London Local Aggregates Assessment 2024

Version – Final

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Contents

Dashboard (all data in million tonnes)

Aggregate	Sales in 2023	Change in sales from previous year	10 year sales average	Sales Trend	3 year sales average	Sales Trend	LAA/London Plan (annual provision)	Permitted reserves in London at 31 December 2023	Change in reserves from previous year	Landbank of permitted reserves[1] (yrs)
London Land-won Sand & Gravel	0.514	↑	0.357	↑	0.425	↑	0.7	5.27	↑	7.52
Land won Sand & Gravel Total[2]	1.25	↑	0.97	↑	1.27	↑	N/A	5.27	↑	7.52
Crushed Rock	4.25	↑	3.33	↑	3.29	↑	N/A	N/A	N/A	N/A
Marine sand & gravel	3.4	↑	4.23[3]	↓	3.5	↑	N/A	N/A	↓	22[4]
Total Primary[5] Aggregates	8.9	↑	9.16	↓	8.06	↑	0.70[6]	5.27	↑	7.52
RSA	3.65	↓	3.26	↓	3.64	↑	N/A	N/A	N/A	N/A
Total Aggregate	12.55	↑	12.42	↓	11.74	↑	0.7	5.27	↑	7.52

[1] Calculated using total permitted reserves at 31.12.2023 and the LAA/London Plan annual provision rate.

[2] Including land won sand and gravel from outside London and imported via railheads.

[3] N.B. Value in LAWP AMR is 4.86 (reason for difference unclear as data underpinning LAWP report not yet received)

[4] Crown Estate estimate of licensed marine reserves – p10 Marine Aggregates Annual Review 2024

[5] 8.9Mt Primary Aggregate sales in 2023 made up of 5.7% London Land won Sand and Gravel; 14% London and Imported Land Won Sand and Gravel; 47.7% crushed rock and 38% marine won sand and gravel.

[6] London Plan 2021 Policy SI 10

Executive summary

London is unique among UK regions in being almost entirely dependent on imported aggregates to meet its substantial construction needs. The capital's primary resources of sand and gravel are relatively limited, and there are no local sources of crushed rock. Consequently, London's aggregate supply system is shaped by reliance on marine-dredged sand and gravel, imports of crushed rock primarily by rail, and the growing use of recycled and secondary aggregates.

In 2023, London's primary aggregate sales rose to approximately 8.9 million tonnes (Mt), nearing pre-pandemic levels. This included around 1.25 Mt of land-won sand and gravel (0.5 Mt from quarries in London), 3.4 Mt of marine sand and gravel, and 4.25 Mt of imported crushed rock. Recycled and secondary aggregates contributed an estimated 2.5 - 3.5 Mt, reflecting continued progress towards circular economy goals.

Land-won Sand and Gravel

Land-won sand and gravel produced from quarries in London is relatively limited. In 2023, only c0.5 Mt was produced, representing less than 5% of London's consumption, although this reflects a slight upward trend. Permitted reserves stood at 5.27 Mt at the end of 2023, equating to approximately a 7.5-year landbank at the London Plan policy provision rate of 0.7 Mt/year. While this technically meets policy targets, the reality is that new permissions have lagged behind depletion. Future supply could be met by resources yet to be worked. The extent of supply needs further geological and constraint investigation. Approximately 0.75 Mt of land won sand and gravel was imported in 2023.

Marine-dredged Aggregates

Marine won sand and gravel remain the backbone of London's sand and gravel supply, contributing about 36% of total primary aggregates in 2023. London is the UK's largest single market for marine sand and gravel, landing material at 14 active safeguarded London wharves along the Thames. This supply is vital for concrete production and other construction applications. The Safeguarded Wharves Review 2018-2021 has reinforced this infrastructure by confirming and consolidating strategic wharves, including the reopening of Peruvian Wharf and the safeguarding of Royal Primrose Wharf.

Imported Crushed Rock

Imported crushed rock is also a key contributor to London's total primary aggregates in 2023. Approximately 4.25 Mt of crushed rock was imported to London in 2023, primarily via railheads. Main source regions include Somerset (Mendips), Leicestershire and Derbyshire. The rail network and 16 operational railheads play a crucial role in distributing these materials across London, reducing the need for long-distance road haulage and supporting more sustainable freight solutions. Crushed rock is also imported by ship to London wharves from Norway and the Glensanda super quarry in Scotland.

Recycled and Secondary Aggregates

Recycled and secondary aggregates contribute 29% of total aggregate supply. These materials, derived mainly from construction and demolition waste and incinerator bottom ash (IBA)[7], support London's transition to a more circular economy and reduce reliance on primary materials. While there is significant permitted capacity (estimated at 5–6 Mt/year), actual production remains lower due to market, quality, the availability of raw material as feedstock and constrained opportunities for development of production capacity.

Demand and Future Trends

Aggregate demand in London is expected to remain high, driven by large-scale housing targets (currently 52,000 new homes per year) which are likely to increase (as set out in the GLA's 'Towards a New London Plan' consultation[8]), regeneration schemes, and major infrastructure projects such as HS2 works at Old Oak Common and future projects such as Docklands Light Railway extension and others being pursued such as the Bakerloo Line extension. Historic consumption trends indicate an average of 9–10 Mt/year, with potential peaks if multiple large projects coincide.

Three demand scenarios examined in this LAA indicate that aggregate requirements would rise significantly if housing delivery increased to London Plan 2021 target levels (52,000 homes/year) or higher.

Supply Adequacy and Infrastructure

While the overall supply system can currently meet demand, it is heavily dependent on imports and vulnerable to infrastructure constraints. The wharf and railhead networks are critical bottlenecks. Safeguarding policies and continued investment in capacity enhancements (e.g. upgraded wharf equipment, expanded rail sidings) are essential to maintain resilience.

Key Risks and Mitigation

Main risks include depletion of land-won reserves, loss (or constraint) of safeguarded wharves or railheads to redevelopment, infrastructure capacity limits, and potential constraints in source regions including time limited planning permissions associated with major reserves. Mitigation strategies include continuation of robust safeguarding policies, proactive planning for new or expanded facilities, stronger regional cooperation, and further promotion of recycled and secondary aggregate.

Recommendations

- Maintain and strengthen safeguarding of wharves and railheads to protect import capacity.

[7] In the long term this source may reduce if there is a reduction in waste being managed by incineration.

[8] https://www.london.gov.uk/programmes-strategies/planning/london-plan/towards-new-london-plan-consultation

- Encourage investment in recycling infrastructure and promote higher-quality recycled aggregate uses.
- Research end dates of quarries supplying London and enhance regional cooperation with supplying Mineral Planning Authorities to help secure future crushed rock and sand supplies including by extending planning permission end dates where appropriate.
- Monitor major project pipelines and prepare contingency strategies for potential demand peaks.
- Improve consistency in Local Plan policy provision for aggregates supply.
- This and other LAAs should be used as evidence to inform any reassessment of the required land-won sand and gravel landbank and associated borough apportionments as well as the annual provision target in the London Plan, that occurs as part of the preparation of the new London Plan.
- Maintain policies that encourage land won sand and gravel extraction to ensure London continues to contribute towards overall supply requirements.

Conclusion

The London Local Aggregates Assessment 2024 confirms a finely balanced but fundamentally import-reliant supply system. Ensuring the capital's ambitious growth and infrastructure programme can proceed will depend on continued protection and enhancement of marine and rail import infrastructure and maximising use of recycled materials. A proactive and collaborative approach among the GLA, boroughs, industry, and source regions remains crucial to securing a steady and adequate supply of aggregates in the years ahead.

1. Introduction

1.1 London's Local Aggregates Assessment (LAA) 2024 provides an updateable, evidence based appraisal of the demand for, and supply of, construction aggregates in the capital, in line with national policy requirements. The National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) require Mineral Planning Authorities to prepare an LAA each year, detailing local aggregate sales (production), consumption, reserves and future demand, and to maintain at least a seven-year landbank of sand and gravel reserves.

1.2 This LAA assesses all forms of supply, i.e. land-won sand & gravel, marine-dredged aggregates, imported crushed rock, plus recycled and secondary aggregates, and evaluates whether the current supply infrastructure and reserves are adequate to meet current and future demand. The LAA also reviews relevant planning policies, and in particular, provision made in London Borough Local Plans (details included in Appendix A).

1.3 Consideration of future aggregate requirements in London is included in Section 4, this details key drivers of aggregate demand, such as large infrastructure projects and ambitious housing targets.

1.4 Importantly, the LAA identifies risks to London's aggregate supply, including the decline in land-won production, development pressure on wharves and railheads, and dependencies on external suppliers, and it outlines issues that need to be managed to ensure a resilient supply chain.

Methodology

1.5 In line with national guidance, this LAA uses a rolling average of 10 years of aggregate sales (and the 3-year average) to indicate local supply trends. Given London's atypical supply situation (minimal land-won production and heavy reliance on imports), the LAA also considers the following factors:

- the London Plan aggregate provision targets;
- the capacity of import infrastructure; and
- the demand forecasts from planned development.

1.6 Data on sales and reserves have been obtained from the annual monitoring survey of operators of 2023 data reported in the London Aggregates Working Party (LAWP) Annual Monitoring Report 2024. Consumption and imports data are informed by the national Aggregate Minerals Survey[9] as well surveys of railheads and wharves. Recycled and secondary aggregate estimates are derived from the Environment Agency's Waste Data

[9] Collation of the Results of the 2023 Aggregate Minerals Survey for Great Britain, MHCLG, 2025

Interrogator and the London Waste Map[10] which reports returns from sites managing construction and demolition waste (the source of recycled aggregate) and incinerators producing bottom ash which is used as a secondary aggregate. All data are the most current available (generally reflecting the position at end of 2023[11]). It should be noted that some 2021 and 2022 import data in London's monitoring had limitations (due to survey gaps), but national surveys and proxy data were used where necessary to fill these gaps.

1.7 Figures quoted are in million tonnes (Mt) unless otherwise stated, and 'sales' refers to the quantity of aggregate produced or landed/imported within Greater London (not including material imported directly to construction sites from elsewhere).

1.8 This LAA also draws on a review of London borough planning policy, and a regional imports assessment (based on 2019 and 2023 data) and a review of LAAs for Mineral Planning Authorities (MPAs) from where aggregate is supplied into London.

Structure

1.9 This report first outlines the policy and regulatory context (Section 2). Section 3 then examines current aggregate supply in London by source (land-won, marine, imported rock, recycled/secondary), including recent sales and remaining reserves. Section 4 discusses aggregate demand trends and drivers (historic consumption and future needs from growth and infrastructure). Section 5 provides an assessment of the balance between supply and demand, this includes the calculated aggregate provision rate, the sand and gravel landbank, and capacity of import infrastructure, and identifies any shortfalls. Section 5 highlights key risks and issues for London's aggregate supply position. Section 6 includes a review of Borough Local Plans. Conclusions and recommendations are given in Section 7.

1.10 Appendix A contains a borough-by-borough overview of aggregate supply points and relevant Local Plan policies (safeguarding designations, capacity issues, etc.), as referenced in the main text. Appendix B, C, D and F include tables of aggregate supply sites in London.

[10] https://apps.london.gov.uk/waste/

[11] Results of the 2024 survey will be reported in next year's London LAA.

2. Policy and Context

National Policy and the Managed Aggregate Supply System

2.1 The planning for aggregates in England operates under the Managed Aggregate Supply System (MASS), which seeks to ensure a steady and adequate supply of minerals to meet construction needs. The NPPF (2024) (paragraph 226) requires that all Mineral Planning Authorities (MPAs) prepare an annual LAA, participate in Aggregate Working Parties (AWPs), and maintain minimum landbanks of *at least* 7 years for sand and gravel (and 10 years for crushed rock). The LAA should forecast future demand based on past sales (usually a 10-year rolling average), consider other relevant local information (e.g. planned developments), and detail how the demand will be met (through local production and imports)

2.2 Planning Practice Guidance (PPG) identifies three elements a LAA should contain:

- A forecast of aggregate demand;
- an analysis of all aggregate supply options; and,
- an assessment of the balance between demand and supply.[12]

2.3 The 32 London boroughs, and the City of London Corporation, are each MPAs with responsibility for minerals planning in their areas, however, given London's circumstances, the boroughs work collaboratively through the LAWP and the Mayor's office to produce a single, consolidated LAA for the Greater London area. This approach avoids duplication and reflects that aggregate supply in London is usually considered at a strategic level. The LAWP (comprising London borough planners, the Greater London Authority (GLA), central government, Marine Management Organisation (MMO), The Crown Estate, Network Rail, Port of London Authority industry representatives, and neighbouring region observers) monitors aggregate supply and provides technical advice to ensure London makes an appropriate contribution to both local and national aggregate needs.

2.4 The National and Regional Guidelines (last issued in 2009 and, while theoretically still in place, essentially superseded by the NPPF's bottom-up LAA process) historically set an expectation for London's land-won aggregate production. Previously, while London had no targets for crushed rock (having no indigenous sources) it had a guideline for sand and gravel production. These guidelines informed previous London Plan policies (see 2.6 below).

[12] PPG Paragraph:062 Reference ID:27-062-20140306

2.5 London's reliance on aggregate from other regions necessitates close liaison with those exporting regions through the AWP system and direct cooperation with major supplying Mineral Planning Authorities (particularly Somerset and counties in the East Midlands). This LAA incorporates information from relevant county LAAs and the South East, East of England and East Midlands AWP reports to ensure imports to meet London's demand are considered in their wider contexts.

The London Plan and Local Policy

2.6 Strategic minerals planning policy for London is set out in the London Plan 2021, notably Policy SI 10: Aggregates. Policy SI 10 (and its supporting text) requires that:

a. London should maintain a landbank of at least 5 million tonnes of land-won sand and gravel (seven years' supply) at all times;

b. boroughs with extractable resources (certain East and West London boroughs) should plan to meet specified apportionments of that regional total (by maintaining landbanks at specified levels); and

c. all existing aggregate sites, including wharves on the Thames and railheads handling aggregates, are safeguarded against redevelopment unless suitable compensatory capacity is provided.

2.7 The London Plan minimum landbank target of 5 Mt of sand and gravel reserves reflects an average annual production target of 0.7 Mt per year of land-won sand and gravel, which was carried forward from earlier London Plans. These targets reflect a strategic ambition to maximise local production where possible and to at least ensure that potential resources remain available (through safeguarding in Local Plans).

2.8 Four London boroughs (Havering; Redbridge; Hillingdon; and Hounslow) were historically identified as having significant sand and gravel resources and so have been allocated a specific share (apportionment) of the regional, at least, 5Mt landbank in London Plan 2021 as follows:

- Havering 1.75 Mt
- Hillingdon 1.75 Mt,
- Hounslow 0.7 Mt
- Redbridge 0.7 Mt

2.9 Policy SI10 also emphasises using recycled/secondary aggregates in development projects and minimising the use of primary aggregates, in line with circular economy principles. Other policies on waste encourage the production and use of recycled aggregates.

2.10 In 2020, with the support of the Port of London Authority (PLA), the GLA completed a comprehensive Safeguarded Wharves Review[13]. The Government subsequently confirmed the safeguarding of an updated list of strategic wharves on the Thames in October 2020. This review consolidated capacity in some areas, for example, in Newham, where a new wharf (Royal Primrose Wharf) was designated immediately downstream of Peruvian Wharf to increase handling capacity, in exchange for the release of some long-disused wharves elsewhere. The result is that since 2021, 42 wharves across London have been formally safeguarded, of which 14 are actively used for aggregates and related materials (others handle cargo like waste or are inactive awaiting reuse). The Mayor and PLA have also invested in reactivating dormant wharves, for example Peruvian Wharf (Newham) was brought back into use in 2019 as an aggregates import terminal. This strong policy protection is vital given development pressure along the Thames as without it, critical river infrastructure for marine aggregate imports could be irreversibly lost to housing or commercial schemes. Section 5 will discuss whether current safeguarded wharf capacity is sufficient.

2.11 In terms rail import infrastructure, while there is no equivalent formal safeguarding direction, the London Plan and some borough local plans safeguard established rail aggregates depots (often as part of Strategic Industrial Land). Policy T7 of the London Plan generally expects all railheads to be safeguarded unless they are shown to be unviable.

2.12 At the borough level, each London MPA is expected to reflect London Plan 2021 policy in their Local Plans by safeguarding relevant sites and, where applicable, identifying resource areas for future extraction. Boroughs with remaining sand and gravel (Havering, Hillingdon, etc.) allocate 'Preferred Areas' or specific sites for minerals extraction in their plans, to enable future permissions. Most other boroughs,(i.e. without their own resources), have policies supporting the use of recycled aggregates in construction and safeguarding of infrastructure associated with import of aggregate.

2.13 Findings of a review of the adequacy of borough Local Plan policies, as detailed in Appendix A, is set out in Section 6.

2.14 Overall, the policy context in London is intended to achieve the following:

- Maintain a steady supply of aggregates;
- safeguard import facilities;
- maximise recycling and the use of recycled and secondary aggregate; and,
- minimise the need to transport aggregates by road.

[13] https://www.london.gov.uk/programmes-strategies/planning/planning-applications-and-decisions/safeguarded-wharves-directions

3. Aggregate Supply in London

3.1 London's aggregate supply comes from four main sources:

1. Land-won sand and gravel extracted from remaining quarries within Greater London and a small amount from quarries beyond London;
2. marine-dredged sand and gravel landed at Thames wharves;
3. imported crushed rock (e.g. limestone, granite) delivered mainly by rail from other regions (and in small part by sea); and
4. recycled and secondary aggregates produced from construction waste and industrial by-products within London.

3.2 This section reviews each in turn, presenting the latest data on quantities, trends, and infrastructure but an overview of sales from various sources is provided in Figure 1 below.

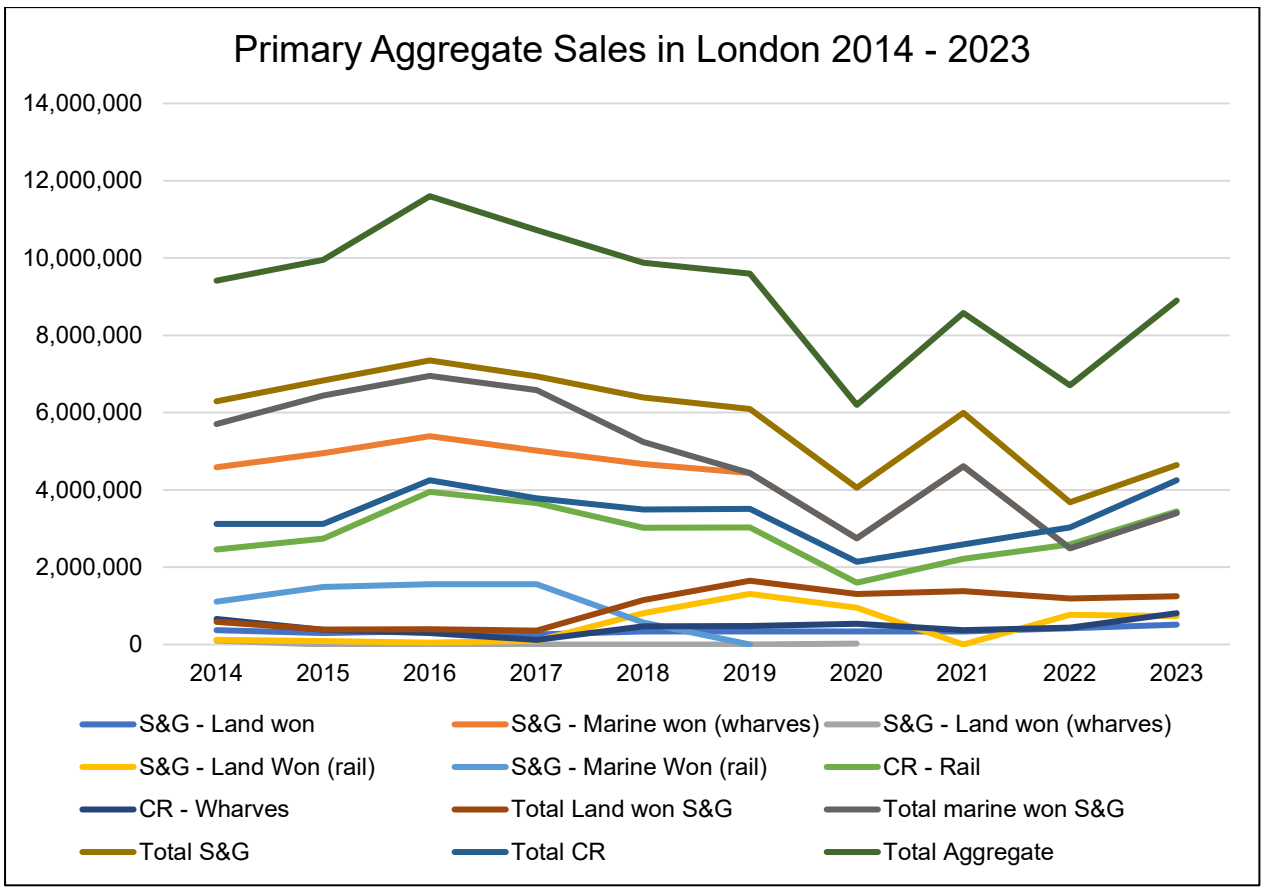

Figure 1: London's primary aggregate supply by source[14]

[14] Sources of data include LAWP AMRs and previous London LAAs. Primary data has not been made available.

3.3 A large quantity of aggregate sold from sources in London, mainly wharves and railheads, is used in London and sales from quarries in London is virtually all used in London and so the level of sales provides a good insight into the level of aggregate consumption in London.

3.4 Overall primary aggregate sales from supply facilities in London has historically been around 9-10 million tonnes per year, with a dip during the 2008-09 recession and a sharp drop in 2020 due to the COVID-19 pandemic. It then rebounded reflecting the recovery of the construction sector. For context, in 2019 the total primary aggregate sales in London was estimated at 9.60 Mt, which fell to 6.20 Mt in 2020 during lockdowns. By 2021-2022, demand began to rise again; in 2023 sales increased to their highest level since 2019 (8.9 Mt) suggesting that consumption is approaching pre-pandemic levels in light of increased construction activity.

3.5 London's primary and total aggregate consumption far outstrips local production, meaning the bulk of aggregates must be imported. Even in earlier steady-state years, only roughly half of London's needs were supplied by material sourced within London (including marine landings); the rest was imported from outside the region. The general pattern (as of mid-2010s and still broadly valid) was: c10% of London's primary aggregate consumption was met by land-won sand & gravel (virtually all of that imported from other regions, as London's own quarries contribute only a few percent), c50% by marine-dredged sand & gravel (landed by ship in London), and c40% by imported crushed rock (mostly brought in by rail). Recycled and secondary aggregates have supplied an additional portion of aggregates equivalent to roughly 20-30% of primary aggregate consumption, which reduces the need for some primary material. The following subsections detail current supply from each source.

London Land-won Sand and Gravel

Resource and operations

3.6 London is located on limited sand and gravel resources - primarily terrace gravels and floodplain sands associated with the Thames and its tributaries, and some bedded sand/gravel in the far west. Historically, sand and gravel extraction in London has been concentrated in a few outer boroughs: notably Havering (East London) and Hillingdon (West London), with smaller contributions in the past from Redbridge, Barking & Dagenham, and Hounslow.

3.7 The aggregate geology of London is illustrated by a map which accompanied a report prepared by the British Geological Society in 2008[15] that examined potential options for future aggregate supply in England, including the

[15] Source: Aggregate resource alternatives: Options for future aggregate minerals supply in England. British Geological Survey Open Report OR/08/025, 2008. N.B. Specific sites referred to by this map may no longer be active.

constraints and feasibility of working different geological resources, taking into account environmental, social, and economic factors. Areas shown with a faint shading on the map are those which are largely sterilised by urban development and/or policy constraints.

3.8 At present (2023), there are only four quarries producing land-won aggregates in London: two in Havering, one in Hillingdon and one in Redbridge. Havering quarries in the Rainham area and Fairlop Quarry in Redbridge work the Thames terraces. Harmondsworth Quarry in Hillingdon works the Colne Valley gravels. Other sites, such as Sipson Quarry in Hillingdon, have ceased operation or are exhausted. No crushed rock is quarried in London (there are no indigenous hard rock deposits). Appendix B lists active and inactive quarries in London and Figure 2 below shows their location.

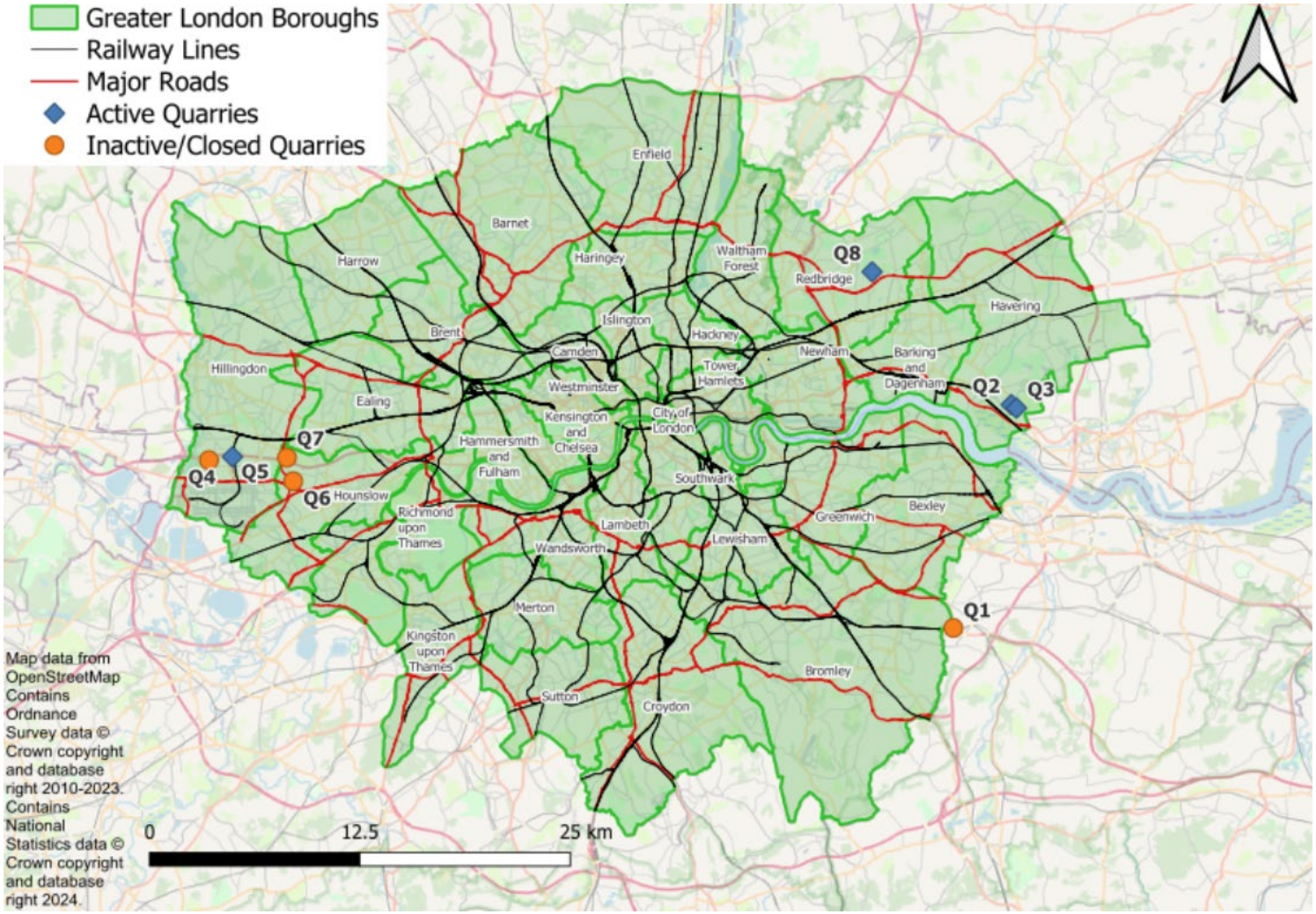

Figure 2: Location of Quarries in London

Sales

3.9 Land-won aggregate output in London is very low. Total sand & gravel sales from the following quarries in London that were active in 2023 was c0.5 million tonnes in 2023:

- Rainham/ East Hall Farm Quarry, Havering
- Wennington Quarry, Havering
- Harmondsworth Quarry, Hillingdon
- Fairlop Quarry, Redbridge

3.10 The ten-year rolling average of land-won sales (2014-2023) is c0.36 Mtpa, and the three-year average (2021-2023) is c0.42 Mtpa. While sales in 2023 showed a marked increase, the 10 year sales average remains well below sales achieved in earlier decades (for example, London produced over 1 Mt/yr in the 1990s). This compares with London's own demand for sand and gravel which is in the order of 5-6 Mt/yr.

3.11 For some time, local extraction has accounted for a small amount of aggregate consumed in the capital. Indeed, by 2014 land-won sand/gravel from within London represented merely 4% of London's total aggregates consumption, and that percentage has remained fairly constant in recent years.

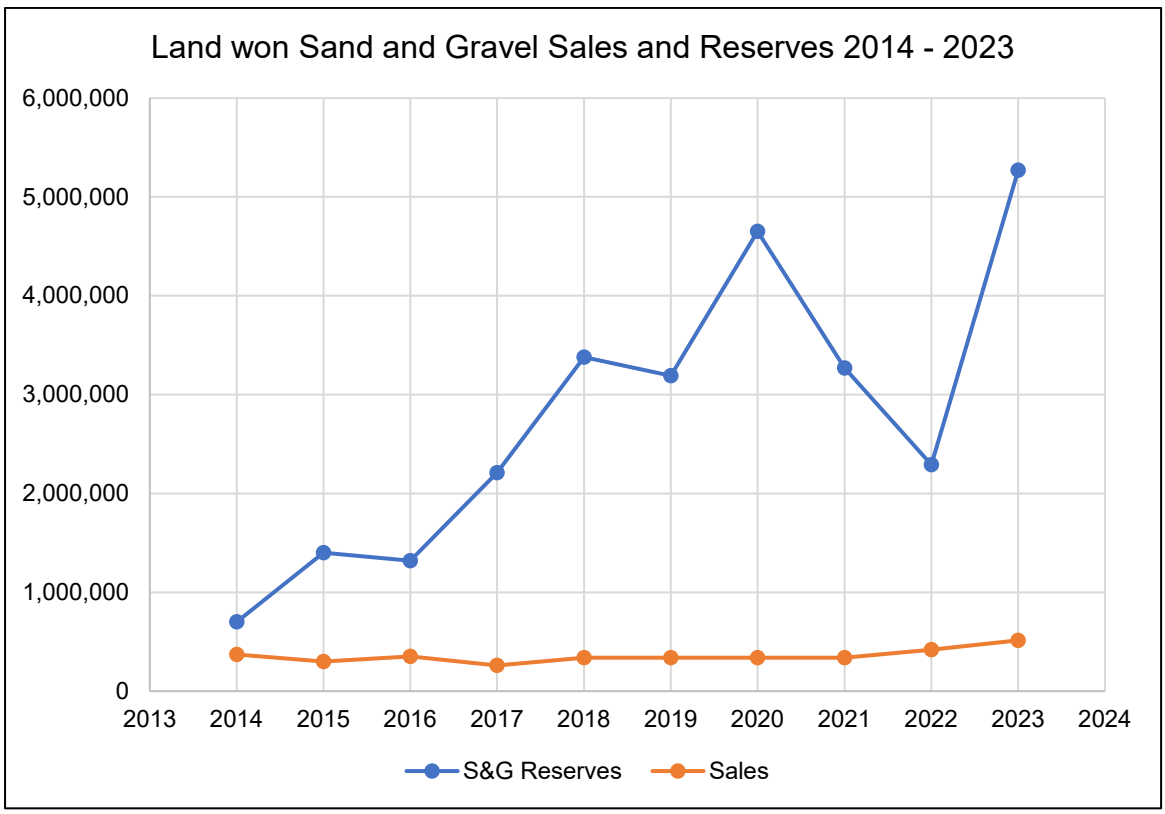

Figure 3: Land-won sand & gravel sales and reserves in London, 2014-2023

3.12 Permission at Harmondsworth Quarry in Hillingdon was granted in 2019 to extract an additional c0.5 Mt of sand/gravel, which would sustain some production for a few years if implemented. In 2016 permission was granted for new quarry at Rectory Farm in Hounslow, however this has never been developed and while the permission expired in March 2025 a fresh proposal is now being developed. Redbridge has further unworked reserves at Fairlop providing an opportunity to supplement reserves.

Reserves and landbank

3.13 As of 31 December 2023, the permitted sand & gravel reserves in London were reported as 5.27 million tonnes, which equates to a 7.5-year landbank using the London Plan's 0.7 Mt/year benchmark. 5.27Mt is a significant increase on recent years and is in part due to additional reserves being recently permitted in Hounslow[16]. Using the actual 10-year average sales (c0.36 Mt/yr) as the basis, 5.27 Mt would represent a larger landbank (c14.5 years), however, London's policy has long been to treat 5 Mt as the minimum total reserve (the amount needed for 7 years at c0.7 Mt/yr) and by that measure, London's landbank is just about meeting the requirement.

3.14 No new significant sand and gravel reserves have been added in London for several years, aside from small extensions; the last sizeable new permission was in 2018 in Havering and the aforementioned Hillingdon and Hounslow sites. This lack of substantial replenishment is a critical concern. Over the last decade, in line with the national trend, the rate at which new reserves were permitted was far below the rate of extraction, leading to a steady decline in the reserve base. The increase to reserves in London in 2023 may well over time appear as a short term and anomalous uptick if reserves are worked without replenishment. The Mineral Products Association reports that in some recent years only c36% of the sand-gravel extracted was replaced by new consents - a situation currently mirrored in London.

3.15 The BGS map of aggregate resources[17] illustrates their extent in London and shows how a large proportion is sterilised. With some exceptions, the remaining identified resource areas (e.g. in Havering's Thames terraces, and Hillingdon's Colne Valley) are either close to existing development, subject to environmental limitations, or only modest in size. The East London boroughs collectively have likely only a few million tonnes left that is both viable and not sterilised by urban land uses. Some historically safeguarded areas may never be worked due to changes in land use priorities. Given these factors, it is anticipated that land-won production could decline. Given the limited nature of these resources, their safeguarding to prevent sterilisation by permanent built developments, for example, is important to maximise their use, particularly while production facilities and processing infrastructure exists in those areas. Further geological investigation of the

[16] Land south of Western International Market, Southall Lane

[17] See paragraph 3.7

remaining resource should be encouraged and the environmental and development constraints mapped to identify any future potential sites.

3.16 Part C of London Plan Policy SI 10 Aggregates requires all London mineral planning authorities to identify safeguarded areas (resources), sites and facilities in their Local Plans.

Local impacts and plans

3.17 The quarries that remain in operation are subject to various conditions (e.g. limited hours, HGV routing agreements) due to their proximity to communities. Both active boroughs (Havering and Hillingdon) have policies to ensure progressive restoration of sites - many worked-out areas have been or will be transformed into nature reserves, public open space or low-level flood storage. While these bring local benefits post-extraction, they also mean that once closed, the sites cannot be readily reopened for further extraction should this become viable.

3.18 For those land-won sand and gravel producing boroughs, it is expected that their Local Plans will demonstrate how they will seek to meet the London Plan apportionments. Havering's Local Plan identifies specific preferred areas in Rainham for continued working and acknowledges that while it will strive to meet its apportionment, significant reliance on imports is inevitable. The Hillingdon Local Plan similarly allocates potential sites (including extensions around Harmondsworth) and notes the borough's role in supplying not just London but also Heathrow construction projects. In both cases, achieving the theoretical apportionment has been challenging. Hillingdon in particular, had a large allocation (1.75 Mt) that it has partially fulfilled but likely will fall short of without further reserves. Appendix A provides more detail on each borough's resource and policy position.

Marine-Dredged Aggregates (Thames Wharves)

3.19 Marine-dredged sand and gravel from the North Sea and English Channel is a critical supply source for London, landed by ships at wharves along the River Thames. These materials (marine sand, shingle, and ballast) are used interchangeably with land-won sand and gravel for concrete, and other construction needs. London's relatively coastal location and access to the Thames have made marine aggregates an increasingly large component of the supply mix, especially as local quarries declined.

Sales and significance

3.20 London is heavily reliant on marine aggregates, indeed the city is the largest single market for marine-dredged sand and gravel in the UK. Approximately 40-50% of London's total primary aggregate consumption is now supplied by marine sources. In 2023, marine sand and gravel comprised c42% of total primary aggregate consumption (about 3.9 Mt out of 9.3 Mt). The 3 year average for marine won sand and gravel sales from wharves in London is 3.5Mt and the 10 year average is 4.2Mt. The Crown Estate's national

statistics for 2023 indicate that 1.5 Mt of marine sand/gravel was removed from the Thames Estuary dredging region (which largely supplies London) that year, and the South Coast dredging region (some of which is also shipped to London) supplied another c4.0 Mt across its markets. A significant portion of those quantities ends up in London. For example, the busiest aggregate wharves in London (at Greenwich and Dagenham) landed nearly 4 Mt in 2023[18]. London's share of all marine landings in England is substantial: out of c18.8 Mt landed at English wharves in 2023, c39% was landed at Thames estuary wharves serving London. Also a key note is that marine-dredged aggregate has overtaken land-won sand as the main source of building/soft sand for London's construction markets.

3.21 This marine won trend is expected to continue as marine resources are currently relatively abundant (subject to licence areas) and environmental controls on dredging are robust. The Crown Estate and British Marine Aggregate Producers Association (BMAPA) have confirmed that current licensed offshore reserves are healthy, with at least 20+ years of permitted dredging at present extraction rates. For the Thames dredging region specifically, there are around 30 Mt of primary marine aggregate reserves with a regional reserve life of c18 years at the latest 10 year average offtake rate (1.59Mt) which indicates a relatively secure medium to long-term supply of sand and gravel for London from this source, assuming wharf landing capacity is maintained. The Crown Estate's 2024 Marine Aggregates Annual Review emphasises that marine supply will grow in importance as land-based sources diminish, highlighting London as a key area where this shift is evident.

Infrastructure - wharves and depots

3.22 There are currently 14 active aggregate wharves in Greater London receiving marine-dredged materials. The major wharves include (east to west along the Thames): Dagenham (LB Barking & Dagenham), Erith (Pioneer & Conway Wharves) (LB Bexley), Greenwich Peninsula (Angerstein, Murphy's, Victoria Deep) (LB Greenwich), Charlton (Riverside Wharf) (Greenwich), Peruvian Wharf (Newham, reactivated in 2019), Royal Primrose Wharf (Newham, newly safeguarded), and further upriver, smaller operations such as Pier Wharf (LB Wandsworth) (see Figure 4 below).

3.23 The Port of London Authority (PLA) coordinates river traffic and leases for these sites (many are owned by the Crown/PLA or long-leased to aggregate companies). Major operators include CEMEX, Heidelberg, Tarmac, Brett Aggregates, and Holcim UK (formerly Aggregate Industries). Many wharves have on-site processing like concrete batching or asphalt plants, making them integral to supply chains (e.g. the Greenwich wharves cluster supports several concrete plants).

[18] Marine Aggregates Summary of Statistics Crown Estate 2023

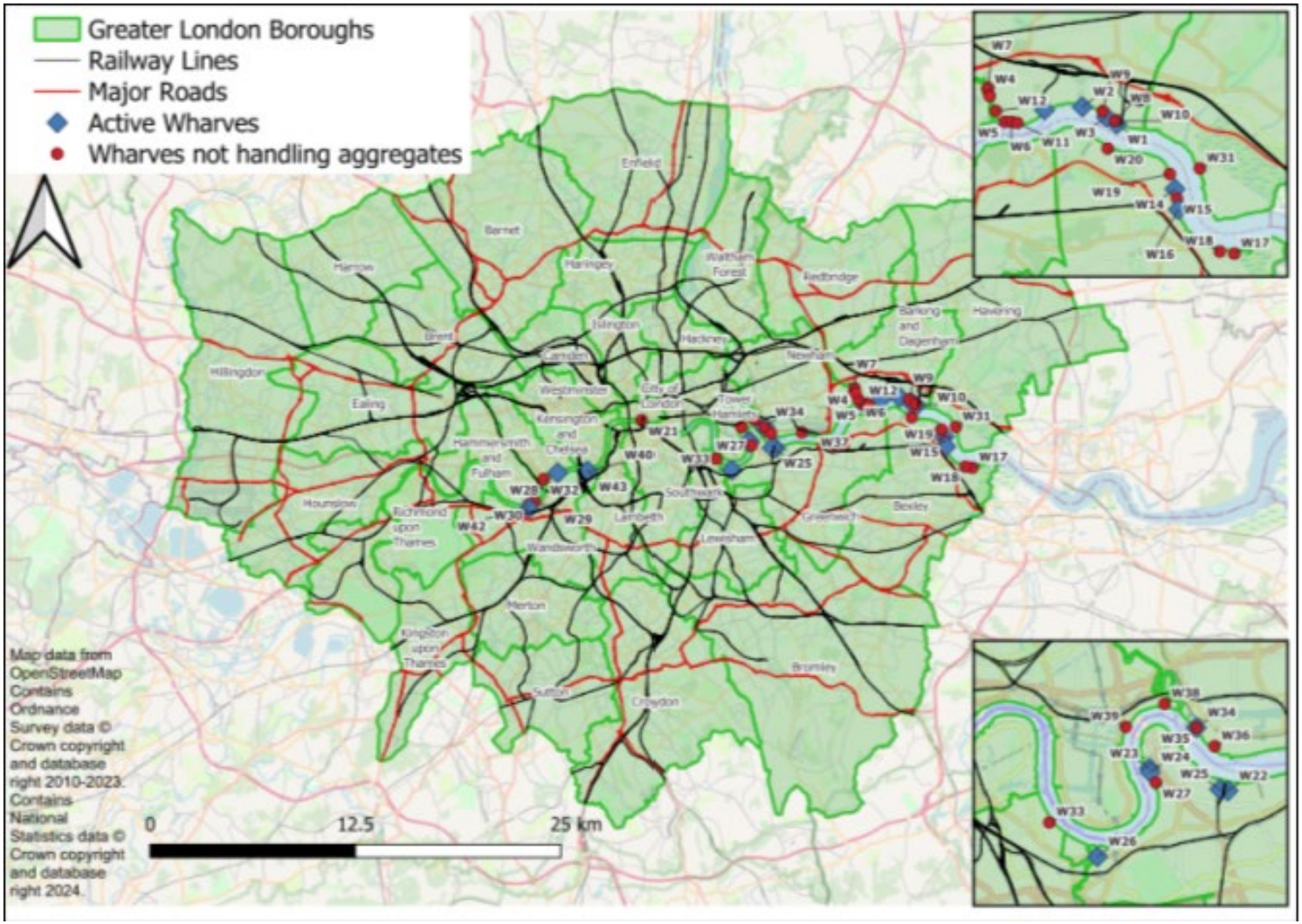

Figure 4: Location of Wharves in London (See Appendix C for details)

3.24 The overall throughput capacity of safeguarded Thames wharves for aggregates is roughly estimated at 8-9 Mt per year, based on theoretical handling rates[19]. However, practical effective capacity may be lower due to tidal and road constraints.

3.25 In 2018, the LAWP noted that there was little headroom capacity for aggregates (c6%), highlighting that while permitted wharf sites exist, their usage was approaching limits in peak years. The 2020 wharf safeguarding which safeguarded capacity, including at Royal Primrose wharf will have helped. Indeed, the PLA's view at the time was that with Peruvian and Royal Primrose wharves coming online, the Thames can handle increased aggregate tonnage. However, it should be noted that while Peruvian Wharf reopened in 2019, this was to accommodate a concrete batching plant using aggregates imported via the river, rather than to import aggregates for wider supply.

Sales and trends

3.26 Table 1 below shows marine aggregate sales in London in the last ten years. For example, in 2023 it is estimated that total marine sand and gravel sales from London wharves was estimated as 3.4 Mt (3.8Mt was landed[20]) - representing over c72% of all sand and gravel sales in London. The trend over the past decade has been relatively stable or gradually rising marine imports, generally in the range of 3-4 Mt annually although declining in recent years.

3.27 Peaks in demand (such as 2016 and 2017) saw marine won tonnages exceeding 5 Mt. The Thames wharf landings have helped offset the lack of land-won production. As noted in Section 3.1, marine aggregates now supply the majority of London's requirement for concreting aggregate (coarse and fine combined, when local land-won is negligible). Many significant London projects have been built on marine sand/gravel - e.g. the Olympic Park 2012 concrete was largely from marine sources, and more recent projects like the Thames Tideway Tunnel used concrete made with marine aggregate delivered by river.

19 Implementation Report - Safeguarded Wharves Review 2018 – 2019 Final – December 2019 (Table 19)

20 Marine Aggregates Crown Estate Summary of Statistics 2024. The difference between sales and landings is due to stockpiling at wharves.

Table 1: Aggregate Sales at London Wharves (2014–2023)

Source: London AWP AMR 2024

Year	S&G - Marine won	S&G - Land won	Crushed Rock	Total
2014	4,590,000	100,000	660,000	5,350,000
2015	4,950,000	0	380,000	5,330,000
2016	5,390,000	0	300,000	5,690,000
2017	5,020,000	0	120,000	5,140,000
2018	4,670,000	0	470,000	5,140,000
2019	4,440,000	0	480,000	4,920,000
2020	2,750,000	20,000	540,000	3,310,000
2021	4,610,000	-	496,667	5,106,667
2022	2,490,000	-	505,556	2,995,556
2023	3,400,000	-	810,000	4,093,333

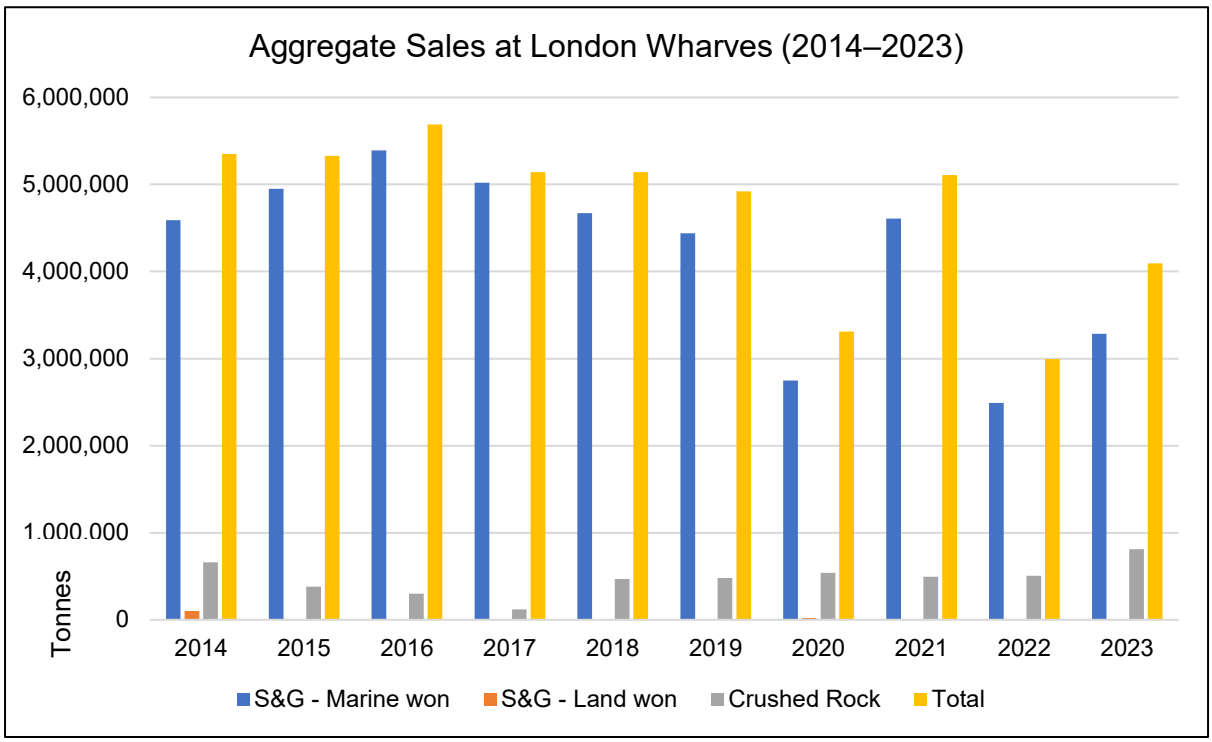

Figure 5: Aggregate Sales at London Wharves (2014–2023)

Quality and usage

3.28 Marine-dredged sand and gravel in London is primarily used as a direct substitute for land-won sands and gravels. After dredging the material is washed (often at wharf or on the dredger) to reduce salt and remove silt, then graded. It produces sharp sand and gravel suitable for concrete and sand suitable for use as mortar sand may also be derived though this more challenging. Marine won aggregate is generally acceptable for most concrete and fill uses.

3.29 Where higher specification aggregate is required for roadstone, marine won material is not an adequate substitute and so that demand is met by imported hard rock (see 3.36). In terms of market share, the marine aggregate landed in London is mostly consumed within Greater London or immediately adjacent counties.

3.30 It is important to note that London itself exports virtually no aggregate except some marine dredged material that is landed in London then transhipped to other regions (this is minimal; an example might be aggregate landed at Greenwich then sent by rail to the Home Counties). The LAWP reported that London exported about 1.4 Mt of aggregate in 2014, 90% of which was marine-origin and mostly went to the East of England, which shows how London may act as a redistribution node for some marine aggregate to counties like Kent.

Planning and safeguarding

3.31 As discussed in Section 2, all existing aggregate wharves in London are safeguarded by the Secretary of State's direction which are supported in Policy by the Mayor and Local Plans. While there is strong policy resistance to redevelopment of these river sites for housing or other forms of non-port use, pressures remain and development proposals adjacent to or on wharf sites have come forward.

3.32 The GLA and boroughs are able to defend wharf sites from encroachment allowing prioritisation of the regional importance of these facilities[21] where appropriate. The presence of inactive or 'disused' wharves in London Docklands prompted some debate, but the 2018 review took a pragmatic approach with only truly obsolete sites (with no realistic prospect of reactivation and better alternatives available) being released. As a result, two minor wharves were de-designated, while capacity was consolidated at a new site to ensure no net loss of throughput potential.

3.33 Looking ahead, marine aggregate supply to London seems secure if the wharf infrastructure is maintained. The Crown Estate has continued to issue dredging licences in regions serving London and, importantly, the industry (via BMAPA) is investing in new, more efficient dredgers and unloading facilities to keep this supply chain reliable. There are environmental

[21] GLA Safeguarded Wharves Review 2018–2020 (Final Report)

considerations - such as ensuring dredging does not damage marine habitats or coastal stability - but these are managed through an intensive regulatory regime and periodic environmental assessments.

3.34 The carbon footprint of marine aggregates delivered by ship, and often used close to the wharf, is relatively low, especially compared to long-haul road transport of land-won material[22]. The use of marine won aggregate in this way supports London's move to more sustainable freight modes. The PLA's Thames Vision[23] and the London Plan Policy SI 15 actively encourages greater use of the river for moving goods like aggregates, aiming to increase river freight tonnage.

Conclusion

3.35 Marine-dredged aggregates form an important element in London's primary aggregate supply, currently providing roughly 3.4 Mt in 2023 (around 38% of all primary aggregates supplied in the capital). The wharf network, though limited in number, has so far been able to handle these quantities, albeit nearing capacity in peak times. Protecting and modestly expanding this capacity (e.g. through site upgrades or wharf openings like Royal Primrose) is critical to meeting future demand, especially as other sources (land-won) decline. Section 5 will assess whether wharf capacity is likely to constrain future marine imports and identify any hotspots where investment might be needed (for example, road access improvements to certain wharves, or increased storage at wharves to allow more throughput on tidal schedules).

Imported Crushed Rock (Railheads)

3.36 London has no indigenous hard rock (crushed stone) resources - the geology of London is mainly sedimentary clays, sands and gravels. Yet large quantities of crushed rock aggregate (such as limestone, granite, basalt) are essential for certain uses in London, including road surfacing, railway ballast, high-strength concrete, and building stone. These materials must be imported from other regions of the UK (and occasionally from overseas) where such rock is quarried. The South West (Somerset), the East Midlands (Leicestershire, Derbyshire), Yorkshire and Scotland are traditional sources of crushed rock for London. The rock is transported predominantly by rail freight into London, arriving at a network of rail-fed aggregate depots. Some crushed rock also arrives by sea in bulk carriers (e.g. granite from Scotland or Norway that can be shipped to wharves), but the majority is via rail.

Sales

3.37 As noted earlier, crushed rock now plays a significant role in primary aggregate sales and constituted approximately 47% (4.25Mt) of London's total primary aggregates sales in 2023 (Total primary aggregate sales

[22] European Environment Agency, March 2021

[23] https://pla.co.uk/thames-vision-2050

c8.9Mt). In recent years crushed rock has increased its proportional role in primary aggregate sales from around 30-35% between 2014 and 2021.

Table 2: Imports of Crushed Rock to London, 2019 and 2023

Source Region	2019 Tonnes	2019 Percentage	2023 Tonnes	2023 Percentage
South West	1,633,000	40.6%	2,092,000	40.4%
East Midlands	835,000	20.8%	575,000	11.1%
East of England	7,000	0.2%	1,000	<0.1%
South East	25,000	0.6%	1,000	<0.1%
West Midlands	55,000	1.4%	5,000	0.1%
North West	0	0%	0	0%
Yorkshire & Humber	0	0%	0	0%
North East	0	0%	0	0%
South Wales	105,000	2.6%	418,000	8.1%
North Wales	2,000	0.05%	0	0%
Scotland and Norway	1,359,000	33.8%	2,083,000	40.2%
Total	**4,021,000**	n/a	**5,174,000**	n/a

3.38 The national Aggregate Minerals Survey (AMS) provides insight into import flows of crushed rock and AMS 2019 and AMS2023 results are set out in Table 2 above. Table 2 shows that London is a significant importer of crushed rock with the majority being sourced from Somerset, the East Midlands and Scotland and Norway. The remainder comes from other English regions such as the West Midlands (mainly sandstone) and some from wharves in the South East.

3.39 The Leicestershire LAA suggests that the county's quarries send in the order of 0.6-0.7 Mt per year to London (Leicestershire is a key supplier of granite via rail). Likewise, Somerset (Mendips) sends large tonnages by rail, with the LAA noting that 14% (c2Mt) of the crushed rock extracted in 2023 was exported to London. A notable contributor outside England is the Glensanda super quarry in western Scotland, which ships high-quality granite by sea with the majority being landed at the Greenwich wharves in London (Angerstein and Riverside wharves receive Glensanda stone for asphalt and rail ballast).

Railhead infrastructure

3.40 To handle these quantities, an extensive network of rail-linked aggregate terminals has been developed by the minerals industry in London. There are a significant number of rail aggregate depots currently operational in Greater London and a few just outside the boundary (e.g. at Harlow or Ashford which serve London market) (See Figure 7 and Appendix D). Many of these depots are operated by the major aggregate companies (Day Aggregates, Tarmac, Heidelberg, Brett, Cemex etc.) and have storage yards where aggregate is stockpiled after arriving in trainload consignments. Typical trainloads bring 1,000 to 1,600 tonnes per trip, often running from quarries in the East Midlands or Mendips overnight.

3.41 Capacity at railheads was identified as a concern in recent years - LAWP minutes in 2018 explicitly flagged 'insufficient rail depot capacity' to meet growing demand. Some depots were working at or near capacity, and opportunities to increase throughput are constrained by factors like site size, surrounding development (limiting operating hours), and rail path availability. However new or expanded depots have been coming online. For example, Hendon rail freight, terminal (at Cricklewood Yard) which became operational in 2020 added significant capacity in north London as part of the Brent Cross Cricklewood regeneration. It replaced a smaller facility and can handle >1 Mtpa of aggregate/cement. Bow East railhead has been safeguarded and was expanded to supply materials for the Tideway Tunnel project and subsequent future use. Additionally, some existing depots have upgraded handling equipment to unload trains faster and turn them around, effectively raising throughput.

3.42 Despite these improvements only a finite number of sites importing aggregate by rail exist, and many are in inner urban locations subject to competing land pressures (e.g. the aggregate railhead at Queenstown Road Battersea closed in 2013 to make way for the Battersea redevelopment, though capacity was partly relocated to Wembley and elsewhere). The importance of protecting these railheads is crucial as together they support the transport of millions of tonnes by rail eliminating many thousands of long distance journeys by HGVs. This is illustrated by Table 3 and Figure 7 below.

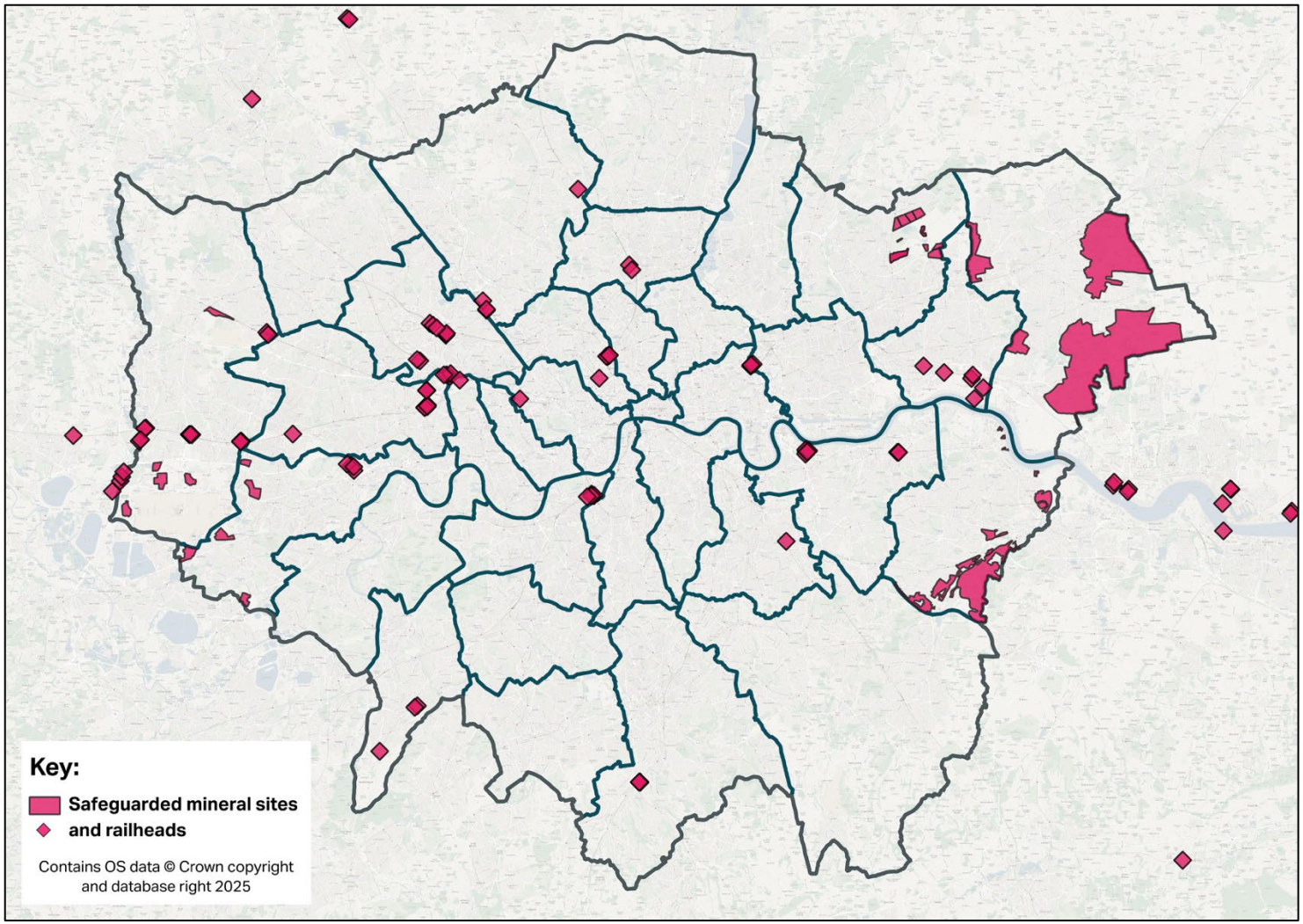

Figure 7: Location of Railheads in London (See Appendix D for details)

Sales

3.43 In 2023 it is estimated that 3.4 Mt of crushed rock was imported to London by Rail and imports in previous years are shown in Table 3.

Table 3 Imports of Crushed Rock to London 2014-2023[24]

Year	CR - Rail	CR - Wharves	Total CR
2014	2,460,000	660,000	3,120,000
2015	2,740,000	380,000	3,120,000
2016	3,950,000	300,000	4,250,000
2017	3,660,000	120,000	3,780,000
2018	3,020,000	470,000	3,490,000
2019	3,030,000	480,000	3,510,000
2020	1,600,000	540,000	2,140,000
2021	2,218,000	372,000	2,590,000
2022	2,594,000	435,500	3,030,000
2023	3,440,000	810,000	4,250,000

Figure 8 illustrates the importance of imports of crushed rock via rail compared to imports via wharves.

[24] Source: London AWP AMR 2024. In 2021 and 2022 the data for imports of crushed rock to railheads and wharves was combined and so data has been derived using averages.

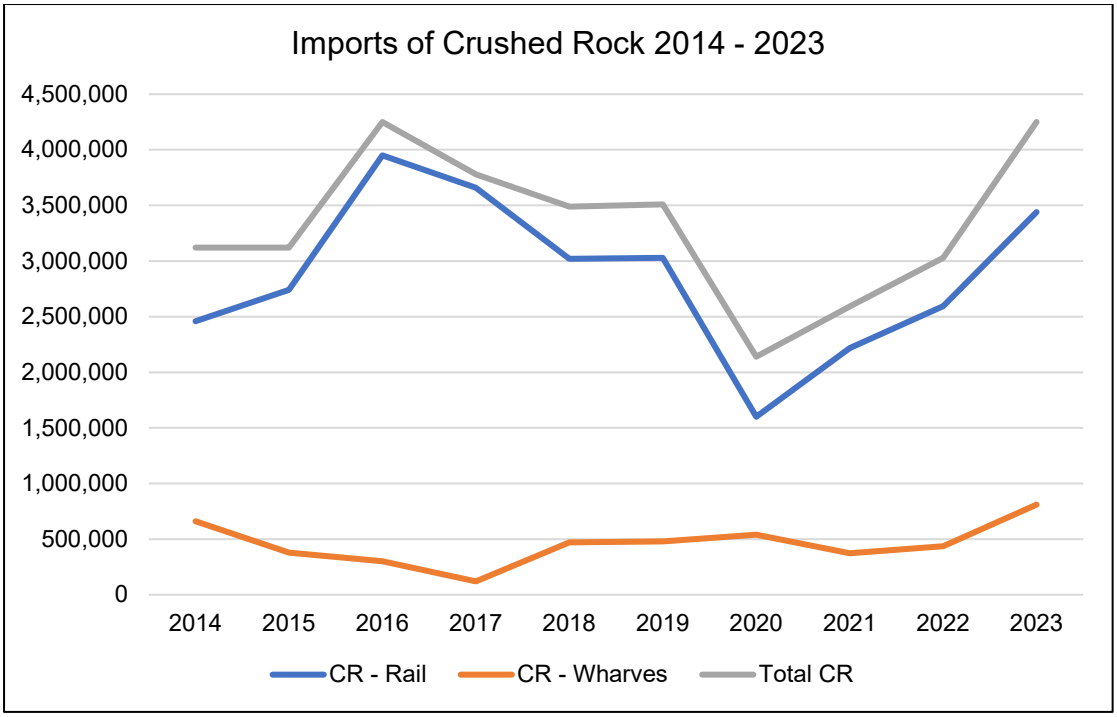

Figure 8 Imports of Crushed Rock to London 2014-2023

3.44 By showing other types of aggregate imported by rail, Table 4 and Figure 9 below demonstrate the important role of railheads in supplying aggregate to London.

Table 4: Total Aggregate Imports via Railheads (2014-2023)[25]

Year	S&G - Land Won	S&G - Marine Won	Crushed Rock	Total
2014	120,000	1,110,000	2,460,000	3,690,000
2015	90,000	1,490,000	2,740,000	4,320,000
2016	50,000	1,560,000	3,950,000	5,560,000
2017	100,000	1,560,000	3,660,000	5,320,000
2018	810,000	570,000	3,020,000	4,400,000
2019	1,310,000	1,230,000	3,030,000	5,570,000
2020	950,000	1,120,000	1,600,000	3,670,000
2021	1,023,333	973,333	2,550,000	4,546,667
2022	770,000	1,107,778	2,393,333	4,271,111
2023	734,000	1,067,037	3,440,000	5,241,037

[25] Source: London AWP AMR 2024

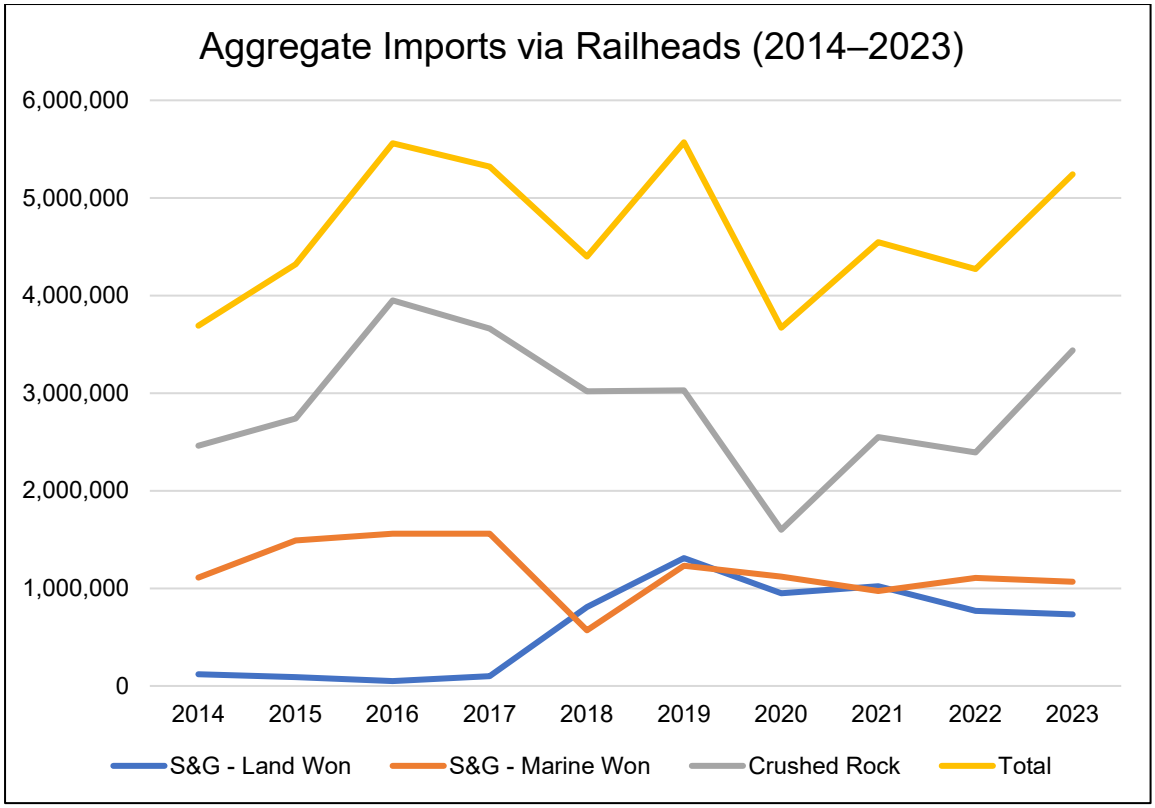

Figure 9: Total Aggregate Imports via Railheads (2014-2023)

3.45 The share of aggregate supply provided by rail imports is estimated at around 55%, with imports of sand and gravel also important. The main rail routes for aggregate are from the Mendip quarries in Somerset via the West of England line into Acton and North London; from Leicestershire and the East Midlands down the Midland Mainline into places like Hendon and Willesden.

3.46 The HS2 project has resulted in large movements of aggregate by rail with 10 Mt of aggregate expected to be transported by rail. By mid-2022 already, over 1 Mt had been delivered to sites in the south (e.g. for the Chiltern tunnel approaches). Many of those trains terminate just outside London (e.g. at Calvert). But within London, HS2's Old Oak Common and West Ruislip construction sites also receive aggregate by rail for tunnel segment manufacturing. This extraordinary demand is transient but significant. It underlines the critical role of rail freight for bulk materials supply to projects in a dense urban area.

3.47 London also indirectly 'imports' crushed rock by road from nearby counties (e.g. some crushed chalk or crushed rock for concrete from just outside London). However, these road imports are minor compared to rail/sea and are usually short haul due to cost.

Originating MPAs and commitments

3.48 Since London depends on quarries in other regions, it is important to consider whether those quarries/regions have sufficient reserves and policy support to continue supplying London. An assessment of regional imports involved a review of the Local Aggregate Assessments and Annual Monitoring Reports of major supplying areas. Key findings (see Appendix E for more details) include:

- **Leicestershire** (East Midlands) - very large hard rock reserves and its LAA acknowledges serving external markets including London; however, there is a declining sand & gravel landbank and pressure on some quarries; maintaining rail capacity is key.
- **Derbyshire** (East Midlands) - significant limestone quarries send crushed rock (over 3 Mt historically to London); Derbyshire's LAA does not explicitly commit to supply London but indicates no specific constraints beyond general output capacity.
- **Somerset** (South West) - home to the nationally important Mendips limestone quarries, has historically supplied a large portion (1-2 Mt/yr) of London's crushed rock; Somerset's LAA and the South West AWP report indicate a healthy crushed rock landbank (over 20 years), with Somerset expected to continue serving national markets, specifically recognising London has a key destination.
- **North East and Yorkshire/Humber** - some high PSV roadstone is sourced by rail for maintenance of London's roads. Those regions have ample reserves as well.

3.49 At present, no immediate supply shortages of crushed rock to London are identified. Most supplier regions have significant landbanks (often decades' worth for crushed rock) and are explicitly planning for continued exports. For example, Leicestershire's policy gives priority to aggregate provision to meet both local and wider needs. Derbyshire and others generally recognise the inter-regional flows as part of MASS. There is one caveat that some counties are noting that their permitted reserves are gradually diminishing (even if still above minimum landbank levels) and new quarry permissions might be needed in the medium term to maintain supply rates. For example, Leicestershire's igneous rock reserves, while currently sufficient, will require new allocations within the next plan period to sustain current output levels beyond 2030. If approvals were delayed or output capped, that could constrain supply to London. Similarly, any rail capacity issues on mainlines (due to greater use of rail) could potentially limit aggregate train pathways.

3.50 The reliance on imports from **Scotland** by sea is also secure as long as wharf capacity (like at Greenwich) remains - the Glensanda quarry has substantial reserves and dedicated shipping.

Risks for crushed rock supply

3.51 The primary concerns revolve around infrastructure rather than geology. London must maintain its railheads to allow continued imports. Many railheads are in locations under redevelopment pressure (for example, the Angerstein rail spur in Greenwich associated with DLR expansion, and the depot at Battersea was lost to development). Planning policy currently protects these sites (see Appendix A), but rigorous implementation is needed to ensure alternative provision if a site is lost. Another risk is network capacity as rail freight paths might be squeezed by new passenger rail services. Continued support from Network Rail, the Department for Transport and Transport for London is required to safeguard freight capacity into London : the industry often cites the critical nature of freight loops and paths on lines like the Midland Mainline and Great Western. Any major changes – for instance HS2 impacts on the West coast route - need monitoring.

3.52 Furthermore, operational issues like HGV traffic, noise and dust can create local opposition to railheads. Some depots, such as those adjacent to residential areas, operate with tight restrictions. If complaints and/or environmental regulation were to place additional restrictions on operating hours (e.g. prohibit night time unloading), throughput could be reduced. Managing such depots to high environmental standards is therefore important to ensuring they maintain their social 'licence to operate'. Where residential development does occur in the vicinity of these facilities the Agent of Change principle (currently in the NPPF 2024 and London Plan 2021 policy) needs to be invoked to ensure that the operation of the facility is not hampered by the more sensitive use.

3.53 Another potential risk is that caused by the Government's wider drive for development of national infrastructure projects with a heavy demand for crushed rock such as the Lower Thames Crossing and Sizewell C. Such projects may disrupt current flows and place greater demands on those regions supplying London thus jeopardising their ability to maintain current, or achieve greater, levels of supply.

3.54 In summary, imported crushed rock via rail is currently supplying roughly 3-4 Mt per year to London and is expected to continue at similar or higher levels if construction demand increases. The source regions have adequate reserves for the foreseeable future, and industry commitments indicate continued willingness to supply London. The ability to sustain (or increase) this flow will depend more on maintaining sufficient rail infrastructure capacity and depot sites in London, rather than on raw resource availability. Section 5 will consider whether London has any emerging bottlenecks in this regard and any mitigation actions (e.g. identifying new depot opportunities or network upgrades).

Recycled and Secondary Aggregates

3.55 The fourth element of London's aggregate supply is recycled and secondary aggregates (RSA). The NPPF provides the following definitions:

- Recycled aggregates:

Aggregates resulting from the processing of inorganic materials previously used in construction, e.g. construction and demolition waste.

- *S*econdary aggregates:

Aggregates from industrial wastes such as glass (cullet), incinerator bottom ash, coal derived fly ash, railway ballast, fine ceramic waste (pitcher), and scrap tyres; and industrial and minerals by-products, notably waste from china clay, coal and slate extraction and spent foundry sand. These can also include hydraulically bound materials.

3.56 In London, the main source of recycled aggregate is Construction and Demolition and Excavation (CD&E) waste - notably crushed concrete, brick, asphalt planings, and screened soil from demolition sites, which can be processed into recycled aggregate. Secondary aggregate is mainly derived from incinerator bottom ash (IBA). Between 20% and 80% of the concrete materials used in the London Olympics, Crossrail, and other major projects came from secondary sources like pulverised fuel ash (PFA), granulated blast furnace slag (GGBS), and recycled aggregate and cement substitutes.

Environmental and policy context

3.57 London's policies strongly promote recycled aggregate use as part of sustainable resource management. Many boroughs require a Site Waste Management Plan for construction projects, that includes setting out how materials will be recycled. Some major projects commit to high recycled content (the Olympics aimed for 25% recycled aggregate in new builds, for example). In this regard, fundamentally, recycled aggregate helps reduce the need for primary imports and reduces waste disposal, aligning with the circular economy approach that is championed by London, including through the London Plan (2021).

3.58 It should be noted that changes in environmental regulation that make it harder for construction and demolition waste to be processed into a material that can be used as an aggregate (for example, tighter 'end of waste' criteria or aggregate standards) could inadvertently restrict recycled aggregate production and use and so such developments require careful monitoring. At the same time, the trend towards 'decarbonising' construction favours increasing recycled content as producing recycled aggregate generally has a lower carbon footprint than quarrying new aggregate.

Capacity and sites

3.59 According to the London Waste Map[26], there are over 100 permanent 'fixed' sites in London that process CD&E waste into recycled aggregate or soil products. A list of all such sites is included in Appendix F. These include crushing facilities on industrial estates (often co-located with waste transfer stations) and at some wharves or railheads.

3.60 The Environment Agency's Waste Data Interrogator (WDI) provides information on CD&E waste treatment in London and is used to estimate recycled aggregate production. Based on WDI analysis and site returns, London has a *theoretical processing capacity* for recycled aggregates well above current production - many sites operate below their permitted throughput limits. Permitted capacity for CD&E processing in London is estimated to be around c6 Mt per year or more (Waste Data Interrogator (using 2024 data published in 2025)), whereas actual output is lower, indicating there is no major capacity shortfall at these facilities. In theory, environmental permits and facility footprints could handle more CD&E recycling27 if the input material and market demand were there.

3.61 As well as at fixed sites, a lot of recycled aggregate is produced on construction sites using mobile crushers. This material is often reused on the same site and generally doesn't get captured in official data which is based on returns from fixed sites.

Production levels

3.62 Accurately quantifying recycled aggregate production is challenging, but the LAA draws on multiple sources. The London LAWP has historically given a range. In 2018, it was estimated that between 2.1 Mt and 3.2 Mt of recycled aggregates were produced in London. This range provides a lower-bound (only accounting for fixed sites captured in returns) and an upper-bound (including estimates for on-site recycling and other uncaptured data). That 2018 estimate was a slight increase on previous years, suggesting an upward trend. Nationally, the Mineral Products Association (MPA) has noted that recycled/secondary aggregates account for roughly 28-30% of total aggregate supply in Britain. If London is achieving similar or even higher proportions (some studies suggest London's recycling rate is among the highest due to scarcity of local primary aggregates), then one might infer that in a year where London's total aggregate demand is c10 Mt, something like 3 Mt could be coming from recycled/secondary sources.

3.63 The London Plan and LAWP have not set a specific numeric target for recycled aggregate, but there is an implicit expectation that as much as possible of the significant CD&E waste stream (which is over 10 Mt/yr in

[26] https://apps.london.gov.uk/waste/

[27] In some instances where sites have excess permitted capacity it may not be achievable for physical or other technical reasons.

London) is turned back into aggregate or construction material. Indeed, Policy SI 7 of the London Plan includes a target of 95% reuse, recycling and recovery of Construction and Demolition waste and 95% beneficial use for excavation waste.

3.64 London produces a large quantity of CD&E waste annually (in the order of 8-10+ Mt, though definitions vary). A large fraction of this is inert rubble, concrete, soils etc., which is suitable for recycling. Table 5, (derived from the WDI data) indicates that London manages (recycles or recovers) several million tonnes of CD&E waste within its borders. Table 5 indicates that using the 'standard methodology'[28], 4.3Mt of construction waste was managed at permitted sites in London in 2023 however, not all of that ends up as quality aggregate product and hence upper and lower conversion rates are applied of 75% and 50% which suggest between 3.35Mt and 2.16Mt was produced. To this, is added, secondary aggregate production in the form of IBA and recycled tyres.

[28] Guidance on Assessing Levels of Recycled Aggregates, January 2024 (prepared by representatives from the National Waste Technical Advisory Board Chairs and Aggregate Working Party Chairs).

Table 5: Estimated production of recycled and secondary aggregates in London, 2014-2023 (lower-bound and upper-bound estimates)

Source: Waste Data Interrogator

Year	CDE waste for treatment	Recycled Aggregate Upper Estimate (75%)	Recycled Aggregate Lower Estimate (50%)	Secondary Aggregate IBA	Secondary Aggregate Tyres	Total Upper	Total Lower
2014	-	2,100,000	1,400,000	-	-	2,100,000	1,400,000
2015	3,569,000	2,676,750	1,784,500	-	-	2,676,750	1,784,500
2016	4,412,000	3,309,000	2,206,000	-	-	3,309,000	2,206,000
2017	4,022,000	3,016,500	2,011,000	-	-	3,016,500	2,011,000
2018	4,283,000	3,212,250	2,141,500	375,610	-	3,587,860	2,517,110
2019	4,013,000	3,009,750	2,006,500	318,970	7,240	3,335,960	2,332,710
2020	4,437,000	3,327,750	2,218,500	350,314	8,963	3,687,027	2,577,777
2021	4,298,000	3,223,500	2,149,000	342,248	10,029	3,575,777	2,501,277
2022	4,382,000	3,286,500	2,191,000	410,639	17,155	3,714,294	2,618,794
2023	4,332,000	3,249,000	2,166,000	374,425	14,006	3,637,431	2,554,431

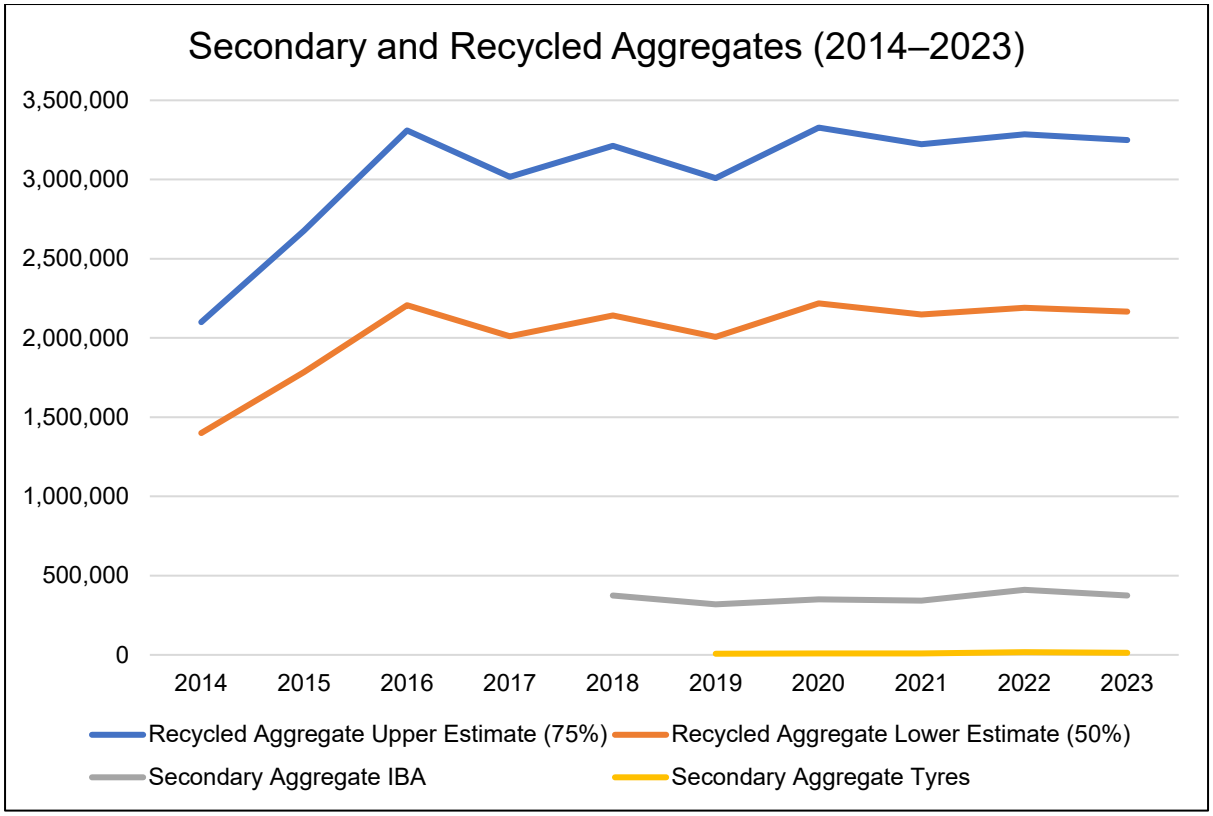

Figure 10: Estimated production of recycled and secondary aggregates in London, 2014-2023

Trends

Recycled Aggregate

3.65 Figure 10 above suggests that over the past decade, London's recycled aggregate output has grown modestly, which may in part be due to policies promoting on-site recycling and the establishment of more recycling hubs. But recent years suggest it may be reaching a plateau as the easily collectible material is already being captured. One constraint is market factors whereby recycled aggregate (typically crushed concrete type 1, or fill sand) competes with cheap primary aggregates from quarries. In a high-demand market like London, generally recycled materials get absorbed, but quality and specifications can limit use in structural concrete or asphalt beyond certain percentages. Many projects use recycled aggregate for sub-base and fill but still rely on primary materials for critical mixes.

Secondary Aggregate

3.66 In London secondary aggregate is mainly derived from incinerator bottom ash (IBA) to produce incinerator bottom ash aggregate (IBAA). London's Energy from Waste facilities (at Edmonton, Bexley, Sutton and Lewisham, etc.) collectively produce hundreds of thousands of tonnes of IBA annually;

companies like Day Aggregates[29] and Blue (ex-Ballast) Phoenix process this into IBAA. IBAA is a secondary aggregate that can be used in a wide variety of construction applications. Approximately 0.34-0.4 Mt per year of IBA could be processed in London into IBAA (e.g. the Bexley plant produces c65 kt/yr of IBA). Other secondary sources of aggregate like spent rail ballast, glass sand, or imported PFA are smaller contributors. Although waste tyres may be processed and used as an aggregate substitute in certain applications (e.g. road making) it is uncertain whether this is occurring in London.

Role in supply

3.67 Recycled and secondary aggregates in London probably contribute in the order of 20-25% of total aggregate used (if including materials used as fill). If focusing strictly on aggregates used in bound materials (concrete, asphalt), the percentage is a bit lower because high specification uses still require primary aggregate. Nonetheless, by tonnage, London is a leading region in reusing its construction materials. The London Environment Strategy[30] sets goals for high rates of CD&E waste recycling (95% beneficial use of CD&E waste by 2026). The current level is already high - well over 90% of construction waste is diverted from landfill, much of it going into recycled aggregate or engineering fill.

3.68 The LAA 2018 report concluded that an estimated 2.1-3.2 Mt of recycled aggregate was produced in 2018, exceeding the recent years' averages. It also noted that if the national average (30% of all aggregates) were applied, London could theoretically be producing up to c4.6 Mt of recycled/secondary aggregate. The discrepancy indicates under-reporting and the difficulty of tracking mobile/crusher sites where recycled aggregate never enters the 'market' and thus escapes data capture e.g. on a large development, contractors may crush the existing concrete on site and reuse it under new roads - that tonnage wouldn't appear in the WDI as it was never managed at a permitted waste management facility.

Capacity and constraints

3.69 Unlike primary aggregates, where scarce resources or conditions of operating could limit production, for recycled aggregates the main limiting factors is the availability of feedstock (CDEW) and the economics of recovery. When the construction market is buoyant, London generates plenty of feedstock, but not all of it can be economically turned into an aggregate that can be used in construction. Some material is too contaminated or of poor quality and thus goes to low-grade uses or landfill. Another factor is regulatory classification - some recycled aggregate produced from waste remains classified as 'waste' until it meets end-of-

[29] https://www.daygroup.co.uk/wp-content/uploads/Ecoblend-Brochure-V01.pdf

[30] https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/london-environment-strategy

waste criteria, which can complicate its usage in some scenarios. The industry has been working on quality protocols (e.g. the WRAP protocol) to ensure recycled aggregates meet certain standards.

3.70 Recent data from 2022–2024 Circular Economy Statements reveals that developments are using 20–25% ground granulated blast-furnace slag (GGBS) in concrete to replace Portland cement. However, actual uptake of high recycled content remains challenging with many applicants defaulting to around 20% recycled or reused content (by project value) as higher levels prove difficult to achieve due to cost and availability constraints.

3.71 Demolition material is still downcycled rather than directly reused in new construction, although there have been improvements for when materials are sorted and segregated effectively and C&D waste is not mixed as discussed below. Generally, concrete, asphalt and other inert waste from construction sites are commonly crushed and used as general aggregate or fill when C&D waste is mixed in rather than being reincorporated into new concrete or asphalt at scale. Industry guidance (e.g. RICS on circular economy in construction) encourages more on-site reuse of materials, but practical barriers including limited space on urban sites (see below), timing of demolition vs. construction and quality control issues often limit the level of reuse achievable. There has been industry investment in the last 10-15 years to improve asphalt and concrete recycling with road planings now incorporated into the manufacture of new asphalt products. Progress has also been made with cleaned crushed concrete used in the manufacture of new ready mixed concrete.

3.72 As noted above a potential constraint is site availability - recycling plants need industrial land but are often seen as ‘bad neighbour’ uses due to noise and dust. It was estimated that in 2020, 16.5% of industrial land[31] in London was occupied by waste management and recycling uses (including recycled aggregates) but London’s intense development pressure on industrial land can threaten the retention of waste facilities though new national policy on ‘Grey Belt’ may help ease this issue. The London Plan seeks to ensure sufficient land for waste and recycling, but there have been cases of recycling sites being displaced by other higher value land uses. Safeguarding of waste sites producing recycled aggregates (especially those co-located at wharves or railheads) is important. In some cases, wharves are used for both landing marine aggregate and recycling demolition waste and if one use is curtailed it may affect the continued operation of the other.

[31] London Industrial Land Supply Study 2020, GLA, March 2023

4. Aggregate Demand and Future Trends in London

4.1 Having examined current supply, this section considers the future demand for aggregate, considering how much aggregate London needs and what factors will influence this in the future. As elsewhere, aggregate demand in London is driven by the scale of construction and infrastructure development, which in turn is tied to population and economic growth, policy targets for housing and transport, and specific large projects. This section outlines historic consumption trends and then discusses the outlook for demand, including major projects and growth drivers that are expected to shape aggregate requirements in the coming years.

Historic Consumption and Demand Trends

4.2 London's consumption of aggregates (taken as the sum of all sources supplying the market) has historically tracked the construction cycle. As noted in Section 3, in the early 21st century, overall sales have averaged about 9-10 Mt per year with periodic fluctuations e.g. during the mid-2000s boom, consumption likely exceeded 10 Mt (e.g. 10.35 Mt in 2005[32]). The global financial crisis saw a sharp decline with consumption falling to 8.9 Mt[33] in 2009. Recovery in the 2010s brought it back to 9.57 Mt by 2014[34]. The year 2019 was a high-demand year corresponding to a peak in construction activity; as earlier noted, consumption was c9.6 Mt. Then 2020 saw a steep decline to 6.2 Mt due to COVID-19 halting many projects for part of the year.

4.3 By 2021 into 2022, sales picked up due to a backlog of projects restarting and government stimuli. The 2023 Aggregate Minerals Survey (AM2023)[35] was published in July 2025. London's recorded aggregate sales were 4.4 Mt[36], while its apparent consumption was 9.3 Mt (see Table 6 below).

[32] Collation of the results of the 2005 Aggregate Minerals Survey for England and Wales, CLG, 2007

[33] Collation of the results of the 2009 aggregate minerals survey for England and Wales, CLG, 2011

[34] Collation of the results of the 2014 Aggregate Minerals survey for England and Wales, DCLG, 2016

[35] Collation of the Results of the 2023 Aggregate Minerals Survey for Great Britain, MHCLG, 2025

[36] N.B. The difference between the sales value in AM2023 (4.4Mt) and the value reported in the LAA (8.9Mt) is due to the fact that AM2023 records sales at the point of production e.g. landings of aggregate at London wharves which are extracted in Scotland are reported as being produced in Scotland whereas the LAA reports the source as London.

Table 6: Aggregate Sales and Consumption 2023 (Source: AM2023)

Aggregate Type	Sales (Mt)[37]	Consumption (Mt)
Land-won Sand & Gravel	0.51	See total
Marine Sand & Gravel	3.89	See total
Total Sand & Gravel	4.40	5.12
Crushed Rock	0.00	4.25
All Aggregates	4.40	9.30

4.4 London's share of national aggregate consumption is roughly 5% (since UK aggregates demand is about 200 Mt/year, with London c10 Mt) making it one of the single largest regional markets in the country.

4.5 Table 7 and Figure 11 illustrate historic consumption by aggregate type, indicating slightly declining trends in consumption though to some extent these trends may be compounded by use of estimates, in years where data was not available, based on reported data.

Table 7: Estimated Primary Aggregate Consumption in London 2005-2023 (Mt)

Year	S & G (Mt)	CR (Mt)	Total (Mt)	Source
2005	6.46	3.89	10.35	Data from 2005 AM survey
2006	6.17	3.94	10.11	Estimate, interpolated from 2005 & 2009
2007	5.88	3.99	9.87	Estimate, interpolated from 2005 & 2009
2008	5.58	4.04	9.62	Estimate, interpolated from 2005 & 2009
2009	5.28	4.09	9.37	Data from 2009 AM survey
2010	5.42	4.00	9.42	Estimate, interpolated from 2009 & 2014
2011	5.50	3.96	9.46	Estimate, interpolated from 2009 & 2014
2012	5.58	3.92	9.5	Estimate, interpolated from 2009 & 2014
2013	5.80	3.90	9.7	London 2013 consumption (LAWP/LAA)
2014	5.68	3.89	9.57	Data from 2014 AM survey

[37] See footnote 26 above.

Year	S & G (Mt)	CR (Mt)	Total (Mt)	Source
2015	6.54	3.95	10.49	Estimate, interpolated from 2014 & 2016
2016	7.40	4.00	11.4	London 2016 consumption (LAA 2018)
2017	6.90	3.78	10.68	Estimate from LAWP sales data
2018	6.39	3.49	9.88	Estimate from LAWP sales data
2019	3.34	4.02	7.36	Data from 2019 AM survey
2020	4.06	2.14	6.2	LAWP AMR 2021 (2020 data)
2021	5.99	2.59	8.58	LAWP AMR 2023 (2021 data)
2022	3.68	3.03	6.71	LAWP AMR 2023 (2022 data)
2023	4.13	5.17	9.3	Data from 2023 AM survey

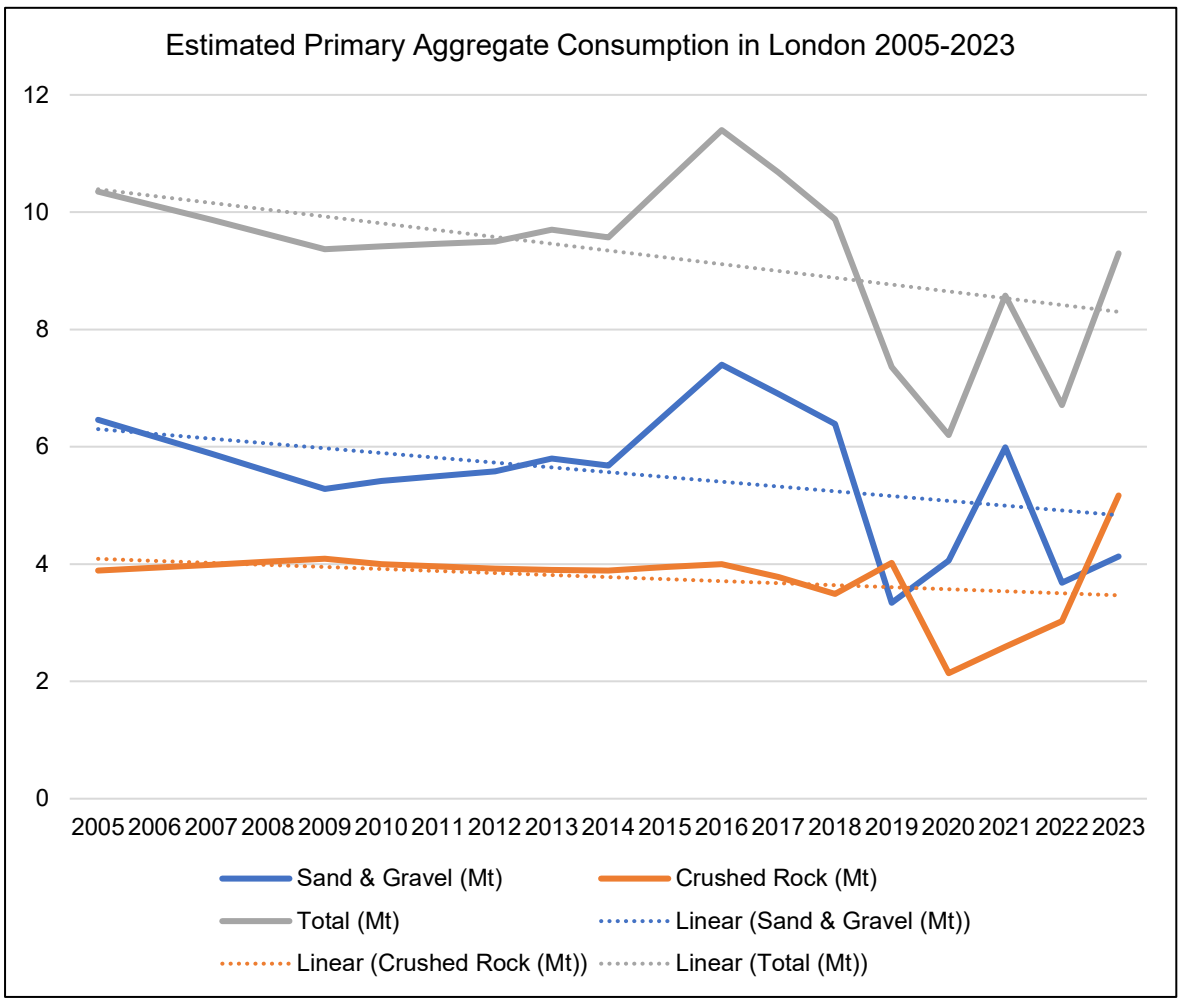

Figure 11: Estimated Primary Aggregate Consumption in London 2005-2023 (Mt)

4.6 London has experienced relatively strong construction growth in the last decade (especially in housing and commercial development), interrupted only briefly by the pandemic. The capital's population grew significantly in the 2000s/2010s, fuelling housing demand and infrastructure expansion. However, demand is also sensitive to economic cycles e.g., post-2016 Brexit uncertainty slowed some investments, though infrastructure spending remained relatively high due to work continuing on projects already underway.

Demand forecasting

4.7 Planning for future aggregate needs requires anticipating how much construction will occur. Housebuilding consumes aggregates in concrete foundations, bricks/blocks (made from aggregates), roads, and associated infrastructure for each development and so one approach is to use housing targets and infrastructure plans as proxies for future demand.

4.8 The London Plan 2021 sets a housing target of 522,870 new homes over 10 years (2019/20 to 2028/29), which averages about 52,300 homes per year. This is a substantial building programme, albeit one that historically hasn't been fully met each year (London has been completing c35k homes/yr recently) (see Table 8 and Figure 12 below). Nonetheless, even approaching this target would imply a sustained high level of construction. It is important to note that the Government revised standard method for calculating housing demand suggested 88,000 homes should be developed each year in London.

4.9 Figure 12 partly illustrates how meeting London's housing and infrastructure needs will likely increase primary aggregate demand above past levels, unless significantly offset by greater efficiency or substitution. The 2017 London Aggregates Assessment projected that CD&E waste (which correlates to construction works volume) would rise from c8 Mt in 2021 to c8.7 Mt in 2036 also assuming more construction activity over time.

Table 8: Net Additional Dwellings v London Plan Target 2015/16 - 2023/24

Source: MHCLG Live tables on Net additional dwellings: Tables 118 and 122[38]

Year	2015-16[39]	2016-17	2017-18	2018-19	2019-20[40]	2020-21	2021-22	2022-23	2023-24
Net additional dwellings	30,390	39,560	31,723	36,618	40,870	34,023	37,204	35,263	32,162
LP Target	42,000	42,000	42,000	42,000	52,000	52,000	52,000	52,000	52,000
Primary Aggregate Sales (000's)	9,950	11,600	10,720	9,880	9,600	6,200	8,580	6,710	8,898

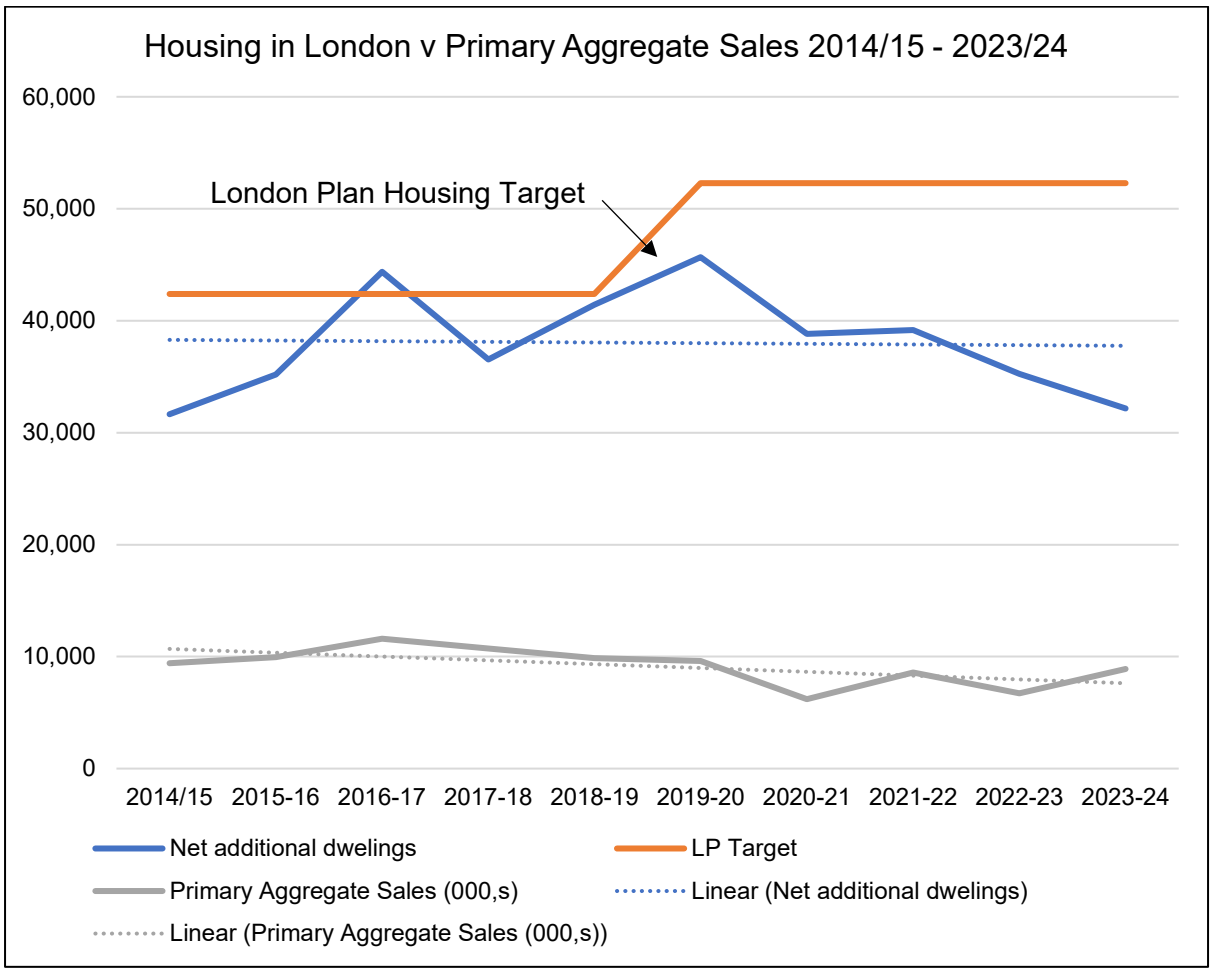

Figure 12: Housing in London v Primary Aggregate Sales 2014/15 - 2023-24

[38] https://data.london.gov.uk/dataset/net-additional-dwellings-borough

[39] Further Alterations to the London Plan

[40] London Plan 2021

4.10 National policy advises using a rolling 10-year average of sales as a baseline for aggregate demand. In addition to this baseline, two potential housing demand[41] scenarios have been modelled to assess future needs using an 'uplift' methodology detailed in Appendix G:

- **Scenario 1 - Business as Usual:** Assumes continuation of recent trends (10-year average demand), serving as the baseline.
- **Scenario 2 - London Plan Housing Target:** Assumes construction to meet the current London Plan target of c52,000 new homes per year (current 10 year average delivery is c38,000). This scenario yields an annual aggregate demand modestly higher than Scenario 1 (reflecting the uplift in construction activity).
- **Scenario 3 - Higher Housing Growth:** Assumes c88,000 new homes per year (as identified by the revised national standard method for calculating housing need). This high-growth scenario implies a substantially greater aggregate requirement (well over 50% above the Scenario 1 baseline).

4.11 The details and output from the modelled scenarios are set out in Table 9 below.

Table 9: Modelled Aggregate Demand Scenarios

Aggregate Type	Annual Aggregate Demand S1 - BAU (10 yr av sales[42]) (Mt)	Annual Aggregate Demand S2 - BAU + London Plan target (Mt) (18% uplift)	Annual Aggregate Demand S3 - BAU + Revised standard method (Mt) (66% uplift)
Land-won Sand and Gravel	0.357	0.42	0.59
Sand and Gravel Total	0.97	1.15	1.61
Crushed Rock	3.33	3.94	5.52
Marine sand and gravel (sales)	4.23	5.01	7.01
Total Primary Aggregates	9.19	10.52	14.73

4.12 The outcomes derived from this initial modelling exercise are designed to illustrate how demand might increase with increased development. Similar,

[41] New housing demand only represents a proportion of overall construction demand but is used here as an indicator of wider construction trends in demand.

[42] The 10-year average sales value covers the period 2014–2023. Using a ten-year average helps minimise the effect of this anomalous high and low sales years such as 2020.

more in-depth modelling could be undertaken to inform policy in the new London Plan once housing targets are confirmed.

4.13 Aside from housing, there are other demands for aggregate including new infrastructure and maintenance of existing housing stock and infrastructure, Major infrastructure projects place specific demand on aggregates and London proposals either under construction or planned are considered below.

Future Major Projects and Development Plans

4.14 To contextualise future demand, this subsection catalogues known major projects and development programmes that will drive aggregate use in London in the coming years and identifies any specific supply implications.

Housing and Redevelopment

4.15 The London Plan's housing target (522,870 homes over 10 years) remains a central driver. While the annual completion rate so far has been below target (about 36k in 2021/22), there are ongoing interventions to increase it which could result in a construction surge. Large housing-led schemes to watch include: Thamesmead Waterfront (thousands of homes, needs new infrastructure), Old Oak Park Royal (25,500 homes, significant commercial space - aggregate already being used for enabling works including HS2 integration), Elephant & Castle Town Centre (regeneration ongoing), Vauxhall Nine Elms (huge volume of high-rise construction continuing, including the new US Embassy area developments), and numerous estate renewal projects across boroughs (which also generate a lot of demolition waste that will then be recycled, feeding supply of recycled aggregate, while also needing new materials for rebuild).

Major Non-residential Buildings

4.16 A number of skyscrapers and commercial projects in the City and Canary Wharf are under construction or due to start (e.g. the Bishopsgate cluster). High-rise buildings consume large quantities of concrete (and hence aggregates). For example, 1 Bishopsgate Plaza, 22 Bishopsgate, etc., each used tens of thousands of cubic metres of concrete. The pipeline of such projects will keep demand for high specification concrete (needing quality aggregates and sand) steady, even if slightly cyclical with economic conditions.

4.17 Between them, the City of London and Tower Hamlets are planning for over 1.5 million square metres of additional office floorspace by the mid-2030s, rising to nearly 2 million m2 by 2040. In the City of London, the adopted and emerging Local Plans forecast at least 1.2 million m2 of new office space between 2021 and 2040, with around 900,000 m2 expected to be delivered by 2031 and 1.1 million m2 by the mid-2030s. In Tower Hamlets, the current and draft plans anticipate 283,000 m2 of new office demand from 2023 to 2038, with an identified capacity of around 212,500 sqm on new

development sites, concentrated in Canary Wharf and the City Fringe. Notably, Tower Hamlets' existing planning permissions already exceed projected demand, offering significant latent capacity.

Other major Developments and Regeneration

4.18 London has multiple large-scale development areas known as Opportunity Areas (OAs) - e.g. Old Oak/Park Royal, Thamesmead, the Royal Docks, Canada Water, etc. These involve constructing entire new districts, which will require large quantities of aggregate for buildings and new infrastructure. Some specific examples in addition to those above: the Barking Riverside development (10,000+ homes) - requires new roads, rail links (the Overground extension just opened), all needing aggregates. The Greenwich Peninsula masterplan (housing, commercial) continues into late 2020s. The Isle of Dogs and Canada Water high-rise clusters also drive concrete usage. Cumulatively, achieving even a portion of those plans will result in high levels of aggregate consumption.

Transport Projects

4.19 Though construction of the Tideway and Silvertown tunnels are complete, future mega projects at various stages of planning and construction include:

- **High Speed 2 (HS2),** while primarily outside London, includes major terminus works at Old Oak Common and a tunnel portal at West Ruislip in Hillingdon. HS2's London works will use enormous quantities of concrete and hence aggregates (HS2 has estimated 10 Mt of aggregate moved by rail for the whole route, with a portion of that destined for London sites).
- The proposed **DLR extension from Beckton Riverside to Thamesmead** is a major infrastructure project aimed at improving cross-river connectivity in East London. Led by Transport for London and the GLA, the extension would cross the River Thames and provide a direct DLR link to Thamesmead for the first time. The project is currently in the feasibility and funding stage, with a preferred route and station locations under consultation.
- **Lower Thames Crossing** (a major new road tunnel east of London): While just outside Greater London, its construction (if it proceeds around 2025-30) would draw on London's wharves and depots for materials and potentially spoil removal.
- The **Bakerloo Line Extension** (to Lewisham) is safeguarded and if funded would also require tunnel segments and station concrete.
- **Crossrail 2** (a north-south Crossrail line): This is currently paused, but if revived in the 2030s, that would be another hugely significant tunnelling project that would consume millions of tonnes of aggregate for concrete.
- **Airport expansion**: While Heathrow's third runway is currently unconsented, if it went ahead, the associated construction (runway, terminals) would use vast amounts of aggregate (Heathrow's expansion

plans had estimated needing over 3 Mt of aggregate). Even without a new runway, Heathrow and other airports have ongoing development (e.g. new taxiways, expansions) that require materials - often sourced via local depots like West Drayton rail aggregate depot.

In addition, numerous smaller transport schemes (new DLR and Overground stations, London Overground upgrades, cycle highway and bus transit projects) cumulatively add to demand (though less aggregate-intensive individually).

Utilities and Resilience Infrastructure

4.20 London is investing in resilience infrastructure, for example, new Thames flood defences and upgrades (e.g. new tidal walls by 2030s) will need large quantities of aggregates for concrete and embankments. The electricity transmission and distribution grid upgrades (new substations, like the London Power Tunnels project National Grid is doing) involve tunnelling and concrete works. Water infrastructure beyond the Thames Tideway tunnel (like upgrades to water treatment works, new water mains tunnels) are also planned, such as the large scale water transfer project planned post 2030. (Thames Water's long-term plan suggests new raw water transfer tunnels to north London post-2030). These involve concrete segments requiring large quantities of aggregate.

Public Realm and Redevelopment Projects

4.21 Programmes like pedestrianisation of city areas, new parks, etc. also use aggregates (for paving, sub-base). The City of London's ongoing public realm works, or the Victoria Embankment strengthening, are examples albeit smaller scale.

Maintenance and Renewal

4.22 Ongoing maintenance of London's existing infrastructure (road resurfacing, building renovations, water and energy infrastructure upgrades) should not be overlooked. For example, road maintenance uses large quantities of asphalt (aggregate + bitumen). Replacement of the road surfaces roughly follows cycles that require thousands of tonnes each year across boroughs. Network Rail's track renewals around London generate steady demand for ballast. These activities ensure an ongoing baseline demand regardless of large projects.

Climate change and decarbonisation

4.23 Climate change and decarbonisation are also affecting demand. Future construction might use less concrete if low-carbon methods are adopted (timber structures, recycled materials, etc.). But given the large backlog in housing and infrastructure, any 'per-building' reduction might be offset by the number of additional buildings needed. However, long-term (beyond 2040), as the economy possibly moves to more circular models, aggregate demand could stabilise or decline. In the timeframe of this LAA (next 5-15 years), no major drop is foreseen, indeed, the current country wide growth agenda, likely means aggregate demand will be maintained at a high level.

Summary and conclusion

4.24 Taken together, these planned activities suggest that demand in London will remain high and possibly increase. There is no indication of a downturn in need and even if growth in the broader economy is sluggish, public sector infrastructure and housing (especially to meet net-zero goals, infrastructure renewal) are likely to continue driving aggregate consumption.

4.25 London's LAA must ensure the supply side can cater to these demand factors. A risk scenario to consider: if, say, Crossrail 2 and a housing boom coincided, could London's supply system deliver, e.g. 14 Mt in a year instead of 10-12 Mt? Such an increase might strain current wharf and rail capacity but some flexibility exists - more material could potentially come via road from closer counties if needed, albeit this is a less sustainable option and is dependent on permitted reserves in the counties around London, which are often restricted by conditions e.g. on annual production or HGV movements. Temporary aggregate depots (like construction consolidation centres) could also be set up for projects (HS2 did something similar, with logistics hubs). London planning authorities should consider how they would be able to positively respond to any necessary temporary increases in throughput (e.g. extended hours at wharves or depots under controlled conditions during peak construction periods). The authorities should also consider how additional supply of aggregates to London could put pressure on current wharf and rail capacity and, if not managed, result in aggregates being imported over greater distances.

4.26 In the event of shortages, European sources could augment supplies (e.g. aggregate import terminals bringing in material by bulk ship from further afield which are highly unlikely in the short to medium term but is not implausible). European aggregates (from Norway, Belgium) have occasionally been imported to the South East and while uncertainties remain it currently seems the post-Brexit trade position is more likely to open than close overseas supply options.

4.27 Overall, London will continue to require in the order of 12-14+ million tonnes of aggregate annually for the foreseeable future, with peaks potentially above that if major projects proceed concurrently. This demand will be distributed across all aggregate types (with about 35+% possibly met by recycled materials assuming policy success). The next section (Section 5) assesses whether London's supply routes can meet the demand and highlights any shortfalls or strategic actions needed

5. Adequacy of Supply and Infrastructure Capacity

5.1 This section assesses whether London's current and planned aggregate supply (from all sources) is sufficient to meet the identified demand, in quantitative and qualitative terms. It considers:

- The landbank for land-won aggregates (as a measure of future local supply);
- the capacity and resilience of import infrastructure (wharves and railheads);
- the contribution of recycled aggregates relative to targets; and,
- any dependencies on other regions that pose a risk.

5.2 It also discusses London's 'LAA Provision Rate', the annual provision figure derived from the 10-year average sales, and how this aligns with London Plan targets.

Land-won Sand and Gravel Provision Rate and Landbank Sufficiency

5.3 Using the standard LAA methodology, the 10-year average sales of land-won sand and gravel in London is c0.357 Mtpa (as of 2023). The 3-year sales average is slightly higher (c0.42 Mtpa). This is significantly below the London Plan provision rate target of 0.7 Mtpa.

5.4 In determining an APR based on sales averages it would be important to consider how well they reflect what is likely to be required going forward and circumstances that have influenced historic sales. For example, the 10 years sales average currently includes the period when sales were depressed by the Covid pandemic and so this value may not adequately represent future demand for aggregate. The impact of using different sales averages on the landbank requirements is set out in Table 10 below:

Table 10: 7 yr land bank requirement Permitted reserve landbank

Sales average	Sales average (Mtpa)	Reserves (Mt)	Landbank (years)
3 year	0.425	5.27	12.4
5 year	0.391	5.27	13.5
10 year	0.357	5.27	14.8

5.5 From the table above it can be seen that the landbanks calculated using sales averages are well above the NPPF minimum of 7 years. However, this

approach must be reconciled with the current London Plan policy which seeks a higher provision (0.7 Mtpa) and expects maintenance of a 5 Mt reserve. The discrepancy between ambition and actual arises because London's production has under-achieved the policy target by over half.

5.6 It is notable that many other LAAs consider the 10-year average as the guiding figure for sufficiency, unless there's an exceptional policy reason to deviate. In London's case, adhering strictly to the 10-year average would declare the landbank adequate, though this would ignore the policy goal of boosting production. The Mayor/LAWP historically maintained the 5 Mt requirement region-wide to encourage any possible new extraction and to demonstrate in Duty to Cooperate discussions that London isn't just ignoring its own resources when planning for provision.

5.7 For this LAA 2024, both approaches are presented as follows:

- By the 10-year average sales method: *Provision Rate = 0.357 Mtpa*. With current reserves (around c5.27 Mt end 2023), London has a 14.5 years landbank, which *technically* meets the NPPF 7-year minimum.
- By the London Plan target method: *Provision Rate = c0.7 Mtpa*. With reserves c5.27 Mt, the landbank is 7.5 years, marginally above the required 7 years.

5.8 Given that the London Plan is part of the statutory development plan, the marginally acceptable landbank position is a policy concern. It suggests that *additional reserves need to be identified and permitted* in the very near future to avoid a shortfall. However, identifying new reserves within London has proven difficult. The borough apportionments (Havering, Hillingdon, etc.) were meant to address this, but as noted, not all have delivered. Potential actions might include:

- Working with boroughs to bring inactive/dormant sites into production;
- speeding up any pending applications;
- revisiting the deliverability of the London Plan targets as part of the current London Plan review.
- Identifying resources for extraction to encourage their working/safeguarding

5.9 It seems highly likely that London's land-won production will remain modest and its reserves could deplete further before any major new permissions are in place.

5.10 It is noted that Bexley has known sand and gravel resources identified and safeguarded in its Local Plan, despite having no active extraction at present. Bromley is also known to have resources in its area but these have not been mapped. While these resources are not contributing to current supply, they represent potential future sources of aggregate that could bolster London's landbank or supply resilience if market conditions and planning constraints allow their extraction in the future.

5.11 Remaining areas in Havering/Hillingdon/Hounslow could yield additional reserves if fully exploited, which might extend the landbank, but one scenario is this may not be for a prolonged period. So, there is a very real risk that London will formally not meet the 7-year landbank requirement, even though demand will still be met via imports.

5.12 **Recommendation:** The Mayor (through the LAWP) could revisit the London land-won aggregate apportionment in light of actual supply trends, ideally in cooperation with other AWPs, though the extent to which any additional requirement is placed on adjoining regions depends on the likelihood of requirements being met by other land-won sand and gravel sources in London as well as marine.

Summary

5.13 Using local 10-year average, supply is adequate for now (landbank 14.5 years), but against the 2021 London Plan policy target of 0.7 Mtpa, supply is only just sufficient (landbank 7 years). It means that while London is currently meeting the NPPF landbank requirement, in the near future it will rely instead on other regions to make up the difference. The consequences are mitigated by strong import capacity (discussed next), but this is an area of concern.

Import Infrastructure Capacity and Distribution

General

5.14 The chart below shows how much aggregate is supplied from railheads and wharves compared to the total primary aggregate sold in London. This shows the importance of sales from railheads and wharves but also shows how there appears to be an increasing quantity sold from non-rail/wharf sources (compared to pre-2018) suggesting a slight increase in road transport.

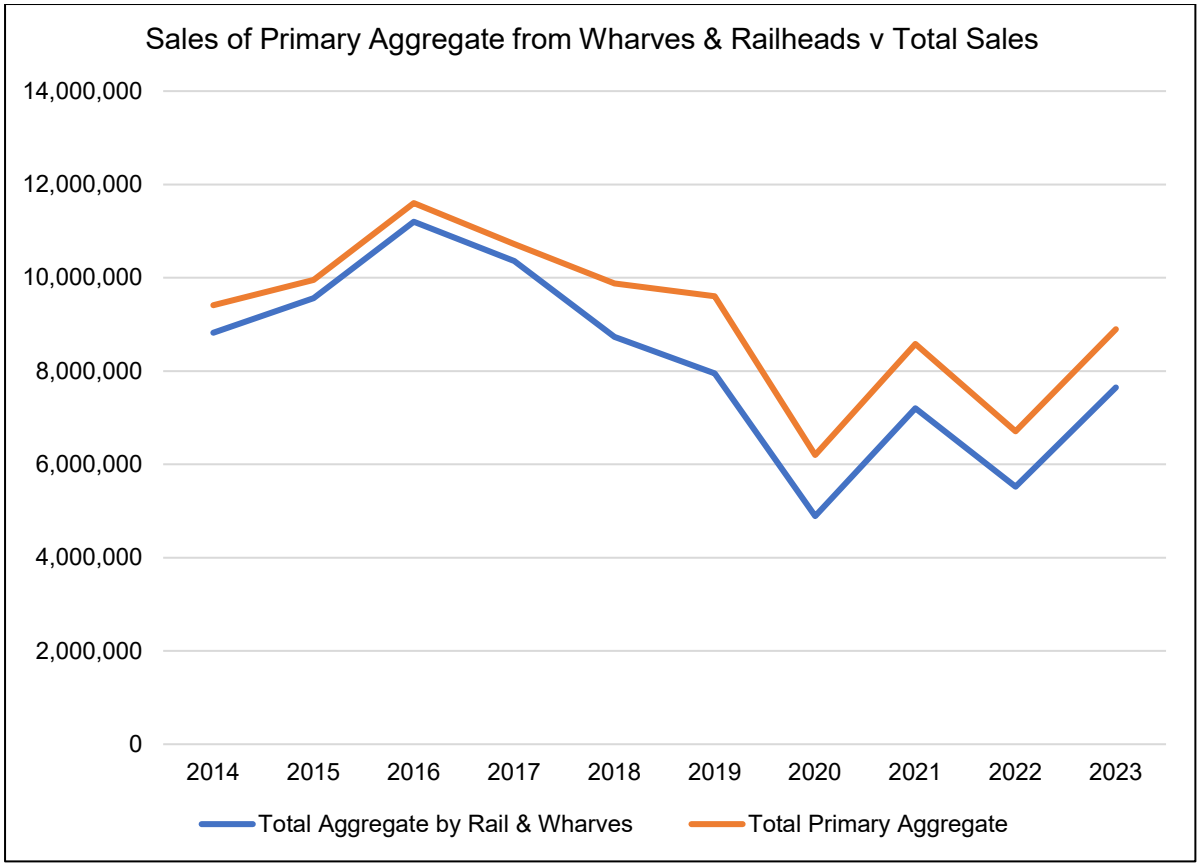

Figure 13 Sales of Primary Aggregate from Wharves/Rail v Total Primary Aggregates

5.15 As detailed in Section 3, London's aggregate wharves handled about 2.5-4.5 Mt on marine won sand and gravel in recent years. The GLA's Wharves Freight Demand and Capacity research indicates that at safeguarded wharves there is 6.7 million tonnes per annum capacity to handle construction materials up to 2050, with 23.6% spare in 2024. This does not take account of capacity at wharves that were repurposed to facilitate construction of the Thames Tideway Tunnel. Theoretically such wharves could provide an additional c1.5million tonnes per annum in the west of London, if they handle the building materials when reactivated.

5.16 Individual wharfs can create bottlenecks if they are closed or there is temporary inactivity; resulting in throughput which needs to be absorbed elsewhere by other wharves if supplies are to be maintained. Generally, this is not an issue as there is a relatively healthy spread of wharves, albeit with the majority of larger facilities being located in the east.

5.17 The key assumption is that no further net loss of wharves occurs. If, hypothetically, one of the major wharves were lost (due to unforeseen events or planning decisions), that could seriously constrain capacity. This LAA, therefore, reinforces the need to retain all existing aggregate wharves and ensure any inactive ones can be reactivated when needed. In this respect, any PLA efforts to re-commission dormant wharves are welcomed.

5.18 Additionally, as tonnages increase to meet demand, some wharves might need operational improvements such as updated grabs, deeper berths for larger dredgers, or better road access to clear materials more quickly. Boroughs and the PLA should facilitate necessary upgrades through any planning consent that might be required e.g. for extended hours or new conveyor systems; supportive positions on such proposals (subject to any issues being mitigated) need to be set out in Local Plan policy and Appendix A suggests that this is already largely the case but this requirement ought to be reinforced in London Plan policy.

5.19 Potential constraints to marine imports and road access to wharves can be caused by neighbouring housing. Road access to wharves is constrained as many are in densely developed areas and HGVs accessing them add to local congestion e.g. Comleys Wharf, Fulham. If environmental constraints further limit hours of access or operation (e.g. ultra-low emission zones or noise restrictions), that could in turn limit wharf usage and output. Solutions could include greater use of river transshipment between locations and use of low emission (e.g. electric) HGVs. Such matters ought to be considered by Local Plans, at least ensuring that policy does not inadvertently create undue barriers to wharf usage. While there are no reports of wharf use being curtailed due to road constraints, and Agent of Change policy gives some protection from new residential development, it cannot be assumed that this will remain the position going forward unless relevant policy is stringently applied and new policy, including site allocations carefully drafted.

5.20 The GLA is undertaking a review of safeguarded wharf capacity relative to demand to inform the forthcoming London Plan. This could present an opportunity to assess whether wharves which are currently inactive, underused or not used for other forms of cargo could be brought into use for aggregate imports in the future. The next version of this LAA will be updated to ensure it takes account of relevant findings and any subsequent review work.

Railheads (Crushed rock imports)

5.21 Railheads in London currently handle c3 Mtpa of crushed rock and up to nearly 4Mtpa has been achieved in the last ten years. However, unlike wharves which are under singular oversight of the PLA, railheads are scattered and rely on national rail network coordination. Railhead capacity is being improved by new terminals like Hendon (2-3 trains/day capacity) and Wembley (Eurovia's hub) coming online.

5.22 Capacity appears adequate. Increases in demand could in theory be met by more and/or larger trains, however this is dependent on network availability and the fact that some network routes can't accommodate heavier trains without track upgrades

5.23 In planning terms, a few things could help with rail capacity such as protecting existing and allocating potential new depot sites and ensuring any redevelopment of railway land (like railway yards and depots) considers the

need for aggregate transportation, including allowing for storage and distribution of the aggregate.

Overall supply capacity vs demand

5.24 Considering all importation avenues plus local production, London's aggregate supply system theoretically can supply well over the current c12.54 Mt demand. Summing capacities: wharves c8 Mt plus rail c4+ Mt plus land-won c0.4 Mt, recycling c3.5+ Mt capacity creates total overall supply capacity of 15.9Mt. Of course, not all operate at maximum capacity simultaneously, but this provides a measure of headroom. The bigger risk is more qualitative in the form of resilience and reliance. London is extremely reliant on external supply (over 95% of primary aggregates come from outside London). This reliance is managed through MASS, but it does mean vulnerabilities as if any major external source had an issue (e.g. a quarry shutdown or rail line closure), London could quickly face short-term shortages. For example, temporary rail line closures (like after a landslide or maintenance) have disrupted aggregate flows before - requiring alternate sources or modes. Similarly, dredging licence delays could theoretically temporarily reduce marine supply, though the Crown Estate and industry have long lead times to avoid this becoming an issue.

Regional cooperation

5.25 The LAA includes an analysis of import sources (the regional import assessment table in Appendix E), which indicates whether those regions foresee continuous supply. For the most part it can be said that they do: East Midlands and South West plan to, and those areas have large landbanks (e.g. Somerset's crushed rock landbank is over 20 years at current provision rates, Leicestershire also reports a healthy rock landbank over 20 years). One exception might be sand & gravel imports from the East of England and the South East - counties like Essex and Kent are themselves facing tightening of land-won resources. However, Essex is addressing this by updating its Minerals Local Plan. Kent's LAA 2022 shows land-won sand and gravel reserves declining and a landbank below 7 years for sharp sand and gravel. Since London imported 402,000 tonnes of land-won sand/gravel in 2023 (69% from East of England) (565,000t[43] of land-won sand/gravel in 2019 (57% from East of England)), if those exporting areas reduce output due to constraints, London might have to rely even more on marine sand or import sand from more distant sources (e.g. by rail from the Midlands or even overseas). This underscores the importance of marine sources filling the gap in requirements.

Conclusion on supply capacity

5.26 At present, London's aggregate supply capacity is just about sufficient to meet current demand, but it is stretched and requires careful safeguarding

[43] This includes imports by road

and incremental enhancements to avoid future deficits. The biggest issues are not the ability to physically supply (as materials and import routes exist), but ensuring the planning framework ensures supply routes are maintained. The following key points emerge:

- **Land-won supply** will not probably significantly increase and is below nominal targets. It will be important to sustain this supply as long as resources remain and while production facilities, processing sites and associated infrastructure exist. Whilst markets will determine supply, once this source becomes depleted London will need to adapt (e.g. find alternative sources) and the demand for London's aggregate needs to be met by other regions should officially be recognised and built into MASS (agreements with other MPAs) to fill the gap.
- **Marine supply** is robust so long as wharves remain operational. There is a risk that the loss of a wharf or navigation issues on Thames would constrict supply but currently this is low due to strong policy support as well as PLA oversight.
- **Rail-freight import supply** is near capacity and any increase in demand will likely require network improvements and/or new depot capacity. As rail freight paths are finite, close working with Network Rail and possibly infrastructure enhancements (e.g. longer loops, improved unloading facilities to shorten train holding time) might be needed if demand grows.
- **Recycled/secondary supply** has further potential to increase sales and relieve some pressure on primary imports which aligns with sustainability objectives. The LAA should encourage boroughs to facilitate recycling facilities (including advanced processing of construction and demolition waste) and the use of such recycled aggregate in construction, which fortunately most already do.

5.27 Overall, it can therefore be said that, in the short-to-medium term, London's supply position is marginally adequate but potentially fragile. It warrants ongoing monitoring by the GLA and the LAWP. Should any significant risks materialise (e.g. a major supplier region signals it cannot maintain exports, or an essential wharf/railhead is at risk of closure), contingency planning is needed. This could include identifying alternate import routes or identifying the funding and finance to deliver new rail-freight infrastructure .

Key Risks, Constraints, and Mitigation Strategies

5.28 The current evidence suggests that the principal risks and issues that could affect London's aggregate supply, and potential mitigation are as follows:

5.29 ***Resource shortfall (land-won)*** - London does not have enough permitted reserve to meet the notional requirement, albeit this is relatively small.

Risk: If replacement resources of land won sand and gravel are not permitted (even minor extensions), London's relatively limited local supply could cease entirely in a few years when current quarries close, leaving zero local contribution.

Mitigation: Boroughs and the GLA should, support in principle any planning applications to extract remaining viable sand/gravel (e.g. extensions in Havering, initiation of dormant sites). While the quantities are small relative to demand, it is important that London demonstrates an ongoing contribution to its own requirements. Additionally, if local supply ceases, around 0.4 Mt[44] must be sourced from elsewhere to maintain supplies at current levels and, while the current infrastructure is capable of meeting such an increase, this nevertheless adds pressure to the system and reduces resilience.

5.30 ***Wharves/depots released from safeguarding and/or policy breach*** **-** The pressure to use riverside and rail-linked land for housing is intense.

Risk: An aggregate wharf or railhead could be lost through a planning decision or simply squeezed by adjacent sensitive development making operations unviable/impractical. Also, some safeguarded wharves remain inactive for long period tempting developers to argue they are redundant.

Mitigation: Strict adherence to safeguarding policy, only releasing a wharf if equivalent or better capacity is provided elsewhere (as was done with wharf consolidation in Newham). For railheads, boroughs must similarly protect those sites in Local Plans (most do, e.g. listing them as 'Rail Preferred Industrial Locations' etc.). If redevelopment is proposed, ensure replacement capacity in vicinity. GLA and TfL (and Network Rail) might explore acquiring land for strategic freight use if needed (PLA style intervention on wharves). The 'agent of change' principle helps ensure new neighbours can't curtail existing uses, but enforcement is crucial. In addition, allocation of additional viable industrial land adjacent to existing wharfs and railheads in Local Plans will help facilitate expansion.

5.31 Constraints on existing infrastructure

Risk: Insufficient throughput capacity at existing facilities during demand peaks (leading to material supply delays for construction, potentially raising costs or causing construction delays).

Mitigation: Encourage equipment upgrades - e.g. encouraging wharves to install additional unloading cranes or conveyors to stockpile faster; railheads could extend sidings to handle longer trains. These usually require planning permission and London Plan/Local Plan policy should be supportive in principle. The industry may also be able to operate more night-time working if allowed; London boroughs should work with operators on noise mitigation to allow extended hours when necessary, rather than outright bans. Such matters ought to be considered when proposals for development on neighbouring on land is received – this could be required by Local Plan policy. The GLA review of safeguarded wharves could consider opportunities for increasing wharf capacity for aggregates supply.

5.32 External supply dependency

[44] Based on 2023 sales averages

Risk: London relies on cooperation of many other regions. If one major region had an abrupt change (e.g. a protective stance limiting exports (unlikely), or a big quarry closure), short-term supply could be affected.

Mitigation: Maintain strong communication via AWPs - early warning of any issue allows contingency. Monitor LAAs of importing areas. Continue to allow for diversity of supply (Currently the balance of supply sources (multiple rail origins, plus marine, plus recycled) provides resilience). Additionally, allowing 'buffer stocks' of aggregate in London might cushion supply shocks - some depots maintain larger stockpiles as a buffer. The planning system can help by permitting adequate stockyard space at sites.

5.33 Environmental constraints and climate policies

Risk: Tighter environmental regulation could impose new limits - e.g. restrictions on dredging times for marine to protect habitats (reducing supply windows), or stricter emission controls on diesel trains/trucks raising costs or limiting operations hours.

Mitigation: The industry is adapting (new dredgers with better environmental tech, trialling electric construction logistics, etc.). Policy makers should integrate aggregates considerations e.g. ensuring wharves and depots are supported in funding to electrify equipment, so they can meet standards without cutting throughput.

5.34 Economic volatility

Risk: A recession would likely impact construction and while this reduces demand for aggregate, sharp falls can lead to supply chain disruptions (e.g. companies mothball capacity which is then slow to restart when needed again). A small example was observed in 2020: some aggregate operations furloughed, causing short-term supply disruption when re-opening.

Mitigation: Mostly market-driven (stockpiling etc.), but LAWP can liaise with industry to understand any upcoming issues.

5.35 The above risks underscore that supply must be actively managed and planned on an ongoing basis and not taken for granted. London's position as a global city depends on continuous construction, which in turn depends on these basic materials. The LAA will be reviewed annually to monitor these risks.

6. Review of Borough Local Plan Policies

6.1 Appendix A provides a borough-by-borough summary of policies and supply infrastructure. Appendix A attempts to provide an assessment of the policies contained in currently adopted Local Plans with a view to establishing whether particular action is needed to enhance the role of borough local plans in ensuring an adequate supply of aggregates in London. The main findings from this assessment are set out below. It is important to note that this review has not considered policy which may be emerging e.g. policy included in Regulation 19 Local Plans.

Local Plan Policy - Strengths/good practice

Strong safeguarding in some boroughs

- Boroughs such as Havering, Hillingdon, Greenwich, Hounslow, Redbridge, Bexley, and Newham actively safeguard wharves, quarries, and railheads. Plans in these boroughs often include clear minerals policies and designate specific sites or areas for aggregates handling and extraction.

Emphasis on circular economy and reuse

- Many boroughs integrate circular economy principles, encouraging material reuse, on-site recycling, and sustainable design (e.g., Camden, Lambeth, Islington).

- Plans often include requirements for Site Waste Management Plans and promote use of recycled content.

Regional cooperation on waste and secondary aggregates

- Most boroughs actively participate in joint waste plans (e.g., South London Waste Plan, North London Waste Plan), which safeguard C&D recycling and facilitate residual waste-to-aggregate flows such as IBA.

Co-location and urban integration

- A few boroughs have explicitly recognised that development associated with aggregate handling is generally supported in identified industrial locations.

- Some boroughs (e.g. Wandsworth) have developed innovative strategies like decking over wharves or integrating waste/aggregate facilities into mixed-use areas, to maintain capacity in the face of urban development pressures.

Recognition of strategic freight infrastructure

- Policies in boroughs such as Tower Hamlets, Kingston upon Thames and Greenwich recognise the strategic importance of wharves and railheads for aggregates and wider freight movement.

Local Plan Policy – Key General Weaknesses

Minimal or no explicit mention of aggregate supply

- Many London borough Local Plans do not include dedicated policies on aggregates, especially those without local quarries or wharves. Instead, they appear to rely on London Plan policy SI10 and joint waste plans. This lack of local-level policy may lead to:
    - Missed opportunities for safeguarding potential aggregate handling sites.
    - Weak resilience if regional facilities become constrained.

Incomplete safeguarding of infrastructure

- Several boroughs appear to not explicitly safeguard railheads or potential freight infrastructure for aggregates, even when these exist.
- Safeguarding tends to focus on wharves and waste sites, while rail-linked depots receive less clear policy protection.
- There is very little in the way of ‘Agent of Change’ protection of all types of site supplying aggregate

Limited support for recycled aggregates

- Few boroughs actively promote production of recycled aggregates beyond expectations concerning general waste recycling, however this is promoted by the London Plan.
- Some boroughs do not explicitly encourage establishment of new C&D recycling facilities or expansion/improvement of existing capacity to produce high quality recycled aggregate.

Redevelopment pressures on safeguarded sites

- Ongoing and intensifying pressure from residential or mixed-use redevelopment threatens long-term aggregate supply infrastructure.
- While some boroughs mention these pressures, application of detailed mitigation or policy safeguards against loss of capacity is inconsistent.

Lack of monitoring and apportionment alignment

- Several boroughs do not clearly set out clear mechanisms to monitor local contributions toward the London-wide apportionment targets or demonstrate how safeguarded land will maintain capacity.

Summary

6.2 Overall, while London borough local plans show strong general support for safeguarding wharves and some key sites, there appears to be widespread weakness in explicit local policy detail, safeguarding of rail aggregates facilities, and active promotion of recycled aggregate production.

7. Conclusions and Recommendations

7.1 In conclusion, the London LAA 2024 finds that London's demand for aggregates remains high and is likely to grow in line with growing development expectations. The city's supply of aggregates is almost entirely dependent on land-won and marine dredged imports and recycled/secondary materials, with local land-won production only a marginal contributor (c0.5Mt in 2023, c5% of consumption). London's aggregate supply position can be summarised as follows:

Land-won sand & gravel

7.2 Supply of London land won sand and gravel is continuing, albeit on a small scale in three boroughs. Permitted reserves (5.27 Mt at end-2023) allow a landbank slightly above the NPPF 7-year requirement when measured against the London Plan apportionment (equating to 7.5 years). Reserves may deplete and, if so, in the near future there will be a shortfall (2024 data might reveal this) so this is a policy concern; however, given the small quantities involved, the practical impact on overall supply is limited - the shortfall will need to be met by alternatives such as increasing imports of land-won material and landings of marine won material in London.

7.3 **Recommendation:** Boroughs should seek to permit any remaining viable sand/gravel reserves to bolster the landbank where environmentally acceptable. Existing accessible resources should be safeguarded. The upcoming London Plan presents an opportunity to re-evaluate the 0.7 Mtpa regional provision target. Meanwhile, it should continue to be clearly acknowledged (e.g. via statements of common ground) that London will continue to rely on marine won sand and gravel and from other areas to meet the majority of its sand and gravel needs.

7.4 **Recommendation:** When preparing Local Plans, Boroughs should thoroughly assess opportunities for allocating sites for aggregate mineral extraction in their areas.

7.5 **Recommendation:** For certain Boroughs, the new London Plan should include target levels of reserve to be maintained in their areas. Targets should be based on a number of factors including presence of accessible aggregate mineral resources and historic production levels.

Marine-dredged sand and gravel

7.6 An important supply for London's primary aggregate sales, providing roughly 38% of consumption (circa 3.4Mt annually). The Thames-based wharf network is currently adequate, though operating in some cases near capacity. The 2018-2019 wharf safeguarding review outcome resulted in a relatively small reduction of safeguarded wharf capacity from 18mt to 17.4mt but secured important compensatory capacity at Royal Primrose Wharf.

7.7 **Recommendation:** Maintain strict safeguarding of aggregate wharves including through careful management of applications in their vicinity. In addition, any new wharf capacity enhancement projects should be expedited. Annual monitoring of capacity use and where appropriate, triggering of mitigation such as operational improvements or identification of additional berth capacity) should be undertaken. Also, continued support for river transport in planning decisions (e.g. requiring major river-adjacent developments to use river freight for bulk materials where possible) will help optimise this supply route. Monitoring of complaints received by environmental health or planning enforcement teams regarding noise and nuisance derived from wharves complaints at wharves should help inform future mitigation policy and review of neighbouring allocations.

Imported crushed rock (rail)

7.8 Approximately 3-4 Mt per year of crushed limestone, granite and other rock is imported, primarily by rail from other regions. This meets around 40% of London's needs. The supply from areas like Somerset and Leicestershire is expected to continue - these areas have ample reserves and recognise London as a key market. Potential bottlenecks relate to rail handling capacity in London. Investments (new depots at Hendon, etc.) have improved the situation.

7.9 **Recommendation:** Unequivocal protection of existing rail aggregate depots in Local Plans and the new London Plan. Identify if any additional railheads or capacity enhancements are feasible - for example, as part of rail freight strategies, consider opportunities such as using under-used rail yards for aggregate handling. The safeguarding of freight paths into London should be promoted, as should investment in infrastructure improvements that benefit aggregate flows (such as track enhancements on key supply routes). Should demand increase, an industry group should be convened (rail freight operators and aggregate companies) to ensure capacity keeps pace with requirements.

Recycled and secondary aggregates

7.10 London is a national leader in using recycled aggregates, with an estimated 2-3+ Mt produced annually from CD&E waste, plus additional secondary materials like IBA aggregate. This contributes significantly (possibly 20-25% of total aggregate used). Headroom capacity currently exists at recycling facilities.

7.11 **Recommendation:** Continue to encourage the use of recycled/secondary aggregates through planning (Local Plan and London Plan) and procurement policies/conditions (e.g. TfL and borough contracts specifying recycled content). Safeguard CDEW recycling sites, especially those co-located with aggregate import sites (wharves/depots), to ensure no loss of capacity. Monitor the recycled aggregate production via WDI data - if production declines or facilities close, investigate and address barriers (such as

shortage of feed material or land constraints). Aim to maximise this sustainable supply source, which eases pressure on imports and landfills and is consistent with Circular Economy ambitions.

Total Aggregate Supply vs Demand

7.12 For now, London's supply system can meet current demand of c12+ Mtpa, but with little slack. Future demand could rise slightly with major projects. The LAA finds that total supply capacity (all sources) may be just sufficient for moderate increases, but any substantial demand surge would test the system.

7.13 **Recommendation:** Maintain a close watching brief on aggregate demand indicators (planning pipeline, major project schedules). The GLA/LAWP should update its analysis if, for example, major infrastructure schemes are approved that could significantly boost short-term aggregate needs. In such cases, planning for temporary supply measures (like additional shipping of aggregate to unusual locations, or creation of project-specific logistics hubs) may be warranted. Early coordination with project promoters can help integrate such measures (as was done to use river/rail for Tideway and HS2 to reduce road transport).

Risk management

7.14 The key risks outlined (loss of infrastructure, external supply disruption, etc.) should be managed through the policies and actions already noted. Additionally, it may be prudent for the LAWP to develop a contingency protocol e.g. if a safeguarded wharf or depot is threatened with closure, LAWP members would collectively object and seek Mayoral intervention; if an external region signals reduced exports, the LAWP would request a Duty to Cooperate meeting with that region's AWP to find solutions (perhaps sourcing from alternate areas). Essentially, maintain strong collaboration lines.

7.15 Finally, some formal recommendations can be made as part of this LAA for incorporation into planning and strategy documents:

1. Maintain Apportionment and Review

7.16 Relevant London boroughs should continue to plan for the currently apportioned 0.7 Mtpa land-won aggregate collectively but acknowledge in Local Plans (supporting text) that, unless permissions are granted for replacement reserves, there will be a regional shortfall. Local Plans (and the new London Plan) should support any sustainable proposals to extract remaining resources. The Mayor, through the current London Plan review, could revisit the annual land-won aggregate production target and associated Borough apportionments in consultation with the Aggregates Working Party and adjacent regions, to ensure the provision figure for London, and certain Boroughs, post-2025 is realistic. Any reassessment

should consider realistic and viable new sources of mineral supply which could be appropriately safeguarded.

2. Safeguarding and Capacity Improvement

7.17 Boroughs must rigorously safeguard all existing aggregate handling sites (wharves and railheads) ensuring no net loss of capacity. This should include existing land won sand and gravel processing facilities to ensure local resources can be viably extracted. Development proposals in the vicinity must be assessed for their impact on these facilities (applying the 'Agent of Change' principle to protect the facilities' operations). The GLA and PLA should work together on an investment and management plan for safeguarded wharves - ensuring dormant wharves are actively marketed to aggregate operators and brought back into use where feasible, or formally de-designated only if truly redundant and where compensatory capacity is provided. Similarly, opportunities to enhance railhead capacity (longer sidings, upgraded loading equipment, etc.) should be supported by planning policy and funding where possible (e.g. through freight infrastructure grants).

7.18 In addition, a network of strategic aggregate handling sites should be clearly identified in the London Plan.

3. Promote Sustainable Transport of Aggregates

7.19 Emphasise use of the River Thames and rail for aggregate movement in all relevant planning and transportation strategies. This reduces road congestion and emissions. The London Plan already encourages this (Policy T7 freight), and a similar policy should be retained in the new London Plan. Major construction projects in London should be directed, via planning approvals or Mayoral guidance, to utilise rail or water for bulk material delivery and spoil removal wherever practicable. This will help maintain tonnages being managed at safeguarded wharves and depots, reinforcing their economic viability.

4. Monitoring and Data

7.20 The GLA/LAWP should continue improving data collection on aggregate imports and consumption (working with industry to fill data gaps). The lack of import data in some recent years hampers analysis - efforts should be made to capture at least high-level figures via AWP surveys or alternative methods. Also, tracking recycled aggregate production via WDI and site capacities should be refined to more accurately quantify this source of supply. Consideration should be given to strengthening policy in the London Plan to require developers to set out how much aggregate is needed for particular developments – especially larger infrastructure projects. Ultimately better data will allow more responsive planning.

5. Cross-boundary collaboration

7.21 Given London's dependence on external sources, this LAA should be shared with the South East, South West, East Midlands and East of England Aggregate Working Parties. It should form the basis of Statements of

Common Ground where appropriate where London acknowledges its reliance, and those regions (and their constituent MPAs) acknowledge the role of supplying London. Encouragingly, some MPAs already note London in their LAAs. These relationships should be maintained and strengthened to ensure ongoing supply. Any potential future constraints identified by those MPAs must be communicated early to the LAWP so that alternative strategies (like sourcing from other regions or increasing marine share) can be arranged.

6. London Plan Policy - General

7.22 The review of borough Local Plan policies confirms that while some boroughs have relatively strong safeguarding and minerals policies, many rely on the London Plan with minimal local detail. This is not always problematic, (e.g. a London-wide circular economy approach is helping to reshape the market) but can be (e.g. in terms of inconsistent protection of relevant infrastructure). Consideration should be given to how London Plan policy can be strengthened to ensure borough Local Plans are consistently addressing development in a manner which will secure aggregate supply.

7.23 In conclusion, London's 2024 aggregate supply position is finely balanced but manageable. The capital will continue to be heavily reliant on marine aggregates, imports by rail, and maximising recycling, as its own resources are depleted. The planning framework in London (London Plan SI10 and borough policies) provides a basis for safeguarding the needed infrastructure - this must be rigorously implemented and strengthened where necessary. By taking forward the recommendations above, and with continued cooperation between the GLA, boroughs, industry, and neighbouring regions, London should be able to secure the steady and adequate supply of aggregates required to deliver its growth and development ambitions in the coming years. The GLA will keep these matters under review and publish the next LAA (2025) reflecting updated data (including the results of the national 2023 Aggregate Minerals Survey and any new developments.

8. Appendices

Appendix A: Borough-Level Aggregates Supply and Policy Overview

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Barking & Dagenham	0	Safeguarded (Active) – 3 Safeguarded (inactive) – 4	Active – 1	12 (no incinerator)	Local Plan 2037 (adopted 2024): Emphasises circular economy and safeguards industrial sites e.g. protected industrial land at Dagenham Riverside supports uses like aggregate distribution via river/rail.	Strong. Up-to-date plan requires re-use of construction materials and safeguarding of wharves and rail hubs for aggregate transport.	Redevelopment pressure in Thames Riverside area could constrain aggregate facilities, but plan allocates space for waste/aggregates uses. Reliant on imports (no local sand/gravel).
Barnet	0	0	0	8 (no incinerator)	New Local Plan adopted 2025: Very little mention of aggregate supply. Safeguards Scratchwood Quarry for CDEW processing. Also covered by North London Waste Plan (NLWP) that safeguards other waste sites.	Moderate. Safeguards site for CDEW processing but otherwise minimal local provisions (mentions regional policies). NLWP safeguards other waste sites.	No explicit mention of aggregate but no primary aggregate supply facilities within borough.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Bexley	0	Safeguarded (Active) – 2	0	6 (+1 incinerator with IBA)	Local Plan 2023 (adopted). Mineral Safeguarding Area (MSA) on the Policies Map to prevent development that would unnecessarily sterilise minerals within the MSA. Wharves on River Thames safeguarded and waste reuse facilities supported. References London Plan targets for aggregates. Incinerator at Belvedere (Riverside Energy) produces bottom ash that is recycled into aggregate off-site.	Supportive. Borough policy includes a new MSA, safeguards import wharves and encourages recycled aggregate production. Long-term commitment to Belvedere IBA processing.	Heavy reliance on Thames wharves and waste facilities -any wharf capacity shortfall could impact supply. There is no provision in the borough for freight to join the rail network.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Brent	0	0	Safeguarded (Active) – 3	8 (no incinerator)	Local Plan 2019–2041 (adopted 2022): No specific minerals policy (not an apportionment borough). Participates in West London Waste Plan 2015 for safeguarding waste/recycling sites. Relies on London Plan for aggregate safeguarding. Policy BT3 encourages potential rail/canal freight operations generally.	Moderately supportive. Encourages use of rail, canal, and freight consolidation, and safeguarding strategic freight infrastructure. Brent supports regional efforts (e.g. cooperating with OPDC on rail aggregate hubs) rather than local provision.	Limited aggregate infrastructure within borough (no wharf). Dependence on facilities in adjoining areas (e.g. Park Royal, Old Oak) means cross-boundary cooperation is vital. No specific mention of aggregate supply.
Bromley	Safeguarded ? (Inactive) – 1	0	0	2 (no incinerator)	Local Plan 2019: Contains no dedicated aggregate policy (borough has no significant aggregate resources) but includes Policy 67 to address any proposals for mineral extraction. Includes policy 112 on waste and allocates sites.	Low. Policies neither especially support nor restrict aggregates supply. Bromley's role is mainly to ensure construction projects use sustainable materials sourced regionally, given no local extraction or handling. Unclear on waste safeguarding.	No significant aggregate sites; minimal capacity within borough. Lacks local sites, so fully dependent on imports via other boroughs' facilities. Local position on waste safeguarding appears weak.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Camden	0	0	Safeguarded (Active) - 2	1 (no incinerator)	Local Plan 2017: No minerals extraction policy (no local reserves). Policy T4 protects existing facilities for waterborne and rail freight traffic. Policy requires sustainable design and reuse of construction materials. Camden relies on the NLWP for any waste aggregate processing capacity.	Supportive. Camden promotes use of recycled aggregates in construction and safeguards/promotes transport of freight inc. aggregate by rail/water.	High construction demand must be met by imports. Urban constraints mean little opportunity for new aggregate sites.
City of London	0	Safeguarded (Inactive) - 1	0	0 (no incinerator)	City of London Plan (adopted 2015, under review): No local extraction; policy focus on sustainable resource use. Developers must maximise recycled content and use freight by rail/river where possible. City relies on the Greater London aggregate supply network.	Supportive (indirectly). The City strongly supports safeguarding regional wharves and railheads (as it depends on them). Local policy sets high expectations for recycling and material re-use in development projects, aligning with London Plan.	100% of aggregates are imported into the City. Any disruption to wharf or rail supply routes (outside City boundaries) could impact construction. No land available for aggregate facilities within the Square Mile.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Croydon	0	0	Safeguarded (Active) -1	6 (no incinerator)	Local Plan 2018: Minerals policy (SP6.7) supports new facilities for recycling aggregates. Safeguards existing waste sites for recycled aggregates including via the South London Waste Plan 2022 for C&D waste management.	Moderately Supportive. The council allows and safeguards construction waste recycling facilities. Local policy emphasises reuse of demolition materials. Improvements in rail track capacity sought.	Several recycling sites operate in industrial areas, but redevelopment pressure is low in those areas. Unclear how Purley railhead is safeguarded.
Ealing	0	0	Safeguarded (Active) – 2	7 (no incinerator)	Core Strategy 2026 (2012) & Dev. Mgmt 2013: Allows mineral extraction in certain circumstances. Policy 2.4 safeguards Acton Rail Depot. West London Waste Plan 2015 safeguards key recycling sites.	Moderately Supportive. Historically minimal local policy on minerals, but Ealing has accommodated strategic facilities (railhead, recycling centres). The new plan supports the reprovision of existing aggregate logistics sites that form part of areas of growth.	Contains a major rail aggregate terminal at Acton (Horn Lane stone terminal) . Industrial land in Park Royal is under pressure from redevelopment (and now partly within OPDC). Data on CDE waste handled is limited. Emerging Local Plan (Reg 19) does not explicitly safeguard Acton sidings as a strategic aggregate site but does acknowledge the need for reprovision.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Enfield	0	0	0	7 (+1 incinerator)	Core Strategy 2010 (no specific minerals extraction policy). Enfield has limited mineral resources (some sand/gravel in the Lea Valley). Policy 23 covers extraction. Draft New Local Plan (Reg 19) to continue relying on London Plan. NLWP allocates sites like Brimsdown for construction waste recycling.	Supportive. Enfield supports continued use of its industrial sites for waste and secondary aggregate management. Local policy, via the NLWP safeguards these facilities. Primary extraction potential partly recognised regional cooperation anticipated to safeguard resources.	Significant cluster of recycled aggregate facilities (e.g. Brimsdown), but borough's aggregate supply is entirely secondary/recycled. The replacement Edmonton incinerator will generate IBA; processing occurs outside the borough. Industrial land demand is high but Enfield's eastern corridor remains a key waste/aggregate site. Unclear how potential resources are safeguarded.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Greenwich	0	Safeguarded (Active) - 5	Safeguarded (Active) – 1	4 (no incinerator)	Core Strategy 2014: Protects Safeguarded Wharves (e.g. Angerstein and Murphy's Wharf) for aggregate import. Also supports use of the Angerstein rail link. New Site Allocations (emerging) continue industrial protection along the Thames.	Supportive: The borough adheres to London Plan requirements to safeguard its wharves for aggregate. It facilitates marine-dredged aggregate landings and modest on-site recycling.	Encroaching residential-led development on the Greenwich Peninsula poses long-term compatibility issues with wharf operations. However, wharf capacity on the Thames is critical for London's supply. Limited space for additional recycling facilities.
Hackney	0	0	0	0 (no incinerator)	Local Plan (LP33) 2023 (2020): No dedicated aggregate policy; focuses on sustainable construction and export of waste. Hackney is part of the NLWP area which identifies recycling sites serving the area.	Neutral. Hackney's plan does not actively address aggregate supply beyond requiring construction projects to follow circular economy principles. It defers to regional mechanisms and neighbouring borough facilities, given the lack of local sites.	Virtually no local aggregate infrastructure. One major C&D waste recycler serves the area on the borough border. All aggregate used in Hackney construction is imported from outside (wharves on Thames or railheads in other boroughs).

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Hammersmith & Fulham	0	Safeguarded (Inactive) - 2	0	2 (no incinerator)	Local Plan 2018: Commits to safeguarding wharves in the borough for freight in line with London Plan policy. North of the borough, the Old Oak (Powerday) recycling facility is now under OPDC planning control but remains a key site.	Moderately Supportive. The borough safeguards wharves and has allowed a large recycling facility, but it has in the past sought to relax some safeguarding.	Strong development pressure on Thames-side industrial land (e.g. past proposals to release wharves for housing). Traffic and environmental concerns around the major Old Oak recycling site. No specific encouragement for production of recycled aggregate.
Haringey	0	0	1 (inactive)	2 (no incinerator)	Strategic Policies (2013-2026): No specific aggregate policy; relies on NLWP to safeguard key C&D waste sites. Emerging Local Plan Reg18 will likely continue this approach.	Supportive (limited scope). The borough supports retention of existing waste/aggregate recycling operations in industrial areas and cooperates in the joint waste plan. There is little more it can do given no wharf or resource in its area.	Few facilities serve aggregate recycling needs. Otherwise Haringey depends on imports. No local resources to exploit. No specific encouragement for production of recycled aggregate.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Harrow	0	0	0	2 (no incinerator)	Core Strategy 2012: no mention of aggregates. Harrow is also covered by the West London Waste Plan 2015, but has minimal aggregate activity. The emerging Local Plan 2021 – 2041 (reg 19) encourages on-site recycling in construction projects and recognises aggregate activity as appropriate on industrial land (Policy LE3).	Neutral. Neither impedes nor promotes aggregate supply. WLWP ensures construction waste is managed sustainably, without hosting significant facilities. Emerging plan is more supportive.	Almost no infrastructure (just small-scale recycling). The borough's construction projects rely on aggregate delivered from outside. Emerging Plan better than existing but no specific encouragement for production of recycled aggregate.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Havering	Safeguarded (Active) – 2 Safeguarded (Inactive) – 1	Safeguarded (Inactive) – 2	0	9 (no incinerator)	Local Plan 2016–2031 (adopted 2021): Includes dedicated minerals policies; Identifies and safeguards mineral resource areas and extraction sites to meet London Plan apportionment (at least 1.75 Mt sand & gravel); wharves are safeguarded for aggregate import. Also covered by the East London Waste Plan (ELWP) that is currently being replaced by a new joint waste plan.	Very Supportive. Havering is one of London's primary aggregate-producing boroughs and its policy reflects this. The council actively plans for extraction and works to maintain its landbank, in line with regional demand. It fully safeguards wharves and known resources, demonstrating a proactive stance.	Reserve levels are just above the minimum 7-year landbank, meaning Havering must keep identifying new resources to maintain supply. Future extraction may be constrained by environmental factors (e.g. proximity to SSSI on marshes) and by urban development at borough fringes. Policy less supportive of extraction if minimum required landbank exists.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Hillingdon	Restoration phase (Inactive) – 1 Safeguarded (Active) – 1	0	Safeguarded (Active) -– 2 Safeguarded (Inactive) – 2	11 (no incinerator)	Local Plan Part 1 (2012) & Part 2 (2020): Minerals policies allocate 1 site and 2 preferred areas at Harmondsworth/Sipson for sand & gravel extraction and an area of search; Meets its 1.75 Mt London Plan apportionment through ongoing quarrying. No MSA. Safeguards railheads (West Drayton, Hayes, Ruislip) and recycling facilities. Covered by WLWP.	Very Supportive. Hillingdon's policies actively encourage local aggregate production and infrastructure safeguarding. The borough has demonstrated commitment by approving quarry expansions and safeguarding rail and recycling sites.	Potential conflict with any future Heathrow expansion (which would have sterilised some quarry land) is mitigated by current policy opposing runway expansion. Otherwise, the main issue is managing simultaneous operation of multiple sites in a populated area (traffic, dust).

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Hounslow	Safeguarded – (Inactive) – 2	0	Safeguarded (Active) – 1	3 (no incinerator)	Local Plan 2015: Commits to contribute to aggregates supply; the West of Borough Plan (2020) allocated Rectory Farm for gravel extraction; Safeguards the strategic rail-fed aggregate depot and recycling facility at Brentford. Emerging Local Plan reiterates the safeguarding of these sites and additional extraction areas beyond Rectory Farm identified on Policies Map. Covered by WLWP.	Supportive. Hounslow has taken steps to enable both primary extraction, aggregate import and secondary aggregate import/processing.	Restarting Land-won aggregate production at Rectory Farm is important – subject to current application. Proximity of the quarry to sensitive receptors (residents, Heathrow) requires careful management. The Brentford aggregates rail terminal sits near redevelopment zones but remains critical for supply.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Islington	0	0	0	0 (no incinerator)	The borough's new Local Plan (2023) emphasises circular economy (re-use of building materials) but has no capacity for extraction or large aggregate facilities. Also covered by the NLWP.	N/A. As a central borough, Islington's role is limited to reducing demand through efficient use of materials. It supports regional safeguarding of aggregates infrastructure by necessity, but its own planning documents do not directly address supply beyond requiring sustainable construction practices.	No aggregate infrastructure in this dense urban borough. All construction materials are brought in from outside, and waste is exported. The key issue is logistics (managing deliveries in a constrained city environment). No specific encouragement for production of recycled aggregate.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Kensington & Chelsea	0	Safeguarded (Active) – 1	0	0 (no incinerator)	New Local Plan 2024: No specific aggregate supply policy. Emphasises sustainable design and construction waste management on-site. The borough, being entirely built-up, defers to the regional network for aggregate provision.	Supportive. K&C partially relies on London-wide policy (e.g. safeguarding of wharves/rail elsewhere). Its position is to minimise construction waste and encourage recycling in projects. It safeguards Cremorne Wharf for its use of waste management and waterborne freight handling purposes.	No industrial land for any aggregate facilities. All aggregates are delivered by road from depots in other boroughs. High construction activity (basements, redevelopments) must be carefully managed for waste and materials but cannot be supported by local infrastructure.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Kingston upon Thames	0	0	Safeguarded (Active) – 1	0 (no incinerator)	Core Strategy 2012: Policy CS5 safeguards (and seek enhancement of) rail depot used for aggregates import (Tolworth Depot). The SLWP covers Kingston's waste facilities (though C&D recycling in the borough is minimal). Emerging new Local Plan (Reg 18) safeguards rail Tolworth Depot.	Supportive. The borough has maintained its rail aggregate depot, to ensure continued supply. Kingston's planning policies recognise the importance of their depot in lieu of other supply modes, showing a supportive approach within its constraints.	One railhead in the boroughs serve as import points for aggregates; retention is crucial. Any redevelopment pressure at Tolworth could threaten capacity, but currently it is designated as industrial. Lack of wharf access means Kingston depends on rail and road for aggregate supply. Agent of change position at Tolworth unclear.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Lambeth	0	0	0	1 (no incinerator)	Local Plan 2021: No aggregate production, but policy EN7 encourages maximising the use of recycled content in construction. Lambeth has one significant CDE waste transfer facility (Powerday at Nine Elms/Battersea border). The borough relies on nearby safeguarded wharves across the river and railheads in other boroughs for material supply. Covered by the SLWP. Policy T5 (River Transport) encourages use of the River Thames for transporting freight including construction materials and waste.	Moderately Supportive. Lambeth's policies promote use of sustainable materials and it accommodates at least one major waste/aggregate facility.	Virtually all aggregates are imported via neighbouring infrastructure. The single recycling site at the borough's edge handles some construction waste, but capacity is limited. Major developments (e.g. at Vauxhall/Nine Elms) depend on regional logistics, with potential traffic impacts.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Lewisham	0	Safeguarded (Inactive) - 1	Not safeguarded (Inactive) - 1	5 (+1 incinerator)	Core Strategy 2011: No local aggregate sites apart from the Safeguarded Wharf at Convoys Wharf (historically for aggregates, though currently inactive). Lewisham hosts the SELCHP energy-from-waste facility (Deptford), and IBA is exported for recycling. Other waste sites are safeguarded and industrial land identified. Draft Local Plan (Reg 19) reinforces wharf safeguarding and sustainable waste management.	Somewhat Supportive. Lewisham complies with safeguarding policy for its one wharf (even as redevelopment pressures loom). It actively pursues waste reduction and supports the recycling of IBA into aggregate but has limited direct influence on aggregate supply due to lack of local infrastructure.	Convoys Wharf's future is vulnerable it is identified for redevelopment; loss of that wharf capacity could be a strategic issue, though the London Plan requires equivalent capacity if redeveloped. Lewisham depends on imports (often via Greenwich's wharves or road). No specific encouragement for production of recycled aggregate.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Merton	0	0	0	9 (no incinerator)	Merton's Local Plan (2024) and the SLWP safeguard several construction waste recycling facilities in Willow Lane and surrounding industrial areas.	Supportive. Merton has a high concentration of C&D recycling sites and local policy safeguards these uses. By safeguarding those sites through the joint waste plan, the borough contributes to aggregate supply (secondary) and shows commitment to recycling initiatives. It lacks primary supply but supports C&D recycling.	A number of small-to-medium recycling operators (skip companies, etc.) provide recycled aggregate supply. These sites are in designated industrial zones; pressure for other uses is relatively low, though any loss could reduce local recycled aggregate capacity. No direct access to river or rail for aggregates, so road import is the main mode.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Newham	0	Safeguarded (active): 1 Safeguarded (Inactive) – 3	0	9 (no incinerator)	Local Plan 2018: No specific mention of aggregates but includes policies to safeguard Safeguarded Wharves (e.g. Royal Victoria Dock and Orchard/Peruvian Wharf). Also supports recycling facilities in industrial areas (e.g. Thames Wharf, Bywaters). Also covered by ELWP.	Supportive. Newham has actively facilitated aggregate supply infrastructure, from safeguarding river wharves to encouraging modern recycling facilities. Its planning framework protects these assets, recognising the borough's role as a significant entry point for aggregates into London.	Newham has seen wharf reactivations (Peruvian Wharf was reopened for aggregates) amid a development boom in the Royal Docks. Ensuring industrial wharf use coexists with extensive new housing is an ongoing challenge. The borough hosts major CDE recycling operations which must be maintained against competing land uses. No specific encouragement for production of recycled aggregate.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
OPDC (Old Oak & Park Royal)	0	0	2	1 (no incinerator)	OPDC Local Plan 2018–2038 (adopted 2022): safeguards the large waste/aggregate recycling facility at Old Oak (Powerday) as Strategic Industrial Locations. Covered by emerging new WLWP.	Supportive. While OPDC area is undergoing transformation, the development corporation's policies so far have integrated these facilities into the long-term land use strategy, which may be taken as providing support for maintaining aggregate supply infrastructure.	Lack of specific consideration of aggregate supply opportunities e.g. No specific encouragement for production of recycled aggregate.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Redbridge	Safeguarded (Active) - 1	0	0	2 (no incinerator)	Minerals Local Plan 2012 (Plan to 2031): Includes Preferred Land for Extraction (PLE) and Minerals Search Areas (MSA). Sets out extraction at Fairlop Quarry and safeguarding of remaining sand/gravel resources for meeting the borough's 0.7 Mt apportionment. No wharves or railheads, so reliance on land-won aggregates and imports. Also covered by the ELWP.	Supportive. Redbridge adopted a dedicated minerals plan in 2012. The borough's policy ensured that local sand and gravel were extracted responsibly over the past decade. Redbridge continues to support aggregates supply by safeguarding any remaining resources, even though its direct contribution is modest.	Fairlop Quarry is nearing the end of its permitted reserves. Identifying any new extraction sites within Redbridge is difficult due to limited suitable land. Once Fairlop is exhausted, the borough will rely entirely on imported aggregates. Full extraction estimated by c2030/31. Without interest from industry/local operator, the identified MSAs will not be exploited. MSAs may come under increasing pressure from development, taking into account new national policy on Grey Belt.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Richmond upon Thames	0	0	0	1 (no incinerator)	Local Plan 2018: No aggregate policies (no resources or facilities locally). Focuses on sustainable construction (policy LP22) encouraging use of recycled aggregates in development. Richmond relies on imports via Surrey or Thames for any aggregates needed. Also covered by WLWP.	Neutral – Richmond's role in aggregate supply is purely as a consumer. Its policies do not impede regional facilities (and it participates in joint waste planning), but the borough itself neither produces nor transhipps aggregates. Emphasis is on reducing demand and using recycled content, consistent with London-wide sustainability goals.	No aggregate infrastructure in Richmond. The borough's construction projects typically get materials transported by road from outside (e.g. via the nearest railheads or wharves in neighbouring areas). The borough's protected landscapes and limited industrial land mean new aggregate or waste sites are not feasible.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Southwark	0	0	0	2 (no incinerator)	Southwark Plan 2022: No active quarry or aggregate wharves. Policy P62 & 63 supports “efficient use of resources” and safeguards existing waste/recycling sites (e.g. Old Kent Road Integrated Facility). Aggregate supply is mainly via facilities in neighbouring areas (wharves in Greenwich/Barking, etc.).	Moderately Supportive. The borough safeguards its waste/recycling operations which contribute some recycled aggregate. It encourages use of river transport for construction projects when possible (e.g. barging materials for Thames Tideway). While not a source of aggregates, Southwark’s policies align with regional efforts by promoting reuse and not encroaching on strategic facilities.	Southwark’s Integrated Waste Management Facility (Veolia) handles some C&D waste, producing recycled aggregate, otherwise the borough lacks dedicated aggregate import points. The urban redevelopment trend in Southwark leaves little room for new industrial capacity.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Sutton	0	0	0	1 (+1 incinerator)	Local Plan 2018: No mention of aggregates. Sutton, with partners, adopted the South London Waste Plan 2022 which safeguards the Beddington Lane area for waste and recycling uses. The Beddington Energy Recovery Facility (incinerator) is a key site producing IBA that is processed into aggregate (presently outside the borough). Also covered by the SLWP.	Supportive via SLWP. Sutton enabled a major infrastructure (the Beddington ERF) that indirectly contributes to aggregate supply via IBA recycling. The borough's planning policy safeguards the Beddington industrial area for such uses. While Sutton does not produce primary aggregates, it is committed to sustainable waste management and supports turning waste into construction resources.	The Energy-from-Waste facility at Beddington provides a steady stream of secondary aggregate (IBA), counted toward recycled supply. Apart from that, Sutton has only a small recycled aggregate facility. With ongoing demands for industrial land for other waste uses, aggregate recycling capacity might not significantly expand.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Tower Hamlets	0	Safeguarded (inactive) – 3	Safeguarded (Active) - 1	2 (no incinerator)	Local Plan 2031 (adopted 2020): Identifies safeguarded wharves and encourages maximising use of water and rail for waste though not specifically aggregate. Policy D.TR4 includes agent of change provision. Supports new wharves. Policies also safeguard local recycling sites (e.g. McGrath's C&D waste facility). Northumberland Wharf safeguarded for waste transfer. Safeguarding of Bow Midland Rail Depot assumed via S.TR1. No specific mention of aggregates.	Supportive. Tower Hamlets recognises the importance of water and rail infrastructure for freight transport. Its local plan explicitly plans for wharf capacity and safeguards the existing railhead.	Bringing Orchard Wharf into full operation is vital (it's a safeguarded site intended for aggregate imports, not yet fully utilised). Surrounding high-density development could pose constraints (noise, hours of operation). No specific mention of aggregates in policy.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Waltham Forest	0	0	0	1 (no incinerator)	Core Strategy 2012: Discussion on aggregates included. Policies 25 and 26 recognise aggregates activity as appropriate on industrial land. Waltham Forest relies on the NLWP to maintain any local waste processing capacity (the borough itself has very limited CDE waste infrastructure). Virtually all aggregate supply is via outside sources (nearest wharves on /Thames, or road imports).	Supportive in principle. Planning focus is on housing and town centre regeneration, with industrial land mainly for light industry. The council participates in regional waste planning but otherwise depends on surrounding infrastructure for aggregates.	The borough has almost no fixed aggregate facilities – possibly a small recycling yard at an industrial estate, but none of strategic scale. Therefore, its issues mirror those of inner London areas: how to accommodate construction needs with deliveries through congested areas and ensuring construction waste is hauled to proper recycling facilities outside the borough.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Wandsworth	0	Safeguarded (Active) – 2 Safeguarded (Inactive) – 2	Safeguarded (Active) -1	1 (no incinerator)	Local Plan 2023: Reaffirms safeguarding of the two Thames wharves at Battersea (Cringle Dock and Pier Wharf) for aggregate/waste use and the rail-linked depot at Battersea Park (aggregate yards). The plan innovatively allows decking over the waste wharf to enable mixed-use while retaining the wharf function. It also safeguards the Day Group aggregate recycling depot at Stewarts Lane. Recognises aggregates handling activity as appropriate in principle on industrial land.	Supportive. Despite development pressures, Wandsworth has maintained a policy of safeguarding critical aggregate infrastructure. It actively works with industry (e.g. co-locating uses) to ensure wharves and railheads remain. This demonstrates a strong supportive stance, recognising that without these facilities, construction in the borough (and London) would be adversely affected.	Intense development in Battersea/Nine Elms brings challenges to keeping these sites operational (e.g. complaints or pressure to relocate due to new luxury apartments nearby). However, Wandsworth has pursued solutions like integrating wharf operations with new development (e.g. covering Cringle Dock) to mitigate conflicts. Long-term viability of these sites will depend on continued political commitment amid high land values.

Borough / MDC	Quarries	Wharves	Railhead(s)	RSA Sites (incl. IBA)	Related Local Plan Policy	Supportiveness of Policy	Potential Issues
Westminster	0	0	0	0 (no incinerator)	City Plan 2019–2040 (adopted 2021): No sites for aggregates within Westminster. The plan focuses on sustainable development: major developments are encouraged or required to use river or rail transport for bulk materials and to produce Site Waste Management Plans. Westminster relies on the regional network (e.g. wharves downstream on the Thames) for all aggregate supply.	Supportive (indirectly). The City of Westminster cannot host supply infrastructure, but its policies strongly support the utilisation of those in other boroughs. By requiring developers to consider river/rail logistics and recycled materials, it contributes to the efficient use of London's aggregate supply chain, in line with regional objectives.	With numerous large construction projects, Westminster's main concern is managing deliveries and waste removal. It encourages use of the Thames for moving construction materials – for example, barging demolition spoil out or bringing aggregate in for schemes like the Thames Tideway or major infrastructure works. The limitation is that it must coordinate with facilities outside its area (such as Victoria Deep Wharf, etc.).

Appendix B: Quarries in London

Ref	Site Name	Operator	Borough	Notes	Grid Reference	Aggregate Type(s) Handled	Status (2024)
Q1	Bourne Wood	Bournewood S&G Ltd	Bromley	No recent extraction	TQ 550346 168205	Soft Sand	Dormant/Inactive. Safeguarded resource - see para 5.2.54 Bromley Local Plan 2019
Q2	Rainham / East Hall Farm Quarry	Havering Aggregates Ltd	Havering	Actively extracting	TQ 554446 181556	Sharp Sand & Gravel	Active. Safeguarded by Policy 37 Mineral reserves.
Q3	Wennington Quarry	Ingrebourne Valley Ltd	Havering	Opened in mid-2010s; actively extracting.	TQ 554401 181209	Sand & Gravel	Active. Safeguarded by Policy 37 Mineral reserves.
Q5	Harmondsworth Quarry	Ingrebourne Valley	Hillingdon	Actively extracting in 2023. Permit granted to allow restoration by filling with inert waste in 2023.	TQ 506100 178200	Sand & Gravel	Not active.
Q6	**Sipson Quarry** (incl. Wall Garden Farm)	Harleyford Aggregates	Hillingdon	Aggregate extraction has ceased.	TQ 507500 178400	Sand & Gravel	Exhausted. (Restoration ongoing)

Ref	Site Name	Operator	Borough	Notes	Grid Reference	Aggregate Type(s) Handled	Status (2024)
Q7	Rectory Farm	Formal Investments / Brett	Hounslow	17.8 ha site consented 2019 for mineral extraction; not commenced as of 2023.	TQ 510500 177800 (approx.)	Sharp Sand & Gravel	Consented (Not yet operational). Safeguarded by Cranford and Heston Spatial Strategy and Policy EQ10 - Minerals. New planning application pending.
Q8	Southall Lane site (Land South of Southall Lane)	Quattro	Hounslow	New extraction c700,000 t over 7 years approved May 2023; site preparation ongoing.	(TQ 510200 179400 approx.)	Sand & Gravel	Consented (Not yet operational). Safeguarded by Policy EQ10 - Minerals.
Q9	Fairlop Quarry	Brett / Tarmac	Redbridge	Major operational quarry supplying sand & gravel; in production through 2023.	TQ 549100 191300 (approx.)	Sand & Gravel	Active. Preferred Land for extraction in the policy Map. Included in Minerals Local Plan.

Appendix C: Wharves in London

This list will be updated in future LAAs in particular in light of the outcome of the GLA review of wharves being undertaken in 2025

Ref.	Wharf (Site Name)	Operator	Borough	Notes	Location Eastings / Northings	Aggregate Type(s) Handled	Aggregates Status (2024) (NAU = No Aggregate Use)
W1	No. 4 Jetty	Heidelberg	Barking & Dagenham	-	549100 181600	Marine Sand & Gravel	Active. Safeguarded by Policy SP5.
W2	Dagenham Wharf	CEMEX	Barking & Dagenham	-	548100 182100	Imported Crushed Rock	Active. Safeguarded within Policy Map.
W3	No.1 Wharf (Western Extension)	Eurovia	Barking & Dagenham	Roadstone wharf	548800 181800	Imported Crushed Rock	Active. Safeguarded within Policy Map.
W4	Pinns Wharf	N/A	Barking & Dagenham	N/A	545351 182590	N/A	No Aggregate Use (NAU). Safeguarded by Policy SP5.
W5	Docklands Wharf (B&D)	S. Norton	Barking & Dagenham	Scrap metals	545835 181662	N/A	NAU. Safeguarded by Policy SP5.
W6	Victoria Stone Wharf	N/A	Barking & Dagenham	N/A	546030 181663	N/A	NAU. Safeguarded by Policy SP5.
W7	Alexander Wharf (B&D)	N/A	Barking & Dagenham	N/A	545345 182664	N/A	NAU. Safeguarded by Policy SP5.

Ref.	Wharf (Site Name)	Operator	Borough	Notes	Location Eastings / Northings	Aggregate Type(s) Handled	Aggregates Status (2024) (NAU = No Aggregate Use)
W8	Ford Dagenham Terminal	TBC	Barking & Dagenham	Waste facility	549065 181693	N/A	NAU. Safeguarded by Policy SP5.
W9	Pinnacle Terminal	Stolthaven Dagenham Limited	Barking & Dagenham	Oil storage depot	548692 181979	N/A	NAU. Safeguarded by Policy SP5.
W10	East Jetty (Hunt's Wharf)	Van Dalen UK	Barking & Dagenham	Waste facility	549065 181693	N/A	NAU. Safeguarded by Policy SP5.
W11	DePass Wharf	TBC	Barking & Dagenham	-	546205 181631	N/A	NAU. Safeguarded by Policy SP5.
W12	Rippleway Wharf	Cory	Barking & Dagenham	Waste handling	545578 181981	N/A	NAU. Safeguarded by Policy SP5.
W13	Steel Wharf	TBC	Barking & Dagenham	Industrial, storage uses	545398 182414	N/A	NAU. Safeguarded by Policy SP5.
W14	Pioneer Wharf, Erith	Tarmac	Bexley	-	550800 179700	Marine Sand & Gravel	Active. Safeguarded by Policy DP7 - Not directly mentioned.

Ref.	Wharf (Site Name)	Operator	Borough	Notes	Location Eastings / Northings	Aggregate Type(s) Handled	Aggregates Status (2024) (NAU = No Aggregate Use)
W15	Albion Wharf	Archer Daniels Midlands Erith Ltd	Bexley	Oil seed, animal food, oils & fats	550857 179426	N/A	NAU. Safeguarded by Policies DP19 and SP11
W16	Erith Wharf	FM Conway	Bexley	-	550900 179100	Imported Crushed Rock	Active. Safeguarded by Policy DP7 - Not directly mentioned.
W17	Standard Wharf	Docklands Wharf Ltd	Bexley	-	552531 177814	N/A	NAU. Does not appear in use for transporting aggregate or other freight
W18	Town Wharf	European Metal Recycling (EMR)	Bexley	Reactivated in 2013 for transport of metal recyclate.	552108 177874	N/A	NAU.
W19	Mulberry Wharf	Vacant	Bexley	Used for open storage.	550648 180139	N/A	NAU.
W20	Middleton Jetty	Cory Environmental Ltd	Bexley	Imports waste containers for Riverside EfW	558849 180844	N/A	NAU.

Ref.	Wharf (Site Name)	Operator	Borough	Notes	Location Eastings / Northings	Aggregate Type(s) Handled	Aggregates Status (2024) (NAU = No Aggregate Use)
W21	Walbrook Wharf	Veolia (waste)	City of London	Primarily used to transport waste to Riverside EfW	532503 180705	N/A	NAU (waste). Safeguarded by Policy CS9 and DM 16.8.
W22	Murphy's Wharf, Charlton	Tarmac	Greenwich	-	540525 178999	Marine Sand & Gravel	Active. Safeguarded by Policy IM5
W23	Riverside Wharf, Charlton	Tarmac	Greenwich	-	538941 179449	Imported Crushed Rock	Active. Safeguarded by Policy IM5
W24	Victoria Deep Wharf	Heidelberg	Greenwich	-	538956 179373	Marine S&G and Crushed Rock	Active. Safeguarded by Policy IM5.
W25	Angerstein Wharf	CEMEX	Greenwich	Also known as RMC Roadstone Wharf	540359 179030	Marine Sand & Gravel	Active. Safeguarded by Policy IM5
W26	Brewery Wharf	J.J. Prior	Greenwich	-	537891 177666	Marine Sand & Gravel	Active. Safeguarded by Policy IM5.

Ref.	Wharf (Site Name)	Operator	Borough	Notes	Location Eastings / Northings	Aggregate Type(s) Handled	Aggregates Status (2024) (NAU = No Aggregate Use)
W27	Tunnel Wharf	Holcim Testex	Greenwich	CDEW processing (recycled aggregate production?)	539071 179163	N/A	NAU.
W28	Swedish Wharf	N/A	Hammersmith & Fulham	Oil Storage depot but does not currently use the river for transport (LP 2018)	525947 175712	N/A	NAU. Safeguarded - Referenced in Policy RTC4.
W29	Comley's Wharf	CEMEX	Hammersmith & Fulham	Concrete batching plant	525989 175727	Marine Sand and Gravel	Active. Safeguarded - Referenced in Policy RTC4.
W30	Hurlingham Wharf	Former Thames Tideway construction site	Hammersmith & Fulham	Site has been redeveloped.	525643 175583	N/A	NAU. Safeguarded by ministerial direction

Ref.	Wharf (Site Name)	Operator	Borough	Notes	Location Eastings / Northings	Aggregate Type(s) Handled	Aggregates Status (2024) (NAU = No Aggregate Use)
W31	Halfway Wharf	Tilda Rice	Havering	Industrial wharf safeguarded by GLA Safeguarded Wharves directions	551525 180304	N/A	NAU. Safeguarded by Policy 31.
W32	Cremorne Wharf	N/A	Kensington & Chelsea	Used for Thames Tideway tunnel construction. Redeveloped	526535 177109	N/A	NAU. Safeguarded by ministerial direction
W33	Convoys Wharf, Deptford	Vacant	Lewisham	Under redevelopment; wharf safeguarding protection policy applies	536923 178358	N/A	NAU. Safeguarded by Policy SD9.
W34	Peruvian Wharf	Brett	Newham	New wharf, opened c2019.	539885 180274	Marine Sand & Gravel	Active. Safeguarded by Policy INF1.
W35	Plaistow Wharf	Keltbray	Newham	Spoil	539885 180274	N/A	Active. Safeguarded by Policy INF1.

Ref.	Wharf (Site Name)	Operator	Borough	Notes	Location Eastings / Northings	Aggregate Type(s) Handled	Aggregates Status (2024) (NAU = No Aggregate Use)
W36	Royal Primrose Wharf	Recycled Material Supplies Ltd	Newham	Fully operational from December 2025	540258 179899	Primary and recycled aggregate	Active. Safeguarded by Policy INF1.
W37	Thames Refinery	Tate & Lyle	Newham	Sugar terminal	542159 179956	N/A	NAU. Safeguarded by Policy INF1.
W38	Orchard Wharf	Vacant	Tower Hamlets	Potential for aggregates or construction materials	539249 180759	N/A	NAU. Safeguarded by Policy D.TR4.
W39	Northumberland Wharf	Cory Environmental	Tower Hamlets	Currently used for waste transfer, not aggregates	538463 180292	N/A	NAU (waste). Safeguarded by Policy D.TR4.
W40	Cringle Dock (Battersea))	Cory Environmental	Wandsworth	Currently used for waste transfer, not aggregates	529158 177570	-	Active. Safeguarded by Policy LP40.
W41	Pier Wharf (Battersea)	Heidelberg / CEMEX	Wandsworth	-	527400 177500	Marine Sand & Gravel	Active. Safeguarded by Policy LP40.

Ref.	Wharf (Site Name)	Operator	Borough	Notes	Location Eastings / Northings	Aggregate Type(s) Handled	Aggregates Status (2024) (NAU = No Aggregate Use)
W42	Smuggler's Way Wharf	Cory Environmental	Wandsworth	Western Riverside Waste Authority Transfer Station	525629 175303		NAU (waste). Safeguarded by LP40.
W43	Kirtling Wharf	N/A	Wandsworth	Former Thames Tideway Tunnel construction site	529280 177586	N/A	NAU. Safeguarded by ministerial direction
W44	Middle Wharf	N/A	Wandsworth	PLA sought expressions of interest for long-term use of Middle Wharf in 2024.	529221 177598	N/A	NAU. Safeguarded by ministerial direction

Appendix D: Railheads in London

Site	Type/Use	Railfreight status	Easting	Northing
Hayes	Asphalt	Active	-0.409342	51.503718
London Neasden	Asphalt	Active	-0.251561	51.552086
Purfleet	Asphalt	Active	0.2532758	51.47175
West Drayton	Asphalt	Active	-0.446553	51.507162
Brentford	Waste / Energy from Waste	Active	-0.323796	51.488552
Northolt	Waste / Energy from Waste	Active	-0.386821	51.553908
Neasden	Waste / Energy from Waste		-0.26103	51.556499
Cricklewood	Waste / Energy from Waste		-0.222626	51.567576
Willesden	Waste / Energy from Waste		-0.241719	51.530203
West Drayton	Aggregates	Active	-0.482322	51.510594
Bow	Manufacturing (Building products)	Active	-0.019936	51.533295
Thames Enterprise Park	SRFI	Under development	0.506485	51.509389
Euston Parcel Deck	Warehousing		-0.135477	51.529501
Neasden	Warehousing		-0.263369	51.557483

Site	Type/Use	Railfreight status	Easting	Northing
Willesden Distillers	Warehousing		-0.248488	51.533373
East Peckham	Waste	Active	0.4044307	51.213523
Battersea			-0.141582	51.473937
Southall			-0.369655	51.506462
Barking	RFI	Active	0.1271587	51.527693
Dagenham (Ford)	RFI	Active	0.1566236	51.519933
London Gateway	RFI	Active	0.4874247	51.507712
Purfleet	RFI	Active	0.2539692	51.473248
Willesden Euroterminal	RFI		-0.251632	51.532866
London Belvedere	Soils and spoil	Under development	0.0908318	51.490496
London Bow	Soils and spoil	Active	-0.017941	51.534134
London Greenwich	Soils and spoil	Active	0.0199803	51.490895
London Willesden	Soils and spoil	Active	-0.271677	51.539809
London Dagenham	Marine aggregates	Active	0.1495724	51.514919
London Greenwich	Marine aggregates	Active	0.0201944	51.492971

Site	Type/Use	Railfreight status	Easting	Northing
London Greenwich	Marine aggregates	Active	0.0223643	51.492454
London Acton	Dry stone	Active	-0.268865	51.517607
London Battersea	Dry stone	Active	-0.143557	51.474619
London Belvedere	Dry stone	Active	0.0898821	51.490496
London Cricklewood	Dry stone	Active	-0.220007	51.563527
London Brentford	Dry stone	Active	-0.328881	51.491627
London Greenwich	Dry stone	Active	0.0212695	51.491906
London Willesden	Dry stone	Active	-0.273709	51.540412
Purley	Dry stone	Active	-0.11249	51.337482
Thorney Mill	Dry stone	Active	-0.485571	51.505313
West Drayton	Dry stone	Active	-0.448373	51.50731
Barking	Concrete	Active	0.1116288	51.531071
Dagenham	Concrete	Active	0.1489016	51.526099
Hayes	Concrete	Active	-0.409607	51.50336
London Acton	Concrete	Active	-0.26681	51.518273

Site	Type/Use	Railfreight status	Easting	Northing
London Battersea	Concrete	Active	-0.143667	51.473815
London Battersea	Concrete	Active	-0.146909	51.473381
London Bow	Concrete	Active	-0.019753	51.533862
London Brentford	Concrete	Active	-0.323922	51.490286
London Kings Cross St Pancras	Concrete	Active	-0.129455	51.539747
London Kings Cross St Pancras	Concrete	Active	-0.127264	51.540238
London Neasden	Concrete	Active	-0.250852	51.552533
London Neasden	Concrete	Active	-0.25825	51.555227
London Paddington	Concrete	Active	-0.19626	51.520611
London Park Royal	Concrete	Active	-0.267203	51.525656
London Tottenham	Concrete	Active	-0.108593	51.580443
London Willesden	Concrete	Active	-0.253655	51.532881
Purley	Concrete	Active	-0.112954	51.337407
Tolworth	Concrete	Active	-0.281752	51.375528
West Drayton	Concrete	Active	-0.447382	51.507362

Appendix E: Review of Importing Areas

MPA (and LAA data)	Region	Aggregate Type	Volume to London (kt)	Commitment to Continue to supply	Constraints	Link to LAA
Derbyshire County Council (2024)	East Midlands	Crushed Rock	3,078	No explicit commitment	No specific constraints related to crushed rock. There are sufficient permitted reserves to maintain production for 53 years.	https://www.derbyshire.gov.uk/site-elements/documents/pdf/environment/planning/planning-policy/minerals-waste-development-framework/local-aggregate-assessment-laa.pdf
Leicestershire County Council (2024)	East Midlands	Crushed Rock	6,140	Yes (Implied)- Policy M4 gives priority to extensions of rail linked quarries	The Sand and Gravel landbank is below 7 years. There will be a shortfall of 5.09 million tonnes by 2031. Making up for this shortfall depends on current applications for sites like Shawell, Misterton, Lockington, and Quorn. Despite there being a surplus of crushed rock in the short term, there is uncertainty over future supply to London via rail. Rail linked site extensions or permissions are essential.	https://www.leicestershire.gov.uk/sites/default/files/2025-01/LCC-Local-Aggregate-Assessment-2023.pdf

MPA (and LAA data)	Region	Aggregate Type	Volume to London (kt)	Commitment to Continue to supply	Constraints	Link to LAA
Northamptonshire County Council (2024)	East Midlands	Crushed Rock	692		Large straightforward river valley sites in the Nene Valley have been exhausted. The structural changes in the aggregates industry have made Northamptonshire a less attractive investment for national companies. May be better suited to regional companies. The crushed rock site at Wakerley is currently being overworked with more mineral extracted annually than originally planned, significantly unbalancing the average sales figures.	https://www.northnorthants.gov.uk/minerals-and-waste-planning-policy/minerals-and-waste-monitoring-reports-and-local-aggregates
Nottinghamshire County Council (2024)	East Midlands	Mixed (Sand/Gravel, Crushed Rock)		Not explicitly mentioned	Within Nottingham City there are limited, if any, realistic opportunities for further extraction due to its built up nature. With regard to sand and gravel provision, resource depletion is now starting to limit output, and since 2006 the number of active quarries has fallen from 8 to 5. 3 quarries are inactive. Crushed rock sales remain at zero as the majority of material used in Nottinghamshire is imported from adjoining authorities. The mothballed quarry at Nether Langwith contains permitted reserves and could be re-opened to meet future needs.	https://www.nottinghamshire.gov.uk/media/w0sbjgyl/nottinghamshireandnottinghamlocalaggregateassesment2023salesdata.pdf

MPA (and LAA data)	Region	Aggregate Type	Volume to London (kt)	Commitment to Continue to supply	Constraints	Link to LAA
Gloucestershire County Council (2024)	South West	Crushed Rock	451	Not explicitly mentioned	Landbank for sand and gravel is 6.16 years based on the 10 year sales average of 0.636 mtpa, this is below the 7 year requirement. The productive capacity at sand and gravel aggregate workings in Gloucestershire is expected to significantly reduce at around 2028, due to planning permission end dates. The productive capacity at crushed rock aggregate workings in Gloucestershire is expected to significantly reduce during 2024, due to planning permissions end dates. Two sites for crushed rock were classed as dormant these sites would need to overcome significant issues before being considered for aggregate working. Many other sites require phased working or progressive restoration which will delay the ability to work and supply minerals. Many sites are subject to sales/output restrictions, usually in the interests of maintaining highway safety. A significant number of crushed rock sites have permission to supply crushed rock for non-aggregate purposes. The proportion of crushed materials supplied for non-aggregate purposes can vary. This can impact landbank figures making them seem higher or lower than previous years. Over-reliance on the Forest of Dean with 70% of crushed rock supply coming from this region and 30% coming from the Cotswold. This imbalance is not reflected in the landbank figure and the Forest of Dean is at risk of being overworked. A future shortfall in Forest of Dean supply could threaten Gloucestershire's ability to meet demand.	https://www.gloucestershire.gov.uk/media/nranzkux/12th-laa-for-gloucestershire-final-version-nov-2024.pdf

MPA (and LAA data)	Region	Aggregate Type	Volume to London (kt)	Commitment to Continue to supply	Constraints	Link to LAA
Somerset (2023)	South West	Crushed Rock	2000	London mentioned as key destination.	Crushed Rock landbank of 23.2 Mt. Torr Works and Whatley Quarry are strategically important rail-lined quarries. The expiration of planning permission for Whatley Quarry in 2030 and Torr Works 2040 risks the continuation of the supply of Crushed Rock in the long-term, without new planning permissions being secured and implemented.	N/A (at October 2025)
West of England (2023)	South West	Crushed Rock	55	Consultation with London on LAA23 and LAA24 proposed.	Permitted reserves located at mothballed Cromhall Quarry - this skews landbank figure. South Gloucestershire has more reserves than North Somerset. Stancombe and Freemans quarries in North Somerset hold most North Somerset reserves making it vulnerable to shortfall. Current trends indicate supply is decreasing against an increase in demand. Only one rail-linked quarry in West of England (Tytherington, South Gloucestershire).	https://n-somerset.gov.uk/sites/default/files/2023-03/West%20of%20England%20Local%20aggregates%20assessment%202012-21.pdf

MPA (and LAA data)	Region	Aggregate Type	Volume to London (kt)	Commitment to Continue to supply	Constraints	Link to LAA
Kent County Council (2023)	South East	Land-won & Marine Sand/Gravel	TBC	Not explicitly mentioned	Land won sharp sands and gravels reserves are declining with no new reserves being permitted. Sales of over 1 million tonnes a year since 2017 means that reserves are being depleted faster than previously modelled. The recent three-dimensional modelling of the reserves estimates that now 14.85mt remain, this would be insufficient for the remaining adopted plan period to 2030. Rail importation (362 kt) is minimal compared to wharves (1.48 Mt). Wharf and rail facilities remain essential but are threatened by competing land uses. Kent's land-won sharp sand and gravel sales have dropped to a historic low (124,200 tonnes in 2022), and no new planning permissions for sharp sand and gravel sites have been granted in recent years. Even though the landbank is 12.67 years, that is only because demand has been low. If demand is increased Kent won't have enough material to meet demands. Kent is becoming too reliant on imports.	https://www.kent.gov.uk/__data/assets/pdf_file/0007/159703/Kents-11th-Local-Aggregate-Assessment.pdf
Essex County Council (2025)	East of England	Marine Sand/Gravel	TBC	Not explicitly - 75% of mineral extracted goes to London	There has been a reduction in the amount of mineral permitted for extraction in Greater Essex over the last 20 years. Actual permitted reserves were 54.60 million tonnes in 2004, but at the end of 2023 stood at 35.07 million tonnes. This is a result of sales being higher than the rate of material being added.	https://www.essex.gov.uk/sites/default/files/2025-05/Greater%20Essex%20Local%20Aggregate%20Assessment%20%E2%80%93%20May%202025.pdf

Appendix F: Recycled Aggregate Sites in London

Source: London Waste Map

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Barking & Dagenham	Renwick Road Rail Hub	IG11 0SB	406738	Biffa Waste Services Ltd	Transfer and treatment - CDEW (CDEW)	0	0	118,016	174,244	62,644
Barking & Dagenham	London Eurohub	IG11 0SQ	404661	DB Cargo (UK) Ltd	Transfer and treatment - CDEW	272,642	185,679	149,152	155,414	89,301
Barking & Dagenham	S U C Exc UK Ltd	RM9 6RJ	104126	S U C Exc (UK) Ltd	Transfer and treatment - CDEW	52,727	70,741	34,768	70,736	73,679
Barking & Dagenham	Organic Waste Treatment Facility	RM9 6LF	WP360 6ME	East London Biogas	Transfer and treatment - CDEW	0	0	0	29,980	2,049
Barking & Dagenham	Dagenham Dock Aggregate Recycling Facility	RM9 6QD	401033	Heidelberg	Transfer and treatment - CDEW	22,161	30,472	22,123.67	26,547	37,004

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Barking & Dagenham	Manns Waste Management Ltd	RM9 6QD	101645	Manns Waste Management Ltd	Transfer and treatment - CDEW	47,500	59,000	41,520	22,250	2,000
Barking & Dagenham	75 - 77 Chequers Lane	RM9 6QJ	402257	Connect Waste Management Ltd	Transfer and treatment - CDEW	12,228	0	0	0	0
Barking & Dagenham	75 - 77 Chequers Lane	RM9 6QJ	80583	R White Waste Management Ltd	Transfer and treatment - CDEW	60,911	89,698	87,299	74,966	74,581
Barking & Dagenham	Barking Riverside Development Park	IG11 0XF	101679	Muckit Recycling Ltd	Transfer and treatment - CDEW	6,792	0	0	0	0
Barking & Dagenham	K&J Skip Hire Ltd	IG11 0EG	403490	K&J Skip Hire Ltd	Materials recycling and sorting	30,759	0	5,455	11,504	4,495

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Barking & Dagenham	Docklands Wharf Transfer Station	IG11 0DY	80525	Multi Services Kent Ltd	Transfer and treatment - CDEW	61,619	49,982	42,882	37,508	27,940
Barking & Dagenham	Cory Barking Operations Ltd	IG11 0DS	80535	Cory Barking Operations Ltd	Transfer and treatment - CDEW	318,706	266,569	365,283	199,518	166,556
Barnet	Donoghue, Claremont Rd	NW2 1RR	80294	P B Donoghue (Haulage & Plant Hire) Ltd	Transfer and treatment - CDEW	69,590	63,240	66,808	69,469	72,649
Barnet	Cricklewood Railway Yard	NW2 6ND	405018	DB Cargo (UK) Ltd	Transfer and treatment - CDEW	0	137,418	343,726	150,629	186,597
Barnet	Upside Railway Yard	NW2 1LN	400425	S Walsh & Son Ltd	Transfer and treatment - CDEW	102,250	65,572	0	0	0

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Barnet	Cricklewood North Waste Transfer Station	NW2 1LL	404074	S Walsh & Son Ltd	Transfer and treatment - CDEW	124,818	20,778	0	0	0
Barnet	Cripps Skips	NW2 1LR	80746	Ground Waste Recycling Ltd	Transfer and treatment - CDEW	9,205	4,786	0	0	0
Barnet	Oakleigh Road South Bulking Facility	N11 1HJ	404148	London Borough Of Barnet	Transfer and treatment - CDEW	16,783	20,107	22,539	8,766	6,128
Barnet	Biel Bros Waste Transfer Facility	N11 1HJ	80755	Biel Bros Ltd	Transfer and treatment - CDEW	44,469	47,037	11,979	33,210	0
Barnet	Scratchwood Quarry	NW7 3HU	102529	Quality Recycling Solutions Ltd	Transfer and treatment - CDEW	129,869	164,571	152,144	132,384	151,964

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Bexley	Tyre Channel Recycling Facility	DA17 6AN	407304	Tyre Channel Ltd	Transfer and treatment - CDEW	0	0	2,515	3,762	5,360
Bexley	Unit 19 Landau Way	DA8 2LF	104692	J & H Haulage Ltd	Transfer and treatment - CDEW	38,268	48,047	84,151	69,999	53,331
Bexley	M & R Building & Landscaping Ltd	DA8 2JZ	402861	Accoil Paper Recycling Ltd	Transfer and treatment - CDEW	1,528	0	0	0	0
Bexley	Unit 15 Maypole Crescent	DA8 2JZ	404589	M & R Skip Hire Ltd	Transfer and treatment - CDEW	995	1,701	0	0	0
Bexley	Anchor Bay Commercial Haulage Waste Treatment Facility	DA1 4QG	104136	Mr George Dugdale, Mr Mark Dugdale and Mr Steven Dugdale	Transfer and treatment - CDEW	39,117	39,220	26,826	32,789	23,756

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Bexley	Stuart's Topsoil	DA14 5EU	400909	Mr Adam Stuart, Mr Billy Stuart, Mr Boris Stuart	Transfer and treatment - CDEW	12,120	11,728	4,396	10,181	8,600
Brent	Bridgemarts Waste Recovery Facility	NW10 7XE	400803	Bridgemarts Ltd	Transfer and treatment - CDEW	79,558	63,366	41,133	18,932	0
Brent	X-Bert Haulage	NW10 2UG	80588	X-Bert Haulage Ltd	Transfer and treatment - CDEW	72,802	27,378	28,670	35,586	51,877
Brent	Wembley Depot	NW10 0UZ	408299	Sewells Reservoir Constructio n Ltd	Transfer and treatment - CDEW	0	0	0	5,505	47,384
Brent	Land At Neasden Goods Yard	NW10 2UG	100180	X-Bert Haulage Ltd	Transfer and treatment - CDEW	52,395	41,566	33,876	40,654	46,580
Brent	Neasden Sidings	NW10 0JJ	403481	WRG (Midlands) Ltd	Transfer and treatment - CDEW	0	0	0	117,748	6,574

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Brent	Unit 2, Hannah Close	NW10 0UX	EP3801 LN	Londonenergy Ltd	Transfer and treatment - CDEW	0	0	118,041	152,936	6,764
Brent	Unit 4 Second Way	HA9 0YJ	402465	H A W K Rubbish Clearance Ltd	Transfer and treatment - CDEW	39,000	46,274	57,021	29,940	9,090
Brent	Glynn Skips	HA9 0YJ	80035	X-Bert Haulage Ltd	Transfer and treatment - CDEW	28,913	19,997	15,370	9,756	5,852
Bromley	Peter Norris (Haulage) Ltd	BR5 2NB	10014	Peter Norris (Haulage) Ltd	Transfer and treatment - CDEW	42,426	37,579	36,865	34,497	37,337
Bromley	Knockholt Station Goods Yard	TN14 7HR	10081	B S P (Knockholt) Ltd	Transfer and treatment - CDEW	14,500	7,180	12,649	6,180	0
Camden	Regis Road Recycling Centre	NW5 3EW	80349	Londonenergy Ltd	Household Reuse and Recycling Centres	3,947	2,571	4,148	4,980	4,658

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
City of London	-	-	-	-	-	-	-	-	-	-
Croydon	64 Northwood Rd, Thornton Heath, CR7	CR4 8HQ	83167	John Oliver Curley	Transfer and treatment - CDEW	9,330	3,590	3,100	1,960	2,235
Croydon	Henry Woods Waste Management Ltd	CR0 4AA	103698	Henry Woods Waste Management Ltd	Transfer and treatment - CDEW	6,535	8,000	8,555	9,270	7,675
Croydon	L M D Waste Management Ltd	CR0 4RR	403078	LMD Waste Management Ltd	Transfer and treatment - CDEW	17,882	30,063	42,584	45,291	50,264
Croydon	Able Waste Services Ltd	CR0 4RR	104808	Able Waste Services Ltd	Transfer and treatment - CDEW	46,007	49,840	62,345	59,762	64,205

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Croydon	Purley Oaks Civic Amenity Site	CR8 2BG	83169	Veolia ES (UK) Ltd	Household Reuse and Recycling Centres	8,375	6,180	6,455	6,230	7,156
Croydon	Day Aggregates Purley Depot	CR8 2AL	103455	Day Group Ltd	Transfer and treatment - CDEW	63,979	52,571	66,235	47,114	48,593
Ealing	Willesden Euro Terminal	NW10 6VQ	402989	Skanska Constructio n UK Ltd	Transfer and treatment - CDEW	0	0	147,588	374,122	950,049
Ealing	Waste Transfer Station	NW10 6DN	80036	Space Rubbish Ltd	Transfer and treatment - CDEW	56,854	45,776	51,933	49,785	45,943
Ealing	Horn Lane Waste Transfer Station	W3 0BP	80060	Quattro (UK) Ltd	Transfer and treatment - CDEW	14,700	11,714	15,320	15,232	12,839
Ealing	Stone Terminal	W3 9EH	80617	Holcim	Transfer and treatment - CDEW	18,856	26,077	58,777	91,021	64,242

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Ealing	Acton Waste & Recycling Centre	W3 8DJ	80030	Ealing London Borough Council	Household Reuse and Recycling Centres	3,881	2,107	1,634	0	0
Ealing	Proper Oils	UB2 5EU	403393	Circular Way Ltd	Other	3,266	917	0	0	0
Ealing	British Rail Goods Yard	UB6 0AL	80571	Link2london Ltd	Transfer and treatment - CDEW	0	0	9,636	43,262	76,976
Enfield	Crews Hill Transfer Station	EN2 9BH	80716	Enfield Skips Ltd	Transfer and treatment - CDEW	26,687	18,099	17,033	18,035	30,885
Enfield	Jute Lane, Brimsdown	EN3 7PJ	80555	Greater London Waste Disposal Ltd	Transfer and treatment - CDEW	22,046	14,295	19,283	13,247	11,344
Enfield	Enfield Waste Management Facility	EN3 7UA	80328	Powerday PLC	Transfer and treatment - CDEW	94,585	87,796	75,774	82,782	111,201

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Enfield	Pegamoid Site	N18 3BH	100204	J O'Doherty Haulage Ltd	Transfer and treatment - CDEW	174,046	154,708	136,552	190,569	215,646
Enfield	Oakwood Plant Ltd, Edmonton	N18 3BH	80316	Oakwood Plant Ltd	Transfer and treatment - CDEW	10,908	12,617	12,902	14,490	11,262
Enfield	A M I Waste	N18 3PP	80319	Tuglord Enterprises Ltd	Transfer and treatment - CDEW	37,556	35,389	45,426	30,288	29,418
Enfield	Yard 10–12 Hastingwood Trading Est	N18 3HQ	100468	A & A Skip Hire Ltd	Transfer and treatment - CDEW	11,314	12,464	9,998	0	0
Greenwich	Tunnel Wharf	SE10 0NU	101878	H. Sivyer Transport Ltd	Transfer and treatment - CDEW	392,256	459,983	489,679	415,913	375,510
Greenwich	Toulouse Plant Hire Ltd	SE10 9QE	83248	Toulouse Plant Hire Ltd	Transfer and treatment - CDEW	66,464	62,235	68,094	65,990	68,195

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Greenwich	Angerstein Wharf	SE10 0RT	400933	Aggregate Industries UK Ltd	Transfer and treatment - CDEW	35,502	16,962	17,486	28,089	43,633
Greenwich	Recycled Material Supplies	SE7 8NQ	402013	Recycled Material Supplies Ltd	Transfer and treatment - CDEW	15,288	6,260	73,739	74,824	68,654
Hackney	-	-	-	-	-	-	-	-	-	-
Hammersmith and Fulham	Powerday Waste Recycling & Recovery Centre EPR/PP3093EE	NW10 6RJ	YP3338FF	Powerday PLC	Other	261,609	276,041	219,439	0	0
Hammersmith and Fulham	Scrubs Lane, Willesden	NW10 6QY	80019	J Simpson Waste Management Ltd	Transfer and treatment - CDEW	41,751	11,190	0	0	0
Haringey	O'Donovan – Markfield Road	N15 4QF	80413	O'Donovan (Waste Disposal) Ltd	Transfer and treatment - CDEW	0	0	21,317	22,728	23,936

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Haringey	O'Donovan, Tottenham	N15 4QF	80317	O'Donovan (Waste Disposal) Ltd	Transfer and treatment - CDEW	0	0	174,169	172,561	156,072
Harrow	Bannister Sports Centre	HA3 6SW	405699	Thames Materials Ltd	Other (inert)	5,920	195,180	37,140	0	0
Havering	Grove Farm	CM14 5NG	403409	R J Skip Hire Ltd	Transfer and treatment (CDEW)	6,715	9,432	10,060	6,919	10,842
Havering	All Seasons Nursery	RM14 1TH	120015	M R Services (Essex) Ltd	Transfer and treatment (CDEW)	3,640	2,679	3,888	2,654	8,928
Havering	Rainham Recycling Facility	RM13 9GJ	401196	Brett Aggregates Ltd	Transfer and treatment (CDEW)	66,312	119,720	24,655	0	0
Havering	Frog Island	RM13 9YH	403185	S Walsh & Son Ltd	Transfer and treatment (CDEW)	190,620	187,041	198,851	184,018	234,411

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Havering	Rainham Site	RM13 8LE	120370	Citron Hygiene (UK) Ltd	Transfer and treatment (CDEW)	0	28	182	329	0
Havering	Unit 5 Denver Site	RM13 9BU	102157	Excel Waste Management Ltd	Transfer and treatment (CDEW)	98,415	37,699	82,156	55,733	54,335
Havering	Albright Transfer Station	RM13 9BU	80378	Albright Transfer Station Ltd	Transfer and treatment (CDEW)	67,900	74,809	69,494	74,556	98,023
Havering	G & S Waste Recycling	RM13 9BU	401607	G & S Waste Management Ltd	Transfer and treatment (CDEW)	10,326	8,896	9,923	10,838	9,744
Havering	Kilnbridge Construction Services Ltd	RM13 7SS	80625	Kilnbridge Construction Services Ltd.	Transfer and treatment (CDEW)	33,081	25,135	26,788	25,429	26,775
Hillingdon	B&K Waste Transfer Station	HA4 0YP	80719	B & K Environmental Services Ltd	Transfer and treatment (CDEW)	143,965	181,745	124,333	96,948	89,536

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Hillingdon	Ruislip Railway Waste Depot - EPR/PP3708MN	HA4 6NS	MP3834LG	Balfour Beatty Rail Ltd	Other (inert)	17,862	15,723	18,530	0	0
Hillingdon	Kershire Recycling	HA4 7DY	401672	Byne Mark	Transfer and treatment (CDEW)	4,048	0	0	0	0
Hillingdon	Sortera Ltd, Skip Lane	UB9 6JL	80072	Sortera Ltd	Transfer and treatment (CDEW)	65,210	67,951	98,459	67,612	35
Hillingdon	Thames Materials	UB9 6RP	401566	Thames Materials Ltd	Transfer and treatment (CDEW)	297,634	568,096	666,114	586,918	493,347
Hillingdon	J Byne Haulage Ltd	WD3 8UX	102145	J Byne Haulage Ltd	Transfer and treatment (CDEW)	1,889	1,500	1,539	0	0
Hillingdon	Wallingford Road Recycling Facility	UB8 2FR	104532	Uxbridge Recycling Ltd	Transfer and treatment (CDEW)	3,920	1,495	2,550	2,880	3,470

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Hillingdon	R G S C Ltd	UB7 7SN	407159	RGSC Ltd	Transfer and treatment (CDEW)	0	0	2,630	12,496	2,816
Hillingdon	Holloway Lane Materials Recycling Facility	UB7 0AE	80564	Powerday PLC	Transfer and treatment (CDEW)	26,486	16,832	34,922	35,579	55,442
Hillingdon	Aymer Skips Ltd	TW19 6BN	404092	Aymer Skips Ltd	Materials recycling and sorting	1,568	7,143	9,087	9,458	4,051
Hillingdon	Foley Haulage Ltd	UB7 0AE	406872	Foley Haulage Ltd	Transfer and treatment (CDEW)	0	0	8,420	22,960	23,660
Hounslow	Brentford Aggregate Materials Recycling Facility – EPR/HP3132WR	TW8 9HF	HP3132WR	Day Group Ltd	Transfer and treatment - CDEW	289,668	331,911	372,233	0	0

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Hounslow	Quattro Site Southall	UB2 5AG	405795	Quattro (UK) Ltd	Transfer and treatment - CDEW	21,916	38,216	55,954	30,036	42,513
Hounslow	St Albans Farm Recycling Facility (Ron Smith)	TW14 0HH	80063	Ron Smith (Recycling) Ltd	Transfer and treatment - CDEW	56,882	49,703	35,748	45,286	39,625
Islington	-	-	-	-	-	-	-	-	-	-
Kensington & Chelsea	-	-	-	-	-	-	-	-	-	-
Kingston upon Thames	-	-	-	-	-	-	-	-	-	-
Lambeth	Belinda Road (Brixton) Waste Transfer Facility	SW9 7DT	83255	Powerday PLC	Transfer and treatment - CDEW	47,869.30	33,599	34,409	26,200	27,436

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Lewisham	Skip Along Waste	SE15 1EP	406725	Skip Along Waste Ltd	Transfer and treatment (CDEW)	0	0	11,701	2,178	0
Lewisham	Unit 1, Stockholm Road	SE16 3LP	104283	R T S Waste Management Ltd	Transfer and treatment (CDEW)	31,206	10,955	0	0	0
Lewisham	Economic Skips Ltd, Mercury Way, SE14	SE14 5RR	83258	Economic Skips Ltd	Transfer and treatment (CDEW)	50,882	24,933	22,458	31,672	31,192
Lewisham	Kilgannon Street Care Group Ltd	SE14 6NA	405611	Kilgannon Street Care Group Ltd	Transfer and treatment (CDEW)	0	0	10	0	0
Lewisham	Sydenham Road	SE26 5JZ	102495	H. Sivyer Transport Ltd	Transfer and treatment (CDEW)	10,817	2,731	0	297	695
Merton	N J B Recycling	SW19 8UG	400856	Reston Waste Management Ltd	Transfer and treatment (CDEW)	44,978	28,040	44,740	64,430	59,500

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Merton	Weir Road Waste Transfer Station	SW19 8UG	400311	Powerday PLC	Transfer and treatment (CDEW)	31,448	40,231	22,068	20,970	22,599
Merton	Waste Transfer and Recovery Facility	SW19 8UG	104521	Reston Waste Managemen t Ltd	Transfer and treatment (CDEW)	69,457	59,600	73,207	113,650	112,514
Merton	Morden Transfer Station	SM4 4AX	83568	Suez Recycling and Recovery UK Ltd	Transfer and treatment (CDEW)	43,563	46,624	41,427	45,308	50,273
Merton	Maguire Skips	CR4 4NB	102215	Maguire Skips Ltd	Transfer and treatment (CDEW)	33,969	19,539	380	0	0
Merton	One Waste Clearance	CR4 4NA	402208	One Waste Clearance Ltd	Transfer and treatment (CDEW)	41,590	3,482	9,771	15,489	16,026

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Merton	B & T @ Work	CR4 4NA	401205	Thomas Penfold	Transfer and treatment (CDEW)	3,218	2,067	1,944	1,738	1,692
Merton	George Killoughery Ltd (Mitcham)	CR4 4NA	103821	George Killoughery Ltd	Transfer and treatment (CDEW)	35,840	20,110	29,254	23,048	20,757
Merton	Unit 5	CR4 8NA	401238	UK And European Constructio n Ltd	Transfer and treatment (CDEW)	0	0	76	0	0
Newham	Harrow Green – Silvertown Recycling Centre	E16 2BZ	103540	Harrow Green Ltd	Other	24	22	22	36	6
Newham	Recycled Material Supplies	E16 2AX	104575	Recycled Material Supplies Ltd	Transfer and treatment (CDEW)	199,089	194,603	235,298	228,355	225,522
Newham	Metro (London G B) Ltd	E16 2AX	404673	Metro (London G B) Ltd	Transfer and treatment (CDEW)	20,710	15,160	10,926	15,222	15,632

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Newham	Brewsters, Dock Road	E16 1AF	80781	Brewsters Waste Management Ltd	Transfer and treatment (CDEW)	58,598	20,126	0	0	0
Newham	G & B Compressor Hire, Dock Road	E16 4AF	80780	G & B Compressor Hire Ltd	Transfer and treatment (CDEW)	50,940	14,770	0	0	0
Newham	P M C Soil Solutions Soil Management Facility	E16 4SH	404568	P M C Soil Solutions Ltd	Transfer and treatment (CDEW)	12,065	0	0	0	0
Newham	I O D Skip Hire Ltd	E16 4SA	80515	Powerday PLC	Transfer and treatment (CDEW)	32,600	27,355	35,326	53,746	64,306
Newham	Canning Town Depot	E16 4TL	401256	Pulse Environmental Ltd	Transfer and treatment (CDEW)	22,958	22,465	46,154	37,570	556
Newham	Marshgate Sidings	E15 2PJ	100245	DB Cargo (UK) Ltd	Transfer and treatment (CDEW)	231,358	104,470	200,284	166,576	194,435

Borough	Site Name	Postcode	Licence Number	Operator	Site Broad Group	2019 (tonnes received)	2020 (tonnes received)	2021 (tonnes received)	2022 (tonnes received)	2023 (tonnes received)
Redbridge	G B Macks	IG6 3TU	403565	G & B Compressor Hire Ltd	Transfer and treatment (CDEW)	8,760	2,729	1,475	8,806	25,670
Redbridge	L B Redbridge, Ley Street Depot	IG2 7QZ	80095	Redbridge London Borough Council	Waste transfer (household and commercial)	459	508	596	486	473
Richmond upon Thames	-	-	-	-	-	-	-	-	-	-

Appendix G - Detailed Explanation of Aggregate Demand Uplift Calculation

The ‘uplift’ (‘U’) value is a figure intended to provide an estimate of the increase in demand for aggregate taking account of the following two housing growth scenarios:

1. Current London Plan 2021 target – 52,000 homes per year
2. Revised national housing standard method - 88,000 homes per year

The uplift takes account of current housing delivery rates and assesses the extra needed to meet the targets set out above.

The calculation utilises the following values:

- Historic Average Annual Net Additional Dwellings ('C’)
- Planned Annual Housing Delivery Requirement (‘P’)
- Percentage increase in house building required to meet Housing Delivery Targets (‘I’)
- Percentage uplift required for housing targets to be met (‘H’)
- Percentage of quarry output utilised for house building and associated infrastructure (‘Q’)

Derivation of these values is described below.

Historic Average Annual Net Additional Dwellings ('C’)

Figure H is derived through interrogation of the ‘live tables on housing supply: net additional dwellings[45] - Table 123 Housing Supply; Net additional dwellings by local authority district, England, 2001-02 to 2023-24’ published by the government, as shown in the table below:

Year	Net Additional dwellings
2014/15	31,649
2015/16	35,196
2016/17	44,366
2017/18	36,529

[45] LT123.ods (live.com)

Year	Net Additional dwellings
2018/19	41,424
2019/20	45,676
2020/21	38,839
2021/22	39,173
2022/23	35,263
2023/24	32,162
Average (C)	38,027

Planned Annual Housing Delivery Requirement ('P')

As above, Figure P for two scenarios is as follows:

1. Current London Plan 2021 target – 52,000 homes per year
2. Revised national housing standard method - 88,000 homes per year

Percentage increase in house building required to meet Housing Delivery Targets ('I')

The percentage increase in house building required to meet the Housing Delivery Targets ('I') is calculated by deriving the difference between the planned housing requirement (P) and the average delivery (C) and then calculating that as a percentage by applying the following formula: (P-C)/C x 100.

The result for figure H is 0.37 or 37% for scenario 1 and 1.31 or 131% for scenario 2. These are the percentage increases in 10-year average house building that will be required to meet the two housing delivery targets.

Percentage of quarry output utilised for house building and associated infrastructure ('Q')

Q is a difficult figure to derive without the benefit of research to analyse the output and fate of material extracted from aggregate quarries categorising into A) quarried material used directly or indirectly for house building and associated infrastructure and B) quarried material not used for any purpose associated with house building.

Research in Yorkshire derived a value of around 50% for the output from sand and gravel sites being associated with house building[46].

Percentage Uplift to be Applied to Aggregate Demand (U)

In light of the above, the percentage uplift to be applied to aggregate requirements is Q x H i.e. 0.5 x H.

The full formula can be expressed as U=(((P-C)/C)*Q)*100 and the results are shown in table AG-1 below.

Table AG-1 Calculation Aggregate Demand Uplift Based on Housing Delivery v Targets

Scenario	Planned Annual Housing Requirement (P)	2014/15-2023/24 Average Net Additional Dwellings (C)	Increase in Average Annual Net Additional Dwellings Required to Meet Planned Housing Delivery Target (I)	% Uplift Required in Housing *(2023 values in brackets)* (H)	% Uplift applied to aggregate requirements (U) (=0.5*H)
Scenario 1	52,000	38,027	13,973	37%	18%
Scenario 2	88,000	38,027	49,973	131%	66%

[46] More details of the methodology used to arrive at this 50% figure can be found in the following document: *'Forecasting demand for aggregate minerals Discussion Paper - July 2014'*, published online by North Yorkshire County Council