

**HERTFORDSHIRE COUNTY COUNCIL
ENVIRONMENT SELECT COMMITTEE
TUESDAY 23 JANUARY 2001 AT 10.30 AM**

Report of the Director of Environment

RANKING SCHEME FOR TRAFFIC AND ENVIRONMENT MEASURES

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1. Purpose of the report

In response to the Environment Select Committee decision at their meeting of 17 October 2000, to review the rationale of the ranking scheme for Traffic and Environmental measures and to consider whether any changes should be made in its future use.

2. Summary

- 2.1 The nature of traffic levels and patterns in Hertfordshire gives rise to numerous traffic problems which the community look to the County Council to resolve. In order to prioritise action in dealing with these requests, a ranking system is operated based upon consideration of traffic volumes, safety and environmental matters. This system has operated for nearly ten years.
- 2.2 The report considers the merits of the existing system in the light of changing circumstances in recent years and looks at alternative ways of prioritising traffic management projects.

3. Conclusion

An analysis of the alternative options has concluded that although they may have some merit, the advantages of retaining the current ranking system outweigh them. Members are therefore asked to consider the retention of the current ranking scheme.

1. **Background**

- 1.1 The high volumes of traffic flows experienced on Hertfordshire roads, together with the complex travel patterns that exist in the County, give rise to extreme pressures on the network. Often motorists seek to use inappropriate routes for their journeys and this has a direct impact on local residents, other motorists and modes of travel.
- 1.2 A large section of the population feel intimidated and their quality of life diminished as a result of the impact of this traffic within their community. This concern is translated into large number of requests to the Environment Department for engineering measures to improve their local environment and to curb the impact of the effects of traffic.
- 1.3 The scale of requests for action significantly exceeds the resources available to resolve them. The County Council has no statutory duty to resolve the problems through minor traffic management works. However, action to improve the local environment is consistent with the objectives of the authority to improve the quality of life in Hertfordshire.
- 1.4 To help manage the situation in an equitable manner the Department adopts a ranking scheme to prioritise the use of funds across the County in a consistent manner. This scheme originated in the early 1990's and remains largely unchanged to this day.
- 1.5 The ranking scheme has been subjected to member scrutiny on three occasions in the past. In 1995, the Environment Committee Performance Review Panel considered the issue. In July 1996, the Environment Committee TPP Policy Panel approved the scheme for continued use. Finally in January 1997, the Environment Committee confirmed the approach as part of its review of traffic calming practices.

2. **The Current Ranking Scheme**

- 2.1 The current ranking scheme takes the following consideration into account:-
 - a) Road hierarchy and traffic flows – weightings are given according to the road hierarchy so that high flows on main roads do not automatically score higher than a lower, but more problematical flow on a local road. Peak and off-peak flows affect the score, in particular peak hour problems on local roads are given prominence.
 - b) Safety – this combines the three factors of vehicle speed, accident history and the presence of vulnerable road users to give an overall indication of the safety hazard. This is a separate exercise from the safety engineering process which targets sites where there is a history of accidents giving rise to casualties.
 - c) Environment – this category involves an assessment of the surroundings and problems therein such as car parking, visibility etc.

The overall priority score for a problem is a combination of the assessments made under the three categories outlined above.

- 2.2 A description of the detailed factors summarised above, together with the factors and weightings used for assessment, is provided at Appendix 1.

- 2.3 The vast majority of problems assessed by the system are those which are generated through public demand. The ranking scheme is used to appraise the relative severity of the problems which have been reported. It represents a relatively simple and robust way to sort the highest priority for action.
- 2.4 Since its inception it has been used to action around £4.9 million of traffic management projects of various types. Currently, there are over 1000 sites identified by partnerships, area offices and districts which have been subject to appraisal by this ranking system in order to determine a shortlist of schemes for action within the limited resources available.
- 2.5 It should be recognised that even if a problem ranks highly enough to guarantee scheme funding it is not always possible to implement a traffic management solution to the problem. On occasions, even when solutions are found they are not acceptable to the local community.
- 2.6 The implementation of traffic management projects is extremely resource intensive, particularly in respect of the public consultation and involvement which is an important part of any solution. The ranking system undoubtedly provides a very helpful tool to identify priorities for funding. It should be noted, however, that the process of collecting data to inform the ranking process has its own resource implications.

3. **Analysis**

- 3.1 Since the ranking scheme was last scrutinised by members there have been a number of developments that have a particular bearing on the use of the scheme.
- 3.2 The nature of schemes to solve the traffic problems raised by the public have changed over the years. It is becoming more common for projects to cost in excess of £30,000 with some requiring in excess of £100,000 for implementation. In the early life of the ranking system typical costs would be in the £5-20,000 range. This, in conjunction with the emphasis on prioritising on a countywide basis has meant in recent years that not all area offices obtain sufficient funding to implement projects each financial year. For example, in 1999/00 only 5 out of 10 areas progressed schemes and in 2000/01 (where significant funding was used for village speed limits) only 2 areas have had the opportunity to implement projects.
- 3.3 The latest Local Transport Plan sets out transport objectives. The ranking system which is largely unchanged from its development in the early 1990's, however, does not fully address all of these. In particular, issues such as promoting prosperity and equity may not be fully considered in assessments, although other factors in the ranking system could be seen to give some weight in support of these objectives.
- 3.4 Until recently, the ranking system has provided the sole basis upon which priorities for implementation are determined and there has been little or no local discretion over which schemes should be funded from the Traffic and Environmental budget. However, recent developments in the local determination of traffic management schemes have occurred and these have given rise to some conflict with the ranking approach. These are described in the next two paragraphs.
- 3.5 The development of Area Transportation Plans in a number of urban areas and the STRAP project which has begun to tackle rural transport issues, have both influenced

decisions on the relative priority to be given to the implementation of projects. The approach towards scheme identification in these plans is notably different to that used in the ranking system. Within these plans, local fora and member groupings decide on the schemes which are required and their prioritisation. Whilst it is accepted that the nature of these projects is often more strategic in nature than responding to demand, in the eyes of the public it may represent wholly different approaches to dealing with similar traffic problems in the County.

- 3.6 Recent years have also seen the introduction of Highway Partnerships. In North Herts, and by April 2001 in all other Partnership areas, there will exist a discretionary budget which the Joint Member Panel overseeing the Partnership can use to fund local projects. As long as these proposals are consistent with overall County Transport policies they may be progressed. In the last two years £30-40,000 of schemes per annum have been funded in this way but with the substantial increases likely in structural maintenance budgets in the next year, this figure, representing 10% of expenditure, could potentially increase very significantly.

4. Alternative Options

- 4.1 Analysis as part of this scrutiny process suggests that members should consider three options in order to prioritise our approach to the solution of local traffic problems. They are to:

- continue with the existing system;
- modify the existing system, or
- move to entirely local determination of priorities.

The broad advantages and disadvantages of each alternative are shown in Table 1. This should be read in conjunction with the commentary below.

- 4.2 *Continue with the existing system:* This represents the simplest way forward. However, limitations in resources will mean that by following countywide priorities some areas of the County may only be able to resource a relatively small number of projects in any given year. Increased discretionary funding available to Partnerships could enable some of this effect to be offset if local panels so choose.
- 4.3 *Modify the existing system:* It may be possible to adjust the weighting given to factors in the existing system to better reflect the LTP transport objectives. However, the nature of the system will inevitably involve a subjective judgement on the relative priority weighting. Consequently the extent to which any change could be seen to enhance the system would be open to challenge. At this time, it is unclear what effect any changes might have on existing prioritised lists of projects. There may be a negative reaction from communities if the priority of their particular schemes should be diminished. If projects are to be re-ranked in a modified system, it would be expensive to undertake. The costs of this would be funded from the works budget in turn meaning fewer schemes being implemented in the short term.
- 4.4 *Move to entirely local determination of priorities:* This would mark a very significant change of approach to that currently used for prioritising traffic schemes via the ranking system. Following the principles used in Area Plans, no specific scoring mechanism would be employed. Rather priorities would be established at the local level based on local member and community group perception of the problem to be addressed. If the

ranking system were to be dropped it would increase the element of budget available to deal with local issues but risk leaving unresolved a number of key strategic objectives. There is also a danger that more and more schemes would proceed on the basis of he/she who shouts loudest will succeed, rather than addressing the silent majority and transport needs. Additionally, the division of the budget into ten would mean that only small scale projects would be funded. Larger schemes, which form the majority of those currently coming forward, would prove difficult to programme and risk the County objective of ensuring equity of service provision to all sectors of the community.

5 **Financial Implications**

- 5.1 Over the past ten years over £4.9 million worth of traffic management schemes have been prioritised through the current ranking system.
- 5.2 The current budget (2000/01) for Traffic and Environmental (T & E) projects is £415,000.
- 5.3 It should be noted that measures to improve pedestrian facilities such as introducing pedestrian crossings, refuges and improving facilities for the disabled are generally funded from separate budgets. Current budgetary provisions allow for £300,000/year for this type of work in addition to T & E funding.
- 5.4 Continuation of the existing system would have no overall financial implications. However, a re-ranking of projects within a modified scheme would have budgetary implications which would need to be found from within existing funding and which could lead to less project funding.

6. **Conclusions**

- 6.1 The benefits which might arise from a modification to the current system are not thought to be great and the resource implications of reassessing the extensive lists of existing schemes will be significant. Consequently it may not be considered worthwhile to pursue this option.
- 6.2 The decision between retaining the existing system and moving to a locally determined approach requires some consideration. There are arguments in favour and against both alternatives. The existing system has provided good service and maintains an equitable and consistent Countywide approach. A move to local determination would offer the opportunity for local member influence and for all areas to receive budgets, albeit with some limitation. These perceived advantages could be secured by ensuring a sufficiently large discretionary element to each area budget, whilst retaining a majority of the budget to address those items prioritised by the ranking system.
- 6.3 Work would be required to develop mechanisms for introducing and managing a comprehensive locally determined approach and to set out how its perceived limitations could be minimised. As such in practical terms the existing system would need to be retained for assessing projects for the 2001-02 year.

- 6.4 Finally, members need to consider the changes taking place within the Transport Management group of the Department. Two new Partnerships are due to commence in the new financial year. New discretionary budgets for Partnerships will also be introduced and mechanisms for management will need setting up. Furthermore, the development of working arrangements with district councils as part of the Procurement Review requires conclusion. Members may consider that with such changes in practice it may be prudent to retain the existing ranking system at this time.
- 6.5 On balance, the robustness and equity of the existing system and the objectivity it brings in justifying action suggest that the best option is to retain the present ranking system.
- 6.6 Members of the panel are requested to determine which option they wish officers to pursue for the future prioritisation of Traffic and Environmental Schemes.

Options	Advantages	Disadvantages
Continue with existing scheme	<p>Defendable and consistent</p> <p>Straight forward to use</p> <p>Provides Countywide equity in resource distribution</p>	<p>Cost of data collection for ranking</p> <p>Possible conflict with Area Plan and Partnership Panel approach</p> <p>Not all Areas can progress schemes</p>
Modify existing scheme	<p>As above plus: -</p> <p>Meets more fully transport objectives</p>	<p>As above plus:-</p> <p>Significant costs in re-assessing existing lists to new approach</p>
Move to local determination	<p>Local member discretion provided.</p> <p>Consistent with Area Plan and Partnership panel approach</p> <p>All areas can progress schemes</p>	<p>Possibly inconsistent approach to scheme selection with different precedents budget</p> <p>Does not provide Countywide equity in resource distribution</p> <p>May limit scale of schemes which could be progressed.</p>

Table 1 – Advantages and Disadvantages of Alternative Options

RANKING OF T & E SCHEMES

HIERARCHY

Flows

Two hour two-way flows divided by 1000 equals Peak Flow (PF)

Eight hour two-way flows divided by 1000 equals Off peak Flow (OFF)

Road type

The loading factors are follows:

Road Type	Peak Hours	Off Peak Hours
Local	0.3	1
Secondary	1	1
Main Distributor	2 (single) 3 (dual)	2 single)
Primary	4	4

Hierarchy – (PF/LF) + (OPF/LF)

e.g. An example showing schemes on different roads

	Local Road	Primary Road
Two hour two-way	160 vehs.	2,400 vehs.
Eight hour two-way	420 vehs.	6,400 vehs.
PF	$160/1,000 = 0.16$	$2,400/1,000 = 2.4$
OFF	$420/1,000 = 0.42$	$6,400/1,000 = 6.4$
PF/LF+OPF/LF	$(0.16/0.3)+(0.42/1)$	$(2.4/4)+6.4/4)$
	$0.533 + 0.42$	$0.6 + 0.6$
Hierarchy Totals	0.953	2.2

SAFETY

Speeding

85th Percentile Speeds

<30 m.p.h.	0
30-40 m.p.h.	2
>40 m.p.h.	3

Accident History

Fatal/Serious Involving Pedestrians	3
Fatal/Serious Vehicles or Slight Pedestrians	2
Slight Vehicles	1
Damage only	1/2

Please note that the scores, 3, 2, 1/2 are not multiplied should more than 1 particular type of accident occur

e.g. 2 fatals involving pedestrian scores 3

Vulnerable Users Present

Children	low volumes	1
	high volumes	2
Cyclists	low volumes	0
	high volumes	1
Old people Handicapped	low volumes	0
	high volumes	1

Safety total is the sum of all the above categories

ENVIRONMENT

Footways

Both sides	0
One side	1
None	2

Please note that no score should be awarded if this category is not an integral part of the complaint.

e.g. a rural section of the C16 with no footways or properties and the complaint is lack of cycle facilities should not score 2 but 0.

Area

Town Centre	3
Village/Town	2
Rural(National Speed Limit	0

Visibility

Restricted for vehicles	1
Restricted for pedestrians	1
Unrestricted	0

* comments for footway applies

Crossing Points

Uncontrolled	2
Controlled	0
Semi Controlled (e.g. refuges)	1

* comments for footway applies

Parked Vehicles

Cause problems	1
Provide Benefit (i.e. act as traffic calming)	-1

Lorries

Cause problems	1
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Environment total in the sum of all the above categories

OVERSALL SCORE = Hierarchy x Safety x Environment

TRAFFIC AND ENVIRONMENTAL SCHEME RANKING SYSTEM

<u>Hierarchy</u>	<u>Safety</u>	<u>Environment</u>
Flows	Speeding	Footways
	< 30 mph	both sides
	30 - 40 mph	one side
2 hr two way peak flow	> 40 mph	none
	Accident History	Area
12 hr two way flow	Fatal/Serious involving Peds.	town centre
	Fatal/Serious Vehicles or slight Peds	village/town
Load Factor L.3/ SD1/ MD 2 or 3 P 4	Slight-vehicle only	rural >60 mph
Enter appropriate No.	Damage only history	res. for vehicles
Road Type	Vulnerable Users Present	res. for pedestrians
Enter appropriate No.	Children – low vols.	unrestricted
	high vols.	Crossing Points
Local Road 1	Cyclists – low vols.	uncontrolled
Sec. Distributor 1	high vols.	controlled
Main Distributor 2 or 3 *		Semi controlled i.e. (refuge)
Primary Route 4		
* Main Dist – Single Carriageway 2		Parked Vehicles
* Main Dist – Dual Carriageway 3	Old people/Handicapped low vols.	Cause problems
	high vols.	Give benefits
Hierarchy Total	Safety Total	Environment Total
		Grand Total

Site. _____

Table 1