

London City Airport Safeguarding

April 2005



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1 INTRODUCTION

- 1.1 The Council's Unitary Development Plan (UDP) is the statutory planning framework for the future of the Borough. To help you when you apply for planning permission and give the background to both the UDP and other Council policies, the Regeneration and Development Division has produced a number of Supplementary Planning Guidance (SPGs).
- 1.2 Although not a formal part of the UDP, this guidance note is a material consideration when assessing planning applications. The guidance is updated more frequently than the UDP itself and you are encouraged to discuss your proposals with the Council's Development Control or Forward Planning sections of the Local Planning Authority (LPA) before you submit a formal application for development.
- 1.3 Please remember that this is Guidance only, and that your application will always be considered on its merits.

PURPOSE OF THIS GUIDANCE

- 1.4 The purpose of this guidance note is to inform both those who are considering applying for a planning permission, and Council planning officers, of the potential implications if a proposed development is located within a 'safeguarded' area around London City Airport (LCY). It highlights and provides a checklist of relevant planning and design issues that may need to be addressed as an outcome of a process of airport 'safeguarding'. It also highlights other Airport-related planning issues, which although outside the formal safeguarding regime, need to be addressed as part of the formulation of development proposals and their assessment at formal application stage. This guidance note is consistent with, and provides more detailed advice on implementation of current UDP policies T30 and T31, which relate to development in the airport safeguarding area.
- 1.5 Airports are strictly regulated by the Civil Aviation Authority (CAA) and developments in close proximity to them must adhere to specific criteria. These criteria are encapsulated in a process called aerodrome safeguarding which is generally defined in both physical and technical terms. The physical elements are those related to the assessment of obstacles in relation to the safeguarded surfaces for the airport, while the technical aspects refer to the assessment of obstacles with regards their potential impact on aerodrome navigational aids and communications systems. Within the United Kingdom, the general rules associated with aerodrome safeguarding are contained within CAA publications:
 - CAP 168 – Licensing of Aerodromes
 - CAP 670 – Air Traffic Services Safety Requirements and other documents such as ICAO Annex 14.

- 1.6 London City Airport, however, being a city centre airport within an already built up environment, varies from many of the standard physical safeguarding characteristics contained within CAP 168 and adheres to a unique set of criteria that have been designed by the Safety Regulatory Group (SRG) of the CAA.

WHAT IS AIRPORT SAFEGUARDING?

- 1.7 The purpose of airport safeguarding is to take the measures necessary to ensure the safety of aircraft, and thereby the passengers and crews aboard them, while taking off or landing, or while flying in the vicinity of LCY.

This is achieved by a process of assessing proposed development so as to:

- Protect the block of air through which aircraft fly, by preventing penetration of safeguarded surfaces;
- Protect the integrity of radar and other electronic aids to air navigation, by preventing reflections and diffractions of the radio signals involved;
- Protect visual aids, such as approach and runway lighting, by preventing them from being obscured, or preventing the installation of other lights which could be confused for them;
- Avoid any increase in the risk to aircraft of a birdstrike by preventing an increase in hazardous bird species in the vicinity of LCY, and wherever the opportunity arises, to reduce the level of risk.

- 1.8 The Council would like potential developers to be aware of the restrictions and implications of buildings in close proximity to LCY, so that their designs can incorporate the constraints while at the same time realising the optimal value of the development.

PRE-APPLICATION ADVICE ON AIRPORT SAFEGUARDING

- 1.9 Prior to a formal planning application being submitted to the Council's Development Control section, developers are strongly advised to devise their proposals in close consultation with both the Council and London City Airport, to gain early feedback and informal advice on how to comply the CAA's safeguarding requirements for London City Airport and the Council's own planning policies and design criteria. The applicant may contact London City Airport's Environment and Planning Manager at the telephone number provided in Section 12 of this document. The nature of advice will depend upon the level of detail provided by the developer, but is likely at this early stage to be limited to general physical safeguarding requirements affecting the development, particularly height restrictions as well as lighting requirements and landscaping. Certain proposals may require specialised safeguarding advice facilitated through LCY. Where it is identified at an early stage that further specialised advice may be required in support of a future

planning application the airport is able to recommend where such advice may be sought.

- 1.10 Any advice provided by either the Council or London City Airport at pre-application stage will be informed and without prejudice to detailed consideration of any future planning applications. The absence of any safeguarding concerns should not be construed as support for any proposed development.

2.0 PLANNING IMPLICATIONS OF LOCATING NEAR LONDON CITY AIRPORT (LCY)

- 1.1 The Aerodrome Safeguarding Process is included in UK legislation as an integral part of the statutory land-use planning procedure governing all development applications for planning permission. It is set out in Directions contained in Circulars issued under the Town and Country Planning Acts. In addition, a process of consultation called 'statutory safeguarding' between the Council and London City Airport (LCY) is underpinned by statutory direction.

- 2.2 Development proposals submitted to the Council are potentially affected by the following 10 main planning issues, which arise in order to ensure aircraft operational safety and public amenity. Seven of these issues arise as an outcome of the official safeguarding process and others arise from normal planning concerns about human safety and environmental amenity. These issues may affect the type, scale, height, design, method of construction, lighting and landscaping of proposed development.

- 2.3 The main constraints relate to the following:

- i) Physical Safeguarding Areas (Obstacle Limitation Surfaces)
- ii) Technical Safeguarding Areas
- iii) Assessment of Instrument Flight Procedures (Directorate of Airspace Policy DAP)
- iv) Construction and Cranage
- v) Birdstrike Hazard
- vi) Wind Turbines
- vii) Lighting

The above issues are included as part of the official Airport safeguarding consultation procedures agreed between the Council and the LCY.

The following additional airport-related concerns arising from the need to protect human life and promote environmental amenity are **not** covered by official Airport safeguarding consultation procedures, and are matters controlled solely by the Council. These relate to:

- viii) Public Safety Zones (PSZs)

ix) Noise-Sensitive Development

x) Roads and Railways

These issues are explained in more detail below.

3.0 PHYSICAL SAFEGUARDED AREAS (OBSTACLE LIMITATION SURFACES)

- 3.1 The operational capability of the Airport is directly influenced by natural features and man-made constructions inside and outside the Airport boundary. These features may result in limitations on the distances available for landing and take-off and on the range of meteorological conditions in which take-off and landing can be undertaken. To ensure that aircraft are allowed safe operational take-off and landing conditions a number of physical safeguarded planes or surfaces, some complex, have been established in the airspace above and around the airport (known as 'Obstacle Limitation Surfaces'). These may well impose constraints on the location, height and types of development proposed in the vicinity of the Airport, especially proposals that would otherwise penetrate critical areas of the surrounding airspace.
- 3.2 LCY has several physical safeguarding surfaces extending from either side of the runway, as well as complex surfaces associated with each end of its runways. The surfaces are made up of two horizontal surfaces linked together by two upwardly sloping surfaces.
- 3.3 The first surface is the lowest and most critical surface, which extends from ground level from either side of the runway in an upward sloping direction and extends 345m either side of the runway centerline.
- 3.4 At this point the sloping surface meets the second safeguarded surfaces, which is the first horizontal surface at a height of 45m above the aerodrome reference level of 4.95m above ordnance datum (AOD). Development within this area should therefore not exceed 49.95m AOD and represents the principle restraint on development. This horizontal surface is rectangular in shape and extends 650m either side of the runway centerline and 1125m beyond the runway strip ends.
- 3.5 The third surface – the outer transitional surface, links onto the edge of the 45m horizontal surface, and is an upward sloping surface which extends out to 2750m from either side of the runway centerline to a height of 154.95m AOD.
- 3.6 At this point the outer transitional surface meets the final horizontal surface, or the outer horizontal surface (OHS), which is circular in shape with a 10,000m radius centred on the Aerodrome Reference Point (ARP). The total safeguarding areas are shown on Map 1 of this Supplementary Planning Guidance Note. The safeguarding surfaces do not necessarily represent building height lines and the information shown is indicative only, and should not be used as a basis for the detailed design of the development proposals.

- 3.7 Extending out from each runway, east and west are upward sloping and diverging surfaces protecting the take off and approach paths. Each take off surface extends out to 3750m from the runway end, rising to 150m above the runway. The approach surface begins 60m out from the approaching threshold and rises to a height of 304.95m above the runway at 6000m, beyond which it remains horizontal at a height of 304.95m to a final distance of 10,000m. In addition there are Flight Protection Surfaces (FPS) which extend either side of the Take Off and Climb surfaces (TOCS). The FPS extend out from the outer edge of the 45m horizontal surface in an upward sloping direction along the edge of the TOCS to a height of 154.95. On the western end of the runway the FPS also expands out through 60 degrees to the north of the surface, to protect the Standard Instrument Departure (SID) Route used by aircraft taking off from the runway to the west.

These surfaces can be summarised as:

Take off and climb surfaces (TOCS)

Slope: 1:25

Length: 3750m

Width: 150m (inner edge) to 1275m (outer edge). (15% divergence - 1:6.67)

Inner Edge: From end of Take-Off Distance Available (TODA)

Grid Reference for the end of TODA on the extended runway centre line:

Runway 10 - 543296E 180467N (ht 5.3m)

Runway 28 - 542100E 180494N (ht 5.03m)

Approach Surface (APPS)

Slope: 1:20

Length: 10000m overall (6000m + 4000m horizontal)

Width: 150m (inner edge) to 3150m (outer edge) (15% divergence 1:6.67 for the first 6000m, then for the remaining 4000m)

Inner Edge: On the extended runway centre line 60m prior to the landing threshold.

Grid reference of threshold:

Runway 10 - 542077E 180494N (ht 4.95m)

Runway 28 - 543411E 180464N (ht 5.71m)

- 3.8 In general these surfaces are to be considered limiting surfaces to which infringements by proposed developments will not be permitted. The Safety Regulation Group of the Civil Aviation Authority (CAA) advises that the safeguarding surfaces may change at any time, and although it will be avoided if at all possible, this may change without notice or consultation. The CAA also advises that they cannot guarantee that the safeguarding surfaces will not change in any way detrimental to any development now proposed or which may be contemplated in the future. Buildings currently within this zone, which significantly exceed the building height, predate the creation of the Airport, or were constructed under a different period of regulation and are generally not to be referred to as any precedent.

4.0 TECHNICAL SAFEGUARDING AREAS

- 4.1 These are safeguards that relate to the protection of radar, navigational communications and radio aids used by pilots and the Airport. Building structures within the safeguarded area may impact on nearby communications, navigation and surveillance systems, leading to a degradation of the integrity of the systems if not controlled. Physical protection controls land development proposals near to aerodrome radio transmitters or receivers. The extent and implications of these potential impacts must be established in consultation with London City Airport using their approved Safeguarding Assessment methods which is a complex process often requiring the use of computer modelling techniques. As outlined below in more detail, the shape, materials and construction techniques of any structure will have to be assessed, along with temporary construction works, including cranes and scaffolding.
- 4.2 The type of equipment and aerial systems used will affect the results:
- Radio communications used are in the VHF and UHF bands;
 - Navigation aids used are Instrumental Landing Systems, Instrument Landing systems associated with Distance, Measuring Equipment and a Non-Directional Beacon;
 - Surveillance aids provide information about the position of the aircraft on the ground and in the air; various types of RADAR are used but none are located at London City Airport.
- 4.3 A Safeguarded Area encompasses that volume of ground and airspace in which the modification of existing structures or the construction of new structures may impact. As mentioned above, while any proposed development should be subject to a Safeguarding Assessment, it is a popular misconception that nothing can be placed or constructed within a Safeguarded Area. This is not necessarily true. The Royals Business Park, Gallions Approach, Gallions Roundabout, Silvertown Dock and Thames Barrier Park East sites all fall within the safeguarding frames of the CNS facilities at LCY. As mentioned above, appropriate building design and consultation with London City Airport at an early stage may help mitigate any potential negative impact on the CNS facilities resulting from the development of the site.

Design and Construction Issues

Building Materials

- 4.4 Any structure that is near to a CNS facility may reflect or diffract radio signals received by an aircraft, thereby potentially degrading that information. The CNS systems used at the airport therefore respond in different ways according to the materials used. Certain materials have proven to be less desirable than others. LCY can provide detailed advice on desirable and undesirable materials. However, an outline of desirable and undesirable

materials are listed below for information, along with the reason(s) for their desirability.

Desirable Materials

Wood	The reflection characteristic is dependent on the water content of the wood.
Eternit Panels	This is a fibre-based panel that, when dry, reflects virtually no signals. Reflections do increase if the panel is wet.
Bricks / Blocks	These are similar to Eternit panels.

Undesirable Materials

Metal	These are electrically conductive and therefore are able (including cladding) to reflect virtually all incident radio signals.
Metal Frames	The spacing between vertical supports is generally 2.5 metres, which is very close to the wavelength of an ILS Localiser. Under these conditions, the metal frame is equivalent to a flat metal sheet.
Tinted Glass	The colour of some glass comes from metal coating (some) either on or within the glass. See 'Metal (including cladding)' above.

Building Designs and Techniques

- 4.5 Subject to certain design features, undesirable materials like those mentioned in the previous section may be acceptable for technical safeguarding purposes. The principle concern from a safeguarding viewpoint is to minimise the reflections caused by a building or structure. This can be achieved in a number of ways, some of which are identified in this section. However, it must be appreciated that virtually every safeguarding application is distinct from all others, and therefore should be treated as such.
- 4.6 The simplest way to reduce the magnitude of reflections from structure is to minimise the area of any faces of the structure that are parallel to the runway centre line. If possible, rectangular buildings should be orientated so that their short faces are towards the runway. Varying the actual design of the building away from the standard rectangle is beneficial. Wherever possible, very tall and/or very wide buildings should be avoided. If tall and/or wide buildings are necessary, then the surface of the building should be broken up so that it does not appear as a single continuous flat sheet reflector. The design of the British Airways World Cargo Centre at Heathrow Airport is a good example of this.
- 4.7 Curved buildings tend to reduce the signal strength of reflected signals, a good example of which is the student accommodation blocks for the University of East London, near to LCY. The walls of buildings can also be tilted so that the top of the building is closer to the runway than the base.

This type of design has the effect of reflecting signals into the Earth rather than onto the runway. An example of such a building is the British Airways Combined Operations Centre at Heathrow Airport.

5.0 CONSTRUCTION AND CRANAGE

Construction

- 5.1 When designing a building, especially when it is likely to approach the limits of the obstacle limitation surface, consideration must be given to the most appropriate methods for the actual build process. Although the design might have used all available elevation and received planning approval, realising the design without the need to penetrate the critical obstacle limitation surface might be physically impossible. Additionally, the use of cranes and large quantities of scaffolding may have detrimental effects on the Airport's navigational and communication aids described in Section 4.0 above.
- 5.2 From the physical safeguarding perspective, the main issue to be addressed is whether there is a need to penetrate the obstacle limitation surfaces during the build process with temporary obstacles such as cranes. All such requirements should be submitted to LCY in a timely manner, preferably during the consultation process so that they can be reviewed, revised and/or mitigated. Each request will need to be dealt with on an individual basis and it should not be assumed that a request similar to a previous one will automatically be approved.
- 5.3 The technical safeguarding issues associated with the construction phase are not specifically associated with how high a temporary obstacle will be. Rather, they apply to the complete site, how it is being developed and the materials that are being used during the development. LCY will refer all technical issues regarding developments to National Air Traffic Services (NATS). Depending on the concerns, NATS may find it necessary to use mathematical modelling tools to identify what the impact may be of the materials being used during construction.

Cranage

- 5.4 Safeguarding aspects of a proposed development do not end with the grant of planning permission. The methods and equipment to be employed during construction may also need to be agreed, particularly if cranes or other tall construction equipment will be involved as these tend to be taller than the proposed structure. If an application is approved, it is important that a developer be aware of responsibilities under BS7121, Part I of 1989, particularly paragraph 9.33: Crane Control in the Vicinity of Aerodromes / Airfields, regarding the erection of cranes on a site. This will require approval directly from the LCY if it is erected within 6km of the boundary of the Airport, or their height exceeds 10 metres or that of the surrounding structures or trees. For a proposal close to the Airport, or under its approaches, a Construction Management Strategy may need to be produced to ensure construction does not prejudice the safe operation of the Airport. In particular, but not exclusively, it should address the use of cranes

or other tall equipment, construction activities like to produce dust or smoke, construction-related temporary lighting, reflections, which may adversely impact on the Airport's navigational and communication aids described in Section 4.0 above.

- 5.5 The construction phase of a development is often the time during which reflections are at a maximum. This is primarily because the buildings can be shrouded in scaffolding which can be significantly more reflective than the final structure. Ideally, scaffolding should be kept to a minimum or be phased so that only a small amount of scaffolding is present at any time. Tower cranes can be significant reflectors and their effects can be very difficult to model due to their movements. If at all possible, jib cranes should be used during the construction phase. If tower cranes are necessary, they should be kept as low as feasible with as short a jib as possible.
- 5.6 It may be appropriate for the Council to place an informative in its development control response in line with the above requirement, to ensure that safety will be maintained where cranes are used in construction of the proposed development. This notwithstanding, please note that it is the developer's responsibility to ensure that there is proper adherence to the code of practice governing the erection of cranes, and not the Council's responsibility.
- 5.7 The above issues are described in more detail in the CAA's Advice Note 4 – "Cranes and Other Construction Concerns", and other advice provided by the Airport Operators Association (AOA) and the General Aviation Awareness Council (GAAC). These advice notes are available to download from their respective websites. In addition, a guide to procedures for operation of cranes in vicinity of Aerodromes is available from the Council's Development Control reception or from the LCY.

6.0 BIRDSTRIKE HAZARD

- 6.1 Birdstrikes are one of the major controllable hazards to aviation. Common birds have caused catastrophic accidents to all types of aircraft. Most birdstrikes occur on or near airports but, because birds are very mobile, features far beyond an airport boundary may increase the hazard. If built development provides feeding, roosting or breeding opportunities, or shelter and security, it may, depending on the citing of the development and the species which is attracts, increase the number of birds visiting or over flying the LCY or the number of birds in the airspace used by aircraft. Gulls and starlings congregate in very large overnight roosts and travel long distances daily, while waterfowl are large and often fly in close formation. The risk to aircraft arises from birds that move into the path of aircraft, either because they are on the Airport itself, or because they are crossing the airfield or its approaches as they move between sites that may be far outside the Airport boundaries. Airports are particularly vulnerable to collisions with large birds such as swans and flocks of small, medium and large birds such as starlings, gulls and geese. There is only limited scope for taking action at

airports to counter these hazards, and safeguarding measures may be the only effective means of reducing the risk to aircraft in flight.

- 6.2 The primary aim of safeguarding in this respect is to guard against newer increased hazards caused by bird-attracting development and where possible reduce birdstrike risk. The LCY has provided a safeguarding map showing a circle of 13 kilometre radius around the Airport representing the need for consultation about potential bird attractant developments. This covers the whole of Newham. The most important types of development in this respect are:
- i) Facilities intended for the handling, compaction, treatment or disposal of household or commercial wastes, which attract a variety of species, including gulls, starlings, lapwings and corvids;
 - ii) The creation or modification of areas of water such as reservoirs, lakes, ponds, wetlands, canals or marshes, which attract gulls and waterfowl. Please note that Part 4 of CAP 680: Bird Safeguarding Guidelines published by the CAA, was under review at the time of this SPG's publication. The CAA's current position is that any new or enhanced wetlands around airports (i.e. within a 13km radius of LCY, covering the whole of Newham and beyond) are in principal inimical to the preservation of air safety and where developments cannot be avoided, comprehensive measures to remove risk should be implemented;
 - iii) Nature reserves and bird sanctuaries; and
 - iv) Sewage disposal and treatment plant and outfalls, which can attract gulls and other species;
 - v) Mineral extraction and quarrying can also create a bird hazard, because although these processes do not in themselves attract birds, the sites are commonly used for landfill or the creation of wetland.
- 6.3 Planting trees and bushes normally creates a bird hazard only if it takes place relatively near to the Airport, but a potential starling roost site further away from the Airport could create a hazard.
- 6.4 It may be appropriate for the Council, in liaison with London City Airport, to include a landscaping condition in its development control response which gives assurance that the proposal does not include landscaping or water features that may increase the risk of a birdstrike to aircraft using the Airport. Alternatively, it may be possible by altering planning proposals to remove bird attractive features, or, failing this, to object to those that cannot adequately be redesigned.
- 6.5 When determining whether a planning application will increase the birdstrike risk at the Airport, the following factors will need to be taken into account:

- what type of developments are attractive to which species of bird;
 - whether birds will move from existing sites to the prepared one, and in the process, cross aircraft flight paths near the airport, or indeed move on to the Airport itself.
- 6.6 The Council will require any application for the above forms of development to be accompanied by a Birdstrike Hazard Assessment carried out in accordance with the considerations outlined in CAP 680 (Aerodrome Bird Control – Part 4, Bird Safeguarding Guidelines, Chapter 27, Subsection 7) issued by the Safety Regulation Group of the CAA. Both the applicant and, if necessary, the Council are advised to discuss such matters at the earliest opportunity if there are any doubts on such matters.
- 6.7 For further advice, information, etc, please refer to the Civil Aviation Authority (CAA)'s Advice Note 3 – Potential Bird Hazards from Amenity Landscaping and Building Design.

7.0 WIND TURBINES

- 7.1 Apart from the potential to be a physical obstacle, wind generator turbines can distort radar performance. Proposed wind farm sites should be notified to the CAA's Directorate of Airspace Policy (DAP) and Ministry of Defence (Defence Estates) prior to application for planning permission. DAP will forward all proposed wind turbine sites within a 30km circle of the Airport to the airport authorities. The CAA will continue to be notified of any proposed wind turbine development that constitutes a power station.
- 7.2 Where it has been determined that a planning application for a proposed development may have an effect on navigational or other aeronautical systems, it is common for simulation or other types of interference modelling of the effects of the development to be conducted. It is usual for the developer to bear the cost of the modelling.

8.0 LIGHTING

- 8.1 Developments that include flood lighting, lighting columns and flashing signs are potentially hazardous to aircraft when positioned close to the Airport. The Council will pay particular attention to the intensity and alignment of road lighting, which is a matter of concern over much more than the areas close to the ends of the runway. The intensity of lighting can distract pilots by causing glare in the direction of an approaching aircraft while, when viewed from the air, a road lighting scheme which makes a pattern similar to an approach or runway lighting pattern can confuse pilots who use these lights when landing at night or in foggy conditions. British Standard S489, Part 8, states that the areas within which a road lighting scheme may affect the safe use of an aerodrome is 4.8km beyond the airport boundary. The Council will therefore take account of the possibility that road lighting can be a safeguarding issue within this area, which covers the bulk of the Borough.

- 8.2 If any lighting is to be included in a development, it should be of a flat glass, full cut-off design with horizontal mountings such that there is no light above the horizontal. This is to ensure that the lighting does not confuse or distract pilots in the vicinity of the Airport.
- 8.3 It will be appropriate for the Council to include a condition on any application consent, to give assurance that the proposal does not include lighting that may dazzle or distract pilots or air traffic controllers in the vicinity of the Airport.
- 8.4 The Air Navigation Order (article 109A) requires any obstacle greater than 150 metres above ground level to be lit, even if well away from the Airport.
- 8.5 In general terms, building development in close proximity to London City Airport will be subject to the need for obstacle lighting. The addition of warning lights to obstacles is intended to reduce the hazards to aircraft operating visually at low level while taking-off or landing at the Airport, particularly at night or in conditions of poor daylight visibility. The Safeguarding process will determine whether a proposed development requires to be fitted with one or more obstacle lights. This is applicable to temporary obstacles, such as cranes (see paragraph 5.5 above), as well as permanent structures.
- 8.6 Where it is deemed necessary that obstacle lights would be required, London City Airport will advise the Council's development control section that a condition to this effect should be attached to any planning permission that may be granted. The condition will state the characteristics for the light(s) which are likely to be steady red light(s) of either 200 or 2000 candelas visible from all directions. It is preferable that such lights should be illuminated at all times, rather than just during the hours of darkness. The requirements for obstacle lighting are further defined in Civil Aviation Publication (CAP) 168.
- 8.7 If there is any doubt on such matters, they should be discussed with London City Airport as part of pre-application advice described in paragraphs 1.9 – 1.10 above.

9.0 PUBLIC SAFETY ZONES (PSZs)

- 9.1 These are areas of land at the end of the runway within which development is restricted in order to control the number of people on the ground at risk of death or injury in the event of an aircraft accident on take-off or landing. It is important to note that these zones are outside the Airport official safeguarding regime and not administered by London City Airport. From the early 1980s day to day administration of Public Safety Zone (PSZ) policy was carried out on behalf of the Government by the Civil Aviation Authority (CAA) about any planning applications for development within the boundaries of Public Safety Zones, and the CAA offered advice based on guidelines issued to it by the Department. In July 2002, following a nationwide review, the PSZ at London City Airport and other airports were redefined and the Government issued specific Guidance (DfT Circular 1/2002) for local planning authorities

on the control of development within them. The Council is now solely responsible for monitoring and managing its occupational level, usually through the use of planning decisions/consents restricting sensitive and other uses that would lead to an increase in population occupying the zone.

The dimensions for the PSZ for London City Airport are as follows:

Runway	Length	Initial Width	Areas of PSZ (Hectares)
10	1820	200	18.2
28	1750	180	15.8

- 9.2 The PSZ for London City Airport is shown indicatively in Map 2 of this Supplementary Planning Guidance note.** This map supersedes the map contained within the Newham UDP (page 250), which is based on outdated information. Within this area, the Council will apply the following approach to development proposals in accordance with Department for Transport (DfT) circular 1/2002 of 10th July 2002.

General Presumption Against Development Within Public Safety Zones

- 9.3 There should be a general presumption against new or replacement development or changes of use of existing buildings, within Public Safety Zones. In particular, no new or replacement dwelling houses, mobile homes, caravan sites or other residential buildings should be permitted. Nor should new or replacement non-residential development be permitted. Exceptions to this general presumption are set out.

Development Permissible Within Public Safety Zones

- 9.4 Two types of exception to the general presumption may be permitted within those parts of Public Safety Zones outside any 1 in 10,000 individual risk contours.

First, it is not considered necessary to refuse permission on Public Safety Zone grounds for the following forms of extension or change of use:

- (i) an extension or alteration to a dwellinghouse which is for the purpose of enlarging or improving the living accommodation for the benefit of people living in it, such people forming a single household, or which is for the purpose of a 'granny annexe';
- (ii) An extension or alteration to a property (not being a single dwellinghouse or other residential building) which could not reasonably be expected to increase the number of people working or congregating in or at the property beyond the current level or, if greater, the number authorised by any extant planning permission; or
- (iii) A change of use of a building or of land which could not reasonably be expected to increase the number of people living, working or congregating in or at the property or land beyond the

current level or, if greater, the number authorised by any extant planning permission.

Second, certain forms of new or replacement development which involve a low density of people living, working or congregating may be acceptable within a Public Safety Zone. Examples of these may include:

- (iv) Long stay and employee car parking (where the minimum stay is expected to be in excess of six hours);
- (v) Open storage and certain types of warehouse development. 'Traditional' warehousing and storage use, in which a very small number of people are likely to be present within a sizeable site, is acceptable. But more intensive uses, such as distribution centres, sorting depots and retail warehouses, which would be likely to entail significant numbers of people being present on a site, should not be permitted. In granting planning permission for a warehouse, the Council will seek to attach conditions, which would prevent the future intensification of the use of the site and limit the number of employees present;
- (vi) Development of a kind likely to introduce very few or no people onto a site on a regular basis. Examples might include unmanned structures, engineering operations, buildings housing plant or machinery, agricultural buildings and operations, buildings and structures in domestic curtilage incidental to dwellinghouse use, and buildings for storage purposes ancillary to existing industrial development.

9.5 The general policy in relation to buildings and land **within any 1 in 10,000 individual risk contours (Please refer to Map 2 of this Guidance for further information)** is that the Government wishes to see the emptying of all occupied properties. The principal feature of that policy is that people should not be expected to live or have their workplaces within such areas. Consequently very few uses will be acceptable within this risk contour. However, certain forms of development which involve a very low density of people coming and going may be acceptable within it. Examples of these might include:

- (ii) Long stay and employee car parking (where the minimum stay is expected to be in excess of six hours)
- (iii) Golf courses, but not clubhouses.

10.0 NOISE-SENSITIVE DEVELOPMENT

10.1 As part of the planning agreement associated with the introduction of jets into London City Airport, a noise insulation scheme was established to protect existing occupiers from the effects of aircraft noise from the Airport. The Council will require developers to provide noise insulation within the area shown in Map 3 to match the acoustic standard required by the noise insulation scheme. Note; the contours shown on this map are liable to

change. Where such a residential development is proposed, the Council will require the windows and external doors to habitable rooms (living rooms, bedrooms and dining rooms) to an eligible façade to meet the following acoustic standard:

Achieve an average sound reduction of not less than 25dB averaged over 100 to 3150 Hz in accordance with sound attenuated vents, either two permanent sound attenuated vents or one combined mechanical and permanent sound attenuated vent shall be provided to each eligible room. These vents shall be in accordance with the standards given in the Noise Insulation Regulations. Mechanical vents shall be wired to the domestic supply in compliance with the current IEE Regulations. Suitable ducting shall be provided from room outside air complete with external grille.

An 'eligible façade' is either

- one that faces east or west, or
- one that faces south north of the airport, or
- one that faces north south of the airport.

- 10.2 Notwithstanding the requirements to provide sound insulation for aircraft noise, the Council will have regard for the advice contained in Government PPG24 (Planning and Noise, September 1994, DoE), Annex 1 for the appropriate NEC, when assessing proposals for development which may be affected by noise from sources other than aircraft and may require a higher standard of insulation. PPG 24 states that:

NEC (noise exposure category)

B Noise should be taken into account when determining planning applications, and where appropriate, conditions imposed to ensure an adequate level of protection against noise.

C Planning permission should not normally be granted. When it is considered that permission should be given, for example, because there are no alternative quieter sites available, conditions should be imposed to ensure a commensurate level of protection against noise.

- 10.3 Developments such as offices, hospitals and schools will also contain buildings and activities which are noise-sensitive. However, these developments are likely to occupy sizeable sites and to contain a proportion of buildings and activities which are less noise-sensitive. The NEC principle cannot therefore be sensibly applied to such developments and it will be more appropriate to refer to specific guidance on internal noise standards in respect to each activity. General information can be found in BS 82 33:1999. Information on guidance for health and hospital buildings is available from NHS Estates, an Executive Agency of the Department of Health. The Department of Education and Skills (DfES) provides guidance for schools (Building Bulletin 93).

10.4 However, all proposals for noise-sensitive uses in the vicinity of LCY will be considered on their own merits, and in accordance with Government guidance.

11.0 ROADS AND RAILWAYS

11.1 Roads and railways may be potential obstructions to aircraft. The International Civil Aviation Organisation (ICAO) provides for this by considering a road to be mobile obstruction of 4.8 metres and a railway to be a mobile obstruction of 5.4 metres. This principle has been adopted as safeguarding practice in the United Kingdom, and consultations where a road or railway is an element should be assessed accordingly. Street furniture, signal gantries, lighting poles and other associated structures should also be the subject of consultation appropriate to their height.

12.0 CONTACTS

It is recognised as good practice for applicants to initiate consultations and discussions with both the Council and London City Airport (LCY) before submitting a planning application, and it is open to applicants to send details of the proposed development directly to London City Airport (LCY) if advised to do so by either Authority.

The LCY address for all such correspondence is:

The Safeguarding Consultee
London City Airport, Royal Docks
London, E16 2PX

For more informal advice, please phone Rob Grafton (Environment and Planning Manager at LCY) on 020 7646 0200

Applicants seeking advice from the Council's Development Control section of the local planning authority (LPA) should contact the Development Control section on 020 8430 2000 ext 22282, and ask for the duty officer.

Additional advice can be obtained from the Council's Forward Planning and Transportation section, on 020 8430 2633.

13.0 REFERENCES

1. British Standard Code of Practice for the Safe Use of Cranes, BS7121, Part 1 (1989).
2. Civil Aviation Authority Advice Note 3: Potential Bird Hazards from Amenity Landscaping Design.
3. Civil Aviation Authority Advice Note 4: Cranes and Other Construction Concerns
4. Civil Aviation Publication (CAP) 168.
5. Civil Aviation Publication (CAP) 670: Air Traffic Services Safety Requirements.

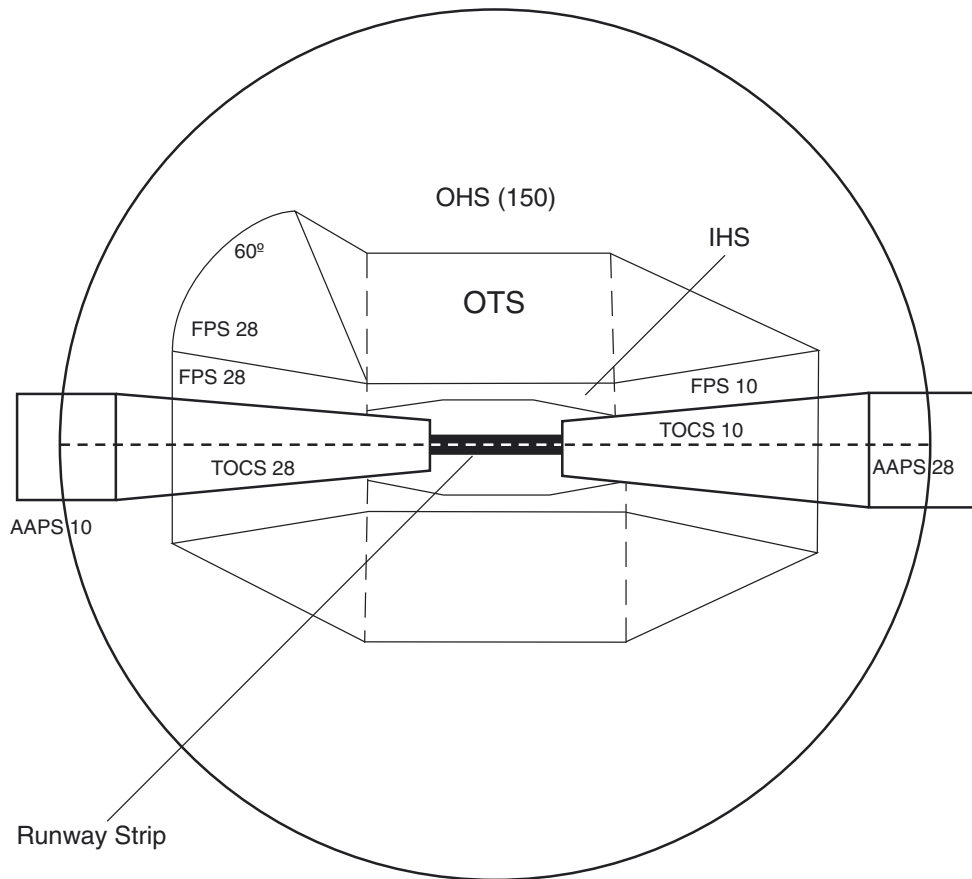
6. Civil Aviation Publication (CAP) 680: Aerodrome Bird Control, Part 4, Bird Safeguarding Guidelines (Safety Regulation Group CAA, 6th September 2002).
7. Civil Aviation Publication (CAP) 738: Safeguarding of Aerodromes (Safety Regulation Group, Civil Aviation Authority) February 2002.
8. DfT Circular 1/2002: Control of Development in Airport Public Safety Zones (Department of Transport, 10th July 2002).
9. London Borough of Newham Unitary Development Plan (Adopted July 2001).
10. ODPM Circular 01/2003: Safeguarding Aerodromes, Technical Sites and Military Explosives Storage Areas: The Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas / Directions 2002 (Office of the Deputy Prime Minister, 27 January 2003)).
11. PPG24: Planning and Noise (September 1994, DoE).

14.0 GLOSSARY / ABBREVIATIONS

1. AOD: Above Ordnance Datum, or above sea level.
2. APPS: Approach Surface. The approach surface is designed to protect and aircraft in the final phase of the approach-to-land manoeuvre. It is an inclined plane larger than the TOCS (seen below) but of similar shape.
3. CAA: Civil Aviation Authority.
4. CNS: Communications, Navigation and Surveillance aids provided at London City Airport to assist air traffic control and pilots in the safe flow of air traffic into and out of the Airport.
5. FPS: Flight Protection Surface. These protective surfaces extend either side of the Take Off and Climb Surfaces that extend out from the outer edge of the 45m horizontal surface in an upward sloping direction along the edge of the TOCS to a height of 154.95m.
6. IHS: Inner Horizontal Surface that is rectangular in shape and extends 650m either side of the runway centerline and 1125m beyond the runway strip ends.
7. LCY: London City Airport, a safeguarded aerodrome located in the Royal Docks in the south of the Borough.
8. LPA: The Council's Development and Regeneration Division, a part of the Environment and Regeneration Department, is the Local Planning Authority, responsible for producing the Borough's Unitary Development Plan and assessing applications / proposals for development.

9. NEC: Noise Exposure Category. See paragraph 8.1 of the main text of this SPG for further information.
10. OD: Ordnance Datum-based on mean sea level.
11. OHS: The Outer Horizontal Surface, which is circular in shape with a 10,000m radius centered on the Aerodrome Reference Point (ARP).
12. PSZ: Public Safety Zones are areas of land at either end of an airport runway within which development is restricted in order to control the number of people on the ground at risk of death or injury in the event of an aircraft accident on take-off or landing.
13. RCA: Radio Communications Agency: See paragraph 5.3 of the main text of this SPG for further information.
14. TOCS: Take-Off Climb Surfaces, are inclined, truncated, triangular areas at each end of the runway sloping upwards from, and the width of, the end of the runway strip, providing protection for aircraft on take-off.
15. TS: Transitional Surface. The first surface is the lowest and most critical surface, which extends from ground level from either side of the runway in an upward sloping direction and extends 345m either side of the runway centerline.
16. UDP: The Newham Unitary Development Plan, 2001, Newham Council's statutory land-use planning policy framework to guide the Borough's future development.

Appendix 1: Maps



Map 1: London City Safeguarding Assessment – Plan View

AAPS = Approach Surface

IHS = Inner Horizontal Surface

TOCS = Take off and climb surface

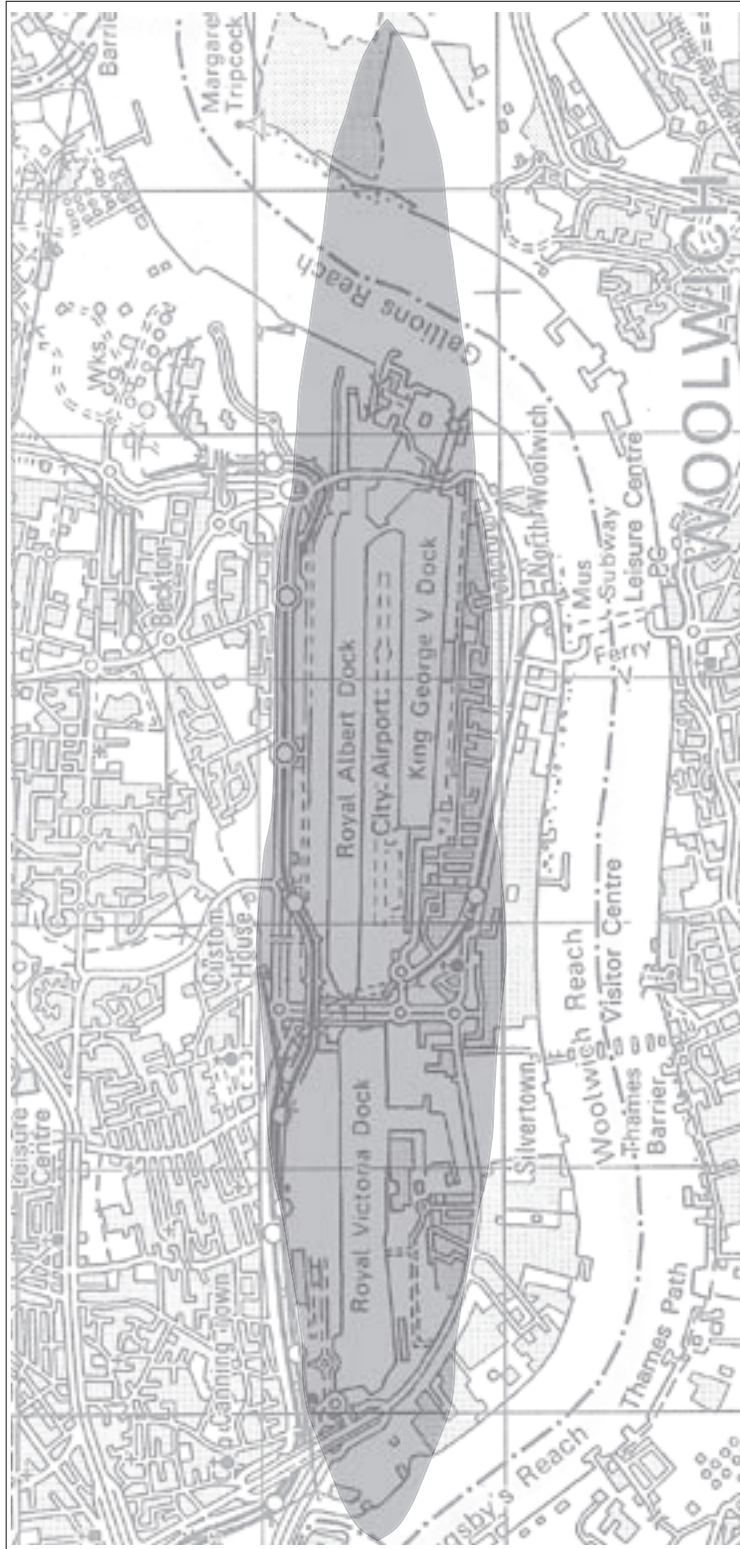
OTS = Outer Transitional Surface

FPS = Flight protection surface

OHS = Outer Horizontal Surface

Note: This information shown is for general guidance only and is subject to change. For further information contact the Environment and Planning Manager at London City Airport,

Telephone: 020 7646 0200 or the Civil Aviation Authority.



Map 3: London City Airport: Noise Contour When Running at Full Capacity

(Any proposed building within the grey area should have sound insulation to match the LCY noise scheme.)

The information shown is for general guidance only and is subject to change.
For further information contact the Environment and Planning Manager at London City Airport Telephone: 020 7646 0200
or The Civil Aviation Authority

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LB Newham 100019272*

Published by the;
CHIEF EXECUTIVES DEPARTMENT
John Herman C. Eng., M.I.C.E.
Head of Physical Regeneration & Development

April 2005