

**FINAL  
REPORT 11/75**

**STUDY OF URBAN  
WORKLOADS**

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**POLICE RESEARCH  
SERVICES UNIT  
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STUDY OF URBAN WORKLOADS —

Final Report

by

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Report 11/75

The views and conclusions expressed in this memorandum are those of the authors and do not necessarily represent those of the Home Office.

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STUDY OF URBAN WORKLOADS

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SUMMARY AND CONCLUSIONS

1. Before 1967 the main patrol effort of uniform police in the United Kingdom was carried out on foot or on bicycles. Research had however been carried out into the possible use of family-type saloon cars to raise the level of patrol and to compensate for a fall in the number of officers available for uniform patrol duty.
2. A scheme of policing based on the use of small cars and the newly-developed UHF personal radios was developed after research in Lancashire and published as an appendix to the Police Manpower, Equipment and Efficiency Report of 1967. In that year police forces were offered sufficient vehicles to enable them to develop schemes within the general concept outlined - these schemes were generally described as "unit beat policing".
3. The introduction of these cars and personal radios was probably the biggest single advance in equipment in the history of the British Police Service. Unit beat policing was seen as the natural development of traditional policing using mobility and communications.
4. Development should have been made along flexible lines but in many cases the description set out in the Report was rigorously followed and the opportunity to introduce variations to suit local requirements was not fully grasped. Assessment of the number of vehicles, the size of beats and the deployment of manpower and equipment was largely based on a prescribed formulae for the conversion of long-established foot beats and a continuation of a basic 3-shift system. The difficulties involved in devising, adapting and managing deployment, shift and scheduling systems flexible enough to take advantage of radio communications, mobility and the area constable role were perhaps not appreciated in 1967. Encouragement and help along these lines is still required to achieve the full potential of unit beat policing.
5. In two towns studied considerable variations in the basic concept were observed. In one 44% of manpower was deployed on the area constable role, while in another no area constables had been appointed. Because of the use of a standard formula differences in the patrol level which existed before the introduction of unit beat policing tended to be reproduced in the scheme adopted.
6. Measured against the five aims of unit beat policing listed in Appendix 30 the conclusions of the study team are as follows:
  - (a) that police efficiency has been improved - although some of the improvement is attributable to the provision of vehicles and good communications rather than to a new system of policing,
  - (b) that where the role of area constable is allowed to develop there is a significant improvement in contact with the public,
  - (c) that panda vehicles have provided a swifter response to calls for assistance - albeit at some cost to the foot patrolling effort,
  - (d) that the potential exists for a very considerable improvement in the flow of information from the public through the area constable, and that generally this potential has not been exploited. The role of the collator is crucial to the achievement of this aim,
  - (e) the improved communications and mobility, and the new systems of policing, have enabled the Police Service to cope with an annual increase in workload without commensurate increases in manpower,
  - (f) the studies show up very clearly the major incident response

role given to the panda vehicles which has resulted in the improvement in response time. This role has given young constables the challenge of, and experience in incident work which they would not have gained under the former policing methods.

The team's overall conclusion is that the idea of unit beat policing has not been fully developed in practical and organisational terms, and that the schemes studied, although beneficial, do not achieve the full potential of a unit beat system.

7. Although the main concern of the study was the general application of unit beat policing systems, and it was not intended to go beyond this area of enquiry or to explore particular aspects in any detail, the study team believe that police forces would be interested to have a list of questions discussed during the study. These are given in recommendation form at the end of this report together with references to the paragraphs of the report which give rise to them. Some may be thought worthy of further enquiry or research, and no doubt individual forces will want to consider whether there would be value in sponsoring further work in a particular area.

INTRODUCTION

8. This study of police urban workloads was carried out by the Management and Organisation Group of the Home Office Police Research Services Unit. The project team consisted of a senior police officer and an O & M assignment officer, with assistance from computer staff. The study was designed in 1971 and field work completed in nine police forces by late 1973. In view of the large amount of data collected and analysed separate interim papers are available giving details of the three main phases of the study. This report is intended to consider and discuss the wider issues thrown up by the detailed studies, in particular as they relate to unit beat policing.

BACKGROUND TO UNIT BEAT POLICING

9. In 1966 the Police Advisory Board set up working parties to consider problems of police manpower, equipment, and operational efficiency and management. The report of the working party concerned with operational efficiency considered that progress towards the aims of providing a better service to the public, increasing the interest, responsibility and status of the man on the beat, and achieving a more economic utilisation of manpower was hampered by the traditional fixed foot beat system coupled with manpower shortages. They considered that a more flexible system should be adopted which exploited the availability of personal radio equipment and the more intensive use of vehicles, and which at the same time gave an overall saving in manpower which would enable a shorter working week to be adopted.

10. A type of motorised beat policing which formed the basis for an experiment in the Lancashire force was regarded as particularly promising and was recommended for wider application.

THE CONCEPT OF UNIT BEAT POLICING

11. A new method of policing was tried out as an experiment in Accrington and was called unit beat policing (see Appendix 30). Police forces generally were encouraged to adopt a similar system and were provided with personal radio systems and vehicles appropriate to a scheme based on the Accrington model (Home Office Circular 142/1967/F5).

12. The Accrington Scheme had five components:

- a. special single manned vehicles (known generally as "panda cars" from their markings);
- b. men permanently posted to an area and working discretionary hours, now known by several designations but most commonly as "area constable";
- c. officers engaged on foot patrol beats in town centres;
- d. a CID officer;
- e. a collator.

The original concept of a panda vehicle driver involved a 24 hour combined foot patrol and incident response function. The compatibility of these two roles will be discussed later in this report.

13. The role of the area constable was interpreted as "the friendly neighbourhood policeman", and apart from the public goodwill generated he was expected to carry a heavy responsibility for gathering information about activity in his area which might help to prevent or solve crime, and also to encourage a feeling of tranquillity and security by the public.

14. The foot patrol officer provided patrol for special areas of high risk such as shopping centres, market areas, or entertainment and other venues where mobile patrol was not suitable.

15. The idea of earmarking particular unit beat areas for exclusive attention by a CID officer so as to create a completely integrated police effort has not been generally accepted. The objections are mainly of an administrative and organisational nature, but one practical point was that if a JID officer is obliged to concentrate his efforts he is more vulnerable to complaints and his outlook tends to become parochial.

16. The collator, usually provided on a divisional basis to cover up to 20 areas and 10 panda car beats, is the key figure in a system of unit beat policing. He must receive and evaluate information from all sources and make it known wherever and whenever it is likely to have the best effect.

17. A good deal of comment on the result of the introduction of what is loosely described as unit beat policing is speculative and subjective. It goes without saying that most constables like to have vehicles and appreciate being in constant contact with sources of assistance and advice. Personal radio systems and more cars are, however, not in themselves a form of unit beat policing and the benefits arising from their introduction are not necessarily attributable to their use within a particular policing system.

18. The distinctive nature of unit beat policing lies in the functional roles given to constables and the way in which the roles work together to form an identifiable unit. Any assessment of the system must therefore concentrate on the concept of the policing unit and the measurement of additional benefit to be derived from it, rather than on results which could equally well arise from traditional policing with the advantage of personal radio and mobility.

#### THE AIMS OF THE STUDY

19. The study aimed primarily to describe, in terms of activity and demand data, the incidence and nature of the workload falling upon different components of unit beat policing in urban areas. Due to interest in management information systems and performance indicators a second aim of the study was to identify existing sources of management data together with the constraints on their use, and to seek new sources and ways of minimising constraints.

20. In discussion with officers of the forces taking part in the study the information used to determine a particular pattern of unit beat policing, and to assess its levels of performance, has been identified. The project team has therefore had the opportunity to examine management data and the constraints facing senior officers responsible for resource allocation and deployment.

#### THE DESIGN OF THE STUDY

21. The measurement of the degree of success or failure of any particular mode of policing involves the definition of objectives and the expression of progress towards those objectives in quantifiable terms. In practice attempts to quantify police work going beyond the

simple terms of recorded crime levels and detection rates have not been entirely successful, either in the United Kingdom or elsewhere. A particular difficulty is to find a measure of the relative effectiveness of different patterns of preventive patrol.

22. A 28 day measure was designed to establish the pattern and amount of police activity which various applications of unit beat policing would yield. With the co-operation of nine separate police forces in England and Scotland measurement was carried out in 1972 and 1973. If the theory of preventive patrol has a firm basis it means that the more skilfully resources are deployed in the patrolling role the more incidents they will prevent. It can also be assumed that an improvement in preventive effect will also arise from a speedy response to calls for police assistance achieved by the availability of personal radio and more vehicles. An improvement in both of these areas therefore should result in a reduction in those classes of incidents which could be described as preventable by a police presence.

23. At the same time as the measurement of activity was in progress records were kept of message traffic to establish the level and category of demands from the public for immediate police assistance, and also of the particular unit beat police function selected to respond to the demands. Appendix 32 shows the type of activity record completed by constables holding unit beat functions, and Appendix 33 the message form used for the measurement period.

24. The contribution of CID officers to unit beat policing was not measured because no scheme could be found where detective officers were allocated to areas in the way suggested in the original unit beat policing concept (Appendix 30 paragraph 7). The separateness of CID officers within the police organisation is not conducive to their integration in units predominantly manned and controlled by uniformed officers. This aspect of unit beat policing has not, therefore, been included in the study.

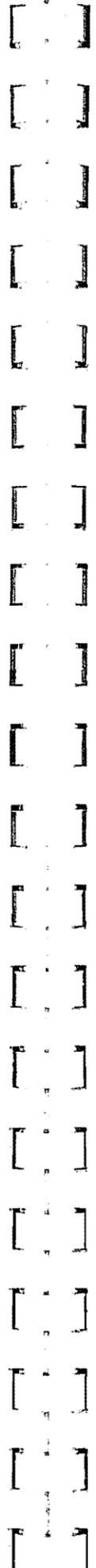
25. The contribution of the collator was not included because his work required an entirely different method of measurement. Inevitably, however, discussion of the results of the study with the forces concerned embraced his role and observations arising from these discussions are included in chapter VI.

#### SELECTION OF FORCES, PHASING AND BRIEFING

26. The study was divided into three phases so that briefing could be given to all constables as close as possible to the beginning of the exercise. The first phase covered four towns with populations of about 100,000, the second four towns (one in Scotland) of 44-50,000 and the last a city of 250,000 measured as four sub-divisions. Briefing was of particular importance as far as the activity records were concerned because their completion was anonymous to encourage personal commitment and uninhibited answers.

27. Within several weeks of the completion of the 28 day study results in the form of computer print-outs, graphs and rough analysis were presented to senior officers and representatives of constables who had taken part in the exercise. The purpose of this stage was twofold; to show the results while recollections were still fresh in the minds of those who had co-operated, and to establish whether the results were acceptable as a reasonably accurate picture of the 28 day period.

28. Separate reports were completed for each of the three separate phases of the study and were discussed in detail with the nine forces concerned. This report is intended to gather together the main threads of discussion and to relate them to such data as appears to be common to all forces. Copies of the separate reports on phase one, two and three of the study are available on request from the Home Office.



#### ACTIVITY ANALYSIS

29. The bulk of police work divides itself naturally into three areas - patrol, incident response and other activities. As suggested in paragraph 22 there may be a direct relationship between the first two - the more effective the patrol effort the less time should need to be spent on incident response. The patrol function, because of the difficulty of quantifying results, usually receives less attention and for this reason is discussed first.

PATROL

30. Generally speaking patrol might be described as the uncommitted time of a policeman on outside duty. When police forces were first created in urban areas the main need was to make the streets safe for the public to use, and this was achieved by frequent and regular foot patrol by constables in a distinctive uniform who called for assistance by whistle or rattle. Street crime and disorder fell rapidly once the public gained confidence in the police and in consequence the view is widely held that the presence of policemen on patrol duty in the street prevents a rise of crime in these categories and in more recent categories such as theft from cars. Opinions are divided about the relative effectiveness of an officer patrolling on foot and one driving a marked vehicle, and as unit beat policing has introduced a concept of "car patrol" which replaces some foot patrol it is necessary to examine some of the arguments presented on each side.

31. Car patrol is said to have these advantages:

- a. The officer is protected from the elements, and his work is therefore less arduous, particularly in winter.
- b. One officer can cover a much wider area in his patrol function than a foot patrol officer.
- c. Equipment can be carried for dealing with emergencies.
- d. Prisoners can be transported (an important consideration when there is a policy to reduce the number of police buildings in an area).
- e. The officers can be given an urgent response role.
- f. A driver can also perform foot patrol duty while his conspicuously parked vehicle achieves a separate deterrent effect.
- g. There are useful savings in travelling time for journeys between an officer's place of reporting for duty and his beat patrol area.
- h. Reports can be written in the vehicles while the officer remains on call.

32. While these advantages can hardly be denied they do not necessarily represent an overwhelming case for the traditional policeman on foot to be replaced by an officer in a car. Given the choice most policemen, if only for the reason given in (a) above, would no doubt choose car patrol. But it would also be true to say that the urgent incident response role that goes with a vehicle is more attractive to constables than foot patrol duty. These factors, however, are related more to questions of morale and job satisfaction than to operational benefit.

33. The main argument against car patrol is one of effectiveness. Panda vehicles are normally single manned and a patrolling officer, however quiet the road and however slowly he drives, has to concentrate most of his attention on his driving and can spare time for little more than a fleeting look at property and people's behaviour. He cannot hear suspicious noises and his approach can be heard and seen some distance away. Members of the public find it difficult to communicate with him while he is moving, and he cannot speak to them. The duration of his

presence in an area is known to be short and in consequence the deterrent value is considerably reduced.

34. These arguments tend to support a generally held view within the Police Service that a police officer on foot is more effective as a deterrent than an officer in a car. The view is reinforced by an analysis of police charges carried out in the third phase of the study which showed that foot patrols dealt with a large proportion of charges even though they were not used for response to incidents.

35. There is no doubt that the introduction of panda vehicles has raised the level of resources available for urgent response to requests for assistance. The urban workloads study, and other similar studies, show that the major part of the police response to reported incidents is now provided by panda vehicles. This is understandable in view of the large number of vehicles used in unit beat policing and the way in which they are used to cover the ground evenly.

36. The success of panda vehicles in this particular area of police duty is counter-balanced by the need for officers to stay in or near their vehicle to meet the demands of the incident response role, and their consequent lack of freedom to patrol on foot. There is also a tendency for more than one vehicle to answer a call, although good radio control discipline can avoid this aspect. The incident response role of policemen on outside duty who are equipped with vehicles is clearly an important one, but it was only one of the advantages of unit beat policing as originally envisaged and there was no suggestion that it should override the need for basic foot patrol. The tendency to stress the incident response function of the panda vehicle arises because it can be measured in terms of "time to respond" and "time to service" whereas the effect of the loss of foot patrol is more difficult to assess on an acceptable basis and therefore could be treated as of less importance.

37. The results of the measurement of patrol activity in the nine forces covered by the study were as follows: for individual results the separate reports and the appendices to this report should be consulted.

FIGURE 1

	% of Duty Time By		
	Foot Patrols	Area Constables	Panda Drivers
Foot Patrol Average	50	42	8
Total Foot Patrol (100%)	% by		
	Foot Patrols	Area Constables	Panda Drivers
	53	31	16

FIGURE 2

Car Patrol Average	% of Duty Time By		
	Foot Patrols	Area Constables	Panda Drivers
	3	2.6.	42
Total Car Patrol (100%)	% by		
	Foot Patrols	Area Constables	Panda Drivers
	3	3	94

38. In several forces the low proportion of foot patrol provided by panda drivers was causing concern and was the subject of special instructions. It is unlikely that this position will change significantly without an explicit alteration in the panda vehicle's response role.

CHAPTER III

INCIDENTS

39. An "incident" was an occurrence to which the police were called by a member of the public. For the purposes of this study they were sub-divided under the headings of crime, traffic, public order and social service. They were classified on the basis of the initial information communicated to the police, and were not revised when the actual nature of the incident was known. For example, an automatic burglar alarm call was classified as a crime incident; a fight between a husband and wife in the home was a social service incident but, if in the street, it was a public order incident. Some incidents could be said to fall into more than one category and in these cases the most serious aspect dictated the classification.

40. The study did not distinguish a particular means by which the information was given (eg the '999' system, telephone to the station, or personally to an officer in the street or at the station). The object was to identify the incident workload in relation to the initial response by police, the number in each category, and the time of day and day of week when they occurred.

41. Before the introduction of short range UHF radio sets sufficiently small to carry on the person, the police service was obliged to rely on VHF communications. Response to incidents was assigned to cars, fitted with VHF radio and usually equipped to deal with road traffic and other types of accident. Features of such vehicles were: their handling ability; the crew were generally senior in service with an abundance of police experience; in many cases the cars were double manned and the duties of driver and radio operator were divided between the two men. These vehicles and crews were therefore prepared both in terms of experience and equipment to cope with all stress situations, such as answering '999' calls or high speed pursuits. A considerable restraint, however, was the limited availability of highly trained men to man these cars. Some calls for assistance by the public could not be allocated to such vehicles because the nearest vehicle was already engaged or the distance to be covered was too great. The practice of directing such calls to divisional or sub-divisional stations to be dealt with was quite common.

42. Before unit beat policing the only resources available at station level were usually a constable on foot or on a bicycle. Calls referred to stations were therefore those which would tolerate the longer response time involved.

43. It was envisaged that the response function at station level would be considerably improved by the availability of the panda vehicles introduced with unit beat policing. It was not the intention of the service to use the panda car to replace the force VHF car, although to a considerable extent this has happened.

44. In the third phase of this study it was established that of the 2,267 calls for police received in the four weeks, 2,118 (93.4%) were dealt with by unit beat police resources at local level. In 73% of all calls in that phase panda cars were the first on the scene of incidents (table 4).

45. There is strong evidence to show that of the remaining 149 calls (6.6%) dealt with by 'other' resources, a high proportion were dealt with by local officers not included in the unit beat policing concept (for example, CID or women police officers or divisional incident vehicles).

46. Units which formerly shared force VHF cars with surrounding areas were immediately capable of fielding between 3 and 9 panda cars (appendix 29, column 5). This increase in cars required a corresponding increase in crews, and many young inexperienced constables, with only basic driving skills, were given the opportunity to develop a mobile role. With few exceptions, these cars were manned by a driver with a UHF personal radio.

47. These new drivers were sometimes still probationary constables. They were directed by radio to incidents of a type and nature which they might be tackling for the first time. The "stress" of this situation is in consequence greater for the panda driver than it is for the force VHF controlled vehicle 2-man crew. These young policemen now found themselves called to a situation which formerly had been the privilege of the older and more experienced officer.

48. The introduction of panda vehicles and personal radio provided opportunities for many policemen to show initiative, keenness and ability which hitherto had been frustrated by lack of communications. The effect on the public of such a service, however was to increase their demands and expectations. The bulk of this increase fell on the panda driver. Calls which had formerly been regarded as appropriate for a response by a foot or cycle equipped constable were given more urgent treatment, and the fast response achieved was regarded as a yardstick for the level of panda driver achievement.

49. Demand for response at this level led to a departure from the originally envisaged role of the panda driver. The qualities and enthusiasm displayed by them ensured the survival of the response role, but this clearly had to be at the expense of their preventive foot patrol work. The following table, compiled from phase 3 data, gives a breakdown showing which functions arrived first at the scene of incidents:-

FIGURE 3

Town	Function first arriving at scene of incident				Total
	Foot Patrol	Area Constable	Panda Driver	Other	
J	47 (11%)	32 (7.5%)	333 (78%)	15 (3.5%)	427 (100%)
K	88 (13%)	13 (2%)	532 (81%)	24 (4%)	657 (100%)
L	108 (13%)	99 (12%)	534 (63%)	103 (12%)	844 (100%)
M	19 (14%)	16 (5%)	267 (79%)	7 (2%)	339 (100%)
Average	292 (13%)	160 (7%)	1666 (73%)	149 (7%)	2267 (100%)

50. The proportion varies throughout the country according to the policy adopted and to different types of communication system. In one force outside this study, 92% of calls were dealt with by panda drivers.

51. The time spent on dealing with incidents amounted to 11% overall. This is equivalent to 53 minutes in an average 8 hour tour of duty. The time spent varied between 7.5% and 14.3%.

FIGURE 4

% of time spent on incidents (all functions)

PHASE	I				II				III				ALL
	A	B	C	D	E	F	G	H	J	K	L	M	All
% of time	8.3	9.1	13.2	14.0	7.5	9.6	14.3	8.3	10.8	13.7	9.9	13.8	11

52. An aspect of these figures is the comparison of towns "B" and "E": the former had 37 area constables (45% of strength) and the latter had none. Allowing for the differences in locales the employment or non employment of area constables has, as was expected, little effect on the time taken up by incidents.

FIGURE 5

Incident time = 1980 Manhours

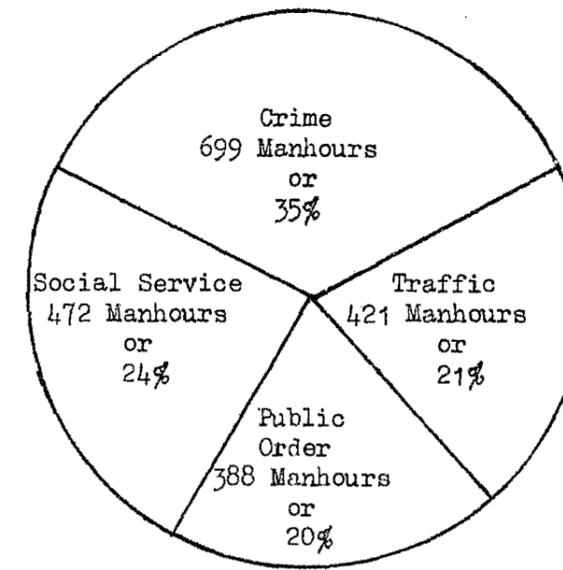
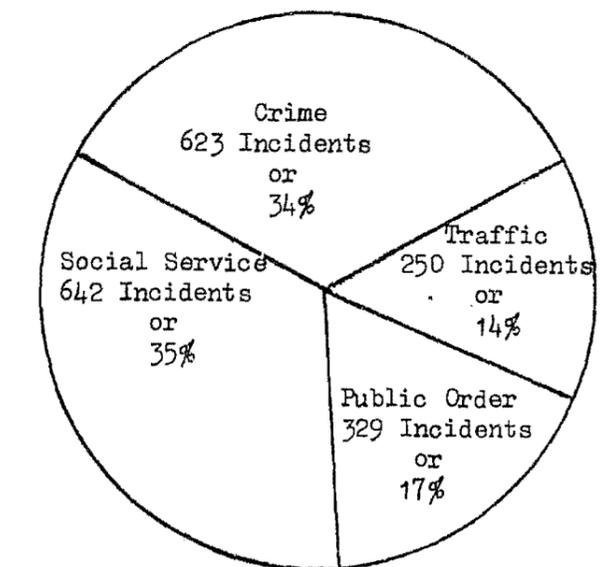


FIGURE 6

Number of Incidents = 1844



53. A breakdown into the 4 categories shows that, with the exception of 2 towns where there were special circumstances prevailing at that time of the study, the largest proportion of incident time is spent on servicing crime incidents.

FIGURE 7

Phase	Town	High/Low	% of Incident time spent on				
			All	Crime	Traffic	P/Order	Soc/Ser.
III	K	High	-	5.9	-	-	4.1
II	G	High	-	-	4.8	-	-
I	C	High	-	-	-	5.9	-
II	G	High	14.3	-	-	-	-
II	H	Low	-	2.8	-	-	-
I	A	Low	-	-	1.4	-	-
II	F	Low	-	-	-	0.8	-
II	E	Low	7.5	-	-	-	1.4
ALL	ALL	Average	11.0	4.0	2.4	1.9	2.7

54. It became apparent during the study that the average time taken to service incidents fell as the number of incidents increased, and increased as the number fell. The extent of the variation is illustrated by example where a low number of incidents took more total time than a high number. An example of the variation is given below :

FIGURE 8

TIME OF DAY

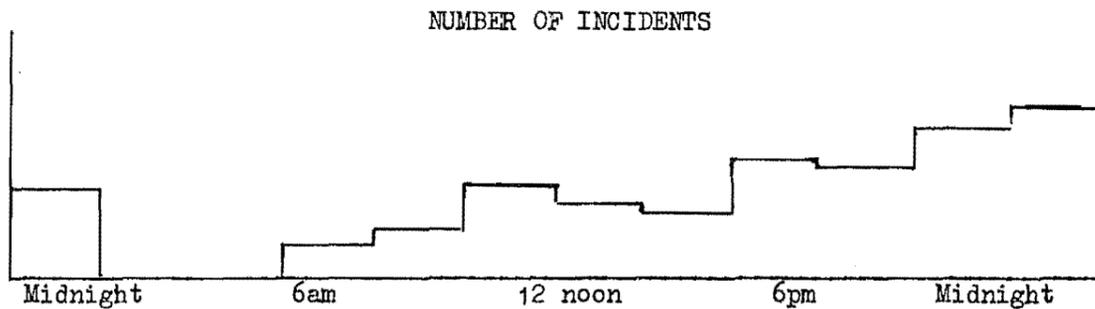
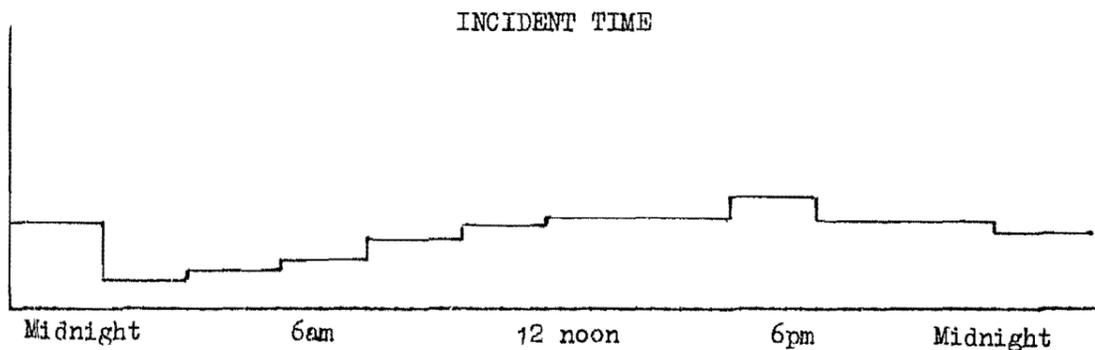


FIGURE 9



The same type of relationship shows up in the following day of week analysis:

FIGURE 10

DAY OF WEEK

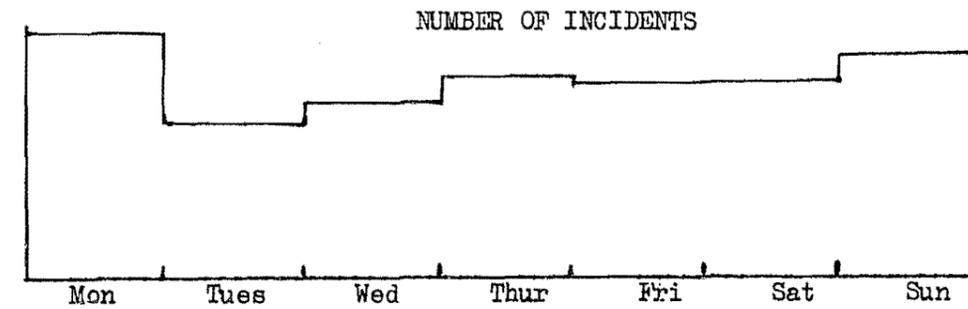
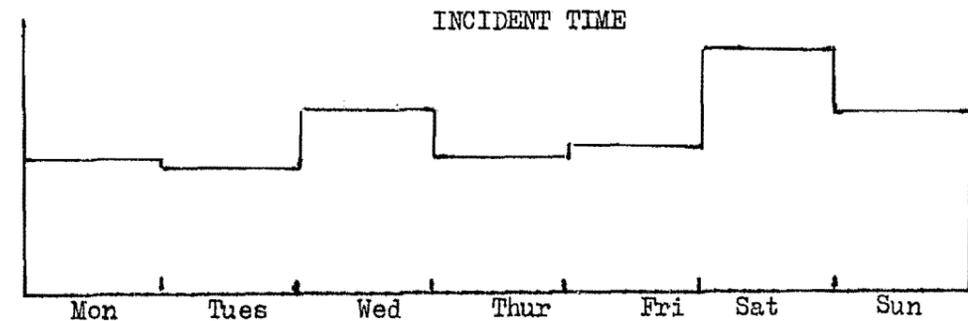


FIGURE 11



55. To some extent this pattern is due to the human tendency to extend work to fill the time available, but the effect of more than one officer attending an incident must also be taken into account. On occasions when numbers of incidents are low and the main police activity is patrol it is more likely that multiple response will occur, and thereby double or treble the total police time spent on an incident. A carefully directed and controlled response would help to ensure that total incident time did not reduce the patrol effort undesirably.

56. Elsewhere in this report it is argued that panda cars should have one or other of two defined roles, one of which should be in the response field (para. 57 ). The extent to which they should be dedicated to a response role should be related to a large extent to the day of week and time of day patterns of incident work. At present the predominating factor in deciding when duty should be done is the welfare and convenience of the men tempered by the subjective judgement of senior officers as to when the men are likely to be most needed. The information which has emerged from this study and others is that there are patterns of public demand for the services of the police which can be accurately measured. An information system capable of measuring and predicting incident workload should become a standard provision to enable flexible management of scarce and costly resources. A similar recommendation

is made in the management study of Ayr Constabulary (see Police Research Bulletin No.23 for Spring 1974).

57. We recommend that panda vehicles should be specifically allocated between dealing with calls from the public and the use of the vehicle to provide mobility for particular preventive tactics. The manpower deployed on incident response should be largely dictated by the predicted level of demands. In most cases this would free manpower and vehicles for positive preventive patrol as a team effort involving area constables and foot patrol officers.

#### INCIDENT RESPONSE

58. The duty to respond to calls from the public can be organised in three ways. It can be divided between local and central levels, or it can be at one level either locally or centrally. This study is concerned only with the response role of the unit beat resources, but to assist in the formulation of a policy it is necessary to establish the size and type of the workload before deciding which type of resource should deal with incidents.

59. With 35% of calls to social service types of incidents, (figure 6) there appears to be a need for local response. It may well be that a large proportion of the 34% crime incidents could also best be dealt with by locally controlled resources. It is in the fields of public order (with 17% of calls) and traffic (with 14%) that a need for a force level response requires serious consideration.

60. To establish whether it is possible to classify, grade and weight incoming calls so that the ideal response can be ascertained, an analysis of a large number of incident calls received locally and centrally should be undertaken and the experience of control room and divisional staff used to determine appropriate type of response.

61. The extent of incident response cover will require to be assessed against the level of response time considered appropriate for various categories of incidents. Enough vehicles to provide this degree of cover (including force-controlled vehicles and vehicles not part of the unit beat policing scheme) could then be earmarked for first line incident response, and those panda vehicles not so designated would be freed for a major foot patrol contribution or for specific tactical use. The number of vehicles and men freed in this way would vary according to the estimated level and type of incident demand by time of day and day of week, and their tactical application would need to take this into account.

#### CRIME INCIDENTS

62. 4% of all the time measured was spent on servicing crime incidents. The variations between the 12 towns and the 3 functions can be seen in appendices 15-17. 4% is equal to 19 minutes in an 8 hour tour of duty.

63. Of all the time taken up by crime incidents, 63.4% was attributable to panda drivers (appendix 16), although they dealt with 88.7% of the incidents (appendix 15). In town "A" they spent 9.3% of their

duty time dealing with them in contrast to 3% in town "H". The greatest contribution by area constables was 10.7% and by foot patrols 5.2% both in town "K" in the exceptional circumstances of a murder enquiry.

64. In town "L" the response by resources other than non-unit beat police was found to be as high as 20%. Further investigation indicated that CID officers were responding to calls in that town. Although their arrest rate did not reflect this, the detection rate was highest for this phase at 65% as compared to 52%, 50% and 43% for the other 3 towns. In phase 3 we also examined the arrests and detentions for crime, the crimes recorded and detected. This revealed that in only one town were most crime charges made by UBP resources; 7 out of 8 in town "J"; in the other towns their crime charge rates were 3 out of 34; 4 out of 25 and 3 out of 10.

65. Crime incident calls do not necessarily reflect the criminal potential of the populace. The same rules were applied to the collection in incident data over all 3 phases, however, and the following figures are comparable:-

FIGURE 12

Phase (1)	Average No. of Crime Incidents (2)	Population (3)	Ratio of Columns 2-3 (4)
I	75	100,000	1:1333
II	38	42,500	1:1118
III	172	250,000	1:1453

#### TRAFFIC INCIDENTS

66. In the first phase the study was limited to an examination of the time spent on incidents. In the second phase the number of such incidents was included, but in both phases the measurement confined itself to the Unit Beat Policing effort. A desire for more information was expressed by participating forces and in consequence the third and last phase included all incidents showing incidents dealt with by non-unit beat police officers as 'others'.

67. In this phase the study showed that of the 294 traffic incidents during the four weeks in only 3 cases did 'other' resources attend first. The traffic division injected several hundred manhours into the areas covered in this phase. This suggests that the role of traffic police in the urban environment could be usefully researched.

68. In 90% of traffic incidents dealt with by unit beat police, 'panda' drivers were the first at the scene (appendix 18). This is higher than for any other category of incident and reflects the need for a quick response for rescue and first aid purposes. Panda drivers,

however, spent only 61% of the time committed to this activity, foot patrols spending 2.9% and area constables 10% (appendix 19). This is probably accounted for by the cases where the incident proved to be a road traffic accident and foot patrol or area constables attended after the panda driver and then either relieved or assisted him with the work involved. From appendix 'J' in the reports on phases II and III we know that traffic incidents took from one to three hours to service.

69. In phase III of the Study it was intended to examine what relationship, if any, existed between road traffic accidents and accident prevention process, but in the time available this did not prove possible. This relationship should exist, and be investigated and continuously monitored.

70. The following table enables a comparison to be made as to the traffic incident problem between the three phases:

FIGURE 13

Phase (1)	Weekly Average Number of Traffic Incidents (2)	Population (3)	Ratio of Col (2) to Col (3) (4)
I	35	100,000	1:2857
II	10	42,500	1:4250
III	74	250,000	1:3378

These figures appear to indicate that a greater problem arises in towns with a population of 100,000, followed by the city of  $\frac{1}{4}$  million, followed by the small towns of 40-45,000. This conclusion is necessarily tentative because of the size of the sample.

71. The time taken to service this activity amounted to 2.3% of the total (appendix 20). There were 250 traffic incidents in the average week, 14% of all incidents but taking 21% of all incident time (see figures 1 and 2).

PUBLIC ORDER INCIDENTS

72. This type of incident involves a breach of public tranquillity and ranges from a simple case of drunkenness to a serious affray. Overall 2% of all duty time was taken up in dealing with them. Of the 329 such incidents dealt with by unit beat police resources (appendix 21) panda drivers were the first at the scene in 87.1% of cases, foot patrols in 8.4% and area constables in 4.2%. In Phase III there were 330 public order incidents in the four weeks of the study, and of these 325 were dealt with by unit beat police resources.

73. In this field of operational police duty the particular tactics to be used rely heavily on the experience and judgment of the officers

involved. Appendix 21 shows the number of public order incidents and the percentages of resources first at the scene for all twelve towns. One measure of whether these attempts are successful may be the extent to which there is response by well placed foot resources (i.e. area constables or foot patrols). When using this as an indicator, however, other factors must be considered.

74. Firstly, because of the seriousness of some types of disorder, there is a practice in some forces of double manning panda cars at times when trouble is likely by drawing a second crew member from foot patrols or area constables. Secondly, if foot resources are well placed there should not be any trouble in a particular locality, but trouble may occur at less predictable spots elsewhere, and involves panda cars. Thirdly, there may be a variation in the degree of radio control and supervision dictating the direction of particular resources to incidents. The fourth factor arises from the figures available in appendix 29, which relates the levels at which the three functions are maintained. For example, on the premise of the preceding paragraph towns 'A', 'L' and 'M' achieve good results (the panda drivers response rate is low (appendix 21). Town 'A' result is influenced by the ability of that town to keep the beats well manned (appendix 24); but towns 'L' and 'M' did not achieve the same intensity of ground cover. Both had only two foot patrols available on average for every tour of duty.

75. It is generally agreed that the arrest rate is an inappropriate indicator of area constable performance, but it may be possible to use his attendance at the scene of public order incidents as a surer indicator. He has a certain amount of discretion to patrol his beat or area when he considers it is most needed (although see paragraph 121 et seq. on his practical constraints), and in many cases has the mobility afforded by a cycle or even a motor cycle in some towns. Foot patrols accounted for just over 5000 manhours, but there is virtually no discretion as to when they will operate. This is because they form the pool from which other functions are supplied. Generally they are probationers and less experienced than area constables, and in consequence would not know their beat so well. Despite this foot patrol constables achieved an 8.4% response rate, double the 4.2% rate by area constables with 3147 manhours. Taken on these figures alone the area constables' performance lags considerably. The arrest rates are set out in the Phase III report at appendix 'O'. These show that foot patrols made 13 arrests for public order offences during the four week period, area constables none, and panda drivers 16. These figures show that the area constables in this study were performing their task in accordance with the description of their work (appendix 30) and are not meant to be critical. They do, however, serve as a basis for an examination of their role.

76. Information gathered by area constables should enable them and others to improve their performance. The system used for processing the information should also evaluate it in terms of results.

77. The ratio of public order incidents to heads of population shows a lower tendency to disorder in the large town.

FIGURE 14

Phase (1)	Public Order Incidents (2)	Population (3)	Ratio of Col (2) to Col (3) (4)
I	44	100,000	1:2,272
II	19	42,500	1:2,236
III	80	250,000	1:3,125

SOCIAL SERVICE INCIDENTS

78. Social Service Incidents accounted for 35% (642) of all incidents but only 24% of all incident time. In the third phase these incidents accounted for 40% of the total number involved, which indicates that social problems are intensified in the more densely urbanised areas.

FIGURE 15

Phase (1)	Social Service Incidents (2)	Population (3)	Ratio of Col (2) to Col (3) (4)
I	74	100,000	1:1,351
II	32	42,500	1:1,328
III	216	250,000	1:1,157

79. The social service field is a largely unexplored area of police activity and in the third phase an examination was made of social service occurrences as recorded in the occurrence books. A comparison was then made between the number of such incident calls and the number of reports.

FIGURE 16

Town (1)	Number of Incidents (4 weeks) (2)	Number of Reports (4 weeks) (3)	Ratio of Col (2) to Col (3) (4)
J	192	43	4.5 : 1
K	260	39	6.7 : 1
L	307	43	7.1 : 1
M	100	23	4.4 : 1
Total	859	148	5.8 : 1

80. The subject is considered in greater detail in the Phase III report (paragraphs 65.-74) but there is scope for a more detailed study. It seems that the busier the police are the less time they spend on the incident and, where they have discretion, the less reporting they do. It may also indicate that the less they have to do the more time they spend and the more writing they do.

81. We emphasised in the Phase III report that such variations in reporting procedures would conflict with any attempt at computer data collection, and the application of a common policy covering the need for entries and the details to be included would be a prerequisite. Variations between town by functions are set out in appendices 24 - 26.

CHAPTER IV

OTHER ACTIVITIES

Refreshments

82. The conditions of service of uniform police officers allow for a  $\frac{3}{4}$  hour refreshment period in an 8 hour tour of duty, taken during the middle 2 hour period. For example during a 2pm - 10pm shift refreshments would be taken between 5pm and 7pm. Officers posted on the functions of panda driver, and also to some extent foot patrol officers, are required to maintain 24 hour cover of an area, and their refreshment time is normally prescribed as part of their duty. Arrangements commonly include provision to avoid taking more than a specified proportion of men from outside duty at any one time.

83. It was a usual requirement for foot patrol officers and panda drivers to attend at a station for refreshment. The travelling time incurred as a result of this requirement is not included in the official refreshment period. In some cases foot and panda beats are so drawn as to radiate from a station, thus ensuring that an officer proceeding to his refreshment remains on patrol in his area until he enters the station, and in other instances panda vehicles are used to collect foot patrol officers from their beats and return them after refreshment. Where sufficient foot patrol officers are qualified drivers they may take over a panda vehicle while a regular driver is having refreshment and thus maintain incident response cover.

84. Arrangements were normally made for staggering the refreshment times to avoid taking a large number of men away from outside duty at regular and predictable times. The survey showed in its time of day activity analysis however, that a drop in patrol and other activity occurs at times when refreshment is taken. The sharpness of the peak in refreshment time depends to a large extent on the type of shift system adopted, and for the nine forces involved in the study this was basically the 6am - 2pm, 2pm - 10pm and 10pm - 6am system (with slight variations) used widely in the police service.

85. The refreshment peaks for the three shift system occur at 9 - 11am, 5 - 7pm and 1 - 3am. The first two periods of abstraction from outside duty do not coincide with periods of low demand for police services, and it is therefore inevitable, that on occasions refreshment periods are disrupted or there is a deterioration in the standard of response. A more varied and flexible pattern of shift working would spread the effect of refreshment periods more widely.

86. The duty times of area constables generally fall between 8am and 12 midnight. The duties of an area constable involve finding opportunities for frequent contact with the public and this requirement dictates that he should carry out most of his duties during daylight and evening hours. In some forces area constables were allowed to take their refreshment at home (particularly if they lived in the area for which they were responsible) at a time which they found convenient, in others they were expected to report to the station at a specified time.

87. In view of the role of an area constable and the degree of responsibility which it implies it seems more appropriate for an area constable to be given flexibility to enable him to work his refreshment needs in with the rest of his working day. An example of flexible working is the personal choice of an area constable to divide his tour of duty so as to work more effectively. Two problems are recognised; one is the difficulty of supervising a man whose hours and duties are not as closely prescribed as for foot patrol officers and panda drivers, and the other is the restriction on the use of area constables to relieve panda drivers for refreshments. Attendance at the station for refreshment helps to solve both of these, albeit at some cost to the role of the area constable within a unit beat policing scheme. A further difficulty is the police service's general disapproval of split shift working which at one time was an unpopular part of conditions of service.

Report Writing at Stations

88. Report writing is directly related to incidents and enquiries and in consequence most of the time spent on this activity is recorded by officers with an incident response and enquiry role, in particular by panda drivers. In terms of proportions of duty time the survey disclosed substantial variations between individual towns of up to 5%. (Appendices 7-8)

89. In recent years some forces have carried out reviews of reporting procedures and wherever possible pro-forma report forms have been introduced to replace full notebook entries and freehold manuscript reports. Dictating machines have also reduced the time spent on report preparation. In view of this greater awareness of the cost in manhour terms of requiring full reports for matters of minor importance it is not surprising that report writing consumes only, on average, 7.5% of the duty time of unit beat officers.

90. Report writing also results from enquiries originating from other police forces, other divisions, and from within a division. Where an officer is employed full time on enquiry and warrant work unit beat officers are relieved of a good deal of report writing and can therefore give more time to their incident response and information gathering roles. The important question of information gathering being facilitated in the process of pursuing enquiries is discussed in paragraph 107.

Traffic Point and School Crossing Duty

91. The growth of traffic in urban areas in the past 20 years has justified the installation of many more automatic traffic signals and various types of pedestrian crossings. It has also seen the introduction of traffic wardens initially recruited to assist with the enforcement of parking regulations and whose role has grown to cover a wider area, including the direction of traffic. The number of school crossing attendants has also increased. It is not surprising, therefore, to record that the amount of time spent by unit beat officers on traffic point duty and on the supervision of school crossings represents slightly more than one per cent of their duty time.

92. In theory the supervision of school crossing patrols provides a good opportunity for an area constable to function within his special role. In carrying out this duty he becomes familiar to parents and children and may make useful contacts for the purpose of gathering information. In practice, however, there will be too many primary schools in his area for him to have a school crossing duty as a regular commitment, and his variations of duty time will also interfere with his regular availability for the task. The study results showed area constables had the largest proportion of the total amount of this area of activity, but as the total number of hours recorded was so small it possibly reflects nothing more significant than the fact that area constables are more likely to be on duty when schools open and close, and that the need for a police officer to cover a crossing is known well in advance, (because of the notified illness of a school crossing attendant, for example).

93. The main workload implication of the traffic point/school crossing activity is the contingency element which is predictable to a considerable extent. The peaks of the small amount of activity recorded were in the periods 8 - 10am and 3 - 5pm which reflect the movement of children to and from schools. The liability for traffic point duty, other than that arising from special events such as football matches and certain types of accident, will be at its highest during the movement of vehicles during the same period in the morning, but rather later in the afternoon.

94. The survey did not measure any contribution to traffic control and the supervision of pedestrian crossings made by specialist traffic resources.

#### Non-Unit Beat Duty

95. When unit beat officers were engaged on activities other than those covered by the eleven specific headings they recorded their time as "non-unit beat duty". This classification included such miscellaneous duties as the escort of prisoners, conveying papers or passengers, court duty, relieving station office staff, and the cleaning of vehicles. Overall this counted for 9.6% of their time. The variation between the forces was from 6.6% to 13.5% (Appendices 13 and 14). Where an officer was detached from a unit beat policing function for the whole of his tour of duty to be employed on non-unit beat work, he was not required to complete an activity card. The data collected therefore, reflects the extent to which these miscellaneous duties reduce the effort put into the unit beat policing scheme by officers holding one of the three main unit beat functions.

96. When a magistrate's court is sitting it is a usual practice for police officers to attend to assist in the running of the court and to maintain good order in the vicinity. Although the study did not set out to establish the total manpower involved in this commitment, the effect was noticeable as the lower availability of manpower for unit beat police duties on court days, particularly when certain days of the week are regularly used. Some of the tasks undertaken by police in magistrate's courts could be carried out by civilian court officers, for example

the maintenance of order. Assuming a reasonable availability of a mobile or foot patrol officer (many courts are on regular foot beats in town centres), assistance could be summoned when required in the same way as to any other type of disturbance.

97. The escort of prisoners imposes a considerable drain on resources and this was particularly noticeable where prisons were at a distance from the courthouse. In one force visited the prison lay at such a distance and on such a poor route that to take one prisoner there on remand involved the use of two constables, one acting as driver and the other as escort, and a vehicle for 8 hours. The loss of 16 man-hours and a vehicle for a tour of duty imposes a considerable strain on a unit, particularly when they are taken from the late or afternoon shift - a time when they are likely to be most needed. The smaller the unit of course, the more serious is the effect of the loss to outside duty manhours. Where there is a regular and predictable need for the facility, forces make arrangements for a scheduled van service to collect and deliver prisoners from and to prisons but it is not unusual to find that a court will sit so late that the scheduled prison van service is no longer available. Special arrangements are then necessary to meet deadlines imposed by prisons. Where this happens it might be appropriate for the occasion to be recorded and the cost of the police providing this extra service brought to the notice of senior officers.

98. It is no part of this study to enquire into the manning of courts and the remand of prisoners, but it seems clear that further research is necessary to find ways to avoid the serious loss of police officers from normal operational duty.

99. The relief of station staff for refreshments by unit beat police officers may be necessary, particularly where the staff is small. A regular arrangement to relieve all inside station office staff by unit beat officers, however, can seriously hamper the work of a unit and where possible station staff should be self-relieving. One example of flexible working was found where the reverse happened and the car patrol driver was relieved by the office man during the night duty shift, while the car driver took his refreshment in the office. In many of the busier units this is not possible because of the pressure of office work. An examination of the flow of work in a busy town not part of the study, indicated that most offices have a lighter workload between 2am and 6am when station staff could well take their refreshments without being relieved by unit beat officers. Only during the morning period was the workload sufficient to justify a man being drawn from street duty and, even here, consideration should be given to having the station office staff relieved by administrative staff.

100. In many forces, the car patrol drivers wash, clean and carry out elementary service on their vehicles. Where this is done the time allocated normally carries on from the refreshment period. Even with staggered refreshment periods this can lead to an almost total absence of mobile patrol resources in an area. Some forces have arrangements whereby their vehicles may be taken through a local car wash but while this reduces the total time committed the driver is still expected to clean the inside of his vehicle and carry out such tasks as topping up batteries, radiators, oil etc. However, small the tasks may be once a

man has been diverted to this type of activity delay in returning to unit beat duty is likely to occur. Every driver must, of course, ensure that his vehicle is roadworthy. This apart, the cleaning and elementary servicing of vehicles could be carried out as effectively and more economically by a virtually untrained civilian staff.

101. There were clear indications during the study that the loss of vehicles for maintenance and repair and the absence of sufficient spare vehicles led to difficulty in achieving the standards of policing set by the senior officers. While considerable research has gone into the efficiency of garage maintenance facilities, the question of sufficient spare vehicles for optimum policing requirements has not had the same attention. Whereas little seems to be lost by having a vehicle standing spare, the loss of mobility and flexibility caused by a lack of vehicles at critical periods can be a serious handicap to the effective deployment of manpower.

102. One aspect which may represent a substantial proportion of non-unit beat activity time is the use of unit beat cars to carry passengers or despatches. In practice this may arise from the convenience provided and in the event of the panda car role becoming purely response (para. 61) it may be that, in the case of these vehicles, this service could be provided without interfering seriously with availability.

103. To some extent non-unit beat duties can be controlled and reduced at times when demands arising from incidents are pressing. It is a field of police activity of importance, and it is important that unit commanders should be aware of the amount of time spent on it so that allowance can be made for its effect on other activities.

#### Enquiries and Visits

104. Police officers are required, as part of their duties, to make a wide variety of enquiries. These embrace such matters as the interviewing of witnesses, prospective defendants and aliens, checking of documents, verifying bail information or addresses, hospital and other urgent messages. They can originate from within a division, from another division within the same force, from another force, and from other agencies. The study did not analyse the nature, the origin or the number of enquiries received during the twenty-eight days of the measure, but the time spent on the activity gives a fairly clear picture of the amount of work involved and the division of work among the unit beat functions.

105. Of the total time measured 8½% represented the effort spent on this activity. It varied between 6% and 10% in England and, because of the different legal system, was as high as 16% in Scotland. In some towns enquiry and warrant officers were appointed but this does not appear to have had a discernible effect on the unit beat contribution. Full breakdowns of this activity in all twelve towns is set out at appendices 11 and 12. The widest variations are given in the following table:-

FIGURE 17

Variations in Enquiries/Visits Time by Functions

Town	High/Low	% of total enquiry time by function:		
		Foot Patrol	Area Constable	Panda Driver
L	High	21	-	-
B	High	-	65	-
G	High	-	-	71
B	Low	4	-	-
G	Low	-	17	-
B	Low	-	-	31
Average		18	27	55

Note: Town 'K' has been ignored for the purposes of this table. The murder enquiry gave distorted readings.

106. This table reflects very clearly the different methods of unit beat policing employed in towns 'B' and 'G'. In town 'B' 45% of the available manpower was employed as area constables and 40% as panda drivers, whereas in town 'G' the proportions were 15% and 70% respectively.

107. The usual approach of the police to the job of dealing with enquiries is to get them dealt with as quickly as possible, whatever degree of urgency attaches to them. Where rapid clearance of this sort of work is the aim clearly the panda cars are the most appropriate resource, and it is therefore not surprising to find that they are given the largest share. It is generally agreed throughout the service, however, that all suitable enquiries of a non-urgent nature should be made by the area constable so that he gains opportunities to gather information and make contacts. As will be seen from the figures in appendix 11, his use on this activity is restricted. One reason for this is that the volume of enquiries to be made within a sub-division is often sufficient to justify an enquiries section where one or more men are employed full-time on this work. This system gives simple administration, quick replies, uniform standards and good control. But it does not help the area constable to know his area and in consequence restricts the flow of information to the collator.

108. Judging by the proportion of enquiries carried out during night time, and assuming that they would all be in an urgent category, about 66% of all enquiries could be regarded as non-urgent and therefore suitable for area constables to deal with.

109. The advantage possessed by the panda driver over the area constable as far as dealing with enquiries is concerned is mobility and 24-hour cover. The degree of mobility given to area constables will affect the amount of enquiry work which they can be expected to do. The size of

DEPLOYMENT OF UNIT BEAT POLICING RESOURCESTIME OF DAY DEPLOYMENT OF UNIT BEAT RESOURCES

the area for which they are responsible will also influence the time spent on enquiry work. In general area constables were expected to do their work on foot but in one force they were provided with lightweight motorcycles and in others pedal cycles were available. The lack of 24 hour cover by area constables is perhaps less of a disadvantage when set against the limited hours when enquiries can be pursued, and the discretion in working hours which area constables could be given. Area constables may also develop an advantage in that their more detailed knowledge of an area could help them to select times and places when people are more likely to be available.

110. It has to be acknowledged that the control of enquiry work becomes more difficult when a large number of officers are involved in it. The difficulty increases when one group of men (panda drivers) are part of the 24-hour cover arrangements and have frequent contact with their administration and another (area constables) are controlled in a different way. Nevertheless if the concept of the area constable in unit beat policing is to take shape and provide a channel of information for a collator the difficulty will have to be faced and solutions devised appropriate to local control arrangements. The requirement of an area constable is that if he is not personally involved he should be made aware at an appropriate stage of all police activity on his area, including those by other functions while he is off duty.

111. Another aspect of enquiry work is the extent to which it is necessary or desirable to have enquiries dealt with in person by a police officer. It is possible for some types of enquiry to be dealt with by post using an appropriate designed proforma, and there is scope for the extension of the practice adopted in some forces of obtaining statements from witnesses in this way.

112. Although most enquiries made by the police find their way into a written record of one kind or another the records are not designed or maintained so as to allow regular analysis for management purposes. Many enquiries have to be made during the evening when there is often a rise in demand for the police, and clearly a detailed analysis would be of considerable value in determining manpower levels for various periods.

Off Duty for Any Reason

113. This activity involved any part of an eight hour tour of duty which was taken up by sport, sickness or time off. It involved 133 manhours (appendix 27) or 0.8% out of the 17,599 manhours measured. This time is noteworthy only because of its size. The only overall pattern to emerge shows that each function accounted for a proportion commensurate with its size (appendix 28).

114. The duties and duty times of panda drivers, foot constables and area constables should take account of the relationship within the unit (see para 133 et seq). The workload which has to be dealt with throughout the 24 hours of the day, whether it is incident response, preventive patrol, enquiries or traffic, varies considerably and the number of officers, together with the functions they hold, should vary in a suitable pattern to meet a particular workload mixture. This requires a deployment system capable of considerable flexibility and variation throughout the day, and this section of the report examines the extent to which such a system is present in unit beat policing.

115. Because of their main ground cover and incident response role panda drivers are scheduled to perform duties which cover the whole of the 24 hour period. In consequence their periods of duty follow the established pattern whereby the 24 hour period is divided into three tours of duty. The general arrangement is for tours to begin and end at fixed times on each day, and these fixed times, the origin of which is uncertain, are 6am - 2pm (early shift), 2pm - 10pm (late shift) and 10pm - 6am (night shift). In one force arrangements were made for part of a team of panda drivers to come on duty an hour later than these times so as to maintain policemen on outside duty during changeover periods. The study showed a noticeable dip in outside activity during the changeover times caused by the need for officers to hand over and check vehicles, to receive briefing, and to collect personal radios and batteries.

116. Two main types of shift systems covering the 3 periods of the day were found. In one 4 reliefs of men are made up and one relief is off duty on any one day. In the other 3 reliefs are made up and on any one day a proportion of men from all 3 reliefs are off duty. There are arguments in favour of both types relating to team spirit and flexibility, but a major factor is the number of hours chosen as a working week. At the time of the survey most forces were working a 42 or 44 hour week with extra payment for hours worked in excess of 40.

117. The aim of both of these types of 24 hours cover is to provide the same number of officers for duty throughout the day, with special arrangements such as additional overtime and rest day working for occasions when more resources are needed (eg football). When officers were required to be taken away from operational outside duty the loss is normally borne by the reliefs to which they belong, whichever part of the day it covers. Night reliefs showed fewer losses in man hours partly because annual leave and time off was discouraged and partly because there are fewer reasons during the night for officers to be called away from outside duty.

118. The effect of the 3/4 relief 3 shift arrangement is that the number of hours of duty performed by the panda driver element of unit beat duty

within the 3 basic periods is roughly the same. The question arises whether, if suitable data was available on a long term and regular basis (in particular data on which reliable workload predictions could be made), a system could be adopted which would weight the panda effort according to a calculated and predictable workload. This could result in the same workload being dealt with as effectively by fewer resources, thus releasing resources for deployment on positive policing and special tasks at times of greater need.

119. The original concept of unit beat policing did not envisage regular and rostered foot patrol as part of a scheme, and relied upon the foot patrol contribution of panda drivers to provide the necessary police presence in town centres and shopping areas. As explained in the section of this report dealing with patrol the incident response role of the panda vehicle has restricted the patrol capability of the driver to a mobile effort, and this is not appropriate to a congested town centre with one-way traffic systems and restricted parking facilities. In practice those responsible for converting to unit beat policing argued successfully for special foot patrol cover for town centres on the grounds that the amount of foot cover from panda drivers would not be sufficient. The degree of this special foot patrol cover provided in the 12 towns measured in the study varied considerably (compare appendices 1 and 3), and although officers posted on a foot patrol function were drawn from the 4 reliefs providing 24 hour cover it was clearly accepted that there were periods within the 24 hours when the foot patrol effort could be reduced or even withdrawn.

120. There were also occasions when foot patrol officers were withdrawn from their function for reasons other than a reduction in town centre activities. They were used for relief of station staff for occasional double manning of panda cars and for other miscellaneous duties. They were classified to some extent as a reserve force.

121. The role of the area constable and the question of his periods of duty have aroused considerable argument within the police service. The intention was that men would be carefully selected for the area constable job, not only because of its special nature but also because they will be working outside the traditional 24 hour cover relief/shift arrangement with its associated briefings and supervision. They were to exercise their individual role by selecting their own duty times within the fixed minimum weekly hours of duty so as to operate to the best effect. In practice this situation created problems of supervision and regular contact because supervisory officers at sergeant and inspector level normally form part of the 24 hour cover team and find it difficult to develop the same sense of responsibility for officers on duty for only part of the supervisory officers' tour, and physically distant with little formal contact. (see appendix 34 for the multiple lines of responsibility).

122. The nature of police work makes it desirable for supervision and a clear chain of command and responsibility to exist for each and every category of officer and it is understandable that the hours of duty of area constables should be subject to a degree of control. This means of course that the amount of discretion an area constable has in fixing his hours of duty on a particular day has to be limited. The usual practice, developed through experience, is for the area constable to submit, a period in advance, a list of duties for each week. In

preparing the list he is normally aware of the preference of senior officers for a particular variation such as 'at least 2 late duties in any one week'. The list is approved at inspector or chief inspector level and if subsequent alteration is proposed a case has to be made and permission obtained. In town 'E' areas were so arranged as to have 16 hour cover for 5 days. The 2 area constables responsible jointly for an area would arrange early and late cover between them handing over a personal radio as a record of changeover.

123. The factors to be taken into account in determining the best hours for an area constable on a particular day are not related solely to workload or to availability as a relief of a driver or town centre foot patrol officer. If, as intended, he is to function primarily as a friendly neighbourhood policeman and be the local eyes and ears of the police service his duty hours will need to be devised to maximise his efforts in these directions. Because of his local knowledge the area constable himself is at present probably the best able to determine when his efforts will stand the best chance of success, and the less restriction he has in preparing his duties the more likely he is to devise times of duty which are most appropriate to a particular day. An example of a flexible approach is a decision by an area constable to split his tour of duty voluntarily to take advantage of opportunities for contact with the public on one day. Split tours of basic duty are no longer part of normal conditions of police service, and where they do occur it is usually on a voluntary basis.

124. The problem of ensuring that adequate supervision is provided for area constables, whatever degree of discretion they are allowed in fixing their hours of duty, is in some instances dealt with by the appointment of a sergeant with special responsibilities for area men. The way in which the supervising sergeant carries out his function however can interfere with the freedom of area constables to take a full part in the operation of unit beat policing. The results of the study threw up an example of the effect of one kind of supervisory approach in a measurement of police activity of area constables in one force by time of day. A peak in patrol activity was persistently recorded during a mid-morning period which on enquiry was found to be due to a requirement for a number of area constables to assemble at one place at a fixed time each day for briefing and contact with the supervising officer. To ensure that they were able to meet this appointment area constables took care to avoid activities such as enquiries which might delay them and recorded patrol activity. Although this particular arrangement was altered shortly after the study was completed it serves to illustrate the problem of devising a type of supervision (perhaps akin to the CID pattern) which is effective for area constables and yet does not restrict the freedom to fix hours of duty which is inseparable from their unit beat policing role. The essence of the problem is that 2 types of supervision have to exist side by side; the fairly close supervision and control exercised over men on 24 hour ground cover duty and the looser and more informal control of area men on discretionary hours working. In so far as the supervisory pattern affects the duty hours of area constable it is of direct interest to those concerned with time of day deployment.

125. The examination of time of day deployment of unit beat officers shows that so far as panda drivers and foot patrol officers are concerned there is little scope for flexibility in the traditional arrangement of

4-relief, 3-shift working. As explained in the previous paragraph there is considerable potential for flexible working hours for area constables if the question of supervision can be resolved. The overall picture is therefore one of peaks of workload being met by a fairly constant level of manpower and giving rise to periods of intense activity alternating with less busy periods identified by high patrol levels.

#### DAY OF WEEK DEPLOYMENT OF UNIT BEAT RESOURCES

126. The conditions of service of uniformed police constables provide for 5,8-hour tours of duty per week or 20 tours per 28-day month. These conditions apply equally to panda drivers, area constables and foot patrol officers. The particular days on which duty is performed are determined by reference to a rest day roster, normally devised and applied on a force wide basis with little or no scope for local variation. At the time of the study the forces measured were working hours in excess of 40 as a regular arrangement, and these extra hours were included in the rest day roster as nominated rest days to be worked. A 44-hour regular working week would therefore involve two of the rostered rest days per month being nominated as working days. These extra working days are known, variously and rather confusingly, as 'paid rest days' 'additional rest days' and 'further additional rest days'.

127. In view of the general lack of detailed knowledge of daily workload dealt with by the police it is understandable that those responsible for devising a rest day roster, including the nomination of rest days for extra duty, should take as a starting point the personal preferences of officers and endeavour to make duties as socially convenient as possible. The roster is otherwise designed, often on grounds of simplicity of management, to give an officer rest days as often on one day of the week as on another. The complete cycle of a rest day roster (ie until it begins to repeat its pattern) can take as long as 2 years or as little as 7 months. The effect of the basic cycle is that within the cycle period an officer will have worked as often, say, on a Friday as on a Wednesday, and will have had rest days equally balanced among the 7 days of the week.

128. The nomination of one or two rest days per month (for a 42 or 44 hour week) is often spread over the 7 days of the week in the same way. There was however more flexibility in rest day working arrangements than in the basic roster structure, but apart from a general view that Saturday constituted a busy day they were designed more on a 'fairshares' basis than on an estimate of workload. The study team found a growing awareness of the drawbacks of extra duty arrangements which were included in a force rest day roster and which resulted in extra men being on duty when there were no special needs, while at other times resources were hard pressed. Although alternative arrangements were said to be under active consideration police forces generally should be encouraged to look at rest day rosters and extra duty from the workload aspect. This need not make duty days more onerous (see paragraph 12 of appendix 38) The results of the study were analysed, and compared the fluctuations of hours on unit beat policing with variations in the incident workload. Bearing in mind the way in which the rest day roster is approached it is not surprising to find no clear relationship between the two. There are two contrary arguments to apply to the variation: one is that the

more intensively an area is patrolled the less likely it is that calls will be received for police assistance. The other is that the more policemen there are in an area the more offences will come to light. The basic questions are those of the effectiveness of preventive patrol and the preventability of incidents giving rise to a call to the police. It is unlikely that these questions can be answered without careful experimentation and measurement over a period of years.

129. Apart from the incident workload (discussed in detail in paragraphs 39-81 there are other commitments which the police are required to meet. These are generally known as 'abstractions from normal duty' and includes such duties as the escort of prisoners, attendance at court and the policing of magistrates court. Other abstractions are sports events and training. These abstractions are to a large extent predictable and in theory a more flexible rest day roster could compensate for the loss of outside duty time which they cause. The study results showed marked reductions in the overall unit beat policing effort on certain days which were directly attributable to regular and foreseeable abstractions.

130. A major difficulty about the application of a rest day roster flexible enough to allow for abstractions of a foreseeable nature is that the abstractions are usually of a local divisional or even sub-divisional character, whereas the basic roster is designed for force-wide application. The argument for a force rest day roster is that it is simple to operate and as far as working conditions are concerned applies with equal fairness to all uniformed officers. The introduction of a new roster is preceded by extensive consultation with representatives of the various ranks affected, and clearly a more flexible system with provision for any substantial local variation would give considerable scope for argument and possible discord. The need for morale to be kept as high as possible is of course an important factor but there is no evidence that a force wide roster necessarily achieves this, or that more flexible rosters appropriate to local conditions and preferences would have an adverse effect.

131. The force rest day roster is also applicable to officers posted as area constables. Their independence of role and freedom to adopt days of duty most likely to take advantage of local conditions is therefore curtailed and provides an example of the constraints of the traditional method of fixing duty days. It could be argued that area constables would choose days of duty more on grounds of domestic convenience than by reference to opportunities to exploit their role, but to some extent this is the question of supervision raised in an earlier chapter. A record of duties would of course be required so that a supervising officer would discuss with an area constable the factors which led him to adopt a particular pattern of duty.

132. This chapter is not intended to be critical of the forces taking part in the study and the reasons for the arrangements made have, it is hoped, been identified and the constraints recognised. Nevertheless the information provided by the study identifies effects which, in terms of operational deployment of resources, do not relate to workload demands, however these are measured. The argument that a proportion of police

work is unpredictable and demands contingency provision is accepted, but it must also be accepted that the amount of contingency provision should vary with the degree of risk. The assessment of this degree of risk requires the collection of information suitable for the calculation of probable levels of demand.

#### OVERALL DEPLOYMENT

133. To obtain the benefits of flexible deployment by time of day and day of week a system is necessary which will allow reliefs, shifts and rest day rosters to be designed to suit the requirements of each police unit. The Police Manpower, Equipment and Efficiency Report stated at page 136 under the heading of 'Varying shift systems':-

"Rigid adherence to a three shift system is the exception rather than the rule. In a number of places there is a four-relief system and in others a five-relief system. In one force, beats are divided into those needing 16 hour cover and those needing 24 hour cover, and to operate these, intermediate shifts have been introduced and are worked with pre-determined regularity. In another force a new shift system has been introduced to ensure that the same group of men always works together; this system also allows each man to have three days off duty at one time every fourth week. In some places five and seven-relief systems have been tried and abandoned as unpopular. In one force a six-shift rota is worked."

134. Some definitions of the terms used in this report are necessary to avoid confusion. A 'shift' is the period of a tour of duty; a 'relief' indicates a group of men who normally work on the same shift; and a 'roster' is a system whereby rest days are listed.

135. In one town in Phase II an attempt had been made to match manpower with the extra demands of a Friday (appendix 37). The town worked a 44 hour week and the extra eight hours per fortnight were used to provide an overlap between 10am and 2pm, and 10pm and 2am, but this was not reflected in the manhours available for unit beat policing on that day. The emphasis on Fridays had been absorbed by allowing other abstractions. In contrast to the working party report we found in the terms studied an almost total adherence to 'three shift' systems.

136. We recognise the need for the strength of a force to be so regulated that it is capable of dealing effectively with all emergencies and contingencies at any time of the day or night. Such needs can and should be assessed and the minimum policing needs for each period of the day established. Resources can then be assigned to cover this need and the remaining operational men deployed positively on preventive measures or specially allotted tasks.

137. The options available are made possible by the size of 'reliefs', the times of 'shifts' and the regulation of manpower by 'rostering' rest days. The most common practice is to divide the operational manpower into four reliefs, particularly where a 42 hour week is operated because this meets the requirement to grant seven rest days in each 28 day period. In this way one relief takes a rest day each day and the other three are on duty covering the 24 hours in three 'shift' periods. (see appendix 36).

138. Relief sizes could in theory be as small as one constable. In effect this would abolish 'reliefs' as such but the periods of lowest need can be an indicator of the minimum relief size. For example if only three constables are needed between say 2am and 6am on certain days - the period of lowest demand - then this would initially indicate a three man relief. It may be however, that other factors prevent this but would allow a two or a four man relief to operate. The objective should be to keep the 'relief' as small as possible.

139. Shift times should be varied according to the need for manpower each day. Workload studies show that certain workload patterns are similar for certain days of the week, but because of variations between towns and even within towns, the application of rigid force-wide or even divisional shift systems is inappropriate. To achieve the necessary flexibility to meet the needs of any day 'shifts' should overlap at certain times (sometimes several shifts may overlap) to give peaks of manpower while other periods may require only one shift. By deciding the level of manpower for each period of every day of the week, the daily number of 'reliefs' needed will emerge.

140. According to the number of 'reliefs' emerging, allowance should be made for spare relief(s) and rest days, etc. The needs of each day having been decided, the 'spare' allocation is used to balance the manpower over the seven days of the week. At this stage the constables or their representatives can be given the opportunity to suggest how the reliefs should rotate both on 'shifts' and on 'rest days' and it should be possible to accommodate preferences within the almost infinite variations. A formula and example of this system is presented at appendix 38.

#### THE IDEA OF THE UNIT IN BEAT POLICING

141. The concept of unit beat policing envisaged, by its title at least, that a panda beat and the 2 areas which it covered would function as an integrated unit with the central facilities made available by the collator, a radio operator and the CID. The panda beat formed a part of 24 hour cover and throughout the year would be manned by between 5 and 20 different individual constables. The changes would be due to the normal rotation of the 4 reliefs on 24 hour cover, release for holidays, sickness and abstractions, posting of panda drivers to other duties or divisions, and panda drivers from other beats covering 2 panda beats at times of manpower shortage.

142. The area constable however is specially selected for his job and is expected to spend at least 2 years on it to develop the local knowledge essential to his role. The inter-relationship of the two roles of panda driver and area constable therefore tends to be casual with little opportunity for development. In one force measured area constables were used extensively to relieve panda drivers at refreshment times thus giving good opportunities for contact and exchange of local information. The system suffers however from the rigid framework of duties within which the area constables have to work in order to fulfil their panda relief commitments. To operate to the best advantage area constables need to be kept informed to occasions when other officers deal with work in their area. An idea put forward in one of the original schemes was that area

constables should follow up incidents dealt with on their areas. This would not only give members of the public involved in incidents confidence in the efforts of the police but that also, perhaps more importantly, give the area constable a contact and make his existence and identity known. In practice arrangements to keep area constables informed of enquiries made in their area and even warrants executed and summonses served, were not comprehensive. Area men were of course given enquiries to carry out (see chapter on enquiries) could overhear radio directions and were supplied with information bulletins, but their limited 8 hour cover meant that they missed a good deal. Information bulletins were necessarily restricted to specific and important matters such as a crime or fatal accident and did not record minor occurrences. Non-contentious messages delivered by other officers could provide an area constable with valuable background information and even with a pretext for a subsequent call.

143. The idea of the unit has perhaps not had the real operational trial that it deserves. The constraints imposed by the major role of the panda driver in responding to incidents, and the shift and rest day structure within which he works, mean that he has little freedom to develop a unit role with the two area constables on his beat. The area constable, although his hours of duty are less rigid, has to work within similar constraints and is not able to exploit all the information about people in his area available from police records. The expression heard on several occasions described the area constables as 'the forgotten men' and this is possibly symptomatic of the difficulty some officers feel they have in fulfilling the promise held out at the beginning of unit beat policing, and the difficulty senior officers have in fitting area constables into suitable arrangements for supervision, shift systems, rest day rosters, and information flow. It was perhaps never made sufficiently clear that a unit was not created simply by designating some men as panda drivers and providing vehicles, and describing others as area constables and allowing a measure of discretion in fixing duty hours or even days.

#### THE DEVELOPMENT AND GROWTH OF INFORMATION SYSTEMS

144. Except perhaps in the areas of crime and road traffic accidents the police service has until now been poorly served with information which could be used to determine the best resource deployment patterns to meet a given situation. The amount of effort required to collect and process information manually has either ruled out the detailed measurement of police activity, or has restricted it to the kind of sampling approach adopted for the urban workloads study. The data provided by a sample can serve a useful purpose in identifying aspects and trends of police work which deserve longer study, and for establishing whether there has been a change in a regular pattern. It is not, however, suitable for day-to-day management because of the lapse of time between collection and availability in a useful form.

145. The introduction of computer-based data systems in the field of operational police work has changed the situation considerably and makes it necessary to examine closely the traditional methods by which police resources are deployed to see whether they might, with advantage, be changed to take advantage of computer-processed information. "Command and Control" systems, for example, record and classify the activities of policemen on outside duty, and are capable of analysing and presenting information within a period of minutes, and this has opened up a wide range of possibilities in the area of immediate resource deployment

and management.

146. For the longer term patterns of resource allocation this activity data can be associated with other categories of information derived from other sources to provide a basis for predictions of workloads and suitable alternative patterns of resource deployment. The results of action taken as a result of the use of the data and predictions can then be analysed and an assessment provided of the degree of success achieved. Appendix 35 gives an example in schematic form of the possible use of data in operational deployment.

CHAPTER VI

COLLATORS AND RADIO OPERATORS

147. It would not be proper to conclude this report without some reference to the work of the collator and the radio operator. The contribution made by these two officers to unit beat policing is a substantial one and it is, therefore, important that their aims and objectives should be clearly defined, and that those filling the posts should be aware of the nature of the contribution which they make. It is perhaps of overriding importance that the officers selected for the posts should have appropriate background and experience and should be given the authority required to meet the objectives.

148. Although the study team did not look at the work of these two posts specifically, in the process of discussing the results of the workload study they received a wide range of impressions about their relationship to unit beat policing and the value of their contribution. In general, the function of the collator is to collect, evaluate, index and dispense information on crime and criminal matters. Given the appointment of suitably experienced officers this role could be enlarged to encompass the identification of operational policing problems over a wide field.

149. The local radio operator has a vital role in directing resources to incidents and the environment in which he works should reflect the importance of his post. A policy of selective response to demands from the public (para. 61) will raise the level of skill and judgement required, and the appointment of an experienced officer capable of exercising authority will be necessary.

150. RECOMMENDATIONS

150(1) The theory of preventive patrol should be extended and applied to the deployment of patrol resources to coincide with predicted workloads. (paras. 22, 144-125).

150(2) While in practice it has proved difficult to attach a CID officer to a "unit" his contribution is vital to the development of the team effort. Regular but informal contact between CID officers and members of the unit beat team, particularly the area constable, should be arranged to enable the unit to make a full and effective contribution to the policing of the area. (paras. 15,24).

150(3) The role of the collator is of major importance in the development of a successful system of unit beat policing. A separate study aimed at a definition of his objectives and how best to achieve them would be of very considerable value, not only to unit beat policing systems but to the whole field of police work. (paras. 16, 147).

150(4) Greater emphasis should be placed on the contribution derived from officers patrolling on foot. (paras. 30-34)

150(5) Panda vehicles should be released as much as possible from an over-riding incident response role so that they can function within the original concept of unit beat policing. (paras. 57,143).

150(6) The adoption of a varied and flexible pattern of shift working should be considered to absorb the effect of refreshment periods. (para. 85).

150(7) Wider use might be made of dictating machines and incident proformas to streamline procedures and reduce the time committed to report writing. (para. 89).

150(8) The relief of station staff by unit beat officers should be avoided wherever possible. (para. 99).

150(9) Panda vehicles should be washed, cleaned and serviced by civilian staff. (para. 100)

150(10) There should be sufficient spare vehicles available to ensure that repairs and servicing do not interfere with operational requirements. (para. 101).

150(11) The use of panda vehicles for general transport purposes should be kept to a minimum. (para. 102).

150(12) The value of enquiry work to the role of area constable should be recognised and his proportion of this work increased by appropriate arrangements. (paras. 108-9).

150(13) Wider use should be made of witness questionnaire forms sent by post. (para. 111).

150(14) Records of enquiry work should be in a form capable of regular analysis to determine workload fluctuations. (para. 112).

150(15) Use should be made of an analysis of incidents to provide a basis for the prediction of response workload. (para. 118).

150(16) An analysis of calls from the public for assistance should be undertaken with a view to their classification, grading and weighting. (para. 60).

150(17) Levels of response to calls appropriate to their classification should be established as a basis for the allocation of response work between force controlled and locally directed vehicles. (paras. 58,59).

150(18) The incident response role of traffic police needs to be clarified. (para. 67).

150(19) The relationship between accident prevention work and the level of accidents should be monitored. (para. 69).

150(20) The effectiveness of the area constable role can be examined by reference to involvement in public order incidents. (para. 75).

150(21) A shift system and rest day roster flexible enough to enable the best operational use to be made of resources should be introduced. (appendix 38).

150(22) Computer facilities should be available to help to identify workload patterns and assess related deployment strategies. (paras. 144-146).

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## % OF CAR PATROL TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	298	3	0	97
	B	638	1	19	80
	C	416	4	2	94
	D	480	6	4	90
AVERAGE		-	3.5	6.3	90.2
II	E	238	5	0	95
	F	295	0	1	99
	G	222	2	1	97
	H	261	8	1	91
AVERAGE		-	3.7	0.8	95.5
III	J	204	2	4	94
	K	174	4	1	95
	L	230	1	2	97
	M	179	1	1	98
AVERAGE		-	2	2	96
ALL	ALL	-	3.0	3.0	94.0

## CAR PATROL TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	8	1.1	1	0.5	288	44.2
	B	10	2.1	120	9.9	508	51.3
	C	5	2.3	9	3.6	393	34.9
	D	27	3.4	22	4.9	431	41.1
AVERAGE		12.5	2.2	38	4.7	405	42.9
II	E	12	2.4	NONE	NONE	226	47.8
	F	1	1.5	2	0.7	292	43.0
	G	5	4.1	2	1.6	215	36.0
	H	20	15.1	4	2.1	237	50.8
AVERAGE		9.5	5.8	2	1.1	242.5	44.4
III	J	4	0.8	8	3.6	192	39.8
	K	7	1.5	1	1.8	166	34.9
	L	3	0.9	4	1.5	223	39.5
	M	1	0.3	2	1.2	176	39.0
AVERAGE		3.7	0.9	3.7	2.0	189.2	38.3
ALL	ALL	8.6	3.0	14.6	2.6	279	41.9

## % OF FOOT PATROL TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	598	79	17	4
	B	959	33	61	6
	C	534	63	18	19
	D	605	61	28	11
AVERAGE		-	59	31	10
II	E	310	87	0	13
	F	170	15	66	19
	G	222	27	27	46
	H	188	27	55	18
AVERAGE		-	39	37	24
III	J	408	66	26	8
	K	288	80	6	14
	L	350	46	37	17
	M	318	52	32	16
AVERAGE		-	61	25.2	13.8
ALL	ALL	-	53	31.0	16.0

## FOOT PATROL TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	471	62.5	102	46.0	24	3.7
	B	316	65.2	586	48.4	58	5.8
	C	338	50.9	97	39.8	99	8.6
	D	369	45.9	171	38.4	65	6.2
AVERAGE		374	56.1	239	43.2	62	6.1
II	E	269	54.0	NONE	NONE	41	8.6
	F	25	33.7	113	44.2	32	4.7
	G	59	46.3	60	46.0	103	17.3
	H	50	38.3	104	56.6	34	7.3
AVERAGE		101	43.1	69	36.7	53	9.5
III	J	268	54.5	105	46.7	35	7.3
	K	231	48.3	16	28.6	41	8.6
	L	159	47.3	131	48.5	60	10.6
	M	164	49.0	102	59.0	52	11.5
AVERAGE		206	49.8	88	45.7	47	9.5
ALL	ALL	227	49.6	132	41.9	54	8.4

## % OF REFRESHMENT TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	156	49	13	38
	B	249	18	45	37
	C	210	33	11	56
	D	216	35	19	46
AVERAGE		-	34	22	44
II	E	88	52	NONE	48
	F	92	9	25	66
	G	78	15	15	70
	H	70	18	20	62
AVERAGE		-	23.5	15	61.5
III	J	121	40	20	40
	K	111	52	6	42
	L	116	30	20	50
	M	95	36	17	47
AVERAGE		-	39.5	15.75	44.75
ALL	ALL	-	32.3	17.6	50.1

## REFRESHMENTS TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	76	10.1	20	9.0	60	9.1
	B	45	9.3	111	9.2	93	9.4
	C	69	10.4	24	9.8	117	10.4
	D	75	9.4	42	9.4	99	9.4
AVERAGE		66	9.8	49	9.3	92.2	9.6
II	E	46	9.3	NONE	NONE	42	8.8
	F	8	10.8	23	9.1	61	9.0
	G	12	9.2	11	8.8	55	9.3
	H	12	9.6	14	7.8	44	9.4
AVERAGE		19.5	9.7	12	6.4	42.2	9.1
III	J	49	10.0	24	10.7	48	10.0
	K	58	12.2	6	10.7	47	9.9
	L	35	10.4	23	8.5	58	10.3
	M	34	10.1	16	9.2	45	10.0
AVERAGE		44	10.7	17.2	9.8	49.5	10.0
ALL	ALL	43	10.0	26.0	8.5	64.1	9.6

## % OF REPORT WRITING AT STATIONS TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	89	48	15	37
	B	191	13	45	42
	C	197	42	10	48
	D	182	37	21	42
AVERAGE		-	35	23	42
II	E	87	53	NONE	47
	F	113	17	21	62
	G	45	12	16	72
	H	55	14	24	62
AVERAGE		-	24	15	61
III	J	78	42	25	33
	K	97	52	4	44
	L	75	43	14	43
	M	64	53	13	34
AVERAGE		-	47	14	39
ALL	ALL	-	35	17	48

REPORT WRITING AT STATIONS TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	43	5.7	14	6.1	33	5.1
	B	25	5.3	87	7.1	79	8.0
	C	84	12.6	19	7.6	95	8.5
	D	67	8.4	38	8.6	76	7.3
AVERAGE		55	8.0	39	7.3	71	7.2
II	E	46	9.3	NONE	NONE	41	8.8
	F	19	25.2	24	9.3	70	10.3
	G	5	4.3	7	5.5	33	5.6
	H	7	5.9	13	7.3	35	7.5
AVERAGE		19	11.2	11	5.5	45	6.5
III	J	33	6.7	19	8.4	26	5.4
	K	50	10.5	4	7.1	43	9.0
	L	32	9.5	11	4.1	32	5.7
	M	34	10.1	8	4.6	22	4.9
AVERAGE		37	9.2	10	6.1	31	6.3
ALL	ALL	37	9.5	20	6.3	49	6.7

## % OF TRAFFIC POINT AND SCHOOL PATROL TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	22	29	45	26
	B	23	39	49	12
	C	26	20	32	48
	D	49	62	11	27
AVERAGE		-	38	34	28
II	E	0.8	62	NONE	38
	F	0.7	0	58	42
	G	12.2	13	44	43
	H	0.4	0	0	100
AVERAGE		-	19	25	56
III	J	6	66	17	17
	K	3	33	34	33
	L	19	21	47	32
	M	8	25	63	12
AVERAGE		-	36	40	24
ALL	* ALL	-	31	33	36

## TRAFFIC POINT AND SCHOOL PATROL TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	6	0.8	10	4.6	6	0.9
	B	9	1.9	11	0.9	3	0.3
	C	5	0.8	8	3.3	12	1.1
	D	31	3.8	5	1.1	13	1.3
AVERAGE		12.7	1.8	8.5	2.5	8.5	0.9
II	E	0.5	0.1	NONE	NONE	0.3	0
	F	0	0	0.4	0.2	0.3	0
	G	0.2	1.5	6	4.7	6	1.0
	H	0	0	0	0	0.4	0.1
AVERAGE		0.2	0.4	1.6	1.2	1.7	0.3
III	J	4	0.8	1	0.4	1	0.2
	K	1	0.2	1	1.8	1	0.2
	L	4	1.2	9	3.3	6	1.1
	M	2	0.6	5	2.9	1	0.2
AVERAGE		2.7	0.7	4.0	2.1	2.2	0.4
ALL	ALL	5.2	1.0	4.7	1.9	4.1	0.5

## % OF ENQUIRIES AND VISITING TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	100	14.3	28.2	57.5
	B	214	4.5	64.6	30.9
	C	159	15.4	22.1	62.5
	D	190	15.2	41.1	43.7
AVERAGE		-	12.4	39.0	48.6
II	E	66	41.4	NONE	58.6
	F	163	7.2	27.6	65.2
	G	83	11.5	17.0	71.5
	H	52	12.6	37.1	50.3
AVERAGE		-	18.2	20.4	61.4
III	J	106	17.9	27.4	54.7
	K	75	32.0	10.7	57.3
	L	82	20.7	29.3	50.0
	M	54	18.5	24.1	57.4
AVERAGE		-	22.3	22.9	54.8
ALL	ALL	-	17.6	27.4	55.0

## ENQUIRIES AND VISITS TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	14.4	1.9	28.1	12.6	57.4	8.8
	B	9.6	2.0	138.5	11.4	66.2	6.7
	C	24.4	3.7	35.1	14.4	99.5	8.8
	D	28.8	3.6	78.2	17.6	83.1	7.9
AVERAGE		19.3	2.8	70.0	14.0	76.5	8.0
II	E	27.4	5.5	NONE	NONE	38.7	8.2
	F	11.7	15.9	45.1	17.7	106.4	15.7
	G	9.6	7.5	14.1	10.8	59.3	9.9
	H	6.6	5.0	19.3	10.5	26.2	5.6
AVERAGE		13.8	8.5	19.6	9.7	57.6	9.8
III	J	19.0	3.9	29.0	12.9	58.0	12.0
	K	24.0	5.0	8.0	14.3	43.0	9.0
	L	17.0	5.0	24.0	8.9	41.0	7.3
	M	10.0	3.0	13.0	7.5	31.0	6.9
AVERAGE		17.5	4.2	18.5	10.9	43.2	8.8
ALL	ALL	18.9	5.2	36.0	11.5	56.9	8.9

## % OF OTHER UNIT BEAT DUTY TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	82	45.7	18.3	36.0
	B	147	26.1	45.2	28.7
	C	203	30.8	15.6	53.6
	D	241	44.1	20.4	35.5
AVERAGE		-	36.7	24.9	38.4
II	E	98	63.3	NONE	36.7
	F	71	6.0	36.1	57.9
	G	60	28.0	25.7	46.3
	H	73	28.5	16.9	54.6
AVERAGE		-	31.4	19.7	48.9
III	J	138	49.3	16.7	34.0
	K	119	46.2	5.9	47.9
	L	172	32.5	25.6	41.9
	M	101	39.6	11.9	48.5
AVERAGE		-	41.9	15.0	43.1
ALL	ALL	-	36.7	19.9	43.4

OTHER NON-UNIT BEAT DUTY TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	37.5	5.0	15.1	6.8	29.6	4.5
	B	38.3	8.0	66.4	5.5	42.2	4.3
	C	62.6	9.4	31.7	13.0	108.8	9.7
	D	106.0	13.2	49.2	11.1	85.4	8.1
AVERAGE		61.1	8.9	40.6	9.1	66.5	6.6
II	E	61.7	12.4	NONE	NONE	35.8	7.6
	F	4.2	5.8	25.6	10.0	41.1	6.0
	G	16.9	13.2	15.5	11.9	27.9	4.7
	H	20.9	16.0	12.4	6.8	40.1	8.6
AVERAGE		25.9	11.8	13.4	7.2	36.2	6.7
III	J	68.0	13.8	23.0	10.2	47.0	9.8
	K	55.0	11.5	7.0	12.5	57.0	12.0
	L	56.0	16.7	44.0	16.3	72.0	12.8
	M	40.0	11.9	12.0	6.9	49.0	10.9
AVERAGE		54.7	13.5	21.5	11.5	55.2	11.4
ALL	ALL	47.3	11.4	25.2	9.3	53.0	8.2

## % OF CRIME INCIDENTS BY FUNCTIONS

Phase (1)	Town (2)	Number of Incidents (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	69	14.5	-	85.5
	B	78	-	5.0	95.0
	C	53	2.0	-	98.0
	D	98	11.0	2.0	87.0
AVERAGE		75	6.9	1.7	91.4
II	E	27	-	-	100.0
	F	62	-	8.0	92.0
	G	49	2.0	6.0	92.0
	H	14	-	-	100.0
AVERAGE		38	0.5	3.5	96.0
III	J	38	15.0	7.1	77.9
	K	48	17.7	1.6	80.7
	L	61	15.6	15.2	69.2
	M	26	9.8	2.9	87.3
AVERAGE		43	14.5	6.7	78.8
ALL	ALL	52	7.3	4.0	88.7

## % OF CRIME INCIDENT TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	108	33.6	10.0	56.4
	B	81	7.2	33.7	59.1
	C	70	23.9	5.1	71.0
	D	106	22.5	4.8	72.7
AVERAGE		-	21.8	13.4	64.8
II	E	33	40.6	NONE	59.4
	F	51	4.1	19.9	76.0
	G	36	13.7	7.8	78.5
	H	22	26.0	10.6	63.4
AVERAGE		-	21.1	9.6	69.3
III	J	42	26.2	9.5	64.3
	K	60	41.7	10.0	48.3
	L	42	21.4	19.1	59.5
	M	48	33.3	14.6	52.1
AVERAGE		-	30.6	13.3	56.1
ALL	ALL	-	24.5	12.1	63.4

## CRIME INCIDENT TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	36.2	4.8	10.7	4.8	60.7	9.3
	B	5.8	1.2	27.1	2.2	47.6	4.8
	C	16.7	2.5	3.6	1.5	49.8	4.4
	D	23.9	3.0	5.1	1.1	77.2	7.3
AVERAGE		20.6	2.9	11.6	2.4	58.8	6.4
II	E	13.6	2.7	NONE	NONE	19.8	4.2
	F	2.1	2.9	10.2	4.0	39.1	5.8
	G	4.9	3.9	2.8	2.2	28.2	4.7
	H	5.7	4.4	2.3	1.3	13.9	3.0
AVERAGE		6.6	3.5	3.8	1.9	25.2	4.4
III	J	11.0	2.2	4.0	1.8	27.0	5.6
	K	25.0	5.2	6.0	10.7	29.0	6.1
	L	9.0	2.7	8.0	3.0	25.0	4.4
	M	16.0	4.8	7.0	4.0	25.0	5.5
AVERAGE		15.2	3.7	6.2	4.9	26.5	5.4
ALL	ALL	72.5	3.4	7.2	3.1	36.9	5.4

## % OF TRAFFIC INCIDENTS BY FUNCTIONS

Phase (1)	Town (2)	Number of Incidents (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	21	14.3	-	85.7
	B	44	-	18.2	81.8
	C	23	-	-	100.0
	D	50	4.0	2.0	94.0
AVERAGE		35	4.6	5.0	90.4
II	E	8	-	-	100.0
	F	3	-	-	100.0
	G	24	-	-	100.0
	H	3	-	-	100.0
AVERAGE		10	-	-	100.0
III	J	16	8.1	8.1	83.8
	K	19	20.3	-	79.7
	L	25	14.1	11.1	74.8
	M	14	16.4	3.6	80.0
AVERAGE		19	14.7	5.7	79.6
ALL	ALL	21	6.4	3.6	90.0

## % OF TRAFFIC INCIDENT TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	45	44.0	9.5	46.5
	B	68	18.4	29.6	52.0
	C	47	24.7	9.9	65.4
	D	60	25.7	11.9	62.4
AVERAGE		-	28.2	15.2	56.6
II	E	16	41.6	NONE	58.4
	F	16	1.6	15.6	82.8
	G	42	11.5	15.6	72.9
	H	14	14.3	8.7	77.0
AVERAGE		-	17.2	10.0	72.8
III	J	31	45.2	6.4	48.4
	K	22	45.5	9.0	45.5
	L	25	32.0	4.0	64.0
	M	35	42.9	5.7	51.4
AVERAGE		-	41.4	6.3	52.3
ALL	ALL	-	28.9	10.5	60.6

## TRAFFIC INCIDENT TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	19.9	2.6	4.3	1.9	21.1	3.2
	B	12.5	2.6	20.2	1.7	35.4	3.6
	C	11.5	1.7	4.6	1.9	30.5	2.7
	D	15.6	1.9	7.2	1.7	37.7	3.6
AVERAGE		14.9	2.2	9.1	1.8	31.2	3.2
II	E	6.7	1.3	NONE	NONE	9.4	2.0
	F	0.2	0.3	2.5	1.0	13.3	2.0
	G	4.8	3.8	6.5	5.0	30.4	5.1
	H	1.9	1.5	1.2	0.6	10.4	2.2
AVERAGE		3.4	1.7	2.5	1.6	15.9	2.8
III	J	14.0	2.9	2.0	0.9	15.0	3.1
	K	10.0	2.1	2.0	3.6	10.0	2.1
	L	8.0	2.4	1.0	0.4	16.0	2.8
	M	15.0	4.5	2.0	1.2	18.0	4.0
AVERAGE		11.7	3.0	1.7	1.5	14.7	3.0
ALL	ALL	100.4	2.3	53.5	1.6	268.3	3.0

## % OF PUBLIC ORDER INCIDENTS BY FUNCTIONS

Phase (1)	Town (2)	Number of Incidents (3)	% of Column 3 by:		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	34	26.5	2.9	70.6
	B	44	-	11.4	88.6
	C	37	5.4	-	94.6
	D	60	8.3	6.7	85.0
AVERAGE		44	10.0	5.2	84.7
II	E	23	13.0	NONE	87.0
	F	11	-	-	100.0
	G	24	-	8.3	87.5
	H	16	-	-	100.0
AVERAGE		19	3.2	2.1	93.8
III	J	11	6.7	4.4	88.9
	K	27	7.5	1.9	90.6
	L	23	17.6	9.9	72.5
	M	19	16.0	5.3	78.7
AVERAGE		20	12.0	5.4	82.9
ALL	ALL	329	8.4	4.2	87.1

## % OF PUBLIC ORDER INCIDENT TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	48	48.6	21.6	29.9
	B	27	10.7	49.4	39.9
	C	119	21.3	5.9	72.8
	D	92	50.4	20.9	28.7
AVERAGE		-	32.8	24.4	42.8
II	E	10	38.4	NONE	61.6
	F	8	8.8	40.4	50.8
	G	16	9.2	14.4	76.4
	H	9	15.7	9.5	74.8
AVERAGE		-	18.0	16.1	65.9
III	J	17	29.4	17.7	52.9
	K	15	20.0	20.0	60.0
	L	10	20.0	10.0	70.0
	M	16	43.8	6.2	50.0
AVERAGE		-	28.3	13.5	58.2
ALL	ALL	-	26.3	18.0	55.7

## PUBLIC ORDER INCIDENT TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	23.2	3.1	10.3	4.6	14.3	1.3
	B	2.9	0.6	13.6	1.1	10.9	1.1
	C	25.4	3.8	7.1	2.9	86.9	7.7
	D	46.6	5.8	19.3	4.3	26.5	2.5
AVERAGE		24.5	3.3	12.6	3.2	34.6	3.1
II	E	4.0	0.8	NONE	NONE	6.4	1.4
	F	0.7	0.9	3.1	1.2	3.9	0.6
	G	1.4	1.1	2.2	1.7	11.9	2.0
	H	1.4	1.1	0.9	0.5	6.8	1.5
AVERAGE		1.9	1.0	1.5	0.8	7.2	1.4
III	J	5.0	1.0	3.0	1.3	9.0	1.9
	K	3.0	0.6	3.0	5.3	9.0	1.9
	L	2.0	0.6	1.0	0.4	7.0	1.3
	M	7.0	2.1	1.0	0.6	8.0	1.8
AVERAGE		4.2	1.1	2.0	1.9	8.25	1.7
ALL	ALL	122.6	1.8	64.5	2.0	348.6	2.1

## % OF SOCIAL SERVICE INCIDENTS BY FUNCTIONS

Phase (1)	Town (2)	Number of Incidents (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	81	22.2	-	77.8
	B	77	-	13.0	87.0
	C	59	-	-	100.0
	D	81	4.9	2.5	92.6
AVERAGE		74	6.8	3.9	89.3
II	E	27	-	NONE	100.0
	F	27	-	7.4	92.6
	G	53	-	13.2	86.8
	H	22	-	-	100.0
AVERAGE		32	-	5.1	94.9
III	J	48	11.5	8.9	79.6
	K	65	11.9	3.1	85.0
	L	77	13.0	13.7	73.3
	M	25	18.0	7.0	75.0
AVERAGE		54	13.6	8.2	78.2
ALL	ALL	642	6.8	5.7	87.5

**CONTINUED**

**1 OF 2**

## % OF SOCIAL SERVICE INCIDENT TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	69	19.5	7.7	72.8
	B	70	12.8	27.8	59.4
	C	31	18.2	4.9	76.9
	D	64	13.9	10.1	76.0
AVERAGE			16.1	12.6	71.3
II	E	13	45.3	NONE	54.7
	F	22	9.9	23.4	66.7
	G	30	11.9	7.6	80.5
	H	20	15.4	20.0	64.6
AVERAGE			20.6	12.8	66.6
III	J	39	33.3	15.4	51.3
	K	41	29.3	4.9	65.8
	L	39	23.0	23.0	54.0
	M	34	23.5	11.8	64.7
AVERAGE			27.3	13.7	59.0
ALL	ALL		21.3	13.0	65.7

SOCIAL SERVICE INCIDENT TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	13.4	1.8	5.3	2.4	50.2	7.7
	B	8.9	1.8	19.4	1.6	41.6	4.2
	C	5.6	0.8	1.5	0.6	23.7	2.1
	D	8.9	1.1	6.4	1.4	48.3	4.6
AVERAGE		9.2	1.4	8.1	1.5	40.9	4.6
II	E	6.1	1.2	NONE	NONE	7.3	1.5
	F	2.2	3.0	5.1	2.0	14.6	2.2
	G	3.6	2.8	2.3	1.8	24.4	4.1
	H	3.1	2.3	4.0	2.2	12.9	2.8
AVERAGE		3.7	2.3	2.8	1.5	14.8	2.6
III	J	13.0	2.6	6.0	2.7	20.0	4.1
	K	12.0	2.5	2.0	3.6	27.0	5.7
	L	9.0	2.7	9.0	3.3	21.0	3.7
	M	8.0	2.4	4.0	2.3	22.0	4.9
AVERAGE		10.5	2.5	5.2	3.0	22.5	4.6
ALL	ALL	93.8	2.1	65.0	2.0	313.0	3.9

## % OF OFF DUTY FOR ANY REASON TIME BY FUNCTIONS

Phase (1)	Town (2)	Activity Time (Hours) (3)	% of Column 3 by:-		
			Foot Patrol (4)	Area Constable (5)	Panda Driver (6)
I	A	14	32.5	10.5	57.0
	B	19	0.6	63.8	35.6
	C	21	32.9	19.5	47.6
	D	13	32.4	12.4	55.2
AVERAGE			24.6	26.6	48.8
II	E	9	51.6	NONE	48.4
	F	6	-	22.5	77.5
	G	5	60.0	-	40
	H	15	5.6	54.5	39.9
AVERAGE			29.3	19.3	51.4
III	J	9	44.4	11.2	44.4
	K	5	40.0	-	60
	L	10	20.0	50	30
	M	7	57.1	14.3	28.6
AVERAGE			40.4	18.9	40.7
ALL	ALL	133	31.5	21.5	47.0

## OFF DUTY FOR ANY REASON TIME AS % OF FUNCTION

Phase	Town	Foot Patrol		Area Constable		Panda Driver	
		Hours	%	Hours	%	Hours	%
I	A	4.4	0.6	1.4	0.6	7.7	1.2
	B	0.1	-	11.9	1.0	6.6	0.7
	C	6.9	1.0	4.1	1.7	9.9	0.9
	D	4.1	0.5	1.6	0.3	6.9	0.7
AVERAGE		3.9	0.5	4.7	0.9	7.8	0.9
II	E	4.9	1.0	NONE	NONE	4.6	1.0
	F	-	-	1.3	0.5	4.5	0.7
	G	3.0	2.3	-	-	2.0	0.3
	H	0.8	0.6	7.9	4.3	5.8	1.2
AVERAGE		2.2	1.0	2.3	1.2	4.2	0.8
III	J	4.0	0.8	1.0	0.4	4.0	0.8
	K	2.0	0.4	-	-	3.0	0.6
	L	2.0	0.6	5.0	1.8	3.0	0.5
	M	4.0	1.2	1.0	0.6	2.0	0.4
AVERAGE		3.0	0.7	1.7	0.7	3.0	0.6
ALL	ALL	36.2	0.7	35.2	0.9	60.0	0.8

BEAT COMPOSITION OF TOWNS AND % OF TIME FILLED

Phase	Town	Number of beats : for			% of time filled		
		Town Centre (foot)	Area Constable	Panda driver	Town Centre (foot)	Area Constable (assuming 40 hours a week)	Panda driver
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I	A	5	9	4	89.7	61.8	97.1
	B	4	37	6	72.0	89.4	98.3
	C	6	18	9	65.8	31.1	74.4
	D	7	21	9	68.4	52.9	69.4
AVERAGE		5.5	21	7	74.0	58.8	84.8
II	E	4	NONE	3	74.2	NONE	93.6
	F	5	9	4	8.8	70.8	100.9**
	G	2	3	6	38.0	108.6**	59.2
	H	1*	9	3	77.4	51.1	92.4
AVERAGE		3	5	4	49.6	57.6	86.3
III	J	6	10	5	48.8	56.2	57.4
	K	7	10	5	40.7	14.0	56.7
	L	4	10	5	50.0**	67.5	67.1
	M	1*	6	3	199.4	61.8	89.5
AVERAGE		4.5	9	4.5	84.7	49.9	67.7
ALL	ALL	52	142	62	69.4	55.4	79.6

\* or as required and manpower permits

\*\* double manning usually with probationer constables

## UNIT BEAT POLICING

Following the apparently successful motorised beat policing schemes at Kirkby, Bury and Widnes, a further experiment was, on the initiative of the Home Office Police Research and Planning Branch, started in Accrington in Lancashire on 1 June 1966. No time limit has been set for the experiment; the Police Research and Planning Branch will measure the effectiveness of the scheme with the assistance of Lancashire Constabulary officers.

## AIMS

1. To increase police efficiency.
2. To cultivate a better understanding with members of the public by:-
  - a. closer contact with the men on the beat;
  - b. swifter response to calls for assistance and complaints.
3. To increase and improve the information flow.
4. By combining resources to overcome the shortage of police officers.
5. To create a new challenge in the method of beat working particularly for the younger constables.

## ACCRINGTON SUB-DIVISION - GENERAL DESCRIPTION

2. Accrington is situated in the northern fringe of the industrial area of Lancashire, 14 miles from the Birmingham-Preston motorway. The sub-Division comprises the borough of Accrington, the urban districts of Church and Oswaldtwistle and the parish of Altham. The population is about 60,000 and it covers 11,269 acres. There are 15 miles of Class "A" roads,  $3\frac{3}{4}$  miles of Class "B" roads and 91 unclassified roads.

3. A typical Lancashire cotton town, Accrington dates back to the 16th century. Considerable redevelopment has taken place in the town centre which has the usual social amenities, including a public library, art gallery, public parks and playing fields. There is a wide variety of light and heavy industries in the district, including such trades as cotton, calico printing, bleaching and dyeing, textile machinery, paper making and many types of precision engineering. Most of the working population are employed in the area.

## POLICING

4. Prior to 1947 Accrington had its own police force and other areas mentioned were policed by the Lancashire Constabulary. When the force was amalgamated with Lancashire, Accrington became the divisional Headquarters of the Accrington division. The area was policed in the conventional manner ie, foot patrol beats superimposed with motor cars and motor cycle, until the beginning of the experiment. The main roads are patrolled by cars and motorcycles directed from outside the Division by the Headquarters Traffic Group and have been ignored for the purposes of the experiment.

5. The authorised strength of the sub-division is 50 police constables and the actual strength is 45 constables. Prior to 1 June 1966, there were 12 foot patrol beats, 8 in the borough, 3 covering Church and Oswaldtwistle and a detached 24 hours responsibility beat (motor cycle) patrolling the

remainder of the area. In addition, there was one area car with one constable and a crime patrol car containing 2 constables. A dog van also gave periodic attention to the sub-division. The supervision consisted of one Chief Inspector (in charge); 3 Inspectors and 7 Sergeants. The CID is made up of one Detective Inspector (in charge of the Division) 2 Detective Sergeants and 4 Detective Constables. There are policewomen also stationed in the Division.

#### UNIT BEAT POLICING

6. When it is considered that 4.8 men are required to cover one beat and that at Accrington there were 12 conventional foot patrol beats, it will be seen that many of them remained uncovered or not covered adequately by police strength available. Under the experimental scheme, the town centre is still policed in the conventional manner, although the possibility of installing close-circuit television to supplement the work of the patrolling officers is being considered. The rest of the sub-division has been divided into 8 areas. Two areas comprise one motor car beat, and the car is on patrol for 24 hours; it is manned by one constable, equipped with personal radio, and controlled from the sub-divisional station. Superimposed on each of the car beats are 2 constables, one for each area. These men are known as the area constables and, as far as possible, live within their area. They have overall responsibility for their particular areas and when off duty are not replaced, cover being provided by car. The responsibilities of the area constable are described briefly in the annex to this appendix.

7. The car beat men and the area constables are assisted by a detective constable for each car beat. This gives a maximum of 4 men on duty at any one time on each of the 4 car beats, ie 2 area constables, one man on the car beat and one detective constable. A flow of information concerning the beat passes between members of the team. Apprehensions and other good police work are considered as the work of the team and not of any individual. This encourages team working and cuts out the "lone wolf" attitude. The team is equipped with personal radio and is supervised by the sergeants and inspectors in the normal manner.

8. It is anticipated that the flow of information will become voluminous, and to ensure that this information is made available to the whole team, and indexed for its future members, some form of collating is necessary. The team must remain on their beat as much as possible, since any time spent away from it is non-productive and should be avoided. A detective constable has therefore been appointed as collator; he works in the sub-divisional office, keeping a record of all the information fed into him by members of the various teams and ensuring that each man is kept up to date with the latest developments on his beat.

9. Like the rest of his team, he is equipped with personal radio, and can be approached for information about any of the beats; he forwards information about known criminals to the force criminal intelligence bureau. The crime prevention officer in the division has been brought into the scheme and is supplied with information in regard to vulnerable premises and other aspects in his particular field. He also contributes to the flow of information.

#### MEASUREMENT OF SCHEME

10. Statistical data is collected by the collator for analysis by the Police Research and Planning Branch. This includes the trend of indictable crimes and other forms of preventable offences. The figures obtained from

this data will be compared with a similar period under the conventional type of policing. Comparisons will also be made with the schemes operating at Kirkby, Widnes and Bury.

11. A further form of measurement is being prepared under which points will be given to the various items of information obtained. As the number of points increase, a situation will become apparent which calls for increased police activity in a particular area. It is hoped that this will make it possible to anticipate crime or other incidents. If a crime has been committed the points system could produce suspects. This is a completely new technique and it is not yet known whether it can be perfected for this type of evaluation. It may be that, if successful, a computer could be used to store the data and indicate when a situation is likely to arise, quickly and accurately.

#### CONCLUSION

12. This experiment has only been operating for a short time, and cannot be properly assessed at this stage. Further similar experiments are being started by the Police Research and Planning Branch in other forces in areas which differ from Accrington. When the results of all these experiments are available, the Branch will be in a position to assess the suitability of unit beat policing for any type of area. The further experiments with the use of closed circuit television in town centres may help the Branch to devise a complete system of policing ranging from central areas, with patrolling constables supplemented by television through suburban and urban areas, with unit beat policing, to rural areas policed in much the same way as at present.

## DUTIES OF AREA CONSTABLE

1. The area constable will reside on or near his beat.
2. He will normally work in uniform, but may wear plain clothes when he considers it necessary. On these occasions he must report the fact to his sergeant.
3. He will be equipped with personal radio and will use this for imparting or receiving information.
4. His area will be worked, on foot, bicycle and in some areas, motor cycle, at his discretion. He will have overall responsibility for his area.
5. His role will be to maintain personal contact with members of the public and in effect he will be the "eyes and ears" of the car beat officers, and the liaison detectives.
6. He will maintain contact by personal radio with the other officers in his group, ie the car beat men, detective, area constable and collator.
7. Copies of Crime Information will be posted to his home.
8. Although his primary role will be concerned with crime and criminals, he will also attend to any other police function in the normal manner, but his reports in these matters should be kept to a minimum. He must not become office-bound.
9. He will be expected to visit the "showing the flag areas" in his area, ie areas where a policeman is expected to be seen, busy crossroads, shopping precincts, etc.
10. On taking over his area his first task will be to familiarise himself with everything in the area, and feed it into the collator, at the same time keeping his colleagues informed what he is doing.
11. To give guidance on the sort of information he should gather is difficult, as situations change from day to day, but if he looks upon the area he is working as his area and that he will be the man who will be asked for information about it, he will not go far wrong.
12. He will ensure that complaints from members of the public are "followed up". This not only applies to reports of crime and other serious matters, but to minor complaints and the subsequent action taken by the police in respect of them. Many complaints against the police are unfounded and unjustified. These have arisen because, in many cases, the complainant has not been made aware of the action taken or of the problems with which the police are faced. "Follow ups" by the area constable will help to a better understanding between the police and the public.
13. Each area constable will call in at the Sub-Divisional Office once or twice each week. The frequency of his visits will largely depend on his necessity to type reports, etc, but he must ensure that as little time as possible is spent off his beat.
14. His effectiveness will be judged by the amount of information he feeds into the collator.

## DEPLOYMENT OF MANPOWER THROUGHOUT THE URBAN WORKLOAD STUDY

Phase	Towns	Manhours Per Function			
		Foot Patrol	Area Constable	Panda Driver	Total
I	A	754	222	653	1,629
	B	484	1,213	1,991	3,688
	C	664	244	1,126	2,034
	D	804	445	1,049	2,298
II	E	498	NONE	472	970
	F	74	255	678	1,007
	G	128	130	597	855
	H	130	184	466	780
III	J	492	225	482	1,199
	K	478	56	476	1,010
	L	336	270	564	1,170
	M	335	173	451	959
TOTAL		5,177	3,417	9,005	17,599

(NB. These figures are for an average taken from 28 days studies.  
The total manhours measured are therefore  $17,599 \times 4 = 70,396$ )

INSTRUCTIONS

1. Insert the date and starting time of your shift in the top line of boxes
2. Insert function codes hourly in the single boxes
3. Insert activity codes for each quarter-hour
4. Include travelling time as part of the activity

FUNCTION CODES:

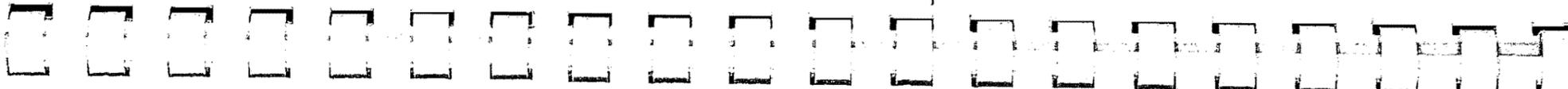
- (1) Foot Patrol
- (2) Area Constable
- (3) Panda Driver

ACTIVITY CODES:

- |  |                           |
|--|---------------------------|
| A Car Patrol                                   | G Enquiries and visits    |
| B Foot Patrol (including Panda driver on foot) | H Incidents: Crime        |
| C Refreshment                                  | J " Traffic               |
| D Report writing at station                    | K " Public Order          |
| E Traffic Point and School Patrol              | L " Social Service        |
| F Other non unit beat duty                     | M Off duty for any reason |

ACTIVITY SHEET

Project	Day	Month	Starting time of shift (24 hr clock)											
4														
1	2 3	4 5	6	7	8	9								
Function	First Hour				Function	Second Hour								
10	11 12 13 14	15	16 17 18 19											
Third Hour											Fourth Hour			
20	21 22 23 24	25	26 27 28 29											
Fifth Hour											Sixth Hour			
30	31 32 33 34	35	36 37 38 39											
Seventh Hour											Eighth Hour			
40	41 42 43 44	45	46 47 48 49											
Ninth Hour											Tenth Hour			
50	51 52 53 54	55	56 57 58 59											
Eleventh Hour											Twelfth Hour			
60	61 62 63 64	65	66 67 68 69											
Thirteenth Hour											Fourteenth Hour			
70	71 72 73 74	75	76 77 78 79											



M E S S A G E

No. ....

Date of origin

Time of origin  
24-hour clock

Project Code

Incident Code

Day

Month

1

2

3 4

5 6

7 8

9 10

Time of first arrival on scene  
24-hour clock

Foot

Area Constable

Panda

Other

Leave blank

11 12

13 14

15

16

17

18

19

20

FROM:

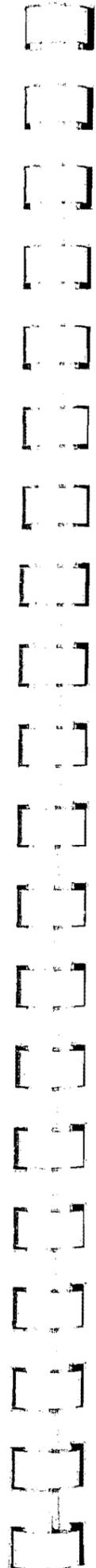
999 Tel Radio Verbally

TO:

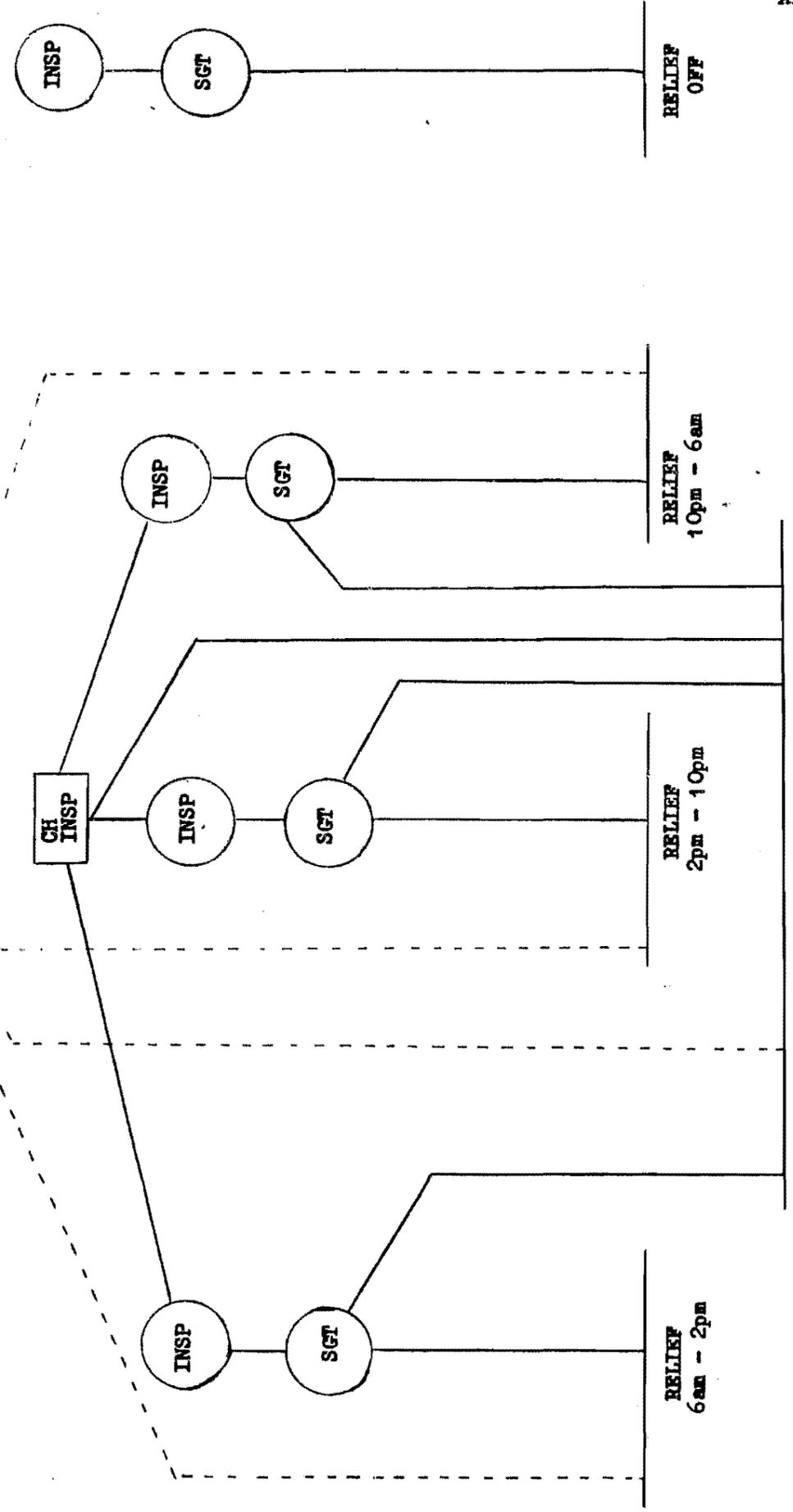
TEXT:

Received by:

- Copies:
- CID
- Briefing
- PW
- Collator
- CPO



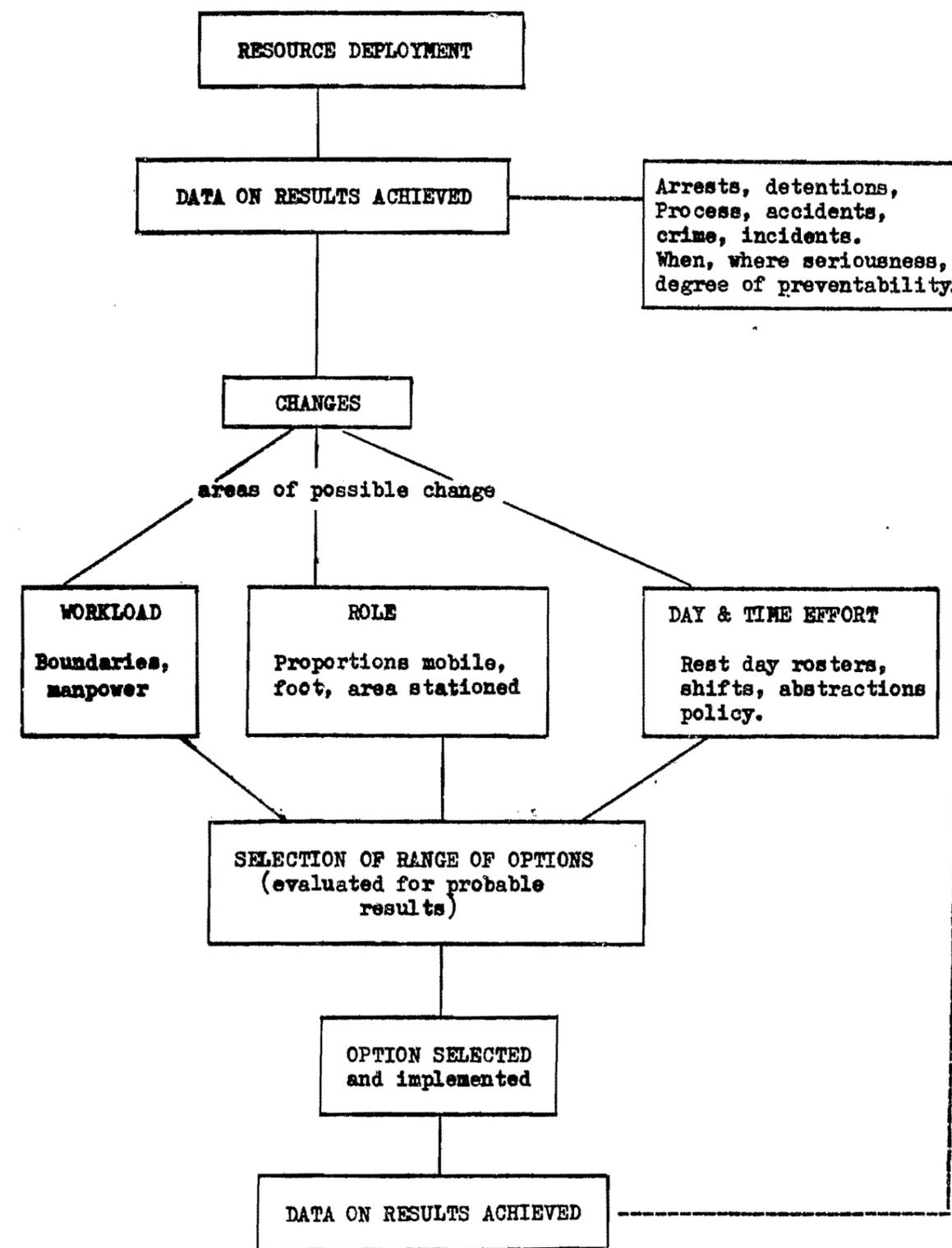
Radio Control



AREA CONSTABLES

Direct Supervision/Responsibility

Radio Control

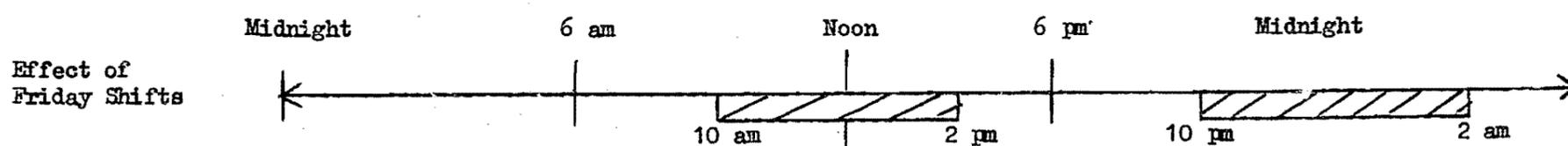


Shift and Rest Day Roster - 42-hour week  
 36 constables (notional), 4 reliefs of 9 men on 3 shifts

Shift Times	Relief	Monday	Relief	Tuesday	Relief	Wednesday	Relief	Thursday	Relief	Friday	Relief	Saturday	Relief	Sunday	Total Hours	
		(hours)		(hours)		(hours)		(hours)		(hours)		(hours)		(hours)	Off.	On
6 am - 2 pm	B	72	B	72	A	72	A	72	A	72	A	72	A	72	168	504
2 pm - 10pm	C	72	C	72	C	72	C	72	B	72	B	72	B	72	168	504
10 pm - 6am	D	72	D	72	D	72	D	72	D	72	D	72	D	72	168	504
Total on		216		216		216		216		216		216		216		1512
Rest Day	A	72	A	72	B	72	B	72	C	72	C	72	C	72	504	
Additional Rest Day		-		-		-		-		-		-		-		
Total off		72		72		72		72		72		72		72	504	
Grand Total		288		288		288		288		288		288		288		2016

Shift and Rest Day Roster - 44 hour week  
 36 constables (notional), 4 reliefs of 9 men on 3 shifts

Shift Times	Relief	Monday	Relief	Tuesday	Relief	Wednesday	Relief	Thursday	Relief	Friday	Relief	Saturday	Relief	Sunday	Total Hours	
		(hours)		(hours)		(hours)		(hours)		(hours)		(hours)		(hours)	Off	On
6 am - 2 pm	3	72	2	72	2	72	2	72	2	72	3	72	3	72	144	504
2 pm - 10 pm	4	72	4	72	3	72	3	72			4	72	4	72	144	432
10 pm - 6 am	1	72	1	72	1	72	4	72	1	72	1	72	1	72	144	504
10 am - 6 pm		-		-		-		-	3	72		-		-		72
6 pm - 2 am		-		-		-		-	4	72		-		-		72
Total on		216		216		216		216		288		216		216		1584
Rest Day	2	72	2	72	4	72	1	72		-	2	72	2	72	432	
Grand Total		288		288		288		288		288		288		288		2016



A recurring theme in the body of this report is the need for the level of resources to vary in a similar pattern to the likely rise and fall of demands on the police service.

Until now police forces have chosen and developed systems for the deployment of resources according to two main requirements. One is that a system should be widely accepted by the men whose working conditions it will dictate, and the other is that it should be simple to operate. In practice the most widely known shift system - the 6am - 2pm, 2pm - 10pm and 10pm - 6am - has become the most widely adopted. In terms of the operational needs of the police discussed elsewhere in the report this system has little to commend it, and its sole merit lies in its familiarity in police circles and the ease with which it can be administered within the police organisational structure.

With the shorter working week and increasing legislation, and pressure to improve performance, it becomes more and more important to examine ways in which valuable and scarce manpower is used and to devise systems which make the best possible use of it. Flexible deployment is one way of making sure that available manpower is deployed at times when it is likely to have the greatest effect, ie at times of peak workload.

This is not to say that the requirement for wide acceptance and good working conditions for the men should be overlooked, and this is clearly an important factor in devising new systems.

If the biggest single factor in gaining wide acceptance is the extent to which particular shifts forming part of a system are socially attractive there is considerable scope for improvement in the prevailing 6am - 2pm, 2pm - 10pm and 10pm - 6am arrangement. It has to be recognised however, that a more flexible and varied system will need greater management skill to

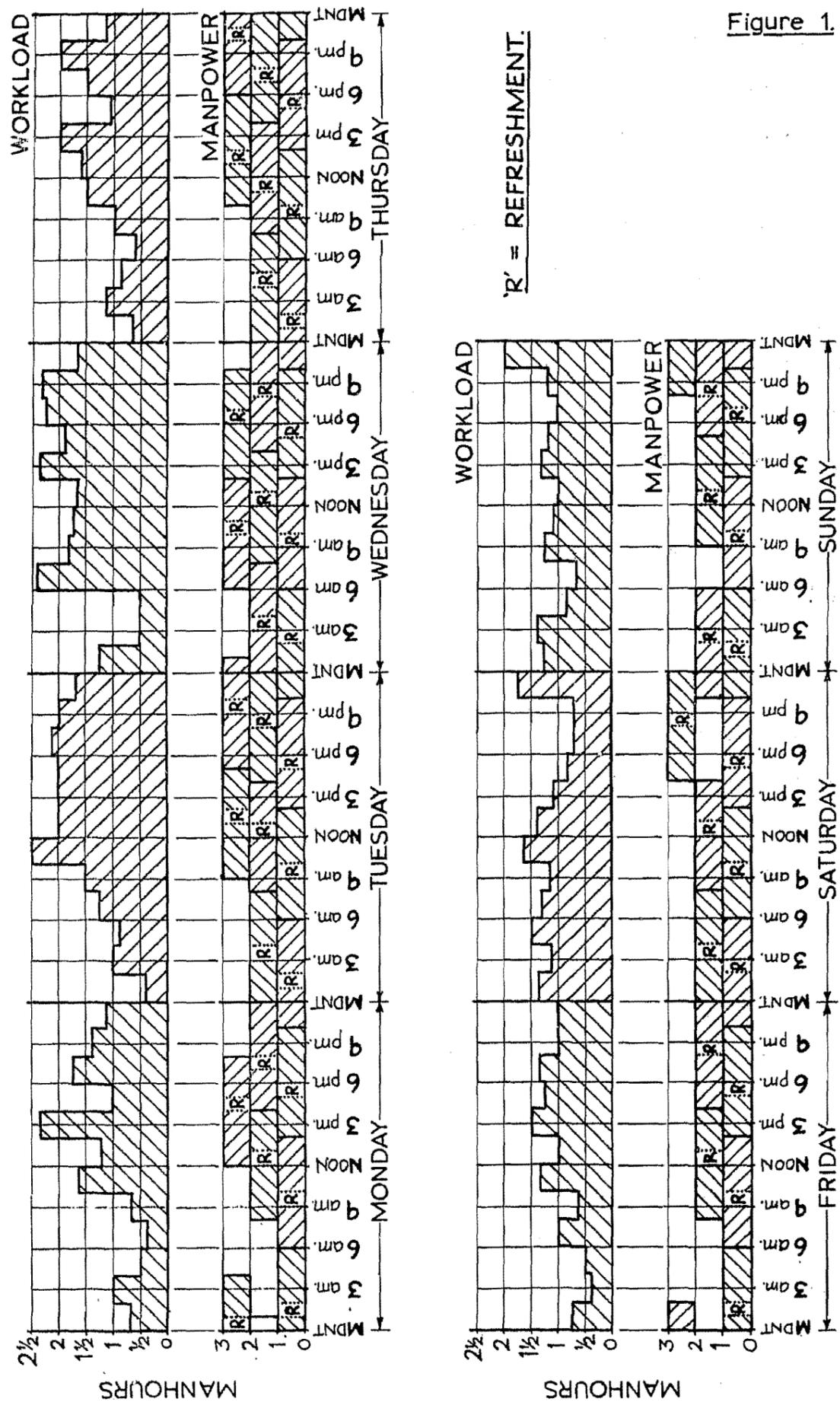


Figure 1.

be operated successfully, and that something will need to be done to break down the "acceptance by familiarity" attitude towards the present system.

The following example of a possible approach to the development of a workload-related shift and rest day roster system is based on a record of panda vehicle activity over a 28-day period. It could be used equally well to determine the resource allocation pattern for other areas of police activity such as foot patrol in town centres. The upper graph of figure 1 shows the fluctuations in activity time as an average of the four weeks of the measurement period. The lower graph shows individual tours of duty assembled in such a way as to match peaks and troughs in demands. The shifts have been arranged to take refreshment periods into account. Police Regulations require police manpower in 8-hour periods. By means of a clear perspex overlay it is possible to draw up an outline which closely matches the workload, albeit with some periods which will have only a light workload. The manpower has been drawn up in 8-hour groupings to give 8-hour shifts. Provision has been made for 45 minutes refreshment time during the middle 2 hours of a shift. For the periods when less than 8-hours is required to meet workloads the shift starting times can be varied to provide more socially attractive tours of duty or to meet other requirements such as cover for the refreshment periods of other shifts. The resultant pattern of shifts is covered and collated as in figure 2. Each period recorded represents one panda driver shift.

Figure 2

Shift Requirements

Shift Times	6-2pm	8-4pm	9-5pm	10-6pm	12-8pm	2-10pm	4-12n	5-1am	6-2am	8-4am	10-6am	12n-8am
Monday	1	1			1	1	1				1	1
Tuesday	1	1	1			1	1	1			1	1
Wednesday	2	1				2	1				1	1
Thursday	1	1		1		1	1		1		1	
Friday	1	1				1	1				1	1
Saturday	1	1				1	1				2	
Sunday	1		1			1		1		1	1	
Totals	8	6	2	1	1	8	6	2	1	1	8	4

FIGURE 2

SHIFT REQUIREMENTS

Shift Times	6-2pm	8-4pm	9-5pm	10-6pm	12-8pm	2-10pm	4-12n	5-1am	6-2am	8-4am	10-6am	12n-8am
Monday	1	1			1	1	1				1	1
Tuesday	1	1	1			1	1	1			1	1
Wednesday	2	1				2	1				1	1
Thursday	1	1		1		1	1		1		1	
Friday	1	1				1	1				1	1
Saturday	1	1				1	1				2	
Sunday	1		1			1		1		1	1	
<b>Totals</b>	8	6	2	1	1	8	6	2	1	1	8	4

Other shift times may be used to replace some of those suggested in figure 2 but the primary aim for a workload related system is to build up manpower when the need is greatest and reduce it proportionately at other times.

To man one post for 24 hours requires (according to Home Office figures) a manning allowance of 5.39 constables. To man a post for one 8-hour shift will require one-third of that figure - 1.797 men. This allowance provides for resting shifts (ie. rest days), spare shifts (ie. cover for sickness, annual leave, courses, etc.), and working shifts (ie. figure 2). Since the total has to be divisible by seven to achieve a daily rate, it must be taken upwards to the nearest multiple of seven:-

$$48 \text{ working shifts} \times 1.797 = 86.256$$

Enhanced to the nearest multiple of seven = 91

For a 40-hour week, eight out of every twenty-eight shifts (days) are resting shifts (for a 42 hour week allow seven out of twenty-eight; for a 44 hour week allow six out of twenty-eight, etc.)

$$\frac{91 \times 8}{28} = 26 \text{ resting shifts}$$

Thus it will be seen that of the 91 shifts 26 are resting shifts, 48 are working shifts, and the remaining 17 are spare shifts. A possible summary is given in figure 3. In that figure the times fixed for the working shifts

Figure 3

Daily distribution of all Shifts

Shifts	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Total
Working	7	8	8	7	6	6	6	48
Spare	2	3	3	3	2	2	2	17
Resting	4	2	2	3	5	5	5	26
Totals	13	13	13	13	13	13	13	91

must remain firm, but the resting and spare shifts are capable of a wide variety of design. The daily total number of shifts is equal to the weekly

total divided by the seven days of the week:-

$$\frac{91 \text{ shifts}}{7 \text{ days}} = 13 \text{ shifts daily}$$

With thirteen shifts each day a roster can be drawn up to provide a full cycle of shifts over thirteen weeks. The format required is drawn up at figure 4.

Figure 4

Reliefs, Shifts and Rest Day Roster

Week	Mon	Tues	Wed	Thur	Fri	Sat	Sun
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

At this stage the men or their representatives can be consulted or left to decide on the rotation and sequence of shifts to suit their requirements. To each space they allocate one of the shifts. This may be a working shift when the times should be shown, a resting shift in which case 'R.D.' only should be shown or a spare shift when only 'Spare' need be shown. Two rosters (of many possible alternatives) are completed at figures 5 and 6 as examples.

Figure 5

## Reliefs, Shifts and Rest Day Roster

Week	Mon	Tues	Wed	Thur	Fri	Sat	Sun
1	6am-2pm	6am-2pm	6am-2pm	10am-6pm	RD	RD	RD
2	RD	5pm-1am	2pm-10pm	2pm-10pm	2pm-10pm	2pm-10pm	2pm-10pm
3	SPARE	SPARE	SPARE	SPARE	RD	RD	RD
4	4-12mn	4-12mn	4-12mn	4-12mn	4-12mn	4-12mn	5pm-1am
5	12n-8pm	9am-5pm	RD	RD	RD	RD	RD
6	SPARE						
7	RD	RD	6am-2pm	6am-2pm	6am-2pm	6am-2pm	6am-2pm
8	12mn-8am	12mn-8am	12mn-8am	RD	12mn-8am	10pm-6am	10pm-6am
9	10pm-6am	10pm-6am	10pm-6am	RD	RD	RD	RD
10	RD	RD	RD	10pm-6am	10pm-6am	10pm-6am	8pm-4am
11	2pm-10pm	2pm-10pm	2pm-10pm	6pm-2am	RD	RD	9am-5pm
12	8am-4pm	8am-4pm	8am-4pm	8am-4pm	8am-4pm	8am-4pm	RD
13	RD	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE

Figure 5 provides for periods of up to 10 days consecutive duty with proportionate groups of rest days. To illustrate the flexibility of the system figure 6 gives up to a maximum of 7 consecutive working days and an increased number of shorter breaks. Figure 6

Week	Mon	Tues	Wed	Thur	Fri	Sat	Sun
1	RD	9am-5pm	2pm-10pm	2pm-10pm	2pm-10pm	RD	RD
2	RD	SPARE	SPARE	RD	RD	SPARE	SPARE
3	12mn-8am	12mn-8am	12mn-8am	6pm-2am	12mn-8am	RD	RD
4	8am-4pm	8am-4pm	8am-4pm	8am-4pm	RD	10pm-6am	10pm-6am
5	10pm-6am	10pm-6am	10pm-6am	RD	8am-4pm	8am-4pm	9am-5pm
6	SPARE	RD	SPARE	SPARE	SPARE	RD	RD
7	RD	SPARE	SPARE	10am-6pm	RD	SPARE	SPARE
8	SPARE	5pm-1am	RD	10pm-6am	10pm-6am	10pm-6am	8pm-4am
9	RD	SPARE	6am-2pm	6am-2pm	RD	RD	RD
10	4pm-12mn	4pm-12mn	4pm-12mn	RD	SPARE	2pm-10pm	2pm-10pm
11	12n-8pm	RD	6am-2pm	SPARE	6am-2pm	RD	RD
12	2pm-10pm	2pm-10pm	2pm-10pm	SPARE	RD	6am-2pm	6am-2pm
13	6am-2pm	6am-2pm	RD	4pm-12mn	4pm-12mn	4pm-12mn	5pm-1am

The main advantage of the workload-related system is that panda drivers are on duty when they are needed most: this more intensive and concentrated effort should in due course be reflected in a change of some aspects of the workload. This effort could be achieved with 384 manhours against the 482 hours available in the town from which the workload was taken. The hours released may be combined with foot patrols for positive preventive policing and special tasks. There can be a greater degree of participation by the men in the design of the shift and rest day roster. The roster gives up to thirteen weeks notice of duties or possible duties. In the town from which the data used to design the roster was drawn one week's continuous night duty is worked every four weeks: a ratio of 1 night duty to every 4 days whereas this system shows that the need could be as low as 13 nights in 13 weeks a ratio of 1 : 7.

The present pattern of supervision rests upon the traditional arrangement of three shift periods per day, and may need to change to accommodate the requirements of a workload-related system. Because supervision plays such an important part in the police service there would need to be a careful examination of supervisory arrangements to ensure that standards were maintained.

The example given is not regarded as necessarily the best approach to the workload patterns recorded. It is provided to illustrate a possible approach to the practical problem of devising a flexible work-related shift and roster system.

## CIRCULATION

Report 11/75

## HOME OFFICE

Dr O Simpson  
 Miss S V Cunliffe  
 D R Sands  
 I J Croft  
 J K S Clayton (Director)  
 G J Wasserman  
 R W G Smith  
 T J Kempton  
 Home Office Library

Chief Scientist  
 AUSS Statistical Department  
 AS G3 Division  
 Research Unit  
 Scientific Advisory Branch  
 Economic Planning Unit  
 Establishment Division 2  
 " " "

Police Department

Sir James Waddell  
 A S Baker  
 W N Hyde  
 J B Howard  
 R A James  
 Sir John Hill  
 A U R Scroggie  
 S E Peck  
 R G Fenwick  
 N Galbraith  
 G Twist  
 A G Warman  
 J H Brownlow  
 E W Bright  
 Miss J S S Law  
 T C Platt  
 W J Bohan  
 G H Baker  
 D H J Hilary  
 E R Cowlyn  
 J F D Buttery  
 G W A Duguid  
 D Heaton  
 J F Halliday  
 D King  
 Ch Supt J B Morgan  
 Ch Insp M D Simpson  
 J P Miller  
 M D Hutton  
 G Phillips (Director)  
 A T Burrows  
 A N Rapsey  
 Home Office Crime Prevention Centre, Stafford  
 Directorate of Telecommunications, Library  
 The Commandant, Police College, Bramshill

DUSS  
 AUSS  
 "  
 " Computer Services  
 " Technical Services  
 HMCIC  
 HMI  
 "  
 "  
 "  
 Assistant to HMCIC  
 " " "  
 " " "  
 " " "  
 Assistant Inspector  
 AS F1 Division  
 " F2 "  
 " F3 "  
 " F4 "  
 " F5 "  
 " F6 "  
 Directing Grade Engineer, F7 Division  
 AS F8 Division  
 " "  
 " "  
 Police Research Services Unit  
 " " " "  
 AS PNCU  
 " JADPU  
 Police Scientific Development Branch  
 " " " "

ALL CHIEF CONSTABLES - ENGLAND & WALES

METROPOLITAN POLICE

Sir Robert Mark  
R A Root (Director)  
Commander I G B Richardson

Commissioner  
Management Services Department

CITY OF LONDON POLICE

J Page

Commissioner

SCOTTISH HOME AND HEALTH DEPARTMENT

I D Penman  
D Gray  
Commandant, Police College, Tulliallan

AS Police Service Division  
HMCIC - Scotland

ALL CHIEF CONSTABLES - SCOTLAND

ROYAL ULSTER CONSTABULARY

J B Flanagan

Chief Constable

ISLE OF MAN POLICE

F Weedon

Chief Constable

STATES OF JERSEY POLICE

E Cockerham

Chief Officer

STATES OF GUERNSEY POLICE

C D Eley

Chief Officer

REGIONAL CRIME SQUADS - ENGLAND AND WALES

L E Read

National Co-ordinator

ASSOCIATION OF CHIEF POLICE OFFICERS

F W C Pennington  
The Liaison Officer

General Secretary

THE POLICE SUPERINTENDENTS' ASSOCIATION OF ENGLAND AND WALES

Ch Supt B Rowland

Secretary

POLICE FEDERATION

R H Pamplin

Secretary

COUNTY COUNCILS ASSOCIATION

A C Hetherington

Secretary

ASSOCIATION OF MUNICIPAL CORPORATIONS

J C Swaffield

**END**

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