



Circular economy and built environment in London

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Circular London



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The latest estimates for net benefits of implementing circular economy opportunities in London's built environment are the most significant of our five focus areas. These opportunities could lead to GDP growth of between £3bn and £5bn annually by 2036.



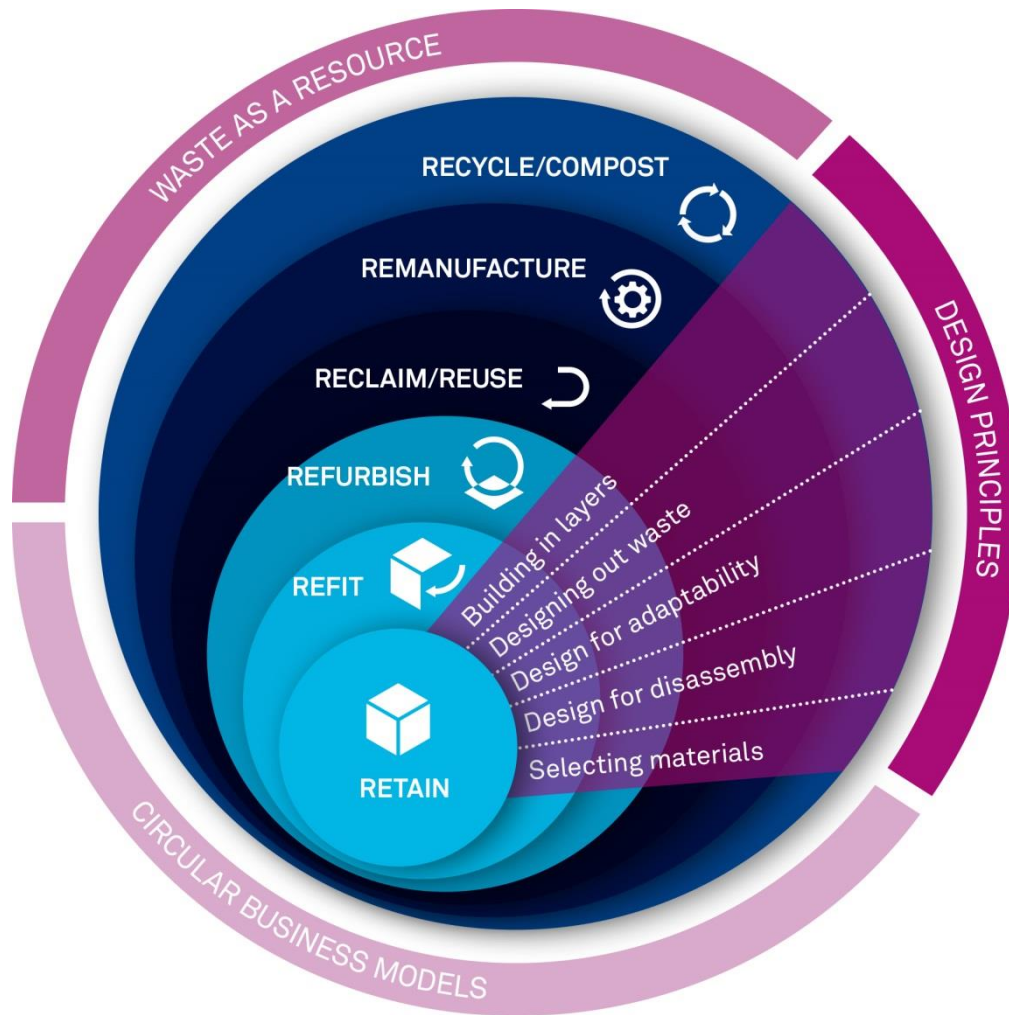
The circular economy opportunities in the built environment will add £3-5bn to GDP by 2036.

Context

London's office space will increase by 5 million m² by 2030, while over 40,000 units of housing per year need to be built over the next 10 years. Infrastructure development in the city is also a high priority, with CrossRail and the Thames Tideway Tunnel currently being built and extensions to the Northern and Metropolitan underground lines planned.

38 opportunity areas have been identified in the London Plan as places that will see unprecedented levels of regeneration and development during the plan period. The largest of these opportunity areas is formed by the Old Oak Park Royal Development Corporation in north west London where 25,500 new jobs and 65,500 new jobs will be created.

48% of London's waste is associated with the construction process.



Retain

When the Angel Building in Islington was redeveloped in 2010, much of the existing reinforced concrete frame was retained. This means that the overall embodied energy (and the cost) of the building was substantially less than if it had been demolished and a new structural frame built.

<https://www.concretecentre.com/Case-Studies/Angel-Building,-London.aspx>



Refit/refurbish

The National Union of Students bought an office on Grays Inn Road, London in 2014 and then undertook a refit using a range of innovative and sustainable features, including a 'product as service' business model for lighting.

<http://www.nus.org.uk/greenoffice>



Re-use

PLACE/Ladywell is London's first pop up village, and is designed to be deconstructed and relocated. Located on a site that would otherwise have been left vacant, it provides much needed housing for Lewisham Council: 24 homes plus commercial space. The buildings are designed to be relocated within the borough in a few years, when the whole site is redeveloped.

<http://asbp.org.uk/case-studies/placeladywell>



Remanufacture

Premier Sustain's Renew Centre in north London is an independent, commercial facility solely dedicated to remanufacturing desks, chairs and other office furniture. Furniture remodeling and refurbishment helps minimise waste and extends the lifecycle of office furniture. At their dedicated workshop they have invested in the tools and technology to ensure they are able to deliver high quality refurbished and resized desks.

<http://www.premiermoves.net/service/the-renew-centre/>



Recycle

Saint-Gobain designs, manufactures and distributes materials such as glass cullet. The company have an offer to clients to collect waste glass, which it uses as feedstock within its production line, with new glass having 30% recycled content. This diverts waste glass away from landfill, and uses less energy and fewer raw materials in the manufacturing process, which, in turn, produces less of the greenhouse gas CO₂.

<http://uk.saint-gobain-glass.com/node/199>



Challenges

- Design of a circular economy building currently requires extra effort in sourcing products and materials.
- Reclaimed products need to out-compete new products and must find secondary market places.
- Funding and time is required to dismantle buildings instead of demolishing them.
- New risk profiles are needed to understand 'products as service' business models.
- Space for storing re-used products

Route map actions

- Facilitate workshops for public and private sector clients to share the benefits of embedding circular economy in retro fit and new build
- Seek funding to carry out built environment demonstration projects in London based on learning from ongoing projects
- Work with construction, demolition and waste management companies to identify circular economy supply chain opportunities
- Research and demonstrate circular economy opportunities in ‘meanwhile’ spaces in the city

Collaboration hub

- Web site
- Networking
- Brokerage – demonstrators