

# Opportunity Areas in London planning

Just Space draft review 2023

## Summary

The term Opportunity Area has been in use since the 1990s, applied to areas where very large scale change through development is planned. This report summarises the big shifts in how the designation has been used, initially for the modernisation of employment in under-used industrial, port or railway land, but now for many ordinary parts of occupied London, the aim nowadays being mainly to create development sites for housing through intensification.

Community groups in and around the affected areas have criticised and resisted many of these schemes for decades and tried to secure changes to the London Plan policies which govern them, with scant success. The criticisms have been that the designation, planning and target-setting of OAs have lacked transparency and democracy, as have the mechanisms for implementation. Areas have been planned without the necessary understanding of the social and economic life of the affected areas and the outcomes have mostly been detrimental to working class, including minoritised, communities and to many businesses. Just Space continues to argue that there should be no further designations until a serious review of the programme has been completed and digested.

[Just Space](#) is an informal alliance of around 80 community and activist groups, campaigns and concerned independent organisations which came together to help each other on planning issues and reinforce the voices of Londoners at grass-roots level during the formulation of London's major planning strategy, the London Plan, and is now active at borough and local levels too.

In the last 2 years Just Space has collaborated with the Planning and Regeneration Committee of the London Assembly which, in turn, has put pressure on the Mayor of London (the planners in the GLA) and secured a new policy document and web site. This represents modest progress.

The aim of this document is to bring a scattered narrative up to date and form a basis for Just Space member groups to consider what further steps, if any, to take on this issue in the wider context of how London will now be planned in the current emergencies.

# Introduction

'Opportunity Area' (OA) is a label which planners have applied to the main places in London where large scale development is anticipated; it has been in use since the 1990s and carried on in the London Plans which have been made since the GLA was inaugurated in 2000. The term is not defined in law, simply in plans.

The essence of the OA is that City Hall reaches an agreement with a Borough council, and often with landowners or developers, and creates a new OA which is then inserted in the next revision of the London Plan with targets for homes and jobs. This creates an area of exception to the normal London planning regime.

The Opportunity Area mechanism for governing major developments in London has been problematic for decades. Many groups which later became members of Just Space were active in challenging individual cases for years and Just Space itself has campaigned since its inception for more democracy, more voice for existing residents and businesses and more effective monitoring of what happens in these areas<sup>1</sup>.

Initially OAs were mostly areas of disused or little-used industrial or transport land like King's Cross and remaining bits of Docklands but these are now almost all used up and the designation is now often applied to areas already fully developed and occupied but where planners want to see redevelopment or intensification – areas with a lot of population and businesses like City Fringe/Tech City or Kingston. Barking Riverside (within the wider OA of London Riverside) has a hybrid geography, partly established residential and commercial areas, and partly reclaimed former industrial land.

In the early GLA period the main emphasis was on modernising and expanding employment; since about 2010 the emphasis has increasingly been on getting more and more housing built to satisfy strong developer pressures and add to the housing stock – believed to be a way of making housing more affordable, though targets for affordable homes were not set for each OA.

This report consists of a review of the historical positions taken publicly by Just Space and its members in reference to the design and governance of Opportunity Areas. In presenting this review, we seek to shed light on an important and difficult question centrally related to planning for the future of living and working conditions in London.

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<sup>1</sup> See [here](#) for a GLA interactive map of London's Opportunity Areas. Opportunity areas are separated according to the degree to which their boundary has been defined (**Adopted boundary** OAs are those with a defined boundary contained within a local planning document that has been subject to public consultation and formal adoption by a local planning authority and/or the Mayor. **Emerging boundary** OAs are those where a boundary has been published and the relevant policies are on track to being adopted (for example public consultation stages of a planning document). **Boundary to be defined** OAs are those where a defined boundary is yet to be published). The degree to which a boundary is defined does not correlate with the date that the OA was designated.

It is important to emphasise to the reader that Just Space acts as an amplifier of a diverse range of local communities' perspectives across Greater London, and summary documents such as this risk suggesting that there is a consensus view on Opportunity Areas across the range of members. On the contrary, this report telegraphs some of the longstanding, shared critiques of Opportunity Areas from members, between diverse sites across London. For specific analysis of a particular case, it will be necessary for the interested reader to contact the community groups associated with a particular Opportunity Area.

In addition to its review of Opportunity Areas, this document also tackles a problem of method: it tries to draw a readable thread from two separate archives of material (the GLA website and the Just Space website), to produce a historical narrative that is easily accessible by the public. Organising the archive of planning documents into a navigable catalogue is a tricky exercise. However, it is a central aspect of democratic accountability, and is necessary for Londoners to be able to grasp how they are being governed.<sup>2</sup>

## History

Opportunity Areas (OAs) have a long history. They were discussed in the early 1990s at a time of policy ferment, as new planning mechanisms aimed at increasing regional coordination at different scales both across the London metropolitan area and the UK more broadly and reports on London's future as a global city were prepared by LPAC and London First. Specific mention was made at that time of a familiar list of places for growth: King's Cross, Paddington, Docklands, East Thames Corridor, and Old Oak Common.

The early definition of Opportunity Areas (OAs) resonates with those in use today, 30 years later, although there are two important differences. Opportunity Areas were initially focused on employment generation and (in the absence of a metropolitan government) the national government played a role. They were originally identified as specific growth points in local Unitary Development Plans (UDPs)<sup>3</sup>, which themselves had been recently introduced as a planning mechanism in the Local Government Act 1985. OAs were originally identified in areas within a development plan where developer interest had been attracted in the "final years of the 1980s boom" (LPAC, 1993, p. 21), and represented then "the Capital's few opportunities for very large scale, integrated, mixed use development where the emphasis must be on employment-generating non-retail activity to broaden London's economic base"<sup>4</sup>.

In an effort to improve access to opportunity and knit together Greater London's fragmented efforts at planning, it was originally envisaged that Opportunity Areas would be developed with transit to link to areas of high unemployment. At the same time, concerns with density, impact

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<sup>2</sup> Readers interested in this problem will enjoy the work of Chi Nguyen on [transforming the London Plan](#).

<sup>3</sup> UDPs were replaced with Local Plans in 2004.

<sup>4</sup> LPAC (1993), Draft Advice on Strategic Planning Guidance for London, June, Romford: London Planning Advisory Committee, pages 21, 48 and 56 are relevant to this paragraph.

on existing areas, and transport links were discussed in relation to the first London Plan (2004) and continue to shape the horizon of strategic planning in London in 2023. However, the original reason for the creation of Opportunity Areas - the availability of large areas of disused former industrial, port or railway land - is no longer a feature of London. Yet Opportunity Areas are still widely used across London and the designation now applies to a number of zones previously labelled 'Areas for Intensification' and there are now 47 cases altogether. In the intervening decades since their inception, new OAs are now delineated in fully-occupied, valued areas of the city, and some still tend to be siloed, rather than networked to extend opportunities to disadvantaged adjoining areas where the intensification of development targets comes into tension with the interests of long standing communities in the area.

OAs were included in the first iteration of the London Plan (2004), and identified across the city as "capable of accommodating substantial new jobs or homes and their potential should be maximised" (§2.8). OAs were noted as a key part of the policy objective to accommodate London's growth within its boundaries and without encroaching on open spaces, to "enable the centre of London and the main Opportunity Areas for development to intensify and to accommodate much of the growth in jobs". (2004, p. 6). But in the subsequent years, it is the challenge of meeting housing targets which has become a key driver of OAs, as of most aspects of the Plan. The extremely high prices of houses and flats in London have made residential development highly profitable in recent decades and pushed up prices of developable land to the point where housebuilding could and did outbid other uses, especially industry and far more land was lost from employment uses than the Plan had envisaged.

Alongside this market-driven process, the dominant explanatory discourse about housing in Britain was about simple supply and demand, the belief being that maximising housing production was the key to improving affordability. Just Space has always [challenged the validity](#) of this approach to housing and [research evidence](#) is now piling up to undermine the prevailing orthodoxy.

The pursuit of housing target numbers remains the dominant driver of London Plans, however, and thus drives borough planning.

Early Opportunity Areas were designed to incentivise and intensify development in large areas of disused brownfield sites across London. There will soon be no more sites of this character to develop. The political difficulties in securing agreement to alternative sites for housing (e.g. Green Belt development or small suburban sites) has placed extreme pressure on OAs to deliver on the ambitious housing targets set out by the London Plan.

In more recent years, policy makers have doubled down on the use of OAs as machines for housing provision. To meet the growing emphasis on London-wide targets for housing, Opportunity Areas have been given more and more ambitious housing targets "with little

technical evidence in a high-level policy framework (the London Plan) and ...not... opened to subsequent interrogation” ([Robinson and Attuyer, 2021](#)).

## Just Space criticisms of Opportunity Areas

By the time that Just Space adopted its constitution in 2012, there were already longstanding examples of community groups contesting the growth policies associated with Opportunity Areas. At King’s Cross, for example, an OA had been established before the GLA was created and community groups battled to gain voice and influence for the tens of thousands of people living adjacent to it, whose housing needs were not being adequately met and for whom precious few community facilities were included in the plans. More recently, at the Elephant and Castle, various resident and business groups protested at the community displacement & decimation of ethnic businesses and social housing stocks through estate ‘regeneration’ and persuaded a panel of inspectors at the 2010 Examination in Public (EiP) of the London Plan to recommend that there should be at least no net loss of social housing in ‘regeneration’ schemes (though Mayor Johnson declined to implement that recommendation).

Public criticism of Opportunity Areas has remained largely consistent over the years. Objections have included:

- the designation and the setting of targets are neither evidence-based and transparent nor subject to democratic examination and testing
- the production of plans for OAs ranges from quite transparent with Public Examination and debate to ones which may be consulted upon but have been prepared in private without community involvement
- the implementation of the plans lacks democratic community input, especially in ensuring that development does not run ahead of social and physical infrastructure, that promised community facilities are delivered and so on
- monitoring has been exclusively of housing and employment numbers, often ignoring social and environmental infrastructure and omitting data on social rented housing.

Since 2014 Just Space has argued that there should be no further OAs designated until after a thorough review of experience to date.

Campaigning on these issues has largely been focused on the consultations on successive drafts of the London Plan and the EiPs on each (with very small gains made in each round). and more focussed activity in specific local cases, notably the two Mayoral Development Corporation areas. The GLA planners have always argued that the London Plan EiPs constitute an adequate testing and legitimisation of the OA programme. However only half a day of discussion has been allocated for the OA policies, progress on established areas and the proposals for new designations. Just Space has always argued that this is derisory.

## Enter the London Assembly

Since the London Assembly is the closest we have to a London parliament and does have scrutiny obligations, Just Space has been engaging seriously with its Planning and Regeneration Committee, hoping to entrench a collaborative working relationship and to strengthen procedures concerning public engagement.

Our aim is co-producing a clear procedure for democratic community engagement through commentary, deliberations and written submissions at the London Assembly and at all levels of governance in London. The discussion of Opportunity Areas is central to this aim, and is the subject of this document. Elsewhere, other Just Space documents deal with Assembly engagements with [Mayoral call-in processes](#) and thinking about the [next London Plan](#).

Just Space submitted a [one-page memorandum on Opportunity Areas](#) for the Committee's meeting that was held on 8 February 2022 and followed up with a longer version. The criticisms by Just Space and member organisations are summarised as follows:

- 1) the process and procedures for designating OAs are unclear and undemocratic. OAs seem to be contrived in discussion between developers/landowners, boroughs and the Mayor, then assimilated to the London Plan. Citizens are sidestepped. The only public deliberation specific to OAs is the consideration as part of the London Plan. Only one half day was programmed in the 2019 EiP for discussion of ALL the established OAs and new ones and broad policies. (The City Fringe was very fraught when introduced and more recently Kingston<sup>5</sup>)
- 2) the targets for housing numbers and job numbers seem to lack systematic justification. These are the main performance indicators used to evaluate their success while social, environmental and regeneration performance are never examined. Just Space made a gain here, persuading the EiP Panel to recommend changes which the Mayor accepted so that targets set for OAs are now to be 'indicative' only, until tested in the examination of Local Plans. However experience with the Local Plan of OPDC is not encouraging: although the new London Plan requirement was in force, neither the targets nor alternatives were addressed in the work of the Inspector who simply accepted them as given.

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<sup>5</sup> **Kingston** is a good example of where an OA was declared with no substantive public deliberation. From the records of a 2018 borough Public Call-In, residents described how "Council appears to have agreed with the GLA behind closed doors to merge the creation of a Local Plan with the creation of an Opportunity Area Planning Framework" and that moreover, "the nature of the growth strategy that Kingston Council is pursuing with the GLA is not made clear in this document". Furthermore, the public-facing [Issues and Options document](#) drafted by Kingston Council did not adequately express the different development options available in the Borough. As residents noted, "this document presents two basic Options and asks residents to choose between them. In addition, only one option presented would bear the growth planned by the council. This gives a clear impression that the council's plans have been predetermined" (see here for the [agenda](#) item).

- 3) There is a variety of guiding/governing documents (OAPFs, SPDs, some of which are subject to EiP examination, others not. All should be. Old Kent Road has seen many permissions ahead of a properly approved plan.)
- 4) The management and implementation of the OAs has no general guiding principles, no democracy of its own or effective means for residents to engage with the confusing mix of organisations developing their areas and providing services. Much depends on whatever form of local democratic accountability is practiced in the host borough(s). (Barking Riverside and Old Oak are among the OAs where this democratic deficit is an issue. Similar issues in Southwark, especially Old Kent Road, are perhaps being tackled from the bottom up by the Southwark Planning Network.)
- 5) One of the recurrent issues in implementation is preventing development from getting ahead of the provision of transport and social infrastructure. Despite GLA assertions to the contrary<sup>6</sup>, OAs in the Upper Lea Valley and Kingston appear to be dependent on the building of Crossrail2. While major railway investments were so crucial that they were implemented at VNEB and Barking Riverside, this has not been the case at Old Kent Road while delay and non-delivery of health facilities, community spaces and other social infrastructure have remained running sores in many OAs.
- 6) There is no systematic survey/inventory of the existing locale of an OA or of the areas around it, so the proposals seem to be based on almost a blank sheet approach instead of the actual mass of uses, users and residents (Peckham Vision has been especially vocal on this, also Old Kent Road, and areas adjoining Old Oak). Since many OAs are co-located with 'Areas for Regeneration', it is a major failing that they can proceed with so little data and participation from established people and enterprises. The Industrial Inventory at Park Royal is a rare partial exception.
- 7) The 2 Mayoral Development Corporations (London (Olympic) Legacy LLDC and Old Oak and Park Royal OPDC) are exceptions in that they each have a special governing institution with planning powers. (Carpenters Neighbourhood Forum at LLDC and Grand Union Alliance at OPDC can testify to the [strengths and weaknesses of these structures](#)). In both cases, while a dedicated development agency could have pursued more democratic and transparent processes, they rarely did so and private sector and transport interests remained dominant, with representatives of elected councils outnumbered and outvoted..
- 8) The powers of OA agencies like the Development Corporations do not enable them to acquire land cheaply enough to achieve all they are tasked with achieving and this drives densities ever upwards. (Grand Union Alliance can testify on this, supported by meticulous academic research by [Robinson and Attuyer](#). The LLDC case differs as they did have land but were burdened by debt.)
- 9) Research<sup>7</sup> and citizens' experience points to Opportunity Areas as having negative effects on poorer residents and many pre-existing businesses through rising housing

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<sup>6</sup> See the [notes and recording of the 2019 EiP Matter 14](#)

<sup>7</sup> Runnymede Trust and CLASS, *Pushed to the Margins*, 2021  
<https://www.runnymedetrust.org/publications/pushed-to-the-margins>

costs, industrial land values and business rents, often leading to actual displacement. This is the opposite of 'regeneration' and a major failing of the Plan.

'Opportunity for whom?' is an increasingly common question, answered by most of us as 'Opportunity for developers'.

The Committee questioned the Deputy Mayor for planning and others from City Hall and Southwark Council but, despite Just Space's offers to help, the Committee did not invite any community participants. [ [agenda and link to video](#) ] [ [transcript](#) ]

An expanded version of the Just Space [memorandum on Opportunity Areas](#) was submitted to the Assembly Committee on February 24 2022. [A more detailed paper on the two [Mayoral Development Corporations](#) was submitted later and considered at a meeting of the committee on [23 November 2022](#).]

On March 17th 2022 the Planning and Regeneration Committee issued a [press release and wrote to the Mayor](#). They recommended, principally, that the Mayor should:

- Work with boroughs to ensure that residents, businesses and community groups are engaged and involved in the planning process within Opportunity Areas from the outset and prior to their designation.
- Monitor and publish comprehensive data giving a breakdown of housing tenure and sizes in each Opportunity Area along with other outcomes. This should include data on demolitions, new homes, and community services. On the committee's specific request in the February meeting for data to include housing demolished and built at social (council) rents, the GLA officer said 'we don't have that; we have to pick up the phone and ask'.
- Explore options for carrying out a full evaluation of Opportunity Areas, which assesses outcomes against objectives, comparisons with equivalent sites in London, impacts on local residents and businesses and value for money.

The Mayor replied with a [report](#) which responds to the Committee's points, mainly in defensive ways. Highlights from the Mayor's report include:

On participation in OAPF formulation, the Mayor is planning to do better. Royal Docks & Beckton Riverside OAPF and Thamesmead & Abbey Wood OAPF, are being prepared now and benefit from extensive stakeholder and community engagement. Both the OAPFs and the Integrated Impact Assessments IIA are the subject of consultation.

The [OA web pages](#) have been improved. A future update of the OA website will include a collection of best practice engagement and public consultation examples in OAs. Lessons learnt will feature best practice from GLA OAPF engagement methods, but also look into engagement tools and approaches from the boroughs as part of the development of SPDs, AAPs etc in OAs.



The GLA is currently drafting a ***Planning Engagement – Core Principles*** document. This will set out the core principles of how the GLA involves Londoners in the planning process, being clear on what Londoners can expect from the planning service. [Comment: this appears to relate to Just Space’s frequent calls for a Mayoral Statement of Community Involvement SCI. The Mayor’s response has been that they agree with the principle but would have to give it a different name because SCI is defined in a law which does not apply to the Mayor of London.]

In response to the Committee’s call for better data, especially on housing demolitions and social housing production the Mayor writes “The OA website does not currently collect data on demolitions in the OAs. Whilst rates of demolition might be a useful measure of change in OAs, accurate measurement presents challenges. Demolition does not necessarily require planning permission, or forms part of a larger planning application. Consequently, there is not a readily accessible source of accurate data. The increasing frequency of retrofits and refurbishments (in line with Circular Economy principles) may also see total demolition become less clear as a measure of change.” [ Comment: This is evasive and must be wrong because the Mayor publishes data on net additional dwellings, i.e. new ones minus those lost.]

On the call for statistics on social-rent (council rent) dwellings there is a rather cryptic footnote 16 which appears to confirm that data on social rentals will be published but we may need to check up on this since, as we said above, a GLA officer had told the committee “we don’t have that data. If we wanted it we would have to pick up the phone.”.

The Annual Monitoring Report (AMR) of the London Plan will be reporting on many variables for each OA. In addition “To support monitoring of development in OAs, the GLA is currently working on publishing detailed information on completions and approvals of community and social infrastructure floorspace in each OA.” Some new variables reflecting the “Good Growth” principles of the London Plan are also being developed.

The issues reemerged in the November 23, 2022 [meeting about Mayoral Development Corporations \(MDCs\)](#). MDCs are the new governance mechanism which Mayor Johnson decided to use for the Olympic area (LLDC) and for Old Oak Common and adjacent areas (OPDC). These have been the subject of [submissions by Just Space and member groups](#) to the London Assembly, raising issues which overlap with those of OAs more widely.

This ends the account of the Assembly engagement and the Mayor’s responses though clearly further change is on the cards, especially as regards the two Development Corporations.

# Commentary

We can tentatively sum up the situation as follows

1. **‘Opportunity Areas’ have outgrown their original mandate.** This report begins with background information on the history of Opportunity Areas, which highlights how the planning context across Greater London has changed since the 1980s. OAs were originally designed to incentivise development in disused industrial sites. There have been no more of these sites since the early 2000s, yet OAs have continued to be designated, but often in densely populated areas, effecting a ‘zone of exception’ from local planning policy, such as density controls and height limits, which would otherwise govern development. It is argued that the GLA have mobilised Opportunity Areas recklessly as a crude tool to meet ambitious housing and employment targets, despite this being in conflict with the purported aims of Mayor Kahn’s ‘Good Growth’ agenda.
2. **There remains an urgent need for a comprehensive review of Opportunity Areas and their continuing use.** Community groups in London, especially those in and near to OAs, have often called for evaluations. There has never been any systematic evaluations of how OAs are working and it is not the clear mandate of any particular organisation to conduct such studies. Within the GLA, the successive Mayors of London could be said to be responsible as part of their statutory duty to monitor their plans. Equally the London Assembly is responsible for the ‘scrutiny’ of the Mayor’s policies and actions. While both bodies have a mandate that could justify a systematic review under their purview, it is worth noting that the London Assembly currently lacks the resources of forensic / investigative skills to carry out the sort of studies in depth which are needed. The wider academic and research communities have done sporadic work on individual OAs but there is no systematic programme by universities or UKRI for whom this issue should be a priority.
3. **The designation of further Opportunity Areas should be halted until their use has been studied and the results have been made public.** This is the longstanding position of Just Space since 2014.
4. **Opportunity Areas are broadly undemocratic, their targets are arbitrary, and the intense development they sanction often displaces valued local land uses and intensifies cost burdens for local residents.** There is widespread experiential evidence of the negative effect of Opportunity Areas, especially on poorer and minority residents and business, which has often been evidenced by residents at London Assembly meetings and EiPs.
5. **Pending a review, Opportunity Areas should be supported as diverse spaces of democratic experimentation.** Just Space will continue to support innovative practices

by community groups which mitigate the shortcomings in the democratic governance of Opportunity Areas.

Our analysis suggests no easy answers to the issue of how London's major developments should be planned and managed, nor is it meant to. There must be a broad array of strategies deployed in approaching the ongoing issues related to London's ability to meet its citizens' housing, recreation, travel and employment needs. These strategies must be contextually informed and situated to meet the needs of residential and business communities that are likely to be affected by concentrations of development in the context of accelerating global climate and ecological breakdown.

So many of the issues raised by OAs come down to issues of inequality of income, wealth and power and these have been dramatically highlighted by the experience of the Covid pandemic which has further changed the context. The [Just Space Community-led Recovery Plan for London](#) represents a start in this process of rethinking from the bottom up.

## What next?

### [draft subject to discussion in Just Space]

After many years of submissions by member groups and by Just Space itself to London Plan and other consultations the Opportunity Area mechanisms which govern London's major developments remain very unsatisfactory. The interventions by the Assembly Planning and Regeneration Committee in 2022 have secured a [policy statement](#) and perhaps some small changes from the Mayor's office. The proof of the pudding remains to be seen.

There is no sign of a systematic study and evaluation of the programme so far. It is a shocking contrast with urban policy in the later 20th century when there was a rich harvest of evaluations by public bodies, research councils and academics, even in the absence of a metropolitan authority.

Just Space also notes that the Mayor is using the continuing designation of OAs to create spaces that are exempt from planning regulations to meet his ambitious housing targets. In the process of doing so, Opportunity Areas have displaced valued and important existing land uses to meet transport infrastructure funding deficits and to try to meet housing targets. This focus on Opportunity Areas comes to the detriment of the Mayor's own objectives for "good growth", especially in producing the social rented housing which is most needed and lowering the housing costs of poor and minoritised people inside and near to the OAs.

More strategically, we contend that the era of Opportunity Areas should now perhaps be over – the initial motivation to identify large areas for new development in disused industrial brownfields is no longer valid. Opportunity Areas now involve declaring areas for extreme

intensification without adequate public consultation or review procedures, often leading to the displacement of people and valued activities. Would Londoners be better off if major developments were governed simply by the normal planning processes of borough councils with the Mayor and the London Plan in the background, setting strategy or some performance requirements? At best, boroughs can act relatively democratically but at worst they can be almost totalitarian in their disregard of their residential and business communities.

There may, perhaps, be a case for a special committee or agency where a major development straddles boroughs or where particularly awkward coordination of agencies is involved but any such body should be composed of democratically elected and accountable people. Elsewhere, it is not clear that any special policy is needed or useful: ALL of London needs good policies. In the case of the LLDC we understand that the Corporation is to cease being a planning authority and shrink to being a park and stadium manager. In the case of OPDC the future is uncertain and at least one Just Space group is adamant that it should be disbanded.

Just Space seeks to embolden the GLA to reframe the meaning of OAs as spaces of experimentation, spaces to explore or be a catalyst for new ways of delivering on London development, processes that build on the energy, know-how and creativity of a wide array of Londoners and take equality seriously as part of the [Recovery Plan](#).

Michael Edwards and Jason Katz with input from Robin Brown  
5 May 2023