



**London Ambulance Service NHS Trust
London 2012 Olympic and Paralympic Games
Post-Games Report**

Forewords

The summer of 2012 saw London as the focus of the world's media. The 2012 Games combined with the Queen's Diamond Jubilee meant attention was on our city as never before. Testing times but ultimately incredibly rewarding and a source of immense pride to Londoners and all who helped deliver such remarkable and memorable events. This report sets out to share the detail of the planning, some of the challenges we faced and the lessons we learned. The London Ambulance Service (LAS), already the busiest free ambulance service in the world, planned its expanded service delivery over 7 years with the clear commitment that the enormous extra workload and responsibilities for 2012 would not compromise normal service delivery to our resident and commuter populations. It is a testament to all our staff and to colleagues from around the country that the capital's residents and all its visitors received the same high quality of service as at any other time. The world was watching and we showed that London can be justly proud of its ambulance service, its people and the excellent care they gave.

Richard Hunt, Chair, London Ambulance Service NHS Trust

The London 2012 Olympic and Paralympic Games provided the English ambulance service with a unique opportunity to show the world the vital and high-quality service we provide to our patients. It was a platform for the ambulance service to showcase its planning and organisational skills, culminating in the highest level of service provision in summer 2012. I would like to thank and congratulate all staff and senior officers - from the London Ambulance Service and other ambulance trusts - for the vital role they played in ensuring a successful and safe 2012 Games.

The 2012 Games placed an international spotlight on our ability to mobilise the required resource, competence and skill necessary to support a world-class event. They provided the impetus to succeed, working towards a common goal alongside colleagues from all our ambulance trusts, the voluntary sector, and the public and private sector organisations. Intensive planning and preparation led to successful delivery. I commend this report to all involved in similar endeavours.

Dr Anthony Marsh, Chair, Association of Ambulance Chief Executives (AACE)

Being part of the 2012 Games was a once in a lifetime opportunity and was an exceptionally proud moment for the ambulance services in England, as was our participation in Her Majesty the Queen's Diamond Jubilee earlier in the year.

This Report is a culmination of the learning gained from the London Ambulance Service's London 2012 Olympic and Paralympic Programme from inception through to delivery. It captures the hard work and contributions of numerous people engaged since London was awarded the 2012 Games in 2005. Furthermore, the national assurance process closure report is contained, providing an overview of the work conducted nationally to validate the planning undertaken by the LAS and other ambulance services in preparation for the 2012 Games. AACE is proud to have been a part of delivering an exceptional event and hopes this report is found to be candid, helpful and informative.

Martin Flaherty, Managing Director, AACE

Previously: Deputy Chief Executive/Deputy Chief Ambulance Officer, LAS; Senior Responsible Owner, London 2012 Olympic and Paralympic Programme

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Thank you to all ambulance service staff and senior leaders who contributed to the 2012 Olympic and Paralympic Games and who helped to ensure that the event was such a huge success

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1. Executive Summary

1.1 Introduction

London was awarded the 2012 Olympic and Paralympic Games on 6 July 2007. The London Ambulance Service NHS Trust (LAS) supported London's 2012 Games Bid prior to its award, and planned and delivered high quality emergency medical services to the Games and the rest of London in summer 2012. The LAS also contributed to the safety and security of the 2012 Games operating within a multi-agency environment both before and during Games-time.

To ensure the organisation was fully and robustly prepared, an Olympic Games Planning Office was formed in 2007 and a comprehensive five-year programme initiated: the London 2012 Olympic and Paralympic Programme. The Office of Government Commerce Projects in a Controlled Environment 2 (PRINCE2) and Managing Successful Programmes (MSP) methodologies were used.

1.2 Objectives

- To deliver an appropriate level of care for all the local communities and Olympic and Paralympic related patient populations during the 2012 Games
- To be an active partner in the planning and delivery of a safe and secure 2012 Games

The overarching requirement on the Organising Committee of the Olympic Games in relation to medical provision (as cited in the International Olympic Committee (IOC) Olympic Games Medical Services, Technical Manual, November 2005) was to:-

'ensure that the level of medical services to the community is not compromised during the Games-time. Capacity issues must be addressed during the planning phases to ensure optimal use of community-based health resources and appropriate level of care for the community and Olympic related patient populations.'

This also underpinned the LAS's 2012 Games Programme.

1.3 Key products/deliverables

The key products planned for and delivered during the Olympic Programme were:-

- Command and control structure: internal and external
- Operational and contingency plans with corresponding testing and exercise programme
- 220 pre-planned aid (PPA) staff from English ambulance services accredited and trained and a comparable number of LAS staff
- 2012 Games training programme: operational; event management; communications delivered to 2012 Games cohort (500+)
- Olympic Deployment Centre (ODC) including catering and transport to venues
- Information Management and Technology infrastructure: Event Control Room (mandate was in part 2012 Games); Forward Command Points in all 2012 Games venues; ODC; Olympic Information Unit
- 66 fully equipped additional ambulances
- Accommodation for PPA staff including catering, welfare and transport to/from ODC

1.4 Games-time Operations

The LAS, supported by other English ambulance trusts, delivered emergency medical services to spectators and athletes in 2012 Games venues within river, central, park and urban zones. Simultaneously, a high level of service delivery was achieved across London.

The LAS successfully fulfilled its role as a key partner in delivering a safe and secure 2012 Games. During Games-time, the LAS had significant input into the 'Health' response to the National Olympic Co-ordination Centre working with other ambulance services to provide a 24-hour-a-day Health response to national Command, Control and Co-ordination. This involved representation on all safety and security issues whilst working with the Department of Health (DH) 2012 Games Response Cell and the National Ambulance Coordination Centre.

1.5 Recommendations

The recommendations included in the report are outlined below. In addition, lessons learned are included throughout the report in relation to the specific section being considered.

Anything which should be done differently:

- Increase the number of pre-Games opportunities to work alongside the Organising Committee to embed cross-organisational working practices
- (LAS) address more pro-actively the issues of the funding arrangements being overly complex and the system-wide difficulties and delays in decision making
- Focus within the programme on ensuring the detailed work for maintaining core service delivery undertaken early and prioritised within the core service management workstreams

London:

- Ensure comprehensive planning undertaken informed by operational and planning staff
- Where appropriate, consider use of PPA staff to enhance cross-trust working and to swell resources when necessary
- Ensure early engagement and common understanding by stakeholders of the remit and requirements of those responsible for operational delivery

Olympic and Paralympic hosts:

- Ensure comprehensive planning undertaken informed by operational and planning staff; maintain proactive leadership role despite potential delay in engagement with Organising Committee due to differing timescales
- Adopt ODC model to ensure standardised deployment practices utilised
- Delivery of the Games does not differ that significantly between cities due to the International Olympic Committee (IOC) host city contract; therefore, regardless of cultural and service model differences, learning from previous host cities experience is useful
- Focused effort on workforce in terms of recruitment, communication, training and rostering is essential to maintain staff interest and enthusiasm throughout planning and delivery
- Build flexibility into planning and anticipate changes in Organising Committee requirements: up to and beyond Games commencement

1.6 Key Legacy Benefits

The legacy impact of the LAS's planning for and participation in the 2012 Games is far-reaching and extensive. The key legacy benefits identified are outlined below:-

PPA: relationships with other trusts have been enhanced significantly during the 2012 Games. English ambulance services successfully demonstrated their ability to competently provide

emergency medical services together. This has enhanced the services' combined capacity to respond to planned and unplanned events in the future.

Multi-agency working: relationships were enhanced considerably with other emergency services, health services and Local Authorities throughout the planning and delivery stages of the 2012 Games. This strengthening will improve future multi-agency working providing an effective model for partnership-working for both short and sustained periods of activity.

Training delivery: this was commended by PPA and LAS staff, who felt that they embarked upon their respective Games-time roles fully prepared and well-trained. This will be of benefit to staff in their business-as-usual posts at their respective trusts.

Event Control: although this was not part of the LAS's Olympic Programme, its development was necessary for the 2012 Games. It was therefore an important enabler and its production was a key interdependency. This fully tested facility is now available for the management of all planned and unplanned major events in the capital.

Venue design: LAS input was made into all the new venue designs for the 2012 Games with public health and emergency service requirements factored into planning. This provides a legacy benefit for those venues that will be remaining in use.

Staff morale: feedback from staff about their participation in the 2012 Games was almost without exception positive. LAS and PPA staff embraced the opportunity to be involved in a once in a lifetime event and approached it with professionalism and commitment.

Commissioning: once an approach to commissioning had been determined and a framework agreed, the relationship between the LAS and its commissioners, in addition to NHS London and the DH, was proactive and positive. Funding requirements were outlined, challenged, refined and ultimately met.

Working differently: non-operational support staff and managers were given the opportunity to undertake new roles in different working environments; they proved themselves highly motivated and capable, enhancing organisational capacity for the future.

2. Introduction

London was awarded the 2012 Olympic and Paralympic Games on 6 July 2007.

London is the capital of the United Kingdom and its largest metropolitan area. It has a population of just over 8 million and covers an area of 1,570 square kilometres.

The majority of the 2012 Games events were held in London, using new, temporary and pre-existing venues:-

Venue	Sport
Earls Court - existing	Volleyball
Excel Exhibition Centre - existing	Boccia, Judo, Powerlifting, Table Tennis, Sitting Volleyball, Wheelchair Fencing, Fencing, Boxing, Taekwondo, Weightlifting and Wrestling
Greenwich Park - temporary	Equestrianism, Modern Pentathlon
Hampton Court Palace temporary	Cycling Time Trial
Horse Guards Parade - temporary	Beach Volleyball
Hyde Park - temporary	Marathon Swim and Triathlon
Lords Cricket Ground - existing	Olympic Archery
Olympic Park – new and temporary	Athletics, Aquatics, Basketball, Track and BMX cycling, Hockey, Handball, Wheelchair Tennis, Basketball and Rugby and Goalball, Modern Pentathlon
O2 Arena (Olympic name – North Greenwich Arena)	Basketball, Artistic Gymnastics, Trampoline
The Mall - temporary	Race Walks, start and finish of the Olympic Road Cycling Races
Wembley Arena - existing	Badminton and Rhythmic Gymnastics
Wembley Stadium - existing	Football
Royal Artillery Barracks - temporary	Shooting and Paralympic Archery

Although the International Olympic Committee (IOC) awarded the 2012 Games to London, nine other venues were identified in other parts of the country:-

Venue	Sport
Box Hill, Surrey	Road Cycle Races
Dorney Lake, Berkshire (Olympic Name – Eton Dorney)	Rowing and Flat Water Canoe
Hadleigh Farm, Essex	Mountain Biking
Hampton Park, Glasgow	Football
Lee Valley White Water Centre, Hertfordshire	Canoe Slalom
Millennium Stadium, Cardiff	Football
Old Trafford	Football
St James' Park, Newcastle	Football
Ricoh Arena, Coventry (Olympic name City of Coventry Arena)	Football
Weymouth and Portland, Dorset	Sailing

2.1 Health Service Context

The award of the 2012 Games to London was founded on a Bid document which provided a series of promises from the UK Government on a range of issues including commitments regarding the provision of health services.

The UK has a single National Health Service (NHS), which is part of the public sector, funded from direct taxation and free at point of use to all eligible residents. There is also a private health care sector, which, although comparatively small, provides a range of services including acute hospitals (although, at present, no emergency departments), community health and ambulance services.

Although funded centrally from national taxation, NHS services in England, Scotland and Wales are managed separately. While some differences have emerged between these systems in recent years, they remain similar in most respects and continue to be regarded as belonging to a single, unified system and being accessed by residents from all parts of the UK seamlessly. To give some indication of scale, the NHS treats three million people per week and directly employs 1.7 million staff, it is said making it the fourth largest employer in the world.

The NHS is currently undergoing a re-organisation (2012/13) but in the planning phase for the 2012 Games, it was structured as follows:-

- The Department of Health (DH) controls England's 10 Strategic Health Authorities (SHAs), which oversee all NHS activities in England
- Each SHA supervises all the NHS trusts in its area
- Services are commissioned for on behalf of populations in city/borough areas by a Primary Care Trust (PCT). PCTs commission primary care services (including primary medical service, dental services and community based nursing, midwifery and psychiatric services), acute services and specialised services for their community
- Some provision of tertiary services is managed at an SHA level
- PCTs commission emergency ambulance services, as part of a wider regional group
- Most NHS services are currently commissioned from NHS Trusts

Ambulance services in the UK are separated into emergency and non-emergency (patient transport) provision. The former is solely provided by eleven regional NHS ambulance trusts in England and single national NHS Trusts in Scotland, Wales and Northern Ireland. Non-emergency services are provided through the treating NHS trust (e.g. community or acute); this provision is a mixture of NHS ambulance trusts and private providers.

2.2 Public Safety

Local Authorities have statutory responsibility for public safety, and license any food, entertainment and sporting venues/premises. The statutory emergency services (Police, Fire, and NHS ambulance trusts) participate in this process through safety advisory groups, which are established and chaired by Local Authorities.

Events and stadia are subject to guidance which covers all aspects of safety, including fire safety, access, egress and circulation, stewarding, crowd densities, temporary demountable structures, medical/first aid provision, contingency and emergency planning. The main guides are *The Event Safety Guide* (Health and Safety Executive) and *The Guide to Safety at Sports Grounds* (UK Government funded guide). These guides have no statutory force but are used to frame safety certificates issued under the Safety of Sports Ground Act or the Fire Safety and

Safety of Places of Sport Act. In addition, recommendations within the guides are applied by licensing authorities through building regulations and health and safety at work regulations, environmental health and licensing for the supply of food and entertainment. These guides were an integral part of the 2012 Bid Document and therefore the NHS promise.

For outdoor stadia with a gross capacity above 10,000, Local Authorities may apply for formal designation as a sports ground by the Secretary of State for Culture, Media and Sport, which requires the issuing of a safety certificate.

The framework for civil protection in the UK is set by the Civil Contingencies Act, which covers arrangements for civil protection and emergency powers. It establishes a clear set of roles and responsibilities for emergency preparedness and response at the local level. NHS ambulance trusts are designated as Category 1 responders within the Act and are required to be part of local resilience to develop emergency and contingency plans for all identified risks within their areas.

It should be noted that for events and sports grounds, the responsibility for public safety remains with the venue/promoter. The emergency services will advise the Local Authority, through the respective safety advisory group on the quality and acceptability of the venue operator/promoter's risk assessment process and policies, plans and contingency planning. The emergency services will then develop their own emergency plans for the venue/event based on the risks associated with the venue, activity and potential impact on the local area.

2.3 London Ambulance Service NHS Trust

The London Ambulance Service NHS Trust (LAS) is one of eleven regional NHS ambulance trusts in England. It serves the whole of London, with nearly 5,000 operational and support staff operating from seventy ambulance stations across the city. The emergency response is split into three operational areas: east, south and west. The ambulance stations are managed as twenty six local complexes.

The LAS receives and has responsibility for all medical emergency calls within the London area (999 calls). These are triaged or categorised using a Medical Priority Dispatch System (MPDS) and responded to, or, if they are identified as less serious, further telephone assessment is done and either responded to in slower time by LAS resources, or referred to other care pathways.

All UK ambulance services operate to a common set of clinical guidelines which are developed and validated by the Joint Royal Colleges Ambulance Liaison Committee. Locally, ambulance trusts' policies and clinical practise varies, depending on local conditions (urban/rural/remote) available services and care pathways etc. All the services employ staff who are paramedics; this is a closed title in the UK, and to use it the individual must be registered with the Health and Care Professions Council, a statutory professional registration body. All services also employ technician staff, who respond to emergency calls, but who are not paramedics. The training and qualification of these staff is not set as a national standard, and varies from service to service. In most instances, these staff work as part of a two person crew with a paramedic.

The LAS employs a variety of responses within London. A double crewed ambulance is a standard response, however, a variety of single responders in cars, on motorcycles and bicycles are also used. Both paramedics and technicians work on emergency ambulance responses, and there are also ambulance support staff that operate Accident and Emergency (A&E) support vehicles, which are tasked to patients identified as requiring less care and assessment. In

addition the LAS has a commercial Patient Transport Service which serves a number of transport contracts for other NHS Trusts in London.

2.4 Games-time Delivery

The LAS, as the NHS ambulance trust with the majority of the venues and activity within its geographical boundary, was nominated as the national lead for the 2012 Games. A formal programme was established to deliver the services for the Games at the LAS and the other NHS ambulance trusts were engaged through a UK wide forum. As planning progressed, each trust undertook the operational planning for their own venues, with the LAS also taking the lead for national planning.

The overriding principle underlying the LAS's provision of services to the 2012 Games venues, the Torch Relay and those events/venues in the urban domain was to establish a separate 'parallel' service. The intention was to ring-fence that provision to ensure contracted and agreed standards were met, and by clearly identifying those resources and providing them, facilitate the maintenance of core service provision for London.

The main products delivered for the 2012 Games by the LAS were:-

- Participation and agreement to the national strategies and policies covering NHS provision to the 2012 Games, ambulance trust services and the safety and security strategies
- The establishment of a new Event Control Suite for use during other events in addition to the 2012 Games
- Development and delivery nationally of a bespoke training programme for all ambulance staff involved in the 2012 Games
- National agreement between NHS ambulance trusts in England for the provision of staff, pre-planned aid (PPA), to work within London during the 2012 Games including Human Resources and welfare policies and procedures
- Setting up a temporary Olympic Deployment Centre (ODC) for deployment of staff in London working specifically on the 2012 Games
- Procurement of accommodation and catering as required
- Provision of an additional 66 ambulances and equipment
- Planning and measures to ensure no reduction in service levels to the population of London during Games-time

This report provides the details of this provision, along with additional workstreams and how this was managed.

3. LAS London 2012 Programme

The LAS's 2012 Programme (Programme) was initiated under the Trust's then current Service Improvement Programme (SIP) and followed in initiation the format used in other Service programmes at that time.

To manage the Programme the Olympic Games Planning Office (OGPO) was set up in February 2007. Prior to this, the resourcing required had been scoped as up to twenty staff dedicated to planning full time, however, this was later reduced to seven whole time equivalents with support as required from other directorates. The OGPO initially benefited from secondees from the NHS Management Training Scheme as well as dedicated support from the LAS Finance, Human Resources (HR) and Information Management and Technology (IM&T) Directorates in the later stages of the Programme.

Early scoping of the Programme took place at a Trust Workshop attended by all the senior directorate leads at sub-board level. From this workshop the main deliverables of the Programme were determined and used to produce the initial programme initiation documents.

3.1 Governance

3.1.1 Programme Board

The Programme Board was chaired by the Senior Responsible Owner, Martin Flaherty, Deputy Chief Executive/Chief Operating Officer, and initially attended by the Head of Olympic Planning, Deputy Head of Olympic Planning, Operations Lead, Communications Lead, Director for Service Improvement, and Head of the Programme and Project Office. As the Programme progressed, the make-up of the Programme Board changed with the addition of the Director of IM&T and the Trust Operational Leads for delivery within venues and for maintaining service delivery.

The Programme was run according to the principles of the Office of Government Commerce Managing Successful Programmes (MSP) and Projects in a Controlled Environment (PRINCE2) methodologies. This was consistent with the LAS's SIP and best practice within UK Government.

Programme Board meetings took place every two months initially and increased to monthly, then fortnightly meetings as the 2012 Games approached. They focused on strategic decision making remaining concise. The Programme Board was responsible for approving all programme and tranche-level documentation and for reviewing project/workstream-level documentation.

3.1.2 Programme Structure and Arrangements

The Programme was set to run for five years. To ensure its effective management and that momentum was maintained, it was tranced into four separate periods of work. Each period was then divided into either projects or workstreams. The projects or workstreams were managed under a matrix structure with relevant members of project or workstream boards being co-opted to assist with work, provide expert advice or for assurance as required. As the Programme progressed the number of projects or workstreams reduced and cross-boundary working increased. Eventually responsibility for delivery passed to the Tactical and Operational Delivery Operations Group and the Maintaining Service Delivery Group (see diagram below).

RESPONSIBILITIES

LAS 2012 Programme Board

2012 Games Operations	Olympic Games Planning Office	Maintaining Service Delivery
Operational delivery inside venues Event control room Games venues: command, control and co-ordination (C3) Urban zone response ODC operations (during Games-time) Pan-London C3	2012 Programme including:- Workforce: PPA provision, rostering and support Infrastructure and support: fleet, ODC completion, catering, equipment and accommodation Training: provision of training to LAS and PPA staff Communications Commissioning Finance Games-wide assurance National C3	Production of complex, area and pan-London plans for meeting 'Games Effect' Business continuity Games-time operational service delivery

Dividing the Programme into four phases of delivery enabled the OGPO to focus on and scope in detail specific elements of the Programme immediately prior to their delivery. It also meant that learning from preceding tranches could feed into subsequent ones. Within each of tranches, either projects or workstreams were scoped in accordance with the number and nature of key deliverables.

The MSP and PRINCE2 methodologies were used in a facilitative and flexible way with the focus on delivery of actual products rather than corresponding programme and project documentation. However, the following documentation was produced at the programme, tranche and project/workstream levels:-

Programme	Tranche	Project / Workstream
Vision Statement	Scoping Brief	Project/ Workstream Brief
Blueprint	End Tranche Report	Milestone Plan
Programme Brief		Product Descriptions
Stakeholder Management Strategy		Risk Register *
Overarching Governance Strategy		Issue Log *
Business Case *		End Project / Workstream Report
Risk Register *		
Issue Log *		
End Programme Report		

Throughout the Programme's duration, the programme management arrangements were amended to reflect the stage of planning; this was captured in Tranche Scoping Briefs.

Although MSP and PRINCE2 advocate keeping certain documents up-to-date or 'live', the documents marked with an (*) above were the only ones to which this was applied. A project initiation process was adhered to throughout the Programme to ensure a standardised approach was used.

At the project-level, in Tranche 1 and 2, project boards were formed with responsibility for scoping the project/workstream and overseeing its delivery. Each project board was comprised of a project executive, project manager, senior user/s, senior supplier/s and business change manager/s depending on the stage of delivery.

In Tranche 3, the workstream-level reporting arrangements varied depending on the workstream to ensure the suitability of the structure for the specific element of delivery.

Risk, Issue and Benefits Management

The approach to risk, issue, interdependency and benefits management was consistent with MSP/PRINCE2 and spanned the duration of the Programme. A short description of each is provided below with further detail provided in the Overarching Governance Strategy.

Risk management:

- Risk: a negative threat (or potential opportunity) that might affect the course of the programme/project; something that *has not* yet occurred but might
- Managed using registers at the programme and project/workstream level; likelihood and impact assessed and mitigation actions identified

Issue management:

- Issue: a problem, query or concern that will affect, or has already affected, the programme/project and requires action; something that *has* happened
- Managed using registers at the programme and project/workstream level; impact assessed and decision made to resolve

Benefits management:

- Identification of the envisaged benefits associated with the Olympic Programme occurred during a launch day in May 2007
- However, following that, to ensure against duplication with the SIP in the tracking of benefits, the benefits were simplified as follows:-
 - To derive learning from Olympic and Paralympic planning to inform LAS development
 - To manage the services provided during the Olympic and Paralympic Games so that clinical and response time performance is maintained across London
 - To make appropriate demands of the LAS in a timely, structured way so that the service required by the Games is delivered within the immovable timeframe

3.2 Assurance

Due to the high-profile of the Programme, assurance on delivery was required at various levels throughout its lifespan. This was delivered as follows:-

3.2.1 Ongoing Assurance

This was provided by the LAS Commissioners, North West London Commissioning Partnership (NWLCP), against an agreed programme plan outlined in the Trust's original Olympic Investment Appraisal Monitoring Business Case Outline Business Case (OIAMB OBC).

(The OIAMB OBC template was a dedicated Government business case template for organisations being funded as part of the 2012 Bid Commitments and allowed a common approach to be taken to the estimating of costs in relation to the Olympic Safety and Security Strategic Programme [OSSSP]. The Department of Health used this template originally to estimate other costs, however, this costing methodology was later replaced with a more standard commissioning methodology).

The LAS commissioners and NHS London (NHSL) (ie. SHA in London), working with the LAS, used the information contained in the OIAMB business case to develop a work programme centred on the provision of services to the 2012 Games, specifically the London Organisation of the Olympic Games (LOCOG), as well as meeting the commitments to the OSSSP contained in the 2012 Bid Document.

The NHSL 2012 Programme Office implemented an overall Games-wide readiness assurance process consisting of two reviews (September 2011 and February 2012). This was based on the continuation of the agreed work programme as well as other areas of assurance, for example: Guidance to NHS staff on volunteering to work for LOCOG during Games-time; readiness for incidents contained in the London Olympic Resilience Planning Assumptions (LORPAs); meeting of the 2012 Bid Commitments.

Submission was against a self-assessment return with challenge against this return by the LAS Commissioners.

3.2.2 Olympic Safety and Security Strategic Programme

Along with other partners, the LAS was required to provide assurance on its delivery of aspects of the OSSSP. This took the form of written submissions on progress in addition to direct activity in the OSSSP Scenario Testing and Exercising Programme run by the Olympic Security Directorate (OSD).

The overall statement of readiness for the LAS involvement in the OSSSP was given by the DH.

3.2.3 Association of Ambulance Chief Executives

The Association of Ambulance Chief Executives (AACE) appointed a Chief Executive lead for Ambulance assurance working independently of NHSL and OSSSP assurance processes. The AACE process covered all UK ambulance services including the Scottish Ambulance Service and the Welsh Ambulance Service both under the remit of devolved administrations outside the English NHS.

The AACE assurance process was led by a programme board, which included representation from SHAs and the DH, and also the LAS as subject matter expert. It included a self-assessment

return and verbal assessment against agreed criteria as well as exception reports and Lessons Learned logs post Games.

The outputs of this process were shared with the DH and relevant SHAs.

3.2.4 Department of Health

In addition to the assurance given through the above processes, further assurance on preparedness was required by the Department of Health (DH) during 2012. There were a number of factors contributing to this, which included: the re-structuring of the NHS; the creation of NHS Operations (with overall responsibility for delivery during Games-time for the NHS); and a response to the national day of industrial action on the 30 November 2011.

The LAS was asked to review contingency plans for dealing with industrial action during Games-time and to have in place sufficient additional capacity to ensure there would be no compromise to delivery. This resulted in the contracting of significant private ambulance cover during both the Olympic and Paralympic Games.

This assurance process included bi-weekly meetings during May, June and July 2012 with the DH Director of Operations in addition to visits by the Minister of Health with responsibility for ambulance services, the Chief Executive of the NHS, and the Secretary of State for Health.

3.2.5 North West Ambulance Service ‘Critical Friend’

The LAS asked the North West Ambulance Service (NWAS) to undertake a ‘critical friend’ review during its early years of planning to ensure that nothing significant was missing from its plans. This consisted of a visit and subsequent review of documentation from an emergency planning advisor and the director of resilience.

3.3 Finance

Despite the promises made in the 2012 Bid Document, in 2007 the DH had yet to instigate a process to approve and allocate funding on the awarding of the 2012 Games to London/UK. From 2007 to 2009 funding for the LAS 2012 Games preparations were in the main undertaken at financial risk to the Trust without any active financial support from NHSL or commissioners.

During that time the LAS dealt with a number of different staff from NHSL and the DH to explain the rationale behind the LAS preparations and the involvement of the LAS in planning for the Games. These included the requirements of the 2012 Bid Document itself as well as the statutory responsibilities of the LAS under UK legislation.

From 2009 the newly appointed LAS Lead Commissioner was asked to take overall responsibility for the assurance of the LAS planning and approval of its business case by NHSL. Final approval of funding was, however, still required by the DH.

Following the announcement of the General Election in 2009 and the subsequent period of reorganisation following that election, the final decision to fully fund the LAS by the DH was not made until early 2011.

3.3.1 ‘Additionality’ and Opportunity Costs

The 2012 Bid document outlined the commitments made by the Secretary of State for Health and the implications on NHS organisations. Throughout its preparations for the 2012 Games, the LAS sought additional funding to enable it to meet those obligations.

Whilst an initial business case had been prepared by the LAS, this was replaced by the OIAMB OBC template (see above). The OIAMB OBC template introduced the concept of a variable contingency element. This contingency in some cases inflated costs by up to 75% and while the main body of the OIAMB OBC was maintained, a more realistic costing model was later developed.

Funding was split between ‘additionality’ costs which were funded and ‘opportunity’ costs which organisations were expected to meet as part of their core funding for the relevant financial year.

In total the LAS received the additional funding outlined below to meet its obligations to LOCOG and also to fulfil its part in ensuring a ‘safe and secure’ 2012 Games.

Additionality Costs

Financial Year	Funding
2007/08	£0.272m
2008/09	£0.528m
2009/10	£0.635m
2010/11	£0.835m
2011/12	£1.365m
2012/13	£6.6m excluding £1m contingency
Total Additionality Funding:	£11.335m

The level of opportunity cost is less easy to define and covered areas such as Trust Board time and costs associated with non-core project and workstream team members, most of whom were not employed full time on planning for the 2012 Games. During Games-time staffing of national command, control and coordination structures (the National Olympic Coordination Centre and representation in the NHS Operations Situation Cell) was considered to be an opportunity cost and this responsibility was shared with other UK Ambulance Trusts.

3.3.2 Memorandum of Understanding

A significant part of the funding process was the agreement of a Memorandum of Understanding (MoU) between the LOCOG Medical Services functional area and the DH, and the subsequent Service Level Agreement between LOCOG Medical Services and the LAS. These documents were based on generic templates provided by LOCOG and outlined the agreed level of cover to be provided by the LAS.

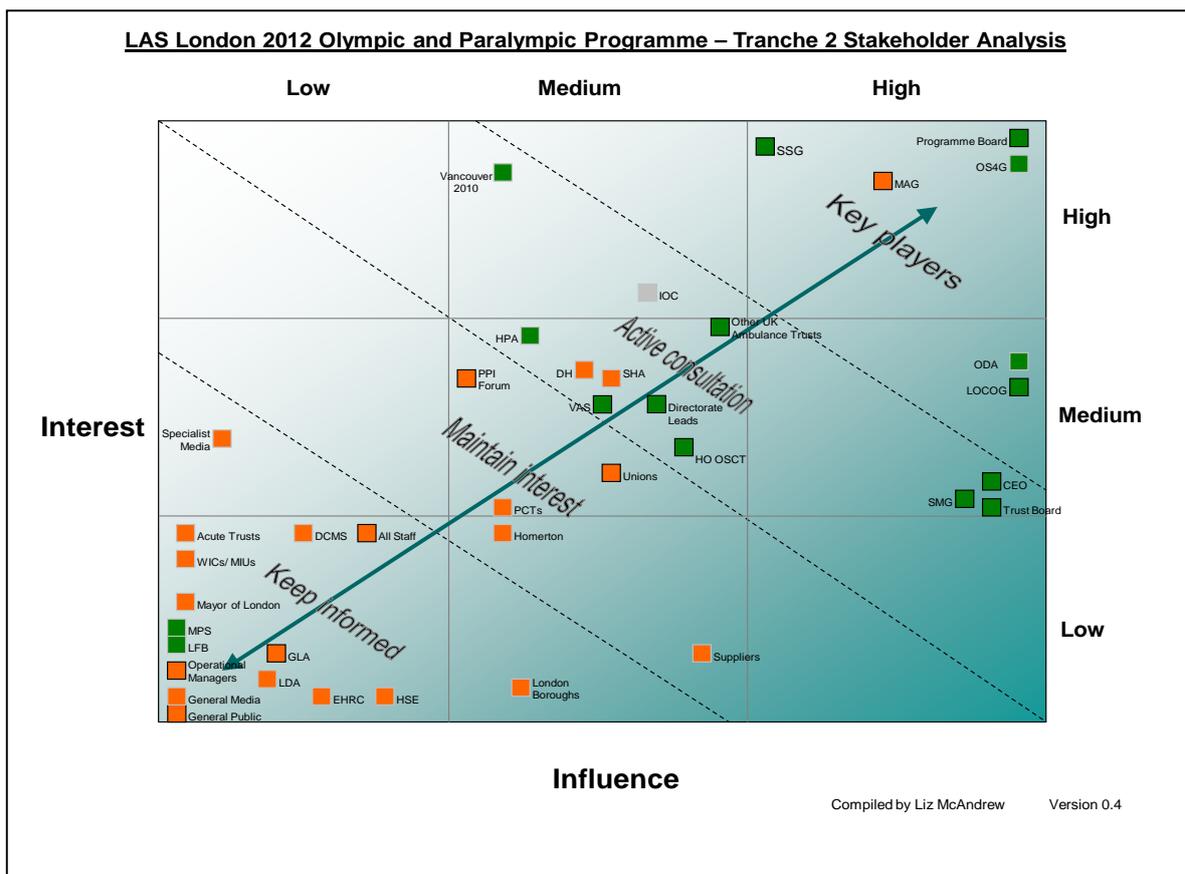
There was initially a limited understanding within LOCOG Medical Services of their responsibilities, specifically within the UK multi-agency and interoperability of Emergency Services contexts. This was despite these featuring in the International Olympic Committee (IOC) Medical Technical Manual and the 2012 Bid Document. This necessitated the involvement of Government Olympic Executive (GOE) and DH representatives in a number of meetings.

The MoU was completed in summer 2010 and provided a clear framework as to what was and was not included in the services to be provided by LAS. It included the provision of ambulances for transport for athletes and spectators at all London venues and defined LOCOG’s responsibility for the provision of medical services within those venues. Once agreed, funding provided to the LAS was based on the requirements included in the MoU and agreed areas of activity outside of that.

4. Stakeholder Engagement

Early assessment of other post-Games reports indicated that a key element of success would be engagement with internal and external stakeholders. These stakeholders were in some cases partners or agencies that the LAS would not normally be directly involved with or those that had no role beyond 2012 Games delivery and were therefore short-term in lifespan.

A Stakeholder Engagement Strategy was devised and updated during the life of the Programme. The diagram below taken from version 3 of that document (December 2009) shows consideration of those stakeholders, taking into account their interest at that time and the influence they would have on LAS planning.



In some cases engagement consisted of one off events or meetings where the LAS advised or provided assurance of their 2012 Games planning. Other external relationships were more involved and operated on a longer-term basis.

4.1 External Stakeholders

4.1.1 Olympic Delivery Authority

The Olympic Delivery Authority (ODA) was responsible for the building of venues and associated infrastructures supporting the 2012 Games. Working with the ODA the LAS was able to input into the design of new venues. The LAS was involved in the health and safety aspects of the venues during the construction phase as well as during operations. A strong relationship was built with the provider of health services to the ODA, including provision of the first response to incidents and joint clinical protocols and handover processes. As a result of this, the LAS also

supported the training and installation of static defibrillators sites inside venues during construction.

4.1.2 London Organising Committee of the Olympic and Paralympic Games

The London Organising Committee of the Olympic and Paralympic Games (LOCOG) was responsible for the staging of the 2012 Games. Many of the promises contained in the London 2012 Bid Document by the UK Government were in relation to services being offered to LOCOG free of charge. These were outlined in the MoU between DH and LOCOG Medical Services and the Service Level Agreement (SLA) between LOCOG Medical Services and the LAS.

In the latter stages of planning particularly, the LAS worked closely with LOCOG in supporting venue medical management in delivery with LAS zone and venue commanders developing strong relationships with LOCOG venue medical managers.

Relationships with other functional areas within LOCOG enabled the LAS to input into the design, safety and security of venues, access and egress in and out of venues, appropriate command and control functions in venues and infrastructure to support these.

4.1.3 Department of Health

Initial DH involvement focused on the development and input into the Olympic and Paralympic Safety and Security Strategy (OPSSS). The LAS was consulted and worked with the DH on the practical aspects of this, as well as on the development of the Olympic Safety and Security Strategic Risk Assessment (OSSSRA) and the London Olympic Regional Planning Assumptions (LORPAs). Throughout the duration of the Programme, relations were maintained with DH 2012 Games representatives.

The reorganisation of the NHS during the duration of the Programme resulted in the formation of NHS Operations. The LAS worked with NHS Operations on the development of the Health Command, Control and Communication (C3) structures with Strategic Health Authority (SHA) colleagues representing the ambulance sector. The LAS also worked with NHS Operations on the integration of the Health C3 with the national safety and security C3 structures, specifically with input into the operation of the National Olympic Coordination Centre (NOCC).

4.1.4 Other Government Departments

The LAS worked with other Government Departments, including the Home Office, the Department for Culture, Media and Sport, Government Olympic Executive and Cabinet Office.

This ranged from informal/formal meetings on preparations, attending debriefs following the Royal Wedding and Queen's Diamond Jubilee, and providing input into resilience and national risk registers.

In addition to providing input into the OPSSS, there were regular formal meetings between the Home Office, the DH and the LAS on the 2012 Games preparations.

4.1.5 Ambulance Services

The DH asked the LAS to co-ordinate the planning response for all UK ambulance services. A UK Ambulance Forum was established which included representation from the Scottish and Welsh Ambulance Services as well as the Crown Islands. The Forum facilitated the dissemination of information and ensured consistency in planning for the 2012 Games. Updates on safety and security, LOCOG planning, City Operations and individual Trusts' activities were

some of the areas covered. The Forum met approximately quarterly throughout the Programme with two national conferences, pre and post 2012 Games.

Meetings and conferences were attended by the voluntary ambulance sector as well as representatives of other host cities including Athens 2004, Melbourne 2006 (Commonwealth Games), Vancouver 2010 (Winter Games), Delhi 2012 (Commonwealth Games) and staff planning for the Glasgow 2014 Commonwealth Games.

In the final stages of planning, the UK Ambulance Forum was used as the platform for the Association of Ambulance Chief Executives (AACE) assurance process and to capture legacy benefits for the ambulance sector.

4.1.6 Other Emergency Services

The LAS built on its existing strong relationship with the Metropolitan Police Service (MPS) and the London Fire and Rescue Brigade (LFB) in planning for the 2012 Games. This involved working at both national and local levels.

The LAS inputted into local planning around safety and security through the MPS as well as national input through the OSD, which was hosted by the MPS on behalf of the Association of Chief Police Officers (ACPO) and Home Office. This local relationship provided input to such areas as the venue risk assessments for security and the inclusion of LAS properties in the security zones, where appropriate.

Staff working in the NOCC during the 2012 Games worked closely with colleagues from the LFB on early identification of incidents and managing the flow of information from them. Joint exercising and training during the three National Command Point Exercises prior to the 2012 Games and at the National Ambulance Exercise 'Operation Amber' provided assurance of the interoperability of all emergency services.

The application of existing joint operational policies such as the London Emergency Services Liaison Panel (LESPL) incident procedures allowed for a clear understanding of roles and responsibilities and maintained normal working practices during the Games. Joint working and a combined approach to resolving issues such as access to the Olympic and Paralympic Route Networks and Games Lanes were invaluable in ensuring all Emergency Services met the challenge of the 2012 Games with minimal impact on the maintenance of service delivery in London.

In addition, the close relationships allowed the sharing of information in planning as well as mutual support in attending meetings and early identification of any possible risks and issues that arose.

4.1.7 The Wider NHS

Responsibility for ensuring that the NHS promise contained in the Bid Document was delivered was given to NHSL and a Programme Team was instigated in late 2009. This team was responsible for co-ordinating all the preparations of NHS organisations and oversaw the commissioning and funding process for London.

The NHSL team provided a useful overview of preparations across the city as well as coordinating cross Trusts' discussions on meeting demand. They issued detailed planning packs in the twelve months prior to the 2012 Games and undertook an assurance process that complemented the AACE process.

There was a strong working relationship with NHSL in many areas including general planning principles, access to the Olympic Route Network/Paralympic Route Network (ORN/PRN) for non-NHS providers, demand management and Games-time operations. NHSL also recognised much of the scoping work undertaken by the LAS as reasonable planning assumptions and invited the LAS to speak at many of its planning meetings with other healthcare partners.

The commissioning relationship with North West London Commissioning Partners (NWLCP) as the LAS's Lead Commissioner is covered elsewhere in this report. However, this was cited by the NHSL Programme Director as an example of good practice and was found to be supportive and valuable once instigated.

Relationships with other NHS providers, specifically acute trusts, was managed through the Games Time Delivery Group convened regularly by NHSL and chaired by the Primary Care Trust Chief Executive Officer lead for the 2012 Games. These meetings facilitated contact between the LAS and the planning leads for other NHS Trusts and ensured plans were consistent and co-ordinated.

4.1.8 Greater London Authority, London Assembly and Local Authorities

The role of the Greater London Authority (GLA) was to assure the Mayor and London Assembly members that the LAS and others had prepared for the 2012 Games and were able to deliver without compromising services to the residents of London. The LAS was asked to appear at the London Assembly Health and Public Services Committee hearings on two occasions to be questioned on its preparations.

The GLA also instigated the development, through its City Operations for the 2012 Games, of a London Events Coordination Calendar, which was used to provide a pan-London picture of all events being planned during Games-time. This was intended to assess the plethora of events which organisations desired to stage in the context of the finite resources for safety, security and inspection and regulation that would be available during Games-time. The LAS sat with NHSL on the Project Board and the Project Team, to oversee the development of this tool.

Planning for venues and events were subject to normal licensing procedures in the main and the LAS commented on these, as normal, through the London Authorities where the events were being held. These Safety Advisory Groups (SAGs) were responsible for the licensing of both 2012 Games and parallel events. In some cases they were augmented into larger joint groups where events crossed borough lines. Notably, this applied for the Olympic Park, where four boroughs had geographical responsibility and a single regulatory body was set up to cover both building control and licensing and regulation on behalf of them all. A single augmented SAG was used for this structure.

4.1.9 Transport for London

Transport for London (TfL) provides oversight and management of London's transport systems including the roads, suburban train services, London Underground and buses. TfL was contracted by the ODA in 2010 to implement the Olympic and Paralympic Transport Strategy and take responsibility for the ORN/PRN. In addition, they took responsibility for crowd management within central London and the delivery of the courses and un-ticketed spectator management for the Olympic and Paralympic Road Races. The LAS worked closely with TfL to ensure access to the Games Lanes and through the traffic management measures for the ORN/PRN and the road races. There was also coordinated planning and management with the

relevant London Authorities of public safety and crowd movement through central London during Games-time.

4.2 Internal Stakeholders

The LAS recognised the benefit of keeping all parts of the organisation informed about 2012 Games preparations and developed a Communications Strategy, which included:-

- Production of a dedicated newsletter for both internal and external use
- Dedicated section on the LAS intranet on 2012 Games planning
- Updates and articles in the LAS News internal staff newsletter
- Two staff surveys
- Updates included in the LAS Chief Executive Annual Consultation meetings
- Presentations at Senior Managers, Managers and Administrative Staff Conferences
- Presentations and attendance at Trust Board, Senior Management Group and Trust Board Away Days
- Attendance at Area Management Meetings
- Attendance at Staff Council Meetings
- Attendance at LAS Patient Forum and Foundation Trust Engagement meetings

An initial survey undertaken in May 2012 suggested that 70% of respondents felt they had been informed of the Trust's preparations for the Games. The same survey also reported that 68% of staff felt that they had been well informed of the implications for travelling to work during Games-time. A repeat survey after the 2012 Games revealed that 93% felt they were well informed of Trust's preparations and only 90% felt they were aware of the implications for travel to and from work. Overall in the second survey, 81% of staff said they felt the Service had managed the 2012 Games well.

5. Safety and Security

The size and scale of the 2012 Games posed some significant security challenges. Ensuring that the Games were safe and secure was a key promise made by the UK Government in the 2012 Bid Document.

The OSSSP outlined the process by which all partners involved would deliver a safe and secure Games. The strategy's aim was to:-

- Plan and manage the safety and security operation with the right resources to deliver
- Protect Olympic and Paralympic venues and events
- Protect transport infrastructure
- Identify and disrupt threats to the 2012 Games
- Prepare for any events that may significantly disrupt the 2012 Games
- Engage with international and domestic partners to enhance security

The body set up to deliver this strategy was the OSD, which the LAS engaged with fully throughout its 2012 Games Programme. A full time member of staff was seconded to work within the OSD from 2007 until immediately post-Games. This member of staff worked within the safety and security programme focusing on the health input to the following areas:-

- Designing security in venues
- Counter terrorism planning
- People and skills
- Protecting the Olympic Park and other venues
- Testing and exercising programme

Through the OSD the LAS also worked closely with other aspects of the Police planning process, which presented a number of opportunities for joint-working such as catering provision for operational staff, accommodation for staff from other UK ambulance services (pre-planned aid staff) and rest centres.

Engagement with the OSD also allowed for significant input in to other areas of planning for the 2012 Games, these included:

- Development of the Olympic Safety and Security Strategic Risk Assessment (OSSSRA)
- Development of the London Olympic Risk Assessment (LORPAs)
- Olympic Safety and Security Concept of Operations
- Partner agency role in the National Command, Communication and Co-ordination (C3) structure in the National Olympic Coordination Centre (NOCC)

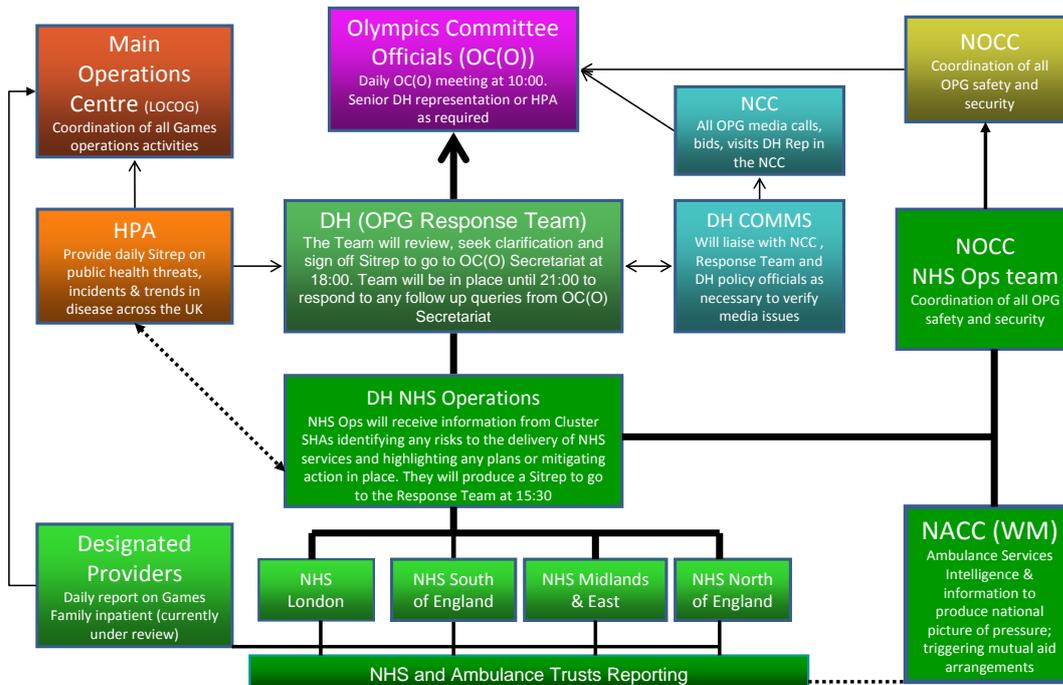
As the 2012 Games approached, the LAS worked with the International Liaison Unit (ILU) attending and speaking at three international conferences for foreign consulate staff and top tier sponsors. The purpose of these events was to provide assurance to those present on preparations for the 2012 Games in relation to safety and security as well as informing about Health preparations.

5.1 National Command, Control and Co-ordination Structures

During Games-time the LAS led on the Health response to the NOCC working with other ambulance services to provide a 24-hour-a-day Health response to national command, control and co-ordination (C3). This involved representation on all safety and security issues whilst

working with the DH Olympic and Paralympic Games Response Cell and the National Ambulance Coordination Centre (NACC). The NOCC was open from immediately prior to the start of the Olympic Torch Relay until after the closing ceremony of the Paralympic Games (18 May to 13 September 2012). Cover was provided at a strategic commander level and there was full participation in all the national Command Point Exercises held at both a national and local pan-London level.

Gamestime Reporting Structures



The NOCC was a nationally integrated coordination centre, resourced with dedicated key agency support personnel and appropriate IM&T systems. Its principle responsibility was to provide timely and accurate agency specific information to the decision making and contingency planning in relation to national safety and security during Games-time. It delivered a national level, multi agency, all hazards Games-related safety and security coordination capacity, which was aligned with the 2012 Games Time C3 Strategy.

On behalf of the NHS, senior ambulances officers provided the NHS liaison in the NOCC, accountable to the Director of NHS Operations. Through these officers working on its behalf, NHS Operations was represented in all related health issues in relation to safety and security during the 2012 Games.

6. Programme Content

The Programme's objectives were as follows:-

- The London Ambulance Service (LAS) will deliver an appropriate level of care for all the local communities and Olympic and Paralympic related patient populations during the 2012 Games
- The LAS will be an active partner in the planning and delivery of a safe and secure London 2012 Games

The overarching Olympic requirement (as cited in the International Olympic Committee (IOC) Olympic Games Medical Services, Technical Manual, November 2005) was to:-

'ensure that the level of medical services to the community is not compromised during the Games-time. Capacity issues must be addressed during the planning phases to ensure optimal use of community-based health resources and appropriate level of care for the community and Olympic related patient populations.'

The Programme was overwhelmingly successful in the achievement of its objectives. Emergency medical services were delivered to the 2012 Games (spectators, athletes and Olympic Family) in accordance with the Memorandum of Understanding signed by the DH and the Service Level Agreement between the London Organising Committee of the Olympic Games (LOCOG) and the London Ambulance Service (LAS). Provision actually exceeded the latter at times due to last minute requests from LOCOG.

Provision of emergency medical services was concurrently ensured to local communities with business-as-usual performance maintained and actually exceeded at points during the 2012 Games.

The LAS was an active partner in the planning and delivery of a safe and secure 2012 Games. Representatives from the Olympic Games Planning Office (OGPO) liaised extensively with the Metropolitan Police, London Fire Brigade, Home Office and Cabinet Office colleagues during the planning phase. The OGPO contributed to the identification and monitoring of risks within the Olympic Safety and Security Risk Assessment and Games Continuity Risk Register. During the 2012 Games, the LAS and representatives from other English ambulance services provided 'health' representation within the National Olympic Co-ordination Centre.

As captured within End Project Reports and End Tranche Reports, products were largely delivered to time and quality throughout the programme's duration. Delays were generally attributable to external factors with timescales revised to accommodate some degree of slippage where unavoidable. An example of this was the delay in finalising the agreement of an Olympic Deployment Centre site, which was affected by LAS non-Olympic estate plans. Sufficient extra time was factored into the delivery timetable for this product; however, as such delays were anticipated. Delays were also encountered in delivering the ring-fenced Games-time vehicle requirement. This was repeatedly raised as a risk and subsequently an issue at the Programme Board and subsequently Senior Management Group levels. Sixty-six ambulances were ultimately available before the Games commenced as required.

The key products planned for and delivered during the Olympic Programme were:-

- Command and control structure: internal and external

- Operational and contingency plans
- Testing and exercise programme: internal and external
- 220 pre-planned aid (PPA) staff from English ambulance services accredited and trained and a comparable number of LAS staff
- Comprehensive internal and external staff engagement: GoWalk campaign (July 2009); Games Planning newsletter (6 editions); 2012 Games bulletins; UK Ambulance Forums (5 meetings); national conferences (2010 and 2012); Olympic planning articles in LAS News
- 2012 Games training programme: operational; event management; communications delivered to 2012 Games cohort (500+)
- Olympic Deployment Centre (ODC) including catering and transport to venues
- IM&T infrastructure: Event Control Room (mandate was in part 2012 Games); Forward Command Points in all 2012 Games venues; Olympic Deployment Centre; Olympic Information Unit
- Sixty-six fully equipped ambulances
- Accommodation for PPA staff including catering, welfare support and transport to/from ODC

6.1 Tranche 1: Foundation

The content of Tranche 1 was scoped at the programme initiation stage. The tranche consisted of nine projects with the following key deliverable/s:-

Project	Key deliverable/s
T1P1 Operations	<ul style="list-style-type: none"> • Demand and resourcing requirements modelled
T1P2 Communications	<ul style="list-style-type: none"> • Communication and engagement plan • Current partnerships identified and key messages developed
T1P3 Mutual aid and volunteers	<ul style="list-style-type: none"> • Existing partnership arrangements tightened • Template for new agreements
T1P4 Clinical skills acquisition/ training	<ul style="list-style-type: none"> • 2012 Games training requirements • Training programme produced
T1P5 Procurement: vehicles and equipment	<ul style="list-style-type: none"> • Procurement requirements identified • 'Green' options explored and potential Olympic sponsors identified
T1P6 Staff engagement	<ul style="list-style-type: none"> • Staff expectations surveyed • Staff welfare requirements and recognition programme scoped
T1P7 Financial framework	<ul style="list-style-type: none"> • Financial framework developed for Programme • Initial estimate of costs
T1P8 Estates strategy	<ul style="list-style-type: none"> • Estates requirements identified • Estates strategy produced for Programme
T1P9 IM&T strategy	<ul style="list-style-type: none"> • IM&T requirements scoped • IM&T strategy produced

Project Boards consisted of representatives from across the LAS and the OGPO. Project executives and managers sat within the area that the project was specifically focusing on with support from the OGPO.

Given the high number of projects, interdependencies were managed on an ongoing basis within the OGPO. In addition, regular interdependency meetings took place at which project managers provided updates about their respective project with interdependencies identified and discussed.

6.1.1 Other Workstreams

In addition to the above projects, a number of other work areas were underway. As these largely concerned ongoing liaison with external organisations, application of a project structure was not considered appropriate. These areas of work included liaison with LOCOG Medical Services and the ODA specifically in the clearing of the Olympic Park site and design of venues. The latter included influencing the positioning of First Aid facilities and access and egress points for ambulances, and to identify early issues with extrication from the seating bowls. Work was also undertaken with the ODA Occupational Health Service provider: the development of a joint set of protocols for emergency call outs and provision of joint training and ensuring familiarity with LAS equipment; establishing a call out regime for the Olympic Park with ODA delivery partners.

6.2 Tranche 2: Operational Planning and Readiness

Tranche 2 scoping was undertaken towards the end of Tranche 1 when most of the latter's products had been delivered. In addition to the launch day content, scoping was informed by key outputs required, enablers from Tranche 1 and actions from a programme-level equality impact assessment and patient and public involvement requirements. The number of projects was purposefully reduced to enhance effective interdependency management.

Some capacity issues were encountered with project management resource outside the OGPO during Tranche 1. The focus in Tranche 2 was on the 'senior supplier' and 'senior user' interests and ensuring that the 'right' people from across the LAS sat on the 'right' project boards. For the majority of Tranche 2 projects, the project executive and project management roles sat within the OGPO with expertise and specialist skills/knowledge provided from different directorates, as appropriate, through representation on the respective project board. In addition, supplier and user roles were filled by the OGPO representatives with links to other Olympic bodies ie. the OSD and the London Organising Committee for the Olympic Games (LOCOG)/Olympic Delivery Authority (ODA).

Project	Key deliverable/s
T2P1 Operational Planning	<ul style="list-style-type: none"> • Command and control structure • View on national command and control • Testing and exercising programme scoped • Plans for deployment of mutual aid
T2P2 Workforce	<ul style="list-style-type: none"> • 2012 Games workforce identified with plan to release and Staffside agreement • Agreements with external suppliers of staff • Continuous staff engagement

T2P3 Skills Acquisition	<ul style="list-style-type: none"> • Comprehensive training programme produced: operational, event management and communications • Delivery plan agreed
T2P4 Infrastructure and Support	<ul style="list-style-type: none"> • Plans for Olympic station, event control and IM&T infrastructure produced; implementation underway • Vehicle and equipment requirements and purchase/procurement scheduled agreed
T2P5 Communication and Involvement	<ul style="list-style-type: none"> • Public education timetable • Ongoing implementation of internal communication plan

6.2.1 Other Workstreams

As in Tranche 1, a number of other work areas were underway throughout the duration of Tranche 2.

Service Level Agreement

Specific deliverables included the production of a Service Level Agreement with LOCOG, which followed the sign-off of the MoU between LOCOG, LAS and Commissioners; this was completed in January 2011. The SLA specified that additional ambulance cover was not required for the Athletes Village, Main Media Centre, hotels or transport hubs. It also excluded the Games Readiness Events (test events).

LOCOG Venue Planning

LOCOG commenced its venue planning with a Model Venue Exercise looking at North Greenwich Arena, which took place in summer 2009. Initial planning then was then completed for all the other venues in London, with subsequent 'rounds' attended by OGPO staff and, in subsequent tranches, the LAS venue commanders when available. All work and decisions made, as well as information on the venues, was documented by the OGPO and made available to the operational managers along with briefings.

Demand Modelling

The underlying work in this area consisted of the following:-

- Modelling of the 2012 Games effect on core 999 calls
- Event demand in urban domain during the lockdown period (14 June–19 September)
- 2012 Games demand modelling profiles

A literature search was conducted looking at medical utilisation rates at mass gatherings and learning from previous Games. Operational Research in Health Ltd (ORH) were commissioned by the LAS, NHSL and commissioners to produce an analysis of the expected impact on core services, which took into account the potential impact of the ORN and assessments by ODA Transport of probable additional traffic road traffic. An expected increase of 3.6 – 8.9% was predicted.

In addition, a paper was developed to understand the special operations requirements (eg. Hazard Area Response Team [HART] and Chemical, Biological, Radiological and Nuclear [CBRN]).

Initial work was undertaken on venue specific operational plans. Full plans were produced for the relevant venues during the construction phase which further developed the work undertaken during Tranche 1. These were continually updated until Games-time to reflect changes to the environment and addressed access issues and rendez-vous points (RVPs) for incidents etc. During the summer of 2010, LOCOG Medical produced venue medical risk assessments for the London venues, which indicated the resourcing levels proposed. These assessments were discussed and negotiated with the LAS and provided a planning base for resourcing.

Work also started on developing emergency plans. Integral to this was multi-agency working, and, as the intention was not to change the principles already existing in London, the plans could be developed using the London Emergency Services Liaison Panel (LESLP) Major Incident Plan, with consideration of 2012 Games specific issues incorporated. RVPs and access points could not be identified at this stage, as the LOCOG's venue planning had not progressed far enough; plans were drafted as a result.

The Greater London Council (GLC) started a process involving all local boroughs and the emergency and transport services in identifying all proposed events within Greater London during Games Time. This, known as the London Events Co-ordination Calendar (LECC), was intended to provide a full picture of the likely resource requirements and to establish the point at which events planned would outstrip agencies ability to provide the necessary resources to meet national safety and licensing requirements.

6.3 Tranche 3: Testing, Exercises and Operational Implementation

Tranche 3 scoping was undertaken towards the end of Tranche 2. The main objective of Tranche 3 was to provide the requisite infrastructure and appropriately skilled staff, ensuring sufficient exercising and testing, to enable the LAS to meet the overall programme objectives. Fundamental to the tranche was preparing the LAS for Games-time operations.

The content of Tranche 3 was informed by the launch day actions, Tranche 1 and 2 enablers and Lessons Learned, equality impact assessment findings, key outputs required for the 2012 Games, and plans from other organisations, such as LOCOG.

As the focus in Tranche 3 shifted from the final stages of planning to operational delivery and given that extensive programme and project management documentation existed for Tranche 1 and Tranche 2, a 'lighter touch' was adopted for Tranche 3.

Rather than using a project structure, areas of corresponding and related activity were grouped under workstreams ie. Operational Delivery, Workforce and Skills Acquisition, and Infrastructure and Logistics. A reduction in the number of high-level workstream areas was decided to facilitate focused and straightforward planning, implementation and communication to internal and external stakeholders.

Project	Key deliverable/s
T3W1 Operational Delivery	<ul style="list-style-type: none"> • Operational and contingency plans • Exercising and testing complete • Command structure in place
T3W2 Workforce and Skills Acquisition	<ul style="list-style-type: none"> • Pre-planned aid arrangements in place with accreditation • Welfare arrangements in place • Training programme delivered: internally and for pre-planned aid • Ongoing communication with staff
T2W3 Infrastructure and Logistics	<ul style="list-style-type: none"> • Olympic deployment centre delivered including plans for catering provision • Ring-fenced Olympic vehicle cohort (66) • IM&T infrastructure in place • Pre-planned aid accommodation and transport to/from accommodation and venues arranged • Control rooms delivered

6.3.1 Other Workstreams

Ongoing liaison continued with LOCOG as Tranche 3 progressed with LAS representation increasingly transferring to operational management with support from the OGPO. The LAS continued to play a key role in preparations for a safe and secure 2012 Games working closely with the MPS, LFB and OPSD. In addition, liaison and engagement with NHSL and the DH was intensified.

6.4 Tranche 4: Games-time and Knowledge Transfer

The final tranche of the Olympic Programme commenced in June 2012 and was comprised of all outstanding Tranche 3 products and Games-time activities that had not been handed over to LAS business-as-usual operations. Tranche 4 concluded the few remaining elements of the planning component of the Programme, included Games-time delivery, and finally, Programme closure. A project structure was used for Tranche 4 with division of activity into three stages; products and areas of activity were assigned owners.

Alongside Tranche 4 of the Olympic Programme, both Games-time and business-as-usual operations occurred. Although overseen by the Olympic Programme Board, these areas did not fall under the remit of the Olympic Games Planning Office/Head of Olympic Planning as responsibility had been fully assumed by Operations.

Stage	Key deliverable/s
Stage 1: Pre-Games	<ul style="list-style-type: none"> • Games-time information requirements scoped • OGPO Management of Change scoped • Knowledge capture/transfer fully scoped • Completion of familiarisation training • OGPO Games-time roles scoped • Finalisation of milestone handover: OGPO to Operations

Stage 2: Games-time	<ul style="list-style-type: none"> • Liaison with Transport for London regarding the Olympic and Paralympic Route Networks • Management of pre-planned aid accommodation • Management of Service Level Agreements with Metropolitan Police Service • Pre-planned aid point of contact • Knowledge capture/transfer underway
Stage 3: Post-Games	<ul style="list-style-type: none"> • End Programme Report produced • OGPO decommissioned including staff • LAS Olympic and Paralympic Games celebration/ conference/pin-badge for all staff • Knowledge capture/Post Games Report

Throughout all three stages, liaison with commissioners and NHSL continued in addition to financial management of the Programme.

7. Programme Risks

Programme-level risks and issues were managed by the Programme Board and featured on each agenda. Given the high number of risks, they were categorised as internal or external. Where necessary, risks/issues were escalated to the Senior Management Group where there was either a dependency on LAS business-as-usual delivery or a requirement for action by the LAS Chief Executive. When each new tranche was scoped, the risk and issue registers were reviewed and refreshed in alignment with the new projects/workstreams.

Risks were managed using likelihood and impact scoring with preventative and contingency actions identified and overseen. Issues were managed using a priority impact rating with Programme Board decisions and corresponding actions noted and overseen.

The nature of risks and issues throughout the Programme were generally related to the following:-

- **Finance:** release of funding and in accordance with programme costs
- **External partners:** sufficiently strong relationships for planning/delivery
- **Health/NHS context:** joined-up, parallel planning
- **Business as usual:** sufficient consideration of and planning for impact
- **Olympic/Paralympic Route Networks:** adverse effect on business-as-usual service delivery and inappropriate access for vehicles serving the 2012 Games venues
- **Communication:** inadequate understanding – internally and/or externally – of nature of LAS' commitment to 2012 Games
- **Interdependencies:** cross-organisational enablers not delivered in time
- **Industrial unrest (LAS):** adverse effect on 2012 Games and/or business-as-usual delivery
- **Industrial unrest (PPA):** adverse effect on 2012 Games and/or business-as-usual delivery
- **Private Ambulance Services:** insufficient funding allocation/inadequate skills mix
- **Provision of LOCOG Medical Services:** pressure on LAS to fill gaps; distraction from LAS role outlined in Service Level Agreement
- **Delivery of ambulance requirement:** fully equipped ambulances not delivered in time

Project and workstream-level risks and issues were managed by project managers and workstream leads and featured in monthly highlight reports circulated to the Programme Board. Where necessary, these were escalated to the Programme Board for action; for example, the risk/issue of the ambulance requirement not being met as mentioned above. At the end of each tranche, the registers were reviewed with risks/issues either closed or transferred to the relevant project/ workstream in the subsequent tranche.

8. Programme Delivery

This section will provide more detail on the work that was undertaken throughout the Programme, largely in Tranches 3 and 4, and is divided into work areas.

8.1 Recruitment and Human Resources

The process to recruit operational commanders took place in the latter part of 2010 after which they participated in the planning process. This was supported by the OGPO given that all the commanders also had full-time LAS roles.

LAS staff were initially asked to register an interest in working at the 2012 Games in 2010. The conditions outlined were that they would: not take any leave during summer 2012; give their permission to share their personal information with LOCOG for accreditation; and attend 2012 Games training courses. These staff were then targeted for receipt of the OGPO newsletter and contact was maintained. Inclusion in the cohort was confirmed during 2011. There were a number of staff who withdrew from the process; during Tranche 4 contact was made with these staff to establish any significant reasons. No real theme was identified; in most cases it was due to a change in personal circumstances. The other ambulance trusts went through a similar process in 2011. The total staff number subsequently identified for training met the anticipated numbers required for 2012 Games venues, other Games related events and the urban domain.

In addition, during 2011 recruitment was started for staff to work in the Olympic Deployment Centre (ODC). This was a mixture of operational and support staff, who would undertake the supervision and support roles for staff working as part of the Olympic Cohort.

8.2 Pre-Planned Aid

Given the scale of the emergency medical service resource requirement identified in Tranche 1, a decision was made by the LAS to approach other English ambulance services to provide additional staff during Games-time. This excluded South West Ambulance Service NHS Trust because of the amount of 2012 Games activity taking place within their trust boundaries. The number of staff required from each trust was determined by their size as a proportion of the national ambulance service in its totality. The term 'pre-planned aid' (PPA) was used to differentiate 2012 Games staffing from 'mutual aid', for which there could still have been a requirement during Games-time.

Detailed work was undertaken to establish processes for the PPA staff with their employing trusts. In principle, they remained under the management of their own trusts with the LAS providing immediate support as required. Any disciplinary issues were addressed by the LAS in the first instance with home-trust Human Resources (HR) policies and procedures and management adhered to in the medium/long-term. The LAS provided support to PPA staff at their Games-time accommodation with a cohort of LAS training officers available 24/7 to address general issues and queries, and provide ongoing clinical advice and support to practice.

Agreement was reached on PPA funding in 2011 including the process for payment. This was centrally via NHSL to LAS, with the other trusts invoicing the LAS for the staff that they had supplied. All funding for accommodation and other costs was provided to the LAS, which then supplied those services.

8.3 Accreditation

Negotiation with LOCOG for accreditation of staff was ongoing from 2011. The accreditation process was undertaken by LOCOG Accreditation, which was responsible for dealing with the process of security clearing staff and issuing the passes. Approval for staff to be accredited and to what level sat with LOCOG Medical Services. Some delays were experienced because of the requirement to deal with two departments; this was exacerbated by delayed publication of the accreditation guidance, which was not issued until after the deadline for ambulance staff submissions.

An LAS HR manager was seconded to the OGPO in Tranche 3 and took prime responsibility for accreditation. Each trust had a nominated lead for the accreditation process, and all ambulance trusts agreed a common procedure to deal with any staff that were refused accreditation. Although all staff had to collect their accreditation in person from the LOCOG Uniform and Accreditation Centre in East London, PPA staff did so having arrived for their Games-time duties, which meant additional travel and time was not incurred.

The accreditation agreed was that all staff would receive basic accreditation, which did not give access to any venues. There was some initial concern that venue commanders were not issued with accreditation for athlete areas, however, no adverse incidents arose as a result of this during Games-time. At the ODC, clinical staff were issued with day passes for all roles within venues. There was a delay in LOCOG issuing these passes, which caused some issues with the provision of resourcing for training venues from the 16 July, but this was resolved.

8.4 Skills Acquisition

The training programme was finalised during the early part of 2011. The training focused on how the 2012 Games would operate differently from normal stadia events and covered security, accreditation and access issues as well as LOCOG, the model of care, ambulance responsibilities and emergency preparedness. Both clinical and command staff received variations of this training. In addition to this classroom training, staff were required to complete some online training.

There was a clinical element that focused on disabilities as this is not taught routinely in detail in UK ambulance services. The clinical sessions were developed with specialists in their field and included Stoke Mandeville Spinal Cord Injury Centre, Mencap, Scope, Sense and the Royal Society for the Blind (charities working in the areas of learning, physical and sensory disabilities). This was provided for the clinical staff. Training was also developed and provided for control staff to work in the Olympic Event Control Room (OECR) and at venues.

Training for LAS staff commenced in May 2011. After discussions with other ambulance trusts, the programme was delivered to PPA staff in their home trusts; this commenced in November 2011. The training was very well received by both LAS and PPA staff with positive feedback on the content and delivery.

As part of the Skills Acquisition work undertaken, a new pocket communication guide was developed for staff. Although the LAS has used a multilingual guide for many years (and have access to a telephone interpreting service for use 'on scene') this guide provides visual questions and standard information and communication tools. It is intended for use with patients with learning difficulties or those for whom English is not a first language. The guide



was issued to all 2012 Games staff, as well as all operational LAS staff.

As it had been agreed that all staff would use LAS specification vehicles and equipment and operate according to LAS clinical protocols, all PPA staff arrived in advance of Games-time (from the 22 July onwards) and were provided with training on these areas. This training took three days, and included accreditation collection.

8.5 Fleet

Based on the continuing refinement of the resourcing requirement for the Games, the final number of additional vehicles required was 66 ambulances. The DH's original preference was for the ambulances to be drawn from all the English trusts' existing fleet, but, after discussion, it was agreed that the additional vehicles would be purchased in advance of vehicle replacement within the LAS fleet only. This required funding and was factored into the overall LAS fleet replacement business case. Orders were placed and the arrival of the vehicles commenced in March 2012. From March to September 2012, the LAS subsequently had a temporarily expanded ambulance fleet. Older vehicles were released later than planned within the replacement programme whilst new vehicles were received earlier than planned to accommodate the additional 2012 Games requirement.

The new vehicles were commissioned into operation from mid May onwards. They were initially used for an Olympic Preparedness Exercise, Operation Amber, and for the celebrations for the Queen's Diamond Jubilee in June. The vehicles continued to be delivered up until Games-time, with 57 delivered and commissioned by the 16 July, and the final group from the 16 July to the 3 August.

Plans were also put in place to expand the capacity of the LAS's fleet technicians during the 2012 Games period with additional agency staff taken on. There was also a focus on providing mobile services during Games-time to reduce down-time and changes to the servicing programme pre-Games. This was intended to ensure the existing fleet required little routine servicing over the summer.

Within core business, a number of measures were put in place to accommodate additional demand. These included:-

- An enhanced focus on mobile fleet technicians supported by the use of agency staff, a plan previously employed by the LAS at periods of heavy demand. The intention was to minimise the time vehicles were off-road and to maximise fleet usage. Servicing was brought forward as much as possible, so planned withdrawal of service was minimised
- The Vehicle Resource Centre built on its already strong relationships with operational managers to ensure improvements to the reequipping of vehicles and maintenance of readiness
- Involvement of the fleet cleaning and restocking contractor in discussions about maintaining service delivery, which resulted in additional staff working in the ODC and an amendment of normal working practices with vehicles restocked at hospitals

- Introduction of a new communication tool for the dissemination of a twice daily snapshot of key department metrics using language and numbers that would be meaningful to colleagues across the LAS; critically this moved from a focus on the percentage of the fleet available, to a Fleet Operating Balance, demonstrating the number of vehicles required and the number actually available

8.6 Equipment and Logistics

Extra equipment had to be purchased for the additional vehicles, as well as personal issue equipment. Additional personal protective equipment was provided to PPA staff where required. This included stab vests, smoke hoods, dosimeters and was issued in vehicle packs.

Planning was undertaken by LAS Logistics to ensure the reliability of the supply chain throughout the 2012 Games. This included working with suppliers to guarantee levels of supply, arranging night-time deliveries where possible and building a larger than usual store of consumables and essential spare equipment. Additional staff were employed to provide additional capacity for tasks such as drug packing to ensure an uninterrupted supply of key consumables to the OCD as well as operational ambulance stations.

Within core business, a number of measures were put in place to accommodate additional demand. These included:-

- A central supply of drugs and consumables was introduced with stock levels increased; to address the issues from potential increased traffic congestion, new delivery routes were designed; the area where the greatest disruption was anticipated, East London, adopted a night-time delivery schedule

8.7 Olympic Deployment Centre

The site for the ODC was identified in Tranche 2. This was originally the LAS's Silvertown Ambulance Station where the lease (which finished in 2011) could be extended temporarily. However, in early 2011 the possibility of extending the lease to 2016 became available, and, as it was proving difficult to find another location for the ambulance station, it was decided to remain at Silvertown. The site could not accommodate the Games-time deployment as well as the ambulance station, so work began to identify another site for the former. By April 2011, a new site, Union Wharf, had been found and negotiations began to secure a short lease. The site provided a large warehouse space, some office space and additional parking also in the Silvertown area and close to the river. The LAS gained access to the site in late 2011 and undertook a refurbishment. To contain costs, additional office space was provided using portakabin structures, as were the welfare facilities. The site was complete by May 2012, and was tested as part of the national preparedness testing exercise, Operation Amber.

Catering was required on site, which was provided by the MPS's in-house caterers. In return, some Police units, which were operating on the river, also used the ODC as their rest centre. This was negotiated to ensure that the Police were not present at LAS's peak throughput times.

The original intention had been to have all staff deployed from the ODC, however, as further refinement of the shift times continued, it became apparent that, for staff working at the venues such as Wembley and Wimbledon, (in West and South West London respectively) this would mean additional shifts or very long days. Given this, it was decided to deploy staff for Earl's Court and Wembley from the LAS West Sector Headquarters in Brent, and for Wimbledon, from Wimbledon Ambulance Station. This decision was made with the support of the zone

commanders, and with an undertaking from them that they would manage the process to ensure that consistency in briefing was achieved.

8.8 Pre-planned Aid Accommodation

The accommodation required for PPA staff from other services was undertaken in conjunction with the MPS. Student accommodation was identified at Goldsmith's College in Deptford, South East London. The facilities available were very good and, as well as bedroom accommodation, the College offered office facilities and catering. The College was situated across the river from the ODC at a distance of about 6 miles. The estimated numbers of rooms were contracted for, along with the catering requirements, however, the actual provision of meals was on the basis of those supplied during Games-time. This was done for both the Olympic and Paralympics Games. Collaboration with MPS meant that the unit costs were reduced.

8.9 Information Management and Technology

Information Management and Technology (IM&T) formed a major element of LAS 2012 Games planning and delivery. This included equipping the ambulance fleet with radios and Mobile Data Terminals (MDTs), installing equipment in all the venue control rooms and other command and control locations, and equipping the ODC and the Olympic Event Control Room. Work commenced on determining IM&T requirements in Tranche 1, specifically in venues from 2009 in conjunction with the ODA and then LOCOG.

Within the ODC, links were generated to LAS systems, such as for resourcing. Furthermore a system was designed which allowed ODC staff to: utilise the bar codes on LOCOG accreditation; scan staff on/off duty; track daily upgrades to accreditation; and scan equipment and drugs.

8.10 Deployment of Staff

Transport was required for the Olympic cohort to and from the ODC and venues, and for PPA staff from their accommodation. LAS Patient Transport Service (PTS) provided this for the two periods of the 2012 Games.

Throughout the Programme, deployment requirements were refined as staffing numbers, locations and shift times changed. PTS provided fifteen mini coach type vehicles with a seating capacity of eight, with a further five vehicles available for resilience, a car and a courier van.

8.11 Safety and Security

As the 2012 Games approached, close work continued with the OSD focusing on the implications for the LAS of the 2012 Games security regimes. This included identifying access and egress search regimes for ambulances to sites, which addressed security concerns, whilst allowing quick access as required; it incorporated checking ambulances for the vehicle security screening process and consideration of searches by dogs for explosives and drugs.

A series of security risk assessments were undertaken, led by LOCOG security and the Police into which the LAS inputted. Other security related risk assessments were undertaken on public transport and roads within London.

Other areas of planning included the provision of specialist resources. CBRN and Hazardous Area Response Team (HART) resources were required to ensure an effective response to

incidents. The other English ambulance trusts participated in the provision with staff from other services working in London during Games-time to provide sufficient cover. There was also a requirement for ambulance staff to join the teams which provided protection to Internationally Protected Principals. These staff were embedded with the protection teams, which was led by the MPS.

8.12 Transport

The ODA consulted on and produced the Olympic and Paralympic Transport Plan during Tranche 3. In 2011, the implementation and management of the Olympic and Paralympic Route Networks were devolved to Transport for London (TfL). The OGPO undertook responses to the collaboration with the other emergency services. Access to the Games Lanes was a significant issue. Both Police and ambulance negotiated access for the vehicles which transported their Olympic/Paralympic cohorts to and from accommodation and venues. With regard to core services, the LAS received permission to access the Games Lanes. This was to facilitate transport to hospital and vehicles movements relating to maintenance of cover in addition to responding to life threatened emergency calls.

An additional challenge was the proposed restrictions on turns to protect Games Lanes and manage traffic flows. In the UK, emergency services have legal exemptions from many traffic regulations, and this did not change for the ORN/PRN. An LAS assessment of the proposals was undertaken with local area managers consulted to identify those places where the proposals would have a significant impact on the Service's ability to respond to calls effectively and then engage with TfL on finding a solution. In some instances, following discussions, TfL changed their plans. In other locations, working together, the LAS and TfL identified collapsible delineators which, while effectively dissuading other road users from making banned turns, enabled ambulances and other emergency service vehicles to freely negotiate the roads

TfL provided extensive information to businesses and services in London about the predicted impact of the Games, and undertook extensive work to encourage those who could, to make different arrangements during Games-time. Work was undertaken within the LAS and with NHSL to assist the wider NHS to ensure they had effective plans in place to address issues arising from the changes to the road network, including staff travel and supply chain issues.

8.13 Maintaining Service Delivery (MSD)

8.13.1 Objectives and Tasks

In early 2012 an MSD group was introduced to provide the strategy and oversight to ensure the LAS was prepared and able to maintain service delivery to London during the 2012 Games. The objectives of the group were to:-

- Preserve lives and protect patient care throughout the 2012 Games period
- Ensure sufficient assets and management functionality is available to manage core activity in preparation for restoration of the new normality
- Maintain the reputation of the trust

The tasks undertaken by the group included:-

- Provide strategic business as usual direction for the LAS during the 2012 Games
- Co-ordinate the three operational areas (East, West and South) in the production of local plans and ensure an escalation and resolution process for delivery

- Ensure Emergency Operations Centre (EOC), Fleet and Logistics, and PTS had operational plans in place to support core business throughout Games-time
- Identify and mitigate any local or trust-wide risks
- Work with the Olympic Programme Broad to ensure alignment of the MSD and 2012 Games plans, anticipating and resolving any risks

Throughout the Programme, consideration of maintaining service delivery was addressed in a number of areas: within negotiations over the MoU and SLA with LOCOG; the ring-fencing of Games-time vehicles and equipment; the use of PPA staff to reduce the staffing impact on the LAS; liaison with TfL; and the work undertaken in Tranches 1 and 2 on expected increases in demand during Games-time, which was used as guidance for the required business as usual resourcing levels.

8.13.2 Reduced Management Capacity and Planning

To address the issue of reduced management capacity for core business because of Games-time demands, the MSD group sought to employ non-clinical managers in operational roles. Furthermore, local plans were produced for each of the LAS's three geographical areas in addition to Fleet and Logistics, Control Services and Patient Transport Services. The intention was to provide the patients and public of London safe, high quality patient care, whilst preserving the reputation of the LAS and maintaining public confidence.

A tool was developed to identify the resourcing levels required for Games-time. Overtime incentives and policies around leave and resource utilisation were identified at the senior management level and discussed and agreed with LAS's staffside (comprised of Union representatives).

Final agreement on Games-time leave arrangements, although discussed from 2009, was not reached until April 2012. The Olympic cohort had agreed not to take leave during Games-time whilst there were no changes to leave arrangements for core staff. This was possible because, in the earlier stages of planning, it had been agreed that all training would cease during Games-time. The additional staffing levels that this would provide was judged, in conjunction with overtime and other measures outlined below, to be sufficient to meet the predicted levels of demand.

Contracts were drawn up with four private ambulance companies to provide additional resources during Games-time as required. Historically the LAS has used Voluntary Aid Societies (VAS) and private companies to bolster provision for periods of high demand with these resources attending a restricted range of calls. The VAS, ie. British Red Cross and St John Ambulance, were unable to provide much resource because of their provision of services to major Games-related events taking place across London during Games-time. Agreement with private companies already existed to define standards for staff, vehicles and equipment for this provision.

Each day of the 2012 Games was red-amber-green (RAG) rated based on the day of the week, the amount of Olympic or Paralympic activity, parallel events, and other events to establish periods of most challenge to facilitate the allocation of resources and systems. Furthermore, the LAS's business-as-usual operational management system was suspended during Games-time because of the high number of managers involved in 2012 Games activity. A trust-wide out-of-hours on-call central ambulance operation manager was available as additional support; 24-hour on-duty cover was provided on 'red' days.

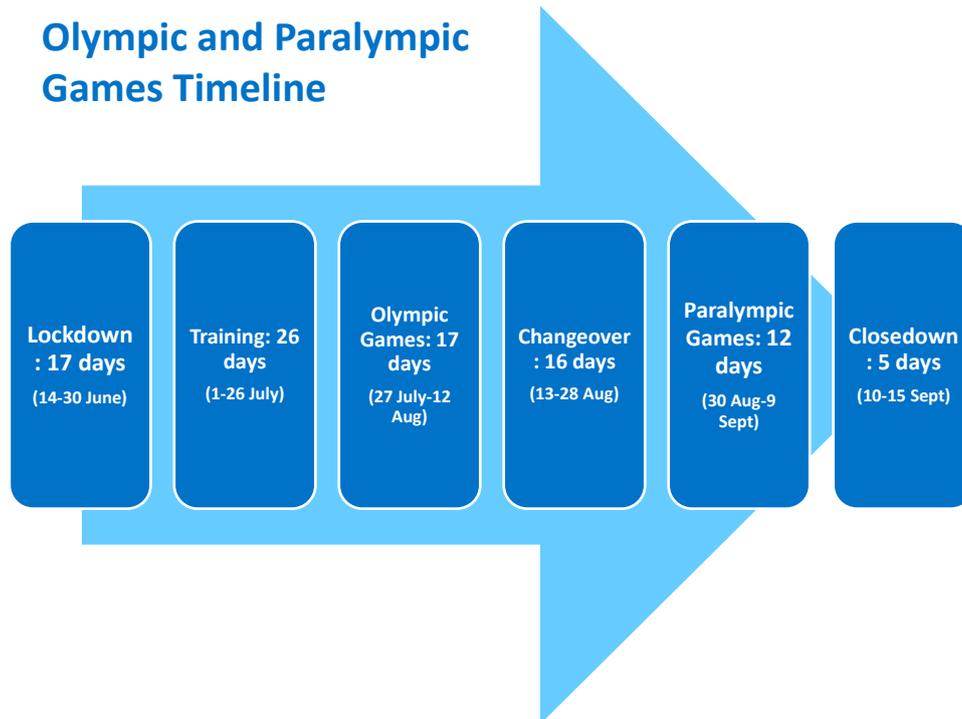
Area plans were produced for each of the three areas of LAS operational activity. The following solutions to risks/issues identified were instigated across the trust:-

- Temporary amendments were made to station management arrangements with a new standard call-sign introduced for an officer able to provide administrative and staff support on every complex throughout the 2012 Games
- Duty station officers (middle management level on complex) covered a larger area than normal to provide additional staff support on scene and management at hospitals
- Ambulance operation managers (senior management level on complex) worked across a larger area than normal rather than just across their normal complex boundaries
- Daily sector conference calls occurred to provide information, updates and facilitate collective decision making
- Plans were all collated centrally and signed off prior to the commencement of the 2012 Games
- Management and supervisory support was provided by LAS trainers and other non-sector based operational officers; team leader roles were enhanced (junior management level on complex)
- Where necessary, specific Games-time plans were produced, for example, for Heathrow Airport to ensure ongoing safe and effective service delivery; to support this, additional officers and team leaders in the west area were trained in air-side procedures
- Interim arrangements were put in place to make adjustments to the trust's Pan-London tactical commander rota due to the number of officers deployed to 2012 Games-specific activity
- MSD operations were co-ordinated through a dedicated forecasting and planning unit established at LAS headquarters to support the MSD strategic commander; this unit had a dedicated team of people on-duty for twelve hours a day throughout Games-time

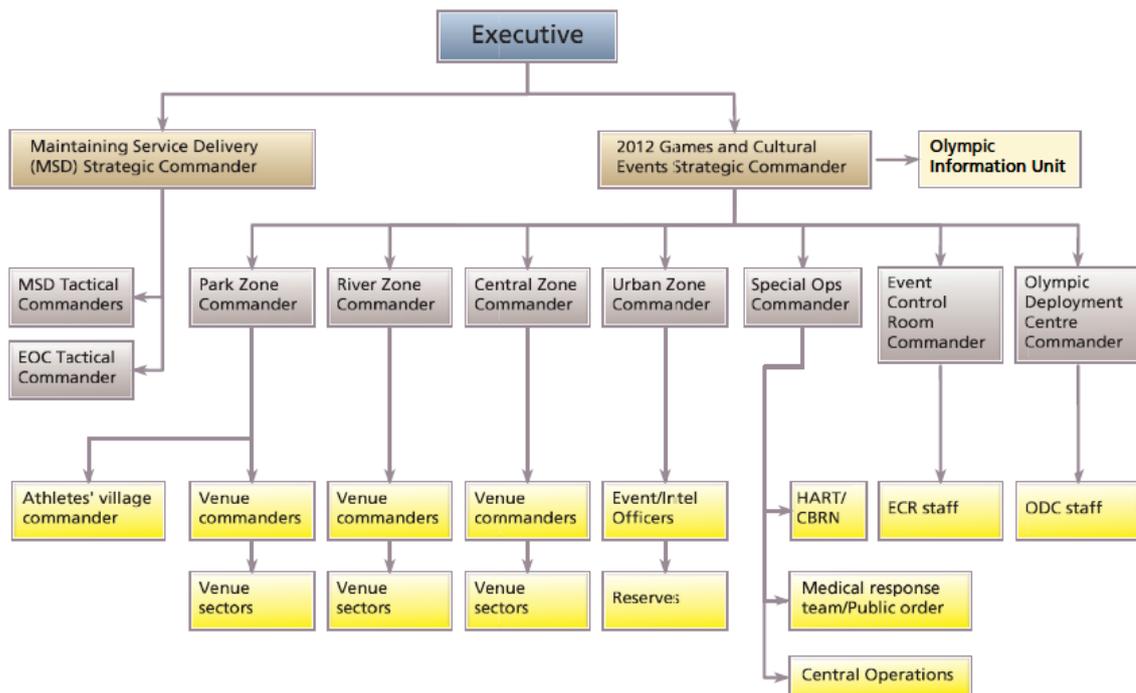
8.13.3 Control Services

Measures introduced to ensure sufficient Games-time cover included the provision of additional clinical support utilising the 'clinical hub' model within the EOC. EOC policies and procedures were all reviewed and updated accordingly, including business continuity arrangements. To offset the 25% abstraction from Control Services for the OECR and forward control points in venues, planning for relief was undertaken six weeks in advance rather than the standard three, and plans for support staff to be tasked to take non-emergency calls were enhanced. Furthermore, resource centre staff were backfilled in their substantive roles to enable them to work in EOC.

9. Games-time Operations



The command and control architecture the LAS adhered to during Games-time was as follows:-



9.1 Olympic Information Unit

Throughout the Olympic and Paralympic period, the LAS was subject to a range of additional reporting requirements. It was essential that these reports were issued reliably, accurately and in a timely fashion. The information required to complete these reports came from a number of different sources (due in part to the scale of the LAS 2012 Games operation). It was

therefore identified that this information should be passed to a single point of contact that would review, compile and issue a standard Games-wide update to satisfy external stakeholders.

In addition, there was a further desire to provide regular and detailed updates to internal stakeholders encompassing key 2012 Games-related matters and assess how the Games were impacting upon core business delivery. It was envisaged that by proactively providing information to interested partners, those members of staff actively involved in delivery would be protected from dealing with adhoc queries and information requests. The Olympic Information Unit (OIU) was scoped to fulfil this role.

The OIU was open from 3 July to 12 September. Its hours of operation flexed in line with the level of *known* or *predicted* 2012 Games-related activity (e.g. it was open 24/7 on all competition days, but reduced hours of operation during the torch and transition phases). These operating hours also took into account the RAG risk rating undertaking as part of the LAS's operational planning.

The OIU was staffed by an operational lead at all times when open (this role doubled up as Gold staff officer). This role was rostered in such a way that there were two officers on hand during peak hours (1400-2000 hours). The officer was supported by an administrator during peak reporting hours, who acted as first point of contact. Further support was provided by a clinical lead during peak operational hours to review any clinical issues identified. Additional support was also provided by a non-operational manager, with 2012 Games-planning familiarity, to increase capacity on identified peak days. A workstation was also prepared for a representative from Maintaining Service Delivery (MSD).

As the inclusion of the OIU was a late addition to 2012 Games delivery, the biggest challenge in establishing this unit was the availability of suitably trained and experienced staff in sufficient numbers to effectively staff the roster. The Service had committed a large proportion of its operational managers to 2012 Games command roles whilst those remaining were committed to providing essential management presence for MSD. This made the task of resourcing the OIU problematic. Whilst this was eventually resolved, it still required operational managers to work a testing roster with a flexible approach.

Working with the LAS's Management Information Department, the OIU developed a bespoke patient reporting database that allowed the identification of numbers of patients, their outcomes and what type of patient they were (athlete, spectator, workforce etc). Essentially this system (developed using SharePoint) supplemented the LAS's existing Computer Aided Dispatch system and enabled the fulfilment of the reporting requirements, internally and externally to NHS and DH. Through providing a 'live' view of ongoing patient contacts it was possible to monitor activity from the OIU without contacting venue commanders for updates. In this respect the SharePoint application proved a success.

The system linked with the main management information portal. It was subsequently able to provide LAS staff with access to ongoing 2012 Games patient reporting and contained a number of queries that provided tables, graphs and reports; these were incorporated into various reports and situational reports (sitreps) during Games-time.

In order to deliver the outputs expected of the OIU, significant work went into devising a daily battle rhythm. This essentially balanced the external requirements for meaningful updates with the capacity of key members of the operational delivery teams to provide the information that would be used to populate these. The outcome was a schedule that provided a daily schedule of activity, and thus provided an hour-to-hour set of deadlines for those working within the OIU.

It also provided a framework for operational commanders to structure their respective team's schedule.

9.1.1 Daily Battle Rhythm

OIU Daily Battle Rhythm					
Time	Type	Lead	Title	Participants / Recipients / Providers	Details
05:00	By Exception	NOCC	NOCC Agency Conf Call	NOCC Chaired	By exception only
05:30	Receive	TfL	Today's Summary		
08:00	Receive	Comms	Internal Comms Messages	Internal LAS	Via the Pulse front Page
09:30	Receive	OIU	Venue 0900 SITREPS	Venue Commanders	Submitted onto X Drive Folder
	By Exception	NW Cluster	NW Cluster Conf Call	NW Cluster	NHSL Sit Rep template - By exception only
09:45	Issue	OIU	GTCC Daily SITREP	NHSL	NHSL Sit Rep template UNIFY2
10:00	Receive	OIU	Zonal 0900 SITREPS	Zones, ODC, Comms, Special Ops, OECR	Submitted onto X Drive Folder
	Tele-Conf	OIU	GOLD Conf Call - 0900 SITREP	ZCs, ODC, Comms, Medical, Special Ops, OECR, SOR, OIU	
11:00	Issue	OIU	Strategic Briefing Document	Distribution List	
12:00	Receive	NACC	Collated National SITREP		
12:45	Receive	NHSL	Collated SITREP (clusters)		
13:00	Receive	OIU	Venue - 11.00 SITREPS	Venue Commanders	Submitted onto X Drive Folder
13:30	Tele-Conf	NHSL	NSHL Daily Conference	LAS Games Gold	20/7 - 12/9 daily
14:00	Receive	OIU	Zonal 11.00 SITREPS	ZCs, ODC, Comms, Special Ops, OECR	Submitted onto X Drive Folder
	Tele-Conf	OIU	Gold Conf call - 11.00 SITREP	ZCs, ODC, Comms, Medical, Special Ops, OECR, SOR, OIU	Submitted onto X Drive Folder
14:30	Receive	NACC	Daily Report		
15:00	Issue	OIU	Strategic Briefing Document	Distribution List	
	Receive	TfL	24 hour Look Ahead		
16:00	Receive	NHSL	Daily Summary Brief		
21:30	Receive	OIU	Venue Reports - 21.00	Venue Commanders	Submitted onto X Drive Folder
22:00	Receive	OIU	Zonal Reports - 21.00 SITREP	ZCs, ODC, Comms, Special Ops, OECR	Submitted onto X Drive Folder
	Tele-Conf	OIU	Gold conf call - 21.00 SITREP	ZCs, ODC, Comms, Medical, Special Ops, OECR, SOR, OIU	
22:30					
23:00	Closure Reports submitted at time each Venue Closes AND by Zone Commanders once all their venues are Closed:				
00:00	Venue Commanders	Issue	Written Zonal Reports	1. Send to Zone Commander / Staff Officer 2. CC E-mail to SITREP@lond-amb.nhs.uk	
00:30	Zone Commanders	Issue	Written Zonal Reports	E-mail the Zone Sitrep to OIU@lond-amb.nhs.uk Zone Commanders, ECR, Comms, ODC	
01:00					
01:30					
02:00					
03:00	Issue	OIU	Strategic Briefing Document	Distribution List	Provides end of day position

9.1.2 Games-time Reporting Workflow

The reporting process detailed below was agreed by the necessary operational leads, and employed throughout Games-time. This process took no longer than 2 hours to complete, meaning that the data and information captured within the strategic briefing document (SBD) was no more than 2 hours old by the time it was distributed. As the SBD was issued 3 times daily on competition days, key stakeholders and interested parties always had accurate and up-to-date information to hand. In turn this reduced the number of direct queries received by the OIU seeking updates.

The approach adopted to receiving these updates was a combination of verbal updates and written reports. Each venue commander would draft a venue sitrep and forward this to their zone command team. Each zone commander would then host a telephone conference with all of their respective venue commanders to discuss any risks of issues they had reported. Each zone commander would use information gathered in this process to draft a zonal sitrep and issue this to the OIU. These would then be reviewed (ideally by the OIU officer) and any issues escalated to Gold ahead of the conference call for further discussion and clarification as needed. The SBD would be drafted following this final conference call and issued to all recipients.

venues and additional training venues to allow training to be undertaken and 24/7 cover for the Olympic Park. This late request had been anticipated in part, however, extra staff were released early from normal duties to support the provision of cover. Additional pressure was placed upon these staff by inadequate LOCOG Medical staffing levels during this immediate pre-Games period. Furthermore, difficulty was experienced in obtaining a sufficient number of meal vouchers from LOCOG. This persisted throughout the 2012 Games and was problematic because staff were not allowed to take full snack packs into venues (only limited drinks and sweets). They were also prohibited by LOCOG from using the spectator food outlets within venues.

9.3 Torch Relay

The Olympic Torch Relay took place over 70 days commencing in Lands End on 19 May and culminating with the lighting of the Olympic flame at the Olympic Opening Ceremony on 27 July. The London leg of the relay took place over seven days (days 64–70) and saw 4.2 million spectators line the streets of the route as it passed through each of London's boroughs.

Previous experience of managing large transient events across London during the Tour de France and Beijing Torch Relay were key to the development of the tactical plan for this event.

Planning for this the Torch Relay took place over the three years before it occurred. Regular meetings took place centrally at City Hall and these were attended initially by the OGPO Emergency Planning Advisor and latterly by the Urban Domain Command Team. Local borough safety advisory groups (SAG) were held in all 33 London boroughs through which the Torch passed. These local meetings were attended by local complex management teams. The central meetings at City Hall saw the overall planning of the event, whilst the borough SAG meetings addressed the detail around the route specifics and timings.

Attendance at Torch Relay planning meetings was a challenge for LAS operational managers given their core duties. In addition, although the general route was shared with all partners some time before the Relay, the final details were restricted to LOCOG, boroughs and the MPS until a very short time before the Relay and were fixed. Given this, there were parts of the route where access to hospitals and ambulance stations was compromised. Congestion around the route further impacted on the ability of core resources to deliver clinical care in their local areas whilst the convoy was in their vicinity.

The resource requirement subsequently increased beyond the initial expectation and additional resources were needed for the silver reserve during this period. This had to be managed using LAS resources as PPA staff were not yet in London; LAS staff also had to be released earlier than expected from core duties to accommodate this requirement.

Dedicated Cycle Response Units (CRUs) were employed ahead of the Torch convoy to deliver clinical care to patients in the dense crowd. Mobile intelligence gathering resources were used to feed back to the tactical command team any information that could impact on the management of the event.

A direct communications link with the MPS Bronze commander (tactical-level), who was located in the Torch convoy, ensured accurate information and a 'real time' awareness of any route changes, medical emergencies or other issues.

Resources deployed on a daily basis varied slightly, but were in-line with the following:-

- 2 teams of four cycle responders (1 x early; 1 x late)
- 4 intelligence cells (2 x early; 2 x late)
- 4 emergency liaison officers (2 x early, 2 x late)
- 12 event specific (silver reserve) ambulances (4 early, 6 late & 2 night)

9.4 2012 Games Zones

Three zones underpinned 2012 Games activity: park; river; and central. In addition to these three, the LAS referred to areas where 2012 Games-related events took place as being within the urban zone. The silver reserve, in addition to providing support to venue operations, largely operated within the urban zone.

9.4.1 Park Zone (or Olympic Park)

LAS service delivery within the Olympic Park was overseen by a zone commander and deputy. They operated from the Park Operations Centre (POC) alongside with all other agencies. LOCOG's Park-wide Manager and Safety Officer were also based in the POC. The zone/deputy zone commanders were supported by a staff officer, tactical adviser and a communications officer. For the 2012 Games Opening and Closing Ceremonies, the deputy commander worked at the POC, with the zone commander working from the Silver Pod at the OECR. This was to provide greater resilience should a large incident occur in the Olympic Park.

LOCOG Medical Services maintained a 24/7 presence in the POC; this person fulfilled the roles of both medical radio operator and manager. Within venues, the venue medical managers spent a considerable amount of time outside the venue control rooms managing their medical teams.

9.4.2 Central Zone

This zone contained Wembley, Earl's Court, Horseguards Parade, Hyde Park and Lords venues. It also had responsibility for the road races, which all started and finished within one of its venues.

Central zone differed in its daily routine to other zones because of the location of its venues. In order to reduce long overtime hours caused by travel (and therefore a significant increase in total resource required) it was agreed that venue commanders would travel directly to their respective venue to be in position at the contracted time rather than travel via the Olympic Deployment Centre (ODC). An assurance document was signed by each of the venue commanders to demonstrate their acceptance of the additional responsibilities that this arrangement resulted in: ensuring a high standard of appearance for all staff; overseeing equipment provision and return; feeding arrangements. Within the other zones, these were the responsibility of the ODC.

An existing ambulance station operated as a small 'ODC' to process staff working at Wembley Arena and Stadium. A localised deployment plan was produced. Staff were offered cold snacks prior to their deployment and travelled via train as this was the most effective way of getting to Wembley Arena. This worked effectively and was meticulously planned and owned by the venue commanders.

The zone command team was based in the Silver Pod at the OECR during the 2012 Games and consisted of a zone commander, deputy, tactical adviser and staff officer.

9.4.3 River Zone

This zone comprised ExCeL, the O2 Arena (renamed North Greenwich Arena for the Games), Greenwich Park, the Royal Artillery Barracks and Wimbledon.

Venue specific issues of note were the politics surrounding the running of North Greenwich Arena (given that only part of it operated as a 2012 Games venue), the sheer size of ExCel, which caused operational difficulties, and the cross country day at Greenwich Park. The cross country day was problematic as its responsible International Federation did not attend the test event; there was subsequently a last minute request for three additional ambulances to cover the event.

Overall, the relationship between the zonal command teams and LOCOG was a positive one. Some confusion occurred regarding the role of LOCOG Medical Services and the LAS in its capacity as a contractor to LOCOG. Furthermore, inconsistencies were experienced in the quality of venue medical managers and the way in which medical services were provided on each site.



9.4.4 Urban Zone

Within the urban zone, delivery of emergency medical service provision was overseen to London's live-sites, along with all 2012 Games-related parallel events. As a result of the anticipated attendance figures and the potential impact on core business, management teams were deployed to the following live-sites on a daily basis:-

- Hyde Park
- Victoria Park
- Potters Field (adjacent to City Hall)
- Greenwich
- Blackheath
- Woolwich
- Walthamstow

In addition to the dedicated management teams, a number of mobile 'intelligence' officers were deployed to the areas of greatest need on a daily basis. The intelligence officers also reported on parallel events taking part across London.

Cycle Response Units (CRU) and Motorcycle Response Units (MRU) were used to cover areas of high demand and parallel events.

Silver reserve ambulances were used for calls around the footprints of the live-sites in order to minimise the impact on core business.

TfL had been contracted under the 'last mile' arrangements to provide support to spectators within Central London. This area, known as the Movement Management Area (MMA) extended from the west of Hyde Park to the City and also contained Euston and King's Cross

stations and the Southbank area. TfL established a multi-agency liaison team to support this area, the Zonal Event Liaison Team (ZELT), which Westminster City Council led. The ZELT was co-located with the TfL crowd stewards' control and the LOCOG multi-agency control rooms for the road races (when occurring). Agencies present included MPS, LAS, Westminster City Council, LOCOG City Operations, TfL, GLA and London Underground. The LAS attended daily, between 06.00 and 00.00, with representation outside these hours when required. An LAS presence in this liaison team provided access to much real time information on crowds and transport issues, which was directed to the OECR and EOC.



Managers working at the live-sites travelled directly to their place of work rather than via the ODC; this was primarily due to the shift length issues that would have otherwise resulted.

Resourcing for the urban zone was as follows:-

- Dedicated team of managers covering each site: 1 hour pre and post gates opening/closing
- Silver reserve vehicle availability against RAG rating: 3 early/6 late/2 night as a minimum
- 2 early and 2 late intelligence cell officers
- CRU and MRU as required

There was an assumption that the public transport network and transient routes between transport hubs and venues would experience an unprecedented increase in footfall during Games-time. This was attributable to: the provision of TFL travel cards with every spectator ticket sold; projected delays caused by the implementation of ORN/PRN; and the suspension of public parking in and around venues.

The main transport hubs and 'last mile' locations were:-

Transport Hub	Last Mile	Serving	Operational
Stratford International	Westfield Shopping Centre	Olympic Park	Olympic and Paralympic Games
West Ham	The Greenway	Olympic Park	Olympic and Paralympic Games
Kings Cross/St Pancras	N/A	Javelin Service	Olympic and Paralympic Games
North Greenwich	Greenwich Peninsula	North Greenwich Arena (NGA)	Olympic and Paralympic Games
Custom House (DLR)	London Pleasure Gardens	ExCel	Olympic and Paralympic Games
Greenwich Park	Greenwich High Street	Greenwich Park equestrian venue	Olympic and Paralympic Games
Waterloo	Southbank and surround	Southbank Cultural Festivals	Olympic and Paralympic Games
Marble Arch	Park Lane and surround	Hyde Park sporting venues and live-sites	Olympic and Paralympic Games
South Kensington	Exhibition Road	Hyde Park sporting venues and live-sites	Olympic and Paralympic Games

London Bridge	Tooley Street	Southbank and Potters Field live-site	Olympic and Paralympic Games
N/A	Victoria Park and surround	Victoria Park live-site	Olympic Games
Charing Cross	The Strand/Trafalgar Square	Trafalgar Square live-site	Paralympic Games

The British Red Cross were contracted to provide first aid cover at five of the main British Rail stations, which would act as hubs for spectators entering London; they were tasked with calls via the OECR where necessary.

Where possible, a member of the tactical command team or OGPO attended local borough SAG meetings and the relevant Augmented SAGs (ASAGs), which acted as focus groups for individual areas of operational planning.

Previous experience of managing large transient crowds coupled with the unknown factors related to the 2012 Games resulted in the development of a tactical plan based around a worst case scenario situation.

To minimise the effect on MSD, CRU resources were allocated to pedestrian areas such as Westfield Shopping Centre, Greenwich Peninsular and the Southbank. MRU resources were deployed on a daily basis to the perimeter of Hyde Park. There was also provision made for dedicated silver reserve ambulance resources, which were used on active standby in last mile areas of high activity as well as backfilling venue resources that were being used to convey patients to treatment centres.

Mobile intelligence officers were deployed to gather real time information in locations where the LAS did not have a static presence or closed circuit television (CCTV) links, often acting on information from the ZELT as to areas of interest or concern. These officers fed back directly to the tactical command team, which enabled the timely allocation of specialist resources where necessary.

Transport hubs and last mile locations accounted for 80% of all urban zone incidents during the 2012 Games; a 75% rate in Return of Spontaneous Circulation (ROSC) in our cardiac arrests patients was achieved.

9.4.5 Lessons Learned: Park, Central, River and Urban Zones

Description of lesson learned	Recommendations for future enhancement/modification
Went well	
Test events: there were a number of test events, which provided the LAS with the opportunity to redefine plans in resourcing, transportation, communication and logistics	Utilise staff experience to inform planning for future large scale events
Early commander appointments: this facilitated the establishment of good working relationships with venue teams. However, the critical relationships with Venue Medical Mangers were late in developing, as they were	Where possible, highlight the centrality of emergency medical service/Olympic Committee of the Olympic Games (OCOG) commander relationships and advocate engagement as early as possible

not involved in the planning stages and test events due to late appointment	
Clear organisation structures: these were developed with well defined reporting lines for each phase of operation of the organisation	Ensure that this underpins ownership and accountability
Recruitment: recruit appropriately skilled and experienced individuals within the organisation that integrate effectively with the operational team	Explore the potential of non-frontline staff contributing to event management to enhance resources and capture different skills/experience
Early commitment of staff: securing the early commitment of staff resulted in greater flexibility	Early commitment is vital to planning; secure staff as early as possible who have the desire and ability to learn and who are flexible and committed
Role not rank: the LAS moved from rank markings and introduced titles for roles rather than rank; this provided consistent message on role rather than rank	Consider this approach for large scale events. However, there were some comments that the lack of officer rank within the venue control rooms was confusing as other statutory services still had their rank. This lead to some radio operators being mistaken for officers and difficulties when dealing with armed services colleagues who recognise rank more than role
Scope to scale up: the approach in responding to a last minute increase in requirement for clinical staff proved successful	Daily tele-conferences for Gold and tactical command teams in days preceding test events to ensure actions are delivered
Commencement of secondments pre-Games: Staff were seconded two weeks earlier than the original date planned of 27 July to support this pre-Games activity; this provided an opportunity for training and briefing	Secondments should be planned at the earliest opportunity and this should be included in the planning for MSD
Daily briefing check list: these were produced to ensure staff familiarity with their venue, its geography and their roles	Regular communication provides consistency and clarity in messaging
Went less well	
LOCOG Medical Services: the LAS often experienced limited LOCOG medical cover, which resulted in LAS managers dealing and resolving LOCOG issues	Consider, and where possible, influence the development of an integrated resourcing tool for the OCOG and emergency medical service provider managers to ensure both parties undertake similar shifts thereby reducing capacity issues. Where this is not possible, be aware that this issue may arise and plan accordingly
Communication within LOCOG: the communication of venue medical risk assessment outcomes within LOCOG was inconsistent and failed to reach the appropriate levels. This resulted in a disparity between perceived requests and actual demand and confusion with LOCOG Sport and Venue management as to the responsibility divide	Considerable benefit would be realised through the finalisation of resourcing plans at least 8 weeks pre-Games with a relief factor must be included for additionality. Where possible, dissemination of relevant information across the OCOG should be advocated and encouraged. Where this is not possible, be aware that this issue may arise and plan accordingly.

between the LAS and LOCOG Medical and the expectation of provision	
Clarity re LAS role: there was a lack of clarity in venues between LOCOG Medical and the LAS as to what, why, how and when the LAS would respond	Wherever possible, the benefit of early identification of OCOG venue medical managers should be advocated in order to establish standard operating procedures. If this is not achieved, expect and prepare for this potential lack of clarity and variation across venues
Delay in LOCOG plans: the delay in the release of LOCOG Medical emergency plans impacted on our planning assumptions	Considerable benefit would be realised through the submission of plans no later than eight weeks prior to test events. However, plan for the possibility that this may not be achieved and prepare accordingly
LAS capacity: a lack of capacity within the Service to call on extra staff	Have a small panel of people to act as decision makers on change control and variances to recruitment plans
Test event staffing: after numerous assurances LOCOG Medical failed to provide appropriate level of staffing at the test events	Plan for the possibility that OCOG Medical may not have the capacity to ensure a sufficient level of cross-organisational testing is achieved; this may increase the necessity of learning/testing for some personnel during Games-time
Event management experience: the majority of LOCOG Medical staff had little or no understanding of stadia or event management	Where this is the case, the provision of additional training should be recommended to enhance service delivery and cross-organisational working in venues. If not achieved, plan with this in mind
Night resourcing: LOCOG had poor resourcing on nights at the Olympic Park; this meant the LAS provided the only on-site medical cover	Be aware that this may result during Games-time, and where possible, influence the OCOG's provision of Games-time night cover during the planning phase
Strategic versus tactical: there was a significant gap between strategic intent and tactical output for LOCOG Medical	Be aware that this may be experienced during Games-time and plan accordingly; influence where possible during the planning phase
Day jobs versus Games commitments: Tension over management of day job alongside 2012 Games commitments and capacity to manage both became increasingly difficult over final six months pre-Games	The early creation of a unit concentrating on service delivery would create greater capacity for managers with multiple portfolios
Confusion re roles: during mobile events such as cycling there was confusion as to who had ownership e.g. OECR or forward control team (FCT)	Involve event control room in planning process much earlier with a team dedicated to central zone
Lack of experience – LOCOG: there was a lack of experience amongst the LOCOG Medical volunteers of command and control events, pre hospital care and logging of issues	During the Games LAS staff engaged early and provided advice, support and on venue training with equipment, however, more of this should have been achieved, or the problem identified and planned for before the venues opened

<p>Test events – full engagement: Greenwich Park was an issue as the international federation responsible for the cross country day neither attended the test event nor had been engaged by LOCOG Medical which meant there was a last minute request for three more ambulances</p>	<p>A more comprehensive programme of test events, involving all the event partners, would be beneficial and should be encouraged; be aware that this may not always be achieved, however, and plan accordingly</p>
<p>Alignment of shift times: shift times between commanders and clinical staff did not align for all venues; this meant that staff arriving at a venue were not always met by an officer, which lead to some confusion</p>	<p>Try to align shift times more effectively</p>

9.5 Olympic Event Control Room

The objectives of the OECR were to:-

1. Assume command for all calls in event/live-site footprints: maintaining situational awareness and ensuring its communication between OECR and EOC
2. Ensure staff are deployed most effectively across OECR and EOC
3. Assess and mitigate risks

Decision-making was recorded on individual calls as appropriate. Each zone had a call log created for its management, and further decisions were recorded there. The final area of decision recording was in an observation book; this enabled managers to review decisions from previous days, ensuring staff were briefed accordingly.

9.6 Pre-Planned Aid

English ambulance trusts provided 225 PPA staff to London; these consisted of clinical staff, officers and event control staff. The aim was to provide a joint workforce from English trusts without depleting any one trust of too many resources. Each member of PPA staff worked with a member of the LAS who was familiar with LAS policy and procedures.

PPA staff were in London for the whole period of the Olympic Games with approximately half returning for the Paralympic Games. Goldsmiths University College (Goldsmiths) in South London provided accommodation for PPA whilst working in London.

Clinical and welfare support for PPA was considered important to ensure any issues or concerns could be effectively dealt with and 2012 Games resources subsequently not adversely affected. The LAS's agreement to use Goldsmiths was through the Metropolitan Police Service (MPS); they held the contract with Goldsmiths to use the accommodation and facilities.

A team of four training officers provided 24-hour on-site welfare support overseen by a practice learning manager. They worked 12-hour shifts based in the welfare office at Goldsmiths.

After the first few days at Goldsmiths, it became clear that further staffing was required and administration support was provided along with an additional welfare officer for the busier periods. The main reasons for this were that: the number of accommodation and support issues that were being raised had not been anticipated; and during the first week, training was being provided to some PPA and it was initially felt that a welfare officer would not be required

on days whilst this was occurring. However, as staff were arriving throughout the week additional welfare support was required to deal with their concerns.

The role of the clinical and welfare support team was to:-

- Provide clinical and welfare support
- Liaise with Goldsmiths in relation to accommodation, catering and other related issues
- Deal with transportation issues ensuring staff were transported as planned, and meet them on return from duties between 2200-0700hrs.



- Manage sickness and conduct whilst at Goldsmiths
- Liaise with the ODC management team in relation to issues with PPA, transportation or resourcing

The site at Goldsmiths was large and spread out with accommodation blocks separate from the main building, catering and welfare office. The clinical and welfare support team had no access to the accommodation blocks and

communication with staff was via the welfare office, TV display in the catering area or via mobile phones.

Wireless connection was poor and intermittent and only one computer was available for use. Ensuring staff received information was difficult due to layout of the College.

Communication between the clinical and welfare support team and the 2012 Games management team was good. The 2012 Games senior management attended briefings and debriefings at Goldsmiths. The clinical and welfare support team provided four reports a day to the ODC of activities at Goldsmiths.

The practice learning manager also communicated directly with the senior management team which enabled them to be quickly aware of any emerging issues so that corrective action could be taken.

As staff were based in London for up to three weeks it was considered important to offer some social activities for staff on their rest days to help relieve homesickness and boredom.

The College offered the opportunity for staff to join their gym at a reduced rate. It also had a cinema, and student union bar with games consoles and machines when open.

The clinical and welfare support team also had a range of sports equipment including football, rounders, cricket and tennis equipment for use and competitions, and also DVDs for cinema showings. The team also provided guided walks around London and a karaoke evening, quiz night and cards evening.

Sharing the welfare office with the MPS enabled the pooling of resources with the MPS using LAS games equipment and LAS PPA using their DVDs and massage chair.

The activities were well attended in the first few weeks. Towards the end of the 2012 Games, as staff became more familiar with each other, they spent more time visiting London independently, returning home, undertaking overtime or organising activities in small groups, and the requirement for central activities subsequently reduced. Staff praised the social support provided and the efforts of the clinical and welfare support team to ensure that all staff enjoyed themselves whilst in London.

9.6.1 Lessons Learned: Pre-planned Aid

Description of lesson learned	Recommendations for future enhancement/modification
Went well	
<p>2012 Games training package: the training package that was developed and delivered around the country to other English ambulance trusts was considered informative and highly beneficial in preparing staff for the 2012 Games</p>	<p>This demonstrates that training can be delivered nationally to various staff groups resulting in a workforce able to operate within another ambulance trust using vehicles and equipment within a short familiarisation period</p>
<p>PPA support: this was considered one of the great successes of the 2012 Games with all PPA attending debriefs commenting on how well they were supported at Goldsmiths</p>	
<p>Welfare support: providing 24/7 welfare support on-site, which included ensuring staff returned safely from duties and were on time for transportation proved very effective. The overwhelming message from PPA was that the LAS got it right and provided excellent welfare support for them whilst they were in London</p>	<p>Future PPA deployments should include on-site welfare support</p>
<p>Social activities: providing several social activities early in deployment helped to settle and integrate staff whilst developing team-working. PPA were very impressed with the social activities and support available, and also contributed ideas for other social events</p>	
Went less well	
<p>Staffing levels: there was initially insufficient staffing of the clinical and welfare support team</p>	<p>Staffing should include administration support and an overlapping of welfare office shifts at busy times to assist with workload and knowledge transfer</p>
<p>Information Technology (IT) installation: underestimated the amount of work required to install IT equipment at Goldsmiths</p>	<p>Time needs to be built into plans to ensure full IT and office resources are supplied, installed and tested prior to the event</p>
<p>Communication: at times communication to PPA at Goldsmiths was challenging due to staff being in various locations</p>	<p>Ensure a communications strategy is developed for future PPA deployment, so that it is clear how and when they will receive information</p>

9.7 Deployment of Staff

The LAS Patient Transport Service (PTS) operated from the ODC. The control function and services were provided on a 24/7 basis. PTS provided a core dedicated team of road staff, control and management throughout the two 2012 Games periods.

Based on the planning models, 15 PTS sitting-case vehicles were provided with a further five as resilience support, along with a marked PTS car and one courier van. These resources were based at the ODC to support the operational delivery. The ambulance vehicles deployed were yellow sitting-case Movano vehicles, each with a seating capacity of eight passengers in addition to the driver. They were equipped with audible and visual warning systems and all were clearly marked as a LAS vehicle. Each had an Airwave radio set and was driven by a uniformed member of PTS staff.

Utilising marked LAS PTS vehicles, each supplied with a Vehicle Access & Parking Permit (VAPP), allowed for access to both bus and ORN/PRN to and from venues to ensure transport times were maintained.

All journey times had been calculated based on information provided from the OGPO and TfL, and incorporated an element of redundancy to allow for unexpected delays. The long shift times planned for the 2012 Games periods allowed limited time for journeys between venues. As the requirement settled into 'routine' running, ongoing monitoring and adjustments were made. All journeys were pre-planned and scheduled within the PTS Meridian system allowing exchange of staff data between PTS and the ODC operating systems.

Training and familiarisation of venues, routes and key locations were given to all PTS staff deployed to work. The training was in the form of a briefing given by the PTS practice learning manager and the PTS work-based trainers along with aids in the form of information packs that were available in each vehicle.

All vehicles were equipped with a PTS personal digital assistant (PDA) and an Airwave digital radio allowing all vehicles to be tracked on mapping screens within the ODC and for on demand journey status reporting. All loading and journey instructions were given electronically. All pickups and drop-offs were time audited and tracked in real time through the vehicle PDA allowing for quality reporting at the end of each day and for any selected period. All individual journey loads comprised of individual named staff and was provided in either printed or electronic format as required on a daily basis. This allowed the ODC/PTS management team the ability to manage adhoc journeys and requests around scheduled planned runs throughout the operating periods.

The plan allowed for flexibility and adaptability and as expected, adjustments and additions were made eg. venues clearing down quickly and the venue team needing to be returned to the ODC early. PTS made every effort to accommodate this and a host of other adhoc requirements throughout the 2012 Games and was able to deliver these all successfully.

A total of 37 PTS staff were used and worked during both the Olympic and Paralympic Games.

9.7.1 Lessons Learned: Deployment of Staff

Description of lesson learned	Recommendations for future enhancement/modification
Went well	
Operational structure: the PTS operational structure proved an effective method to respond to adhoc requests	
Approach: listening to crews/self-managing teams/proactive outlook/combining runs/positive can-do approach	
Went less well	
Radios: the use of terminology (event control use of word 'PTS')/monitoring different channels	Consistent use of language across organisation and teams
Clarity re locations: there was some confusion about journey times and drop-off points in the first few days of the Olympic Games	Clarity of the location of drop off points needs to be agreed and communicated early, possibly with practice runs and clear collection signs. Journey times need to be assessed to ensure they are suitable. It would also be beneficial to have a PTS liaison role located in accommodation, especially for the first few days of the Games. Complete a list of postcodes for drop-off and pick-up for entry into Sat Nav in the event that new staff are required

9.8 Olympic Deployment Centre

9.8.1 Aims of the ODC:-

- To register all staff and provide security clearance
- To brief all staff of expectations, learning from the previous day and clinical update
- To feed staff
- To issue Airwave radios and essential medical kit
- To issue staff with their dedicated vehicles for the day
- To provide visible management presence 24/7 for duration of the 2012 Games

The primary function of the ODC was to process LAS and PPA operational staff effectively through a formally structured registration process. This included registration and issuing of accreditation, briefing, feeding station, issuing personalised kit and transportation to venue. On return, kit was collected including accreditation passes. The ODC was used to process staff for all in venue events and cultural events.



9.8.2 Team Selection and Training

In 2010, expressions of interest were invited from staff across the LAS to work as part of the ODC team. This was an ideal opportunity for staff from a variety of backgrounds to play a role in managing processes, staff and logistics. There was a huge interest and 24 staff were shortlisted from various directorates. The driver for this was the need to minimise abstractions of clinical staff from operations.

The overwhelming success of this process highlighted the significant potential of staff from various directorates, 50% of whom did not wear a uniform. It also proved that having the right number of staff working 24/7 provided clear and consistent messages of leadership, reducing inappropriate queries and resolving disputes quickly.

The ODC team wore distinctive uniform that could be seen and identified at a distance by any staff. The uniform had no rank and everyone wearing the uniform was regarded as a manager who would resolve issues and take accountability and ownership for consistency of delivery.

9.8.3 Resourcing and Scanning

Resourcing for the 2012 Games was coordinated primarily by two staff who scheduled shifts for both the LAS and PPA personnel. The resource team were available every day at the ODC from 07:00-19:00 for resourcing and pay queries. As the Olympic Games began, it became apparent that more specialist resource co-ordinators were needed to manage the influx of staff and their requests for overtime and shift changes and these were provided.

A scanning system was created and implemented, which facilitated ODC processes considerably. A barcode system captured staff starting and finishing work as well as creating a database to document all equipment, including drugs, which had been issued to them as they were deployed to venue. During the whole period there was 100% compliance on drugs and no equipment losses.

At peak periods, the ODC processed 450 people per day including specialist MPS assets.

9.8.4 Lessons Learned: Olympic Deployment Centre

Description of lesson learned	Recommendations for future enhancement/modification
Went well	
Selection process: team selection and the variety of skills from individuals from various directorates created a learning environment for everyone. Issues and tasks were viewed outside of the normal operational mindset	Further use of the concept of role before rank should be considered within the LAS
Integrated processing centre: this was the LAS's first opportunity to create an integrated processing centre employing resourcing, HR, logistics and fleet in one location	This is a useful model for future developments within the LAS
Briefing: the opportunity to brief staff at the beginning of their shift is immeasurable. The effectiveness of this communication and the visibility of clinical leadership on station	

resolved issues of interpretation and increased the quality of outcomes	
Scanning system: barcode scanning system became more refined with time allowing the ODC team to manage greater demand in a shorter period	To implement a barcode scanning system for various audit processes
Went less well	
Scope creep for briefings: generic briefings became specific briefings for zones which was never in the ODC scope, these continually changed and should have been the responsibility of venue management teams	Venue managers to be processed through the ODC and manage their respective briefings
Variation in shift times: venue managers did not start at the same time as clinical staff which caused confusion and lack of consistent messages	It would be beneficial if venue managers accompanied clinical staff to venue
Multiple portfolios: senior managers had multiple portfolios up to and during the 2012 Games	Early release date must be arranged to ensure effective handovers are completed

9.9 Special Operations

The Special Operations response for the 2012 Games was planned primarily against the national threat level of 'substantial' for international and Irish terrorism and 'low' for CBRN terrorism. In addition to the requirement for response to unconventional terrorism was the requirement for a robust response to Urban Search and Rescue (USAR), Safe Working at Height (SWaH), Inland Water Operations (IWO) and Marauding Firearms Terrorist Attack (MFTA).

The Special Operations plan was compiled according to relevant guidance and issued by the Tactical and Operational Preparedness for Delivery of Olympic Games (TOPDOG) Group; it contained resourcing levels expected for green, amber and red days as below:-

Green Day	2 full strength HARTs CBRN assessment team Tactical support office on duty
Amber Day	As Green Day plus: Decontamination team
Red Day	As Amber Day plus: 1 x extra full strength HART dedicated to the event

During discussions with multi-agency partners, it became clear that there was a desire to set up a joint-agency CBRN response team. This developed to a point where the London Fire Brigade (LFB) CBRN rapid response team (RRT) positioned a unit at LAS premises in East London; the team had the remit of responding to any 2012 Games venue in the east or south east of London. The LAS matched this response with a CBRN assessment team of two staff working on a 24/7 rota. The concept of this unit was to respond with the LFB team and provide a detailed assessment from inside the inner cordon of a hazardous materials incident. The MPS also based their Olympic specific explosive officers within these LAS premises. This unit

had the remit to respond to 2012 Games venues to diffuse, disrupt or mitigate the effects any explosive or potentially explosive device, either with or without a 'novel payload' (i.e. an attached hazardous substance). Although dispatched through three separate control rooms, these units worked closely together during Games-time and on most calls, deployed together to allow a sound multi-agency assessment of the hazard area.

Tactical advice relating to specialist response was provided on a rota basis to any zone commander who required it by a tactical support officer based in the OECR. This allowed immediate advice to be given by an officer who was aware of the overarching tactical picture at all times during the 2012 Games.

Support to the MPS protection plan was provided by the LAS in the form of 12 staff, who were seconded to Operation Reznor. This operation details the methods by which a protected principle will be extracted from a public venue in the event of a confirmed or suspected CBRN attack. The operation also details the hospitals to be used for that principle, the methods of decontamination available, both at scene and en route to the hospital, and the handover processes at the hospital. Of the 12 ambulance staff involved on Operation Reznor, seven were from the LAS and the remaining five were provided by regional ambulance services.

The deployment and management of all resources, except Operation Reznor call signs, sat under OECR, and in general, the resources were deployed to appropriate calls within the event footprints.

The co-locating of LFB and MPS teams was deemed to have been hugely successful. It gave staff the opportunity to get know other responders with whom they would attend a incident, and it was felt that this would result in a more joined-up and timely response.

9.9.1 Lessons Learned: Special Operations

Description of lesson learned	Recommendations for future enhancement/modification
Went well	
<p>Maintenance of cover: although the Special Operations response was not deployed to any large scale incidents during the 2012 Games, both the duty teams maintained cover throughout London with a call rate similar to that of a non-Games day</p>	
Went less well	
<p>Confusion re zone assignment: debrief comments relating to OECR indicated that there was at times confusion around what zone an incident should sit in; this normally occurred when there was a suggestion of a larger scale incident starting to build and it was unclear if it should sit with the urban zone or one of the other zones</p>	<p>Greater clarity ad agreement in advance of how responsibility will be assigned would be beneficial</p>

9.10 Debriefing

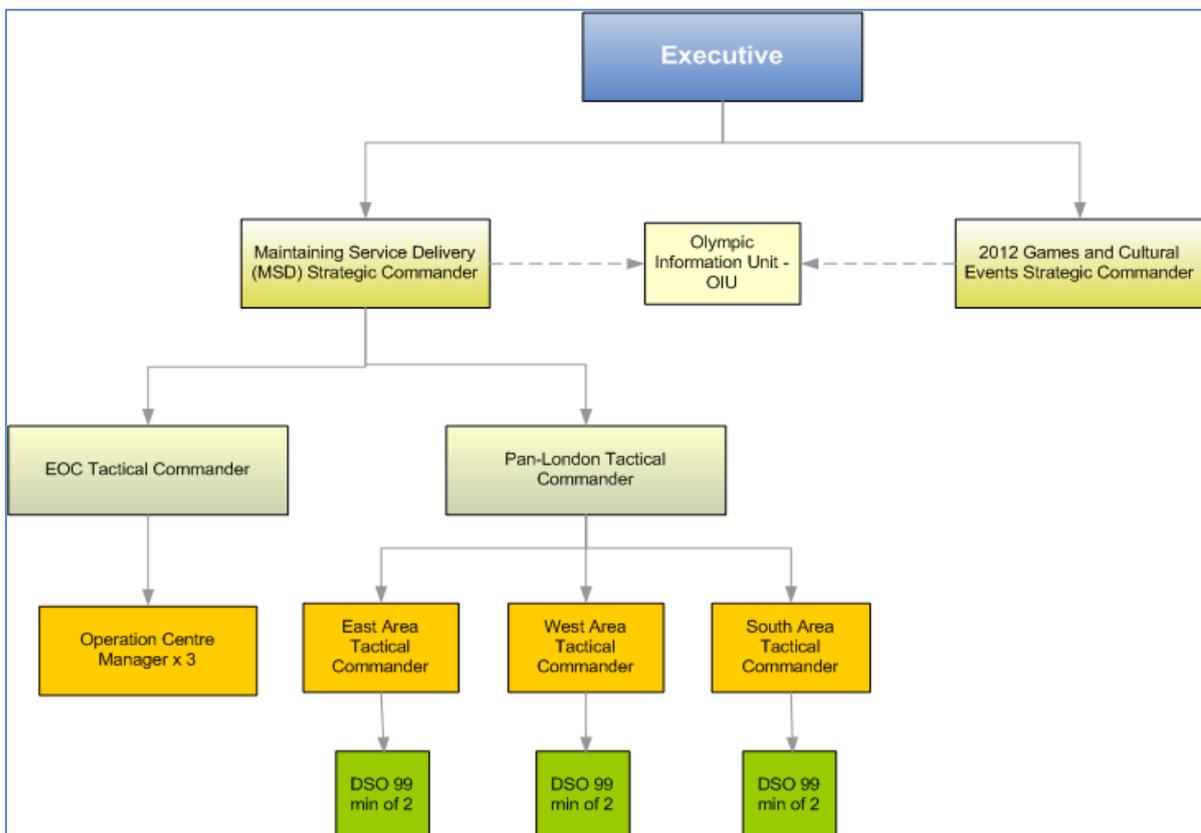
Debriefing was undertaken within the zones using a standardised format used by emergency services across the UK. The outputs from this were used to inform zonal and work area reports. Wider LAS debriefings were held by senior managers; the lessons learned gained from this process are contained within this report.

9.11 Maintaining Service Delivery

The MSD operational plans were implemented from early July as managers began to operate within the Olympic Cohort. All plans were in place by the 25 July. Overall, the new operating rhythm was embedded quickly after some initial minor teething problems. The Games-time resourcing plan developed for Area Operations was based on the LAS's existing resourcing plan with the additional assumptions of activity increases and individual risk assessments carried out prior to the commencement of the 2012 Games. Where possible resources were at 100% of the standard resource plan and additional resources were provided for the red RAG-rated days where the LAS perceived the largest risk. This was done to meet demand assumptions against a backdrop of reduced establishment (240 posts), significant vacancies in area operations, and no restrictions on staff annual leave.

9.11.1 Command and Control

MSD command and control sat alongside the 2012 Games command structure; as outlined below:-



9.11.2 Management Arrangements

The above operational management process was created to maintain a simple and effective system that involved all levels of management whilst empower complex level-managers with

responsibility for daily operations. Managers and team leaders demonstrated huge flexibility and gave considerable support to these new working methods. It was crucial to have clearly defined leadership each day, specifically during morning briefings where tactics were formed and issues resolved. Operational briefings took place within areas each morning chaired by an ambulance operations manager (AOM) with all complexes represented. The AOM then joined the daily Gold briefing.

These arrangements engendered a proactive approach to solving challenges and preventing issues from interrupting operational functions. Actions taken at both area tactical level and at Gold level encouraged a positive approach from all levels of management throughout the area.

Initially, Gold-level meetings focused more on tactical decision-making than strategy. However, this changed after feedback from the areas with each area devising tactics at the local level. Deployment of additional resources was planned by Gold effectively throughout.

As with the Olympic Cohort, MSD adopted a daily reporting and activity ‘battle rhythm’ to translate into a comprehensive internal and external reporting regime. The daily process for MSD was as below:-

MSD Daily Battle Rhythm

6.45	•MSD Gold receives handover from night duty AOM (tactical Commander)
7.00	•MSD Forecasting & Planning (F&P) Unit & Area Operational hubs open
8.30	•MSD Gold to assign F&P nominee to prepare MSD template for O.I.U. strategic briefing
9.15	•Review MSD template and submit to O.I.U by email
9.30	•Lead pre-meet with F&P team for 10.00am tele-conference
10.00	•Ensure F&P Manager has submitted MSD up-date for the NACC
10.00	•Lead Diagnostic & Intelligence Gathering tele-conference (as per agreed agenda)
11.30	•Approve MSD Gold action log for distribution
12.00	•Prepare and email 1st COO internal strategic briefing to Martin Flaherty
13.00	•Ensure F&P Manager has prepared 2nd strategic briefing for O.I.U.
13.15	•Approve briefing and submit to O.I.U.
14.00	•Meet with F&P team to develop SWOT and recommendations for next day
16.30	•Prepare for 17.00 planning & action conference call
17.00	•Lead Planning & Action tele-conference
17.30	•Approve MSD Gold action log for distribution
18.00	•Prepare and email 2 nd COO internal strategic briefing to Martin Flaherty
18.45	•Brief late-turn / night-turn on duty Tactical Commander
19.00 -7.00	•On-call

9.11.3 Communications

Good communication was essential. The strategic bulletins provided effective briefings for staff on what had and what was likely to occur each day. Some areas adopted an ‘in-cab’ briefing: a briefing left in the cabs of ambulances for staff. This covered important information of which staff needed to be aware and was highly successful. This system was particularly

useful for reminding crews of factors relating to events such as the road races. Because the LAS does not necessarily restrict its crews to specific geographical areas (nearest appropriate resource attends priority calls), all crews across London could have been in an affected area; in-cab briefings were a useful way of reminding them of the processes to be used to cross/access closed roads.

Many managers involved in the MSD delivery felt they were allowed to manage their areas from an 'operational' perspective without hindrance or interference; this led to an increased sense of ownership over local issues.

9.11.4 Transport

The daily patterns experienced suggest that the TfL's travel demand plan worked effectively, with significant numbers of people and businesses changing their patterns of travel and service delivery to ease congestion on the roads and make space on public transport for 2012 Games spectators. The second week of the Olympic Games was busier, particularly on the roads, possibly due to the lack of difficulties in the first week. The only real difficulties experienced with regards to traffic congestion were experienced in the days preceding the 2012 Games. Unusually, the ORN was only activated from the 25 July (this is normally done much earlier) although some of the lane reductions and banned turns were implemented from Monday 23. From Monday 23-27, some key routes did experience congestion and an increase of journey times for LAS around East London and in West London. The latter was mostly due to the combination of the ORN from Heathrow with a weight restriction on a flyover section of that road. As the Olympic Games started, users of these routes were avoiding them and congestion became less of an issue, particularly in the first week. TfL reacted to the conditions and reduced measures throughout Games-time; as 2012 Games traffic was flowing well, more of the roads were made available to everyone else. The Paralympic Games, because of a considerably reduced PRN in comparison to the ORN, and only one road race, had far less impact.

9.11.5 Performance

9.11.6 Lessons Learned: Maintaining Service Delivery

Description of lesson learned	Recommendations for future enhancement/modification
Went well	
Tailored management rosters: the provision of tailored management rotas, aligned to RAG ratings worked well, with management cover effectively focused	
Team leader empowerment: this went well with team leaders appreciating the autonomy and greater range of the role and station staff appreciating their constant protected presence to address issues and focus internal service governance and quality	To be considered in future management plans
Additional staffing: (including the support from contractors) led to a reduced utilisation rate	

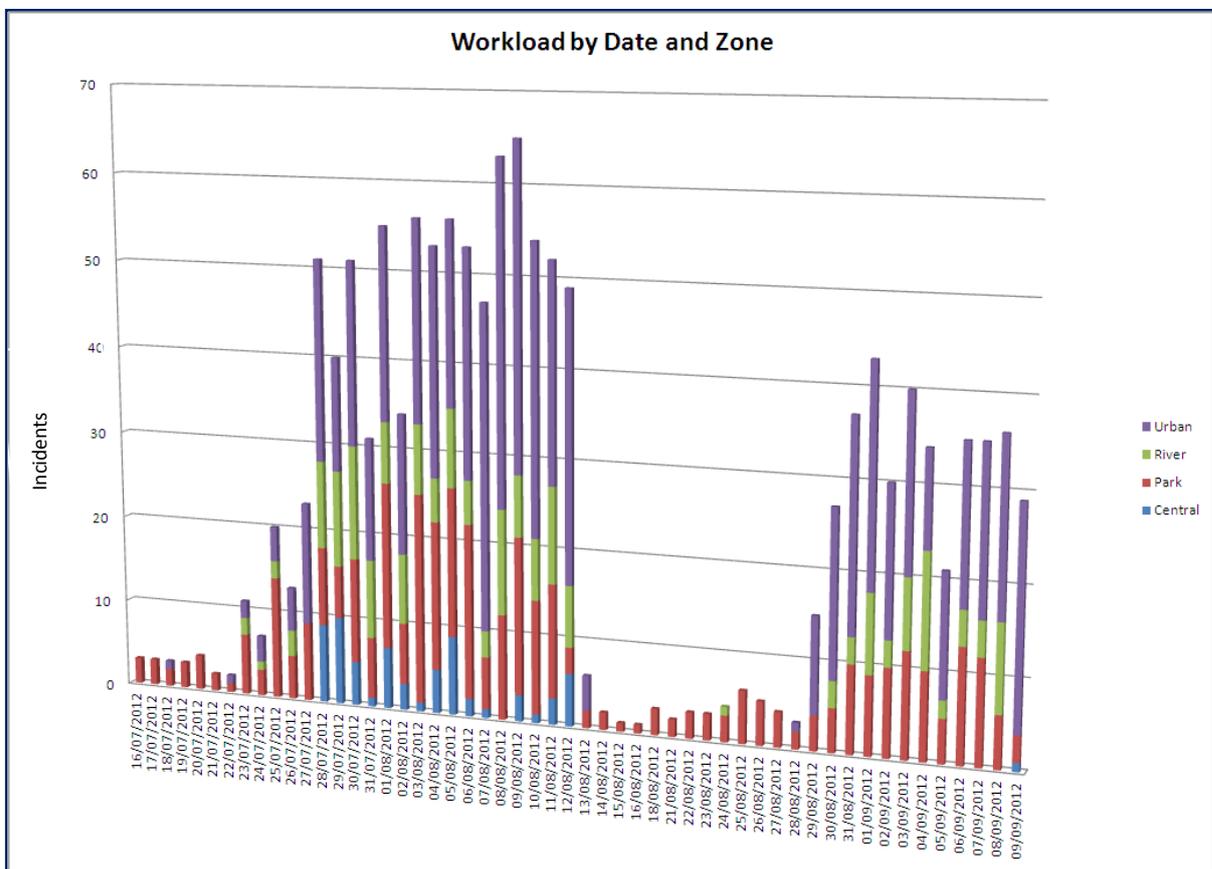
from the norm and created a Games-related relaxed environment	
Went less well	
Early planning: ensure planning for MSD is not delayed; plan well in advance	
2012 abstractions: despite attempts to ensure the Olympic Cohort was taken from across the LAS, there were some areas with greater abstractions of clinical and management staff than others; it proved challenging for MSD to then manage the provision of a robust system of management during Games-time	Greater consideration to local impacts of seconded managers and early clarity and plans as to how abstractions will be addressed
LOCOG plans: the late finalisation of plans impacted MSD, as footprints and last mile arrangements impacted this area of work as well as the Olympic Cohort	Focus within Games/event planning for early delivery of plans; at least eight weeks before commencement

10. Data and Analysis

From the data contained within the LAS's management information system and the additional data collection undertaken by the OIU, the following information was obtained.

10.1 Workload by Date and Zone

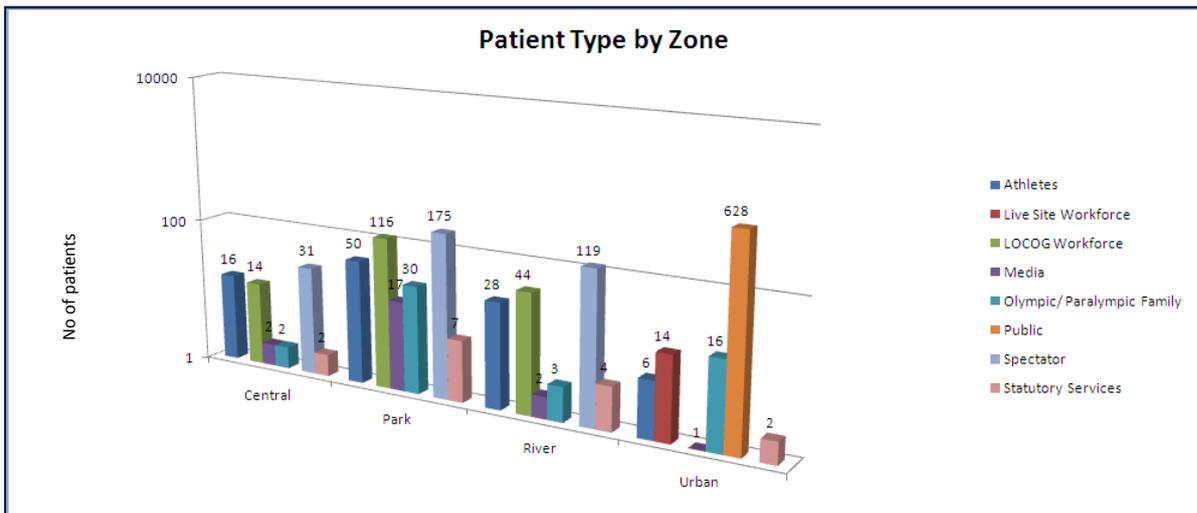
Workload was ordered by zone (park, central, river and urban) and indicated by day. The busiest zone throughout the 2012 Games was the urban zone. Given that the other three zones were operating within 2012 Games venues where LOCOG Medical services were available on site to assess, treat and discharge patients, this is not surprising. Some of the work undertaken within the urban zone at transport hubs and last mile locations is difficult to quantify in terms of being 2012 Games-specific. Some of these patients may have been unconnected to the 2012 Games, however, since it was not possible to distinguish this from patient records, they have all been included here. It should be noted that MSD resources would also have attended calls within the urban zone, for example, at transport hubs, if silver reserve was not available, and dealt with spectators and visitors to the 2012 Games.



10.2 Patient Type by Zone

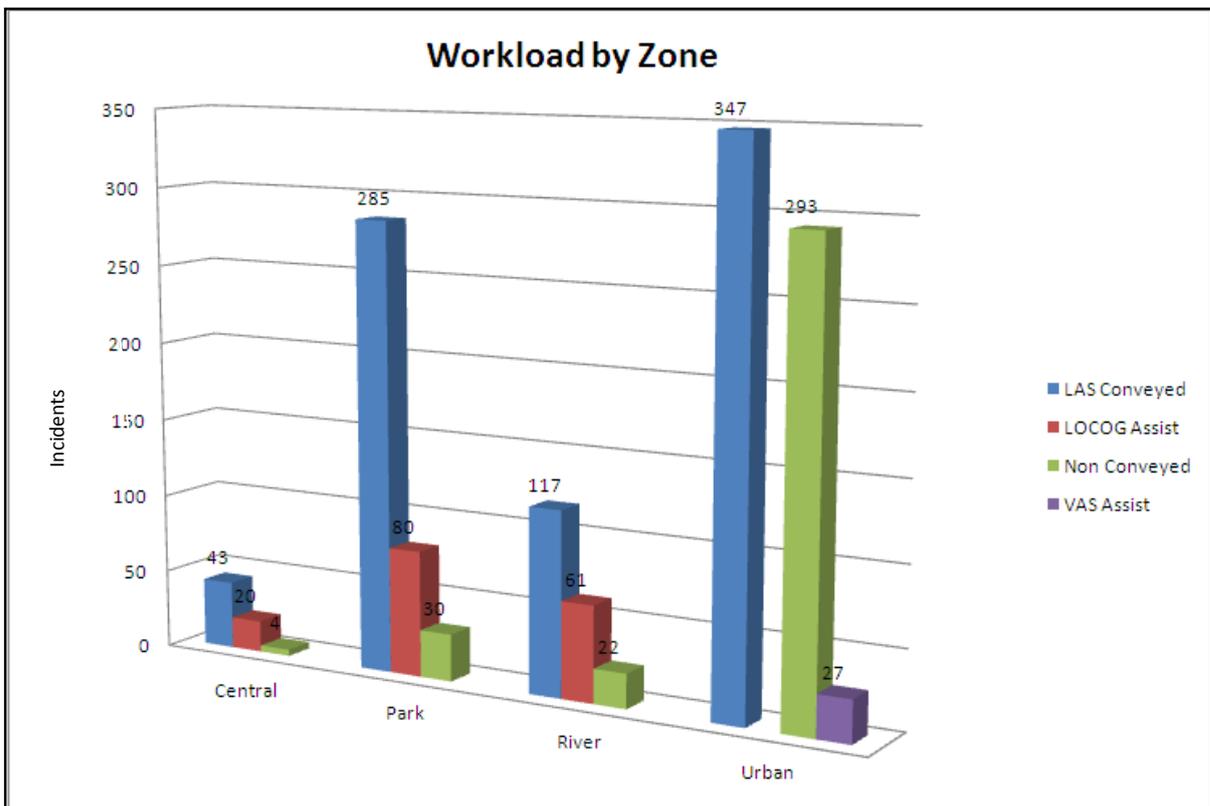
Again, in the graph below, the significant number of patients attended by silver reserve vehicles (urban zone) in the public spaces (last mile, transport hubs etc) is the largest single group. The fairly high incidence of LOCOG staff is not unusual; this has been the case at most other Olympic and Paralympic Games. In London, many of the LCOG volunteers and staff were working away from home or working long shifts. Given this, the numbers are not surprising, however, it should be noted that this reflects those that needed intervention or transport by

ambulance. Presumably the number seeking medical treatment from LOCOG Medical Services was significantly higher.



10.3 Workload Type by Zone

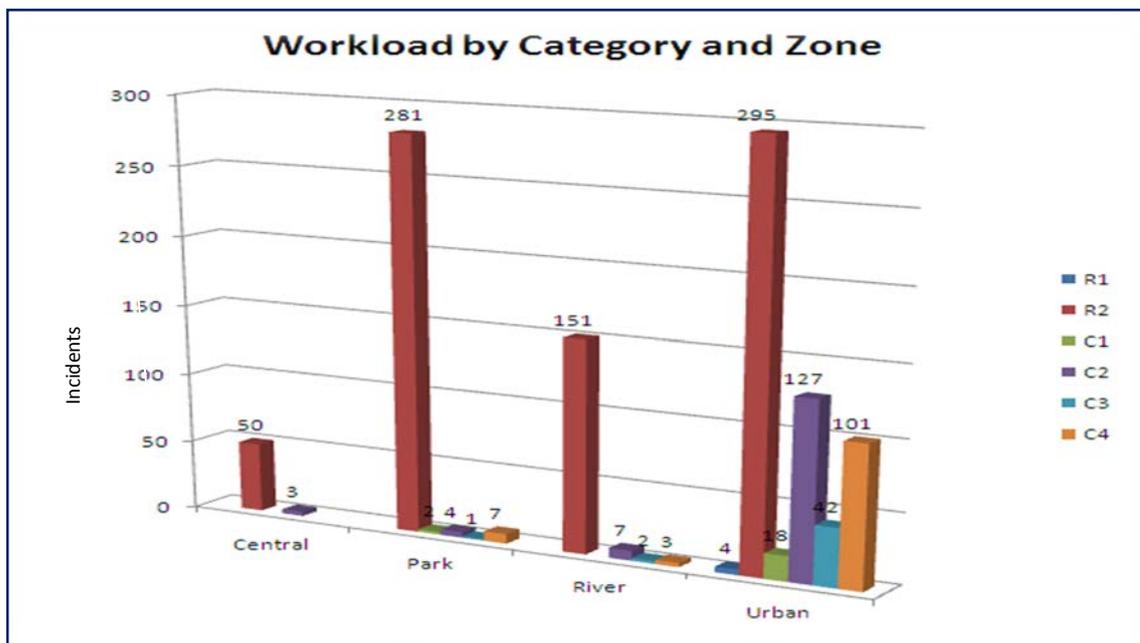
The LOCOG assist category refers to LAS crews attending, but not conveying, a patient at a venue. In many cases this was because the patient needed to be assessed and a 12 lead electrocardiogram (ECG) was required. LOCOG purposefully restricted the number of 12 lead ECGs they purchased and had available as all LAS vehicles contain this equipment, and LAS staff and vehicles were present at all venues during competition and training. This saved LOCOG money but did generate a not inconsiderable number of attendances for the LAS. Any other occasions when LOCOG needed assistance without that leading to a conveyance by ambulance are also included in this category.



10.4 Workload by Clinical Category and Zone

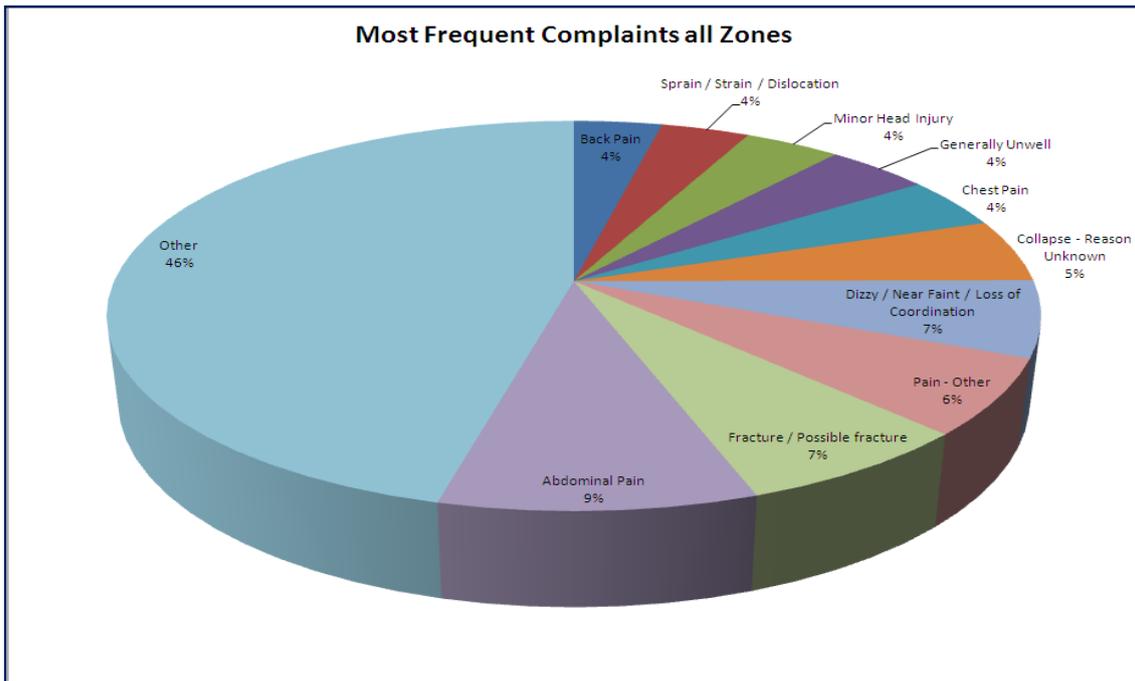
The LAS, as do all UK ambulance services, categorises calls into a series of clinical priorities. The 'R' calls (red) are the highest priority classified as immediately life threatened; categories C1 and C2 are potentially life threatened; category C3 is not life threatened but requiring an attendance; and category C4 calls are those suitable for clinical telephone advice and referral to other care pathways. As can be seen in the graph below, the incidence of the lower priority calls is significantly lower within venues where medical services were available. The high incidence of category C4 calls for urban zone is due to referral by telephone not being suitable for most patients in a public place; these patients would have been at transport hubs or within the last mile. In addition, when called by stewards to calls in the urban zone, efforts would be made to attend and support those staff.

A cardiac arrest receives a Red 1 category. None occurred in specific LOCOG sports venues although several cardiac arrests occurred in the Olympic Park. This is probably due to the immediate notification coming from a steward or other LOCOG staff member/volunteer or police officer via the LOCOG radio system to the LAS venue command team and not being processed in the normal way through LAS triaging systems. Of the seven cardiac arrests in the Olympic Park, six survived.



10.5 Illness/Injury

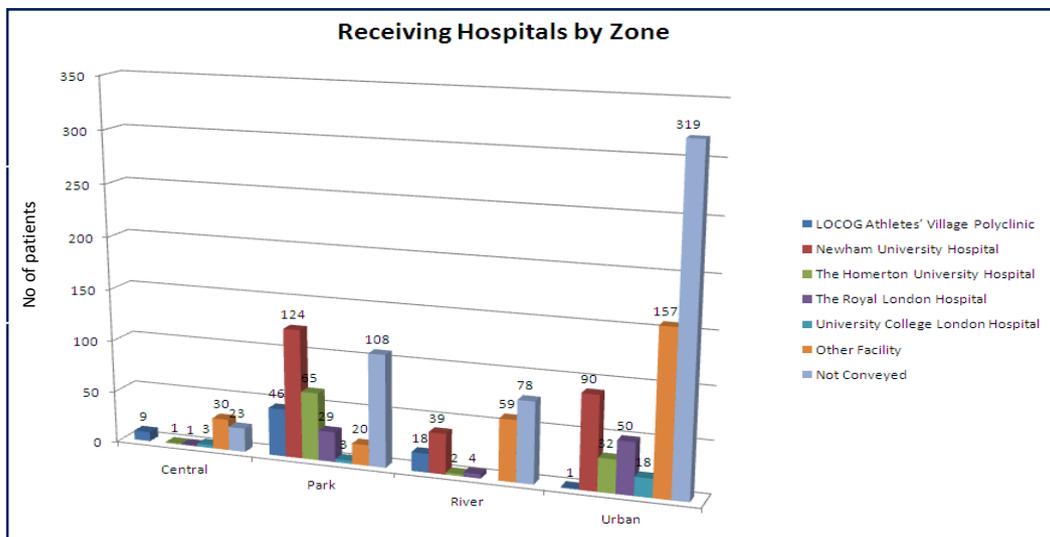
The following chart indicates the most frequent complaints across all zones. Those forming smaller groups are classified together as 'other'.



10.6 Receiving Hospitals

LOCOG nominated three hospitals for receiving the Olympic Family (OF). The Homerton Hospital was designated for athletes; the Royal London Hospital for trauma; and University College London Hospital for the International Olympic Committee (IOC) officials. This was always flexible, as, for example, athletes in the road cycle races would not, if taken very unwell or significantly injured on the course, have been brought back to the Homerton or Royal London if a similar hospital was closer to them. Clinical care would not be compromised by lengthy journeys if the patient was not stable. Hospitals around London and Surrey were briefed to ensure they had awareness of the OF requirements.

The quite significant number of patients conveyed to 'other' hospitals also includes those taken to heart attack centres and some to hyper acute stroke units, or trauma centres other than the Royal London. London has networks for all three of these conditions and these were used as normal throughout Games-time. All classes of patients were conveyed to the hospital most clinically suitable when required ensuring the normal levels of clinical care were ensured in London for all patients.



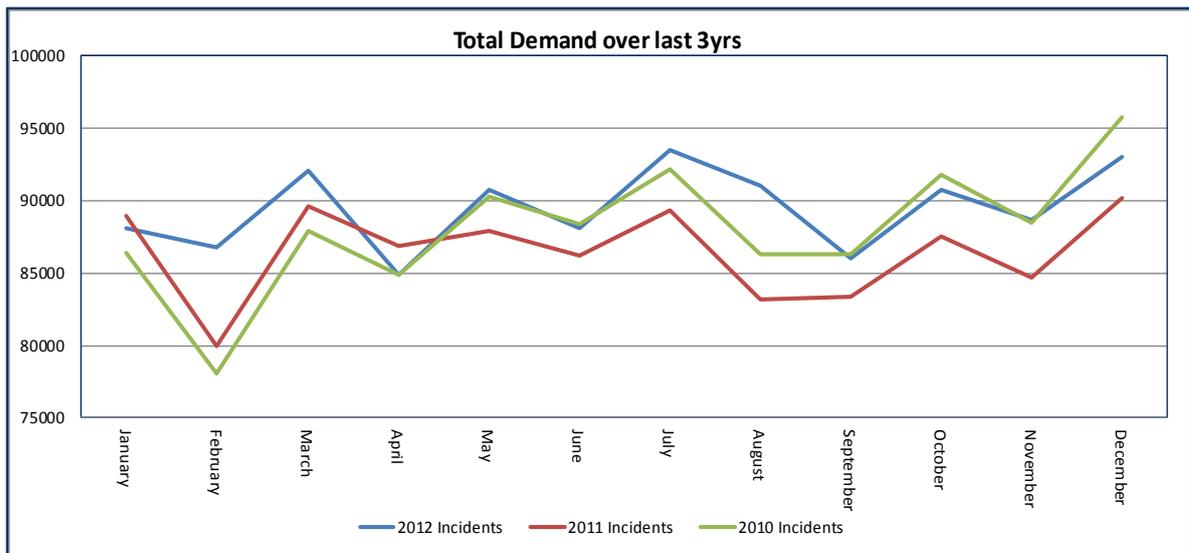
10.7 Maintaining Service Delivery

The graph below shows the number of LAS incidents (ie. calls attended rather than 999 calls or vehicles assigned) for the last three years. During 2011, the usual upward trend in demand was not experienced. During 2012, demand then returned to 2010 levels with an increase in activity in August, which coincided with the Olympic Games. A drop in call rates is usually experienced in August due to holidays and fewer people subsequently working. In August 2012, approximately 5000 additional calls were received compared to the rest of the year's comparison to previous years. This equates to approximately 5%, which is towards the lower end of the expected increase in core demand.

These 5000 calls include all core work and that experienced in the urban zone; the 2012 Games venues are excluded, however, as well as the additional road race resources.

The impact of the Paralympic Games is small; there is virtually no change discernible from the previous year when similar trends were experienced.

The increase in demand experienced is consistent with that predicted. However, using this figure to estimate core demand for future host Games cities is only advisable if accompanied by plans to address the behaviour of resident/normal population in relation to travel and working, and the presence of a developed integrated transport system.



11. Lessons Learned

11.1 Key Lessons Learned

Throughout the Olympic Programme a vast amount of lessons were identified. Some of these lessons learnt were applied during latter stages of the Programme whilst others will be applied in the future in the LAS. Furthermore, it is hoped that the Lessons Learned will be of benefit to ambulance services in other Olympic and Paralympic host cities and to cities hosting other big events, sporting or otherwise.

11.2 Lessons Learned

Description of lesson learned	Recommendations for future enhancement/modification
Went well	
Early scoping: commencing scoping in 2007 meant that there was sufficient time to plan comprehensively and subsequently address emergent risks and issues promptly and effectively prior to Games-time	Ensure sufficient lead-in time is factored into all programmes and projects (especially those of external-facing nature) so there is enough opportunity to forge strong and effective working relationships internally and externally
Consistent Senior Responsible Owner (SRO): identifying and maintaining SRO with executive responsibility throughout Programme with ability to escalate risks/issues to Chief Executive/Chair as required	Having constant, committed lead is highly beneficial both internally and externally; executive responsibility imperative to ensure Programme is given the importance and focus required
Tranches: dividing the Olympic Programme into four tranches and then into projects and workstreams ensured sufficient focus was given to all areas of planning with the detail managed at the appropriate level	Employ a tranche structure for programmes that last longer than a year (approx) to make the work manageable and so that learning obtained throughout the programme can feed into its latter stages
Operational input: involving operational staff from the beginning of the Programme and ensuring their centrality throughout the planning and delivery stages heightened the suitability of products for Games-time use	Ensure end users are involved from the outset so the suitability of products for ultimate use guaranteed; greater involvement in budget-setting would also be beneficial and enhance accountability
Dedicated team: the establishment of a dedicated planning team within the LAS helped ensure consistency and continuity throughout Games planning and delivery. The redeployment of staff sat within the final stages of the Programme	Dedicated, focused planning teams are advisable for programmes/projects where possible; appointment to permanent posts enhances the likelihood of continuity and subsequently saves time and effort getting new people up to speed. The redeployment of programme/project staff should be an intrinsic element of the programme/project
Methodologies: the use of programme and project management methodologies is beneficial, however, it is imperative that a flexible approach is adopted with the methodologies facilitating rather than hindering or complicating delivery	Adopt a 'lean' approach to programme/project management in relation to documents and governance; the appropriateness for the organisation is of greater importance than strict and inflexible adherence to the methodologies
Multi-agency working: working with other agencies in safety and security opened doors and facilitated the resolution of issues; it also provided opportunities for economies of scale ie. shared accommodation for pre-planned aid	Seek to align organisation with safety and security partners and to identify where there is scope to work together to deliver higher quality/less costly results

staff, shared use of Olympic Deployment Centre	
Pre-planned aid (PPA): the process to recruit, train and support PPA staff was highly successful and those staff had a positive experience, as did the LAS staff who worked with them	Look to use staff from other ambulance services to improve the robustness of resourcing plans and to give other services the opportunity to participate
Went less well	
Commissioning: the lack of initial clarity regarding the commissioning process or source of funding resulted in multiple rounds of a commissioning cycle and a high turnover of commissioners, which resulted in considerable repetition and time wasted; this was resolved once a permanent director and project manager were appointed and responsibility for commissioning assumed by the North West London Commissioning Partnership	To as great an extent as possible, at the highest level, petition should be made for a clear process and consistent commissioning process and presence to be defined as soon as possible during/after programme initiation. Lobbying of funding bodies should occur at all levels of the organisation with escalation upwards (to Chief Executive/Chair level) until a resolution is found. The risk of an undefined/ill-defined funding process and high turnover of commissioners should be highlighted and the impact of this on ultimate delivery and associated costs
Commissioning framework: there was a lack of a clear, timetabled commissioning framework; this resulted in additional unnecessary ambiguity having to be managed, which delayed planning and wasted time	As above
Dedicated finance lead: the absence of a dedicated finance lead throughout the Programme to ensure a consistent approach was developed and maintained, and production of detailed financial reports for commissioners, DH and Home Office	A permanent/consistent finance lead is imperative when costs exceed a certain level; a comprehensive working knowledge of the organisation's financial systems is also essential combined with a full understanding of the funding process once determined
Delayed 'Health' input: there was limited involvement of 'Health' (i.e. other NHS organisations and the DH) in the early stages of the development of the C3 Concept of Operations (CONOPS) and system testing and exercising	To as great an extent as possible, the strategic health authority/DH should be lobbied and/or influenced to input into planning to ensure 'health' sufficiently and comprehensively represented and included in planning; escalation up to Chief Executive/Chair may be necessary
Organising Committee Requirements: although the risk of the Organising Committee requiring additional resources at late notice had been identified, this still caused difficulties, particularly in relation to training venues; more contingency than had been planned for would have been beneficial	Ensure sufficient contingency (and more) factored into planning especially when working closely with/for external organisations; it is imperative that strong, effective two-way relationships are developed with support and input at the appropriate level
Access, accreditation and Vehicle Accreditation Passes (VAPs): there were some issues regarding access and accreditation in relation to delays and appropriate coverage	Dedicate sufficient time to the accreditation and access elements of planning and strive to build strong and effective relationships with the Medical Services and Accreditation function areas of the OCOG
'Last mile': there was no clear guidance regarding medical provision within the last mile, which caused some confusion at times during the Games	Imperative that clear guidance is provided by the OCOG regarding the last mile, including variations at different venues; ascertaining this should remain a priority; detail could potentially feature in the SLA

<p>Training with medical provider: pre-deployment training and exercising with the Organising Committee's medical provider was limited; this would have been highly beneficial aiding cross-organisational provision of care during Games-time</p>	<p>The benefit of this should be highlighted to the OCOG with provision for training and exercising factored into both the ambulance service and OCOG training schedules</p>
<p>Shift allocation: the resource requirement for allocating shifts to pre-planned aid and LAS staff was significantly under-estimated</p>	<p>The allocation and subsequent management of shifts should be thought through carefully with dedicated resource committed to the task prior to Games-time; scope to scale up resourcing should be factored into planning</p>

12. Key Sustainable Achievements

12.1 Benefits and Business Change

The approach to benefits management was simplified early on in the Programme so there was no duplication of the benefits management work being undertaken for the LAS's Service Improvement Programme. Given that the LAS's mandate for the Programme was its statutory responsibility for emergency medical service provision rather than envisaged benefits, the focus was on the perceived 'added value'; this was defined as follows:-

- To derive learning from Olympic and Paralympic planning to inform LAS development
- To manage the services provided during the Olympic and Paralympic Games so that clinical and response time performance is maintained across London
- To make appropriate demands of the LAS in a timely, structured way so that the service required by the Games is delivered within the immovable timeframe

This added value was realised. Firstly, the learning has been captured (see Lessons Learned) and will inform future LAS developments specifically in programme management and event planning. Furthermore, it was shared with colleagues from other ambulance services at the National Post-2012 Games Conference in October 2012.

Secondly, service provision to the 2012 Games was ensured without compromising clinical and response time performance across London. Business-as-usual provision was maintained with targets actually exceeded at some points during Games-time.

Finally, appropriate demands were made of the LAS in a timely, structured way to ensure readiness for the Games; this was demonstrated by the organisation's successful delivery to the 2012 Games and adherence to the Service Level Agreement with the LOCOG. Assurance of this readiness was sought extensively within the NHS and by Government throughout the Programme's duration. This culminated in visits by Andrew Lansley (Secretary of State for Health) and Sir David Nicholson (Chief Executive of English National Health Service) in June 2012.

Business change was largely managed at the end of Tranche 3 and the beginning of Tranche 4. However, throughout the Programme, where known, people with responsibility for ultimate Games-time delivery, such as the Games-time Operations Lead, were included on project and workstream boards. This helped ensure that plans were developed and implemented with input from subject matter experts and ultimate senior users/users. At the end of Tranche 3 and the beginning of Tranche 4 a formal handover process was undertaken whereby outstanding products were comprehensively documented and handed over to Games-time senior users.

12.2 Key Legacy Benefits

The legacy impact of the LAS's planning for and participation in the 2012 Games is far-reaching and extensive. The key legacy benefits identified are outlined below:-

PPA: this element of the LAS's delivery to the 2012 Games was one of its highlights. PPA staff spoke extremely positively about their experience in London and LAS staff were equally as encouraging about their experience of working with staff from other ambulance services. English ambulance services successfully demonstrated their ability to competently provide

emergency medical services together. This has enhanced the services' combined capacity to respond to planned and unplanned events in the future from a shared platform of training.

Multi-agency working: relationships were enhanced considerably with other emergency services, health services and Local Authorities throughout the planning and delivery stages of the 2012 Games. This strengthening will improve future multi-agency working and provide an effective model for how different organisations can work together effectively for both short and sustained periods of activity.

Training delivery: this element of delivery was also commended by pre-planned aid staff and LAS staff, who felt that they embarked upon their respective Games-time roles fully prepared and well-trained. The disability element was developed in conjunction with Stoke Mandeville Spinal Cord Injury Centre, Mencap, Scope, Sense and the Royal Society for the Blind and other organisations; this proved to be very popular with staff. In addition to equipping staff for their Games-time roles, this will be of benefit to staff in their business-as-usual posts at their respective trusts.

Event Control: although the Event Control Room was not part of the LAS's Olympic Programme, its development was necessary for the 2012 Games. It was therefore an important enabler and its production was viewed as a key interdependency. This facility is now available for all planned LAS events and unplanned events if necessary in the future. It has also been fully tested both prior to and during the 2012 Games.

Venue design: LAS input was made into all the new venue designs for the 2012 Games with public health and emergency service requirements factored into planning. This is of legacy benefit for those venues that will be remaining in use.

Staff morale: feedback from staff about their participation in the 2012 Games was almost without exception positive. LAS and PPA staff embraced the opportunity to be involved in a once in a lifetime event and approached it with professionalism and commitment. Their involvement gave them the opportunity to speak to other ambulance service colleagues about their respective services, which made them appreciate that some of their issues with the LAS were reflected elsewhere too and were not just LAS-specific.

Commissioning: once an approach to commissioning had been determined and a framework agreed, the relationship between the LAS and its commissioners was proactive and positive. Both parties understood the requirement for a productive working relationship to ensure that the funding requirement was approved at the local and national levels, and that the required level of care was subsequently delivered. Commissioners commended the OGPO for the approach it adopted, which demonstrated how a 'win-win' relationship can be developed and nurtured.

Working differently: providing non-operational support staff and managers with the opportunity to undertake new roles in a different working environment, for example, in complexes and at the ODC, was very successful with staff proving themselves highly motivated and capable. This is a legacy benefit for the future.

13. Recommendations

Anything which should be done differently	Recommendations: London	Recommendations: Olympic hosts
Increase the number of pre-Games opportunities to work alongside the Organising Committee to embed cross-organisational working practices	Ensure comprehensive planning undertaken informed by operational and planning staff	Ensure comprehensive planning undertaken informed by operational and planning staff; maintain proactive leadership role despite potential delay in engagement with Organising Committee due to differing timescales
(LAS) address more pro-actively the issues of the funding arrangements being overly complex and the system-wide difficulties and delays in decision making	Where appropriate, consider use of PPA staff to enhance cross-trust working and to swell resources when necessary	Adopt ODC model to ensure standardised deployment practices utilised
Focus within the programme on ensuring the detailed work for maintaining core service delivery undertaken early and prioritised within the core service management workstreams	Ensure early engagement and common understanding by stakeholders of the remit and requirements of those responsible for operational delivery	Delivery of the Games does not differ that significantly between cities due to the International Olympic Committee (IOC) host city contract; therefore, regardless of cultural and service model differences, learning from previous host cities experience is useful
		Focused effort on workforce in terms of recruitment, communication, training and rostering is essential to maintain staff interest and enthusiasm throughout planning and delivery
		Build flexibility into planning and anticipate changes in Organising Committee requirements: up to and beyond Games commencement

14. Programme and Project Terms

Programme and Project Terms	
Term	Explanation
Benefit	A positive outcome, quantified or unquantified, that a project is being undertaken to deliver and justify the investment
Benefits Realisation	The practice of ensuring that the outcome of a project produces the projected benefits outlined in the Business Case
Blueprint	A model of the business or organisation, its working practices and processes, the information it requires and the technology that will be needed to deliver the capability described in the Vision Statement
Business Case	Information that describes the justification for setting up and continuing a project; should be updated at key points throughout the project
Deliverable	An item that the project has to create as part of the requirements; depending on the type of project, another name for a deliverable is 'product'
Governance (Programme)	The functions, responsibilities, processes and procedures that define how the programme is set up, managed and controlled
Issue	A problem, query, concern or change request that affects the programme and requires management intervention and action to resolve
Issue Log	The log of all issues raised during the project or programme
Outcome	The term used to describe the totality of what the project is set up to deliver
Peer Review	Specific reviews of a project or any of its products where personnel from within the organisation and/or from other organisations carry out an independent assessment of the project; peer reviews can be done at any point within a project
Product	Any input to or input from a project
Product Description	A description of a product's purpose, composition, derivation and quality criteria; it is produced at planning time, as soon as possible after the need for the product is identified
Programme	A portfolio of projects and activities that are co-ordinated and managed as a unit such that they achieve outcomes and realise benefits
Programme Brief	An outline of the programme's objectives, desired benefits, risks, costs and timeframe
Programme Mandate	The trigger for the programme from senior management who are sponsoring the programme
Project	A particular way of managing activities to deliver specific outputs over a specified period and within cost, quality and resource constraints

Project Brief	A description of what the project is to do; a refined and extended version of the Project Mandate, which the Project Board approves and which is input to project initiation
Project Management	The planning, monitoring and control of all aspects of a project and the motivation of all those involved in it to achieve the project objectives on time and to the specified cost, quality and performance
Project Manager	The person given the authority and responsibility to manage the project on a day-to-day basis to deliver the required products within the constraints agreed with the Project Board
Project Portfolio	A list of all the projects and activities that together will deliver the required 'future state' described in the Blueprint and hence achieve the capabilities expressed in the Vision Statement
Risk	A negative threat (or potential positive opportunity) that might affect the course of the programme
Risk Register	The log of all risks identified during the programme
Senior Responsible Owner (SRO)	The title given to the individual who is ultimately accountable for successful delivery of the programme
Stakeholder	An individual, group or organisation with an interest in, or influence over, the programme

15. Acronym List

AACE	Association of Ambulance Chief Executives
A&E	Accident and Emergency Department
ACPO	Association of Chief Police Officers
AOM	Ambulance Operations Manager
ASAG	Augmented Safety Advisory Group
C3	Command, Control and Co-ordination
CBRN	Chemical, Biological, Radiological, Nuclear
CCTV	Closed Circuit Television
COO	Chief Operating Officer
DDO	Deputy Director of Operations
DH	Department of Health
ECG	Electrocardiogram
EOC	Emergency Operations Centre
GLA	Greater London Authority
GLC	Greater London Council
GOE	Government Olympic Executive
HART	Hazard Area Response Team
HR	Human Resources
IM&T	Information Management and Technology
ILU	International Liaison Unit
IOC	International Olympic Committee
IWO	Inland Water Operations
LAS	London Ambulance Service NHS Trust
LECC	London Event Co-ordination Calendar
LESLP	London Emergency Services Liaison Panel
LFB	London Fire and Rescue Brigade
LOCOG	London Organising Committee of the Olympic Games
LORPAs	London Olympic Resilience Planning Assumptions
MFTA	Marauding Firearms Terrorist Attack
MDT	Mobile Data Terminal
MoU	Memorandum of Understanding
MPDS	Medical Priority Dispatch System
MPS	Metropolitan Police Service
MSD	Managing Service Delivery
MSP	Managing Successful Programmes (methodology)
NACC	National Ambulance Co-ordination Centre
NHS	National Health Service
NHSL	NHS London (SHA)
NOCC	National Olympic Co-ordination Centre
NWAS	North West Ambulance Service NHS Trust
NWLCP	North West London Commissioning Partnership
OBC	Outline Business Case
OCOG	Olympic Committee of the Olympic Games

ODA	Olympic Delivery Authority
ODC	Olympic Deployment Centre
OECR	Olympic Event Control Room
OF	Olympic Family
OGC	Office of Government Commerce
OGPO	Olympic Games Planning Office
OIAMB	Olympic Investment Appraisal Monitoring Business Case
OIU	Olympic Information Unit
ORN	Olympic Route Network
OSD	Olympic Security Directorate
OSSSP	Olympic Safety and Security Strategic Programme
OSSRA	Olympic Safety and Security Strategic Risk Assessment
PCT	Primary Care Trust
PPA	Pre-planned Aid
PRINCE2	Projects in a Controlled Environment 2 (methodology)
PRN	Paralympic Route Network
PTS	Patient Transport Service
RAG	Red-Amber-Green Rating
ROSC	Return of Spontaneous Circulation
RVP	Rendez-vous point
SAG	Safety Advisory Group
SHA	Strategic Health Authority
SLA	Service Level Agreement
SIP	Service Improvement Programme
SITREPS	Situation Reports
SRO	Senior Responsible Owner (in accordance with MSP)
SWH	Safe Working at Height
TfL	Transport for London
TOPDOG	Tactical and Operational Preparedness for Delivery of Olympic Games
UK	United Kingdom
VAP	Vehicle Accreditation Pass
VAS	Voluntary Aid Societies
ZELT	Zonal Event Liaison Team



16. Appendix 1:

PARK ZONE			
Type of Patient:	Disposition:		
	LOCOG Assist	Non Conveyed	LAS Conveyed
Athlete	4	2	44
Olympic/Paralympic Family	5	1	25
Media	1	0	16
LOCOG Workforce	26	14	76
Statutory Services	3	1	3
Spectator	41	12	122

URBAN ZONE (including all other accredited locations)			
Type of Patient:	Disposition:		
	LOCOG Assist	Non Conveyed	LAS Conveyed
Athlete	0	3	3
Olympic/Paralympic Family	0	4	12
Media	0	0	1
Live Site Workforce	1	7	6
Statutory Services	0	2	0
Public	26	277	325

CENTRAL			
Type of Patient:	Disposition:		
	LOCOG Assist	Non Conveyed	LAS Conveyed
Athlete	6	0	10
Olympic/Paralympic Family	0	0	2
Media	2	0	0
LOCOG Workforce	4	2	8
Statutory Services	1	0	1
Spectator	7	2	22

RIVER			
Type of Patient:	Disposition:		
	LOCOG Assist	Non Conveyed	LAS Conveyed
Athlete	7	3	18
Olympic/Paralympic Family	0	0	3
Media	0	0	2
LOCOG Workforce	16	1	27
Statutory Services	1	2	1
Spectator	37	16	66



17. Appendix 2: Attendance by Location

Zone	Venue	No of Attendances
Olympic Park Zone	Basketball Arena/Velodrome/BMX Track	31
	Athletes' Village	79
	Olympic Stadium	65
	Common Domain/Media Centres	127
	Eton Manor	18
	Aquatics Centre/Water Polo Arena	18
	Copper Box	16
	Riverside Arena	26
	Other	18
	Total	396
River Zone	North Greenwich Arena	42
	Excel Centre	88
	Greenwich Park	57
	Wimbledon	8
	Royal Artillery Barracks	3
	Other	2
Total	200	
Central Zone	Earl's Court	15
	Lords Cricket Ground	5
	Horse Guards Parade	10
	Wembley Arena	7
	Wembley Stadium	2
	Hyde Park	4
	Other	24
Total	67	
Urban Zone	Woolwich/Greenwich	9
	Olympic Family Hotels	5
	Hyde Park/Exhibition Road	29
	Transport Hubs	271
	Victoria Park	9
	Last Mile	251
	Potters Field	9
	National Olympic Committee Houses	1
	Blackheath	1
	Torch Relay	3
	Other	79
Total	667	