



Essex **Powered Two Wheeler** Strategy

“ Mopeds and motorcycles can offer an affordable alternative means of transport for trips where public transport is limited and walking and cycling unrealistic, increasing mobility and widening employment opportunities. ”



Essex County Council
Transportation &
Operational Services



Essex **Powered Two Wheeler** Strategy

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1 - Introduction



The production of a powered two wheeler strategy for Essex has been made in response to the Government's White Paper, *A New Deal for Transport: Better for Everyone* which highlighted the contribution that powered two wheelers (PTW) could make towards an integrated transport policy. The Government expects local authorities to include an assessment of the role of PTW in their Local Transport Plans (LTP). The County Council has outlined its thoughts in its recently published LTP but feels that greater analysis of the role to be played by PTW can only be carried out by publishing a separate document. This document outlines in detail a strategy for promoting sustainable use of PTW and suggests ways in which this mode of transport may be better integrated within transport and land use planning mechanisms.

It has been recognised that as congestion increases on our roads and transport costs rise, people are turning to PTW for a variety of reasons including economy, easier parking, reduced journey times and greater convenience. In particular, sales of vehicles with an engine capacity of 125cc and below have seen a dramatic increase in the last year alone (1999) of 59%. As such, it is becoming increasingly clear that provisions for PTW need to be made in order to afford their users the same opportunities and facilities available to other modes of transport currently being promoted.

In light of the above, and as part of the Local Transport Plan process, Essex County Council has highlighted these needs by setting out a clear and concise strategy in relation to the use of, and facilities for, PTW. In addition, the PTW strategy will enable the County Council to allocate funds towards the implementation of certain schemes and initiatives outlined in Section 6 of this document. It will also identify the problems associated with this mode of transport and how these can be addressed together with the opportunities afforded, such as helping to contribute towards specific targets identified in other areas, for example the Road Traffic Reduction Plan.

Although not a new area, it is the first time that PTW have been considered in a broader sense within an integrated transport policy, apart from inclusion in road safety/reduction of casualties' schemes. It is therefore hoped that this strategy will offer PTW the same consideration and facilities already given to other modes of transport, whilst at the same time recognising their vulnerability.



1.1 Background

In July 1998, the Governments White Paper, A New Deal for Transport: Better for Everyone, stated that; "The role of motorcycling in an integrated transport policy raises some important and complex issues. We are therefore setting up an advisory group to bring together motorcycle interests and other interested parties. This will allow discussion of issues of concern to those who ride motorcycles and of the ways we can work together on policies, including encouraging further improvements in the safety and environmental impact of motorcycling."

The establishment of the Advisory Group on Motorcycling, chaired by Lord Whitty, Transport Minister, was announced on 21 April 1999 with meetings to be held quarterly. A task force was set up within the Group to look at specific areas such as training and licensing, safety and the environment.

The Governments White Paper also stated that; "Whether there are benefits for the environment and for congestion from motorcycling depends on the purpose of the journey, the size of the motorcycle used and the type of transport the rider has switched from."

"In drawing up their local transport plans, local authorities consider specific measures to assist motorcyclists, such as secure parking at public transport interchange sites."

"We would welcome proposals from local authorities interested in conducting properly monitored pilot studies of the use of bus lanes by motorcycles, to help inform decisions on whether there is a case for motorcyclists to be allowed to use bus lanes."

In March 2000 the Department of the Environment, Transport and the Regions (DETR) issued guidance to Local Authorities for producing Local Transport Plans (LTP). In this document the DETR stated that;

"Mopeds and motorcycles can offer an affordable alternative means of transport for trips where public transport is limited and walking and cycling unrealistic, increasing mobility and widening employment opportunities. Local authorities should take account of the contribution powered two wheelers can make in delivering integrated transport policies, for example where they are being used in congested traffic conditions. Mopeds and small motorcycles may produce benefits if they substitute for car use, but the intention should not be to encourage people to switch from sustainable transport options - walking, cycling or public transport."

1.2 Purpose of the Powered Two Wheeler Strategy

The Essex PTW Strategy is a collection of elements and related actions that work together in an integrated way to create PTW facilities and promote PTW. They are intended to cater for the present and future needs of PTW within the broad context of transport and other related objectives within the County.

The purpose of the PTW Strategy can be summarised as:-

- Setting a clear vision for PTW throughout Essex.
- Providing the links between PTW and other related policy initiatives.
- Influencing the policy content of Local Plans, District Transportation Strategies and other key policy documents.
- Providing a reference point for the PTW element of District Transportation Strategies.
- Stimulating inter-agency work between local authorities and other organisations involved in the promotion of PTW and PTW facilities.
- Clarifying what is expected from the development plan process.
- Giving a framework for the PTW content of LTP and the annual progress reports.





1.3 Layout and Scope of the Powered Two Wheeler Strategy

	Section	Content
1	Introduction	Purpose and background to the development of the strategy and policy context.
2	Powered Two Wheelers in Essex	National trends, problems and opportunities and information relating to usage and accidents.
3	Objectives and Targets	Specific objectives for PTW set within the context of the LTP.
4	Strategy	Elements of the strategy.
5	Action Plan and Implementation	How the strategy will be implemented through the LTP and Development Plan processes.
6	Monitoring and Review	A list of performance indicators and specific targets which will be used to monitor the impact of the PTW Strategy.

1.4 A Note on terminology

Within this document powered two-wheelers (PTW) refer to any motorised two wheeled vehicle, excluding cyclemotors. Also it should be noted that the terms PTW and motorcycle are used throughout the document and maybe considered interchangeable.



2 - Powered Two Wheelers Usage

2.1 National Trends - Personal Travel¹

In setting the scene for assessing PTW usage it is helpful to appreciate some of the trends in personal travel nationally and how PTW usage is changing as a result.

- The average British resident travelled 6,666 miles each year in the period 1995/97, an increase of nearly half since the early 1970s. However, the average number of journeys per year has increased by only 10% over this period, and the time spent travelling was almost the same in 1995/97 as in 1972/73.
- Average journey length has increased by 22% over the last decade, from 5.2 miles in 1985/86 to 6.3 miles in 1995/97.
- The number of short journeys has gradually fallen, particularly those under a mile. There have been increases in the number of medium length journeys between 5 and 25 miles, but in the higher distance bands the average number of journeys has only increased marginally.
- 28% of journeys made in 1995/97 were under a mile, 80% of which were on foot.
- We spend an average of 2 weeks a year travelling, including nine days in our cars, and three days walking. An average journey by car takes 20 minutes.
- Commuting and travelling to shops each account for about 1 trip in 5. About 2 trips in 5 are for leisure purposes.
- Table 1 shows the number of journeys per person per year by the main mode of transport. The dominance of the car over other modes of transport, an increase of 53%, is apparent. Declines, however, are apparent in all other modes.



Table 1²

Mode	Journeys per person per year					Percentage change 1975-1997
	1975/76	1985/86	1989/91	1992/94	1995/97	
Walk	325	350	328	306	293	-10
Bicycle	30	25	21	18	17	-43
Car Driver	262	317	387	389	401	53
Motorcycle	9	9	6	5	4	-56

Please note that the statistics contained within the tables in this section are not literally per person but averaged across all involved in the NTS survey and reproduced as an index for comparison with earlier and later surveys.



Table 2 shows the average journey length by main mode of transport. Although, as demonstrated in Table 1, the number of motorcycle journeys has fallen, the average length of these journeys has steadily increased.

Table 2³

Mode	Average Journey Length - Miles					Percentage change 1975-1997
	1975/76	1985/86	1989/91	1992/94	1995/97	
Walk	0.6	0.6	0.6	0.6	0.6	--
Bicycle	1.7	1.8	1.9	2.0	2.3	35
Car Driver	7.5	7.6	8.0	8.2	8.5	13
Motorcycle	5.3	5.8	6.1	7.0	8.6	62

Table 3⁴

	Distance Travelled Per Person Per Year By Purpose & Main Mode: 1995/97			
	Walk	Bicycle	Car	Motorcycle
Commuting	14	14	888	14
Business	2	1	548	--
Education	17	1	26	1
Escort education	10	--	60	--
Shopping	39	3	383	2
Other escort	5	--	236	--
Personal business	15	2	233	2
Visiting friends at home	17	4	513	3
Visiting friends elsewhere	8	1	82	1
Sport/entertainment	7	3	189	2
Holiday/day trip	2	9	243	6
Other inc. just walk	32	--	9	--
All purposes	169	38	3,411	31

Table 3 shows that in relation to motorcycle use:

- 45% relates to commuting purposes.
- 19% relates to holidays/day trips.
- 10% relates to visiting friends.

Impracticalities associated with motorcycle use may restrict this mode of transport being used for other purposes. However, it should be noted that new designs in PTW now offer weather protection and boot space, which may help to address these practicalities.

Current trends in PTW use offer a good basis on which targets and performance indicators may be set. The statistics quoted revealed that although the number of journeys has decreased the average length of PTW journeys have increased with the main purpose of these journeys being for commuting purposes.

³ DETR - Focus on Personal Travel 1998.

⁴ DETR - Focus on Personal Travel 1998.

* Miles



2.2 Powered Two Wheeler Usage in Essex

Two main sources of data are available for assessing usage in Essex, firstly the ten yearly national census and secondly more recent information from the Essex Travel Survey.

These are set out below:

Area of the County	% using PTW as the primary mode of travel to work	
	1991 No. of trips	1991 modal split (%)
Basildon	450	1.14
Braintree	510	1.49
Brentwood	180	1.18
Castle Point	60	0.41
Chelmsford	690	1.54
Colchester	970	1.92
Epping Forest	130	0.61
Harlow	230	0.99
Maldon	160	1.20
Tendring	690	2.13
Uttlesford	190	1.09

The table above highlights the maximum contribution made by PTW as it expresses journeys made by users who both live and work in the District concerned. This is considered the best guide since usage drops off with increased distance travelled.

More recent information derived from the Essex travel survey indicated that 1.2% all trips undertaken by a sample of 2000 households used PTW as the primary mode of travel.

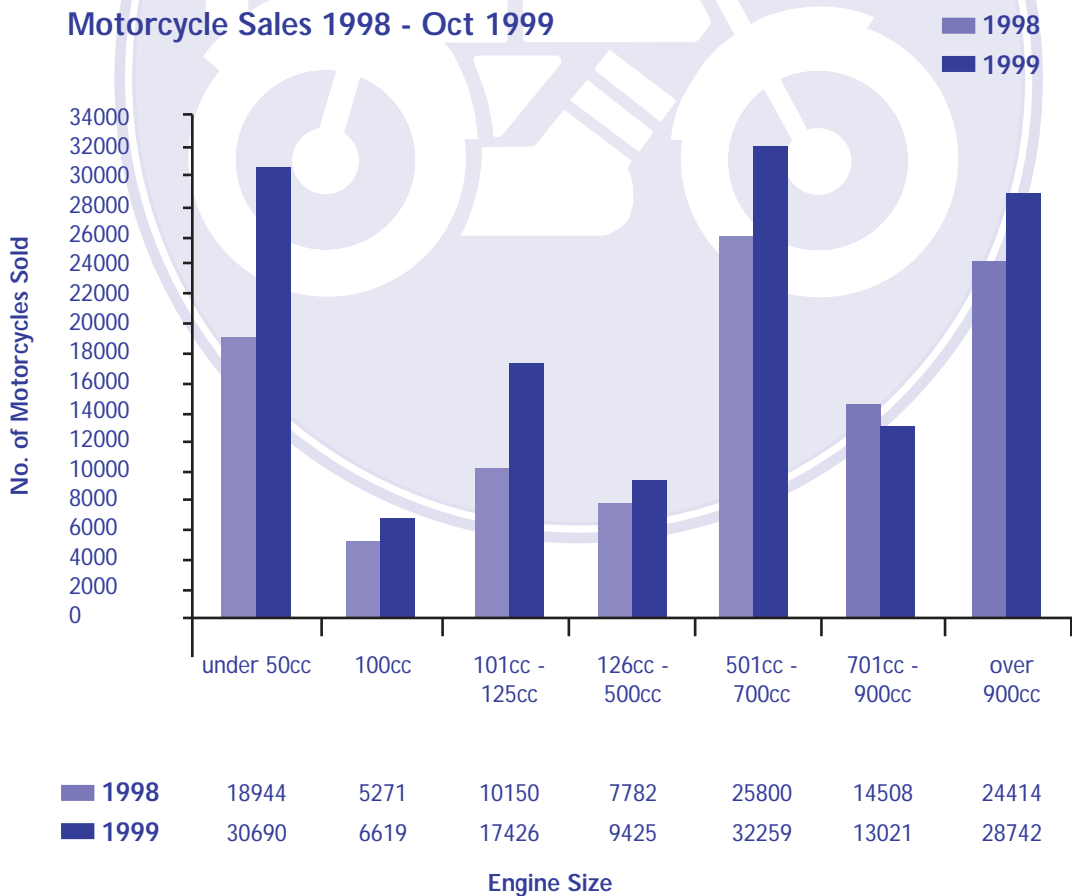
However, to gain a more accurate indicator of PTW usage in Essex, the possibility of PTW crossing annual screen line counts in some Essex towns will be looked into.



2.3 Powered Two Wheeler Sales

Sales of PTW have been on the increase nationally, especially scooters, the so called “commuter vehicles”, which are seen as a desirable mode of private transport for use in urban areas where their size and flexibility allow them to beat the traffic jams keeping journey time to a minimum. The sale of these vehicles have seen the most significant rise in the last year (1999); 62% in sales of vehicles under 50cc and 72% in sales of vehicles of 101cc – 125cc. This can be demonstrated in Fig. 1 below.

Fig 1⁵



- At the end of 1998 22,362 PTW were registered in Essex
- At the end of 1999 24,407 PTW were registered in Essex

3 - Opportunities and Problems



In order for the strategy to be meaningful it must address real and perceived problems and take advantage of opportunity areas that may exist; these areas are outlined below.

Opportunity Areas

There are many opportunities that PTW use can take advantage of. These are dealt with individually as follows:

3.1 Pollution

The Motor Vehicles Emissions Group of the European Commission reported that:

- PTW represent 15% of all powered vehicles in the EU.
- Of the total air pollution they produce less than:
 - 4% Carbon Monoxide.
 - 4% Nitrogen Oxide.
- Of the total contribution to greenhouse gasses they produce less than:
 - 1% Carbon Dioxide.

90% of PTW can run on unleaded petrol.

Table 1 below demonstrates that PTW are a more environmentally friendly form of private motorised transport as opposed to the car.

Table.1⁶

Car and PTW Emissions. Grammes per Passenger Km

Vehicle	Carbon Dioxide	Carbon Monoxide	Hydrocarbons	Nitrogen Oxides
Motorcycle	115	8.93	1.1	1.0
Car	165	12.85	1.5	1.4

Energy consumption relates to the energy content of fuels. Table 2 demonstrates that PTW use between 1/2 - 1/3 of energy when compared with that consumed by cars, before taking into consideration the number of passengers.

Table.2⁷

Primary Energy Consumption

Vehicle	Megajoules per vehicle km	Megajoules per passenger km
Moped	1.5	1.5
Motorcycle	1.9	1.7
Petrol Car (1.1Ltr)	2.6	1.5
Petrol Car (2.9Ltr)	5.3	3.0

⁶ London Transport Buses - Emissions and Air Pollution in London.

⁷ Banister, Wood, Watson 1994 - The relationship between energy use in transport and the urban form.

Table 3 below refers to fuel consumption by miles per gallon, and demonstrates that the majority of small to medium sized motorcycles are more fuel-efficient than cars. Even high performance sports bikes have improved fuel consumption compared to the car on congested roads, consuming between 55% and 81% less fuel than cars on the same journey.⁸

Table. 3 Fuel consumption⁹

Vehicle	Fuel Consumption
2-stroke 50cc Scooter (auto)	90.6 mpg
4-stroke 125cc Motorcycle	118.12 mpg
4-stroke 125cc Scooter (auto)	113 mpg
4-stroke 250cc Scooter (auto)	76 mpg
500cc Twin cylinder motorcycle	76 mpg
1,300cc Saloon Car	31.6 mpg (urban trips)
2,000cc Saloon Car	21.5 mpg (urban)

In 1992 Vienna, car owners looking for parking spaces used an extra 180,000 litres of fuel per day solely for this purpose.

Noise Pollution

It should be recognised that Essex Police receive numerous complaints in relation to the leisure use of PTW, with particular reference to noise. However, the negative contribution of noise should be qualified. PTW are not inherently noisy being subject to a maximum of 80db (A) for over 175cc under EC Type-Approval, with machines in use required to conform to Construction and Use Regulations. Noise from illegal exhaust systems is an enforcement issue, which does not come under the control of Essex County Council.

3.2 Congestion & Journey Times

In the majority of circumstances, PTW do not add to traffic congestion, and journey times are more predictable in congested conditions due to their ability to filter through traffic which has come to a stand still. In terms of vehicle breakdowns causing delays to other road users, a PTW rider has the advantage of being able to move his/her vehicle out of the way of the traffic flow, something, which is more difficult for the car driver to do on their own.

PTW may also serve to alleviate parking problems already experienced in many areas. In a parking space designed for a car, it is possible, depending on vehicle size, to park up to five PTW. Therefore, a modal shift away from the car would have a twofold effect. A reduction in the demand for parking land along with a reduction of congestion within urban areas caused by cars looking for parking spaces.



3.3 Highway Maintenance

Generally, PTW have low axle loadings and are of a lightweight construction, thus it can be argued that they are less responsible for road damage when compared with other motorised vehicles. It should also be recognised that few changes would be needed to the current road infrastructure in order to accommodate PTW, allowing greater use to be achieved without the major investment usually needed in order to accommodate cars.

3.4 Sustainability

It is recognised that in comparison with a car, PTW generally, have a lower fuel consumption, although on a per passenger basis the benefits are less clear. However, PTW emit more hydrocarbons and carbon monoxide per kilometre travelled than a car fitted with a catalytic converter, but similar amounts of nitrogen oxides and particulates, which are of the most concern in urban areas¹⁰.

In terms of resources, 75% of components from PTW can be re-used on other machines; the remaining 25% can be recycled¹¹.

The 1992 European Commission Green Paper on the impact of Transport in the Environment cited average vehicle occupancy rates as 1 to 1.2 persons during peak travelling times in European Cities.

3.5 Accessibility

The Governments' White Paper on Transport is concerned with widening travel choices. Indeed it recognises that those without a car have suffered, as the car has become increasingly necessary to enjoy a full range of goods and services. In this respect the PTW can offer a more economical alternative.

- On average a moped costs 12% of the price of a small car.
- Vehicle excise duty (VED) for a small PTW is nearly 14% of the cost of VED for the new lower taxation band for small cars.
- The VED for the largest PTW is still 66% cheaper than the cheapest rate for cars¹².
- As already demonstrated in Table 5, fuel consumption is far less than that of a car making them cheaper to run.



¹⁰Motorcycles, DETR, RSVD 1997

¹¹Motorcycle Industry - PTW the Smart Choice, 1999.

¹²Motorcycle Industry - PTW the Smart Choice, 1999.

Problems

There are several problems that affect PTW usage, which can be split into three areas; risks on the highway, PTW casualties and specific needs of PTW users.

3.6 Hazards on the Highway

PTW are vulnerable road users and may be affected by the following risks when riding on the highway:

- inattention of other road users
- junctions with poor visibility
- poorly maintained roads
- inadequate road surfaces, for example, poorly positioned manholes and gullies
- diesel spillages and other contamination of road surfaces
- Design and siting of street furniture, particularly crash barriers congested areas

With the proper kind of procedures in place that take into consideration the needs of PTW on the highway, many of these problems can be addressed. However, in terms of problems relating to the behaviour of other road users these may only be addressed over time by use of publicity campaigns. It should also be recognised that riders of PTW may bring about conflicts with others and may themselves benefit from a better appreciation of other road users.

3.7 PTW Casualties

Much has been done at a national level to reduce PTW casualties over the last 20 years. There has been legislation to improve the safety of new riders and to regulate the size of machines that the inexperienced rider can use. This has resulted in a decrease in PTW casualties, and a downturn in the use of PTW particularly amongst the young.

As illustrated below, between 1988 and 1998 PTW casualties have seen the most significant decrease in all severalties¹³.

- | | |
|-------------------------------|---------------|
| ● Pedal Cyclists | 13% decrease. |
| ● Pedestrians | 24% decrease. |
| ● PTW (inc. passengers) | 43% decrease. |
| ● Car (inc. passengers) | 23% increase. |
| ● Bus/Coach (inc. passengers) | 4% increase. |

However there has been an increase in PTW sales in recent years particularly at the higher end of the market with a growth in the sale of machines above 500cc of over 40% (from 1985 to 1995.)

Accidents have begun to rise as a result of the increased use, and there is growing concern about the increasing number of fatal accidents, particularly occurring during the summer months.





3.8 Essex Casualty Rates

In depth analysis undertaken in 1999¹⁴ indicated that there is a difference in the type of accident during 'leisure use' as opposed to commuter journeys. 'Leisure riders' are categorised as those at weekends between 8am and 9pm. 'Commuter riders' as those on Monday to Friday between 6-9am and 4-7pm.

The commuter journey has a similar level of risk to that of the pedal cycle with riders involved in 75% more multi-vehicle accidents than leisure riders travelling the same distance. Leisure riders are twice as likely to suffer more serious injury due to the type of road and the speed at which they are travelling.

In the three-year period 1997-1999 in Essex, 1,899 accidents involved a PTW¹⁵. This figure includes some accidents where the rider/passenger was not injured. Of these, 1,899 accidents, 1,048 occurred in urban areas and 851 occurred in rural areas.

- 40% of accidents involving PTW occurred at off peak times.
- 25% occurred at peak times.
- 35% at weekday times.

Examining the distribution of PTW accidents by junction shows that:

- 38% occur on links.
- 15% at mini or conventional roundabouts.
- 30% at T, Y or staggered junctions.
- 4% at cross roads.
- 8% at private drives.
- 5% at other junction types

In terms of numbers of vehicles involved, 66% of PTW accidents involve one other vehicle usually a car.

The data for 1999 allows the size of the PTW to be distinguished. Below the number and percentage of each vehicle type involved in the accidents is shown:-

Vehicles	Percentage	Size of PTW
106	14%	Mopeds
122	17%	125cc and under
501	69%	125cc and over

Without knowing the number of PTW by engine size in Essex it is difficult to work out an accident rate for each type of machine.

Casualty change 1981-1999¹⁶

The table below shows the changes to PTW casualties and includes both riders and passengers in the figures.

Table 1

casualties

Year	Fatal	Serious	Slight	Total
1981-85 av.	24	517	951	1492
1997	11	185	421	617
1998	13	165	395	573
1999	17	208	493	718
Change (%)				
1981-85 av. - 99	-29.2	-59.8	-48.2	-51.9
1998 to 1999	30.8	26.1	24.8	25.3

Comparing the 1999 PTW casualty figures to the 1981-85 average shows large reductions for all severities. During the 1980's legislation made it expensive and more difficult for young riders to take up motorcycling; instead young riders chose to purchase cars and the number of PTW users fell dramatically in Essex.

However, research by the DETR in 1998 showed that the number of PTW users had risen between 1996 and 1997, and that the average size of the engine purchased was larger. In recent years the numbers of PTW casualties in Essex have been small so conclusions drawn must be viewed with care. However, there has been an increase across all severities between 1998 and 1999, with an increase of 26.4% in fatal and serious.

Table 2

Motor cyclist casualties by age 1981-1985 average and 1999¹⁷

1981-85 Average	0-4	5-7	8-11	12-15	16	17-25	26-29	30-39	40-49	50-59	60-69	70-79	80+	NK	Total
Driver	0	0	0	4	176	865	77	105	64	44	21	4	1	2	1363
Passenger	0	0	1	6	14	93	4	6	1	1	0	0	0	1	127
1999	0-4	5-7	8-11	12-15	16	17-25	26-29	30-39	40-49	50-59	60-69	70-79	80+	NK	Total
Driver	0	0	0	4	59	158	99	195	98	24	11	6	1	21	676
Passenger	0	0	0	6	2	16	2	10	1	1	0	0	0	4	42

NK represents an unknown age.

As a result of rounding figures to whole numbers when calculating averages for the different age ranges, the total number of casualties calculated for the 1981-85 averages in Table 1 may vary slightly from the averages calculated in Table 2.

Comparing the numbers of casualties in 1999 with the 1981-85 average shows dramatic decreases for both rider and passenger casualties aged between 16 and 25. However, the number of rider and passenger casualties has stayed fairly constant for all other age groups except for the increase in casualties to riders aged 26-49. This may be due to an increase in the number of PTW bought by this age group over the last few years.

Previous research undertaken in the county had identified a greater risk associated with leisure riding compared with commuter use. In order to understand the nature of PTW accidents, recent trends needs to be studied further in order to devise education and engineering measures to help prevent the upward trend from continuing.

3.9 Accident Reduction 2000 Targets

In July 1989 the Government set a 40% reduction in PTW casualties by the year 2000. Since 1981 the number of PTW casualties has been decreasing and the 40% reduction has been bettered as a 62% reduction has been achieved. Although the number of casualties since 1992 seems to remain around the 600 mark, 1999 has seen PTW casualties increase by a quarter from the 1998 figures.

3.10 The New Targets

In 2000 the Government set a new 10-year target and launched a new Road Safety Strategy. By 2010 it wants to achieve, compared with the average for 1994-98:

- A 40% reduction in the number of people killed or seriously injured in road accidents;
- A 50% reduction in the number of children killed or seriously injured; and
- A 10% reduction in the slight casualty rate, expressed as the number of people slightly injured per 100 million vehicle kilometres.

The County Council has responded to these targets by producing its own Road Safety Strategy that amongst other matters aims to reduce risks and casualties to PTW users and to promote safer usage through publicity and other campaigns.

3.11 Specific Needs of PTW

In general terms the needs of PTW are similar to private cars. However, to encourage sustainable usage there may be a need to redress a lack of facilities for PTW users in certain situations. These are briefly outline below but are covered comprehensively as part of the strategy and action plan sections of the document.

(a) Parking Issues There is a need for designated secure parking for PTW in well-lit areas, particularly at public transport interchanges and at town centres. Storage facilities are beneficial at the workplace (implemented for example as part of Staff Travel Plans), and at rail stations to enable PTW users to store their helmets and protective/reflective clothing. Allowing PTW exemption from parking fees in public car parks would enable users to park in these car parks. At present, those car parks with pay and display tickets cannot be used, as there is nowhere secure to place a ticket on a PTW. It may also be useful to investigate 'dead space' in car parks, which cannot be used by cars, as potential areas for PTW parking.

(b) Access Issues Allowing PTW in areas currently restricted to public transport and pedal cycles, as well as the use of bus lanes would add to the safety of PTW users by diverting them away from the main areas of traffic in urban areas.

(c) Other Issues There is a need for greater levels of information about facilities for PTW, in particular clear signage of facilities on approaches to towns, as well as ensuring their needs are considered in land use and transportation planning mechanisms.

4 - Objectives

4.1 Powered Two Wheelers as part of the Essex Local Transport Plan

In March 2000, the DETR issued guidance to Local Authorities for producing LTPs. The requirements for addressing the needs of PTW were included in the guidance. Essex County Council has included PTW within the LTP as part of its functional policy statement covering private motorised travel. These functional policy statements highlight the contribution of individual modes of transport to five Integrated Transport Themes. The following table demonstrates both the positive and negative contributions to these areas made by PTW.

Integrated Transport Theme	Relationship with PTW	
	Positive Contribution	Negative Contribution
Encouraging Sustainable Development and Travel Patterns.	<ul style="list-style-type: none"> ● Inclusion within Green Commuter Plans. ● Provision of facilities within new developments. ● Less affected by congestion. ● Shorter travelling times in congested areas. 	<ul style="list-style-type: none"> ● PTW are typically a one-person form of transport, although it should be recognised that they have the ability to carry a passenger.
Creating an Inclusive Transport System by Providing Choice and Accessibility.	<ul style="list-style-type: none"> ● Inexpensive and flexible mode of transport. ● Provision of PTW facilities creates more choice. 	<ul style="list-style-type: none"> ● May be poorly perceived in terms of image or exposure to danger or risk. ● May attract those walking, cycling or using public transport.
Management of Overall Travel Demand and The Transport Network.	<ul style="list-style-type: none"> ● Ability to use the transport infrastructure already in place, without the need for major investment. ● Use of bus lanes by PTW makes better use of available road space. 	<ul style="list-style-type: none"> ● Not necessarily an ideal form of transport for long distance journeys.
Expanding Transport Capacity.	<ul style="list-style-type: none"> ● Better use of available road and parking space. 	<ul style="list-style-type: none"> ● Unable to carry bulky or heavy goods.
Protecting and Enhancing Rural and Urban Environments and Communities.	<ul style="list-style-type: none"> ● Produce less pollution than other forms of motorised transport. ● Less conspicuous than private cars. ● Provides more choice. 	<ul style="list-style-type: none"> ● Noise pollution. ● Vulnerable road user.

4.2 Objectives

The objectives of the Essex Local Transport Plan are the backbone to all transport-related policy and strategy within the county. The objective headings were issued as guidance by the DETR. Essex County Council has adopted an additional objective relating to the efficient use of resources, and has formulated sub-objectives under each heading which relate to local conditions in Essex. The table below shows the relationship between these objectives and the PTW policy for Essex. ✓✓ indicates a strong link, ✓ a less direct link and ✗ weak or no direct link.

Objectives	Sub-objectives	Link	Relationship to strategy
Environment – to protect and enhance the built and natural environment.	Reduce the growth in the length, duration and number of motorised journeys, particularly for peak hour trips to and within urban areas, in order to improve air quality and to contribute to reducing the forecast growth in carbon dioxide emissions.	✓	Powered two wheelers produce less pollution damaging to health and through their more efficient engines reducing the amount of carbon dioxide which reduces the greenhouse affect.
	Protect sensitive urban and rural environments from adverse impacts of transport.	✓	PTW are less visually intrusive and their parking requirements are less than for other forms of motorised transport.
	Work with others towards reducing vehicle emissions.	✓	Increased usage of PTW would lead to a reduction in private car trips and as such the strategy would assist this area.
	Encourage use of sustainable modes of transport.	✓	The strategy seeks to promote PTW as a sustainable mode of travel especially for short trips.
Safety – to improve safety for all travellers.	Achieve, as a minimum, national targets for road accident and casualty reductions especially through speed reduction measures and by reducing risks to vulnerable road users.	✓ ✓	The strategy seeks to create safer conditions for PTW usage, and encourage safer rider behaviour.
	Reduce crime, and the fear of crime, on the transport system and in public places.	✓	Security of PTW is an issue and the strategy seeks to reduce thefts.

Objectives	Sub-objectives	Link	Relationship to strategy
Economy – to contribute to an efficient economy, and to support sustainable economic growth in appropriate locations.	Support the designated priority areas for economic regeneration.	✓	The strategy would assist this area of the plan in a modest way by promoting an affordable accessible mode of transport.
	Develop a safe and efficient transport network for longer distance trips to support economic prosperity, minimise the cost of congestion to business and to make Essex an attractive location for business.	✗	The strategy is not seeking to promote longer distance travel by PTW and hence its contribution would primarily be through reductions in traffic congestion in urban areas.
	Support the economic vitality and viability of town centres, the viability of village communities and give residents the opportunity to meet shopping and other needs locally.	✓	Through exemptions to general vehicle restrictions which often apply around town centres PTW offers an alternative mode of travel available to many people.
Accessibility – to promote accessibility to everyday facilities for all, especially those without a car.	Work with the community, voluntary groups, the rail industry and bus operators to improve accessibility and reliability for all travellers including the mobility impaired.	✓	PTW have a key role to play in accessing transport interchanges for longer distance commuting trips in particular. The strategy aims to enhance existing facilities.
	Maintain and enhance, as far as possible, a level of transport services to meet the social needs of rural communities where these cannot be provided commercially.	✓	PTW are a low cost form of transport, which may provide an alternative to those of low income without access to a car, and where public transport is non-existent or limited.
	Provide, as far as possible, for the travel needs of sectors of the community without access to a car.	✓ ✓	PTW can offer a transport solution to those without cars or unable to afford them.
	Encourage employers, major retailers and leisure operators to implement travel plans.	✓ ✓	The strategy aims to encourage usage of PTW through company travel plans.

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Objectives	Sub-objectives	Link	Relationship to strategy
Integration – to promote the integration of all forms of transport with land use planning, leading to a better, more efficient transport system.	Accommodate the additional housing and economic development required by Regional Planning Guidance in a way that encourages sustainable travel patterns.	✓	By promoting an environment which encourages shorter trips the development strategy should encourage trips by PTW.
	Work with national government, regional bodies, the rail industry and bus operators to develop improved travel information through ticketing and transport interchanges for passengers and freight.	✗	No direct link.
	Accommodate the permitted expansion of Stansted Airport in a sustainable way.	✓	The Surface Access Strategy being developed aims to cater for travel by PTW.
Efficient use of Resources – to seek and encourage investment in transport and make efficient use of the resources available.	Maintain the existing transport system to an appropriate standard and to manage the system to optimise and minimise congestion.	✓	PTW have a role to play in reducing congestion levels.
	Seek private sector and other sources of funding towards transport improvements and measures to protect, and where possible enhance, the transport network in areas of new development.	✓	Developers will be expected to consider the needs PTW when planning new developments.





4.3 Powered Two Wheeler Strategy Objectives

The objectives of the Essex Powered Two Wheeler Strategy are shown below. Each has been supported by a set of sub-objectives that relate specifically to PTW use.

Objective One: To improve the road environment for PTW and introduce facilities, which assist their usage.

- To highlight opportunities to improve highway conditions for users of PTW.
- To maximise the opportunities to provide parking facilities.
- To reduce motorcycle theft.
- To adapt traffic management systems where appropriate to assist users of PTW.
- To evaluate and pilot use of bus lanes and bus gates by PTW.

Objective Two: To promote sustainable PTW usage.

- To work with key stakeholders in encouraging PTW use as an alternative to the car.
- To contribute towards Essex County Council's strategies and targets for improving air quality and by encouraging the use of PTW as an alternative to the car.
- To highlight the contribution made by PTW in reducing congestion and contributing towards traffic reduction strategies.
- To encourage employers to include PTW users in Staff and Company Transport Plans.
- To provide information on PTW use and availability of facilities.

Objective Three: To improve Safety for those using PTW.

- To consider the safety implications of promoting the sustainable safe use of PTW as part of an integrated transport strategy for Essex.
- To investigate the best methods and means of targeting the leisure motorcyclist to ensure that they are informed of all issues related to leisure riding.
- To consider PTW users in the Safety Audit guidelines.
- To provide facilities which directly improve the safety of PTW users.
- To work with the Police to effectively target areas where PTW users cause a nuisance and present a danger to themselves and others on the highway.

Objective Four: To promote the Integration of PTW within all transportation and land use planning mechanisms and related policy areas.

- To consider the needs of PTW users at public transport interchanges.
- To seek the provision of adequate secure parking facilities as part of new developments.
- To consider the needs of PTW users in any future plans in relation to major improvements on the highway or as a result of redevelopment.
- To include the needs of PTW within District Transportation Strategies, Local and Structure Plans, and other similar strategies.

5 - The Essex Powered Two Wheeler Strategy

Outlined below is the proposed strategy that Essex County Council intends to adopt. These initiatives are designed to encourage PTW use as an alternative to the car mainly in urban areas. They are also designed to make better use of the current transport infrastructure by helping to alleviate congestion. This can often be achieved simply by making better use of available road space. By introducing schemes such as allowing PTW into town centres currently restricted to public transport and pedal cycles only, and the use of bus lanes under a monitored pilot scheme, traffic will be re-distributed from congested areas that currently affect our towns, especially during peak times. This in turn will lead to shorter journey times for those choosing to travel by this mode.

The introduction of designated parking areas and facilities, particularly at public transport interchanges will afford more opportunity and accessibility for PTW users. It is also intended to take into consideration the needs of PTW when planning new developments, green commuter plans and the building of new roads/improvements of existing ones, which are already given to other modes of both private and public transport. Publicity initiatives related to safety will be aimed at making all road users more aware of the PTW.

5.1 Parking

The availability of parking areas on and off the highway is a major factor in deciding whether to travel by PTW. The promotion of the following initiatives will be examined:

- Secure parking facilities and areas close to destinations in town centres.
- Signs indicating parking for PTW.
- Free parking in local authority controlled car parks.

5.2 Theft

Parking areas where machines are likely to be left for several hours or are left in un-supervised locations need additional safety and security facilities and the following will be investigated to assist in reducing theft:

- Parking stands designed for PTW to be made available in public car parks and in certain designated areas in town, neighbourhood and village centres.
- Undercover facilities in public car parks with lockers for the storage of helmets/protective clothing.
- CCTV to deter theft and assist with detection of stolen PTW.

5.3 Integration at Public Transport Interchanges

Access to stations in Essex is a major consideration in developing integrated transport initiatives in the LTP. The following areas will be explored:

- Provision of secure free parking/storage facilities at rail stations.
- Good access arrangements to car parks.

5.4 Traffic Management Systems

PTW may be encouraged by careful redesign of existing traffic management systems. The following initiatives will be considered:

- Introduction of a monitored pilot scheme allowing PTW to use bus lanes.
- Consideration of exemptions to traffic orders similar to those applied to pedal cycles.

5.5 Staff Travel Plans

PTW users can benefit in many ways from being included in staff and company travel plans. The following initiatives will be pursued:

- The inclusion of PTW in staff travel plans negotiated as part of new development.
- The inclusion of PTW users in the County Council's own staff travel plan.



5.6 New Developments and other Major changes to the Highway system

New developments or major transport schemes often result in substantial alterations to existing highway systems. It will be important to take advantage of these opportunities:

- The needs of PTW when planning access to new developments.
- The needs of PTW in plans when considering improvement to existing highways and the building of new roads.
- The introduction of parking standards for PTW as stated in the Essex Planning Officers Association Vehicle Parking Standards. One space, plus an additional space for every ten car parking spaces.

5.7 Road Maintenance/Geometry

PTW are susceptible not only to imperfections in road surfaces, but also to debris on the road. It will therefore be useful to:

- Examine existing maintenance procedures to ensure that the needs of PTW can be taken into account.
- Relate maintenance regimes, road geometry, risks of accidents and accident patterns.

5.8 Safety

To overcome the impression that motorcycling is dangerous and to reduce casualties, road safety and accident reduction programmes can assist by:

- Introducing traffic management measures which reduce risks to vulnerable road users such as PTW and cyclists.
- Increasing the awareness of all road users to the needs of PTW.
- Encouraging the use of protective and reflective clothing.
- Applying audit changes to the road system in respect of risks to PTW users.
- Analysing and reporting upon PTW casualties and taking action at problem sites.
- Including PTW in a "Share the Roads" campaign.
- Working with the Police to target sites where inappropriate speed, and, rider behaviour, is a problem.

5.9 Publicity

It will be important to highlight the activities of the strategy through publicity material in order to:

- Encourage sustainable use of PTW as a mode of transport and an alternative to the car, particularly in urban areas.
- Reinforce road safety initiatives.
- Advertise facilities for PTW.

5.10 Partnerships and Joint Working

The strategy will be more effective the more it seeks to involve users and those in a position to assist in developing facilities or other initiatives. The following is proposed:

- Encourage partnerships between Essex County Council, other Local Authorities and PTW User/Interest Groups.
- Encourage District Councils to make provision for PTW in their local plans, when assessing planning applications and as part of their role in developing District Transportation Strategies.
- Encourage Public Transport Operators to consider PTW access and parking issues when proposing changes to the layout of interchanges and to participate in joint funding initiatives with local authorities and others.
- Continuing the consultation with PTW user groups by developing a safety forum to consider issues related to PTW safety.



6 - Implementation & Action Plan

6.1 Introduction

Implementation will be carried out primarily through the LTP in terms of both capital and revenue funding. To lend the strategy some foundation an initial three-year action plan has been devised. Implementation arrangements will vary but the LTP will be used to guide the geographic and activity based initiatives proposed in the action plan. These are outlined below.

6.2 The Action Plan

A list of projects - grouped under each strategy element - has been established for the next three years, and target dates attached for the completion of each project. The key players involved in the implementation of each project have been identified. Usually staff of the County Council and District Councils will be involved. The projects are summarised in the Action Plan shown on page 28.

6.3 Implementation Arrangements

A list of specific schemes for implementation will emerge from many of the projects in the Action Plan. The main vehicle for the introduction of these schemes will be the LTP, which sets the scene for the implementation of all transport proposals for the next five years. Implementation arrangements within the LTP are proposed in relation to the following geographic division of the county.

- Main urban areas (over 25,000 people)
- Large Towns (over 10,000 people)
- Rural Areas
- Inter urban corridors
- Countywide

Initiatives and schemes will be developed as follows:

- Through District Transportation Strategies.
- Through the planning of large capital schemes.
- Through the development plan process.
- Through partnership working with others such as transport operators.
- Through countywide programmes or activities such as the development of road safety strategies.

6.4 Sources of Finance

Financial resources for implementing the Strategy will come from a variety of sources - the LTP to include capital investment and revenue support, District Councils, developers and other quarters. The Council will be proactive in seeking opportunities to secure funding for measures that encourage PTW from a variety of sources.

It will not be easy to pin point precisely how much investment is allocated to the vision of encouraging

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more PTW, because components will be funded from a number of programme areas. For example, part of the accident reduction programme may be spent on measures that contribute to encouraging PTW use because an accident problem site is improved. The intention is to work with District Councils and others to keep records of the investment on physical and promotional measures where the key objective is to encourage the sustainable use of PTW.

The investment from several of the contributory sources will vary considerably from year to year. An important purpose of the PTW Strategy is to have plans in place that can respond constructively to implementation opportunities as they arise. The variability in the expenditure pattern will become clear as information on the annual amounts is established. Usually the total expenditure will not be known until after the close of the financial year.

At the time of compiling this strategy document the following profile of expenditure is anticipated from the LTP alone to cover the areas of Road Safety and Traffic Management alone.

YEAR	AMOUNT (£ Millions)
2001/2002	6.8
2002/2003	7.7
2003/2004	7.4
2004/2005	6.3
2005/2006	6.6
TOTAL FIVE YEAR LTP	35





6 Powered Two Wheeler Action Plan – Implementing the Strategy

Strategy Element & Policy	Action to be Taken	Spatial Impact	Responsibility for Implementation	Priority	Timescale
Parking					
<ul style="list-style-type: none"> Designated PTW parking. 	<ul style="list-style-type: none"> Introduce a programme of PTW parking facilities. 	Main urban areas/ Large towns.	ECC/Districts.	High.	2001/3.
	<ul style="list-style-type: none"> Devise parking standards for town centre areas based on current usage. 	Main urban areas/ Large towns.	ECC/Districts.	High.	2001/2.
<ul style="list-style-type: none"> PTW parking signs. 	<ul style="list-style-type: none"> Introduce a programme of Signs indicating facilities for PTW parking. 	Main urban areas/ Large towns.	ECC/Districts.	Medium.	LTP
<ul style="list-style-type: none"> Free & unrestricted parking. 	<ul style="list-style-type: none"> Promote a trial Free parking in public car parks scheme and monitor its affect. 	Main urban areas.	Districts.	Medium.	LTP
Theft					
<ul style="list-style-type: none"> Secure parking/storage facilities. 	<ul style="list-style-type: none"> Devise a Good Practice Guide covering design of PTW parking stands and storage facilities. 	Countywide.	ECC/Motorcycle Industry.	High.	2001/2.
Integration at Public Transport Interchanges					
<ul style="list-style-type: none"> PTW parking facilities at major transport interchanges. 	<ul style="list-style-type: none"> Audit of existing facilities available at rail stations. Devise programme of enhanced provision of parking facilities. 	Countywide.	ECC/Districts/Rail Operators.	Medium.	2001/3.
<ul style="list-style-type: none"> Access. 	<ul style="list-style-type: none"> Action to be determined. 	Countywide.	ECC/Districts/Rail Operators.	Medium.	2001/3.

6 Powered Two Wheeler Action Plan – Implementing the Strategy

Strategy Element & Policy	Action to be Taken	Spatial Impact	Responsibility for Implementation	Priority	Timescale
Traffic Management & Bus Lanes					
<ul style="list-style-type: none"> ● Monitored pilot scheme. 	<ul style="list-style-type: none"> ● Identify bus lane locations for trial. 	Main urban areas/ Large towns.	ECC/District/Bus Operators.	Medium.	2001/3.
<ul style="list-style-type: none"> ● Exemptions to Traffic Orders. 	<ul style="list-style-type: none"> ● Advice note to be prepared. 	Countywide.	ECC.	Medium.	2001/3.
Staff Travel Plans					
<ul style="list-style-type: none"> ● The inclusion of PTW in staff travel plans. 	<ul style="list-style-type: none"> ● Prepare advice note for use by developers. ● Introduce enhanced facilities for PTW at County Hall. 	Countywide.	ECC.	High.	2001/2.
New Developments and Major Changes to the Highway System					
<ul style="list-style-type: none"> ● Consideration of the needs of PTW in new developments. 	<ul style="list-style-type: none"> ● Devise PTW parking standards for use in assessing development proposals. ● Devise a checklist for assisting access and parking needs for PTW at new developments. 	Countywide.	ECC/Districts.	High.	2000/1.
<ul style="list-style-type: none"> ● Considering the needs of PTW when improving existing/new highways. 	<ul style="list-style-type: none"> ● Action to be determined. 	Countywide.	ECC/Districts.	High.	2001/2.
Highway Maintenance					
<ul style="list-style-type: none"> ● Examine existing maintenance procedures. 	<ul style="list-style-type: none"> ● Review of maintenance practices. 	Countywide.	ECC.	High.	2001/3.



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Strategy Element & Policy	Action to be Taken	Spatial Impact	Responsibility for Implementation	Priority	Timescale
Safety					
<ul style="list-style-type: none"> ● Increase awareness of all road users to needs of PTW. 	<ul style="list-style-type: none"> ● Ongoing in association with Road Safety Strategy. 	Countywide.	ECC/Districts.	High.	LTP.
<ul style="list-style-type: none"> ● To encourage the use of protective and reflective clothing. 	<ul style="list-style-type: none"> ● Ongoing publicity in association with Road Safety Strategy. 	Countywide.	ECC/Districts.	High.	LTP.
<ul style="list-style-type: none"> ● PTW casualties. 	<ul style="list-style-type: none"> ● Review existing road safety audit procedures in association with Road Safety Strategy. ● Commission and report upon PTW accident and casualty trends and produce a plan for remedial action. 	Countywide.	ECC.	High.	2001/2.
<ul style="list-style-type: none"> ● Share the Roads Campaign. 	<ul style="list-style-type: none"> ● In conjunction with Road Safety Strategy. 	Countywide.	ECC.	High.	2001/2.
<ul style="list-style-type: none"> ● Appropriate speed choice and riding standards. 	<ul style="list-style-type: none"> ● Liase with Police on problem sites and take joint action. 	Countywide.	ECC.	High.	2001/2.
Publicity					
<ul style="list-style-type: none"> ● Encourage the use of PTW as a mode of transport and to reinforce safety initiatives. 	<ul style="list-style-type: none"> ● Leaflet/Guide to be produced. 	Countywide.	ECC.	Medium.	2001/3.
<ul style="list-style-type: none"> ● Advertise facilities for PTW. 	<ul style="list-style-type: none"> ● Ongoing as opportunities arise. 	Countywide.	ECC/Other Organisations.	Medium.	LTP.

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Strategy Element & Policy	Action to be Taken	Spatial Impact	Responsibility for Implementation	Priority	Timescale
Partnerships <ul style="list-style-type: none"> To encourage partnerships between Essex County Council, other Local Authorities and Motorcycle User/ Interest Groups. 	<ul style="list-style-type: none"> To set up a Local Forum between ECC and PTW User/ Interest groups. To discuss PTW issues in Eastern Region. 	Countywide.	ECC/ERDET. 	High.	2001/2.
<ul style="list-style-type: none"> To encourage District Councils to make provisions for PTW. 	<ul style="list-style-type: none"> Ongoing review of District Transportation Strategies and Local Plans. 	Countywide.	ECC/Districts.	High.	LTP.
<ul style="list-style-type: none"> To encourage P/T Operators to consider the needs of PTW. 	<ul style="list-style-type: none"> Consider issues at regular liaison meetings. 	Countywide.	ECC/Rail Operators.	Medium.	2001/3.
Target & Performance Indicators					
<ul style="list-style-type: none"> Monitoring & Evaluation. 	<ul style="list-style-type: none"> To identify missing target and performance indicators. 	Countywide.	ECC.	High.	2001/2.
<ul style="list-style-type: none"> Funding & Partnerships 	<ul style="list-style-type: none"> To identify a monitoring and evaluation system in which to assess the impact of the PTW Strategy. 	Countywide.	ECC.	High.	2001/2.
	<ul style="list-style-type: none"> To identify further partners and funding opportunities. 	Countywide.	ECC.	Medium.	LTP.





7 Monitoring and Review

7.1 Monitoring

In order that the County Council and others can understand the impact which the PTW Strategy is having, and the extent to which the Objectives are being achieved, a series of Performance Indicators and Targets (see page 35) have been derived. These will be the focus of the annual monitoring process.

The Performance Indicators explain how the Objectives will be measured. We have selected Indicators which measure Outputs (what is actually done) and Outcomes (the results of actions), rather than measures of Inputs.

Targets specify a desired value for a Performance Indicator at some time in the future. The County Council have not generally specified targets for each performance indicator at this stage. Further work is needed to derive measurable, relevant targets for some performance indicators.

The focus of the monitoring activity will be directed to the performance indicators and targets against which the County Council shall assess the extent to which the implementation of PTW Strategy is delivering its impact. However, monitoring certain cycling information is useful to add to our back-ground knowledge of motorcycling throughout Essex. So we shall also use automatic cycle counters and manual counts at:

- a sample of regular sites to check the trends in PTW activity;
- sites where measures to encourage PTW are being implemented, so that we better understand the impact of these local measures; and
- sites that can be integrated with other transport monitoring.



We shall seek the assistance of others to help provide regular PTW information:

- parked motorcycles at railway stations and in town centres;
- motorcycling to work at companies with travel plans; and

It is intended to repeat the Essex Travel Diary periodically, which will measure PTW ownership, usage to work and attitudes to motorcycling.

7.2 Review


We shall include specific sums of money for PTW facilities in our annual works programme, and shall roll-forward the three year Action Plan so that well-planned and prioritised proposals feed into future work programme.

We shall include a statement describing the implementation of the PTW Strategy and its effect each year in our annual progress report that is part of the LTP process. We shall review the PTW Strategy formally at the end of the LTP period or at an earlier date if we are not making sufficient progress in achieving our Objectives.





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Objective	Performance Indicator Partnerships	Data Source	Target
O1: To improve the road environment for PTW usage and introduce facilities which assist their usage. 	1.1: Number of publicly available PTW parking places.	Biennial surveys.	1.1: Target to be identified.
	1.2: No. motorcycles stolen.	Police & Transport Police records.	1.2: Target to be identified.
	1.3: motorcycle recovery rate.	Police & Transport Police records.	1.3: Target to be identified.
	1.4: No. employers implementing company travel plans.	Department records.	1.4: No target yet.
	1.5: Total investment on specific PTW facilities.	Local authority records.	1.5: No target.
O2: To promote sustainable Powered Two Wheeler Usage.	2.1: Modal share for work journey.	Census data + travel diary.	2.1: Target to be identified.
O3: To improve Safety for those using PTW.	3.1: Nos. killed and seriously injured.	Extras Database.	3.1: Reductions in line with Essex Road Safety Strategy.
	3.2: Nos. involved in slight accidents.	Extras Database.	3.2: Reductions in line with Essex Road Safety Strategy.
O4: To promote the Integration of PTW within all transportation and land use planning mechanisms and related policy areas.	4.1: No. of parking facilities available at P/T interchanges.	Biennial surveys.	4.1: Target to be identified.

Essex Powered Two Wheeler Strategy

August 2001



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This document is available in alternative format on request Please Call 01245 437616



Essex **Powered Two Wheeler** Strategy



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