

Deliveries by River

Tideway Modular Buildings

This information sheet aims to provide an example of how the Port of Tilbury can help with waterborne movements of modular buildings.

The Port of Tilbury formed with Marine Operator S Walsh to assist the Tideway Tunnel East team to deliver 99 modular office units to their Chamber Wharf site, via waterborne transport. The Port of Tilbury provided consolidation storage for the offices.

"Tideway is moving as much material as possible by river – instead of by road – which has benefits for air quality, congestion and vulnerable road users such as cyclists and pedestrians.

To date, we've moved more than two million tonnes of material by river, which has kept more than 200,000 lorries off London's road network.

But our river transport strategy has benefits for air quality too. For example, compared to modern standard Euro VI HGVs carrying the equivalent cargo, a 75 per cent engine load 1,000-tonne barge will produce 90 per cent less CO₂ (carbon dioxide), 95 per cent less CO (carbon monoxide), and 86 per cent less NO (nitric oxide).

The air quality benefits of using tugs and barges (instead of lorries) increases when larger vessels are used, with barges used on the project ranging in size from 800 to 1,600 tonnes, with the largest able to carry as much material as around 100 lorries."

Quote from Tideway highlighting the benefits of moving materials via the River Thames

Modular unit being lifted onto barge. Source: Port of Tilbury London Limited.



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Advantages



96 vehicle movements saved one way. Less congestion on London roads and on site



Environmentally sustainable, with a 95% reduction in CO₂ emissions



Using a flat –top barge, modules can be craned directly into position. There was a total of 22 barge movements



Potential 24/7 delivery, as there are no road barriers, leading to greater reliability



Cost effective – no need to have to pay congestion charge or ULEZ charges



Cyclist safety benefits

Challenges

- Ensuring the pontoons arrived with enough time to unload before low tide; an efficient turnaround of the pontoon being loaded and unloaded to optimum on the tide was essential
- Constraints of the Chamber Wharf site had to be overcome:
 - Within a residential area of central London
 - Road network around the site
 - Physical size of the site

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Modular Buildings

Utilising the Port's geographical position

Following on from the Tideway model, there is a potential opportunity for the Port of Tilbury to utilise its geographical location in the modular buildings market. This page briefly explains the concept of modular housing, and highlights some examples of riverside housing developments.

Modular Housing

- Housing units are manufactured in a factory off-site, and then transported to the construction site where they are assembled.
- Modular housing is potentially low cost and therefore affordable for the consumer.
- Housebuilders with existing modular housing factories include: Swan Housing and Berkeley Homes.
- IKEA modular housing developed by BoKlok, a well-known housebuilder in Sweden, and co-owned by IKEA and Skanska
- Currently in partnership with West Sussex Council to build 200 homes during the next five years.¹



Modular student residences. Source: Arup

Housing Developments along the Thames

The Port of Tilbury could be used as a hub for storage and consolidation of modular housing for residential developments along the Thames, as well as an ideal site to locate a modular manufacturing factory. Examples of such developments include:

- Regeneration taking place on the Greenwich Peninsula, with 7 new neighbourhoods over 150 acres, and an expected population of 34,000 people.²
- Regeneration of Thamesmead, spanning 250 acres with 11,500 new homes, and a collaboration of Peabody, the London Borough of Bexley, the Royal Borough of Greenwich, the GLA and TfL.³
- The new neighbourhood of Barking Riverside, where 10,800 new homes are being developed across 443 acres.⁴
- Millennium Mills development on the Royal Docks, a derelict building to be restored as part of the £3.5 billion regeneration of the area.⁵



Silvertown Quays. Source: Arup



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1. 'Ikea plans 200 flatpack homes in Bristol', Inside Housing (<https://www.insidehousing.co.uk/news/news/ikea-plans-200-flatpack-homes-in-bristol-63569>)
2. Greenwich Peninsula (www.greenwichpeninsula.co.uk)
3. Thamesmead (<https://www.thamesmeadnow.org.uk/the-story/>)
4. Barking Riverside London: (<https://barkingriverside.london/>)
5. The Millennium Mills are alive...(<https://www.londonroyaldocks.com/the-millennium-mills-are-alive/>)

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