

Transport and Environment Committee

10:00am, Tuesday, 13 January 2015

Updated Pedestrian Crossing Prioritisation 2014/15

Item number	7.4
Report number	
Executive/routine	
Wards	All

Executive summary

This report provides an updated pedestrian crossing priority list and reports back on the consultation on locations approved in 3 June 2014 report. It also responds to a request made through the Transport and Environment Committee on 23 November 2012 'to include in a future report a review of the prioritisation of existing traffic lights without a pedestrian crossing sequence and associated funding implications'.

Links

Coalition pledges	
Council outcomes	CO21
Single Outcome Agreement	SO4

Updated Pedestrian Crossing Prioritisation 2014/15

Recommendations

- 1.1 It is recommended that the Committee:
 - 1.1.1 approves the updated pedestrian crossing priority list for 2014/15 as per Appendix 1;
 - 1.1.2 notes the locations that did not meet the priority list criteria in Appendix 2;
 - 1.1.3 approves the updated construction list and notes the results of the public consultations setting aside any representations to allow construction to progress (Appendix 3);
 - 1.1.4 notes the outcome of a review of the prioritisation of existing traffic signals without pedestrian crossing facilities and associated funding requirements as requested by the Transport and Environment Committee on 23 November 2012;
 - 1.1.5 notes the priority list (Appendix 6) for renewing and upgrading traffic signals and that this will be used as the basis for the programme in 2014/15 and 2015/16; and
 - 1.1.6 agrees to carrying out a PV²assessment of the 62 signalised junctions without full pedestrian crossing facilities and to receiving the results of the assessment, in the annual report on Pedestrian Crossing Prioritisation in late 2015.

Background

- 2.1 In accordance with the decision made by the former Transport, Infrastructure and Environment Committee on 28 July 2009, on the report titled “Pedestrian Crossing Prioritisation Process”, this report provides an update on the priority list for pedestrian crossings.
- 2.2 It also responds to a request made to Transport and Environment Committee, on 23 November 2012, for a review of the prioritisation of existing traffic signals without a pedestrian crossing sequence and associated funding implications.

Pedestrian crossing priority list

- 3.1 The previous pedestrian crossing priority list (approved by Transport and Environment Committee on 4 June 2014) consisted of 10 locations. These sites remain on the priority list for construction as listed in Appendix 1.
- 3.2 The base data which is used to assess if a location is suitable for a crossing is known as the PV^2 value. This is a nationally recognised value that indicates the number of passing vehicles and pedestrians. Pedestrian and vehicle counts are taken over the peak hours of a week day between both 7am to 10am and 3pm to 6pm, and avoid any school holidays or other factors which may skew results. This base PV^2 value is then adjusted to take account of local factors such as the age of those crossing, the composition of passing traffic, the number of pedestrian incidents and the number of trip-attractors such as schools, doctors' surgeries, shops etc.
- 3.3 A location with an adjusted PV^2 value of 1 or higher would be considered for a puffin crossing, locations with a value of 0.3 or higher would be considered for a suite of measures that includes a zebra crossing, a refuge island or pavement build-outs. If a very low PV^2 value is achieved no additional crossing facilities may be recommended. Appendix 4 is a flow diagram which details the steps carried out in a pedestrian crossing assessment. This process is only used for the provision of stand alone pedestrian facilities, such as puffin crossings and pedestrian islands; it does not include the provision of facilities at existing traffic signals.
- 3.4 Since June 2014 a total of forty-five locations have been assessed. Eight of these have met the criteria, including two re-assessments, and have been added to the priority list for construction. Ferniehill Drive, which was included in the report to Committee in June 2014 report has now been constructed and removed from the priority list.
- 3.5 Thirty-seven of the requested locations did not meet the adjusted PV^2 scoring and were not progressed. Locations which have an adjusted PV^2 value of less than 0.3 or deemed unsuitable are not being progressed and are listed in Appendix 2.
- 3.6 It should be noted that, due to consultation requirements, some locations may fall back into the following year's programme. Issues may arise which require alterations to the proposed designs or Traffic Regulation Orders may be required which may affect construction timescales. Should any location fall back into the following year's construction programme, additional locations will be brought forward on the basis of highest ranking from the priority list.

Traffic Signals without Pedestrian Crossing Facilities

- 3.7 There are 554 traffic signals within the City of Edinburgh boundary. This is split into 236 signalised junctions, 275 pelican and puffin crossings and 43 toucan crossings. Of the 236 signalised junctions (see table below) 6 have no pedestrian crossing facility as they would not be appropriate due local topography, type (eg roundabout) and location. There are a further 62 that only have partial pedestrian crossing facilities a while the majority (71%) have full pedestrian facilities.

Traffic Signals Installations	Approx Quantity
Full Pedestrian Facilities	168
Partial Pedestrian Facilities	62
Pedestrian Facilities Not Applicable (eg. signalised roundabouts)	6
Total Signalised Intersections	236

- 3.8 The capital budget for upgrading or renewing traffic signals (signalised junctions and pedestrian crossings) is approximately £250,000 per annum. This is supplemented by money from Scottish Government funding for Cycling, Walking and Safer Streets which varies from year to year.
- 3.9 The expected design life for traffic signals is approximately 15 to 20 years. Beyond this, equipment reliability and availability of spares becomes difficult. Up until 2014/15 the prioritisation for capital spend on existing traffic signals has been based primarily on the age and condition of signals. The table below gives a breakdown of the age of all of the 554 traffic signals in Edinburgh.

Traffic Signal Asset - Age Profile	Quantity
0 – 5 Years	89
5 – 10 Years	191
10 – 15 Years	117
15 – 20 Years	83
> 20 Years	74
Total Quantity of Installations	554

- 3.10 Most of the signalised junctions with partial crossing facilities tend to be older ie 15 years or more. When signalised junctions are renewed or upgraded full pedestrian facilities are also installed. The cost of upgrading signalised junctions varies depending on the type and size of the intersection but an approximate average cost is £125,000. In 2014/15 the capital budget for traffic signals is being supplemented by £150,000 from Cycling, Walking and Safer Routes funding giving a total capital resource of £400,000.
- 3.11 In a recent exercise the Traffic Signals and Road Safety Teams used a broader set of criteria to prioritising spend on renewing or upgrading traffic signals including:
- Age/condition of equipment;
 - Public health and safety;
 - Traffic and pedestrian flow; and
 - Fault frequency.
- 3.12 The criteria and associated scores (see Appendix 5) were applied to all traffic signal installations and used to produce a top 20 list of traffic signals (see Appendix 6) which has been used as the basis for the renewal/upgrading programme for this financial year and next. As the age the criteria is given greater weighting only 7 of the 20 installations had partial pedestrian facilities albeit 3 of them were at the top of the list.
- 3.13 The programming of junction upgrades is dependent on traffic management and other network constraints such as major road works. Due to current or anticipated network constraints, the three signalised junction at the top of the prioritised list have been deferred until 2015/16 subject to a review of traffic and network management issues. The junctions that it is proposed to upgrade to the 2014/15 programme are:
- London Road/Meadowbank Terrace;
 - Salisbury Place/Newington Road; and
 - Minto Street/East Mayfield.
- 3.14 It is worth noting that the age of the signal assets is a priority criterion in deciding investment priorities. This is because older installations are more susceptible to faults and cyclical renewal helps mitigate the health and safety risk to the public associated with signal failure due to age and condition.

- 3.15 The need for pedestrian crossing facilities at signalised junctions could also be considered solely in terms of road safety as part of the assessment that is used for compiling the Pedestrian Crossing Priority List ie assessed to determine the PV^2 value. It is intended to carry out the assessments necessary to establish a PV^2 value for all 62 signalised junctions with partial pedestrian crossing facilities and to programme this work over the next 12 months. It is proposed that the outcomes of these assessments are reported to a future meeting of this Committee.
- 3.16 The outcome of these assessments should be considered with other priorities for the Road Safety capital budget. In this context the higher costs of upgrading signalised junctions to include full pedestrian facilities will need to be assessed against installing new stand alone pedestrian crossings and other facilities such as pedestrian islands.

Measures of success

- 4.1 Pedestrian crossing facilities are provided at locations across the city which have been assessed as having the greatest demand and difficulty experienced by pedestrians. Local consultation ensures the facilities provided meet the requirements of the local community and stakeholders.

Financial impact

- 5.1 Funding of up to £245,000 has been made available from the 2014/15 capital road safety budget of £900,000 to introduce crossing facilities at locations from the priority lists. It is proposed that a similar amount will be allocated in the 2015/16 budget.
- 5.2 The annual traffic signals capital refurbishment budget for cyclical renewals is in the region of £250,000. In 2014/15 an allocation of £150,000 is also being taken from the Scottish Government grant, Cycling Walking and Safer Streets. Based on current construction costs, two major or possibly three medium sized signalised junctions could be refurbished within this budget. Alternatively, a number of pelican crossings could be upgraded to puffin type crossings.
- 5.3 Should there be a desire to target traffic signals junctions without full pedestrian facilities, it is estimated that with an average cost £125,000 per junction the total cost would be in the region of £8m. This allows for full refurbishment of the installation, as signalised junctions without full pedestrian facilities are generally older installations, and as such, are unlikely to be suitable for minor modifications. The cost of carrying out PV^2 assessments on these signalised junctions is estimated to be in the region of £60,000.

Risk, policy, compliance and governance impact

- 6.1 The Edinburgh Road Safety Plan puts forward the vision that the Council and its partners will work towards Vision Zero and provide a modern road network where all users are safe from the risk of being killed or seriously injured. In the Plan, a number of interventions have been developed for pedestrians, including the provision of new crossings and pedestrian facilities at signalised junctions, to enable more people to walk greater distances safely and reduce conflict at key points. By not progressing the proposals, it would not be possible to construct new pedestrian crossing facilities at these key points across the city, therefore not meeting the policy objectives.

Equalities impact

- 7.1 The new pedestrian crossing priority list will take into account the road safety needs of all users. Due regard will be given to the protected characteristics (Age, Disability and Religion and Belief) through the consultation and design process.
- 7.2 The Disability Discrimination Act came into force in 2005. Many of our installations pre-date this and therefore do not comply with this legislation. This is because they do not have facilities to aid disabled users, such as dropped kerbs, tactile cones and audible beepers. In the scoring system for prioritising investment in pedestrian crossings, points are awarded to reflect non-compliance with this legislation.

Sustainability impact

- 8.1 Potential for positive impact on the environment by providing improved pedestrian facilities. This should encourage walking; reduce vehicle use and lower carbon emissions.

Consultation and engagement

- 9.1 Consultation will be carried out at the proposed locations on the pedestrian crossing construction list once approval has been granted and a design has been produced. The results of the consultation on four schemes approved in the report of 3 June 2014 are included in Appendix 3.

Background reading/external references

Appendix 1 – Updated Pedestrian Crossing Priority List

Appendix 2 – List of locations which failed to meet priority list criteria

Appendix 3 - Consultation and Construction List

Appendix 4 – Pedestrian Crossing Assessment Process

Appendix 5 – Traffic Signals Prioritisation Criteria

Appendix 6 – Traffic Signal Installation Priority List-top 20

Background Paper - Report to the Transport, Infrastructure and Environment Committee 28 July 2009 titled “Pedestrian Crossing Prioritisation Process”

http://www.edinburgh.gov.uk/download/meetings/id/8638/pedestrian_crossing_prioritisation_process

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Links

Coalition pledges

Council outcomes **CO21:** Safe – Residents, visitors and businesses feel that Edinburgh is a safe city.

Single Outcome Agreement **SO4:** Edinburgh’s communities are safer and have improved physical and social fabric.

Appendices

Appendix 1 - Updated Pedestrian Crossing Priority List

Appendix 2 - List of locations which failed to meet priority list criteria

Appendix 3 - Consultation and Construction List

Appendix 4 - Pedestrian Crossing Assessment Process

Appendix 5 - Traffic Signals Prioritisation Criteria

Appendix 6 - Traffic Signal Installation Priority List - Top 20

Appendix 1
Updated Priority List

Adj PV2 > 1.0 therefore site can be considered for a Signalised Crossing

Adj PV2 < 1.0 and > 0.70 therefore site can be considered for Pedestrian Island, Build outs or a Zebra Crossing

Adj PV2 < 0.30 therefore Do Nothing

Rank	LOCATION	Base PV ²	Date of PV ²	Vulnerable Users		Vehicle Composition		Ped. Accident Factor	Road Width Factor	85th Percentile Speed Factor (mph)					Trip Ends	Adjusted PV ²	Current Status	
				Children >15% (% plus 100/115)	Elderly & Disabled >15% (% plus 100/115)	Buses & coaches > 10% (2)	HGVs > 10% (2.3)			1 + (N/10)	Actual width/7.3	<30 (1)	30-35 (1.1)	36-40 (1.2)				41-45 (1.3)
Previously Approved Sites from June 2013 Committee																		
1	West Granton Road opposite 26 Granton Mill Crescent	0.34	Mar-12	1	1	1	1	1	1.6	1	1.1	1	1	1	1	1	0.593	Consultation complete April 2013. Proposed for construction. Construction delayed due to TRO.
2	London Street at Drummond Place	0.681	Dec-12	1	1	1	1	1	2.2	1	1.1	1	1	1	1	1	1.48	Various crossing options to be designed and consulted on. Delayed due to TRO.
3	Myreside Road at Footbridge	0.189	Jan-13	1.348	1	1	1	1	1.2	1	1.1	1	1	1	1	1	0.33	Pedestrian island to be designed and consulted on. Delayed due to TRO.
4	Costorphine Road (A8) at Kaimes Road	1.236	Oct-09	1	1	1	1	1.1	1.9	1	1.1	1	1	1	1	1	2.81	Signalised crossing to be designed and consulted on. Awaiting developer funding. Reassessed May 2014.
5	Dalry Road at Dalry Place	0.223	Oct-09	1	1	2	1	1.1	1.6	1	1	1	1	1	1.4	1.09	Various crossing options to be designed and consulted on. Delayed due to TRO. Reassessed May 2014.	
New Sites Added from 2013/14 Assessments																		
6	Crewe Road North at junction with Pilton Avenue	0.24	May-13	1.21	1	1	1	1	1.1	1	1.1	1	1	1	1	1	0.347	Build out options designed and consulted on. Anticipated construction 14/15 financial year
7	Colinton Road at Pedestrian exit from Napier University	0.317	Apr-14	1	1	1	1	1	2.0	1	1.1	1	1	1	1	1	0.573	Signalised crossing designed and consulted on as unsafe location for refuge island. Anticipated construction 14/15 financial year
8	East Fettes Avenue at Broughton High School opposite entrance to Inverleith Park	0.158	Apr-14	1.217	1	1	1	1	1.9	1	1.1	1	1	1	1.25	1	0.504	Pedestrian island to be designed and consulted on. Delayed due to TRO
9	Pilrig Street @ Cambridge Avenue	0.248	Apr-14	1	1	1	1	1	1.3	1	1	1	1	1	1	1	0.323	Pedestrian island to be designed and consulted on. Delayed due to TRO

Rank	LOCATION			Children >15% (% plus 100)/115)	Elderly & Disabled >15% (% plus 100)/115)	Buses & coaches > 10% (2)	HGVs > 10% (2.3)	1 + (N/10)	Actual width/7.3	<30 (1)	30-35 (1.1)	36-40 (1.2)	41-45 (1.3)	>46 (1.4)	Serves 2 trip-ends i.e. school, shops, leisure, community (1.25)	Serves 3 trip-ends i.e. school, shops, leisure, community (1.4)		Current Status
10	Cranley Nursery at Buckstone on Braid Road	0.201	May-14	1.104	1	1	1	1	1.5	1	1.1	1	1	1	1	1	0.358	Pedestrian island has been designed and consulted on. Anticipated construction 14/15 financial year
11	Telford Road at Telford Gardens	0.626	May-14	1	1	1	1	1	2.0	1	1.1	1	1	1	1	1	1.302	Various crossing options to be designed and consulted on.
12	Great Junction Street	1.651	May-14	1	1	1	1	1.2	2.0	1	1	1	1	1	1	1	3.311	Being constructed as part of Foot of The Walk Improvement Project
13	Ferry Road at Silverknowes Neuk	0.34893	Oct-14	1	1	1	1	1.1	1.0	1	1	1	1	1	1	1	0.389	Various crossing options to be designed and consulted on.
14	Ferry Road between Dudley Avenue and Summerside Place	0.713	Oct-14	1	1.017	1	1	1	1.0	1	1.1	1	1	1	1	1	0.842	Various crossing options to be designed and consulted on.
15	South Gyle Crescent, 150m south of junction with Redheughs Avenue	0.1768	Oct-14	1	1	1	1	1.3	1.0	1	1	1	1	1	1	1	0.3433	Various crossing options to be designed and consulted on.
16	Ocean Drive - Between exit from BHS and Roundabout	1.3698	Oct-14	1	1	2	1	1.3	2.0	1	1	1	1	1	1.25	1	1.3698	Various crossing options to be designed and consulted on.

Appendix 2
Locations Which Failed to Meet the Priority List Criteria

LOCATION	Base PV ²	Date of PV ²	Vulnerable Users		Vehicle Composition			Ped. Accident Factor	Road Width Factor	85th Percentile Speed Factor (mph)					Trip Ends	Adjusted PV ²	Current Status
			Children >15% (% plus 100/115)	Elderly & Disabled >15% (% plus 100/115)	Buses & coaches > 10% (2)	HGVs > 10% (2.3)	1 + (N/10)			Actual width/7.3	<30 (1)	30-35 (1.1)	36-40 (1.2)	41-45 (1.3)			
Locations Which Failed to Meet the Priority List Criteria																	
Douglas Crescent at Palmerston Place	0.013	Apr-14	1.000	1	1	1	1	1.5	1	1.1	1	1	1	1	1	0.02	Low score, failed to meet criteria (>0.3)
Yeaman Place/ Polwarth Crescent in vicinity of canal bridge	0.127	May-14	1.043	1	1	1	1	1.3	1	1	1	1	1	1	1	0.167	Low score, failed to meet criteria (>0.3)
Lasswade Road at Park Crescent - Existing Island	0.274	May-14	1.000	1	1	1	1	1.3	1	1	1	1	1	1.25	1	0.446	Low score, failed to meet criteria (>1) to upgrade existing islands to a puffin crossing.
Oxgangs Avenue at Oxgangs Green - Existing Island	0.09	May-14	1.183	1	1	1	1	1.2	1	1	1	1	1	1	1	0.138	Low score, failed to meet criteria (>1) to upgrade existing islands to a puffin crossing.
Clovenstone Road at Westerhailes Park - Existing Island	0.065	Apr-14	1.078	1	1	1	1	1.0	1	1.1	1	1	1	1	1	0.77	Low score, failed to meet criteria (>1) to upgrade existing islands to a puffin crossing.
Inverleith Row at Inverleith Place	0.154	Apr-14	1.078	1	1	1	1	1.3	1	1	1	1	1	1	1	0.223	Low score, failed to meet criteria (>0.3)
Gamekeepers Road at Cargilfield School	0.035	May-14	1.000	1	1	1	1	1.6	1	1.1	1	1	1	1	1	0.06	Low score, failed to meet criteria (>1) to upgrade existing islands to a puffin crossing.
Gilmerton Dykes Street at Gilmerton Dykes Crescent	0.087	May-14	1.113	1	1	1	1	1.3	1	1	1	1	1	1	1	0.122	Low score, failed to meet criteria (>0.3)
Kirkbrae at Orchardhead Road	0.148	May-14	1.130	1	1	1	1	1.1	1	1.1	1	1	1	1	1	0.197	Low score, failed to meet criteria (>0.3)
Craighouse Gardens at Craighouse Road	0.041	Apr-14	1.209	1	1	1	1	1.4	1	1	1	1	1	1	1	0.069	Low score, failed to meet criteria (>0.3)
Lasswade Road at Liberton Place Path	0.088	May-14	1.078	1	1	1	1	1.0	1	1.1	1	1	1	1.25	1	0.184	Low score, failed to meet criteria (>0.3)
Claremont Park near Forbes Nursery	0.074	May-14	1.139	1	1	1	1	1.5	1	1.1	1	1	1	1	1	0.138	Low score, failed to meet criteria (>0.3)
Ladywell House - Existing Island	0.16	May-14	1.070	1	1	1	1	2.0	1	1	1	1	1	1	1	0.272	Low score, failed to meet criteria (>1) to upgrade existing islands to a puffin crossing.
Corstorphine High Street at Ladywell Avenue - existing island	0.145	May-14	1.000	1	1	1	1	1.0	1	1.1	1	1	1	1	1	0.218	Low score, failed to meet criteria (>1) to upgrade existing islands to a puffin crossing.

LOCATION			Children >15% (% plus 100)/115)	Elderly & Disabled >15% (% plus 100)/115)	Buses & coaches > 10% (2)	HGVs > 10% (2.3)	1 + (N/10)	Actual width/7.3	<30 (1)	30-35 (1.1)	36-40 (1.2)	41-45 (1.3)	>46 (1.4)	Serves 2 trip-ends i.e. school, shops, leisure, community (1.25)	Serves 3 trip-ends i.e. school, shops, leisure, community (1.4)		Current Status
Maybury Drive at North Bughtlin Place	0.006	May-14	1.200	1	1	1	1	1.0	1	1	1	1	1	1.25	1	0.009	Low score, failed to meet criteria (>0.3)
Strachan Road at Craigmock Road	0.095	May-14	1.035	1	1	1	1	1.0	1	1	1	1	1	1	1	0.135	Low score, failed to meet criteria (>0.3)
Outside 60 Cluny Gardens	0.047	May-14	1.043	1	1	1	1	1.1	1	1.1	1	1	1	1	1	0.061	Low score, failed to meet criteria (>0.3)
Lanark Road at Arnott Gardens	0.037	May-14	1.148	1	1	1	1	1.8	1	1	1	1.3	1	1	1	0.102	Low score, failed to meet criteria (>0.3)
Kilgraston Road at Dick Place	0.177	May-14	1.017	1	1	1	1	1.0	1	1	1	1	1	1	1	0.178	Low score, failed to meet criteria (>0.3)
Hamilton Terrace - outside of school	0.00113	Oct-14	1.000	1	1	1	1	1.0	1	1	1	1	1	1	1	0.001	Low score, failed to meet criteria (>0.3)
Duddingston Road at the narrowing, west of Durham Road	0.01863	Oct-14	1.035	1	1	1	1	1.0	1	1	1	1	1	1.25	1	0.027	Low score, failed to meet criteria (>0.3)
Wardie Steps bus stop, Lower Granton Road	0.16667	Oct-14	1.000	1	1	1	1	1.0	1	1	1	1	1	1	1	0.203	Low score, failed to meet criteria (>0.3)
Dumbryden Drive at Hailes Quarry Park	0.00058	Oct-14	1.000	1	1	1	1	1.2	1	1	1	1	1	1	1	0.0006	Low score, failed to meet criteria (>0.3)
Dumbryden Drive at Dumbryden Grove	0.00054	Oct-14	1.009	1	2	1	1	1.0	1	1	1	1	1	1.25	1	0.001	Low score, failed to meet criteria (>0.3)
Inverleith Terrace east of junction with Arboretum avenue	0.01687	Oct-14	1.000	1	1	1	1	2.0	1	1.1	1	1	1	1.25	1	0.036	Low score, failed to meet criteria (>0.3)
Hailesland Road @ Canal View PS	0.00641	Oct-14	1.000	1	2	1	1.2	1.0	1	1.1	1	1	1	1.25	1	0.021	Low score, failed to meet criteria (>0.3)
East Trinity Road east of Laverockbank Avenue	0.00158	Oct-14	1.000	1	1	1	1	1.0	1	1	1	1	1	1	1	0.002	Low score, failed to meet criteria (>0.3)
Grange Loan at junction with Dun-Ard Gardens	0.03462	Oct-14	1.035	1	1	1	1	1.1	1	1	1	1	1	1	1	0.038	Low score, failed to meet criteria (>0.3)
Ferry Road at Clark Avenue	0.04046	Oct-14	1.000	1	1	1	1	1.0	1	1.1	1	1	1	1	1	0.044	Low score, failed to meet criteria (>0.3)
Liberton Brae at Kirk Brae	0.00664	Oct-14	1.000	1	1	1	1	1.7	1	1.1	1	1	1	1	1	0.013	Low score, failed to meet criteria (>0.3)
Braid Road at entrance to the Hermitage of Braid	0.18291	Oct-14	1.009	1	1	1	1	1.0	1	1	1	1	1	1.25	1	0.227	Low score, failed to meet criteria (>0.3)
Willowbrae Road at Willowbrae Avenue	0.05714	Oct-14	1.000	1	1	1	1	1.3	1	1	1	1	1	1	1	0.075	Low score, failed to meet criteria (>0.3)
Maybury Road at Craigs Road	0.41953	Oct-14	1.070	1	1	1	1	2.1	1	1	1.2	1	1	1	1	1.135	Low score, failed to meet criteria (>2 for Dual Carriageway)
Eglington Crescent at junction with Glencairn Crescent at Travelodge	0.04998	Oct-14	1.000	1	1	1	1	1.6	1	1	1	1	1	1.25	1	0.103	Low score, failed to meet criteria (>0.3)
Lanark Road West at footpath to Nether Currie Road	0.10028	Oct-14	1.000	1	1	1	1	1.2	1	1	1	1	1	1	1	0.118	Low score, failed to meet criteria (>0.3)
West Granton Access @ West Pilton Way	0.04732	Oct-14	1.000	1	1	1	1	1.0	1	1	1	1	1	1	1	0.048	Low score, failed to meet criteria (>0.3)
Braid Road between Cluny Drive and Comiston Terrace	0.1075	Nov-14	1.304	1	1	1	1	1.0	1	1	1	1	1	1	1	0.192	Low score, failed to meet criteria (>0.3)

Appendix 3
Construction List and Public Consultations

3.1 Construction List

Location	Neighbourhood Partnership	Crossing Type	Estimated Construction Cost	Construction Year
West Granton Road opposite 26 Granton Mill Crescent	Forth NP	Refuge Island	£15,000.00	2014/15
Cranley Nursery at Buckstone on Braid Road	Pentlands NP	Refuge Island	£15,000.00	2014/15
Colinton Road at Pedestrian Exit from Napier University	South West NP	Signalised Crossing	£40,000.00	2014/15
Ferniehill Drive opp No 16	Liberton/ Gilmerton NP	Refuge Island - including costs for relocation of BT services.	£40,000.00	2014/15
Crewe Road North at Pilton Avenue	Forth NP	Build Out	£15,000.00	2014/15
London Street at Drummond Place (TRO Required)	City Centre NP	Signalised Crossing	£40,000.00	2015/16
Myreside Road at Footbridge (TRO Required)	South Central NP	Refuge Island	£15,000.00	2015/16
East Fettes Avenue at Broughton High School opposite entrance to Inverleith Park (TRO Required)	Inverleith NP	Refuge Island	£15,000.00	2015/16
Pilrig Street at Cambridge Avenue (TRO Required)	Leith NP	Refuge Island/ Build Out	£15,000.00	2015/16
Corstorphine Road at Kaimes Road (Awaiting Developer Funding)	Western Edinburgh NP	Signalised Crossing (£25,000 Developer Contribution)	£40,000.00	2015/16
Dalry Road at Dalry Place (TRO Required)	South West NP	Signalised Crossing	£40,000.00	2015/16
Telford Road at Telford Gardens	Inverleith NP	Signalised Crossing	£40,000.00	2015/16
Ferry Road at Silverknowes Neuk	Almond NP	Refuge Island/ Build Out	£15,000.00	2015/16
Ferry Road between Dudley Avenue and Summerside Place	Forth NP	Refuge Island/ Build Out	£15,000.00	2015/16
South Gyle Crescent, 150m south of junction with Redheughs Avenue	Western Edinburgh NP	Refuge Island/ Build Out	£15,000.00	2015/16
Ocean Drive - Between exit from BHS and Roundabout	Leith NP	Signalised Crossing	£40,000.00	2015/16
Henderson Street at the junction with Great Junction Street	Leith NP	Signalised Crossing	£40,000.00	2015/16

3.2 Ferniehill Drive Consultation Responses

Summary	In Favour	Representation	Comments	Response to Representation
Resident	Yes	No	Pleased about this proposal	-
			Make right turn from Ferniehill Avenue more dangerous, increase pedestrians standing in the road in front of buses and will cause traffic jams.	The island is positioned so as to not affect the right turn manoeuvre, will have no affect on traffic flows and will provide pedestrians a safe place in the road whilst waiting to cross to prevent pedestrians standing on the white line in the centre of the road as happens at present.
Resident	No	Yes		
Resident	Yes	No	-	-
Resident	Yes	No	Would prefer controlled crossing/ zebra crossing	Criteria not met for a signalised crossing
Resident	Yes	No	-	-
Resident	Yes	No	-	-
Resident	Yes	No	Would prefer a controlled crossing	Criteria not met for a signalised crossing
Resident	Yes	No	-	-
Resident	Yes	No	-	-
Resident	Yes	No	-	-

Location	Neighbourhood Partnership	Crossing Type	Estimated Construction Cost	Construction Year	
Resident	Yes	No	Would prefer a controlled crossing as registered blind		Criteria not met for a signalised crossing
Resident	Yes	No	Not before time		-
Resident	Yes	No	-		-
Resident	Yes	No	-		-
Resident	Yes	No	-		-
Resident	Yes	No	Will be a great help as long as the bus stop is not moved		No plans to move the stop
Resident	Yes	No	Consider a keep clear at car park entrance		-
Resident	Yes	No	Great for older people crossing to shops and bus stop		-
Resident	Yes	No	-		-
Resident	Yes	No	Sooner the better		-
Resident	Yes	No	Would prefer a controlled crossing		Criteria not met for a signalised crossing
Resident	Yes	No	-		-
Resident	Yes	No	-		-
Police Scotland	Yes	No	-		-
Resident	Yes	No	-		-
Fire Service	Yes	No	-		-

3.3 Braid Road at Cranley Nursery Consultation Responses

Summary	In Favour	Representation	Comments	Response to Representation
Resident	Yes	No	Would like Access Protection Markings renewed to prevent residents driveways being blocked	Markings will be refreshed as part of construction process
Resident	Yes	No	-	-
Councillor	Yes	No	Will aid safe crossing to bus stop	-
Councillor	Yes	No	-	-
Resident	Yes	No	-	-
Resident	Yes	No	Excellent news will make taking children to nursery safer	-
Resident	No	Yes	Concerned at reduction in parking. If parking is preserved then supports the proposal.	Will not remove any of the controlled parking.
Resident	No	No	Would like the island nearer Comiston Road, would like speed bumps installed and Braid Road closed at Comiston Road	Braid Road proposed to be included as a 20mph street in citywide roll
Resident	Yes	No	Long Overdue	-
Resident	Yes	No	Will make crossing with children safer	-
Neighbourhood Team	Yes	No	-	-
Resident	Yes	No	-	-
Resident	Yes	No	-	-
Resident	Yes	No	Would benefit from speed restriction measures	Braid Road proposed to be included as a 20mph street in citywide roll
Resident	Yes	No	Would like a zebra crossing with island	Criteria not met for a zebra crossing
Fire Service	Yes	No	-	-
Community Council	Yes	No	-	-

3.4 Colinton Road Consultation Responses

Summary	In Favour	Representation	Comments	Response to Representation
Neighbourhood Team	Yes	No	-	-
Resident	Yes	No	The footpath on the western side of the road is in a poor condition and needs looked at	The footpath directly affected by the construction of the crossing will be reinstated and upgraded.
Resident	Yes	No	-	-
Resident	Yes	No	Would like more guardrail installed to ensure pedestrians go to the crossing	This will be considered as part of final design
Police Scotland	Yes	No	-	-
Resident	No	No	Would like crossing moved, if not possible install more guardrail. Would also like parking restrictions between Glenlockhart Road and the crossing at peak times.	This will be considered as part of final design

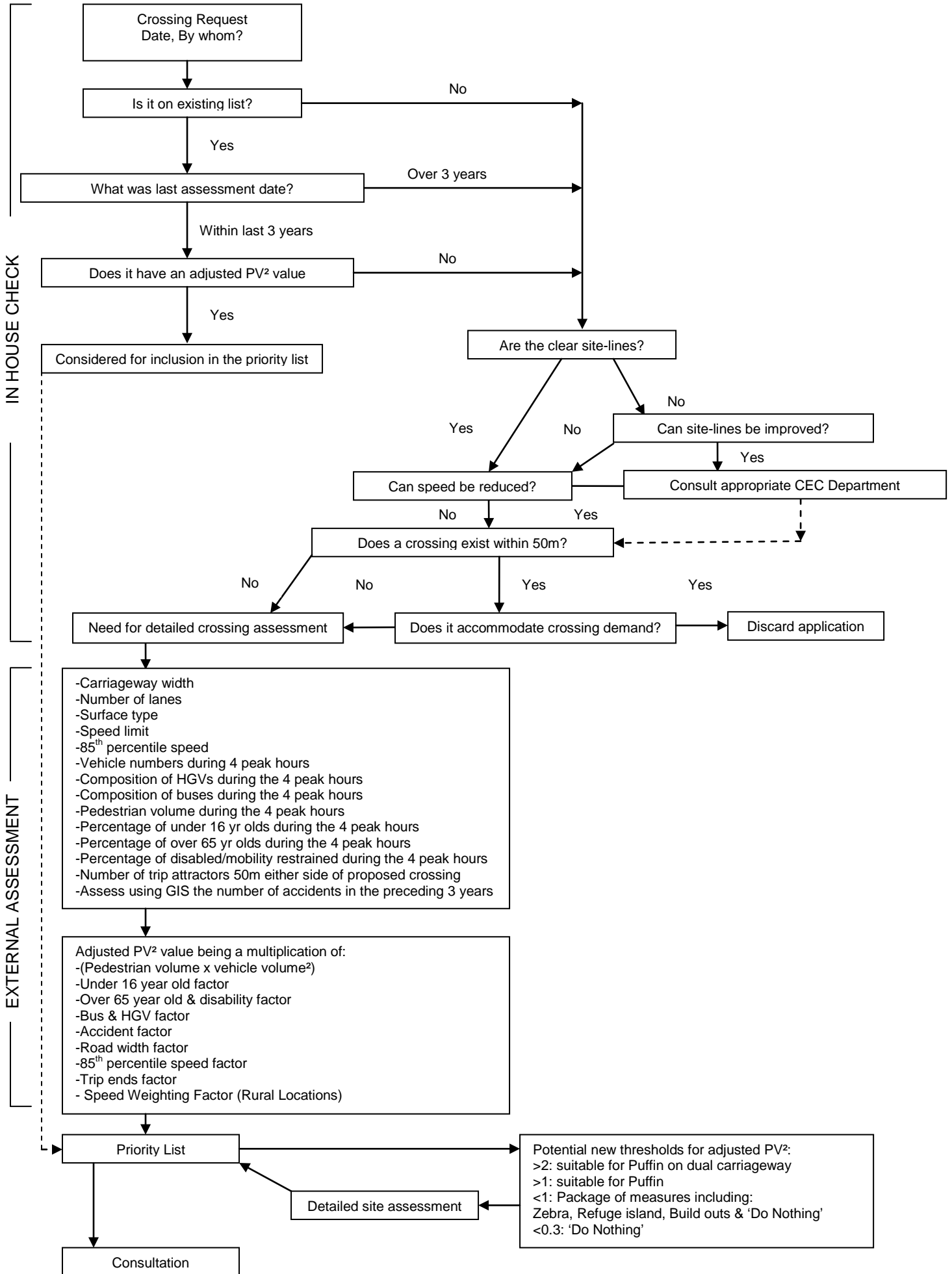
3.5 Crewe Road North at Pilton Avenue Consultation Responses

Summary	In Favour	Representation	Comments	Response to Representation
Resident	Yes	No	-	-
Resident	No	Yes	Does not want traffic lights. There is already a build out. Wants on street parking preserved.	Signals are not being installed

Location	Neighbourhood Partnership	Crossing Type	Estimated Construction Cost	Construction Year	
Resident	No	Yes	Will the kerb be level with the street? Will there be signs or traffic lights installed? Only speed humps will improve road safety		Signals are not being installed and dropped access to driveways will
Resident	Yes	No			-
Resident	Yes	No			-
Resident	Yes	No			-
Resident	Yes	No	Safety First		-
Resident	No	Yes			-
Resident	Yes	No			-
Resident	Yes	No	Would also like a bin installed at the crossing location		Request has been sent to North Neighbourhood Office to progress
Resident	Yes	No			-
Resident	Yes	No	A good idea as will help reduce speeds		-
Community Council	Yes	No			-
Resident	Yes	No			-
Resident	Yes	No			-

Pedestrian Crossing Prioritisation Process

Appendix 4 – Pedestrian Crossing Assessment Process



A robust set of criteria has been developed to assess where capital expenditure can best be targeted.

This selected criteria is transparent and able to with-stand significant scrutiny, as it is acknowledged that with the limited budgets available, we will not be able to fully satisfy all competing needs from Community Groups, Councillors, Members of the Public etc.

PROPOSED CRITERIA

The proposed evaluation method will look at ten individual criteria, each with its own weighting/score. Utilisation of the criteria, with a higher weighting given to age and condition, will quickly identify the older installations. These installations can then be further evaluated using the remaining criteria to form a ranking order evaluated against a robust, transparent and valid scoring system.

The ten criteria used for evaluation are listed below:

1. Age;
2. Condition (mechanical);
3. Number of Critical Faults (per rolling 12 month period);
4. Pedestrian Facilities;
5. Traffic Flows (over peak hours);
6. Pedestrian Flows (over peak hours);
7. Accident Statistics;
8. Disability Discrimination Act (DDA) Compliance;
9. Installed Cycle Facilities;
10. Incoming Correspondence (Councillors, public, groups etc.)

EVALUATION METHOD

Each installation is to be evaluated using the above ten criteria with specific weighting (points score) given to each individual criteria. The maximum number of points awarded per site will be 100, with the aim that installations with the highest score are identified as those installations to be refurbished as first priority.

The points associated with each criteria and the associated reasoning is detailed below.

1. **Age: 20 points.** The age of an installation is the predominant reason for cyclical refurbishment. Older installations are more likely to fail with serious faults, such as cable faults; necessitating expensive remedial works often involving the need to undertake civil engineering works. The sourcing of spare parts becomes an issue and term maintenance contracts are also priced higher to reflect the average age of the infrastructure. New technologies (bus priority etc) used at more modern sites are not employed thus having a possible overall negative economic impact.
2. **Condition: 5 points.** This is closely related to age and in most cases the mechanical condition of older junctions is extremely poor. However, on rare occasions an older junction is in relatively good mechanical condition thus an upgrade may not be an immediate necessity.

3. **Number of Critical Faults: 5 points.** Older junctions generally have a greater number of faults than newer junctions (not always the case). Therefore, to reflect the increased cost of maintenance this is taken into account. Any fault that results in an 'all dark' is to be classed as critical.
4. **Pedestrian Facilities: 15 points.** Junctions without pedestrian facilities or only partial facilities do not comply with current Council policies. Points are therefore awarded to reflect this.
5. **Traffic Flows: 10 points.** Sites with the greatest amount of traffic are often the most critical when it comes to network management and safety. To reflect the difference between a critical site and a more rural, less trafficked location, points are awarded accordingly. Formal vehicle counts will not be conducted as a matter of course for ranking purposes, with reliance on local knowledge being used to determine vehicle numbers. Formal counts may be used if the need arises or to aid in the design process.
6. **Pedestrian Flows: 10 points.** It is essential that sites with significant pedestrian flows are reliable to enhance safety and promote walking throughout the City. Points are awarded accordingly. Formal pedestrian counts will not be conducted as a matter of course with reliance on local knowledge being used to determine pedestrian numbers. Formal counts may be used if the need arises or to aid in the design process.
7. **Accident Statistics: 10 points.** Sites with a recurring, same type accident problem are often due to site factors such as visibility, signal phasing etc. Points are awarded to reflect the need for modification/change at these sites. It is also acknowledged that the Road Safety team will carry-out more in-depth investigations and make recommendations on required changes, with any remedial actions being funded from their budget.
8. **Disability Discrimination Act Compliance: 10 points.** The DDA came into force in 2005. Many of our installations pre-date this and therefore do not comply with this legislation. Points are awarded to reflect non compliance with this legislation. Lack of dropped kerbs, tactile cones, beepers etc. would all lead to a higher points award.
9. **Installed Cycle Facilities: 10 points.** The Council, through the "Active Travel Action Plan" is promoting cycling as a form of commuting as well as a leisure pastime. Points are awarded to reflect sites which do not tie in with this policy.
10. **Incoming Correspondence: 5 points.** To reflect the concerns/observations of the general public consideration will be given to issues raised via correspondence received. Points will be awarded if related complaints are received.

SCORING SYSTEM

A scoring system has been developed largely based on material facts. This allows evaluation to be largely objective and should produce consistent results irrespective of the individual undertaking the evaluation.

Out of the ten evaluation criteria above only criteria 2, Condition, is open to variance. However, the experience and knowledge of the staff carrying out the evaluation should ensure consistency is maintained.

APPENDIX 5 - CRITERIA FOR RANKING TRAFFIC SIGNALS

Criteria 1: AGE

Age	>30 Years	25-30 Years	20-25 Years	15-20 Years	< 15 Years
Points Awarded	20	15	10	5	0

Criteria 2: CONDITION

Condition	Action Recommended Within Next 5 Years	No Immediate Action Required
Points Awarded	5	0

Criteria 3: NUMBER OF CRITICAL FAULTS

Number of Critical Faults (Per Annum)	>3	<3
Points Awarded	5	0

Criteria 4: PEDESTRIAN FACILITIES

Facilities	None	Partial (across side rd)	Partial (across main rd)	Full
Points Awarded	15	10	5	0

Criteria 5: TRAFFIC FLOWS (over peak hours)

Flows (Peak Hour)	>1000 Vehicles	500-1000 Vehicles	<500 Vehicles
Points Awarded	10	5	0

Criteria 6: PEDESTRIAN FLOWS

Flows (Peak Hour)	>300 Pedestrians	150-300 Pedestrians	<150 Pedestrians
Points Awarded	10	5	0

[APPENDIX 5 - CRITERIA FOR RANKING TRAFFIC SIGNALS

Criteria 7: ACCIDENT STATISTICS

Accident Frequency	3 or > Same Type	2 Same Type	Random
Points Awarded	10	5	0

Criteria 8: DISABILITY DISCRIMINATION ACT

DDA Compliant Facilities	None	Partial	Full
Points Awarded	10	5	0

Criteria 9: INSTALLED CYCLE FACILITIES

Cycle Facilities	None	Partial	Full
Points Awarded	10	5	0

Criteria 10: CORRESPONDENCE

Related Correspondence	>2	<2
Points Awarded	5	0

WORKED EXAMPLE

As a 'worked example', choosing two random sites, (1) Fairmilehead Crossroads which is in excess of 30 years old and (2) Dundas St/Henderson Row which was upgraded in 2007. On evaluation, the above criteria scores provides an outcome of 45 and 10 points respectively (see table below). Both sites have full pedestrian facilities and cycle facilities.

	Fairmilehead Crossroads	Dundas St/Henderson Row
Age	20	0
Condition	5	0
Faults	5	0
Ped Facilities	0	0
Traffic Flows	10	5
Pedestrian Flows	0	5
Accident Stats	0	0
DDA Compliance	5	0
Cycle Facilities	0	0
Correspondence	0	0
TOTAL	45	10

This demonstrates that with the heavy bias on age/condition, a greater score is generated by the older installation which meets with the departments general objective of cyclically renewing the traffic signals asset whilst also giving due cognisance to other related priority factors.

CONCLUSION

The above proposed criteria, evaluation method and associated scoring system ensures a credible, transparent and valid system for ranking traffic signals in order to prioritise the capital budget spend each FY.

The criteria, and in particular, the points awarded to each criteria (weighting), can be amended to reflect the priorities of the department, reviewed on an annual basis.

Currently, the criteria and points system are biased towards the maintenance aspect of the infrastructure (30% of the score). At this time the Traffic Systems service are comfortable with this approach, this will however be reviewed on an annual basis

Location of Traffic Signals	Age	Age Points	Condition (mechanical)	Condition Points	Number of Critical Faults (per rolling 12 month period)		Pedestrian Facilities	Pedestrian Facilities Points	Traffic Flows (over peak hours)	Traffic Flows Points	Accident Statistics	Accident Statistics Points	DDA Compliance	DDA Compliance Points	Installed Cycle Facilities	Installed Cycle Facilities Points	Correspondence	Correspondence Points	Total Points
					Critical Points	Faults Points													
London Rd/Easter Rd:	16-Jul-59	20	Poor	5	0	0	Partial	5	>1000	10	3	5	None	10	Partial	5	3	5	65
Lothian Rd/Fountainbridge:	12-Jun-57	20	Poor	5	0	0	Partial	10	>1000	10	5	5	Partial	5	Partial	5	0	0	60
Regent Rd/Abbeymount:	05-Aug-59	20	Poor	5	0	0	Partial	10	500-1000	5	11	10	Partial	5	Partial	5	0	0	60
Leith Walk/Pilrig St:	18-Mar-64	20	Poor	5	4	5	Full	0	>1000	10	9	10	Partial	5	Partial	5	0	0	60
London Rd/Meadowbank Terr:	12-Mar-65	20	Poor	5	0	0	Partial	10	>1000	10	4	0	None	10	Full	0	0	0	55
Salisbury Pl/Newington Rd:	07-Apr-59	20	Poor	5	0	0	Partial	5	>1000	10	2	0	None	10	Full	0	3	5	55
Lothian Rd/Morrison St:	14-Sep-33	20	Poor	5	0	0	Full	0	>1000	10	9	10	Partial	5	Partial	5	0	0	55
Tollcross:	01-Nov-63	20	Poor	5	0	0	Full	0	>1000	10	14	10	Partial	5	Partial	5	0	0	55
Home St/Gilmore Pl:	03-Nov-63	20	Poor	5	0	0	Full	0	>1000	10	5	10	Partial	5	Partial	5	0	0	55
London Rd/Montrose Terr:	23-Mar-64	20	Poor	5	0	0	Partial	5	>1000	10	0	0	Partial	5	Partial	5	0	0	50
Minto St/Mayfield:	30-Jun-66	20	Poor	5	0	0	Partial	5	>1000	10	8	5	Partial	5	Full	0	0	0	50
Corstorphine Rd/Saughtonhall Dr:	12-Feb-64	20	Poor	5	0	0	Full	0	>1000	10	5	5	Partial	5	Partial	5	0	0	50
Leith Walk/McDonald Rd:	29-Dec-60	20	Poor	5	0	0	Full	0	>1000	10	12	10	Partial	5	Full	0	0	0	50
South Clerk St/Preston St:	29-Jun-66	20	Poor	5	0	0	Full	0	>1000	10	7	10	Partial	5	Full	0	0	0	50
Niddrie Mains Rd/Duddingston Rd West:	01-Feb-67	20	Poor	5	0	0	Full	0	>1000	10	6	10	Partial	5	Full	0	0	0	50
Fairmilehead Crossroads:	01-Feb-65	20	Poor	5	6	5	Full	0	>1000	10	4	0	Partial	5	Full	0	0	0	45
South Clerk St/Bernard Terr:	18-Feb-58	20	Poor	5	0	0	Full	0	>1000	10	5	5	Partial	5	Full	0	0	0	45
Nicolson St/West Nicolson St:	25-Apr-58	20	Poor	5	0	0	Full	0	>1000	10	2	0	Partial	5	Full	0	0	0	40
Hamilton Pl/Kerr St:	11-Nov-60	20	Poor	5	0	0	Full	0	>1000	10	0	0	Full	0	Partial	5	0	0	40
Grange Rd/Causewayside:	18-Oct-61	20	Poor	5	2	0	Full	0	>1000	10	1	0	Partial	5	Full	0	0	0	40