

East London Joint Waste Plan

Circular Economy Topic Paper

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Abbreviations and Glossary

Abbreviations

CE	Circular Economy
DRS	Deposit Return Scheme
EPR	Extended Producer Responsibility
GHG	Greenhouse Gases
LA	Local Authority
LPA	Local Planning Authority
NPPF	National Planning Policy Framework
NPPW	National Planning Policy for Waste
RWS	Resources and Waste Strategy

Glossary

Anaerobic Digestion	A natural process comprising the breakdown of organic material in the absence of air. It is carried out in an enclosed vessel and produces biogas (methane) that may either be used to produce electricity or cleaned up and supplied to the gas grid.
Circular Economy	The circular economy means decoupling economic activity from the consumption of resources. It is based on three principles: Design out waste and pollution; keep products and materials in use; regenerate natural systems.
Climate Change	Climate change is a long-term change in the average weather patterns that have come to define Earth’s local, regional and global climates.
Climate change adaptation	Adjustments made to natural or human systems in response to the actual or anticipated impacts of climate change, to mitigate harm or exploit beneficial opportunities.
Climate change mitigation	Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions.
Extended Producer Responsibility	Extended Producer Responsibility is a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer products.
Greenhouse Gases	A greenhouse gas is a gas which absorbs reflected solar energy. This has the effect of making the Earth’s atmosphere warmer. Solar energy enters the Earth’s atmosphere and reaches its surface. Some of that energy is reflected back into space, however greenhouse gases absorb this reflected energy back to the Earth. Carbon dioxide, methane and nitrous oxide are all greenhouse gases.
Local Plans	Prepared by local planning authorities, Local Plans guide decisions on future development proposals for an area. They set out policies to be used in decision making which are supported by a vision for how the local planning authority would like the area to develop.
Recycling	The collection and separation of materials from waste and subsequent processing to produce new products and materials.
Regenerative	Something that is able to or tending to regenerate—to regrow or be renewed or restored, especially after being damaged or lost.
Reuse	Reuse is the use of a product or material in its original form with minimal reprocessing (can be following repair), that would otherwise be managed as waste.

1. Executive Summary

- 1.1 This topic paper sets out background information that underpins proposed policies in the Regulation 18 East London Joint Waste Plan intended to ensure development comes forward in a manner that is more aligned with circular economy principles.
- 1.2 The topic paper considers and explains what a circular economy is, its benefits and its impact on the environment and climate change, and, in particular, how the East London Joint Waste Plan can help facilitate a move to a more circular economy.
- 1.3 It provides information and guidance on the circular economy and its implications for land use and the built environment.
- 1.4 The paper aims to inform stakeholders, including developers, architects, and the public, about the benefits and challenges of adopting circular economy principles in the built environment and its relevance to the preparation of the East London Joint Waste Plan.
- 1.5 It highlights the role of planning policy in facilitating the transition to a circular economy and provides recommendations for incorporating circular economy practices into development projects.
- 1.6 This document was drafted in July 2024 and so reflects Government policy and strategy at that time. The document will be updated in light of any changes to Government policy and strategy that are made prior to the publication of the Regulation 19 East London Joint Waste Plan (this is the final draft version of the Plan that will be submitted for independent examination).

2. Introduction

- 2.1 The implications of a traditional linear economy, which constantly takes, makes, uses and disposes of resources, are becoming clearer as the impacts of climate change and damage to the environment are realised both locally and globally. The 'circular economy' offers an alternative economic model that seeks to address these problems by avoiding and reducing the wasteful processes associated with growth in most of the world's economies.
- 2.2 The World Economic Forum's definition of a Circular Economy is as follows:
- 'A circular economy is an industrial system that is restorative or regenerative by intention and design. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return to the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems, and business models.'*
- 2.3 A circular economy is underpinned by the following three main principles:
1. Designing out waste and pollution as far as possible;
 2. keeping products and materials in use for longer; and,
 3. regenerating and recovering natural systems.
- 2.4 By adopting these principles, traditional economic objectives, opportunities and growth can still be achieved through innovation while the impacts of climate change and environmental damage can be reduced or, ideally, eliminated¹. For example, in a 2021 report², the Green Alliance estimated that a move to a more circular economy in the UK would result in 450,000 jobs by 2035.
- 2.5 Greenhouse gas (GHG) emissions from the waste sector represent approximately 4% of total UK greenhouse gas emissions (see Climate Change Topic Paper) and are indirectly related to other sectors, for example, the refurbishment and construction of buildings accounts for 11% of the GHG emissions in major cities (which is in large part due to emissions associated with the production of construction materials such as cement, steel, aluminium and plastic) and 15% of these materials are wasted during the construction process and resources may be lost due to their disposal in landfill when a building is demolished³. These wasteful practices result in increased GHG emissions associated with the production of the building materials which arise from the extraction of raw materials and their conversion into products⁴.

¹<https://www.ellenmacarthurfoundation.org/circular-economy/concept>

² https://green-alliance.org.uk/resources/Levelling_up_through_circular_economy_jobs.pdf

- 2.6 This topic paper sets out background information that underpins proposed policies in the East London Joint Waste Plan (ELJWP) which are intended to ensure development comes forward in a manner that is more aligned with circular economy principles. The topic paper considers what a circular economy is, its benefits and its impact on the built environment and climate change, and, in particular, how planning policy in the East London Joint Waste Plan can help a transition to a more circular economy.
- 2.7 Adopting circular economy principles in the ELJWP is consistent with the London Plan 2021 that includes the following in Policy GG6 ('Increasing efficiency and resilience'):

'To help London become a more efficient and resilient city, those involved in planning and development must:...

A. seek to improve energy efficiency and support the move towards a low carbon circular economy, contributing towards London becoming a zero-carbon city by 2050...'

³https://www.ellenmacarthurfoundation.org/assets/downloads/Completing_The_Picture_How_The_Circular_Economy-_Tackles_Climate_Change_V3_26_September.pdf

⁴ Acuff, K., & Kaffine, D. T. (2013). Greenhouse gas emissions, waste and recycling policy. *Journal of Environmental Economics and Management*, 65(1), 74-86.

3. Policy Background

National Policy

3.1 The UK government has published various policy and strategy documents which are aligned with the achievement of a more circular economy and the main ones are discussed below.

Environment Act 2021

- 3.2 The Environment Act 2021 includes powers to deliver the following:
- Extended producer responsibility to make producers pay for 100% of cost of disposal of products, starting with plastic packaging
 - A Deposit Return Scheme for single use drinks containers
 - Charges for single use plastics
 - Greater consistency in recycling collections in England
 - Electronic waste tracking to monitor waste movements and tackle fly-tipping
 - Reductions in waste crime
 - Introduction of new resource efficiency information (labelling on the recyclability and durability of products)
 - Regulation of the shipment of hazardous waste
 - Bans or restrictions on the export of waste to non-OECD countries

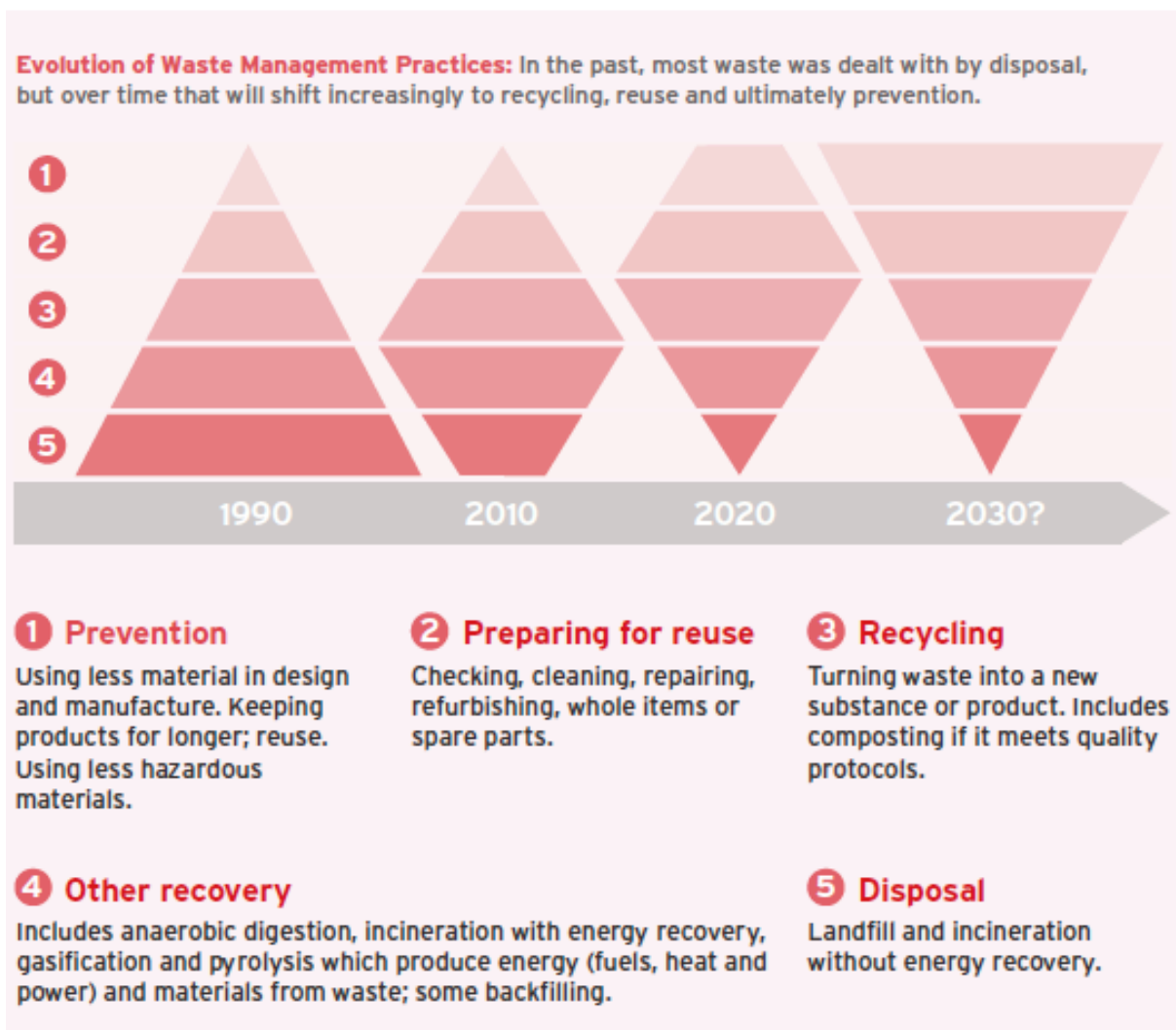
Resources and Waste Strategy, 2018

3.3 The 2018 Resources and Waste Strategy (RWS)⁵ sets out current Government thinking on waste management in England, including how the country must minimise waste and manage it more effectively through maximising opportunities to generate value from material prevented from entering, and that extracted from, waste streams. RWS includes an illustration of the circular economy on page 8 (also included in the ELJWP).

- 3.4 The RWS identifies five strategic ambitions:
1. To work towards all plastic packaging placed on the market being recyclable, reusable or compostable by 2025;
 2. To work towards eliminating food waste going to landfill by 2030;
 3. To eliminate avoidable plastic waste over the lifetime of the 25 Year Environment Plan (by 2042);
 4. To double resource productivity by 2050; and
 5. To eliminate avoidable waste of all kinds by 2050.

⁵ Our Waste, Our Resources: A Strategy for England, DEFRA, 2018
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf

- 3.5 Since 2018, the Government has announced further targets and initiatives which are considered below.
- 3.6 The RWS identifies the waste hierarchy as a key principle to be applied when promoting a more circular economy. The waste hierarchy provides a framework on how to deal with waste efficiently and requires that waste is prevented from occurring in the first place and resources are reused and recovered as much as possible. Implementing the waste hierarchy is essential if resources are to be managed in a more efficient way and a circular economy is to be established. The RWS illustrates how England is moving towards the management of waste in accordance with the waste hierarchy as set out below



- 3.7 The RWS identified the construction sector as a key area where resource efficiency needs to be improved to maximise resource productivity and meet targets related to waste production and management. RWS noted that the construction industry is on the brink of fundamental change with the increasing adoption of innovative construction materials and techniques. The implementation of Extended Producer Responsibility (EPR) for certain materials used in the construction sector is seen as a particular way of improving resource use, though this has not yet been implemented.
- 3.8 As part of the RWS, DEFRA launched three consultations in 2019:
- Introducing a Deposit Return Scheme for drinks containers (DRS) in England, Wales and Northern Ireland;
 - consistency in Household and Business Recycling Collections in England; and,
 - reforming the UK packaging producer responsibility system by introducing EPR.
- 3.9 The aim of a DRS would be to reduce the amount of littering, increase recycling rates for related materials, improve collection of high quality materials in greater quantities and promote recycling through clear labelling and consumer messaging. Government has recently (April 2024) announced a revised timeline for DRS with implementation now programmed for October 2027⁶.
- 3.10 The EPR scheme for packaging will require packaging producers to pay the full cost of managing packaging once it becomes waste⁷. The scheme will encourage producers to use less packaging (e.g. by 'light weighting') and use more recyclable materials, reducing the amount of hard to recycle packaging placed on the market. The main requirement of the EPR Regulations is that no one responsible for packing or filling products into packaging or importing packed or filled packaging into the United Kingdom, may place that packaging on the market unless it fulfils the 'essential requirements' and is within the heavy metal concentration limits. The essential requirements are as follows:
- Packaging must be manufactured in such a way that it can be reused or recovered;
 - packaging must not contain any hazardous substances above the permitted levels;
 - packaging must be marked with the appropriate identification codes; and, packaging must be designed and manufactured to meet the requirements of the essential requirements.

⁶ <https://www.gov.uk/government/publications/deposit-return-scheme-for-drinks-containers-policy-statements/deposit-return-scheme-for-drinks-containers-joint-policy-statement>

⁷ <https://www.gov.uk/guidance/extended-producer-responsibility-for-packaging-who-is-affected-and-what-to-do>

- 3.11 In 2023 the UK government confirmed that implementation of the EPR scheme had been delayed for a year until October 2025.
- 3.12 The consultation on consistency was concerned with measures to improve the quantity and quality of what is recycled by moving towards methods of waste collection which are more consistent across the country. It is anticipated that consistent collection will help increase recycling rates significantly above 50%, towards the much higher recycling rate of 65% (by 2035). The proposals consulted on were for all local authorities to:
- collect the same core set of dry recyclable materials from households
 - have separate weekly food waste collections from households, including flats
- 3.13 In response to the consultation, in 2023, the UK government announced a new, but related, initiative called 'Simpler Recycling'. The initiative aims to reform the waste system by introducing a simpler, and 'common-sense' approach to recycling. The approach means that people across England will be able to recycle the same materials, whether at home, work, or school regardless of where they live. This will include weekly collections of food waste, for most households, by 2026⁸. It is not clear whether this will be taken forward following the general election of July 2024.

Waste (Circular Economy) (Amendment) Regulations 2020⁹

- 3.14 The Waste (Circular Economy) (Amendment) Regulations 2020 (*SI 2020/904*), transposed the EU's 2020 Circular Economy Package (2020 CEP) in England, and were made on 25 August 2020. These Regulations implement six amending EU Directives on waste management as follows:
- The Waste Framework Directive;
 - packaging and packaging waste;
 - landfill of waste;
 - end-of life vehicles;
 - batteries and accumulators and waste batteries and accumulators; and,
 - waste electrical and electronic equipment.

⁸ <https://www.gov.uk/government/news/simpler-recycling-collections-and-tougher-regulation-to-reform-waste-system>

⁹ <https://www.legislation.gov.uk/uksi/2020/904/made>

- 3.15 The changes are intended to increase the prevention, reuse and recycling of waste e.g. by strengthening requirements for the separate collection of paper, metal, plastic or glass. The Regulations also put the Government commitments in the 2018 Resources and Waste Strategy to recycle 65% of municipal waste and to have no more than 10% of municipal waste going to landfill by 2035 into law.
- 3.16 The bulk of substantive changes to laws, regulations and administrative provisions made under the CEP affect two Directives:
- The Waste Framework Directive
 - The Landfill Directive
- 3.17 Measures are to be taken to prevent waste generation and to monitor and assess the implementation of those measures. These measures must be included in waste prevention programmes prepared by ‘appropriate authorities’¹⁰.
- 3.18 Requirements for separate collection of waste are amended to provide more detail on the circumstances under which separate collection of waste is not necessary to ensure that waste undergoes preparing for reuse, recycling, or other recovery. Amendments to regulations are intended to ensure that waste collected separately for preparing for re-use or recycling is not incinerated (whether with or without energy recovery) or landfilled, except for waste resulting from subsequent treatment operations of the separately collected waste for which incineration or landfilling delivers the best environmental outcome in accordance with the waste hierarchy.

Waste Prevention Programme for England (2023)

- 3.19 The Waste Prevention Programme for England: ‘Maximising Resources¹¹, Minimising Waste’ is a cross-departmental Government programme that sets out priorities for managing resources and waste in line with the RWS. The programme aims to move towards a circular economy by keeping goods in circulation for as long as possible and at their highest value. This includes increasing the reuse, repair, and remanufacture of goods. The programme also aims to reduce the amount of waste produced in England and increase the amount of waste that is recycled.
- 3.20 The programme includes the following three cross-cutting themes:
1. Designing out waste: Including ecodesign and consumer information requirements, and Extended Producer Responsibility schemes.

¹⁰ The Waste (England and Wales) Regulations 2011, define “appropriate authorities” as “the Environment Agency, a waste collection authority, a waste disposal authority, a waste regulation authority or a local authority”

¹¹ <https://www.gov.uk/government/publications/waste-prevention-programme-for-england-maximising-resources-minimising-waste>

2. Systems and services: Including collection and take-back services, encouraging reuse, repair, leasing businesses and facilities.
3. Data and information: including materials databases, product passports (sets of data, unique to the specific product that can be accessed online and give detailed information on, for example, contained materials, components and history, to support improved outcomes such as higher quality recycling) and voluntary corporate reporting.

3.21 Based on available data on the amount of waste arisings or known carbon emissions from production, the programme identifies the following seven key sectors for action:

- Construction;
- textiles;
- furniture;
- electronics;
- vehicles;
- plastic and packaging; and,
- food.

3.22 The Programme specifically notes that planning has a role in waste prevention and includes the following:

‘The Department for Levelling Up, Housing and Communities will continue to support local authorities to promote sustainable resource use through planning. The [National Planning Policy for Waste](#) requires that when determining planning applications for non-waste development, local planning authorities should, to the extent appropriate to their responsibilities, ensure that the handling of waste arising from the construction and operation of development maximises reuse and recovery opportunities, and minimises off-site disposal. Additionally, chapter 2 of the National Planning Policy Framework (NPPF) recognises the need for the planning system to consider the prudent use of natural resources and waste minimisation in the pursuit of sustainable development. The National Planning Policy Framework and the National Planning Policy for Waste are material considerations for local planning authorities when making decisions on planning applications and when preparing their local plans.’

3.23 The programme is required to be reviewed by the UK government every six years. The latest version of the programme was published on 28th July 2023.

National Planning Policy Framework

- 3.24 The NPPF does not currently include explicit references to the transition towards a circular economy but does state that ‘planning policies and decisions must also reflect relevant international obligations and statutory requirements’ (paragraph 2). This confirms that planning policy and decisions should be aligned with legislation and other policy e.g. the RWS. Furthermore, the central objective of the NPPF is sustainable development (summarised as ‘meeting the needs of the present without compromising the ability of future generations to meet their own needs’ (paragraph 7)) which is wholly consistent with circular economy principles.
- 3.25 The environmental objective of the NPPF calls for ‘using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy’ (paragraph 8) all of which can be helped by the transition to a circular economy. The other two objectives of the NPPF (economic and social) are interdependent and so must also be considered. Circular approaches to development are consistent with the economic objective of building a ‘strong, responsive and competitive economy... to support growth, innovation and improved productivity’. The social objective focuses primarily on homes, but aims for a ‘well-designed and safe built environment’ which circular economy practices can also help deliver.
- 3.26 The NPPF requires planning policy and decisions on planning applications to support the transition to a low carbon future, stating that the planning system should help ‘shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure’ (paragraph 157 - emphasis added). This provides clear direction regarding circular approaches in development by promoting reuse.
- 3.27 In its October 2023 response to the ‘Climate Change Committee 2023 report to Parliament – progress in adapting to climate change’¹², the Government reconfirmed its commitment to a fuller review of the NPPF, in line with the Net Zero Strategy¹³, to ‘make sure to make sure it contributes to climate change mitigation and adaptation as fully as possible’. The new government has confirmed its intention to prioritise a review of the NPPF as part of its planning reform agenda.

¹² <https://www.gov.uk/government/publications/government-response-to-the-climate-change-committee-2023-adaptation-progress-report/government-response-to-the-climate-change-committee-2023-report-to-parliament-progress-in-adapting-to-climate-change>

¹³ The UK Net Zero Strategy is a government plan to achieve net-zero greenhouse gas emissions by 2050.

National Planning Policy for Waste

3.28 The NPPF should be read in conjunction with the National Planning Policy for Waste (NPPW) (2014) when considering planning for waste. The NPPW sets out the Government's ambition for a more sustainable and efficient approach to resource use and management. The NPPW sets the framework within which Waste Planning Authorities, including the four East London Boroughs, prepare Waste Local Plans and determine waste related planning applications.

3.29 While NPPW does include direct reference to the circular economy its policies support circularity¹⁴ in a number of ways including the following:

1. **Sustainable Waste Management:** The NPPW promotes sustainable waste management by encouraging developments that facilitate the efficient use of resources, thereby reducing the generation of waste. It advocates for the provision of adequate waste management facilities that support recycling, composting, and other recovery operations.
2. **Waste Hierarchy:** This approach aligns with the circular economy by ensuring that waste is managed in the most environmentally beneficial way.
3. **Design and Construction:** The NPPW encourages developments to incorporate design and construction practices that minimise waste and promote the use of recycled and sustainable materials. It supports the use of sustainable building techniques that facilitate the deconstruction and reuse of building components at the end of their life cycle.
4. **Infrastructure and Facilities:** The policy supports the development of infrastructure and facilities that enable the collection, sorting, and processing of recyclable materials. It encourages the co-location of waste management facilities with other types of development to reduce transportation needs and promote efficiency.

National Model Design Code

3.30 The Government's National Model Design Code¹⁵ is intended to set out clear design parameters to help local authorities and communities decide what good quality design looks like in their area. It helps ensure good quality design in areas by considering various aspects and is aligned with circular economy principles in the following ways:

1. **Health and Wellbeing:** The code emphasises the creation of safe, inclusive, and active environments, which can contribute to healthier communities and align with circular economy goals.
2. **Green Infrastructure and Biodiversity:** It encourages approaches to landscape and green spaces, including tree-lined streets. Biodiversity considerations are essential for sustainable development.

¹⁴ 'Circularity' refers to the concept of keeping products and materials in circulation for as long as possible and at their highest value.

¹⁵ <https://www.gov.uk/government/publications/national-model-design-code>

3. Environmental Performance: The code ensures that buildings and places contribute to net-zero targets, promoting sustainability and resource efficiency.
4. Layout and Infrastructure: It addresses the layout of new developments, including infrastructure and street patterns, which can impact resource use and waste management.
5. Quality Façades and Local Character: The code considers building façades' quality and local vernacular, heritage, and materials, fostering sustainable design.

The Waste Management Plan for England (2021)

3.31 The Waste Management Plan for England provides an overview of waste management in England including the policy landscape. The Plan was updated in 2021 to reflect changes made by the transposition of the EU Circular Economy Package into law in England which includes the requirement for specific legislation for arrangements for waste containing significant amounts of critical raw materials; and an assessment of existing waste collection schemes with a view to improving the separate collection. These additions support the circular economy by providing legislation for managing raw materials and improving the collection of separated waste making it easier for waste to be re-used and recycled.

3.32 The Ministerial Foreword to the Waste Management Plan for England 2021 includes the following:

'The government's overall approach to resources and waste is one of moving away from the current linear economic model of take, make, use, throw, towards a more circular economy which keeps resources in use for longer so that we can extract maximum value from them.'

London

London Plan 2021

3.33 The London Plan 2021 takes a comprehensive and ambitious approach in seeking a transition to a circular economy. The approach includes specific policy intended to ensure that major new development is designed and constructed with circular economy principles in mind – this includes a requirement for the submission of Circular Economy Statements with proposals for development that is of such significance that it must be referred to the Mayor for determination ('Referrable development'¹⁶). Circular Economy Statements are required to consider the whole lifecycle of a building, including construction, use and end of life. The Plan states:

¹⁶ 'Referrable development' includes developments with more than 150 residential units or over 30,000 square metres of floor space.

'3.3.10 To minimise the use of new materials, the following circular economy principles (see also Figure 3.2) should be taken into account at the start of the design process and, for referable applications or where a lower local threshold has been established, be set out in a Circular Economy Statement (see Policy SI 7 Reducing waste and supporting the circular economy):

building in layers – ensuring that different parts of the building are accessible and can be maintained and replaced where necessary

designing out waste – ensuring that waste reduction is planned in from project inception to completion, including consideration of standardised components, modular build and re-use of secondary products and materials

designing for longevity

designing for adaptability or flexibility

designing for disassembly

using systems, elements or materials that can be re-used and recycled.

3.3.11 Large-scale developments in particular present opportunities for innovative building design that avoids waste, supports high recycling rates and helps London transition to a circular economy, where materials, products and assets are kept at their highest value for as long as possible. Further guidance on the application of these principles through Circular Economy Statements will be provided.

3.3.12 Figure 3.2 shows a hierarchy for building approaches which maximises use of existing materials. Diminishing returns are gained by moving through the hierarchy outwards, working through refurbishment and re-use through to the least preferable option of recycling materials produced by the building or demolition process. The best use of the land needs to be taken into consideration'

3.34 Guidance on the preparation of Circular Economy Statements has been published by the Greater London Authority¹⁷.

3.35 In preparing Local Plans, the Boroughs are encouraged to require Circular Economy Statements for development that is of a scale below that of referable development.

3.36 It is important to note that the Mayor has also set a target for London to be net zero carbon by 2030¹⁸.

East London

Local Plans and Guidance

3.37 Each of the Boroughs in East London already include policies in their Local Plans requiring proposals for development to consider how the waste arising at the development will be managed. This includes making provision for the temporary storage of waste prior to its collection. A summary of local plan policy requirements is set out in the appendix to the Climate Change Topic Paper.

London Borough of Barking and Dagenham Draft Local Plan

3.38 Once adopted, the new Local Plan for Barking and Dagenham¹⁹ will set out planning policy in the borough until 2037.

London Borough of Havering Local Plan (2016-2031)

3.39 The Local Plan for Havering sets out planning policy in the borough until 2031.

London Borough of Newham Local Plan (2018-2033)

3.40 The Local Plan for Newham sets out planning policy in the borough until 2033. In summer 2024, Newham will be undertaking a consultation on its Regulation 19 draft Submission Local Plan.

London Borough of Redbridge Local Plan (2015-2030)

3.41 The Local Plan for Redbridge sets out planning policy in the borough until 2030.

3.42 Some boroughs have also prepared guidance intended to assist architects in ensuring that waste management is taken into account in their designs for new housing development. A good example of this is the 'Waste Management Guidelines for Architects and Property Developers' prepared by the London Borough of Newham²⁰.

3.43 In some cases, the Boroughs' Climate Change Action Plans also reference the circular economy as a means of mitigating climate change, for example by minimising waste and making its management more sustainable.

3.44 Newham Council's 'Just Transition Plan' (December 2023) was prepared in response to its earlier Climate Change Emergency Statement (2019). The Plan takes a more holistic approach to climate change by considering matters

¹⁷ <https://www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance/circular-economy-statement-guidance>

¹⁸ <https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/climate-change/zero-carbon-london/pathways-net-zero-carbon-2030>

¹⁹ <https://www.lbbd.gov.uk/planning-building-control-and-local-land-charges/planning-guidance-and-policies/local-plan>

²⁰ <https://www.newham.gov.uk/downloads/file/7057/waste-management-guidelines-for-architects-and-property-developers>

other than decarbonisation. The Plan focuses on increasing equity, reducing emissions, and building long-term resilience²¹ and promotes circular economy initiatives such as encouraging collaboration with local reuse and repair organisations.

²¹ <https://www.newham.gov.uk/council/just-transition-plan>

4. Circular Economy and Climate Change

- 4.1 While the primary focus of the circular economy is delivering benefits for the wider environment while providing greater security in resource supply and boosting the economy, it also has a crucial role to play in mitigating the causes of climate change. This is recognised in the Government's Net Zero Strategy²² which includes a section on sustainable use of resources and notes: *'Net zero will mean maximising the value of resources within a more efficient circular economy.'*
- 4.2 A transition to a circular economy requires a decoupling of growth from consumption. By implementing policies which require a more circular approach, consumption and associated GHG emissions are reduced while growth is sustained.
- 4.3 As the use of renewable energy mitigates 55% of GHG emissions²³, current climate strategies often emphasise the need to decarbonise energy supplies and transport. However, while these emissions are an important concern, decarbonising these sectors alone will not be sufficient for the UK to meet its statutory target of net-zero emissions by 2050.
- 4.4 The remaining 45% of GHG emissions arises during the provision of goods, services and infrastructure required to meet society's needs e.g. vehicles, buildings, clothing and food (involving industrial, agricultural and land use processes). It is projected that through technological innovation and a shift in consumption patterns, two thirds of the GHG emissions from these sectors can be reduced by 2050²⁴. By increasing the use rate of goods and assets and recycling associated materials, GHG emissions resulting from their production will be reduced.
- 4.5 Together, building and construction are responsible for 39% of all carbon emissions in the world, with operational emissions (from energy used to heat, cool and light buildings) accounting for 28%. The remaining 11% comes from embodied carbon emissions, or 'upfront' carbon that is associated with materials as well as construction processes²⁵. According to a report by the Environmental Audit Committee²⁶, the built environment is responsible for 25% of the UK's total greenhouse gas emissions. The report also states that emissions from the built environment must be reduced if the UK is to meet net zero by 2050.
- 4.6 Within cities, 11% of all GHG emissions arise from refurbishing and constructing buildings which utilise materials such as aluminium, steel and concrete, of which 15% is wasted during construction and potentially 100% of all materials lost to landfill when buildings are demolished²⁷.

²² [Net Zero Strategy: Build Back Greener, BEIS, October 2021](#)

- 4.7 In East London over 2 million tonnes of Construction, Demolition and Excavation waste is produced each year²⁸. Reducing wastage in accordance with circular economy principles reduces the demand for primary raw materials (including minerals) which in turn reduces the GHG emissions associated with their extraction and production of construction materials such as aluminium, steel, and concrete.
- 4.8 Refurbishing existing development rather than constructing new buildings may play a pivotal role in reducing carbon emissions within the construction industry. Approximately 40% of residential buildings in Europe were built before the 1960s, and many of these structures lack modern energy-saving technologies. Instead of demolishing and replacing them with modern buildings that incorporate energy efficiency measures, refurbishment can integrate such features while preserving the embodied carbon present in existing materials. However, retrofitting existing, and especially older buildings, to modern high energy efficient standards has significant challenges and is not a panacea. By prioritising consideration of the feasibility of refurbishment over new construction, it may be possible to transition to a circular economy and significantly reduce GHG from the construction sector.
- 4.9 Designing buildings with their deconstruction in mind (Design for Deconstruction (DfD)) can also help reduce carbon emissions. DfD includes:
- Designing buildings such that they can change their use over time – minimising the need for refurbishments and redevelopment and considering how or where buildings can be repurposed or their life extended;
 - using systems and products that have long lifespans; and,
 - ensuring that materials can easily be recovered for reuse at the end of a building's life.
- 4.10 This approach reduces the amount of energy that would be required to produce new materials. Designing for deconstruction also contributes to lowering carbon emissions by minimising the quantity of waste and materials requiring transportation.
- 4.11 The separate ELJWP Topic Paper on Climate Change discusses the interaction between waste management climate change in more detail.

²³https://www.ellenmacarthurfoundation.org/assets/downloads/Completing_The_Picture_How_The_Circular_Economy-_Tackles_Climate_Change_V3_26_September.pdf

²⁴ <https://climate.ellenmacarthurfoundation.org/>

²⁵ World Green Building Council

²⁶ <https://publications.parliament.uk/pa/cm5803/cmselect/cmenvaud/103/report.html>

²⁷ Ellen MacArthur Foundation

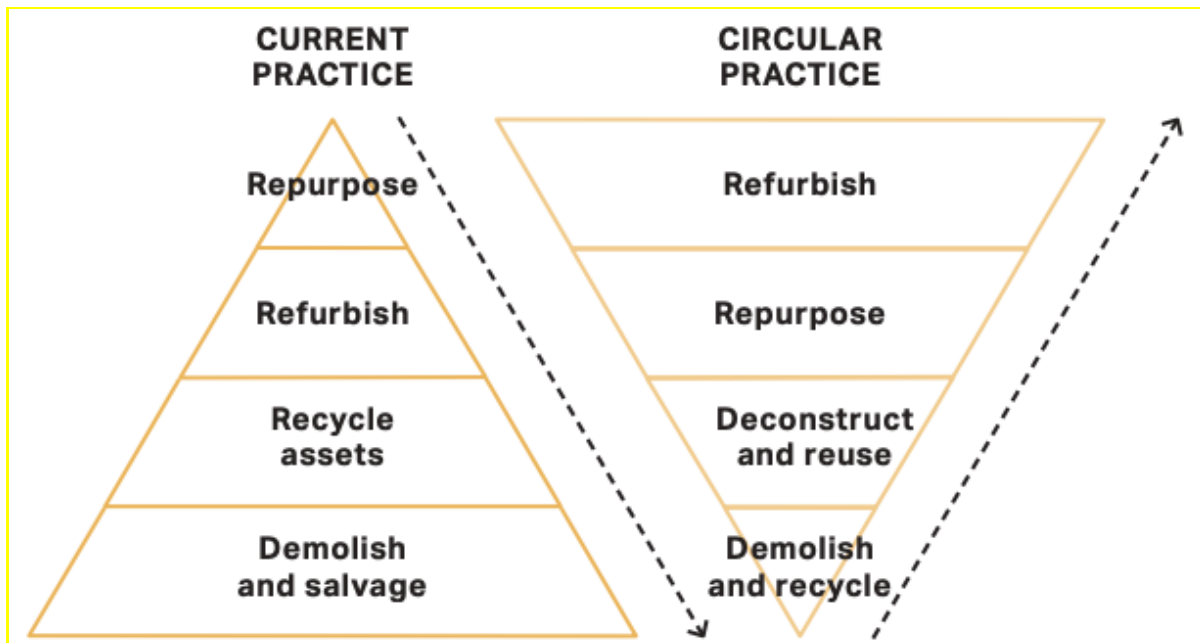
²⁸ See Waste Topic Paper, July 2024

5. Circular economy, land use and the built environment - implications

5.1 Implementing circular economy principles in land use and development involves the following:

- Optimising Existing Infrastructure: Making better use of existing buildings and infrastructure by promoting sharing and reuse, reducing the need for new construction.
- Designing for Longevity: Creating new buildings that maximise their useful life by allowing easy adaptation to various purposes.
- Shift from Demolition to Deconstruction: Instead of demolishing buildings, focussing on deconstruction to reclaim materials for reuse, repair, and refurbishment.
- Resilient Materials: Using non-hazardous materials that withstand damage from use and weathering.
- Prefabrication to Reduce Waste: Minimising waste during construction through pre-fabrication techniques.
- Elimination of Hazardous Materials: Avoiding use of hazardous materials to simplify end-of-life management.
- Promoting Reuse and Recycling: Ensuring waste generated during development can be easily reused or recycled, for example by providing separate storage for recyclable materials.
- Regenerative Design: Creating long-lasting developments that work with natural processes – harnessing sustainable resources such as solar gain, water harvesting, and biodiversity net gain.
- Renewable Energy Use: Incorporating renewable energy sources during construction and building use.
- Efficient Land Use: Maximising land efficiency.
- Restoration of Derelict Land: Revitalising abandoned or neglected land.
- Shared Facilities: Providing developments with shared amenities (e.g., laundries) to avoid unnecessary replication of consumer goods.
- Circular Activities Space: Including facilities for sharing, hiring, repairing, and reusing.
- Low-Carbon Transport: Prioritising low-carbon shared/public transportation.
- Ecosystem Services Protection: Safeguarding and enhancing ecosystem services and natural capital.

5.2 The diagram below illustrates the changes in approaches needed within the development industry to achieve a more circular economy:



Source: Design for a Circular Economy Primer, GLA²⁹

²⁹ https://www.london.gov.uk/sites/default/files/design_for_a_circular_economy_web_1.pdf

Challenges

- 5.3 *While recovering and recycling materials like aluminum and plastic benefits the environment, the process can be costly and so, in some cases, it may be more practical and economical to purchase new primary products³⁰.*
- 5.4 *Currently, there is a lack of suitable products and incentives for developers and architects to fully embrace approaches aligned with achieving a circular economy. Taxes on the landfilling of waste can discourage some wasteful practices, however, further efforts are needed to promote product reuse and recovery in construction, such as implementing Extended Producer Responsibility (EPR) for construction materials.*
- 5.5 *Achieving a fully circular economy in development isn't always feasible, in particular, material recycling in construction has limits as some materials degrade, do not meet required specification standards for example regarding structural strength, and impurity removal becomes increasingly challenging with each use cycle.*
- 5.6 Development in London often involves paying a premium for land and so properly handling waste in line with circular economy principles can be expensive due to the need for additional space to separate and store waste before reuse and recycling.
- 5.7 Sorting of waste can be time-intensive which has cost implications. Organising material collection and storage may also require additional administration. Monitoring material reuse and coordinating recycle collection by different contractors is essential to avoid overburdening sorting and storage space.
- 5.8 Sustainable materials and reuse pose challenges for construction workers. New or innovative materials may lack widespread availability, meet technical standards, or be unfamiliar. Deconstruction can also be a technical challenge, especially when demolition remains more common than disassembly. Refurbishment of existing buildings will not always be feasible, or necessarily the best environmental option.
- 5.9 'Material banks' have been identified as necessary to ensure construction follows circular economy principles. Material banks provide a resource for recycled materials and materials available for reuse, however such banks do not currently exist at the scale required.
- 5.10 Designing new buildings according to circular economy principles will require expert input from architects and specialist contractors. And the availability of skilled individuals could also be a barrier unless proper training and guidance are available.

³⁰ <https://www.circular.academy/circular-economy-critics-and-challenges/>

6. How can planning policy help facilitate a circular economy

- 6.1 Policies in the Local Plans adopted by the East London Boroughs already encourage developers to embrace circular economy principles in new development.
- 6.2 The London Plan³¹ requires Circular Economy Statements to accompany significant development proposals. These statements outline how new development will integrate circular economy practices in terms of layout, construction, and use. By requiring this, the policy ensures that applicants consider circular economy strategies during the design phase, maximising opportunities for thoughtful planning. The London Plan also requires Whole Life Carbon Assessments (WLCA) to be submitted with ‘referrable development’. WLCAs set out how the lifetime carbon emissions associated with a building’s construction, use and demolition and so there is overlap with Circular Economy Statements when the impact of materials use is assessed.
- 6.3 The need for Circular Economy Statements is reinforced by a report from the House of Commons Environmental Audit Committee³². The report examines ways to enhance the sustainability of the UK’s built environment and included the following recommendation:
- ‘circular economy statements including pre-demolition audits should be a requirement of planning applications which entail demolition of properties, as is already the case for certain applications which London boroughs are required to refer to the Mayor of London for consideration. The circular economy statement must explain why retrofit to match existing or new uses is not possible if demolition is proposed and be accompanied by a whole life carbon assessments of both new build and retrofit. This requirement should be introduced as soon as is practicable and not later than any package of reforms to the planning system which the Secretary of State for Levelling up, Housing and Communities is expected to introduce before the end of the current Parliament.’*
- 6.4 Applications for planning permission may also need to be accompanied by a ‘site waste management plan’. Some Local Plans include policies which place obligations on developers to detail the amount and type of waste that will be produced, how it will be reused or recycled and how unauthorised disposal of waste will be prevented in a ‘Site Waste Management Plan’.
- 6.5 Local Plans may also expect refurbishment and retention of buildings rather than demolition. The emerging Newham Local Plan refresh expects masterplanning in certain areas to consider refurbishment of existing residential development rather than its demolition.

³¹ https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf

6.6 Waste Local Plans typically incorporate policies designed to prioritise waste management according to the waste hierarchy. By doing so, they encourage development that enables waste reuse, recycling (including composting), and contributes to the transition toward a circular economy. Additionally, in certain instances, managing biogenic waste—such as producing biogas through anaerobic digestion—may produce renewable energy. Waste Local Plans importantly provide for the development of recycling facilities and capacity, including for construction and demolition waste, and production of recycled aggregates for future use in construction. Policies in the Local Plans and the current East London Waste Plan have already supported the development of existing waste facilities in East London which are already contributing to the achievement of a circular economy (See the Topic Paper on Waste Management).

6.7 The draft East London Joint Waste Plan fully embraces the need for circular economy approaches to be taken into account in new development. In particular it includes the following:

- **Draft Vision:**

‘By 2041, the principles of the circular economy will be fully integrated into all forms of development within East London, resulting in reduced waste production and increased emphasis on repair, refurbishment and reuse including that associated with built structures....’

- **Strategic Objectives:**

- **Strategic Objective 1: Significantly Reduce Waste Production Overall**

Encourage the integration of circular economy principles and the adoption of best practice design and construction approaches, to achieve a significant reduction in waste production by 2041.’

- **Strategic Objective 2: All Built Development Will Contribute to the Achievement of a Fully Functioning Circular Economy by 2041**

- *Promote the use of circular economy principles in design, construction and development in the built environment, emphasising reduced waste production and increased reuse and repair practices.*
- *Encourage development to consider and minimise waste during construction and operation, following the waste hierarchy in priority order.*
- *Enable delivery of development which will help establish a viable and easily accessible network of re-use, repair, and recycling services.*

³² House of Commons Environmental Audit Committee, Building to net zero: costing carbon in construction, First Report of Session 2022–23, May 2022
<https://committees.parliament.uk/work/1147/sustainability-of-the-built-environment/publications/>

- *Foster a shift in perception such that waste materials are viewed as a valuable resource, ensuring sustainable waste management is integral to the development and use of all new development.*
- *Encourage development that prioritises the use of reused, reusable, recycled and recyclable materials and minimises the use hazardous materials which could result in the production of hazardous waste in construction projects in East London'*

- **Policy:**

Policy JWP1: Circular Economy

- A. Development that constitutes or incorporates activities compatible with the circular economy will be encouraged.
- B. All development should follow the principles of a circular economy during construction and operation phases, which includes:
1. Preserving and repurposing existing structures where practical and appropriate; or
 2. demonstrating that repurposing existing built development is not practicable or the best environmental option; and
 3. reducing the generation of construction, demolition, and excavation waste and managing any such waste that arises from the development in accordance with the waste hierarchy and on the site of production where practicable; and
 4. designing for flexibility and longevity, recyclability, repurposing and refurbishment; and,
 5. sustainable construction methods, including maximising the use of reused, recycled and recyclable materials and techniques that reduce waste and facilitate the deconstruction and reuse of building components.

For major developments, this should be demonstrated through the submission of a Circular Economy Statement. All proposals should set out how waste arising from demolition (if applicable) and construction will be managed in a Site Waste Management Plan which, as appropriate, should incorporate a Pre-demolition Audit.

- C. New development (not including minor householder applications) should include detailed consideration of waste arising from its occupation and/or use including how waste will be stored, collected and managed through a Recycling and Waste Management Strategy that demonstrates:
1. Sufficient storage space will be provided to accommodate source separation and separate storage of recyclable materials;
 2. in flatted development and houses in multiple occupation, sufficient temporary on site storage, including for separated recyclables (including food waste) and items for reuse, until it is collected;
 3. storage and collection systems (such as dedicated spaces, storage areas, chutes, or underground waste collection systems) will ensure adequate and convenient access for all users and waste collection operatives, ease of maintenance and separation collection of recyclable materials and reusable items; and,
 4. systems and infrastructure will be monitored and maintained including contingency arrangements for system/infrastructure failures.
- D. Major waste sites should incorporate facilities for visitors to allow educational opportunities relating to the circular economy.