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# The Future of Helicopter Operations in London

## A Discussion Document

### Introduction

London City Airport (LCY) opened in 1987 operating scheduled and corporate services to both domestic and European destinations. Annual passengers travelling through the airport broke the two million mark during the second half of 2005. London City Airport's Master Plan ([www.londoncityairport/masterplan](http://www.londoncityairport/masterplan)) forecasts that passenger numbers will reach eight million by 2030. During the last 19 years LCY has had extensive experience in fixed wing aircraft operations in an inner city location and has complemented this with a comprehensive, committed and detailed approach to reducing its impact on the local environment and local community.

### Background

The Mayor's London Plan and Ambient Noise Strategy have both identified an issue of helicopter operations over London and the need to consider how this might be addressed in the future.

The London Plan focuses on the issue of heliport development in Policy 3C.7.

#### ***Policy 3C.7 Heliport development***

*The Mayor will and boroughs should consider heliport proposals in terms of the need for such facilities and their wider environmental impact. Working with boroughs in east London, the Mayor will consider the need and practicality of identifying sites in east London for an additional heliport to support London's economy. Boroughs should, in general, resist proposals for private heliport facilities with the exception of predominantly emergency use facilities*

The Mayor's Ambient Noise Strategy identifies three policies on the impact of helicopters over London.

#### ***Policy 51***

*The Mayor will urge the Government, European Union, and the helicopter industry to progressively tighten noise emission standards, support the development of quieter helicopters, and ensure that noise impacts of related emerging aviation technologies are minimised.*

#### ***Policy 52***

*The Mayor will urge the Government and air traffic services to keep the noise implications of changing helicopter use under review, together with emerging opportunities for cost-effective monitoring and control, and to examine, in consultation with the Mayor, London boroughs and others, how relevant technologies could provide new ways of minimising noise impacts.*

**Policy 53**

*The Mayor will expect any proposed heliport or similar facilities to be assessed in accordance with Planning Policy Guidance Note 24 or its replacement, and noise impacts minimised, including in terms of projected changes in intensity of use of helicopter routes across London. Working with boroughs in east London, the Mayor will consider the need for and practicality of identifying sites in east London for an additional heliport to support London's economy. Boroughs should, in general, resist proposals for private heliport facilities, with the exception of predominantly emergency use facilities.*

In response to these policies the Greater London Assembly's Environment Committee launched an investigation into helicopter noise in London in July 2006. Key witnesses from National Air Traffic Services, British Helicopter Advisory Board, Civil Aviation Authority and London City Airport were asked to give their views on the current environmental impacts of helicopter operations in London. The committee is due to report on these issues in October 2006.

The Terms of Reference for the investigation are to:

- *Establish what impact any increase in helicopter traffic and noise has had on Londoners and how this is being addressed;*
- *Determine helicopter routeing in London and assess if improvements can be made to the way helicopter air traffic is managed;*
- *Establish the noise performance of helicopters typically used and the different types of helicopter use in London;*
- *Examine the effectiveness of the three policies on helicopter noise in the Mayor's Noise Strategy.*



## Helicopter routes and the growth in helicopter movements

### R160 Restricted Zone

A lack of data regarding the frequency and routing of helicopters over London was identified by the Greater London Assembly's Environment Committee as being a concern of Londoners.

There are two controls imposed by the CAA on helicopters flying over London and these are taken directly from the CAA 1996 Rules of The Air Regulations.

Rule 5 b and c state that a helicopter shall not fly,

*b) "below such height as would enable it to alight without danger to persons or property on the surface, in the event of failure of a power unit"*

*c) "over the area hereinafter specified, below such height as would enable it to alight clear of the area in the event of failure of a power unit, that is to say the area bounded by straight lines joining successively the following points:*

*Kew Bridge (N5129.18 W00017.17);*

*The Eastern extremity of Brent Reservoir (N5134.30 W00014.02);*

*Gospel Oak Station (N5133.27 W00008.97);*

*The South East corner of Springfield Park (N5134.12 W00003.20);*

*Bromley-by-Bow Station (N5131.47 W00000.65);*

*The South West corner of Hither Green (N5126.72 W00000.63);*

*Herne Hill Station (N5127.18 W00006.07);*

*Wimbledon Station (N5125.23 W00012.27);*

*The North West corner of Castelnau Reservoir (N5128.87 W00014.03);*

*Kew Bridge (N5129.18 W00017.17):*

*Excluding so much of the bed of the River Thames as lies within that area between the ordinary high water marks on each of its banks.*

This specified area is included on Figure 1 on the following page.

This area is known as the R160 Restricted Area and has been approved by the CAA and the Government in The Air Navigation (Restriction of Flying) (Specified Area) Regulations published in 2005. It extends from the Isle of Dogs in the east to Barnes in the west and follows the path of the River Thames. Within this area is a licensed helicopter landing site at Battersea, marked as 'London Heliport' in Figure 1, which is currently owned and operated by Weston Group Plc.

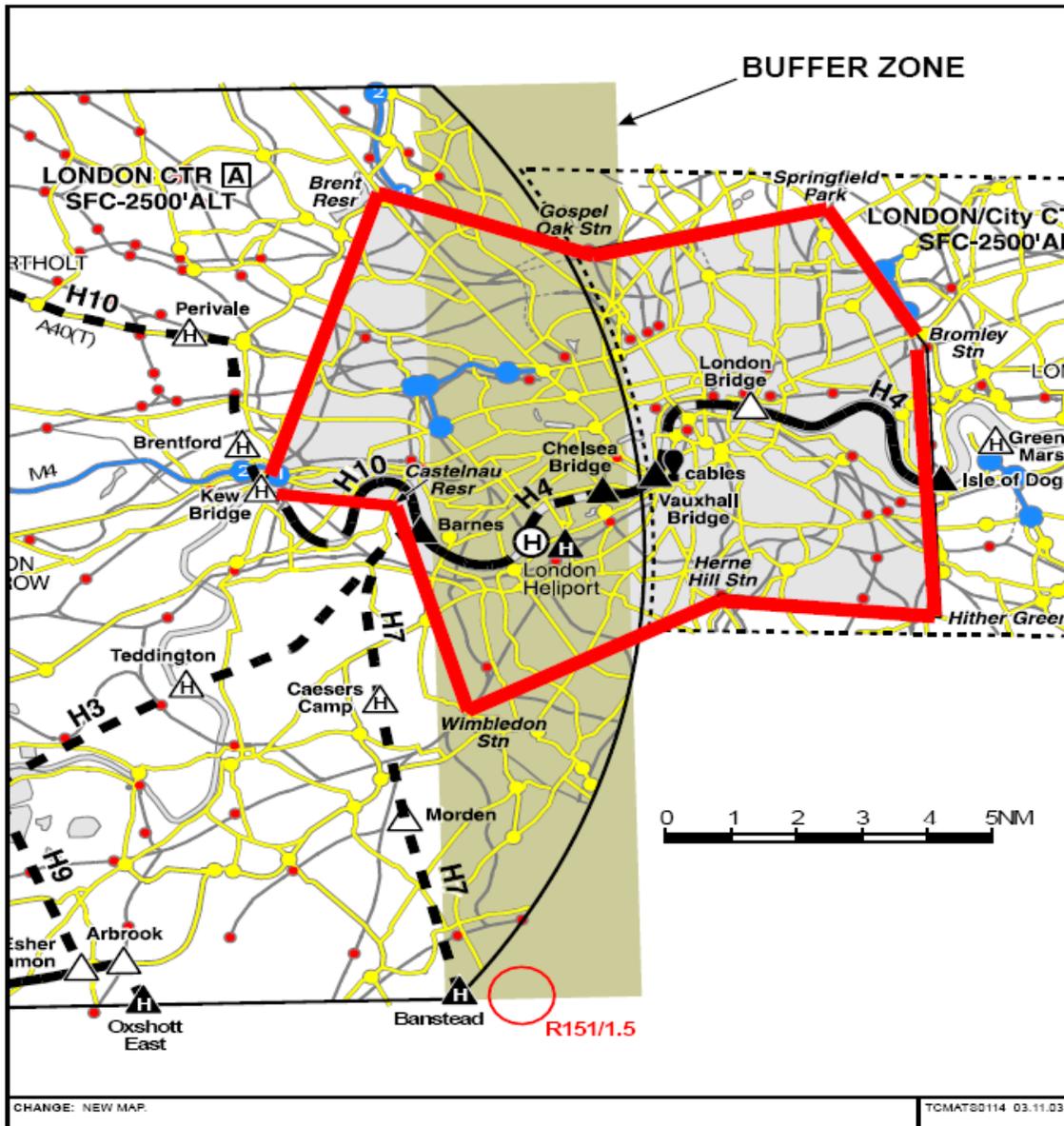
Rule 5 of the CAA 1996 Rules of The Air Regulations states that single engine helicopters are prohibited from entering the R160 Restricted Area, because of the need to be able to "*alight clear of the area in the event of failure of a power unit.*"

In order to ensure collision avoidance twin engine helicopters will follow instructions of air traffic controllers based at London City Airport, Thames Radar, Heathrow Airport or Battersea Heliport, but their movements are not generally further restricted and they have the freedom to fly the most direct route over any part of London, including directly through the R160 area.



Figure 1

# Restricted Area R160 (the "Specified Area")



**R160 Restricted Area**  
(CAA Report of the London CTR Review Group, September 2005)



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## Helicopter Route H4

In order to allow single engine helicopters to transit specifically through London without entering the R160 area and also to provide a routing for twin engine operators, National Air Traffic Services (NATS) has published the H4 Heliroute in its Aeronautical Information Package (AIP) which is a document refreshed every 28 days containing static information regarding air navigation. H4 is a fixed routeing following the River Thames from Barnes to the Isle of Dogs, which traffic can use when flying through London and applies to both single and twin engine helicopters, allowing for the fact that in the event of the failure of one engine, the helicopter should be able to land clear of any residential areas.

In order to enter the H4 route, traffic is required to obtain permission. The majority of fixed wing pilots in areas surrounding the aerodromes at London City Airport and Heathrow Airport must use instrument flight rules (IFR). In the case of helicopters, *which fly visually*, they require special clearance in order to fly through the London airspace. This need to fly visually means helicopters are required to have sight of the ground at all times. In conditions of poor visibility this means that helicopters need to fly at lower altitude to ensure the ground is always in sight.

This procedure often requires helicopters to make use of holding areas at either end of the route prior to receiving air traffic clearance resulting in them holding over densely populated areas, such as Greenwich and Blackheath in the east and Kew Bridge and Brentford in the west.

In addition to the H4 Heliroute the CAA has published a further six routes which extend westerly from the edge of the R160 restricted zone, allowing helicopters to fly through the London Control Zone without affecting aircraft arriving and departing from Heathrow.

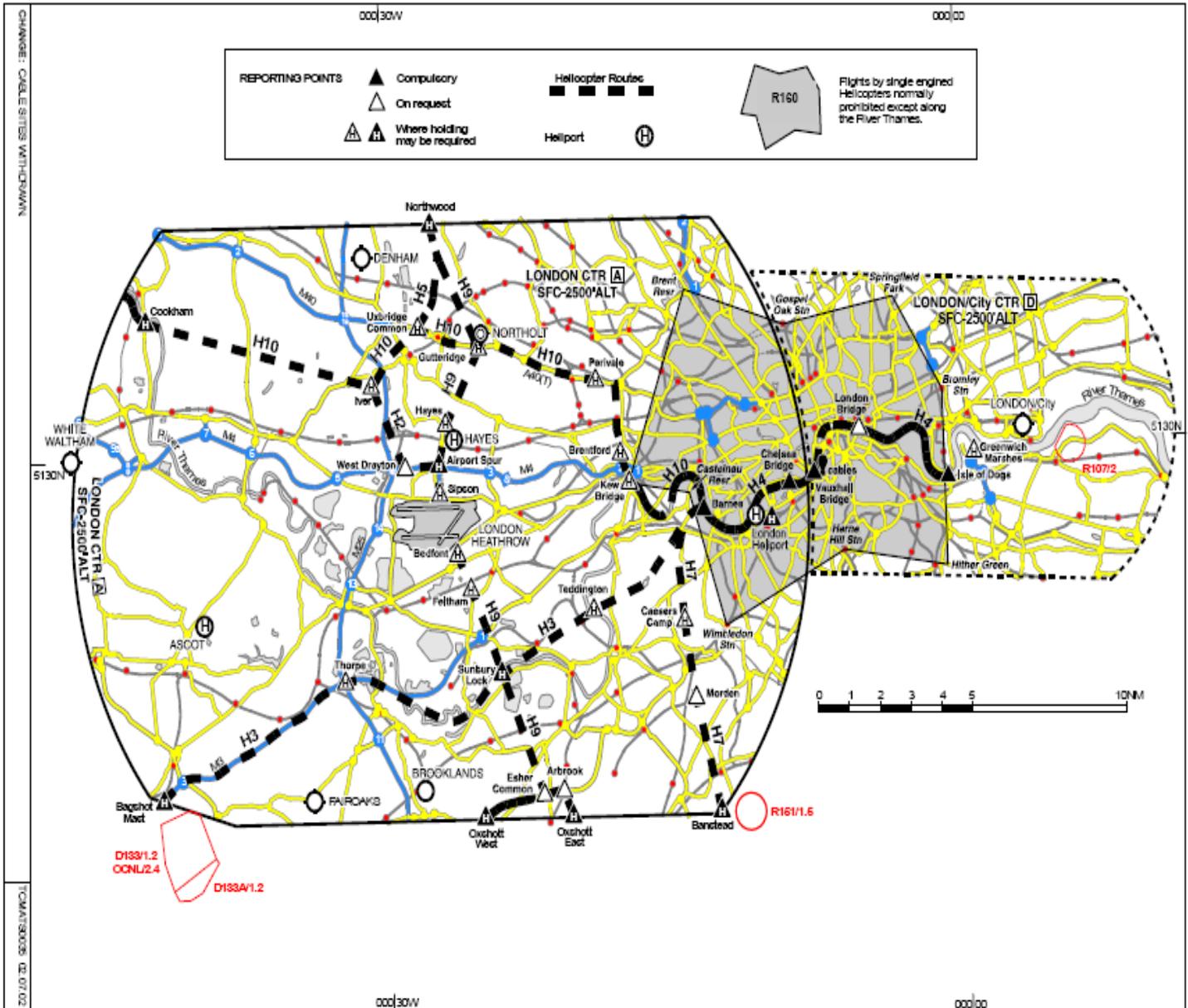
These routes are also designated by the letter H and a number and they each have a specific altitude to be flown *'at'* or *'not below'* and this ensures the helicopters are vertically separated from the IFR traffic using Heathrow.

The routes are shown on Figure 2.



Figure 2

LONDON CTR AND LONDON/CITY CTR



Helicopter routes in and around central London  
(CAA Report of the London CTR Review Group, September 2005)



These heliroutes and the necessary separation between visual and instrument traffic are controlled by two separate control zones in London; the London Control Zone and the London City Control Zone. LCY is concerned that there is no single body or organisation coordinating helicopter movements in London.

In the build up towards the Olympics Games in 2012, it is expected that helicopter traffic will significantly increase therefore providing more cause for concern.

All these routes are located over West London, apart from H4 which extends only as far as the Isle of Dogs in the east.

### The current issues

#### Police, medical and military operations

The Metropolitan Police Air Support Unit based at Lippitts Hill, near Loughton in Essex operates a fleet of three Eurocopter Twin Squirrel helicopters on a 24 hour basis over London.



These helicopters will often take off and hold over London so as to avoid wasting valuable response time. As a result more populated areas are overflown than ideally necessary.

The armed forces operate a variety of helicopters over London, including the Royal Navy and British Army Lynx helicopter and the Royal Air Force Chinook HC2. These aircraft tend to fly over much of London en route to destinations including Woolwich Barracks in South East London, on a 24 hour basis.



The Royal Air Force is responsible for the operation of the Royal Flight and No. 32 (Royal) Squadron has a fleet of fixed wing and rotor wing aircraft based at RAF Northolt, including Augusta A109 and Twin Squirrel helicopters. These helicopters are used to transport the Royal Family and senior Government members and frequently fly over London, on a 24 hour basis.



The London Air Ambulance (HEMS) operates a McDonnell Douglas Explorer helicopter based at The Royal London Hospital in Whitechapel, on a 24 hour basis. This aircraft is unlike many other helicopter types which fly over London because instead of a tail rotor, the MD Explorer is equipped with a no tail rotor system (NOTAR system). The NOTAR system provides the necessary anti-torque and steering control whilst eliminating the associated noise, thus making this aircraft much quieter to operate.

The 24 hour nature of all the above operations means that the noise impact over London can be significant. When responding to emergency calls these helicopters require 'free reign' over London and the noise impact of those movements is uncontrolled.

### **Civil operations**

There is a high demand for civil helicopter operations over London. As well as companies operating private sightseeing tours, there is also demand for helicopter operations from the financial districts in the City and Canary Wharf to other areas of London and elsewhere in the UK.

Additionally the operation of charter helicopters for property and land viewing and for corporate and private travel also contributes to traffic levels.

### **Air traffic control workload and cost**

The airspace surrounding LCY is controlled by our own Air Traffic Control service, which is provided on our behalf by National Air Traffic Services Ltd (NATS). In order for helicopters to transit this airspace helicopter pilots need to seek permission from LCY air traffic controllers, who prioritise between our own scheduled services and other traffic waiting to transit the airspace. Therefore our primary concerns relate to the workloads of air traffic controllers and the subsequent potential implications for disruption to our own operations.

Any unplanned increase in helicopter movements in the future could have a negative impact on scheduled operations from London's airports.

Currently helicopter operators do not bear the cost of all the air traffic control services they utilise as they fly over London and with an increase in traffic and the subsequent demand on air traffic services clarification of who pays will be important.



**Unlicensed helicopter sites**

Any owner of a piece of land may use it as a helicopter landing facility without any kind of permission. It is only necessary to inform the CAA if the site is considered to be located in a ‘congested area.’ This has been defined in article 118 of the Air Navigation Order 1995 as,

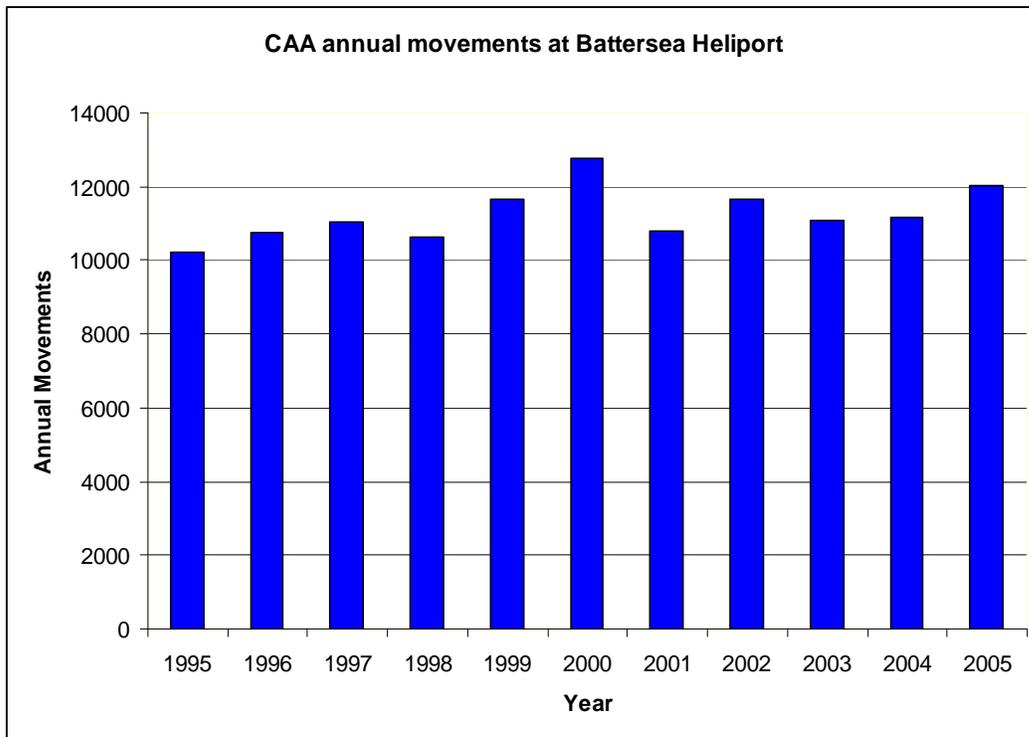
*“any area in relation to a city, town or settlement which is substantially used for residential, industrial, commercial or recreational purpose.”*

It is not currently necessary to license a helicopter site unless it is to be used by a scheduled helicopter service or for flying instruction, which is why many of the current helicopter operations over London are unscheduled.

It is also not necessary to provide a fire and rescue service provided that the unlicensed, temporary site will not be used for the purpose of passenger transport by more than 10 movements in any 24 hour period.

Currently there is only one licensed helipad facility in London at Battersea, which has a cap of 12,000 movements per annum excluding police and military operations. This was set by the London Borough of Wandsworth when it granted planning permission to the site in 1993. The latest CAA statistics for Battersea Heliport are reproduced in Table 1.

**Table 1**



**Battersea Heliport annual helicopter movements**  
 (Reproduced from CAA Airport Statistics. [www.caa.co.uk/airportstatistics](http://www.caa.co.uk/airportstatistics))



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Any further increase in helicopter movements could result in a rise in the number of unlicensed heliports. These sites are only required to inform the CAA of their existence if they are considered to be within a 'congested area.' This requires CAA permission based on Rule 5 of the 1996 Rules of the Air Regulations.

## Future options

### Option 1

A ban on civil helicopters flying over central London. This however would have little effect on the environmental impact facing London because it is the emergency service operations which are believed to contribute to the majority of noise and environmental issues.

Such a ban would seriously limit the contribution that helicopter operations make to London's economy and in the medium term could result in issues for the staging of the Olympic Games in 2012. As was seen in Athens and Sydney, helicopter traffic is an integral part of any successful Olympic Games. London's ability to meet the increased demand will be integral to maintaining its status as a world city.

### Option 2

Initiate a study to identify a suitable location for the provision of a new heliport to control and manage helicopter traffic. LCY is in principle prepared to work with key stakeholders to undertake research into locations in London that could facilitate a new heliport. LCY agrees with the Mayor that this research should be concentrated in East London.

Funded by the private sector, such a heliport could be planned, constructed and operated in a professional, co-ordinated and regulated manner. It would be regulated by the CAA and managed through a Section 106 planning agreement; this would ensure that it meets the anticipated demand for increased helicopter movements in a safe, controlled and efficient manner, and in doing so alleviates the environmental issues raised by the GLA Environment Committee in July 2006, and contributes to the economic development of London.

### Option 3

Provide an additional helicopter route, to allow traffic to travel from the current H4 route at the Isle of Dogs on a northerly track along the Lea Valley.

The 2005 London CTR Review Group, which was commissioned by the CAA and Directorate of Airspace Policy (DAP) to study the operation of helicopters within the London Control Zone (CTR) reported that in order to address capacity issues in the London airspace,

*"there may be a consequent need to designate a Helicopter Route via the Lea Valley."*



This would give helicopters a specified routing to the north. Adequate controls would need to be agreed between the CAA and helicopter operators to ensure that aircraft were controlled along one flight path over a much less populated area; therefore reducing the environmental impact. Such a route would also serve the adjacent main Olympic site at Stratford.

The environmental impacts of the helicopter holding points at either end of the heliroutes could be addressed with potential sites over the Thames Estuary and the reservoirs to the west of Chingford and South Woodford providing areas of low population over which aircraft could hold before flying into London. This would complement the holding point at the westerly end of H4 over the Barnes Wetlands.

#### **Option 4**

Extend the H4 helicopter route further eastwards along the Thames to the QE2 Bridge, allowing helicopters to hold away from the residential areas of Greenwich and Blackheath.

#### **Recommendations**

In order to reduce the noise pollution associated with helicopters flying over London and address the problem of unregulated and uncontrolled helicopter movements LCY recommends:

1. A co-ordinated approach to manage helicopter activity between the relevant London Boroughs, the CAA, The Mayor of London, the British Helicopter Advisory Board, NATS and LCY to work together to measure and control the environmental impact these aircraft have on the city.
2. Research to be undertaken into relocating the Metropolitan Police helicopter operations to a more centrally located heliport facility in East London, which would not only give them better operational access to central London, but also limit the residential areas over which they fly.
3. A new heliroute to extend north from the current H4 route following the Lea Valley and terminating at a proposed new holding point over the reservoirs to the west of Chingford. This would ensure that the noise footprint would predominantly be focused on non residential areas and that by corralling the traffic there would be more effective controls of aircraft movements.
4. Helicopter route H4 to be extended eastwards along the river as far as the QE2 Bridge. This would then allow for a new holding point over the Thames Estuary, which would take traffic away from the residential areas of Greenwich and Blackheath and reduce the associated environmental problems. Helicopters would then join the H4 route anywhere along its course as it follows the Thames through East London.



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The above recommendations should be centred around a heliport in East London, which has not only been identified by The Mayor of London as a location but is considered by LCY as a workable solution to the current environmental impact of helicopter traffic over London. Any future heliport will not be based at LCY, as this is an aerodrome operating fixed wing aircraft and there are no plans to change this.

LCY believes that it is in a position to participate in this study, not only because of experience in the industry but also because of close links with the community and local councils and our experience of operating a safety critical business in an inner city area. Many of the users of civil helicopters are business travellers, LCY's core market, particularly in our successful corporate Jet Centre. LCY would also have the resources and experience in Fixed Base Operation (FBO) handling and ATC to support such an operation cost effectively providing London with improved facilities and reduced environmental impact at no extra cost to the public purse.

LCY works continuously with the community to manage the environmental impact of its operations and through London City Airport's Consultative Committee have an open forum for local residents to discuss any issues. Additionally we work with the London Borough of Newham on environmental impact including noise monitoring and air quality through our Section 106 Agreement we work to improve the local environment and to monitor and reduce the impact of our operation. We could extend these initiatives to an East London helicopter operation allowing for the sustainable management of helicopter traffic both now and in the future.

### **What we would like you to do**

Please let us know your views on the foregoing discussion paper – whether you agree with us or not – and in particular adding points we may have overlooked.

Please reply to Dan Townsend either in writing or by email to the following address by Tuesday 31<sup>st</sup> October:

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