

London Waste and Recycling Board Response to the Draft London Plan Executive Summary

1. The London Waste and Recycling Board (LWARB) is a statutory Board established by the GLA Act 2007 to help reduce waste and improve its management in London.
2. LWARB strongly supports the concept of Good Growth which underpins the draft London Plan and welcomes the recognition of the role the circular economy will play in delivering this vision. It will be vital that the London Plan considers and incorporates the circular economy, otherwise growth in London will not be developed in a sustainable way that meets the Mayor's vision for a Low Carbon Circular Economy as set out in the draft London Environment Strategy. We would suggest this is recognised more clearly in the Good Growth chapter. We would suggest the definition of the circular economy is consistent throughout the document, and aligns with the definition included in the Draft London Environment Strategy (LES).
3. We welcome the inclusion of circular economy design principles in the design chapter. Embedding circular economy into new and existing homes will assist in delivering the LES aims of becoming a zero waste city, and the vision to become a low carbon circular economy. To meet these aims it will be essential that the design and construction of new homes incorporate circular economy and the use of all resources.
4. We support the inclusion of the need for recycling and waste disposal facilities that are convenient, appropriately integrated and designed to work effectively. We welcome the inclusion of consideration of adequate and easily accessible space for separation and storage of recyclables, food, and residual waste, and we welcome the inclusion of the reference to LWARB's waste management planning advice for new flatted properties.
5. We fully support the inclusion of the requirement for referable applications to support the circular economy, aim to be net zero waste and include a Circular Economy Statement. We will work with the Mayor's regeneration and environmental teams, and Mayoral Design Advocates (MDAs) to create further detail on the criteria and guidance for Circular Economy Statements.
6. We support the inclusion of circular economy construction principles within the draft Plan. We support the recognition that precision manufactured homes (e.g. pre-fabrication and modular construction) can reduce construction time and support reuse of materials. We support the statement that regional consolidation and distribution centres are needed to serve the city coupled with micro-distribution centres this will help support the need for an increasingly efficient transport network, and with the Mayor's aims of reducing air pollution.
7. We support the inclusion of policies to ensure buildings and space are fully utilised including flexible design, co-location and use of meanwhile spaces. Optimising use of buildings and space will help to increase housing supply, and support the principles of Good Growth and the circular economy. Designing for flexibility reduces wasted time,

effort and materials traditionally associated with building use transitions and expands the range of possible users of a building.

8. We are concerned the draft plan does not include requirement for an overarching strategy which will identify how to deliver the waste infrastructure needed across London. We are pleased that the draft Plan recognises that “The successful implementation of the circular economy will help to reduce waste”. However it is unclear from the draft plan how this has been reflected into the waste arising projections. The current Plan, produced by the previous Mayor, did not include consideration of the ability of the circular economy to reduce waste, or policies to drive the circular economy. Research by Arup into the effects of the circular economy on waste production in London has identified the potential to reduce waste by up to 60% by 2041 through circular economy interventions which avoid the production of waste. We would therefore strongly suggest that the Arup work is referenced within the plan and incorporated into the evidence base. We would suggest this highlights the need for apportionment to be constantly under review to ensure local plans take into consideration the wider context of circular economy progress across London, an oversupply of waste infrastructure is avoided, and land is freed up for circular economy or other uses. It will be important to consider the ability of private sector to deliver waste infrastructure capacity in a way that prioritises circular economy over linear economy.

9. This also highlights the need for a London wide strategy which identifies current and future requirement for the broad location and type of waste infrastructure needed, to address waste from all sectors, and which is also regularly reviewed. We would suggest this could be further strengthened through incorporating the assessment of current and future supply and demand for reuse materials, and spatial requirements needed to support a circular economy (e.g. broad location of micro consolidation centres).

10. We are concerned to note that the proposed KPI's which will be used to monitor progress of the new London Plan do not include any circular economy related metrics. We would recommend inclusion of a circular economy related target within the KPIs to ensure progress towards the Mayor's target of becoming a zero waste city, and vision of a low carbon circular economy is monitored. LWARB would be pleased to share our current work on circular economy metrics for London to support this.

Introduction

11. The London Waste and Recycling Board (LWARB) is a statutory Board established by the GLA Act 2007 to help reduce waste and improve its management in London. The Board is chaired by the Mayor of London (or his representative). The Board also includes four councillors and two independents appointed by London's councils and one independent member appointed by the Mayor of London.

12. LWARB delivers three key programmes:

- Resource London is a programme of support for London Local Waste Authorities jointly funded by LWARB and WRAP.

- Advance London is an investment programme to support SMEs to capitalise on the benefits of the circular economy.
- Circular London is a programme that aims to create the right conditions for a circular economy to flourish in London.

13. LWARB has provided technical advice to the GLA during the drafting of the new London Plan. We are pleased to observe several of our recommendations have been included within the draft.

14. Within this document LWARB provides a detailed review of the draft London Plan with several recommendations for additional information that could be added in order to strengthen the Mayor's desire to move London towards becoming a zero waste city.

Good Growth

15. LWARB strongly supports the concept of Good Growth which underpins the draft London Plan. It is vital that the Plan considers and incorporates the circular economy to support the commitment to sustainable development set out within the draft London Plan, and which underlies the Mayor's vision for a Low Carbon Circular Economy as set out in the draft London Environment Strategy. LWARB would like to work with the Mayor's Good Growth by Design team to ensure strong and inclusive growth through the adoption of circular economy principles such as the sharing of buildings, spaces, and equipment which can reduce costs for residents whilst increasing access to services.

16. We support policy GG2 - Making best use of land. We would suggest GG2 (F) is broadened to include maximising opportunities to use all public buildings as well as infrastructure assets for more than one purpose. We would also suggest maximising use of meanwhile spaces is included within this policy.

17. We support policy GG4 - Delivering the homes Londoners need, which recognises that skilled precision manufacturing techniques can increase the rate of house building, and also the need to identify and allocate a range of sites to deliver housing locally. We would suggest sites should include using meanwhile sites for temporary housing. The use of modular housing that is easily disassembled for use elsewhere on such sites can support both of these aims, as demonstrated through The Place/Ladywell development [<http://asbp.org.uk/case-studies/placeladywell>]

18. We support the need to grow a good economy as set out in Policy GG5. The circular economy could provide London with net benefits of at least £7bn every year and 40,000 new jobs (12,000 net additional jobs) in the areas of re-use, remanufacturing and materials innovation whilst also supporting the principles of Good Growth. [<http://www.lwarb.gov.uk/wp-content/uploads/2016/09/LondonCircularEconomyJobsReport2015OnlineVersionFinal.pdf>].

19. We support the need to ensure London continues to provide leadership in innovation, research, policy and ideas, supporting its role as an incubator and centre for learning as described in policy GG5. The low carbon circular economy is identified as a priority

sector in the draft London Environment Strategy. LWARB works to provide leadership, innovation and policy to support this sector. This has already included working with a wide variety of stakeholders to produce the London Circular Economy Route Map, and supporting c. 60 SME's within London, helping them to move to circular business models. Through LWARB's Advance London programme we will deliver support to 100 SMEs, help to create 48 new jobs and introduce 30 circular products. We are also developing a circular economy innovation and collaboration hub which provide acceleration and incubation services for London circular economy SMEs and create a community of circular economy activity in London. We would suggest that to tie this policy in with policy GG6 an additional point is added to policy GG5 which states that those involved in planning and development must ensure development is able to support and promote the low carbon circular economy.

20. We are pleased to see the plan recognises the need for cities to become more resilient and adaptable. We welcome the inclusion of text which recognises that a low carbon circular economy is socially, and environmentally responsible, and will save money and help build resilience against the likelihood of environmental threats affecting London's future. We would suggest that this text could be added to by explaining that it will also help build resilience for businesses and residents against the likelihood of future resource scarcity (ranging from food to energy to building materials) and fluctuations in commodity prices.

21. Paragraph 1.5.2 describes a low carbon circular economy as one in which "the greatest possible value is extracted from resources before they become waste". This description is more like a linear economy in that it assumes that resources eventually become waste and that maximum value should be extracted from those resources. The text used on p253 of the draft London Environment Strategy includes a definition of the circular economy which states "The Mayor will take a circular approach to London's use of resources that designs out waste, keeps materials in use at their highest value for as long as possible and minimises environmental impact." This definition more accurately reflects the concept of a circular economy and could be used in paragraph 1.5.2 to provide better continuity between Mayoral strategic aims. Our response to the LES recommended this description could be improved even further through the use of the definition used by the Ellen MacArthur Foundation which states that the circular economy is: "...restorative and regenerative by design. Relying on system-wide innovation, it aims to redefine products and services to design waste out, while minimising negative impacts. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural and social capital". This definition touches upon other key themes within the draft LES and might be more appropriate as it captures better the holistic nature of the systemic change that a move to a circular economy requires. We would suggest the London Plan aligns with the final definition chosen for inclusion in the LES.

22. We support policy GG6 – Increasing efficiency and resilience, however the policy currently appears to focus mainly on low carbon, and not on a low carbon circular economy which is described in the text supporting GG6 We would suggest the policy could be strengthened through the inclusion of the text below "Seek to improve the efficiency of all resources needed to deliver new development (including energy,

materials and water) to support the move towards a low carbon circular economy, contributing towards London becoming a zero carbon and zero waste city by 2050”.

Spatial Development Patterns

23. LWARB would urge the inclusion of a requirement for policy SD1A to include a reference to the Mayor’s provision of support to ensure Opportunity Areas maximise delivery towards the low carbon circular economy vision, and deliver the Good Growth agenda. Also we would suggest that SD1B should require Boroughs to set out how they will support, and plan for development which meets the Mayor’s low carbon circular economy vision, and delivers the Good Growth agenda.

24. We are pleased to see the inclusion of circular economy as an issue for strategic consideration in policy SD2 – Collaboration in the Wider South East, We would emphasise the circular economy will not just help with waste management, and that waste management is a subset of the circular economy, and not the other way around as drafted. The circular economy will help address environmental, social and economic issues such as economic prosperity, and resilience, and can help to accommodate growth (through the promotion of sharing and shared spaces for example) and manage consumption (by changing consumers to users (through leasing for example)). Throughout the draft Plan the term circular economy is often incorrectly used as just a euphemism for waste management, as in SD2.

25. We would suggest policy SD4 – The Central Activities Zone (CAZ) could be strengthened through the inclusion of an additional point which states the need to incorporate the principles of Good Growth, and support the Mayor’s vision for a low carbon circular economy. We suggest SD4K is strengthened through inclusion of the need to identify and protect sufficient capacity for building materials for reuse.

26. We would suggest a reference to how offsite construction, onsite reuse of materials and consolidation of construction material deliveries can reduce the need for construction related deliveries, therefore reducing air pollution in the CAZ, and how the Mayor will be supporting this type of activity is included in paragraph 2.4.8

27. We support the need for Boroughs to take into account the supply and demand for industrial and related uses in development plans, and are pleased that waste management and recycling are recognised in the list of supporting functions needed for the CAZ. We would suggest this description is extended to include low carbon circular economy businesses and reverse logistics activities.

28. We would suggest that policy SD5I also include consideration of meanwhile office space use where appropriate.

29. We would suggest that policy SD6 - Town Centres, point G includes the need for enhancement of tourist infrastructure to include appropriate waste and recycling facilities which will be important to support increases in tourist usage of sites, and to avoid littering and reduction in recycling rates.

30. We agree with policy SD7 (A) – Town Centre Network, that the changing role of town centres should be proactively managed in relation to the town centre network as a whole. We would suggest that additional text is added to this policy to ensure this includes consideration of how the low carbon circular economy can be supported to ensure alternative use of space. This could include activities such as repair/reuse shops and maker spaces. The policy should also consider promoting sustainable waste management and recycling within town centres, from household, businesses and on-the-go waste streams.

31. We would suggest that paragraph 2.9.2 includes the need for Town Centre strategies to cover waste and recycling infrastructure. Without this there is likely to be a detrimental environmental impact on issues such as air pollution and street scene. We would also suggest town centre strategies are required to consider how they will contribute to the low carbon circular economy e.g. through asset sharing between businesses.

Design

32. We support policy D1(A(10)) – London’s Form and Characteristic, which states development plans, area-based strategies, and development proposals should facilitate efficient servicing and maintenance of buildings and the public realm as well as deliveries. We would suggest this policy also includes waste collections.

33. We support policy D1(B(2)), which states that development designs should give thorough consideration to practicality of use, flexibility, safety and building lifespan through appropriate construction methods. Designing for flexibility reduces time, effort and materials traditionally associated with building use transitions and expands the range of possible users of a building. We would suggest this point is extended to include consideration of the building and materials used after the initial use to allow for reuse.

34. We also support policy D1(B(3)), which states development design should aim for high sustainability standards. We suggest this includes a reference to the circular economy design principles set out in figure 3.1.

35. We welcome the inclusion within paragraph 3.1.8 that shared and easily accessible storage space to support separation of recyclables should be considered at an early design stage. We would further suggest this must be linked to the inclusion of appropriate levels of in - home storage for recycling.

36. We welcome, and fully support the inclusion of circular economy design principles in paragraphs 3.1.10 – 3.1.12 . We suggest there may be a need for more detailed explanation of what is meant by design for adaptability and disassembly in paragraph 3.1.10. This could be included in the further planning guidance for sustainable design and construction mentioned in paragraph 9.2.10.

37. We support the recognition in paragraph 3.1.11 that large scale developments will be able to facilitate London’s transition to a circular economy, and welcome the inclusion of reference to further guidance on the application of these principles in London’s Circular

economy Route Map. We suggest that additionally large scale developments are encouraged to consider using the London growth/infrastructure map currently being developed by the GLA to assess other major developments planned or in progress to identify opportunities developments to share or reuse resources from other sites.

38. We suggest that policy D2(A) – Delivering good design, also requires for initial evaluation to include existing and future potential for circular economy growth. This should also include current and future waste and recycling infrastructure requirements. Failure to consider such issues could have serious social, environmental and economic impacts.

39. We welcome the appointment of the new Mayor’s Design Advocates (MDAs) to champion Good Growth. We would like to work with the MDAs to assist in capacity building and advocacy of circular economy design principles, and would welcome the opportunity to provide training and workshops for, and with the MDAs.

40. Paragraph 3.1.8 highlights the need early in the design stage to consider adequate storage space for separating recyclables. We welcome the inclusion of the need for adequate and easily accessible space for storage and separation of recyclables in policy D4 (G) – Housing quality and standards. We would suggest it is made clear that this includes space within the new homes as well as in communal collection areas.

41. The areas of scrutiny a proposed development design should cover as set out in paragraph 3.2.8 currently includes materials but not the wider circular economy. We recommend that to align with the earlier guidance on design within the draft Plan in paragraphs 3.1.10-3.1.12 this should be added here.

42. We support the inclusion in 3.4.11 of the need for recycling and waste disposal facilities that are convenient, appropriately integrated and designed to work effectively, and we welcome the inclusion of the reference to LWARB’s waste management planning advice for new flatted properties and would suggest developers are advised to use the template within the advice document. We would also suggest that this is expanded to include “future – proofed” to ensure developments consider future infrastructure plans.

43. We note the Mayor’s intention to create a document which sets out the standards that need to be met to deliver policy D4. We would welcome the opportunity to work with the Mayor on this document in relation to waste and recycling and wider circular economy design standards.

44. Policy D7 – Public realm, currently does not include any reference to waste and recycling infrastructure. We would recommend an additional point is included which requires suitable waste and recycling infrastructure to be included in the public realm and the operational needs of this infrastructure to be considered.

45. We support policy D7(M) to ensure the provision and future management of free drinking water at appropriate locations in new or redeveloped public realm to support reduction in single use plastic bottles.

46. We agree that opportunities should be identified by boroughs and developers for use of meanwhile space to create attractive public realm, but perhaps it would be appropriate to indicate a hierarchy of uses from temporary housing through commercial and small industrial to public realm.

Housing

47. We recognise the need to increase London's housing supply to meet the growing population. Policy H1- Increasing housing, supply could include a point for consideration of retaining existing buildings where possible, and the use of off-site prefabrication, and modular construction to reduce construction timescales, reduce costs of development, and support the principles of circular economy.

48. We would welcome the opportunity to work with the Mayor to input into the creation of design principles for small housing developments in London, and the review of GLA design guidance mentioned in paragraph 4.2.6.

49. We support policy H4 – Meanwhile use. We agree that consideration should be given to the use of meanwhile space for housing to allow optimised use of available space. We would add to this that the use of meanwhile space for other activities should also be considered for example storage of demolition materials for reuse (which has been highlighted as a barrier to increasing reuse within the construction industry). Reuse of building materials supports the circular economy principles set out in the design chapter, and the vision of a low carbon circular economy as set out in the Mayor's draft LES.

50. We welcome the recognition that precision manufactured homes can reduce construction time and support reuse of materials. We suggest a definition of "precision manufactured homes" is included here to provide clarity, and we would recommend this recognises the need for such homes to be reusable on other sites.

51. We support policy H11 – Ensuring the best use of stock. Optimising use of buildings and space will help to increase housing supply, and support the principles of Good Growth and the circular economy.

52. We believe the build to rent policy – H13, could encourage developers to better consider the entire lifecycle of new buildings including reuse of materials at the end of a building's lifespan as this could reduce costs of build to rent developments. We encourage the inclusion in the build to rent policy for developers to consider next-use of building materials, and leasing of components within the development under this policy which could help to reduce costs for developers and will also promote the acceleration of a circular economy by promoting component reuse.

53. The requirement for boroughs to undertake assessments of short, and long term supported and specialised accommodation needs within their borough could also include the requirement to consider how they will ensure developments are flexible to adapt to the identified long term changes, encouraging building reuse.

54. We suggest policy H18(5) – Large scale purpose built shared living, could be expanded to include communal facilities, such as kitchen space with storage for recyclables, food waste and residual waste and access to commonly used household items for sharing (for example the “Library of Things” concept). We suggest the management plans detailed in paragraph 4.18.4 should include plans to maintain white goods provision on service contracts which include maintenance and repair, and how waste storage areas will be maintained. If the Mayor issues planning guidance for this form of accommodation as mentioned in paragraph 4.18.6 we would welcome the opportunity to input to the development of the guidance.

Social Infrastructure

55. We agree with policy S1- Developing London’s social infrastructure, point D that development proposals that seek to make best use of land should be supported. This will help ensure delivery of Good Growth principles within London. We would suggest paragraph 5.1.8 which includes reference to shared use and co-location of facilities could also include a reference to provision of library of things which can help ensure households have access to goods they may not be able to afford to purchase themselves.

56. We support Policy S2A point 5 and paragraph 5.2.8 for co-location of facilities and integration with other forms of social infrastructure and uses as this increases asset utilization. This might also include temporary meanwhile uses or release space for community social enterprises in the circular economy. For example ReSpace: [<http://rally.respaceprojects.org/>].

Economy

57. We agree that it is important to ensure there is sufficient space to support the growth of new start up companies and to accommodate SMEs, particularly those working in circular economy (paragraph 6.1.5, 6.2.1). Paragraph 6.3.3 mentions the Mayor wishes to support sectors that have social or cultural value. The draft LES includes a desire by the Mayor to encourage businesses in the low carbon and environmental sectors, and a vision for a low carbon circular economy. We would therefore also include low carbon circular economy as sectors the Mayor wishes to support.

58. We welcome policy E4 – Land for industry, logistics and services to support London’s economic function. We support the need to make provision for light and general uses, storage, consolidation centres and secondary materials and waste management. These functions support delivery of a circular economy. We would suggest the list of activities which are essential to the functioning of the economy and servicing the needs of the growing population which are included in paragraph 6.4.1 is expanded to include circular economy activities such as storage and reuse of materials and remanufacturing, and would recommend a coordinated London-wide strategy is produced to identify current and future needs for storage, consolidation and distribution centres, alongside predicted supply and demand for reuse of materials. We would welcome the opportunity to work

with the Mayor on such a strategy. Existing centres such as The London Consolidation Centre will be able to provide valuable insights into such a strategy.

59. We believe sustainable “last mile” distribution mentioned in 6.5.2 should be supported by micro consolidation and distribution sites to ensure deliveries and collections are reduced as far as possible across London.

60. We support paragraph 6.5.3 which states innovations to make more effective use of land in SILs are encouraged and should be explored in Local Plan reviews and Opportunity Area planning frameworks. We recommend that this should be expanded upon to encourage exploration of land use which supports a low carbon circular economy such as co-location of businesses with complimentary needs, or industrial symbiosis opportunities thereby reducing the need for storage and transport, optimising space and building use and reducing waste.

61. We support policy E7 – Intensification, co-location and substitution of land for industry, logistics, and services to support London’s economic function. However we would stress that this needs to ensure adequate space for waste and material reuse infrastructure.

62. We support policy E8 - Sector growth opportunities and clusters. Successful delivery of the circular economy will require support and collaboration across businesses, public sector and academia and industry sectors. We would recommend circular economy clusters are included in the list of types of clusters to be supported in order to support the Mayor’s vision of a low carbon circular economy as detailed in the draft LES.

63. We welcome the statement in paragraph 6.8.3 that the Mayor will support businesses to adopt the principles of the circular economy, but recommend that additional text is added that states that “the Mayor will support businesses that operate or adopt circular economy business models”. The text used within this paragraph to describe the circular economy is more like a linear economy. We recommend all definitions of a circular economy within the London Plan align and would refer to the recommended definition contained within paragraph 21 of this document. We are keen to discuss with the Mayor what form this support will take, and how we can work together through LWARB’s Advance London Programme. The circular economy includes development of clean tech, and is not separate from it. We suggest reference to “redevelopment of Old Oak and Park Royal into a smart and sustainable district also includes reference to the commitment to the circular economy within the draft Old Oak and Park Royal Local Plan.

Green Infrastructure and Natural Environment

64. Policy G1 – Green infrastructure, requires boroughs to prepare green infrastructure strategies. We support this requirement and recommend food growing and composting are also included within the list of areas to be considered. This allows such strategies to align better with Policy G8.

65. We support policy G8 – Food growing and suggest composting is also considered within this policy and the local use of any resulting compost. We also support the recognition that innovative solutions for delivery of food growing should be considered to better

utilise space. This should include meanwhile space. We support the recognition that urban food growing can help with healthier eating, support the local economy and reduce transport emissions.

Sustainable Infrastructure

66. We suggest policy SI2 – Minimising greenhouse gas emissions also makes reference to the contribution of low carbon circular economy initiatives to a zero carbon development.

67. We would welcome the opportunity to work with the Mayor on the drafting of further planning guidance on sustainable design and construction as mentioned in paragraph 9.2.10.

68. We support policy SI3 – Energy infrastructure, however energy masterplans should also consider where waste could be reused, recycled or incorporated in a low carbon circular economy before being used for energy generation (point B4).

69. We recommend that reference to smart technologies in Paragraph 9.6.7. should also include data on waste collection and generation and resource use.

70. We support policy SI7 – Reducing waste and supporting the circular economy. We suggest SI7(A) is reworded to ensure it is clear that the circular economy will deliver waste reduction, and not the other way round. SI7(A(2)) could be reworded to ensure it is clear that waste minimisation is not achieved through reuse of materials. Waste minimisation avoids the use of materials in the first place. We suggest that it is reworded to state that waste minimisation will be delivered by encouraging the widespread adoption of circular economy business models that design out waste at the outset, or promote sharing, leasing or are designed to be repaired, modular or last longer. It should be clear that this is part of a transition from consumption of products to use of products. We suggest SI7(A(3)) is clarified to reference the waste hierarchy to ensure that recyclables are utilised at their highest value to ensure avoidance of waste to landfill does not result in an increase in incineration of recyclables. . We support target A4a. for 65% of municipal waste to be recycled by 2030. The target in the current London Plan includes reuse as well as recycling in construction, demolition and excavation waste.. We strongly believe that reuse should be retained due to its higher place in the waste hierarchy. SI7(B) should also refer to reuse of entire buildings and the leasing of components where appropriate.

71. We welcome the inclusion of the requirement for design of developments with adequate and easily accessible in home and communal storage space for separate collection of dry recyclables (at least card, paper, plastic bottles, mixed plastic, metals, glass) and food. We suggest a reference to LWARB's waste management planning advice for new flatted properties is included here.

72. We welcome the inclusion of the requirement for referable applications to support the circular economy, aim to be net zero waste and create a Circular Economy Statement. We will work with the Mayor's regeneration and environmental teams, and MDAs to create further detail on the criteria and guidance for Circular Economy Statements.

73. The text used within paragraph 9.7.1 to describe the circular economy is more like a linear economy. We would recommend all definitions of a circular economy within the London Plan align and would refer to the recommended definition contained within paragraph 21 of this document.

74. We agree with the text in paragraph 9.7.1 that states London should move to a more circular economy as this will save resources, increase resource efficiency of London's businesses and help to reduce carbon emissions. We would refer to paragraph 8 of this document which provides further detail on these benefits, as well as paragraph 17 in reference to jobs and economic benefits. We would also suggest a reference to paragraphs 3.1.10 – 3.1.12 of the draft Plan which provides more background on circular economy.

75. We agree with the statement in paragraph 9.7.1. that the successful implementation of circular economy principles will help to reduce the volume of waste that London produces and has to manage. We suggest the following text is provided to support this statement *“Research by Arup into the effects of the circular economy on waste production in London has identified the potential to reduce waste by up to 60% by 2041 through circular economy interventions which avoid the production of waste. The summary report can be found here http://www.lwarb.gov.uk/wp-content/uploads/2016/12/Final-Report_Issue.pdf.”*

76. We support the recognition in paragraph 9.7.4 that higher order uses of inert waste are possible. We suggest clarification of what is meant by higher order uses is included as a reference here, and that a distinction between different waste types and streams within construction waste is made.

77. Paragraph 9.7.4 states that “A combination of mobile facilities on construction sites, effective use of existing waste processing sites, and, where appropriate, safeguarded wharves, as well as the provision of recycling facilities at aggregate extraction sites, should be capable of meeting the anticipated future requirement within London to achieve more beneficial re-use of this material.” We would like to know what research has been conducted which has allowed these conclusions to be reached . Space for storage of materials for reuse is seen as a key barrier by the sector [<http://www.lwarb.gov.uk/what-we-do/circular-london/circular-economy-route-map/>].

78. We support Policy SI8 – Waste capacity and net waste self sufficiency. We welcome SI18(B(1)) - development plans should identify how waste will be reduced in line with the principles of the circular economy, and how remaining quantum will be managed. We would suggest adding to the end of this sentence “and how waste can be considered as a resource”. Perhaps a more nuanced policy formulation could be used that recognises that a circular economy is one that encourages circular economy business models that reduce waste by design, and that development plans should include policies that allow these business models to flourish, linking this policy to the good growth policies at the beginning of the Plan.

79. Policy SI8 should also ensure plans consider where waste could be reused, recycled or incorporated in a low carbon circular economy before being used for energy generation.

80. Paragraph 9.7.1 states the successful implementation of the circular economy will help to reduce waste. Work undertaken for LWARB by Arup indicates that higher levels of waste reduction are possible through the accelerated uptake of circular economy initiatives. We suggest that this work is incorporated within the evidence base. A reduction in waste produced will mean less requirement for waste infrastructure. This highlights the need for apportionment to be constantly under review to ensure local plans take into consideration the wider context of circular economy progress across London, and to ensure an oversupply of waste infrastructure is avoided. It will be important to consider the ability of private sector to deliver waste infrastructure capacity in a way that prioritises circular economy over linear economy. This also highlights the need for a London – wide strategy which identifies current and future requirement for location and type of waste infrastructure needed, and which is also regularly reviewed. It is also important that this strategy considers waste from household, municipal and commercial sources. We would suggest this also examines circular economy related spatial needs as suggested in paragraph 9.

81. LWARB are fully supportive of the Mayor's aim for London to send no biodegradable or recyclable waste to landfill by 2026 and that 65 per cent of municipal waste is recycled by 2030, as also included in the draft LES. The text in paragraph 9.8.2 the target has been changed slightly to read "The Mayor is committed to sending zero biodegradable or recyclable waste to landfill by 2026". We suggest this wording is changed to ensure it is clear that the Mayor's target is focused on volume of recycling rather than just avoiding landfill, as this could result in recyclables being incinerated to avoid landfill.

82. We would be interested to clarify with the Mayor what work is envisioned as a result of the text in paragraph 9.8.3 which states "The Mayor will work with Boroughs, LWARB, and the London and neighbouring Regional Technical Advisory Boards to address cross boundary waste flow issues."

83. We recommend that paragraph 9.8.4 should reorder the management activities to reflect priorities better – making reference to the waste hierarchy as a guide in reference to its management.

84. Paragraph 9.8.7 states that Boroughs should examine in detail how capacity can be delivered at a local level. We would recommend this is also tied to the need to consider how circular economy activities can reduce waste included in policy SI8, B1.

85. We support the need to safeguard London's waste sites however we would urge the inclusion that if surplus capacity is identified at such sites this should be safeguarded for circular economy activities such as reuse, repair and remanufacture to support further decreases in waste creation, and assist in developing the low carbon circular economy in London.

86. We agree that large scale redevelopment proposals should incorporate waste management facilities within them. We would suggest this requirement is enhanced to

say the facilities should be as sustainable as possible, and include facilities which enable the circular economy e.g. storage for reuse of materials, and a reference is made to the points made in paragraph 9.8.16.

87. We support the inclusion of a commitment to source truly residual waste as an appropriate demonstrable step required as part SI8(D(3)). We suggest this is expanded upon in the text to explain what the definition of this would be, and how this should be evidenced.

88. We welcome the inclusion of the text in paragraph 9.8.16 which describes the key points which waste processing facilities should incorporate. This point includes references to key design features and therefore we would recommend considering this paragraph is moved to the design chapter and a reference to it within the design chapter is placed in this part of the document.

89. We appreciate the reference to LWARB's work in paragraph 9.8.17, however the work referred to is guidance for all new build flats, and is not a design guide.

90. We suggest policy SI9(A) – Safeguarded waste sites, is amended to read “Existing waste sites will be safeguarded and retained in use for waste management, or circular economy related activity”.

91. We support the need to encourage reuse and recycling of construction, demolition and excavation waste within London, and the target for reuse/recycling of this waste as set out in policy SI10 - Aggregates. We would like to understand where the target for 50% of the waste to be recycled as aggregates by 2020 has been derived from. As identified in paragraph 9.7.4, there are opportunities for higher order reuse of this material and we would not support a target which did not encourage more products and materials to be reused in this way before being used as aggregates.

92. We support the statement that London needs a reliable supply of construction materials to support continued growth. The increase in development in London will mean an increase in the need for building materials and transport associated with construction, and is likely to result in increased waste production and associated costs. It will be important that the impacts of such large scale construction are investigated and the opportunities to reduce these impacts, and benefit from reuse of materials are assisted. We would suggest the Mayor undertake a review of construction material demand within London for the next 20 years, and potential supply, with reuse of existing materials being paramount. We would welcome the opportunity to work with the Mayor on such a study.

93. We support the need to facilitate freight transported by river, and the safeguarding of wharves in Policy SI15 – Water Transport. We agree that redevelopment of safeguarded wharves should only be accepted if the wharf is no longer viable, and would suggest that this viability criteria should also include consideration of current and future demand for the wharf to support circular economy activities such as consolidation of freight.

Transport

94. We support the need for an increasingly efficient transport network, and that the Mayor will work with partners to minimise servicing and delivery trips on the road network through consolidation. We would suggest this work could include investigating appropriate locations for consolidation, and micro consolidation and distribution sites which are needed to serve the city now, and to facilitate planned major development, and support increased reuse of materials. We would also stress that consolidation centres should be used to support reuse of materials such as reclaimed construction materials.

95. We support the need for development plans to consider the Mayor's Health Streets approach as set out in policy T2. We would also support the addition of "avoidance of litter on streets, and adequate provision of waste and recycling receptacles" as part of the Healthy Streets approach, and also its incorporation into point B1 of policy T2. This would not only avoid littering, but also help to support the waste policies contained within the draft LES. Litter can also have a negative impact on health [[Keep Britain Tidy Litter Report 2013](#)].

96. We support paragraph 10.6.5. which requires parking provisions to be flexible for different users and adaptable to future repurposing. This will ensure best utilisation of space now and in the future. We would suggest the list of potential other uses of car parking sites could be widened.

97. We agree with policy T7 – Freight and servicing which states Opportunity Area Planning Frameworks, Area Action Plans, and other area based plans should include freight and servicing strategies. We would suggest point A2 could be added to include reference to consolidation and micro consolidation centres in terms of infrastructure and facilities to manage freight and servicing. We suggest point A3 could also include collaborative strategies and reverse logistics arrangements to reduce emissions from freight as a whole. We also support point E to support new consolidation and distribution facilities, and H, to support micro consolidation as this will help to support effective reuse of materials.

98. We support the statement in paragraph 10.7.2 that regional consolidation and distribution centres are needed to serve the city coupled with micro-distribution centres. We note the mayor supports the identification of new sites for load consolidation. As stated in paragraphs 58, and 92 of this document, we would suggest work is undertaken by the Mayor to investigate and identify appropriate sites to support this.

Funding the London Plan

99. We support the inclusion of text to explain the potential benefits of the circular economy in paragraph 11.1.53. In relation to the definition of circular economy in this paragraph, we would refer back to our earlier points that this definition should be consistent within this document and across other Mayoral strategies.

100. We agree that business will lead the transition to a circular economy as described in paragraph 11.1.54, and that a mix of investment from a variety of sources including public sector and not for profit is needed. We are pleased our work with the GLA to

identify budget to invest in circular economy businesses on commercial terms is included.

Monitoring

101. We are concerned to note that the proposed KPI's which will be used to monitor progress of the new London Plan do not include any circular economy related metrics. The current London Plan includes a KPI for "increase in municipal waste recycled or composted and elimination of waste to landfill by 2026". The Mayor's ambitions include targets for a zero waste city, recycling targets, and a vision of a low carbon circular economy, and although these are reflected in the Good Growth principles which underlie the draft Plan, and are incorporated into the draft Plan itself, they are not reflected here. This would mean progress towards these vital elements of the London Plan would not be monitored. We would urge the inclusion of metrics which adequately reflect the Mayor's targets and priorities. LWARB would be pleased to share our current work on circular economy metrics for London to support this.