossing, the northbound traffic flow was also stopped when a bus or larger vehicle tried to pass through. These larger vehicles had to wait for a gap in the southbound queue in order to proceed.

Over the course of the lunchtime survey period there were 11 secondary school aged children crossed to and from the Tesco store.

Over the entire survey period, three elderly pedestrians crossed and three mothers with pushchairs crossed.

Six HGVs passed through the survey location in a southbound direction. These vehicles are prohibited from travelling along Victoria Street. Two of these vehicles were brewery delivery vehicles and may have been legitimately delivering supplies to the two pub/hotel premises sited within the restricted length of Victoria Street.

A number of pedestrians originating from parked vehicles on the west side of Victoria Street walked down to the existing build-out at Glenhome Terrace in order to cross the carriageway directly adjacent to the Tesco store front door. Additionally, there were a number of pedestrians whom had to wait for a long period of time next to their vehicle before a suitable gap in the traffic appeared to allow them to cross safely. The provision of a crossing would remove the need to wait as pedestrians would be given priority.

6. AUTHORISED SIGNATURE

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7. REPORT AUTHOR DETAILS

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8. BACKGROUND PAPERS

No background papers were used as a point of departure for writing this report.