

East Midlands Ambulance Service (EMAS) Stakeholder Workshops – Information Pack

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1. INTRODUCTION

Thank you for your attendance at the EMAS Stakeholder Workshops. This is a key event in determining the future estates of EMAS and your participation is vitally important to this process.

The Workshops will be taking place over 3 days in 3 different locations:

Monday 11 th March 2013 10.00 - 16.00	The Derbyshire Hotel Carter Lane East South Normanton Derbys DE55 2EH	01773 812000
Tuesday 12 th March 2013 10.00 - 16.00	Best Western Hotel Three Swans 21 High St Market Harborough LE16 7NJ Sat nav LE16 9AA	01858 466644
Wednesday 13 th March 2013 10.00 - 16.00	The White Hart Hotel Bailgate Lincoln LN1 3AR	01522 563293

Please check-in at Reception and you will be instructed as to where to go. Tea and coffee will be served from 9.30am with the Workshops starting promptly at 10.00am. A buffet lunch will also be provided.

2. AGENDA FOR THE DAY

Please see the agenda for the day below (this will be the same at each workshop):

AGENDA ITEM	TIME
Welcome – Tea & Coffee	9.30am
Setting the Scene – Executive intro + Explanation of process	10.00am
Explanation of Estate options + Q&A	10.30am
Explanation of criteria + Q&A	11.30am
Lunch	12.30pm
Criteria Weighting	1.00pm
Tea & Coffee	2.00pm
Option Scoring	2.15pm
Close	4.00pm

3. **BACKGROUND AND CONTEXT**

Why is the East Midlands Ambulance Service NHS Trust (EMAS) considering making changes to their estates structure?

EMAS have targets to meet which includes measuring the time it takes for an ambulance to reach a caller. We know that our performance needs to get better and we believe that the only way to achieve this is to change the way that we work.

EMAS estates structure is concerned with the number and location of ambulance reporting bases i.e. where the ambulances are based before they are called out. The set-up of the reporting bases influences our ability to reach a caller within our target times.

Many of our 66 existing ambulance stations (or reporting bases) have been in place for over 40 years or longer, built at a time when local councils were responsible for service provision. Since this time, the context of service provision has changed. As a result, the locations of our bases within the EMAS geographical area is not optimal for current service provision, when it is provided by EMAS on a regional basis. Our current buildings are in need of major repairs and refurbishment which is likely to cost about £12.5 million, and so now seems like a good time to consider a restructure.

Why have I been invited to attend a stakeholder workshop in order to access the options that are under consideration?

The programme titled 'Being the Best' went out to public consultation between 17th September to 17th December 2012. We have collated the feedback that was received on this consultation document. Now we are conducting a

detailed analysis of the options that are available, with a view to making a proposal to the Trust Board, by the end of March 2013.

What is the aim of the workshops?

The workshops will provide an opportunity to discuss the details, including the relative benefits, of each option being considered. We want to know what is important to our stakeholders. For example, do you feel that improving response times overall is more important than ensuring every area within EMAS borders receives a consistent/ equal service? Decisions such as these can be difficult to make, and we feel it is important to reflect stakeholder values when making these decisions. The 14 criteria that we will be asking you to provide a weighting for will be explained on the day but they are also defined within appendix A. You will independently be asked to weight each of the 14 criteria against each other. We will collate all attendees' responses together and this will produce a list of the 14 criteria in order of importance at a group level. After the weighting exercise we will know which of the 14 criteria matter most to you as a group, and which matters least.

Different estates options better meet different criteria, for example estates option 3 may place higher importance on staff wellbeing, whereas Option 1 may place higher value on co-location of estate. We would also like your opinion about which criteria are met by which estates option. Currently there are 5 estates options and these will be explained on the day but they are also described later on in this document and further explained in appendix B. We used an external company called Process Evolution, to model and analyse our data, and this has informed the 5 options that are available.

We will ask attendees to rate how well they think each estates option achieves each of the 14 criteria. You will be asked to use a 5 point scale to provide this rating, and this scale will be explained on the day but it is also included as appendix C. For example, you will be asked how you think estates option 1 will impact upon performance improvement. You have been provided with all the information that we have available within this information pack, in order to allow you to make an informed judgement. Although all of the information is provided in this pack, it will also be explained on the day, with an opportunity for you to ask any questions that you may have. However we would advise that you familiarise yourself with the criteria and estates options, as well as the 5 item scoring scale before attending the workshop.

How will the outcomes of each day be used?

You will be able to see the results of your own workshop on the day. So you will know how your own group weight the criteria, and you will also know your "favourite" estates option at a group level.

The data collected within your workshop will be collated with the data collected from the other two workshops and the opinion of each attendee will be given the same weighting. We will combine the qualitative data collected within the workshops with our financial data when deciding on the best option.

We will write to all of the stakeholders, who attend, with the outcomes of the workshops and the next steps that will be taken.

4. THE BENEFITS

The best option must aim to fulfil the following objectives:

- Provide suitable facilities in locations that support an improvement in operational performance, measured by response times.
- Provide facilities which support the efficient management, training and deployment of resources within each Division (North, South and Eastern), including appropriate provision for maintenance and 'make ready' support services.
- Provide facilities that support and motivate staff and enhance the public image of the Trust.
- Provide a range of flexible and sustainable accommodation that will support changes in demand, future Trust operational strategy and the Trust's environmental aspirations.

- Develop an investment programme that is deliverable within acceptable time and cost parameters, making best use of existing assets.

5. THE OPTIONS

Estate Options

The following are high level descriptions of each of the 5 options. If you would like more detail on how each of the options will work operationally and how they best meet the criteria, please see Appendix B.

1. **Option 0, the 'do nothing' option would involve making no changes to the configuration of estate, both the asset base and supporting services.** The option would involve clearance of backlog maintenance for current facilities to ensure a fit for purpose estate which is compliant with current NHS Standards. This clearance of backlog maintenance would be essential to ensure the ambulance service could continue to safely deliver services at current standards. The option would mean that all the current ambulance stations are retained.
2. **Option 0.a. the 'do nothing plus' option would involve making no changes to the configuration of estate, both asset base and supporting services. This option would comprise an additional resource investment in more ambulance vehicles and staff.** The option would involve clearance of backlog maintenance for current facilities to ensure a fit for purpose estate which is compliant with current NHS Standards. To ensure services continue to meet current standards and potential future changes in need, with increased effectiveness, additional ambulance vehicles and staff would be commissioned to strengthen the service. Under this option, services would continue to utilise the current estate with all current ambulance stations retained.
3. **Option 1, the 'do minimal' option** would involve undertaking the minimum amount of change necessary to ensure the ambulance service could continue to deliver at current service standards in a safer and more effective manner. The aim of this would be to minimise the changes to both the asset base and supporting services by retaining all the current stations, and introducing 118 new Community Ambulance Points ("CAPs") to improve performance and staff welfare while on standby. The option would cause limited disruption to business as usual and the workforce, as there would be no station closures or changes to travel times.
4. **Option 2, the 13 hubs plus 118 CAPs or 'hubs and spokes' option** involves the closure of the existing ambulance stations and the replacement of these stations with 13 hubs, strategically located across the regions with new, environmentally friendly, assets each with occupational health facilities. The aim of this would be to provide a modernised service, with a workforce that is able to respond flexibly to the changing future demands on the service. This option would continue to be supported by support services configured to deliver fleet services at the 13 strategically located Hubs, a central logistics team, make ready at every Hub and one major medical device engineering workshop with 3 mobile engineers.
5. **Option 3, of the '27 Hubs plus 108 CAPs' option** involves the creation of 27 hubs with 108 CAPs. The location of Hubs and CAPs would be identified through a detailed process mapping exercise which would take into account the performance measures for ambulance response times as well as staff travel time to Hubs from home, and travel time from Hubs to CAPs. This option would continue to be supported by support services configured to deliver fleet services at 11 strategically located Hubs, a central logistics team, make ready at every Hub and one major medical device engineering workshop with 3 mobile engineers.

Summary of options

Option 0

Do nothing + Backlog maintenance

Option 0a	Do nothing (Backlog maintenance) + Ambulances & Staff
Option 1	Do minimum (Backlog maintenance) + CAPs
Option 2	Hub Solution – 13 Hubs + 118 CAPs
Option 3	Hub Solution – 27 Hubs + 108 CAPs

Appendix A

The Criteria

Criteria	Things to consider
Performance Improvement	• EMAS' performance targets – e.g. 8 & 19 minutes response times
Equity of service access	• Equal service levels – both rural and urban
Efficient utilisation of resources	• Fuel usage • Vehicle down time • Staff utilisation • Stock utilisation
Innovation, modernisation and best practice	• Peer group comparators • Upgrade of estate • Support modernised practice
Patient safety and satisfaction	• EMAS targets e.g. Red1/Red2/Green1/Green2 • Complaints • Reduction in Serious Untoward Incidents (SUIs)
Co-location of estate	• 30 min Home to Hub • 30 min Hub to CAP • Other Health Services • Other Emergency services
Quality improvement	• Access to training facilities • Crew access to clinical quality managers and trainers • Timely maintenance of ambulances • Breakdowns (due to age profile of vehicles)
Operational effectiveness	• Support services e.g. Medical Devices Engineering, Fleet and Make Ready
Trust strategy / health economy strategy	• Conveyance to other providers • Regional resilience
Staff wellbeing	• Staff satisfaction • Sickness • Occupational health
Perception of the EMAS Brand	• New buildings – local settings • Patient complaints • Fresh/modern/high quality
Flexible to accommodate future demands	• Adaptable • Moveable • Scaleable
Environmental impact	• Reuse of existing buildings • Carbon footprint • Energy efficient buildings
Ease of implementation and impact on operations	• Complexity of decants • Length of time • Transition impact on performance

Gold Standard for Criteria

To support the use of the criteria, we have developed a set of 'Gold Standard' responses. These responses describe how the ideal estate option would meet these criteria. This provides a benchmark against which the different estates options can be tested.

Criteria	Desired Level of Performance
Performance Improvement	The estates option is designed to facilitate Operations in the improvement of EMAS R8/R19/G1/G2 performance. It also has scope to accommodate higher performance levels if required, for instance capacity of estates to accommodate sufficient staff and resource to deliver 80% R8 if required in the future.

Equity of service access	The estate option is designed so the service can meet R8/R19 targets across all the geographical areas of the East Midlands. In this estate option no one area is disadvantaged to the advantage of another. The service in both rural and urban areas meet R8/R19 targets. This performance is also dependent on effective organisation of vehicles and staff.
Patient safety and satisfaction	The estates option is designed to assist in improving R8/R19/G1/G2 performance; in so doing it will place a trained medical professional with patients earlier; therefore enabling them to commence treatment sooner thus potentially reducing mortality. The estate option will also have the capacity to improve support to frontline services. Through these improved facilities, staff will have better access to managers and training facilities thus enabling staff development and therefore enabling better patient care. Complaints and Serious Untoward Incidents (SUIs) will be reduced as improved support to frontline services will improve patient experience of the service. These improvements are also dependent on effective workforce organisation within the estates model.
Staff Wellbeing	The estate option provides facilities that contribute to staff wellbeing, for instance CAPs allow staff to rest more comfortably on breaks and between calls. The workplace is also safer for staff as buildings are improved or newly built to include higher security systems. In addition, the estate options for reporting bases will have capacity to improve ways of working for both support and frontline staff, through improved facilities and design such as purpose built vehicle preparation areas, onsite occupational health facilities, study rooms and fitness suites. This will improve staff satisfaction with their workplace environment. These factors will contribute to a range of other factors outside of estate programme that effect staff wellbeing.
Efficient utilisation of resources	The estates option has the capacity to improve ways of working in support and frontline services, through improved facilities and design. Improved ways of working will improve the utilisation of vehicles staff and resources, and reduce unnecessary downtime that could result in resource shortage. In addition, unnecessary costs associated with wasted resource, such as poor stock control on stations or over stocking of vehicles will be reduced. These improvements are also dependent on effective workforce organisation within the estates model.
Innovation and modernisation and best practice	The estates option is designed to assist improve EMAS performance so it can perform to or exceed the standard of peer group services. The estates option is innovative, in that it introduces new ideas, systems and methods of working for support services and front line staff for example vehicle preparation areas and systems that enable the rapid turnaround of vehicles. The option will also modernise the estates design and facilities, and has the potential to modernise estates & facilities management for example a centralised building management system that detects failing plant equipment to enable its replacement before complete failure.
Quality improvement	The estates option is designed so the crew have improved access to clinical quality managers and trainers, thus helping improve clinical care standards. It has the capacity and facilities for the ambulances and equipment to be maintained to the highest mechanical and IPC standard. There will consequently be a reduction in breakdowns. This improvement is also dependent on effective workforce organisation within the estates model.
Operational effectiveness	The estates option has the capacity to improve the effectiveness of support services, such as Fleet, Medical Device Engineering and Make Ready, through improved facilities and design. This will improve the operational effectiveness of support services, and consequently frontline services. This improvement is also dependent on effective co-ordination between operations and the workforce within the estates model.
Trust strategy/health economy strategy	The estates option has the capacity for the service to meet the aims set out in the Trust's 'Being the Best' strategy, through improved facilities and design. The service can consequently operate effectively with, and improve the performance of, other health facilities in the East Midlands. This is achieved by staff who are better equipped to maintain and develop their skill and knowledge levels and by providing a responsive timely service to the public that meets or exceeds performance targets. The service also contributes to regional resilience.
Co-location of estate	The estates option is designed to meet requirements approved by the Trust Board: no vehicle has to travel more than 30 minutes from a hub to a CAP, and no staff member living within EMAS borders has to travel more than thirty minutes to their nearest hub.

	The estates option is also designed so facilities can be closely located to Accident and Emergency depts. Community Ambulance Posts are designed to be flexible to meet changing demands therefore a significant proportion are co-located with other Health or Emergency Services; those that are not are modular in design and capable of being re-located.
Perception of the EMAS Brand	The estate option installs new EMAS buildings in local settings that are visible to the public. The estate will have a uniform appearance identifying it with EMAS and provision of a modern service image; that of a high quality service.
Flexible to accommodate future demands	The estates option is designed to be flexible to meet changing future demand on the service. This means buildings in the estates option are adaptable, moveable and scalable to accommodate future demands.
Environmental impact	The estates option will have minimal environmental impact, both in initial implementation and the long term running of the service. The ideal option may differ in this case; if the estate option involves a high number of new buildings the initial environmental impact will be high, however new more energy efficient buildings will produce less carbon over their lifetime. The estate option will be designed so there is a reduction in energy and utility utilisation, and thus the carbon footprint produced by the service.
Ease of implementation and impact on operations	Ideally, implementation of the estates option will have little negative impact on the performance or support to frontline services. This will vary a little on whether the estate option involves the re-housing of services and re-scheduling of vehicle deployment.

Appendix B

Estates

Definitions

Performance standards:

- This is the National Ambulance Service targets set by Government and Commissions.
- R1 or R8 (Red1 or Red8) this requires that for immediately life threatening calls a trained person must be with a patient in 75% of all calls within 8 minutes, from time of call to arrival at the patient's location.
- R2 or R19 (Red2 or Red19) this requires that for immediately life threatening calls a vehicle and crew capable of transporting a patient must be with a patient in 95% of all calls within 19 minutes, from time of call to arrival at the patient's location.

Performance at Trust level, EMAS wide or overall:

- This is the collective reporting of emergency performance against the above performance standards, the data is aggregated to cover the whole of the EMAS area of:- Lincolnshire, Nottinghamshire, Derbyshire, Leicestershire, Rutland and Northamptonshire.

Performance at Divisional, County, PCT or local level:

- This is performance data as described above that describes the performance in a specific area(s).

Demand Sensitive shift system:

- This is a rostering system that aims to match staffing levels to emergency call demand levels.

Double Crew Ambulance (DCA):

- Standard Ambulance crewed by qualified ambulance staff.

Fast Response Vehicle (FRV):

- Single paramedic in a car responding primarily to immediately life threatening call and secondarily other emergency calls.

Facilitated standby:

- A location where crews can be sent to wait for emergency calls that has basic facilities e.g. toilets and somewhere to get a hot drink.

Shorelines:

- All new ambulance vehicles are capable of maintaining the vehicle equipment and medical device batteries via a mains power supply fed to the vehicle via a shoreline (110v mains power to vehicle).

Option 0: Do Nothing

Outline

This option entails the retention of all 65 existing ambulance stations with no new or changed support services. This estate option would not improve performance as there would be no change to the current service. At present the service is only meeting the R1 and R2 targets by a small margin, even when additional resources (private providers) are counted within the performance data. The data for EMAS last year demonstrated that performance was 74.9% R1 & 93.4% R2. This performance also varies across the East Midland region with response times in rural areas longer than those in urban, and in some PCT areas performance is noticeably poorer (ranging from 50.3% to 79.4% for R1). The new demand sensitive shift system would be enacted on the current stations and would bring some benefit in performance. With both human and fleet resources distributed across 65 locations the present issues of managing resources would continue i.e. ensuring that every crew had a serviceable vehicle at the commencement of every shift and time lost in travelling to fleet workshops by operational crews would continue to be a challenge taking time from front line duties.

This option would not change staff travelling time to/from work, nor would staff benefit from a facilitated standby point i.e. the proposed Community Ambulance Posts (CAPs). Staff would continue to be deployed to standby points as they are now which could be a layby or on street parking area.

The areas covered in this section are:

- Estates
- Site and Site security
- Parking
- Signing on/off for duty and vehicle allocation
- Managerial contact
- Locker space and facilities
- Make ready systems and facilities
- Fleet system and facilities
- Medical Device Engineering (MDE) systems and equipment library
- Logistical support
- Deployment to CAP and meal arrangements
- Management of deployment to CAPs
- Staff development
- Welfare facilities at Hubs
- Information Technology

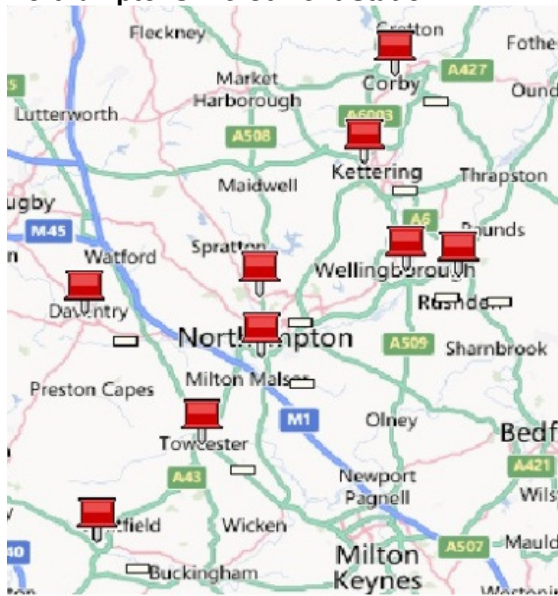
The locations of all current ambulance stations are presented in the maps below by county.

- Derbyshire (17)
- Nottinghamshire (12)
- Leicestershire (10)
- Northamptonshire (9)
- Lincolnshire (18)

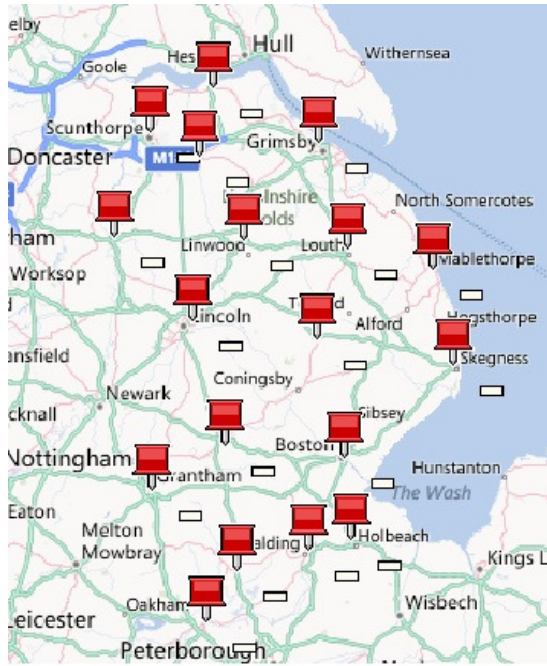
Leicestershire Current Stations



Northamptonshire Current Station



Lincolnshire Current Stations



Estate Back Log maintenance costs by County

The estates back log maintenance will still need to be addressed at a cost of circa £12.5m this will be phased over five years, upon completion of these works the estate would be in compliance with NHS condition B. However additional monies would need to be invested to bring about carbon reduction in line with NHS targets.

The estate was assessed under six facets, and the costs are presented below.

Back Log Maintenance by Division

Division	Condition	Functional Suitability	Space Utilisation	Quality	Statutory	Environmental	Total Six Facet
Derbyshire	£2,344,953	£72,467	£269,250	£202,514	£741,184	£23,600	£3,653,971
Leicestershire	£1,588,392	£80,000	£265,500	£348,221	£386,084	£0	£2,517,139
Lincolnshire	£4,029,440	£81,484	£99,000	£121,250	£796,126	£0	£4,599,886
Northamptonshire	£735,618	£33,600	£196,550	£61,801	£174,396	£0	£1,201,765
Nottinghamshire	£1,456,457	£34,500	£562,000	£136,500	£295,407	£0	£2,484,954
Trust Totals	£10,154,860	£ 302,051	£1,392,300	£870,286	£ 2,393,197	£ 23,600	£ 14,457,715
							£ 14,457,715
					Works undertaken		£ 2,216,970
					Current total		£ 12,240,745

Site and Site security

In this option stations would continue in their present locations with no change to sites, site security will not alter with the exception of access to the buildings themselves. Access to buildings would be standardised to the current electronic access system used in Nottinghamshire, Derbyshire, Leicestershire and parts of Northamptonshire.

Loss of a site for whatever reason would not impact on service provision as resources could be moved to the nearest alternate ambulance station, therefore enhanced security is not felt to be necessary.

Parking

Parking at the current Ambulance Stations would be unchanged with open access for staff with no security gates. There would be no need to increase the number of parking spaces.

Signing on/off for duty and vehicle allocation

The current system of a paper based signing on/off and vehicle allocation would continue as at the present time unless it was upgraded to an electronic system as a separate business case.

Access to Managers

Staff would also continue to have limited access to managers more so under the new rank structure which reduces the number of operational managers.

Locker space & Facilities

There would be no change to locker space or station facilities unless this was as a special case of need for specific stations. The current station facilities provide basic lockers and locker room space for all staff. Every station has kitchen and dining areas available to staff and these are fitted out with self-catering type services. Stations have areas for dirty utility, linen and general stores.

Fleets System & Facilities

Fleet Services would continue to be provided from the existing three workshops in, Derbyshire, Leicestershire and Northamptonshire with the external provider for fleet service continuing in Lincolnshire. This arrangement especially in Nottinghamshire and Derbyshire results in time lost by operational crews and operational managers taking vehicles to/from

the fleet workshops in Alfreton. In Lincolnshire the external provider retains vehicles for longer than the in-house service due to conflicting priorities lack of access to ambulance specialist and obtaining spare parts. Due the distribution of resources across 65 locations removing vehicles out of the system would not be possible without adding further pressure on operational services, thus making the desired reduction of the fleet's age profile more challenging to achieve. Deep clean for DCA and FRV would continue to be provided as with the current system.

Make Ready

Operational front line clinical staff will continue as they do now to check their own vehicles for roadworthiness, consumable stock levels and undertake medical device user tests prior to the vehicle being ready for service, however as is the case now if pressed to attend an emergency the crew will attend prior to checking the vehicle's stock and equipment, a practice that has potential for clinical risk. This is not effective use of operational staff time as it potentially delays activation to emergencies.

Medical Device Engineering (MDE) systems and equipment library

Medical Device Engineering is provided from a central workshops based at Alfreton plus use a mobile workshop to provide services to Divisions. The team of three engineers are supported by Royal Derby Hospitals medical Engineering Dept. for technical support and relief cover in the event of leave and sickness.

The present systems for managing medical devices is varied between Divisions and results to poor visibility of medical devices, adding to the possibility of devices being out of service date again adding to clinical risk.

This service would not change under this model however additional tracking systems for medical devices may be introduced under a separate business case.

Logistical support

Logistical support for the procurement and supply of medical and other consumables is presently managed centrally from Alfreton. All goods are purchased and shipped into Alfreton logistics where a minimum stock is maintained for resilience purposes; the goods are dispatched to stations from this central facility upon orders being placed by staff to top up their local store on stations.

Under this option stock management would continue to be managed locally by the Team Leaders –thus taking time away from operational services- as it is now unless new systems were introduced to make its control more efficient.

Staff development

Clinical education would continue to be delivered as it is now via three educational training centres with limited access to the educational staff on stations.

Welfare facilities at Hubs

Under this option station facilities remain as they are now, there would be no designated occupational health room on stations nor would there be fitness suites or study rooms unless they already exist in the current building.

Information Technology

All stations have NHS internet connection for access to the EMAS, website, email system and service and personal network folders. Any upgrading of this system would be under a separate business case.

Capacity for Expansion and Service Flexibility

Due to the loss of the patient transport contract during 2012 there is room for expansion for approximately 270 vehicles and 700 staff should these figures be required. However, within this model without the use of Community Ambulance Stations there is no flexibility for facilitated standby locations as the Trust would continue to use the current standby plans and facilities.

Current EMAS staffing

EMAS Front Line Staff Head Count													
	Ambulance Staff Band 4	Ambulance Staff Band 5	Ambulance Staff Band 6	Ambulance Staff Band 7	Ambulance Staff Non AfC	Ancillary Band 1	Ancillary Band 2	Healthcare Assistant Band 2	Healthcare Assistant Band 3	Healthcare Assistant Band 4	Maintenance Band 3	Modern Apprentice (NVQ)	Grand Total
A&E Head Count													
Derbys				5									5
Alfreton	5	4	1						4				14
Ashbourne	2	7	1			1			2				13
Bakewell	4	4	1										9
Belper	4	5	1						2				12
Buxton	8	16	2			1			9				36
Chesterfield	14	23	5						12				54
Eckington	3	10	1						1				15
Heath	4	18	6			1			5				34
Ilkeston	6	14	2			1			6				29
Long Eaton (S)	1	8							3				12
Matlock	3	7	1			1			3				15
Mickleover	7	21	6			2			7				43
Newmills	4	7	1						1				13
Raynesway	20	30	7			1			13				71
Ripley	5	11	6			1			1				24
Swadlincote	5	13	2			1			6				27
Willow Row	5	16	3			1			6				31
Events (Hucknall)	3	5	1						1				10
HART (Mansfield)	33	7	1								1		42

	Ambulance Staff Band 4	Ambulance Staff Band 5	Ambulance Staff Band 6	Ambulance Staff Band 7	Ambulance Staff Non AfC	Ancillary Band 1	Ancillary Band 2	Healthcare Assistant Band 2	Healthcare Assistant Band 3	Healthcare Assistant Band 4	Maintenance Band 3	Modern Apprentice (NVQ)	Grand Total
Leics				4									4
Coalville	4	17	5			1			3				30
Goodwood	16	35	5			1			11				68
Gorsehill	13	43	4						29				89
Hinckley	5	13	2			1			3				24
Loughborough	11	22	3		1	1			1				39
Lutterworth	5	4	1						1				11
Melton Mowbray	4	11	2										17
Mkt Harborough	7	10	1			1			3				22
Narborough	5	21	2						6				34
Oakham	2	8	2			1			2				15
Syston	1												1
Lincs				9								1	10
Bartn on Humber	2	4							2				8
Boston	11	17	2						8				38
Bourne	3	7	3						9				22
Brigg	3	11							2				16
Cross O Cliffe						1							1
Gainsborough	7	11	1			1			3				23
Grantham	5	10	5			1			4				25
Grimsby	6	28	7			1			14				56
Holbeach	2	8	1						1				12
Horncastle	2	6							5				13
Lincoln	13	36	11		1	2			8				71
Louth	7	15	5			1			1				29
Mablethorpe	4	3							3				10
Market Rasen	2	8	1			1			2				14
Scunthorpe	8	30	5			1			7				51
Skegness	6	22	3			1			7				39
Sleaford	5	12	2						9				28
Spalding	4	11	3						4				22
Stamford	1	5	1						2				9

	Ambulance Staff Band 4	Ambulance Staff Band 5	Ambulance Staff Band 6	Ambulance Staff Band 7	Ambulance Staff Non AfC	Ancillary Band 1	Ancillary Band 2	Healthcare Assistant Band 2	Healthcare Assistant Band 3	Healthcare Assistant Band 4	Maintenance Band 3	Modern Apprentice (NVQ)	Grand Total
Northants				4									4
Brackley	2	7	1			1			2				13
Corby	2	22	2			1			1				28
Daventry	3	11	7			1			1				23
Kettering	6	18	9			1			6				40
Mereway	6	29	3			1			9				48
Northamptn	2	21	5						5				33
Rushden	2	5	1						2				10
Towcester	2	6	1			1			2				12
Wellingboro	4	22	4			1			6				37
Notts				7			1						8
Arnold	9	7	3			2			3				24
Beechdale	23	36	6			1			3				69
Carlton	8	13	2			2			5				30
Eastwood	6	4	2			1							13
Hucknall	2	14	3			2			5				26
Kings Mill	29	33	7			1			15				85
Newark	5	16	5			1			10				37
Retford	6	14	2			1			2				25
Stapleford	9	11	5			2			9				36
Wilford	4	14	7			1			4				30
Worksop	8	12	6			1			3				30
Wst Bridgeford	5	11	2						5				23
PTS Head Count													
Cross O Cliffe										1			1
Grimsby									17	1			18
Scunthorpe								6	21	1			28
Kings Mill									2				2
Queens Medical									7				7
Stapleford										1			1

Option 0a: Do Nothing – add more ambulances and staff

In this option all of the factors applicable within option 0 above will apply apart from the addition of further staff and vehicles.

Process Evolution have identified that an additional 148 staff including relief staff; and 20 DCA and 9 FRV vehicles will enable the Trust to achieve R1 and R2 at the current five Divisions level. Should the Trust be prepared to accept performance at a Trust wide level the number of additional staff falls to 66. This analysis has been modelled on 2011/12 data will require an uplift proportionate to 2012/13 outturn increase in responses.

The additional staff and vehicles would be predominantly dispersed in Lincolnshire 127 staff & 18 DCA & 6 FRV; with a small contingent in Derbyshire 12 staff & 1 DCA & 2 FRV; and Northamptonshire 9 staff & 1 DCA & 1 FRV. The existing estates would be capable of absorbing these additional staff and vehicles with no structural changes. However, the additional vehicle activity will require a further three mechanics who would be based in the Lincolnshire Division.

Option 1: Do Minimum – 118 CAPs

Outline

This option entails the retention of all 65 existing ambulance stations and the introduction of Community Ambulance Post (CAPs) with some changes to support services.

This estate option would achieve performance targets at Trust and Divisional Level (3 Divisions) for R1 and at Divisional Level for R2 in Notts/Derby and Leicester/Northants. Lincolnshire R2 performance would improve marginally but would not achieve the 95% standard by 5.9% (see tables below) this modelling uses all EMAS resource and assume current staffing levels, a 2% maximum on day VOR and that all vehicles are prepared and ready at the commencement of every shift.

At present the service is only meeting the R1 and R2 targets by a small margin, even when additional resources (private providers) are counted within the performance data. The data for EMAS last year (2011/12) demonstrated that performance was 74.9% R1 & 93.4% R2 at a Trust level. This performance also varies across the East Midlands region with response times in rural areas longer than those in urban, and in some PCT areas performance is noticeably poorer. The new demand sensitive shift system would be enacted on the current stations and would bring some benefit in performance.

Staff travelling time to work would not be affected in this model as all staff would continue to report to their current station, this meets the Trust target that no staff member will have their travelling time extended beyond 30 minutes for those members of staff living within EMAS borders. Staff who already travel for more than 30 minutes can apply for a station transfer should they wish to do so and there is a station closer to their home address.

Performance options 1 ,2 & 3				
Derby/Notts				
	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	75.3%	95.4%	85.3%	83.7%
Current Estate, Optimised CAPs (option1)	79.6%	96.5%	88.7%	87.1%
13 hub solution	80.5%	96.9%	89.5%	88.7%
27 hub solution	80.6%	97.0%	89.5%	88.2%
Change from Current				
	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs (option1)	4.3%	1.1%	3.4%	3.4%
13 hub solution	5.2%	1.5%	4.2%	5.0%
27 hub solution	5.3%	1.6%	4.2%	4.5%
Lincs				
	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	74.0%	88.5%	73.8%	81.7%
Current Estate, Optimised CAPs (option1)	75.2%	89.1%	74.6%	81.9%
13 hub solution	76.0%	90.0%	76.9%	83.0%
27 hub solution	75.8%	89.6%	77.8%	83.9%
Change from Current				
	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs (option1)	1.2%	0.6%	0.8%	0.2%
13 hub solution	2.0%	1.5%	3.1%	1.3%
27 hub solution	1.8%	1.1%	4.0%	2.2%
Leics/Northants				
	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	75.0%	94.4%	82.0%	80.7%
Current Estate, Optimised CAPs (option1)	77.9%	95.3%	87.3%	86.2%
13 hub solution	78.4%	95.4%	87.0%	86.3%
27 hub solution	78.7%	95.4%	88.1%	87.0%
Change from Current				
	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs (option1)	2.9%	0.9%	5.3%	5.5%
13 hub solution	3.4%	1.0%	5.0%	5.6%
27 hub solution	3.7%	1.0%	6.1%	6.3%
Overall				
	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	74.9%	93.4%	81.5%	82.2%
Current Estate, Optimised CAPs (option1)	78.0%	94.4%	84.9%	85.6%
13 hub solution	78.7%	94.8%	85.7%	86.5%
27 hub solution	78.8%	94.7%	86.3%	86.8%
Change from Current				
	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs (option1)	3.1%	0.9%	3.4%	3.3%
13 hub solution	3.9%	1.3%	4.2%	4.3%
27 hub solution	3.9%	1.3%	4.8%	4.5%

Community Ambulance Posts (CAPs)

The 118 CAPs would be located strategically around the Trust as identified by Process Evolution modelling; the locations for the CAPs are the same for all options described below. No CAP will be more than 20 minutes drive from the existing ambulance stations; this is within the Trust target drive time of 30 minutes.

A Community Ambulance Posts will be equipped with a fully functioning kitchenette including fridge, 2 microwave ovens, kettle, washing facilities; dining area with TV, at selected CAPs there will be internet access for staff, along with toilet facilities and dirty utility. Externally there will be a vehicle parking area equipped with shorelines for two vehicles. CAPs will have domestic services provided as required.

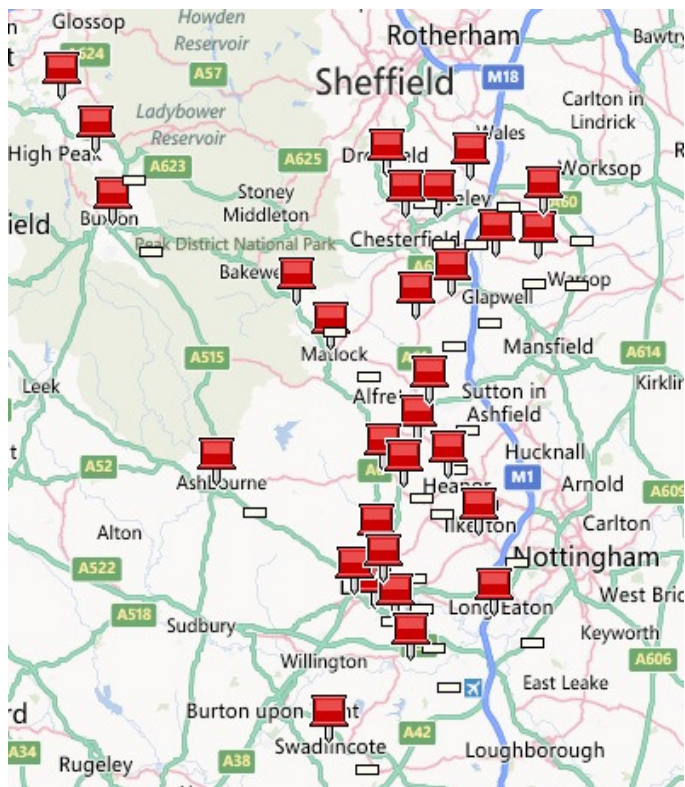
CAPs may be facilitated in non EMAS premises such as Fire Stations or other health premises or be a modular building sited on a leased plot of land.

Staff will require the ability to transport food on their vehicles as they may be operating from a Community Ambulance Post for a full shift or may move between CAPs and/or stations during the shift therefore may be allocated a meal break at a location other than their shift start location. In the short term this may require a portable device such as a powered cool box or lunch bag with cool blocks, as vehicles are developed in future years a built in food container powered by the vehicle systems will need to be explored.

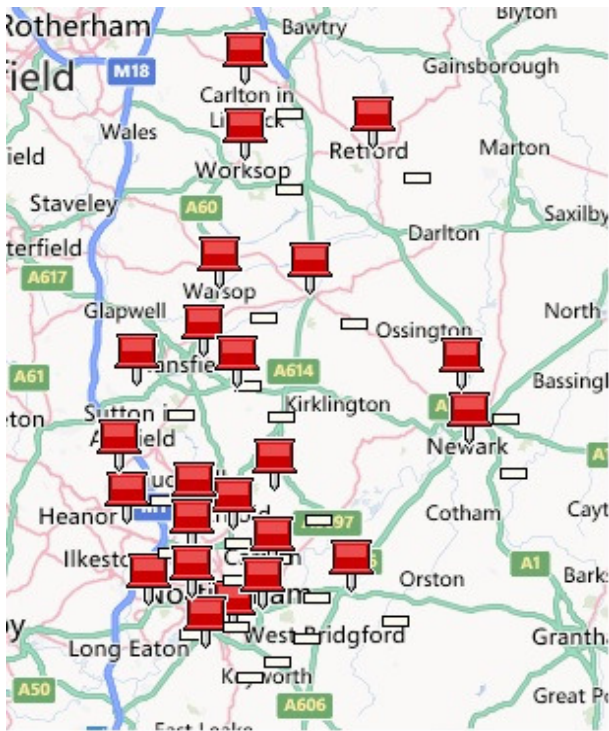
Current standing operational procedures such as meal-breaks; will need to be amended to reflect this change in practice.

Cap Locations

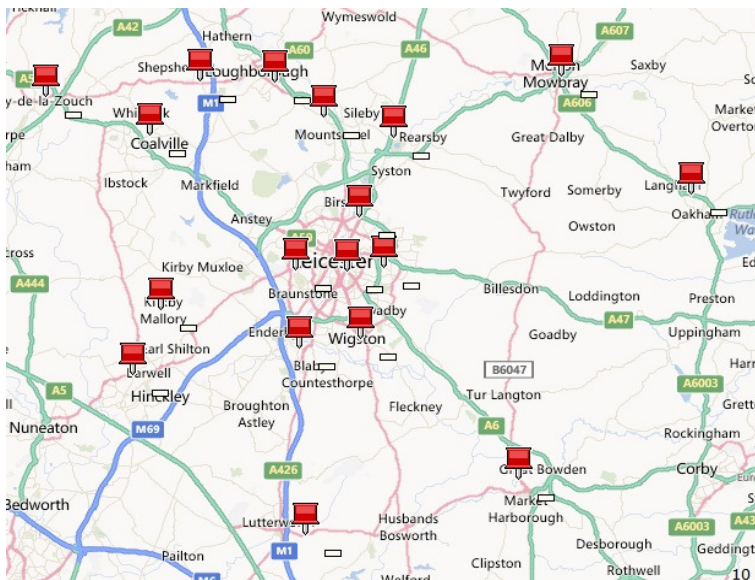
Derbyshire CAPS (29)



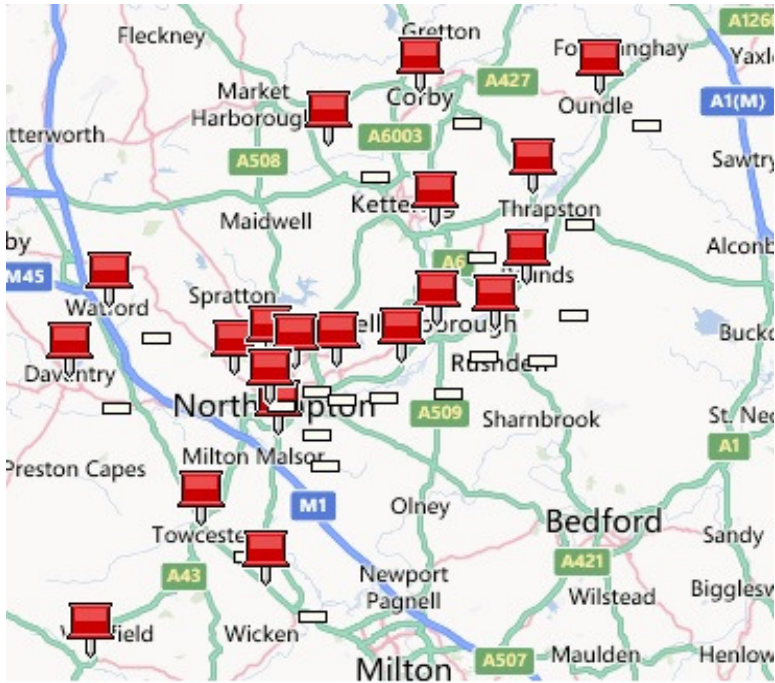
Nottinghamshire CAPs (23)



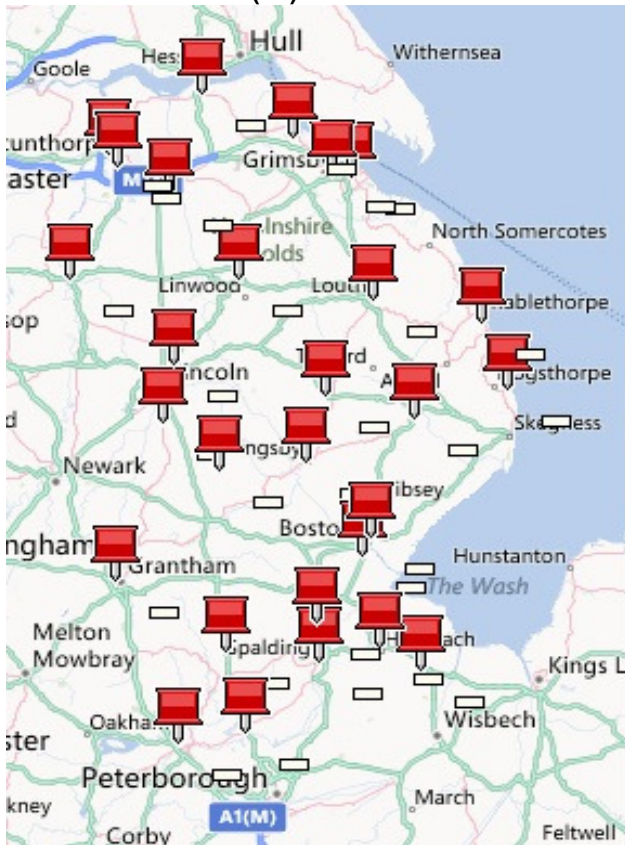
Leicestershire CAPs (18)



Northamptonshire CAPs (20)



Lincolnshire CAPs (28)



Estates Back Log maintenance costs by County

The estates back log maintenance will still need to be addressed at a cost of circa £12.5m this will be phased over five years, upon completion of these works the estate would be in compliance with NHS condition B. However additional monies would need to be invested to bring about carbon reduction in line with NHS targets.

The estate was assessed under six facets, and the costs are presented below.

Division	Condition	Functional Suitability	Space Utilisation	Quality	Statutory	Environmental	Total Six Facet
Derbyshire	£2,344,953	£72,467	£269,250	£202,514	£741,184	£23,600	£3,653,971
Leicestershire	£1,588,392	£80,000	£265,500	£348,221	£386,084	£0	£2,517,139
Lincolnshire	£4,029,440	£81,484	£99,000	£121,250	£796,126	£0	£4,599,886
Northamptonshire	£735,618	£33,600	£196,550	£61,801	£174,396	£0	£1,201,765
Nottinghamshire	£1,456,457	£34,500	£562,000	£136,500	£295,407	£0	£2,484,954
Trust Totals	£10,154,860	£302,051	£1,392,300	£870,286	£2,393,197	£23,600	£14,457,715
							£14,457,715
					Works undertaken		£2,216,970
					Current total		£12,240,745

With both human and fleet resources distributed across 65 locations the present issues of managing resources would continue as described above this would therefore prevent the performance targets being achieved as described within this option. It would therefore be necessary to make some changes to Make Ready and Fleet Services to achieve the targets with the retention of the existing estate.

Fleets Services

Fleet Services would continue to be provided from the existing three workshops in Derbyshire, Leicestershire and Northamptonshire with the external provider continuing in Lincolnshire. However to eliminate the need for operational staff to move vehicles –a considerable time commitment- to and from fleet services a team of six drivers and three small vans would be employed across the current workshops and within Lincolnshire. These staff would ensure that vehicles are moved promptly between stations and fleet services and would also deal with road side breakdowns, this will minimise lost time through vehicle issues.

Due to the distribution of resources across 65 locations; removing vehicles out of the system would be challenging if avoiding further pressure on operational services is to be achieved. However a small reduction may be possible under this model because of the improved efficiency within the fleet infrastructure; thus making the desired reduction of the fleet's age profile more achievable than under option 0.

Make Ready

Vehicles will be cleaned and prepared for service by locally based make ready staff. On stations where vehicle numbers are low; staff would be employed on a part time basis with hours of operation according to shift patterns and vehicle numbers. On larger stations make ready staff will be employed full time and provide relief cover for the smaller stations thus ensuring continuity of service.

The make ready teams will operate within the existing ambulance station facilities with only limited essential modifications. The make ready staff will have access to an equipment library so that any defective or out of service date medical devices can be swapped off the vehicles for attention by the Medical Device Engineers. Vehicle wash areas will be external in some of the locations as it is now. Clinical and domestic waste would continue to be managed as it is currently.

Vehicles will be presented to the make ready staff/teams at the end of every shift to enable them to be prepared for the next shift or deep cleaned as part of the scheduled cleaning plan. Any vehicle defects detected during checking will be immediately reported to the fleet team for correction. If a medical device is found to be defective or due service it will be exchanged for a replacement device from the equipment library and Medical Device Engineering notified. Once the vehicle has been completely checked, cleaned and prepared for the next shift a handover document will be completed, signed and

left in the vehicle as evidence of serviceability. At the end of each shift the crew will complete the handover sheet and return it to the Make Ready staff/team. The crew will still be responsible for checking the five legal compliance items i.e. Tyres, lights, horn, wipers and brakes. A vehicle requiring consumables or other items of equipment during the shift can call at any Station for the required consumables.

The timing of deep cleans will be coordinated with Vehicle Resource Centre (VRC) to ensure they coincide with other planned maintenance schedules to minimise vehicle down time. Make ready staff in addition to their decontamination cleaning will be trained to provide a range of low level vehicle repairs e.g. change bulbs, tighten loose fitting etc. this will reduce the need for out of hours fleet services.

The make ready staff could also be trained to provide support at major incidents by driving support vehicles, erecting tents/shelters and maintaining equipment levels.

The introduction of make ready staff at all ambulance stations enable the Trust's target of having vehicle prepared by specialist teams rather than operational staff.

Access to Managers and Clinical Support

Clinical education would continue to be delivered as it is now via three educational training centres with limited access to educational staff on stations. Staff would also continue to have limited access to managers more so should the new rank structure be introduced which reduces the number of operational managers.

Capacity for Expansion and Service Flexibility

Due to the loss of the patient Transport Contract during 2012 there is room for expansion for approximately 270 vehicles and 700 staff should these figures be required.

The introduction of CAPs allows for flexibility in the future; in the case of a co-location premises with either the Fire or other Health Services the lease agreement can be terminated to enable a move to a more favourable location, or in the case of a modular building this could be re-sited wherever suitable land can be obtained.

Option 2: Hub Solution - 13 Hubs and 118 CAPs

This option requires the closure of the majority of the Trust's current ambulance stations and the building of new Hub stations along with introducing 118 Community Ambulance Posts. In Leicestershire the Trust would retain and refurbish the Rosings as a Divisional HQ, in Lincolnshire Cross O'Cliffe would be retained as Emergency Operations Centre (EOC) and Divisional HQ. In Nottinghamshire Carlton Station would be refurbished as a CAP and as a facility for ICT and other services currently located in Beechdale. Within the counties of Nottinghamshire, Derbyshire, Leicestershire and Northamptonshire there would be two large purpose built hubs in each; while within Lincolnshire there would be five purpose built hubs giving a total of 13 Hubs (see maps below). This option brings together large numbers of staff in good quality premises that are well facilitated with occupational health, fitness suite, educational space, and cultural diversity space, along with purpose built fleet and make ready service areas.

Performance options 1 ,2 & 3				
Derby/Notts	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	75.3%	95.4%	85.3%	83.7%
Current Estate, Optimised CAPs	79.6%	96.5%	88.7%	87.1%
13 hub solution (option2)	80.5%	96.9%	89.5%	88.7%
27 hub solution	80.6%	97.0%	89.5%	88.2%
Change from Current	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs	4.3%	1.1%	3.4%	3.4%
13 hub solution (option2)	5.2%	1.5%	4.2%	5.0%
27 hub solution	5.3%	1.6%	4.2%	4.5%
Lincs	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	74.0%	88.5%	73.8%	81.7%
Current Estate, Optimised CAPs	75.2%	89.1%	74.6%	81.9%
13 hub solution (option2)	76.0%	90.0%	76.9%	83.0%
27 hub solution	75.8%	89.6%	77.8%	83.9%
Change from Current	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs	1.2%	0.6%	0.8%	0.2%
13 hub solution (option2)	2.0%	1.5%	3.1%	1.3%
27 hub solution	1.8%	1.1%	4.0%	2.2%
Leics/Northants	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	75.0%	94.4%	82.0%	80.7%
Current Estate, Optimised CAPs	77.9%	95.3%	87.3%	86.2%
13 hub solution (option2)	78.4%	95.4%	87.0%	86.3%
27 hub solution	78.7%	95.4%	88.1%	87.0%
Change from Current	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs	2.9%	0.9%	5.3%	5.5%
13 hub solution (option2)	3.4%	1.0%	5.0%	5.6%
27 hub solution	3.7%	1.0%	6.1%	6.3%
Overall	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	74.9%	93.4%	81.5%	82.2%
Current Estate, Optimised CAPs	78.0%	94.4%	84.9%	85.6%
13 hub solution (option2)	78.7%	94.8%	85.7%	86.5%
27 hub solution	78.8%	94.7%	86.3%	86.8%
Change from Current	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs	3.1%	0.9%	3.4%	3.3%
13 hub solution (option2)	3.9%	1.3%	4.2%	4.3%
27 hub solution	3.9%	1.3%	4.8%	4.5%

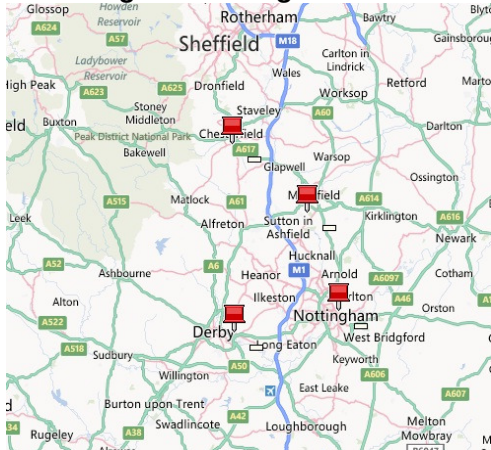
The following description is in no specific order of importance, but aims to describe the day to day operations within Hubs and CAPs for 'Hub and Spoke' model that differ from existing practice or proposed 'do minimum options' (Options 0, 0.a. and 1).

The areas covered in this section are:

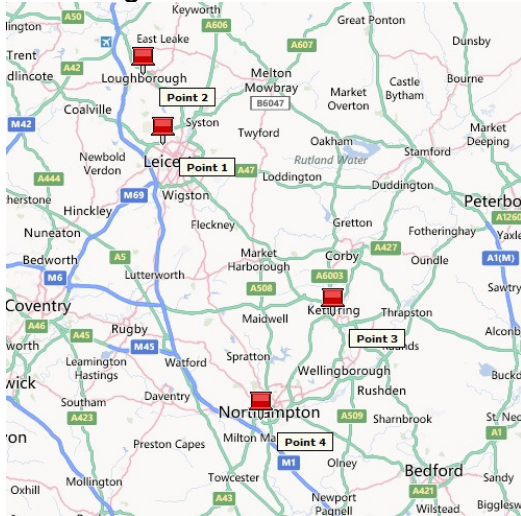
- Site and Site security
- Parking
- Signing on/off for duty and vehicle allocation
- Managerial contact
- Locker space and facilities
- Make ready systems and facilities
- Fleet system and facilities
- Medical Device Engineering (MDE) systems and equipment library
- Logistical support
- Deployment to CAP and meal arrangements
- Management of deployment to CAPs
- Staff development
- Welfare facilities at Hubs
- Information Technology

13 Hub Locations

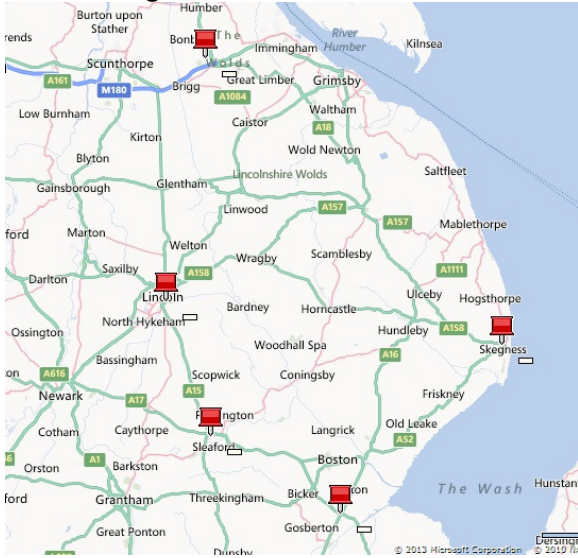
North Region: Nottinghamshire and Derbyshire



South Region: Leicestershire and Northamptonshire



Eastern Region: Lincolnshire



Site and Site Security

Hubs ('HUB') will be located near to A&E units or principle Hospitals within a locality, the aim of this is to reduce time from A&E to HUB; in the event that the crew have a vehicle or equipment issue they will be able to report back to the HUB for a vehicle change over or replenish stock or equipment. An added benefit of being close to the A&E unit is to minimise the risk of unplanned end of shift overtime.

HUB sites will have a good level of security provided by CCTV; a 2 meter palisade fence around the perimeter and gated access and egress from the site controlled by access fobs. The fencing will be supplemented by trees and shrubs to provide site screening and to act as a windbreak; this will also contribute to the NHS forest and reduce our carbon footprint by offsetting. Access to the buildings will be via access fob with some internal control over movement between parts of the building; store rooms for the equipment library and drugs for example will have additional access controls.

For emergency vehicles exiting the site barriers will be automatic opening.

Vehicle re-fuelling will be within the site with sufficient stock to maintain 21 days resilience and managed through an electronic recording system to improve security and reporting.

Parking

The site will provide sufficient parking for staff and vehicles. Ambulance vehicles will have canopies facilitating covered but not garaged parking, all ambulance parking bays will have shorelines suspended from the canopies. Within the grounds adjacent to the parking there will be a training area for simulated incident management.

Throughout the site there will be adequate grit bins and waste receptacles.

Signing on/off for duty and vehicle allocation

Staff will sign on/off for duty electronically using a fob and PIN system; at the time of signing on for duty their vehicle and deployment point will be identified; along with new/unread notices and emails these will be identified on the screen of the interactive notice board enabling and sign posting staff to keep up to date with important documents; once the staff member has finished viewing their updates they will log off the screen. This system will facilitate electronic timesheet management.

Managerial contact

The goal of enabling staff to have regular contact with their line manager as a minimum at the start and end of every shift and improved access to educational staff and enhanced educational facilities will be fulfilled in this model. The new hubs will offer meeting/training rooms, study room, computer access room and cultural diversity room, thus facilitating an environment that encourages staff development.

Locker space and facilities

Locker rooms would be access controlled to only those staff based at that locality. All staff will have a personal locker that is of sufficient size to contain spare uniform and Personal Protective Equipment (PPE).

There will be changing, showers and toilet facilities outside of the locker areas.

All staff areas will be designed and built with IPC compliance as a primary consideration to ensure high standards of hygiene and minimal risk of transfer of infection.

Make ready system and facilities

Vehicles will be cleaned and prepared for service by locally based make ready teams. The make ready teams will have purpose designed work areas that enable efficient management of the make ready process with wet and dry cleaning bays, that have bespoke cleaning facilities, re-stocking systems, equipment library and waste management systems. Make ready services would be provided at all HUBs.

Vehicles will be presented to the make ready teams at the end of every shift to enable them to be prepared for the next shift or deep cleaned as part of the scheduled cleaning plan. Any vehicle defects detected during checking will be immediately reported to the fleet team for correction. If a medical device is found to be defective or due service it will be exchanged for a replacement device from the equipment library and Medical Device Engineering notified. Once the vehicle has been completely checked, cleaned and prepared for the next shift a handover document will be completed, signed and left in the vehicle as evidence of serviceability. At the end of each shift the crew will complete the handover sheet and return it to the Make Ready team. The crew will still be responsible for checking the five legal compliance items i.e. Tyres, lights, horn, wipers and brakes. A vehicle requiring consumables or other items of equipment during the shift can call at any HUB make ready area to request from the make ready staff the necessary items; as most major A&E dept would have a HUB located nearby, no vehicle should be without an item of equipment for long except in cases where they are required to transport patients out of county and experience a problem with equipment.

At locations where there are limited vehicle numbers, make ready staff would operate on an hours as required basis; therefore resilience would be provided by the HUB operating 24/7 and adjacent to an A&E. The timing of deep cleans will be coordinated with Vehicle Resource Centre (VRC) to ensure they coincide with other planned maintenance schedules to minimise vehicle down time. Make ready staff will be trained to provide a range of low level vehicle repairs e.g. change bulbs, tighten loose fitting etc. this will reduce the need for out of hours fleet services.

The rota disposition of vehicles will be influential on the make ready staffing levels; the more staggered the shifts the less staff intensity there is and the easier it becomes to prepare vehicles and improves the likelihood of on-day spare capacity.

The make ready staff could also be trained to provide support at major incidents by driving support vehicles, erecting tents/shelters and maintaining equipment levels.

Fleet system and facilities

Fleet services will be based at 13 locations across the Trust, giving a geographically wide spread service while still being of an effective operating unit. Body repair and warranty work will continue as now to be dealt with by external service

providers. The Fleet team would operate 10 hour shifts per day; seven days per week. Cover out of hours would be provided by on-call and the current recovery contract arrangements with our external provider.

Coordination via Vehicle Resource Centre with make ready and medical device engineering is essential to ensure that deep cleaning, routine planned servicing of the vehicle and medical equipment is managed effectively with minimum vehicle down.

Movement of vehicles between fleet and locations that do not have a fleet facility will be undertaken by 2 dedicated drivers using 1 van; likewise in the event of vehicle breakdown a driver will take a made ready vehicle to the location of the breakdown to enable the crew to continue with normal duties while the driver waits for vehicle recovery.

A mobile mechanic service will enhance the resilience; this will reduce unnecessary transport for minor repairs that require a mechanic's skill level.

13 main workshop locations by Region:

Region:	Workshop Locations:
North Region	Nottingham
	Mansfield
	Derby
	Chesterfield
South Region	Gorse Hill
	Loughborough
	Northampton
	Kettering
Eastern Region	Lincoln
	Algarkirk
	Elsham
	Sleaford
	Skegness

Medical Device Engineering (MDE) systems and equipment library

Medical Device engineering will have a centrally based workshop in the Derby Hub where the engineers will operate from. The engineers will attend the HUBs equipment libraries regularly to ensure that all equipment requiring servicing is attended to. Annual vehicle pipeline pressure testing and servicing will be coordinated with VRC and fleet services to ensure vehicle down time is minimal. Due to the use of equipment libraries located with the Make Ready teams no vehicle should be off the road due to a non-serviced medical device. Medical device failure will be dealt with promptly by the make ready team swapping equipment out of the library on to the vehicle. By introducing the make ready teams as managers of the equipment library tracking of medical devices will improve thus compliance to planned service dates and maintenance of the device register. Adjacent to each library there will be a small workshop suitable for MDE, ICT staff requiring a repair area and fleet staff dealing with electronic vehicle equipment or radio systems.

Logistical support

Logistical services (consumables and medicines) will be provided centrally as in the current model; however there will be some direct deliveries to locations where it is more practical or economically advantageous. Other services such as document archive management, movement of paper Patient Report Forms (PRF) and recycling will also continue as with the current model.

The make ready team will as they remove goods from the stock rooms bar code read the goods used thus providing an indication of stock requirements for the central logistics team to make up stock replenishment orders. Deliveries would be on a just in time principle ensuring resilience is maintained at the Hubs, but also a central capability to support unplanned or seasonal demands.

All make ready and stores areas will be designed and built with IPC compliance as a primary consideration to ensure minimal risk of transfer of infection.

Deployment to CAPs and meal arrangements

Hubs will have fully fitted kitchens and mess rooms with TV, public access Wi-Fi and EMAS internet access to accommodate operational requirements.

Community Ambulance Posts will be equipped with fully functioning kitchenette including fridge, 2 microwave ovens, kettle, and washing facilities. The CAP will have toilet facilities, dirty utility and a dining area with TV, at selected CAPs there will be internet access for staff. Externally there will be a vehicle parking area equipped with shorelines for two vehicles. CAPs will have domestic services provided as required.

CAPs may be facilitated in non EMAS premises such as Fire Stations or be a modular building sited on a leased plot of land.

Staff will require the ability to transport food on their vehicles as they may be operating from a Community Ambulance Post for a full shift or may move between CAPs and/or HUBs during the shift therefore may be allocated a meal break at a location other than their shift start location. In the short term this may require a portable device such as a powered cool box or lunch bag with cool blocks, as vehicles are developed in future years a built in food container powered by the vehicle systems will need to be explored.

Current standing operational procedures will need to be amended to reflect this change in practice.

A number of the rural Community Ambulance Posts in the 13 Hub model are more than 30 minutes -in a small number of cases over an hour- from the Hub locations, this is outside of the Trust target for travelling time to CAPs from Hubs.

Management of deployment to CAPs

Deployment to CAPs from Hubs will be undertaken on a priority basis determined by the demand requirements on the day and managed by the system status plan. However, performance will be monitored both rural and urban to ensure that equality of service is maintained. There is a risk that as crews deploy out to the CAPs from the urban located Hubs sites that they are diverted to attend an emergency and therefore do not reach their intended CAP, this could result in a delay while an alternate crew is deployed to the CAP to fulfil the cover requirement.

Staff development

The HUBs will facilitate improved access for staff to personal development by providing a computer room where staff can log on and undertake eLearning packages, or undertake online research. The provision of a study room will offer a quiet space where staff can read traditional text based study material. HUBs will also have a meeting room that can be used for facilitator led education in a more formal setting. These facilities coupled with improved access to Team Leaders, Clinical Team Mentors & Locality Quality Managers will enable Personal Development Reviews to be undertaken in a favourable atmosphere of supportive education.

Welfare facilities at HUBs

In addition to the staff development facilities above there will also be dedicated Occupational Health room in each of the HUBs; this will enable staff to be seen more locally thus aiding staff return to work by early intervention. The addition of a fitness suite at HUBs should encourage staff to undertake regular exercise improving fitness and therefore assisting in reducing sickness due to musculoskeletal injury. There is also an opportunity to be explored; the Trust's occupational health provider could use the occupational health room in combination with the fitness suite to provide improved access to physiotherapy sessions thus potentially reducing return to work time following injury. An additional facility is a cultural diversity room that could be used by staff for prayer, quiet reflection or as a resource room where knowledge can be improved about different cultures.

Information Technology

Information technology is a key interdependence across the whole system; the use of technology should reduce the dependence on paper based systems. For example every site should have a scanning system that enables paper based mail (e.g. PALS letters, sick certificate) that arrive at the HUBs to be scanned and forwarded to the appropriate department. Paper based PRFs could be scanned by a trained administrator who would enter the PRF on the clinical audit system locally enabling the audit team to process the data centrally in a timely fashion. The introduction of web based reporting systems should also aid in the reduction of paper and improve efficiency of reporting. Fleet management will be managed by a coordinated system that links, VRC with make ready, fleet, MDE and EOC.

Fuel issues will be controlled electronically feeding information directly into the fleet and finance systems.

Option 3: Hub Solution - 27 Hubs and 108 CAPs

This option requires the closure of the majority of the Trust's current ambulance stations and the building of new Hub stations along with introducing 108 Community Ambulance Posts. In Leicestershire the Trust would retain and refurbish the Rosings as a Divisional HQ and Gorse Hill as one of the Divisional fleet locations, in Lincolnshire Cross O'Cliffe would be retained as Emergency Operations Centre (EOC) and Divisional HQ. In Nottinghamshire Carlton Station would be refurbished as a CAP and as a facility for ICT and other services currently located in Beechdale. Other existing ambulance stations could be refurbished to become HUBs, within the counties of Nottinghamshire, Derbyshire, Leicestershire and Northamptonshire there would be two large purpose built hubs in each that include fleet; while within Lincolnshire there would be three purpose built hubs also housing fleet services giving a total of 11 large Hubs (see list below). These 11 HUBs would be supported by a further 16 smaller Hubs that would have make ready and all other service as found in the large HUBs except fleet services. This option brings together larger numbers of staff than in the current 65 ambulance station arrangement; but not in the numbers found in the 13 HUB option. The buildings will be new or refurbished good quality premises that are well facilitated with occupational health, fitness suite, educational space, and cultural diversity space, along with purpose built fleet (11 sites) and make ready service areas.

Performance options 1 ,2 & 3				
Derby/Notts	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	75.3%	95.4%	85.3%	83.7%
Current Estate, Optimised CAPs	79.6%	96.5%	88.7%	87.1%
13 hub solution	80.5%	96.9%	89.5%	88.7%
27 hub solution (option 3)	80.6%	97.0%	89.5%	88.2%
Change from Current	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs	4.3%	1.1%	3.4%	3.4%
13 hub solution	5.2%	1.5%	4.2%	5.0%
27 hub solution (option 3)	5.3%	1.6%	4.2%	4.5%
Lincs	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	74.0%	88.5%	73.8%	81.7%
Current Estate, Optimised CAPs	75.2%	89.1%	74.6%	81.9%
13 hub solution	76.0%	90.0%	76.9%	83.0%
27 hub solution (option 3)	75.8%	89.6%	77.8%	83.9%
Change from Current	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs	1.2%	0.6%	0.8%	0.2%
13 hub solution	2.0%	1.5%	3.1%	1.3%
27 hub solution (option 3)	1.8%	1.1%	4.0%	2.2%
Leics/Northants	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	75.0%	94.4%	82.0%	80.7%
Current Estate, Optimised CAPs	77.9%	95.3%	87.3%	86.2%
13 hub solution	78.4%	95.4%	87.0%	86.3%
27 hub solution (option 3)	78.7%	95.4%	88.1%	87.0%
Change from Current	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs	2.9%	0.9%	5.3%	5.5%
13 hub solution	3.4%	1.0%	5.0%	5.6%
27 hub solution (option 3)	3.7%	1.0%	6.1%	6.3%
Overall	Red 8	Red 19	Green 1	Green 2
Current (Baseline) Model	74.9%	93.4%	81.5%	82.2%
Current Estate, Optimised CAPs	78.0%	94.4%	84.9%	85.6%
13 hub solution	78.7%	94.8%	85.7%	86.5%
27 hub solution (option 3)	78.8%	94.7%	86.3%	86.8%
Change from Current	Red 8	Red 19	Green 1	Green 2
Current Estate, Optimised CAPs	3.1%	0.9%	3.4%	3.3%
13 hub solution	3.9%	1.3%	4.2%	4.3%
27 hub solution (option 3)	3.9%	1.3%	4.8%	4.5%

The following description is in no specific order of importance, but aims to describe the day to day operations within Hubs and CAPs for 'Hub and Spoke' model that differ from existing practice or proposed 'do minimum options' (Options 0, 0.a. and 1).

The areas covered in this section are:

- Site and Site security
- Parking
- Signing on/off for duty and vehicle allocation
- Managerial contact
- Locker space and facilities
- Make ready systems and facilities
- Fleet system and facilities
- Medical Device Engineering (MDE) systems and equipment library
- Logistical support
- Deployment to CAP and meal arrangements
- Management of deployment to CAPs
- Staff development
- Welfare facilities at Hubs
- Information Technology

27 Hub Locations

North Region: Nottinghamshire and Derbyshire



South Region: Leicestershire and Northamptonshire



Eastern Region: Lincolnshire



Site and Site Security

Larger Hubs ('HUB') will be located near to A&E units or principle Hospitals within a locality, the aim of this is to reduce time from A&E to HUB; in the event that the crew have a vehicle or equipment issue they will be able to report back to the HUB

for a vehicle change over or replenish stock or equipment. An added benefit of being close to the A&E unit is to minimise the risk of unplanned end of shift overtime. Inevitably with 27 Hubs some will be located more rurally and therefore not close to principle A&E depts.

New built HUB sites will have a good level of security provided by CCTV; a 2 meter palisade fence around the perimeter and gated access and egress from the site controlled by access fobs. The fencing will be supplemented by trees and shrubs to provide site screening and to act as a windbreak; this will also contribute to the NHS forest and reduce our carbon footprint by offsetting. Refurbished sites may not have the land available for such security and planting plans.

Access to the buildings will be via access fob with some internal control over movement between parts of the building; store rooms for the equipment library and drugs for example will have additional access controls.

For emergency vehicles exiting the site barriers will be automatic opening.

Vehicle re-fuelling will be within the site with sufficient stock to maintain 21 days resilience and managed through an electronic recording system to improve security and reporting.

Parking

The site will provide sufficient parking for staff and vehicles. On new built sites ambulance vehicles will have canopies facilitating covered but not garaged parking; on refurbished sites internal parking may continue to save demolition costs, all ambulance parking bays will have suspended shorelines. Within the grounds of the new built Hubs adjacent to the parking there will be a training area for simulated incident management.

Throughout the site there will be adequate grit bins and waste receptacles.

Signing on/off for duty and vehicle allocation

Staff will sign on/off for duty electronically using a fob and PIN system; at the time of signing on for duty their vehicle and deployment point will be identified; along with new/unread notices and emails these will be identified on the screen of the interactive notice board enabling and sign posting staff to keep up to date with important documents; once the staff member has finished viewing their updates they will log off the screen. This system will facilitate electronic timesheet management.

Managerial contact

The goal of enabling staff to have regular contact with their line manager as a minimum at the start and end of every shift will be fulfilled in 27 Hub model, using a combination of both face to face and video conferencing systems. In the 27 Hub model the following bases will be clustered for managerial purposes:

Clusters	Number of ops staff	Number of vehicles	DCAs	FRVs	Spare DCAs	Spare FRVs	PTS vehicles	Total Vehicles	Number of make ready staff	Number of mechanics	Number of CAPs
Chesterfield & Dove Holes	156	34	16	5	7	2	0	30	8	4	15
Derby & Ashbourne	213	37	20	6	9	2	0	37	9	3	9
Mansfield, Worksop & Newark	238	58	23	10	9	4	0	46	13	3	18
Nottingham	221	39	17	9	6	3	0	35	9	5	8
Leicester, Ashby, Loughborough & Hinckley	354	82	35	14	13	5	0	67	19	5	14
Melton & Grantham	101	15	4	3	2	2	0	11	3	3	2
Northampton & Brackley	129	27	10	6	4	2	0	22	6	4	11
Kettering, Corby & Market Deeping	159	34	13	8	5	4	0	30	8	3	12
Skegness, Sleaford & Boston	162	37	16	4	6	2	0	28	9	3	8
Lincoln, Louth & Gainsborough	179	39	12	8	4	4	0	28	9	4	6
Grimsby & Scunthorpe	206	59	12	7	4	3	30	56	13	5	5
	2118	462	178	80	69	33	30	390	105	42	108

Red = Fleet stations

Locker space and facilities

Locker rooms would be access controlled to only those staff based at that locality. All staff will have a personal locker that is of sufficient size to contain spare uniform and Personal Protective Equipment (PPE).

In new built HUBs there will be changing, showers and toilet facilities outside of the locker areas.

All staff areas will be designed and built with IPC compliance as a primary consideration to ensure minimal risk of transfer of infection.

Make ready system and facilities

Vehicles will be cleaned and prepared for service by locally based make ready teams. The make ready teams will have purpose designed work areas that enable efficient management of the make ready process with wet and dry cleaning bays, that have bespoke cleaning facilities, re-stocking systems, equipment library and waste management systems. Make ready services would be provided at all HUBs. The facilities vary between new built and refurbished premises.

Vehicles will be presented to the make ready teams at the end of every shift to enable them to be prepared for the next shift or deep cleaned as part of the scheduled cleaning plan. On smaller sites vehicles may be prepared during a limited number of hours each day leaving prepared spare vehicles available if required. The make ready staff at smaller locations would be employed part time working prior to shift change times and on full days when a deep clean is scheduled.

Any vehicle defects detected during checking will be immediately reported to the fleet team for correction. If a medical device is found to be defective or due service it will be exchanged for a replacement device from the equipment library and Medical Device Engineering notified. Once the vehicle has been completely checked, cleaned and prepared for the next shift a handover document will be completed, signed and left in the vehicle as evidence of serviceability. At the end of each shift the crew will complete the handover sheet and return it to the Make Ready team. The crew will still be responsible for checking the five legal compliance items i.e. Tyres, lights, horn, wipers and brakes. A vehicle requiring consumables or other items of equipment during the shift can call at any HUB make ready area to request the make ready staff for the necessary items; as most major A&E dept would have a HUB located nearby, no vehicle should be without an item of equipment for long except in cases where they are required to transport patients out of county and experience a problem with equipment.

At locations where there are limited vehicle numbers, make ready staff would operate on an hours as required basis; therefore resilience would be provided by the HUB operating 24/7 and adjacent to an A&E. The timing of deep cleans will be coordinated with Vehicle Resource Centre (VRC) to ensure they coincide with other planned maintenance schedules to minimise vehicle down time. Make ready staff will be trained to provide a range of low level vehicle repairs e.g. change bulbs, tighten loose fitting etc. this will reduce the need for out of hours fleet services.

The rota disposition of vehicles will be influential on the make ready staffing levels; the more staggered the shifts the less staff intensity there is and the easier it becomes to prepare vehicles and improves the likelihood of on-day spare capacity.

The make ready staff could also be trained to provide support at major incidents by driving support vehicles, erecting tents/shelters and maintaining equipment levels.

Fleet system and facilities

Fleet services will be based at 11 locations across the Trust; giving a geographically wide spread service. Body repair and warranty work will continue as now to be dealt with by external service providers. The Fleet team would operate 10 hour shifts per day; seven days per week. Cover out of hours would be provided by on-call and the current recovery contract arrangements with our external provider.

Coordination via Vehicle Resource Centre with make ready and medical Device engineering is essential to ensure that deep cleaning, routine planned servicing of the vehicle and medical equipment is managed effectively with minimum vehicle down.

Movement of vehicles between fleet and locations that do not have a fleet facility will be undertaken by 4 dedicated drivers using 2 vans; likewise in the event of vehicle breakdown a driver will take a made ready vehicle to the location of the breakdown to enable the crew to continue with normal duties while the driver waits for vehicle recovery.

A mobile mechanic service will enhance the resilience; these mobile mechanics will have six ramps based at strategic locations other than the main 11 workshops this will reduce unnecessary transport for minor repairs that require a mechanic's skill level.

11 main workshop locations by Region:

Region:	Workshop Locations:
North Region	Nottingham
	Mansfield
	Derby
	Chesterfield
South Region	Leicester
	Grantham
	Northampton
	Kettering
Eastern Region	Lincoln
	Boston
	Scunthorpe

Medical Device Engineering (MDE) systems and equipment library

Medical Device engineering will have a centrally based workshop in the Derby Hub where the engineers will operate from. The engineers will attend the locations with equipment libraries regularly to ensure that all equipment requiring servicing is attended to. Annual vehicle pipeline pressure testing and servicing will be coordinated with VRC and fleet services to ensure vehicle down time is minimal. Due to the use of equipment libraries located with the Make Ready teams no vehicle should be off the road due to a non-serviced medical device. Medical device failure will be dealt with promptly by the make ready team swapping equipment out of the library on to the vehicle. By introducing the make ready teams as managers of the equipment library tracking of medical devices will improve thus compliance to planned service dates and maintenance of the device register. Adjacent to each library there will be a small workshop suitable for MDE, ICT staff requiring a repair area and fleet staff dealing with electronic vehicle equipment or radio systems. However, in some of the Hubs that are refurbished locations space may be limited thus requiring the MDE to work from their mobile workshop.

Logistical support

Logistical services (consumables and medicines) will be provided centrally for all estate options (as in the current model), however there will be some direct deliveries to locations where it is more practical or economically advantageous. Other services such as document archive management, movement of paper Patient Report Forms (PRF) and recycling will also continue as with the current model.

The make ready team will as they remove goods from the stock rooms bar code read the goods used thus providing an indication of stock requirements for the central logistics team to make up stock replenishment orders. Deliveries would be on a just in time principle ensuring resilience is maintained at the Hubs, but also a central capability to support unplanned or seasonal demands.

All make ready and stores areas will be designed and built with IPC compliance as a primary consideration to ensure minimal risk of transfer of infection.

Deployment to CAP and meal arrangements

Hubs will have fully fitted kitchens and mess rooms to accommodate operational requirements.

Community Ambulance Posts will be equipped with fully functioning kitchenette including fridge, 2 microwave ovens, kettle, and washing facilities. The CAP will have toilet facilities, dirty utility and a dining area with TV, at selected CAPs there will be internet access for staff. Externally there will be a vehicle parking area equipped with shorelines for two vehicles. CAPs will have domestic services provided as required.

CAPs may be facilitated in non EMAS premises such as Fire Stations or be a modular building sited on a leased plot of land.

Staff will require the ability to transport food on their vehicles as they may be operating from a Community Ambulance Post for a full shift or may move between CAPs and/or HUBs during the shift therefore may be allocated a meal break at a location other than their shift start location. In the short term this may require a portable device such as a powered cool box or lunch bag with cool blocks, as vehicles are developed in future years a built in food container powered by the vehicle systems will need to be explored.

Current standing operational procedures will need to be amended to reflect this change in practice.

None of the Community Ambulance Posts in the 27 Hub model are more than 30 minutes drive time to reach them from the Hub locations, this achieves the Trust target for travelling time to CAPS from Hubs.

Management of deployment to CAPs

Deployment to CAPs from Hubs will be undertaken on a priority basis determined by the demand requirements on the day and managed by the system status plan. However, performance will be monitored both rural and urban to ensure that equality of service is maintained. There is a risk that as crews deploy out to the CAPS from the urban located Hubs sites that they are diverted to attend an emergency and therefore do not reach their intended CAP, this could result in a delay while an alternate crew is deployed to the CAP to fulfil the cover requirement.

Staff development

The HUBs will facilitate improved access for staff to personal development by providing a computer room where staff can log on and undertake eLearning packages, or undertake online research. The provision of a study room will offer a quiet space where staff can read traditional text based study material. HUBs will also have a meeting room that can be used for facilitator led education in a more formal setting. These facilities coupled with improved access to Team Leaders, Clinical Team Mentors & Locality Quality Managers will enable Personal Development Reviews to be undertaken in a favourable atmosphere of supportive education.

Welfare facilities at HUBs

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Appendix C

Option Scoring

Verdict	Score
Will not meet the criteria and may be detrimental	0
Unlikely to meet the criteria	1
Unsure whether it will meet the criteria	2
Will meet the criteria	3
Will meet the criteria and improve upon it	4