



**A discussion paper on the strategy for delivering
service in the rural territory of the South Central
Ambulance Service **NHS** Trust**

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Version

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1. Introduction and Executive Summary

This document has been prepared to provide stakeholders with an appreciation of the emergency performance challenges faced by the South Central Ambulance Service in some of its more rural areas and the steps that we have and will continue to be take to address this.

SCAS has finite operational resource in terms of vehicles and clinical staff. Over the past two years we have increased the number of operational staff and vehicles to meet the more challenging 'Call Connect' performance standards that were introduced in April 2008.

We endeavour to deploy our limited resources in localities where the greatest number of patients will benefit, this is based on technology systems which can provide projected demand based on historical performance.

Within our region there is a high percentage of semi-urban and rural areas which produce low volumes of 999 calls often with two or less calls a day. In such areas it would not be an efficient use of our resources to routinely deploy ambulances into these areas. In recognition of the challenge of achieving a timely emergency response in these areas SCAS has developed a cadre of 200 Community First Responder (CFR) Schemes with more than 1500 members. These trained volunteers respond within their own communities providing valuable life sustaining treatments until an emergency ambulance arrives.

This paper provides an overview of these schemes and identifies our future plans for further schemes.

Emergency demand continues to grow across SCAS at an average of around 5% per annum. In many areas the rural communities have produced a growth in demand well in excess of the SCAS average. The emergency 999 service is often used inappropriately with the ambulance service acting as a public 'fail safe' when other emergency and unscheduled care pathways fail. It is widely accepted that this continuing growth in demand is unsustainable and a radical multi disciplinary review of emergency and social care services is required

SCAS has started on this journey by developing Clinical Support Desks (CSD's) within each of its Emergency Operations Centres (EOC's). Staffed by either Emergency Care Practitioners or Registered Nurses the CSD can provide a 'hear and treat' advice line providing telephone clinical assessment and advice to callers, often reducing the need for an ambulance attendance. Currently more than 40% of patients dialling 999 are not conveyed to hospital and we believe this can be reduced still further.

In order to improve our performance still further we need the support of our health and local authority partners. We need to enhance the availability of our resources by:

- PCT's and Acute Trusts reducing ambulance turnaround delays at hospitals which to the end of October amounted to 8800 ambulance hours lost
- PCT's and Social Services holding case conferences on 'frequent callers' and agreeing alternative care pathways for these patients, thus reducing the number of 999 calls received from these patients.
- PCT and Local Authorities developing and supporting end of life care models within local communities particularly amongst Nursing Homes

- PCT's and Local Authorities providing community 'Falls Teams' currently the Ambulance Service receives numerous calls simply to assess and put back to bed patients who have fallen. 'Falls' represent around 30% of all 999 calls.
- We need the support of Buckinghamshire and Berkshire Local Authorities to encourage their Fire Services to participate in the co-responder schemes. Their active participation will have an immediate improvement in emergency performance in rural communities

There are numerous other areas, such as the management of alcohol and drug related incidents, mental health calls, etc where partnership working could help reduce the pressure on the ambulance service and thereby improve performance.

We are already in discussion with our stakeholders on many of these issues, but there is a real need to inject some urgency into these reforms. SCAS cannot make these changes alone.

Background

South Central Ambulance Service is responsible for providing emergency and urgent care services for the public across four counties, Berkshire, Buckinghamshire, Hampshire and Oxfordshire. .

Only 10% of the incidents that the service responds to are life threatening, with all other calls having an urgent primary or social care need. It is therefore important that patients needs and symptoms are assessed quickly and safely and they get the care they need at the right time in the right place and by the right person.

Improved call handling and clinical triage will ensure that serious emergencies get a rapid response and other patients are assessed, treated and managed or referred onwards by ambulance personnel according to their needs.

In life threatening emergencies such as cardiac arrests it is vital that patients have access to early recognition, resuscitation and treatment . Survival rates are increased by each minute reduction in the response time and therefore it is vitally important to get a resource to these patients to not only provide definitive cardiac care but also to reduce levels of anxiety and distress for families or bystanders.

Patients experiencing heart attacks or strokes also need rapid assessment of their condition, stabilisation and onward referral to the most appropriate health care provider. It is essential that they receive treatment within the definitive time period to improve the outcome form their illness and health. Patients with acute onset of stroke symptoms should be admitted scanned and given thrombolysis for a clot within 3 hours of their onset of symptoms. For heart attack patient's new evidence states they should be admitted for an angioplasty procedure within 120 minutes of their call to 999.

In rural areas community, staff and co responders play a vital part in helping to respond to patients with both life threatening and urgent needs. They can begin life saving treatment including resuscitation, provide reassurance, be a helping hand to families and also assist the ambulance staff with further care and treatment.

The Trust deploys its operational resource and manages its performance by compartmentalising its geography into areas or zones. Those with the lowest activity levels, (less than an average of two category A or B calls¹ in any given 24 hour period), tend to correlate positively with the more sparsely populated or rural areas of the geography.

Some of these areas will go days without generating any 999 calls and therefore do not justify a dedicated Trust resource, based within the zone on a standby point. By way of example in Oxfordshire and Buckinghamshire there are 43 communities that generate less than 1 Life Threatening "A" call in a fortnight. One can gain an appreciation of the scale of the low activity areas by looking at the SCAS map below. Red circles and ellipses are high activity areas, orange are medium activity and the rest and clearly the majority of the geography, is low activity.

¹ Category A calls are defined as immediately life threatening. Category B calls are urgent calls but are not immediately life threatening

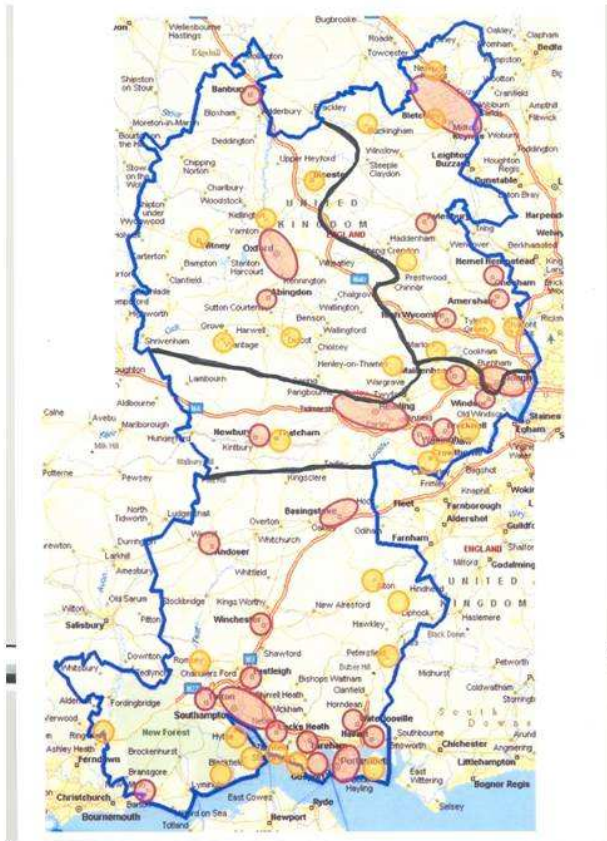


Figure 1 – SCAS Activity Map

In high activity areas, ambulance standby points are used to maximise response times, with each standby point having a six minute drive zone. Each standby point has been chosen using an analysis of historical call volumes which provides a prediction that future calls will also arise within the drive zone.

Low activity areas require a different approach as in some areas the incidence of emergency calls is so low that an ambulance would be standing idle for the majority of its time, which is neither effective or cost efficient. Instead a non ambulance 'indirect' resource provides the initial emergency response which is immediately backed up by an emergency ambulance resource.

Indirect resources include:

- Volunteer Community Responders (members of the public)
- Co-Responders (primarily retained Fire officers, but the Coastguard and military (RAF) also fall into this category)
- Staff Responders (Trust employees who volunteer to respond in their own time)
- Static sites (so called because the equipment – primarily a defibrillator, stays in the same place and staff in that location are trained in Emergency First Aid.

Examples are airports, shopping centres, nursing homes, GP practices)

Ambulance trusts, (and SCAS is no exception), perform better in terms of the national response time targets, in their high density, high activity areas, where ambulances are continuously busy , than they do in low activity zones.

PCTs also vary in terms of their low activity :high activity mix, therefore it follows that they receive differing levels of performance from SCAS. Five of the eight PCTs receive a performance that is better than the national target. The three with the most low activity component, (Hampshire, Buckinghamshire, Oxfordshire), do not although Oxfordshire is very close with a year to date performance of 74.9%

It is important to appreciate that SCAS is not commissioned to deliver performance per PCT, but measured across the regional geography covered by the Trust. There are three key measures, (known as A8, A19 and B19), which are based on response times and these are as follows:

1. To be on scene for patients experiencing a potentially life threatening episode, within 8 minutes 0 seconds of the call being connected to the Trust's telephony switch. This target is to be met for 75% of these "A" calls
2. To be on scene for patients experiencing a potentially life threatening episode, within 19 minutes 0 seconds of the call being connected to the Trust's telephony switch. This target is to be met for 95% of these "A" calls
3. To have an initial response on scene for patients experiencing a serious, but not life threatening condition, within 19 minutes 0 seconds of the call being connected to the Trust's telephony switch. This target is to be met for 95% of these "B" calls

In common with other ambulance services, SCAS is funded and monitored to deliver these three targets, as three discrete measures, measured across its 4 counties, (Berkshire, Buckinghamshire, Oxfordshire and Hampshire). Thus, there is:

- ⤴ An A8 target across the SCAS geography (Measure 1)
- ⤴ An A19 target across the SCAS geography (Measure 2) and a
- ⤴ B19 target across the SCAS geography (Measure 3)

Although this is the funding and contractual position, there has been increasing focus and interest in breaking down SCAS performance and looking at it at PCT and sub PCT level. This has fostered a very helpful debate into how ambulance services should be provided in different geographical areas. Indeed, this paper is in part a consequence of that debate.

This having been said, there have been significant improvements in the three PCTs with the busiest, low activity areas. Over the last 18 months, A8 performance, improved as follows:

Hampshire	Up by 28.8%
Oxfordshire	Up by 27.8%
Buckinghamshire	Up by 42.5%

Whilst part of this will have come from the increased investment that arose as a result of the new national targets introduced in April 2008, some has derived from an increased focus on the low activity areas and the expansion and utilisation of indirect resources in these locations.

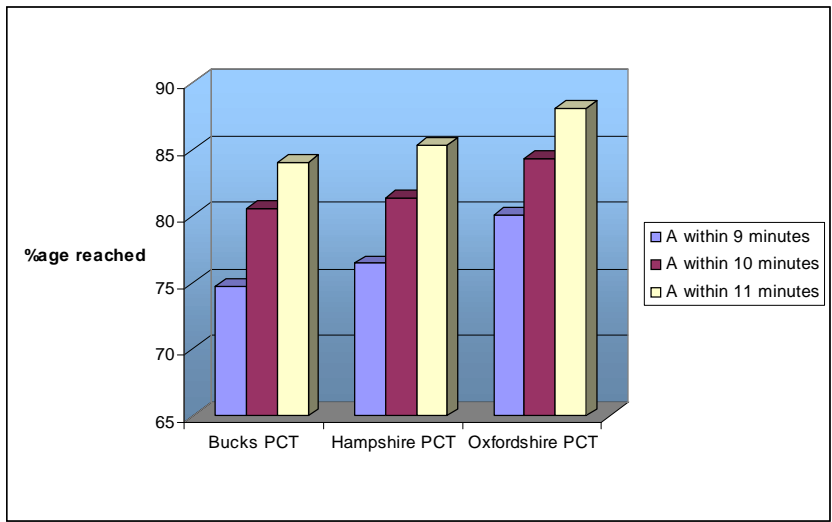
It is perhaps also worth reflecting on the performance levels that are currently being delivered in the rural areas of the Trust. This can be viewed in a number of ways; firstly what is the response time, per area within which 75% of A calls receive a response; given a target of 8 minutes. This reveals:

Oxfordshire PCT	8 minutes 15 seconds
Hampshire PCT	8 minutes 45 seconds
Bucks PCT	9 minutes 15 seconds

Buckinghamshire's demographics, whereby it has the highest number of low activity areas in SCAS, is reflected in it being the furthest of the three from the 8 minute national target.

Another way of assessing performance in these areas is to determine the performance "tail", or how close to the target the performance is in these areas. Again, focussing in on the three "rural" PCTs, the following profile emerges:

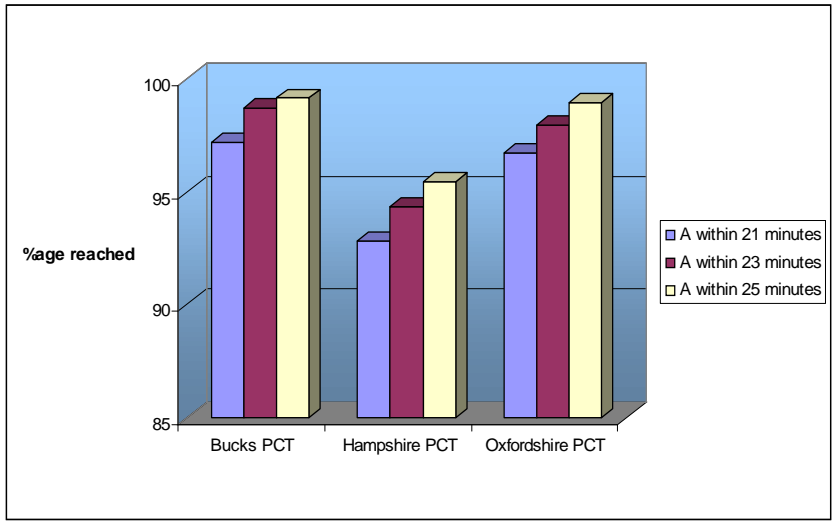
These graphs show data for the month of August. Oxfordshire attained the A8 target in the month and shows ahead of the other two rural areas.



Good use of indirect resource in these areas explains the steep improvements between minutes 9 and 11.

Figure 2 – A8

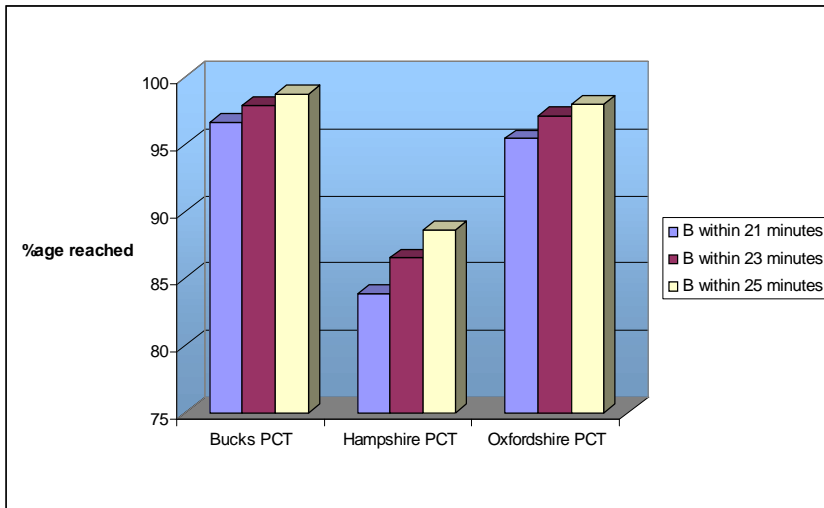
Performance Tail



Buckinghamshire attained the A19 target in August, (96.1%) as indeed it has done since April, (95.7% YTD performance). The 19 minute targets for the other areas are discussed below. Due to Buckinghamshire's topography and road system, it is challenging to get to incidents in 8 minutes, but 19 minutes

is far more achievable.

Figure 3 – A19 Performance Tail



Buckinghamshire was very close to the B19 target in August, (94.8%). The 19 minute target has been a consistent challenge in Hampshire for some time and to a lesser extent in Oxfordshire. This whole area is subject to an external review, which will conclude its findings at the end of October.

Figure 4 – B19 Performance Tail

Whilst indirect resources are an important contribution to patient care in rural locations, their impact on performance targets only effects the A8 measure and they do not count, from a response time perspective, in terms of the 19 minute targets.

There are approximately 1,800 people contributing with SCAS' indirect schemes and in 2008:2009, they contributed approximately 11% of the Trust's A8 performance. The plan is to increase this number by 550 to 2350 in 2009:2010. It is anticipated that a further 2.5% contribution will be made to the A8 target, with the focus on expansion being in the 3 PCTs with the highest low activity content.

The key to improving A8 performance still further in low activity areas and therefore the 3 targeted PCTs, is to increase the capacity and contribution of indirect resource in these areas. Applying additional Trust crews and vehicles does not represent an effective and pragmatic approach.

Whilst progress has been made, clearly more needs to be done, in order to strive for parity of performance across all geographic area types. The following table shows the current position in each of the 3 divisions, together with the number of daily sub 8 minute A call responses needed to achieve the national targets in all areas of the Trust

	Current Rural A8 performance	Typical daily A call volumes in low activity areas	Calls currently responded to within 8 minutes	Total calls needed to attain 75%	Incremental daily target needed
Berkshire	54%	5.5	3	4	1 call
Hampshire	54%	18	9.7	13.5	3.8 calls
Ox and Bucks	49%	26	12.75	19.5	6.75 calls

Table 1 – Current Rural Performance and Outstanding Target

If the daily number of calls needed appears low and therefore easily achievable, then consider the context in which this target is set. Both Hampshire and Oxfordshire and Buckinghamshire need to reliably and consistently succeed with 50% of the rural A calls available to them. These calls can occur at any hour of the day or night and anywhere in what accounts for approximately 90% of the Trust's geography, (please refer to Figure 1). The challenge is probably better encapsulated by the phrase "needle in a haystack" rather than "easily achievable"

The detailed indirect plans for the three divisions within SCAS have been included in Section 5. This includes an analysis of all SCAS' low activity areas and it can be seen that each division's context and therefore approach is unique to them.

Berkshire plans to address schemes in 35 separate areas/communities and raise its performance to 72.5%, complemented by a focus on static sites. Hampshire is looking to address schemes in 56 areas/communities and raise its performance in low activity areas to 70.75% complemented by a major expansion of staff responding in the county. The Oxfordshire and Buckinghamshire division has identified 59 communities/locations it wishes to focus on, including the areas of Military and Fire Co-Responders, raising its performance ultimately to 67.05%

Estimated incremental costs are £386,000 in Hampshire, £307,000 in Oxfordshire and Buckinghamshire and £265,000 in Berkshire. The full improvement outlined above is likely to take a minimum of 2 years to achieve, with a potential to realise the following within 9 months:

Berkshire	65%
Hampshire	64%
Oxfordshire and Buckinghamshire	61.5%

The Trust uses a deployment and performance management framework that regards its geography as falling into three different zonal types, (High activity, Semi-High activity and Low activity). The definition of these is as follows:

High activity – typically a city area where on average, every 24 hours, there are more than 4 A or B incidents occurring within a 6 minute drive time of a Trust vehicle, positioned on a standby point within that zone. An average of 3 A and 2 B calls would classify a zone as High activity as would an average 4.2 B calls and 1.6 As. The Trust has a total of 42 High activity zones and examples are:

- Portsmouth has 2
- Milton Keynes has 4
- Reading has 5

An example of a High activity drive zone is shown below in Figure 1

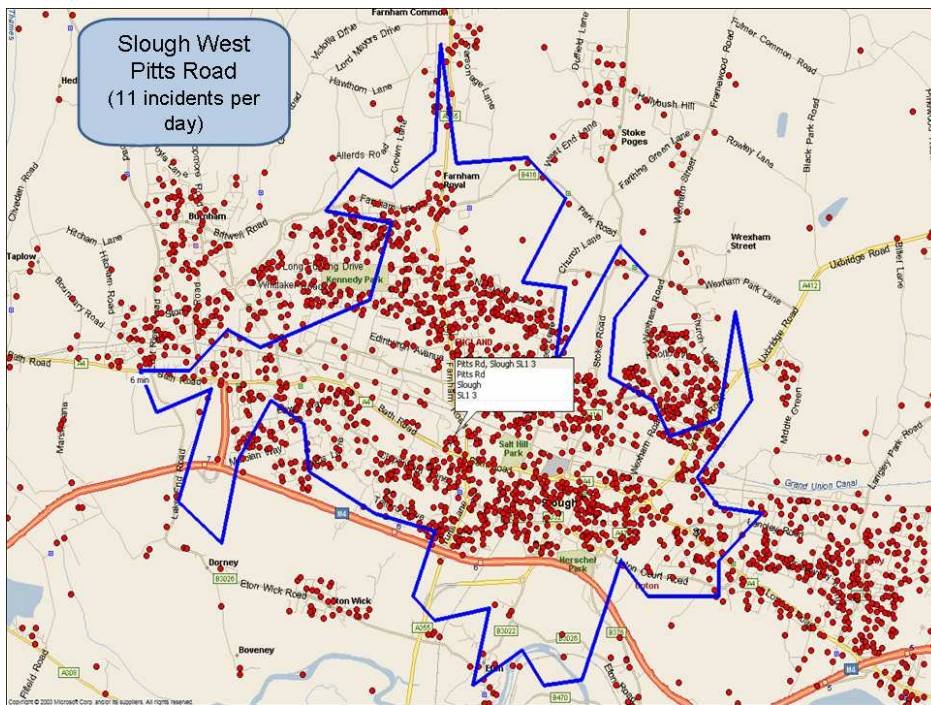


Figure 5 – Example of a High activity Drive Zone

Medium activity zones – these are invariably less densely populated than high activity areas. A 6 minute drive zone in a medium activity area will see an average of between 2 to 4 A/B incidents in any 24 hour period. Examples of this type of zone are:

Taplow, Crowthorne, Ascot, Princes Risborough, Marlow, Bicester,
Hayling Island, Romsey, Alton

The target drive time for both these zone types is 2 minutes less than the national response time targets, to allow for control centre tasks such as call taking, determining the patient's location, identifying a suitable resource and deploying it to the incident. 6 minute zones are overlain with 17 minute zones, that cater for the 19 minute targets.

A map of the high activity and medium activity zones for Berkshire is shown in the Figure below.

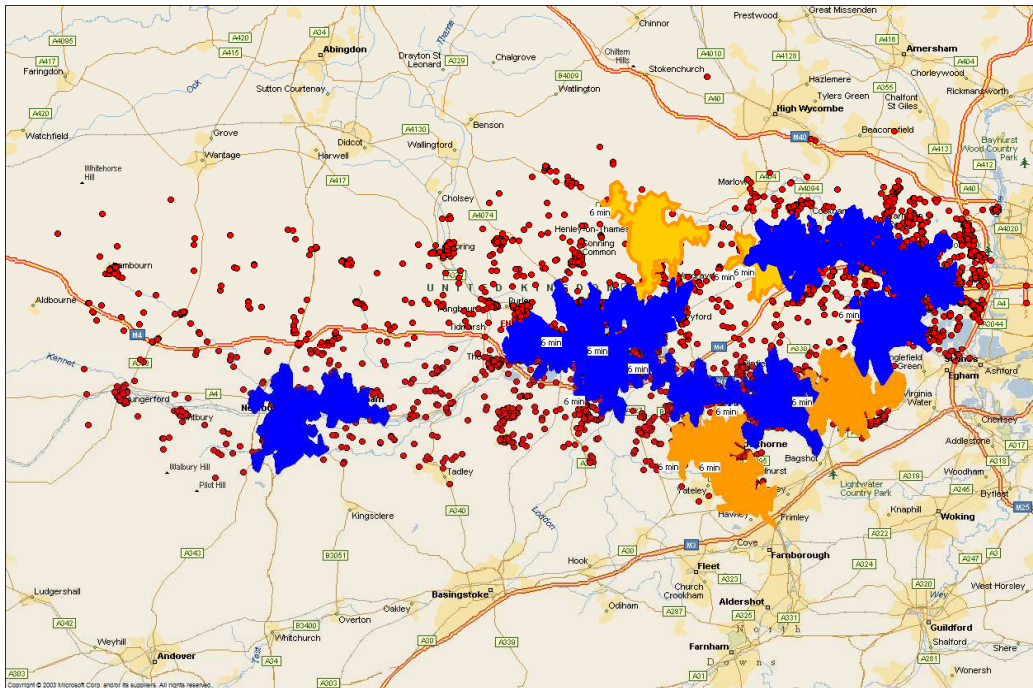


Figure 6 – High and medium activity drive zones for Berkshire (October 2007 – September 2008)

The rest of the geography, where activity and call volumes, are by residual definition low, is classified as low activity. The low activity component of Berkshire that meets this definition is shown in the next figure.

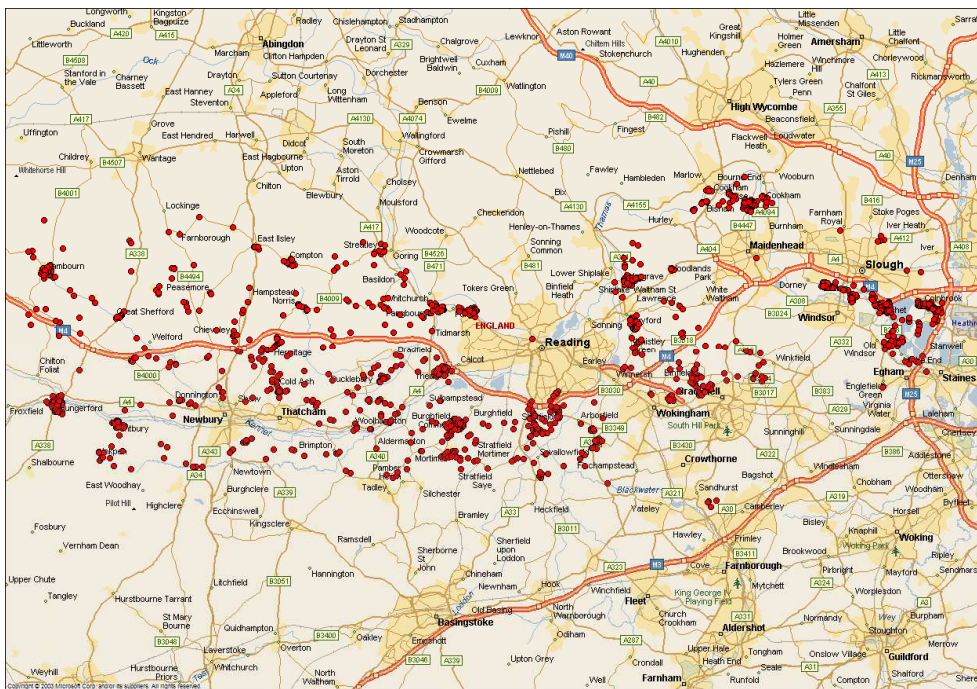


Figure 7 – Low activity locations for Berkshire

Low activity areas have traditionally presented challenges to ambulance trusts, in terms of delivering a service that meets the national response time targets. They still do. It is not viable permanently to base a single car in it's own 6 minute, 20 square mile drive zone. It obviously makes even less sense to place an ambulance there. In some of these places there might not be a 999 call for many days. The steadily increasing cost of applying Trust resources to progressively lower activity incident areas is shown in Appendix 1. An extreme example of one of these areas is now shown.

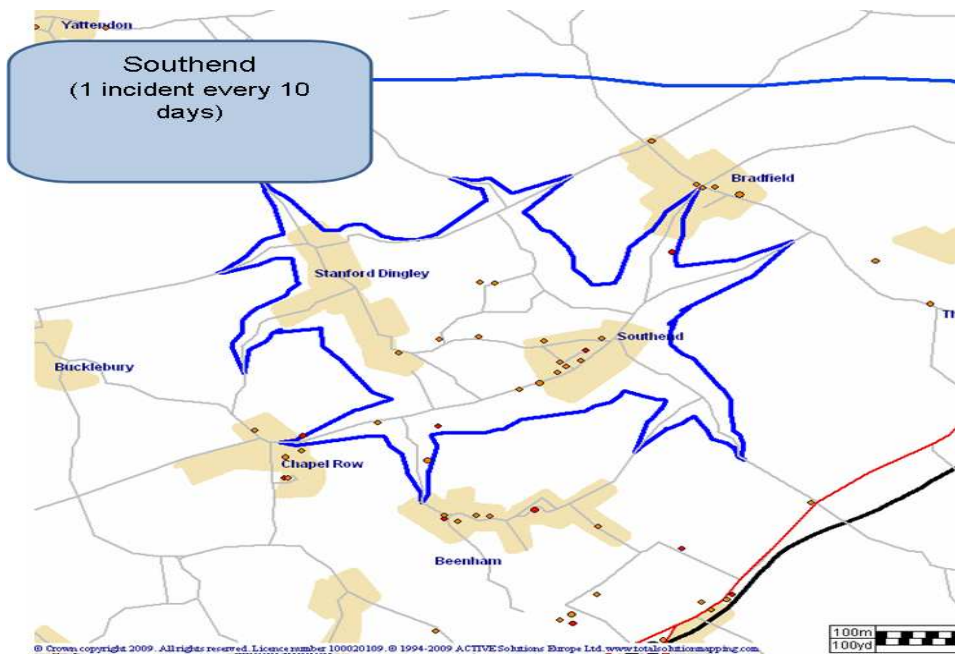


Figure 8 – Example of a quiet low activity area

To emphasise this point please refer to the Appendix 2. These contain a breakdown of the low activity areas in Berkshire, (which has the smallest population of low activity zones for South Central). As can be seen there are 24 identified locations that generate less than 1 A/B call a day. These locations generate, between them, a total of 601 A calls per year. Appendices 3 to 5 show that by establishing drive zones for these 24 areas still results in A activity that is outside the coverage of these zones.

Turning to Hampshire their lowest activity areas (< 1 A/B call every 2 weeks), generate, in total, less than 5 A calls a day. Each community or location in this ultra low volume part of the county will typically produce less than 10 A calls **a year**.

A similar approach in Oxfordshire and Buckinghamshire produces an even starker picture, perhaps unsurprisingly, as it contains the highest proportion of the low activity geography in South Central. 78 of the “quietest” locations generate a total of 3,454 A/B calls a year, (less than 10 calls a day across 78 locations) of which 1238 are As, (3.4 a day). If a dedicated Trust Rapid Response Vehicle, (car), were to be used as the initial response mechanism, in each of these areas, the cost per incident would be in the range of £4,600 to £18,000 depending on location. An ambulance would be twice as much; please refer to Appendix 1.

A divisional comparison of the low activity areas reveals the following:

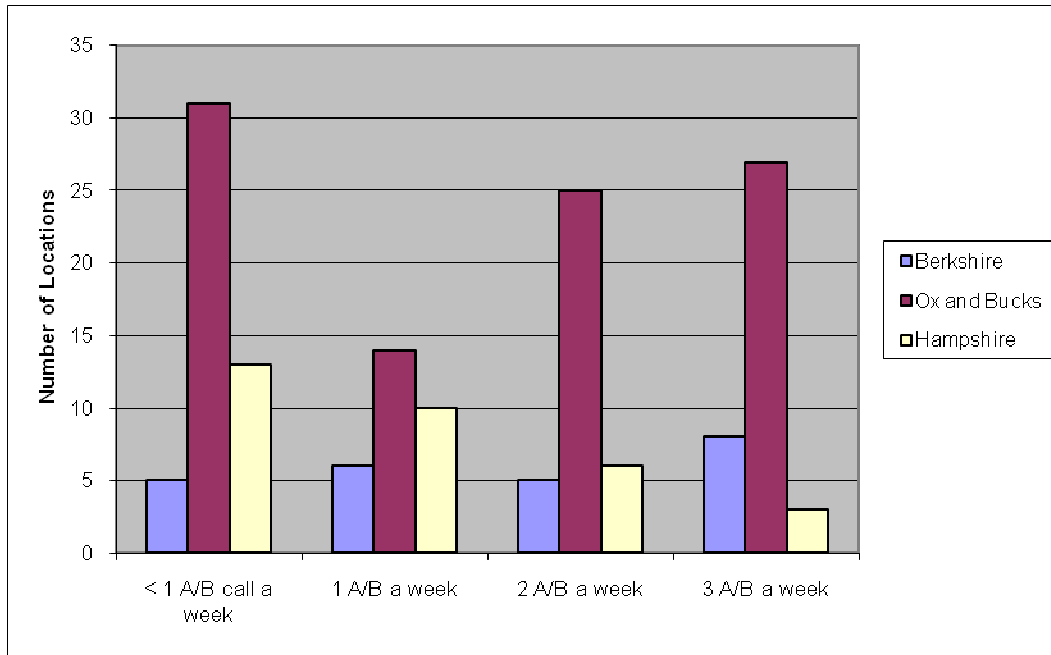


Figure 9 – Comparison of low activity areas

So clearly, alternative innovative approaches to providing the primary emergency response need to be sought.

Before exploring these, it is worthwhile placing the low activity nature of South Central into some sort of context. Whilst the Ambulance Trust is only commissioned to meet the national response targets over the 4 counties overall, there is understandably a high level of interest in performance at the individual PCT levels. It is, after all the PCTs who fund the service on behalf of their constituents – potential patients.

The nature of the different geographical areas covered by South Central's 8 PCTs, means that some encompass very little of the challenging low activity territory, (2 actually have none). Others have large proportions of their area falling into this classification, as can be seen from the diagram below

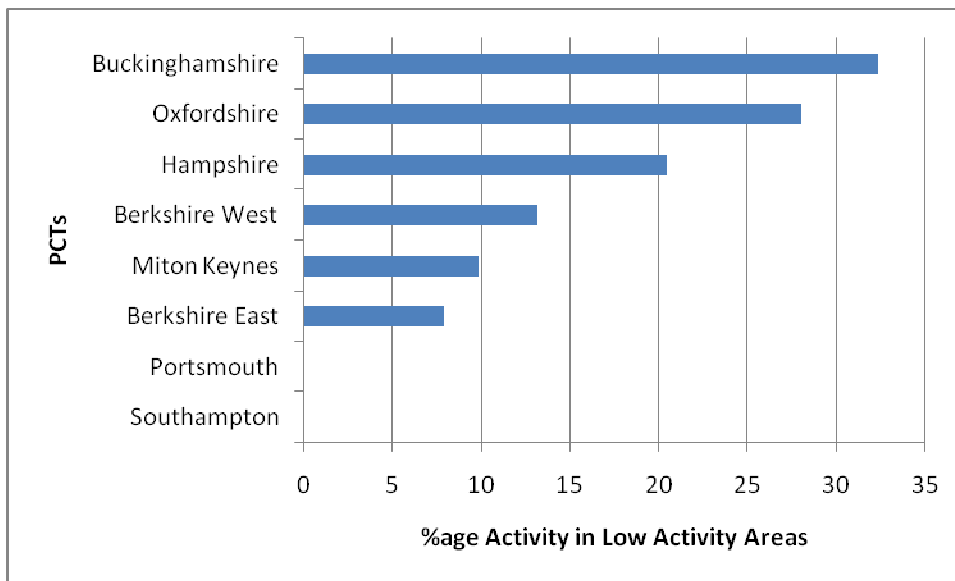


Figure 10 - Low activity Component of South Central's PCTs

As stated, ambulance trusts will perform better in terms of the national response time targets in High activity areas, (dedicated 7 by 24 hour resource within 6 minutes of the incident), than they will in low activity areas, - no such dedicated resource.

It therefore follows that PCTs with significant high activity content (Berkshire East and West, Portsmouth, Southampton and Milton Keynes) will “enjoy” a higher standard of service, (in purely response times), than those with a bigger low activity content. And indeed, if one looks at the diagram below this can be seen to be the case.

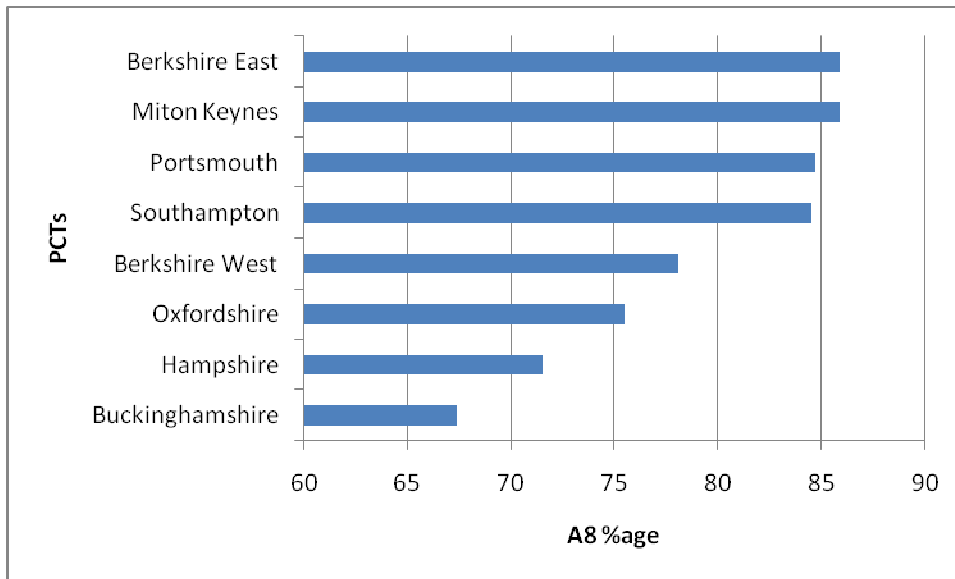


Figure 11 – The performance delivered to PCTs in South Central

2. The Indirect Solution

SCAS has worked hard with its partners to improve performance in these challenging areas, whilst preserving performance in the high density, high activity zones. This can be seen by comparing the situation, for the year to date (end of July 2009), with the situation for the 12 months prior to that.

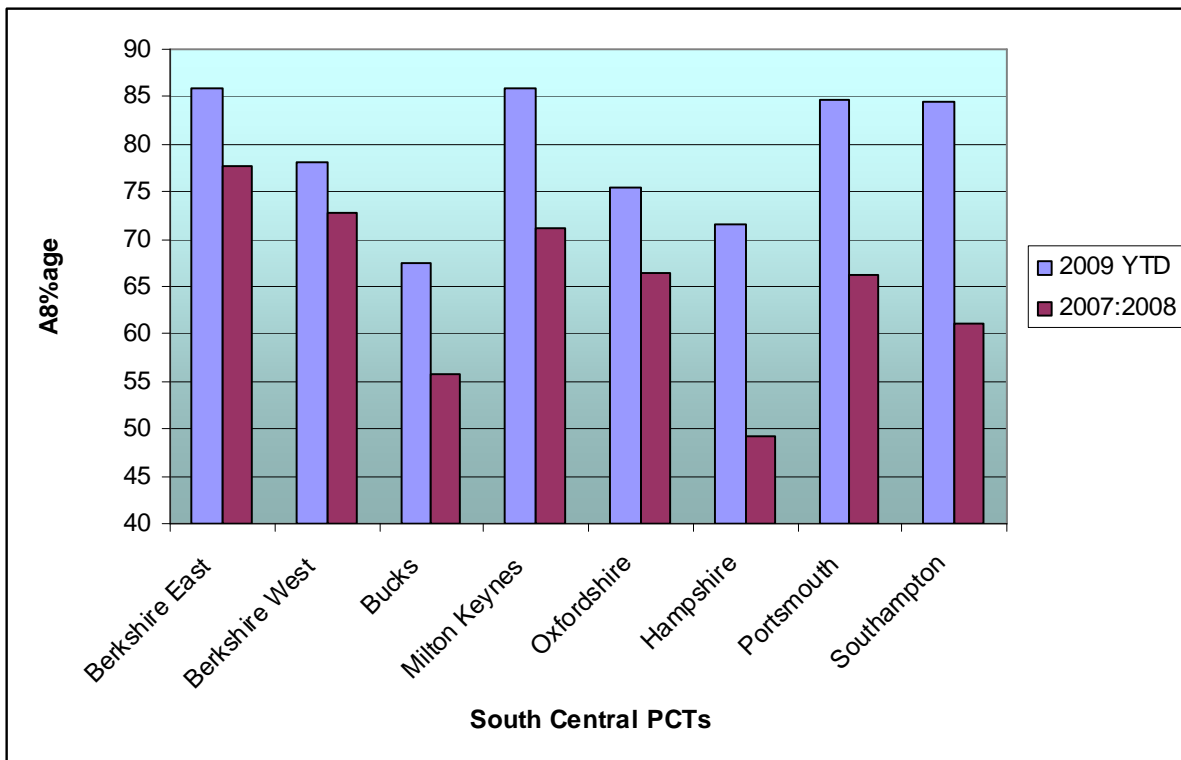


Figure 12 – 12 month improvement in A8 performance

SCAS uses what is referred to as an indirect resource as the initial emergency response in low activity areas, backed up immediately by a Trust resource, which is nearly always a double crewed ambulance with a paramedic on board. It should be noted that invariably the Trust resource is deployed to these incidents before the indirect one, although the latter will usually always arrive first.

The term “indirect” covers a number of differing resource types and these are described below. The word infers that the resource is not on a Trust rota and is complementary to it.

3.1 Indirect Resource Types

The main types are as follows:

Volunteer Community Responders

Co-Responders

- ⤴ Fire Service
- ⤴ Coastguard Service
- ⤴ Military Bases

Trust Staff Responders

Static Sites

- ⤴ Shopping Centres
- ⤴ Police Custody Suites
- ⤴ Nursing homes and GP surgeries
- ⤴ “Mobile” Doctors and Nurses
- ⤴ Major transport hubs such as Docks/Airports/Motorway service Stations/Railway Stations

Providing a portfolio of responders, builds a robust workforce and a brief description of these is now given, to provide the reader with an appreciation of how they operate and how the Trust manages this aspect of its organisation.

3.1.1 Volunteer Community Responders

The Resuscitation Council UK defines a ‘Community Responder’ as follows: “A person trained as a minimum in basic life support and the use of a defibrillator, who attends a potentially life-threatening emergency”. Volunteers who operate within the community they live or work in and respond to incidents within a predetermined geographical area. They are managed by the Trust and operate as agents of the Trust. They coalesce to form a scheme, under the leadership of an individual who is the co-ordinator and the primary administrative interface with the Trust. They will be sent to incidents, (see 4.3 for classification), that are within 4 minutes drive time, (under normal driving conditions), from their location.

3.1.2 Co-Responders

These are groups of associated professionals or support services. Such groups would include Fire and Rescue Services, HM Coastguard and the military, such as the RAF. Coastguard schemes only operate in Hampshire due to the land-locked nature of Berkshire, Oxfordshire and Buckinghamshire. Co-Responder Groups are regulated through an appropriate Memorandum of Understanding.

3.1.3 Trust Staff Responders

These are similar to Community Responder schemes insofar as staff volunteer to respond in their own personal time. They will self-organise to form a rota in their community with other staff members who live nearby. The Trust provides a vehicle for the scheme to use and all the necessary medical and communications equipment. Because these are clinically trained operational road staff, they can proceed to the incident under blue lights and therefore have a wider coverage than the public volunteers.

3.1.4 Static Sites

These will be schemes that are predominantly resourced through the National Defibrillator Programme and will include such places as shopping centres, airports, GP surgeries and residential care homes.

3.2 County Comparison across SCAS

The number of schemes deployed in each county can give some guidance as to the effectiveness of the indirect resource. At the end of 2008:2009 the picture was as follows:

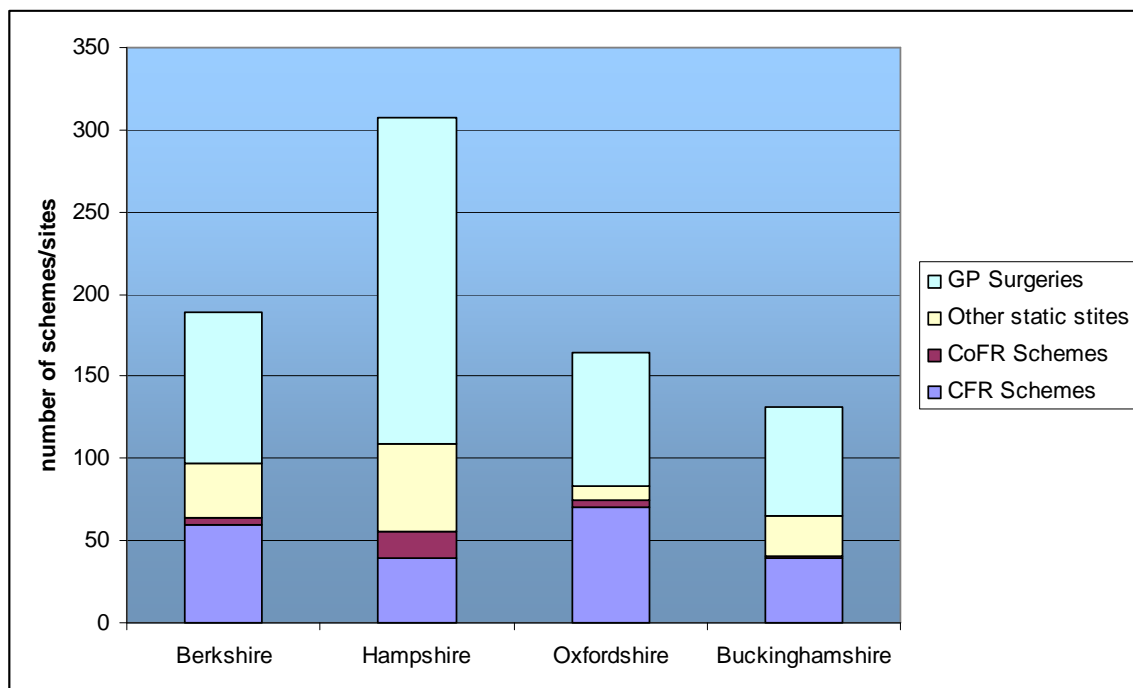


Figure 13 – Indirect Schemes and initiatives deployed per county

However, the number of schemes is only a proxy for their efficiency and effectiveness, how well they perform and how well the Trust utilises them. For example a county may have what looks like an impressive number of schemes, but if they have few members, are only available a few hours a week and when they are supposed to be available, are uncontactable, then this tells a different story.

A much more representative picture can be gleaned by examining the overall contribution they make to SCAS' performance. The next few diagrams provide the reader with the effectiveness of the SCAS approach to indirect over the last 12 months:

SCAS Indirect Contribution

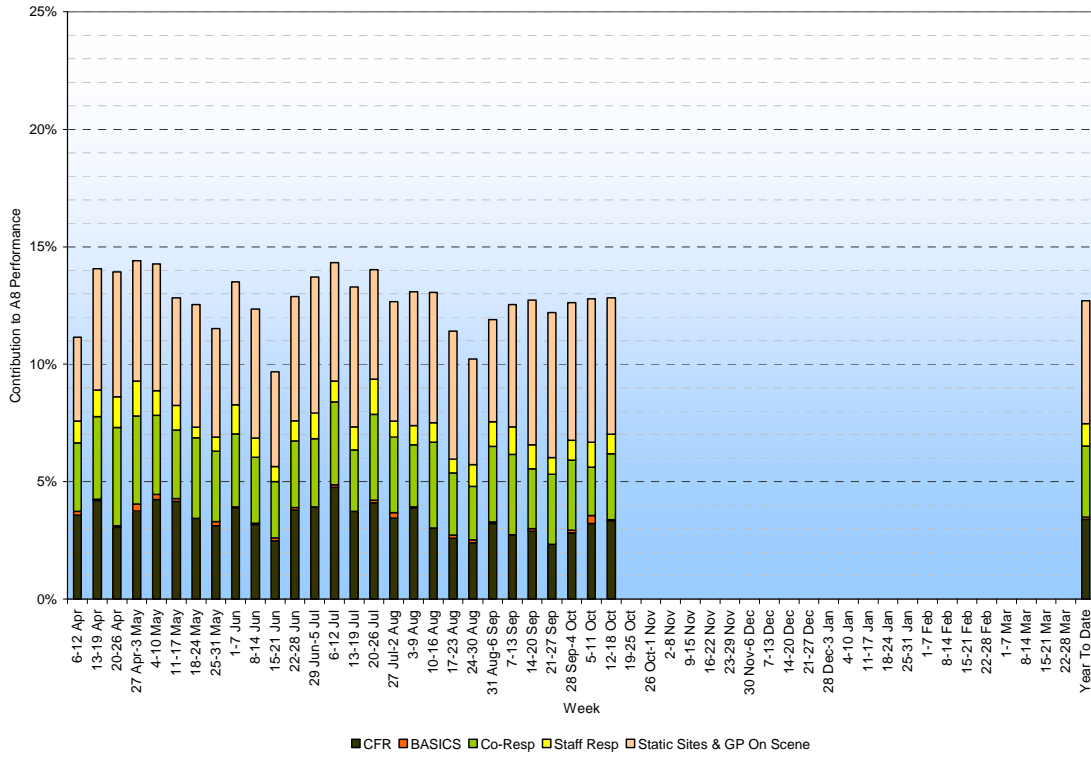


Figure 14 – Indirect contribution for SCAS (Current YTD)

Berkshire Indirect Contribution

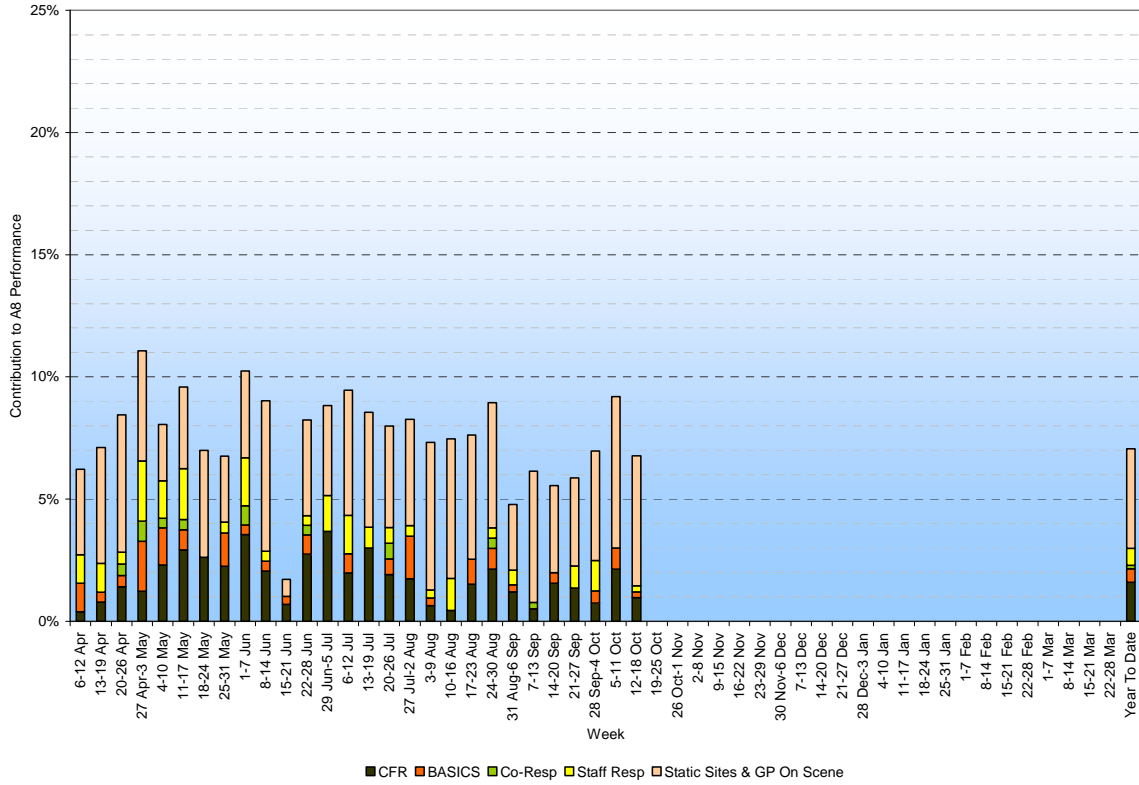


Figure 15 –Unique Indirect contribution for Berkshire: (Current YTD)

Hampshire Indirect Contribution

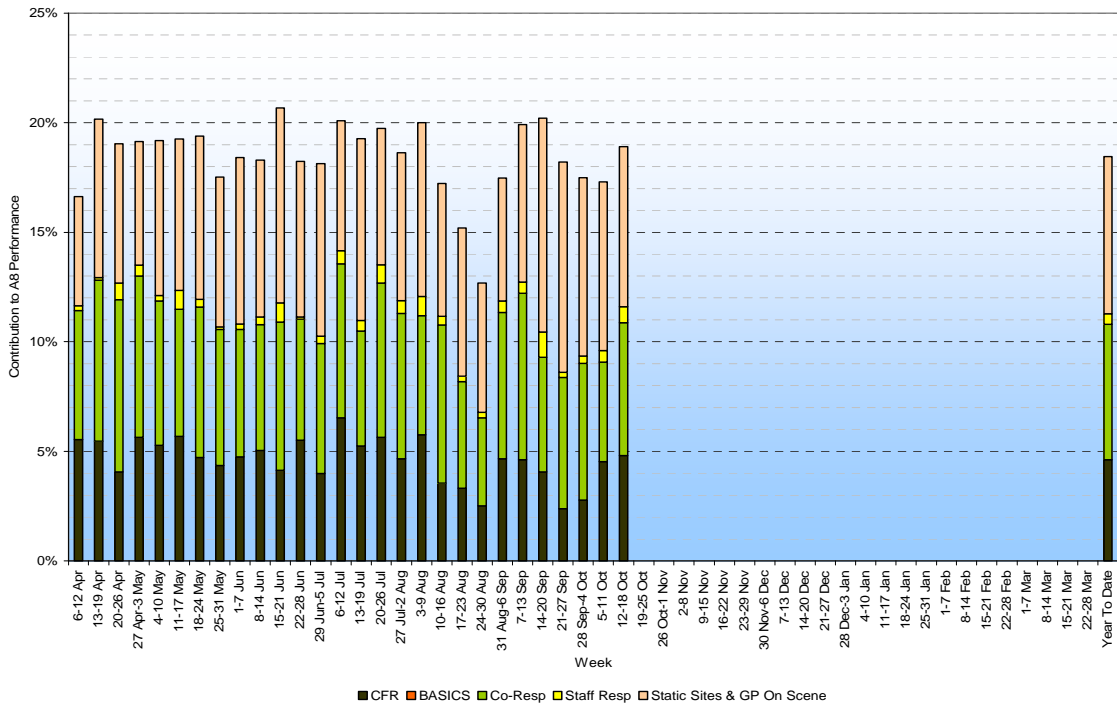


Figure 16 – Unique Indirect contribution for Hampshire: (Current YTD)

Oxon & Bucks Indirect Contribution

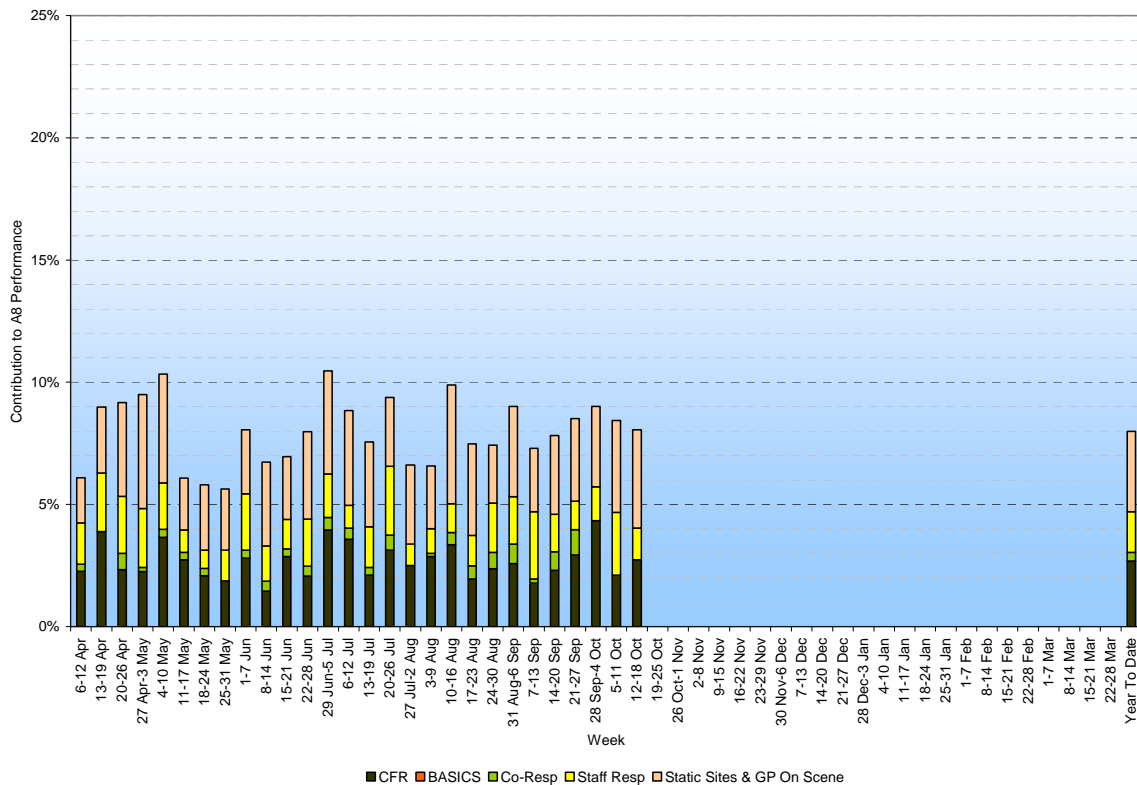


Figure 17 – Unique Indirect contribution for Oxfordshire:Buckinghamshire combined (Current YTD)

These diagrams tell an interesting story and reveal the significant differences in the deployment and performance of indirect resources across the different areas of the South Central region.

Hampshire enjoy an impressive and reliable contribution from their indirect resources. There are a number of reasons for this:

- ✦ Indirect schemes and initiatives have been built up over a long period, longer than elsewhere in the Trust
- ✦ Strong sense of community in the low activity areas
- ✦ Reliable and responsive Fire Service Responder schemes from retained stations
- ✦ High saturation of static sites, (particularly GPs)

Berkshire get a very low contribution (maximum 2%) from a relatively high number of community responder schemes, and the reasons for this are not fully understood. The county enjoys a far more significant contribution from the static sites it has deployed. Berkshire's overall A8 performance has been consistently good and as can be seen from table 1, it has the highest low activity A8 performance in SCAS. This coupled with the relatively low proportion of activity in rural areas, means that reliably meeting one more A call per day in these areas, will take Berkshire to 75% overall. This of course may change once AMPDS is implemented at the beginning of September and a greater reliance and demand is made on the indirect contribution.

Oxfordshire and **Buckinghamshire** face the biggest challenge in SCAS in terms of delivering the service in the low activity areas. The main reason for this, as already explained, is that they have the biggest proportion of sparsely populated areas, with Buckinghamshire being the most. As can be seen from Figure 14, the division experiences significant variation in terms of the contribution delivered. 6 of the last 17 weeks saw the contribution on or about 10%. So, as well as continuing the development and expansion of indirect schemes, the division will be focussing on strengthening that part of the EOC that controls the resource, thereby making 10% the norm and the assured base on which to build.

3. Management and Governance of the Trust's Indirect Resource and Clinical Assurance

4.1 Recruitment and Training

There is an informal and formal aspect to the selection process. The Trust wants to attract as many suitable responders as possible and so it is fair to say that the interview and assessment process is more relaxed than with a prospective Trust employee. However, there needs to formal assurance that the volunteer is suitable and this takes the form of:

- Taking up two references
- CRB checks
- Validation of driving license, insurance MOT
- Self-declared health screening

and will in all probability include registration with the Independent Safeguarding Audit, (ISA)

Initial training takes the form of an induction course and is a mixture of practical and theoretical content. This is based on the IHCD First Person on scene qualification. As well as covering the provision of emergency first aid, the course covers subjects such as manual handling, infection control, record keeping, and health and safety. A threshold pass mark is set for the end of course tests. Re-training referred to as requalification occurs every 6 months and covers:

- The safe use of an defibrillator
- The safe use and storage of Oxygen
- Practical CPR sessions including a scenario
- A short multiple choice question paper covering the theoretical core elements

All community responders are provided training on the relevant trust policies and in particular confidentiality, data protection, infection prevention and control, incident reporting and safeguarding children and adults.

Equipment Provision

The following equipment is provided to enable the responder to perform their duties. The equipment is consistent with Trust equipment and in line with Trust policy.

- ✦ Corporate-wear/safety -wear
- ✦ Carry response bag
- ✦ Automatic external defibrillator with spare pads
- ✦ Manual suction
- ✦ O2 therapy and spare cylinder
- ✦ Bag valve and mask
- ✦ Selection of bandages
- ✦ Oral pharyngeal airways
- ✦ Blankets
- ✦ Hygiene (hand cleaning etc)
- ✦ Mobile phone with CAD application
- ✦ Hands-free combined Sat-nav, in some areas

4.3 Clinical Risk Assurance

A clinical risk assessment has been undertaken to determine the types of calls and training needed for community and co responders to be sent to. Exceptions have been highlighted and EOC staff clearly outlined action cards to ensure that community responders are not sent inappropriately. These are outlined below:

- A patient in cardiac arrest
- A patient who has a serious uncontrolled bleed
- A patient who is in need of immediate airway maintenance or will benefit from early high flow oxygen therapy
- Unconscious patient
Patient with decreased level of consciousness (as a result of sudden medical illness or trauma)
- Choking
- Severe respiratory distress
- Signs of shock
- Cardiac emergencies
- Diabetic emergencies
- Epileptic emergencies
- Suspected Cerebral Vascular Accident (CVA) or stroke

They will not be sent to the following:

- The scene is violent or is thought to be violent
- Someone has been assaulted
- A patient is suffering from a mental or emotional condition
- The patient is on a motorway or dual carriage way
- The patient is under 2 (two) years old
- The incident is a gynaecological or maternity call
- The scene is dangerous without PPE
- Fire
- Road Traffic Collision
- Chemicals or other dangerous materials involved

Thus the EOC has a balancing act to perform, in getting an indirect resource to a patient in the shortest possible time, whilst ensuring they send them to an appropriate incident. Deploying the volunteer before the patient's condition is determined will necessitate standing the volunteer down (re-calling them) if it becomes apparent that the incident falls into the lower bulleted list. This can be very frustrating for the volunteer, and if it happens on a few occasions, can cause them to consider donating their services elsewhere.

A responder will always automatically be backed up by the despatch of a Trust resource, to the incident and in most instances a Trust resource is despatched prior to the responder.

A support mechanism is well defined for all the schemes and issues are followed up by the training officers or Community responder managers as the welfare of our staff is very important

4.4 Communication

Emergency Operations Centre

Within the Emergency Operations Centre (EOC) the role of dispatching indirect resources has become specialised. This has demonstrated that to ensure the safety and prompt activation of the responders it is necessary to operate an Indirect Support Desk in each of the EOC's.

- Automatic log on/off facility (ability to identify how many hours the scheme is available)
- Competent dedicated dispatchers (speed and safety) 24/7
- CAD location by mapping or tracking device
- Dispatch process that enables contact with the scheme as the call is coming in
- Capture on scene time
- Dispatcher with time to complete welfare/time/equipment check
- Dispatcher monitoring/auditing system (allocation to responder time)

Each scheme is provided with and communicates with the EOC, by a mobile phone including SMS messaging that is interfaced to the Computer Aided Dispatch systems in each of the EOCs.

5. What More Could or Should Be Done ?

This document has revealed a set of different performances across the Trust and explained that the nature of the low activity is also different from county to county. Whilst there are different baselines across the geography, more can be done in all low activity areas to improve A8 performance. The three SCAS divisions have prepared plans on how they can achieve this and these are included later in this section. Before exploring these, the basis on how these plans were constructed is now explained..

Each division has followed a number of steps:

- ✦ Identify the low activity areas to be considered
- ✦ Sort that list (in descending order) by the number of missed life threatening calls per year
- ✦ Establish assumptions for:
 - The %age of calls that are currently missed, that will (when the scheme is set up or expanded) receive an indirect allocation
 - The performance (success percentage rate) for these allocations. In other words what percentage will receive an indirect on-scene attendance within 8 minutes of the call being connected to the Division's switch
- ✦ Set the baseline for current overall performance for the low activity areas.

Each scheme or initiative will then incrementally improve performance by addressing the existing failed calls and converting a percentage of them to successes, based on the assumptions described above. For the purposes of this planning process these have both been set at 70%. The cumulative impact of each scheme/initiative is then recorded. If all of the schemes delivered against the assumptions then the overall improvement can be determined. The three plans are now presented.

5.1 Oxfordshire and Buckinghamshire

The potential improvements that can be made on a baseline of 49% A8 performance are shown in the graph below

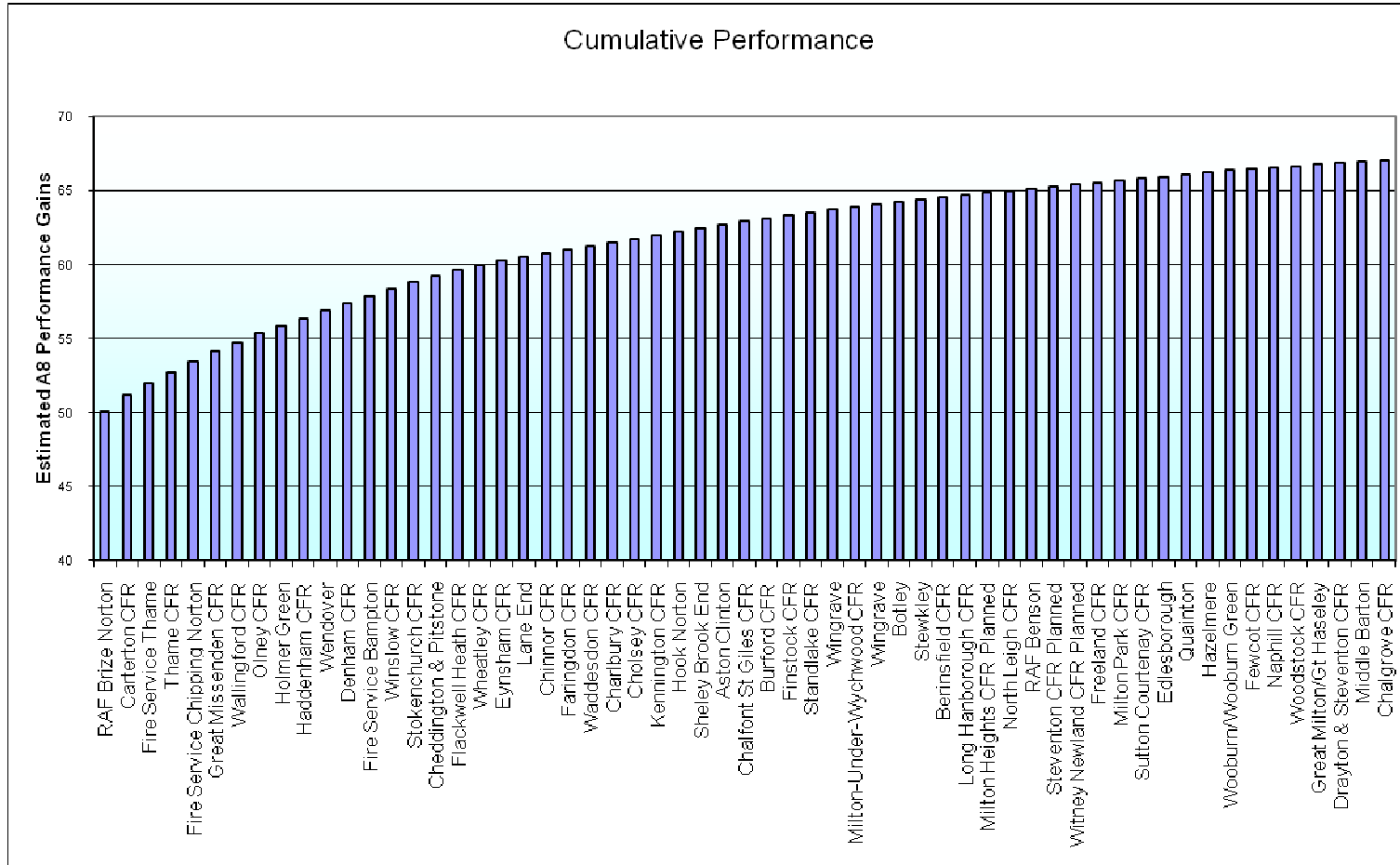


Figure 18 – Cumulative planned performance for Indirect (Ox and Bucks)

The underlying data that supports the previous graph for Oxfordshire and Buckinghamshire:

Figures in these 2 columns are for 4 months

Present Scheme	Existing Scheme	Rural Misses	Potential Gain	Performance Gain	Cumulative Performance
RAF Brize Norton	Yes	67	33	1.14	50.09
Carterton CFR	Yes	64	31	1.07	51.16
Fire Service Thame	Yes	49	24	0.83	51.99
Thame CFR	Yes	43	21	0.73	52.71
Fire Service Chipping Norton	Yes	42	21	0.73	53.44
Great Missenden CFR	Yes	40	20	0.69	54.13
Wallingford CFR	Yes	36	18	0.62	54.75
Olney CFR	Yes	34	17	0.59	55.34
Holmer Green	No	31	15	0.52	55.85
Haddenham CFR	Yes	30	15	0.52	56.37
Wendover	No	30	15	0.52	56.89
Denham CFR	Yes	29	14	0.48	57.37
Fire Service Bampton	Yes	29	14	0.48	57.86
Winslow CFR	Yes	28	14	0.48	58.34
Stokenchurch CFR	Yes	26	13	0.45	58.79
Cheddington & Pitstone	No	26	13	0.45	59.24
Flackwell Heath CFR	Yes	24	12	0.41	59.65
Wheatley CFR	Yes	19	9	0.31	59.97
Eynsham CFR	Yes	16	8	0.28	60.24
Lane End	No	16	8	0.28	60.52
Chinnor CFR	Yes	15	7	0.24	60.76
Faringdon CFR	Yes	15	7	0.24	61.00
Waddesdon CFR	Yes	15	7	0.24	61.24
Charlbury CFR	Yes	14	7	0.24	61.49
Cholsey CFR	Yes	14	7	0.24	61.73
Kennington CFR	Yes	14	7	0.24	61.97
Hook Norton	No	14	7	0.24	62.21
Sheley Brook End	No	14	7	0.24	62.45
Aston Clinton	No	14	7	0.24	62.69
Chalfont St Giles CFR	Yes	13	6	0.21	62.90
Burford CFR	Yes	12	6	0.21	63.11
Finstock CFR	Yes	12	6	0.21	63.32
Standlake CFR	Yes	12	6	0.21	63.52
Wingrave	No	12	6	0.21	63.73
Milton-Under-Wychwood CFR	Yes	11	5	0.17	63.90
Wingrave	No	11	5	0.17	64.08
Botley	No	10	5	0.17	64.25
Stewkley	No	10	5	0.17	64.42
Berinsfield CFR	Yes	9	4	0.14	64.56
Long Hanborough CFR	Yes	9	4	0.14	64.70
Milton Heights CFR Planned	Yes	9	4	0.14	64.84
North Leigh CFR	Yes	9	4	0.14	64.97
RAF Benson	Yes	9	4	0.14	65.11
Steventon CFR Planned	Yes	9	4	0.14	65.25
Witney Newland CFR Planned	Yes	9	4	0.14	65.39
Freeland CFR	Yes	8	4	0.14	65.53
Milton Park CFR	Yes	8	4	0.14	65.66
Sutton Courtenay CFR	Yes	8	4	0.14	65.80
Edlesborough	No	8	4	0.14	65.94
Quainton	No	8	4	0.14	66.08
Hazelmere	No	8	4	0.14	66.22
Wooburn/Wooburn Green	No	8	4	0.14	66.36
Fewcot CFR	Yes	7	3	0.10	66.46
Naphill CFR	Yes	7	3	0.10	66.56
Woodstock CFR	Yes	7	3	0.10	66.67
Great Milton/Gt Haseley	No	7	3	0.10	66.77
Drayton & Steventon CFR	Yes	6	3	0.10	66.87
Middle Barton	No	6	3	0.10	66.98
Chalgrove CFR	Yes	5	2	0.07	67.05

Figure 19 – Supporting data for Ox and Bucks

5.2 Berkshire

The potential improvements that can be made on a baseline of 54% A8 performance are shown in the graph below.

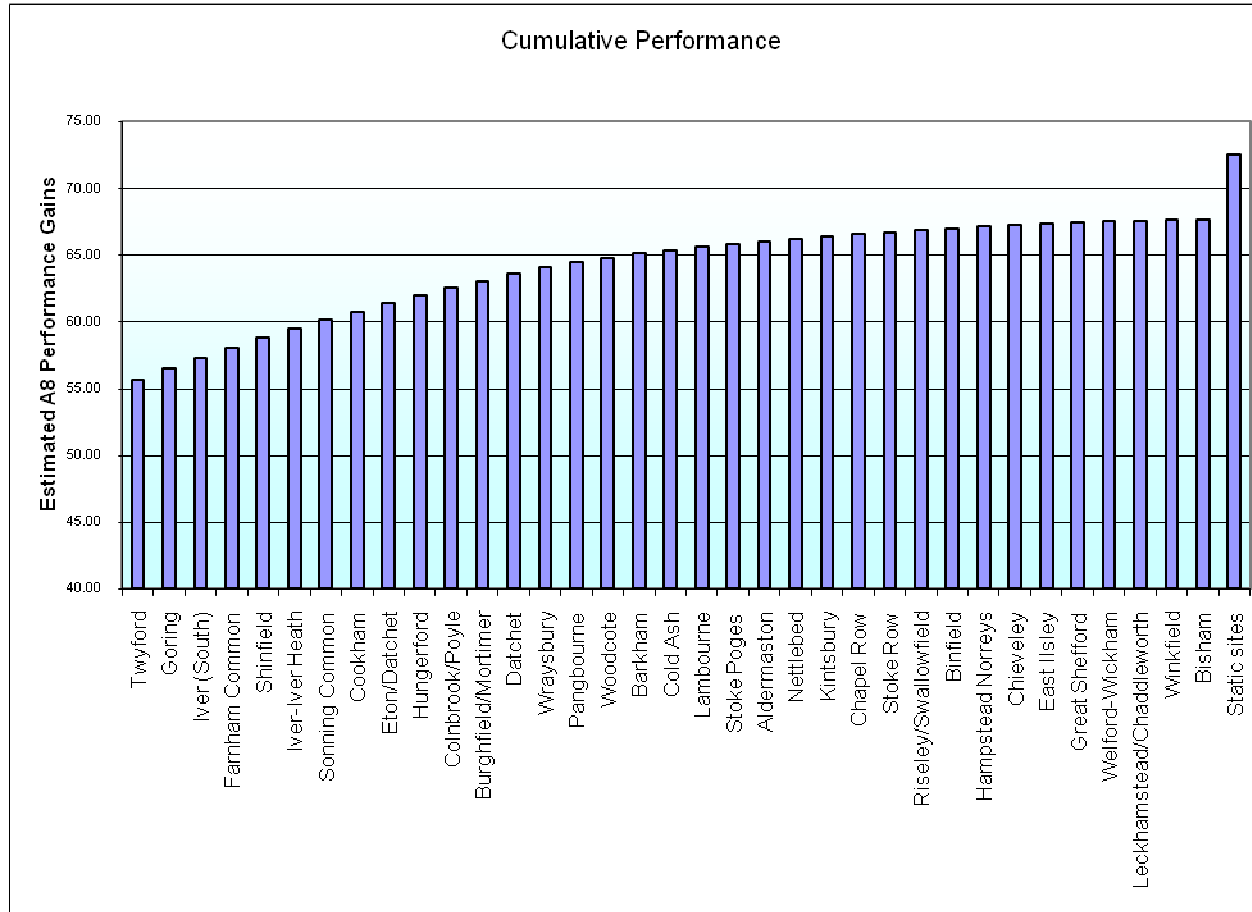


Figure 20 – Cumulative planned performance for Indirect (Berkshire)

The underlying data that supports the previous graph for Berkshire

Figures in these 2 columns are annual why is Ox/Bucks shown as 2 months and this as annula

Present Scheme	Existing Scheme	Rural Misses	Potential Gain	Performance Gain	Cumulative
Twyford	Yes	78	27	1.29	55.62
Goring	No	56	19	0.91	56.53
Iver (South)	No	48	16	0.77	57.29
Farnham Common	Yes	46	16	0.77	58.06
Shinfield	Yes	44	15	0.72	58.78
Iver-Iver Heath	No	42	14	0.67	59.45
Sonning Common	Yes	40	14	0.67	60.11
Cookham	Yes	38	13	0.62	60.74
Eton/Datchet	No	37	13	0.62	61.36
Hungerford	Yes	36	12	0.57	61.93
Colnbrook/Poyle	Yes	35	12	0.57	62.51
Burghfield/Mortimer	Yes	33	11	0.53	63.03
Datchet	No	33	11	0.53	63.56
Wraysbury	No	31	11	0.53	64.08
Pangbourne	Yes	20	7	0.33	64.42
Woodcote	Yes	19	7	0.33	64.75
Barkham	No	19	7	0.33	65.09
Cold Ash	No	16	5	0.24	65.33
Lambourne	Yes	16	5	0.24	65.57
Stoke Poges	No	15	5	0.24	65.81
Aldermaston	No	13	4	0.19	66.00
Nettlebed	No	12	4	0.19	66.19
Kingsbury	No	11	4	0.19	66.38
Chapel Row	No	10	3	0.14	66.52
Stoke Row	No	9	3	0.14	66.67
Riseley/Swallowfield	Yes	9	3	0.14	66.81
Binfield	Yes	9	3	0.14	66.95
Hampstead Norreys	No	8	3	0.14	67.10
Chieveley	Yes	7	2	0.10	67.19
East Ilsley	Yes	6	2	0.10	67.29
Great Shefford	No	6	2	0.10	67.38
Welford-Wickham	No	5	2	0.10	67.48
Leckhamstead/Chaddleworth	Yes	4	1	0.05	67.53
Winkfield	No	4	1	0.05	67.58
Bisham	No	1	0	0.00	67.58
Static sites	N/A	300	103	4.93	72.50

Figure 21 – Supporting data for Berkshire

5.3 Hampshire

The potential improvements that can be made on a baseline of 54% A8 performance are shown in the graph below

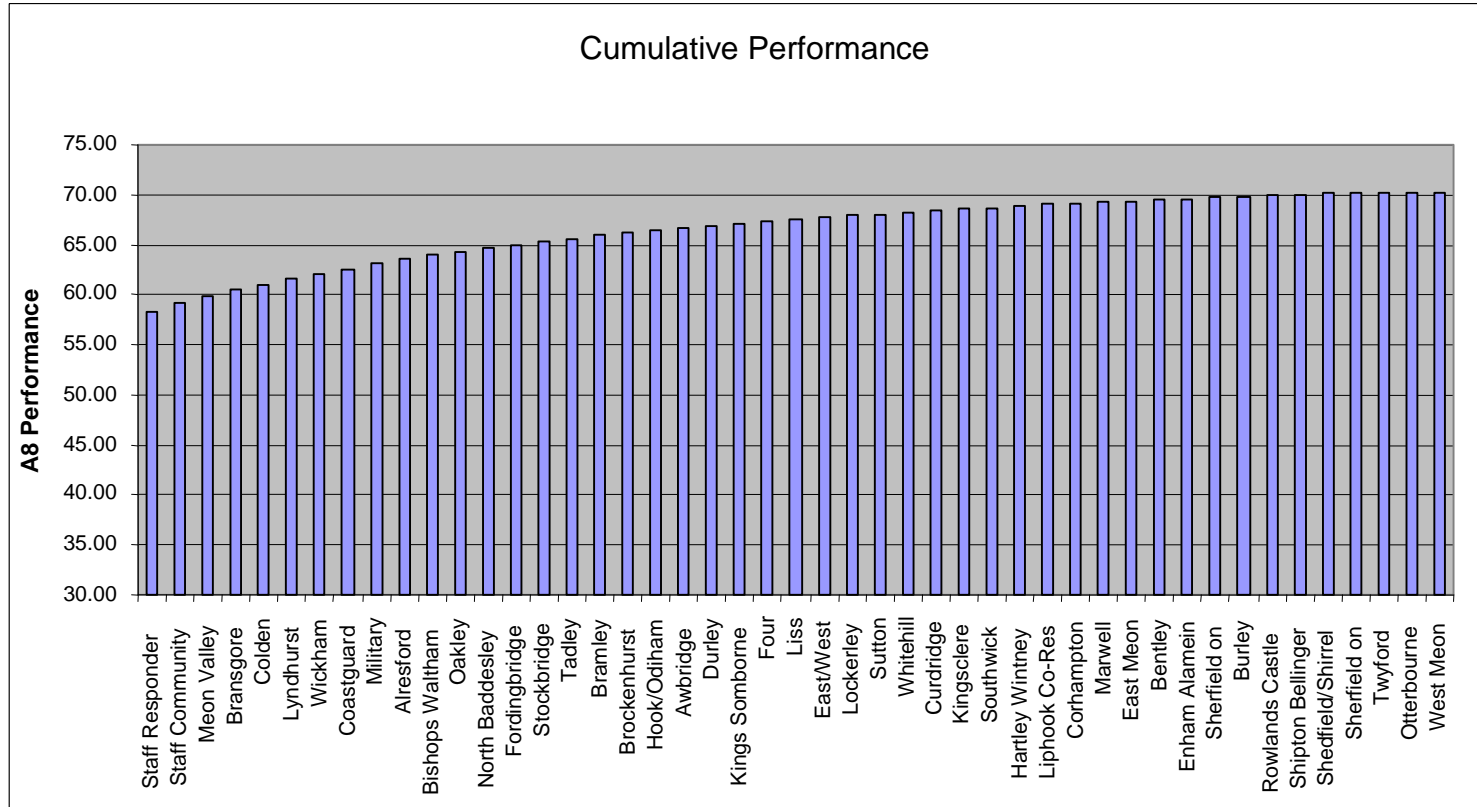


Figure 22 – Cumulative planned performance for Indirect (Hampshire)

The underlying data that supports the previous graph for Hampshire:

Figures in these 2 columns
are for 4 months and this is 4 months – should all be same
- annual?

Scheme	Existing/New	Rural Misses	Potential Gain	Performance Gain	Cumulative Performance
Staff Responder	New	n/a	80	4.21	58.21
Staff Community Responder	New	n/a	20	1.05	59.27
Meon Valley	Existing	24	12	0.63	59.90
Bransgore	Existing	23	11	0.58	60.48
Colden Common/Twyford	Existing	20	10	0.53	61.01
Lyndhurst	Existing	20	10	0.53	61.53
Wickham	New	20	10	0.53	62.06
Coastguard	Existing	n/a	10	0.53	62.59
Military	Existing	n/a	10	0.53	63.11
Alresford CFR/Co-Res	Existing	18	9	0.47	63.59
Bishops Waltham	Existing	15	7	0.37	63.96
Oakley	Existing	15	7	0.37	64.33
North Baddesley	New	15	7	0.37	64.70
Fordingbridge	Existing	12	6	0.32	65.01
Stockbridge	Existing	12	6	0.32	65.33
Tadley	Existing	13	6	0.32	65.64
Bramley	New	13	6	0.32	65.96
Brockenhurst	New	13	6	0.32	66.28
Hook/Odiham	New	10	5	0.26	66.54
Awbridge	Existing	8	4	0.21	66.75
Durley	Existing	8	4	0.21	66.96
Kings Somborne	Existing	8	4	0.21	67.17
Four Marks/Medstead	New	9	4	0.21	67.38
Liss	New	8	4	0.21	67.59
East/West Tytherley	Existing	6	3	0.16	67.75
Lockerley	Existing	6	3	0.16	67.91
Sutton Scotney/South Wonston	New	6	3	0.16	68.07
Whitehill	New	6	3	0.16	68.23
Curridge	New	6	3	0.16	68.38
Kingsclere	New	7	3	0.16	68.54
Southwick	New	7	3	0.16	68.70
Hartley Wintney Co-Res	Existing	7	3	0.16	68.86
Liphook Co-Res	Existing	6	3	0.16	69.02
Corhampton	Existing	4	2	0.11	69.12
Marwell	Existing	4	2	0.11	69.23
East Meon	New	5	2	0.11	69.33
Bentley	New	5	2	0.11	69.44
Enham Alamein	New	5	2	0.11	69.54
Sherfield on Loddon	New	5	2	0.11	69.65
Burley	Existing	5	2	0.11	69.75
Rowlands Castle	Existing	5	2	0.11	69.86
Shipton Bellinger	New	4	2	0.11	69.96
Shedfield/Shirrel Heath	Existing	4	2	0.11	70.07
Sherfield on English/West Wellow	New	3	1	0.05	70.12
Twyford	Existing	3	1	0.05	70.17
Otterbourne	New	3	1	0.05	70.23
West Meon	New	3	1	0.05	70.28
Swanmore/Waltham Chase	Existing	3	1	0.05	70.33
North Boarhunt	New	2	1	0.05	70.39
Southwick	New	2	1	0.05	70.44
Waltham Chase	Existing	2	1	0.05	70.49
Godshill	Existing	2	1	0.05	70.54
Hursley	Existing	2	1	0.05	70.60
Weyhill	Existing	2	1	0.05	70.65
Sparsholt	Existing	2	1	0.05	70.70
Ashurst Birthing Centre	New	2	1	0.05	70.75
Heath End	Existing	1	0	0.00	70.75
Holybourne	Existing	1	0	0.00	70.75

Figure 23 – Supporting data for Hampshire

5.4 Commentary on Divisional Plans

Oxfordshire and Buckinghamshire have a current baseline of 49% A&S performance in their low activity areas. They envisage introducing 17 new schemes and expanding/strengthening 42 existing ones and this would ultimately elevate them to 67%. It should be noted that 41 of these schemes will incrementally achieve less than 1 A call success a fortnight, due primarily to the low level of “opportunity” in these low activity locations. If the division’s original estimate of 75% of existing missed calls could receive an indirect allocation and 80% of these would be successful, then the overall improvement will be raised by 4% to 71%. This gives the reader some appreciation of the sensitivity of the planning assumptions. There are currently no additional static sites identified and planned for the division.

Berkshire has a current baseline of 54%, which climbs to 72.5%, as a result of a combination of:

- ▲ 19 new CFR schemes
- ▲ 16 expanded schemes
- ▲ AEDs being installed in the remainder of GP surgeries in the county and in 34 “commercial” static sites

Hampshire anticipate obtaining a significant contribution by invigorating staff responder schemes in 6 locations and they believe there is the interest and enthusiasm for this. They have also identified 23 new Community/Co-Responder schemes and the opportunity to strengthen 32 existing ones. Hampshire already enjoy an established relationship with the Fire service, who act as Co Responders, (14 schemes). 3 of these 14 are in the low activity areas. Hampshire are also planning a focus on nursing homes in the county (static sites) and anticipate 8 A call successes a month from this source. Hampshire’s current baseline is 54% and their overall plan is ultimately realised, this will rise to 70.8%.

Estimated incremental costs are £386,000 in Hampshire, £ 307,000 in Oxfordshire and Buckinghamshire and £265,000 in Berkshire. The full improvement outlined above is likely to take a minimum of 2 years to achieve, with a potential to realise the following within 9 months:

Berkshire	65%
Hampshire	64%
Oxfordshire and Buckinghamshire	61.5%

Due to the nature of the reliance on identifying and obtaining the commitment of volunteers for a lot of these areas, it is difficult to be prescriptive in regards to timescales. However the Trust would envisage covering these 149 locations within the next 2 to 3 years.

6. Conclusion

The use of indirect resource in the South Central Ambulance Service has evolved over many years and has its roots well before the 2006 merger of the various disparate organisations. The A8 performance of the Trust overall, relies to a significant degree on the contribution it receives from this quarter; particularly in the rural areas.

This paper has sought to explain the various types of resource and how they are used in the different counties and the varying degrees of contribution that they make. It has also explored the compartmentalising of South Central into 3 tiers of activity and put forward a case that indirect, (rather than a dedicated Trust resource) is the only cost effective option for delivering the initial response in the low activity areas.

It has also highlighted the variation in low activities areas across the SCAS geography and that some areas receive a lower contribution from their indirect resource than others do and has attempted to account for why this might be.

The document then moved on to explore the different plans that each division has for continuing to improve performance in the low activity areas, using indirect resource as the primary emergency response for life threatening calls (A calls). These resources are immediately backed up by a Trust resource, which is invariably mobilised to the incident before the indirect. To a lesser or greater degree indirect resources are already well established in South Central and these have typically been implemented in the busier parts of the low activity areas. It therefore follows that additional improvements will become progressively harder to achieve as the Trust pursues areas located in lower and lower activity levels. Indeed this can be further emphasised by examining the areas targeted by the divisions in their plans, as follows:

	Targetted Areas	1 A call or less a week	1 A call or less a fortnight
Berkshire	25	58%	39%
Hampshire	56	70%	30%
Ox and Bucks	59	24%	0%

Table 2 – Activity Levels in the targetted areas

This obviously raises the challenge of keeping schemes and their constituent members engaged in the quieter areas.

So, in closing, the modelling and forecasting approach to addressing the challenge of low activity area and the use of indirect resources within them, is now standardised across SCAS. However, each division has its own individualistic approach to building on its own indirect presence. The rationale and justification for this will be historical and one of demographics and geography, as each Division has its own set of factors to consider, and they are often very different from neighbouring divisions.

So, Hampshire have a firm base of established Fire and Co-Responder schemes, complemented by a strong indirect contribution from static sites. They seek now to focus on strengthening both Community and Co-Responder schemes, whilst making more use of SCAS employees as responders. Static site expansion plays a small role in the County.

Berkshire has struggled with a reliable, consistent contribution from Community Responders for a variety of reasons and whilst preserving what is there and persevering with it, their plan has a major focus on static sites and starting to replicate some of Hampshire's success with the Fire Service

Finally, Oxfordshire and Buckinghamshire's strategy is to expand their base of Community Responder schemes, but with a clear focus on establishing/expanding Co Responder schemes, both military and Fire Service. The division already has 5 such schemes and is looking to implement a further 8.

SCAS strives for equity of access and to deliver the best possible service levels to the highest number of patients, within the financial envelope in which it has to operate. This paper has outlined SCAS's plans for improving performance in the challenging low activity areas and moving closer to his goal. The Trust is very aware that in the two largest divisions, predicted performance falls short of the overall national percentage response targets for life threatening incidents. SCAS welcomes the thoughts and suggestions from the readership of this paper, on how they feel the gap maybe further closed

APPENDICES

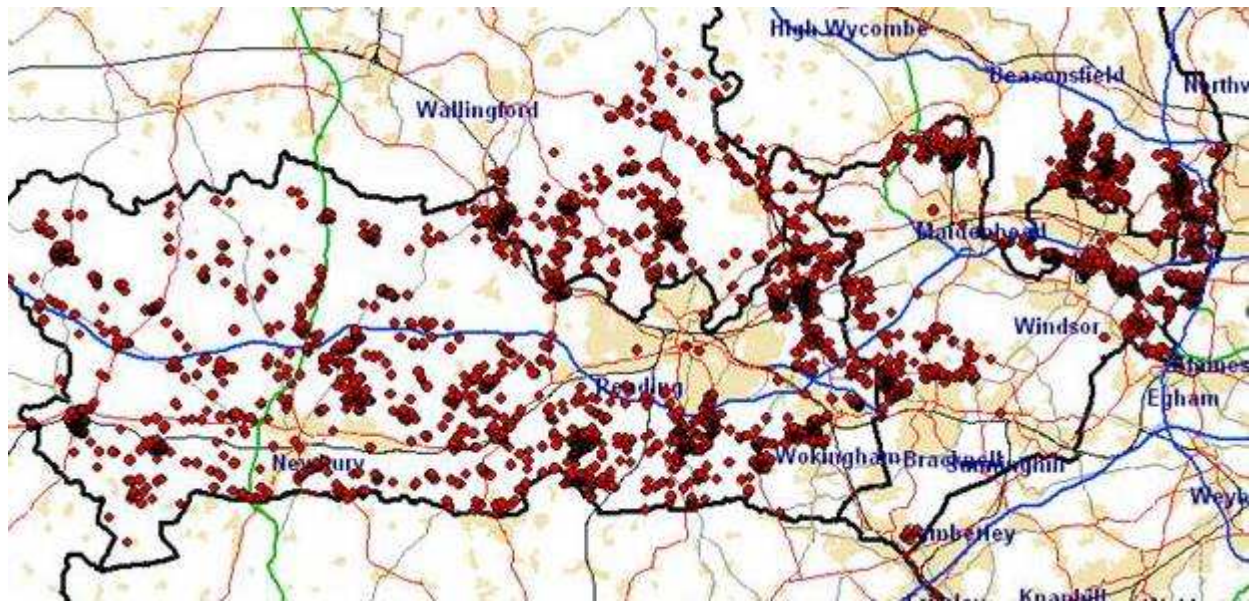
Appendix 1 – Segmentation of Low Activity Areas in Oxfordshire and Buckinghamshire combined

	Annual Activity	Locations in this category	% of Low Activity of this category	cost per incident of dedicated RRV	cost per incident of dedicated DCA	A Activity	Typical A8 %age
< 1 A/B a fortnight (<26 a year)	550	33	0.19	£ 18,000.00	£ 36,000.00	190	24.21
< 1 A/B a week (26-52)	2000	31	0.47	£ 4,650.00	£ 9,300.00	660	25.15
1 A/B a week (52-75)	904	14	0.64	£ 4,646.02	£ 9,292.04	388	18.30
2 A/Bs a week (76-150)	2724	25	1.80	£ 2,753.30	£ 5,506.61	1095	28.13
5 A/Bs a week (151-300)	6120	27	5.00	£ 1,323.53	£ 2,647.06	2608	41.76
1 A/B a day (301-450)	3661	10	2.72	£ 819.45	£ 1,638.90	1502	42.88
1.5 A/Bs a day (>450)	28547	24	6.44	£ 252.22	£ 504.43	12186	54.23

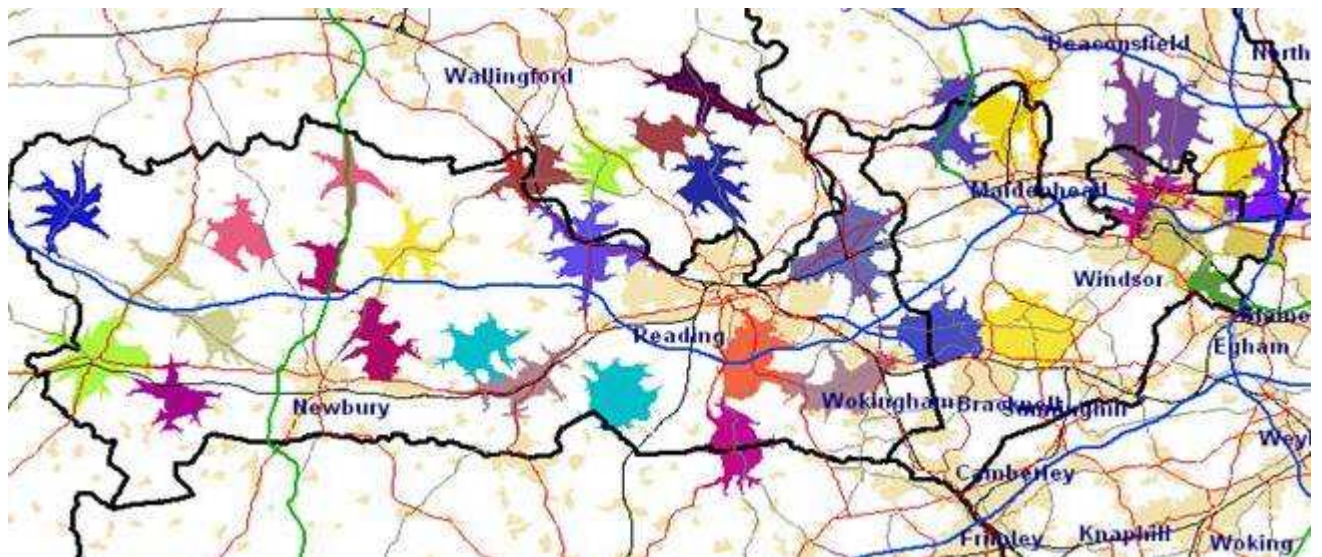
Appendix 2 – Segmentation of Low Activity Areas in Berkshire

	Annual Activity	Locations in this category	% of Low Activity of this category	cost per incident of dedicated RRV	cost per incident of dedicated DCA	A Activity	Typical A8 %age
< 1 A/B a fortnight (<26 a year)	1821	MANY LOCATIONS (see map)	2.82%			446	63.68%
< 1 A/B a week (26-52)	196		0.30%			35	14.29%
	31	East Ilsley	0.05%			6	0.00%
	43	Great Shefford	0.07%			7	14.29%
	30	Leckhamstead/Chaddleworth	0.05%			4	0.00%
	48	Stoke Row	0.07%			9	0.00%
	44	Welford-Wickham	0.07%			9	44.44%
1 A/B a week (52-75)	364		0.56%			68	42.65%
	55	Hampstead Norreys	0.09%			9	11.11%
	53	Bisham	0.08%			2	50.00%
	72	Chapel Row	0.11%			13	23.08%
	54	Chieveley	0.08%			15	53.33%
	55	Riseley/Swallowfield	0.09%			19	52.63%
	75	Winkfield	0.12%			10	60.00%
2 A/Bs a week (76-150)	558		0.87%			120	40.83%
	97	Aldermaston	0.15%			23	43.48%
	141	Cold Ash	0.22%			27	40.74%
	118	Kintsbury	0.18%			21	47.62%
	91	Nettlebed	0.14%			21	42.86%
	111	Woodcote	0.17%			28	32.14%
5 A/Bs a week (151-300)	1839		2.85%			408	43.87%
	269	Binfield	0.42%			46	80.43%
	284	Cookham	0.44%			63	39.68%
	281	Goring	0.44%			76	26.32%
	153	Lambourne	0.24%			33	51.52%
	195	Pangbourne	0.30%			40	50.00%
	245	Sonning Common	0.38%			64	37.50%
	184	Wraysbury	0.29%			48	35.42%
	228	Barkham	0.35%			38	50.00%
1 A/B a day (301-450)	3226		5.00%			647	56.57%
	425	Burghfield/Mortimer	0.66%			92	64.13%
	385	Colnbrook/Poyle	0.60%			56	37.50%
	442	Eton/Datchet	0.69%			83	55.42%
	365	Hungerford	0.57%			88	59.09%
	377	Shinfield	0.58%			74	40.54%
	442	Datchet	0.69%			84	60.71%
	375	Iver (South)	0.58%			75	36.00%
	415	Stoke Poges	0.64%			95	84.21%
1.5 A/Bs a day (>450)	2005		3.11%			376	55.85%
	596	Farnham Common	0.92%			117	60.68%
	726	Twyford	1.13%			148	47.30%
	683	Iver-Iver Heath	1.06%			111	62.16%
All Activity	64479	Berkshire Division	100.00%			13925	78.45%

Appendix 3 –Low Activity Areas in Berkshire



Appendix 4 –Low Activity Areas in Berkshire with drive zones corresponding to Appendix 2



Appendix 5 - Unaddressed low activity area incidents in Berkshire

