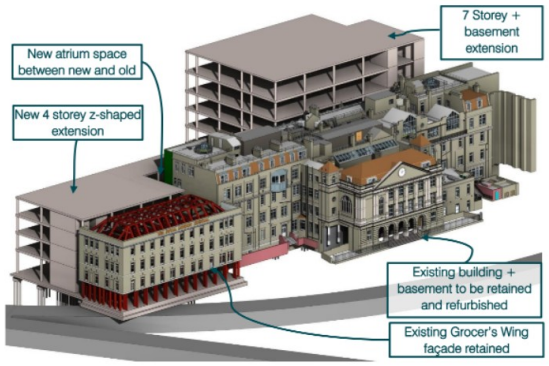
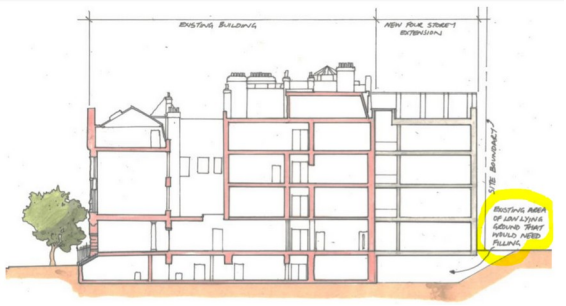
Tower Hamlets Town Hall
Submitted by Elliott Wood Partnership Limited

Awards category
Regeneration and retrofit – public buildings

Lead or collaborating organisation(s)	Client: London Borough of Tower Hamlets Architect: Allford Hall Monaghan Morris Civil & Structural Engineer: Elliott Wood Partnership Limited Landscape Architect: Levitt Bernstein MEP: Atelier10 Principal Contractor: Bouygues UK
Location of SuDS	Tower Hamlets Town Hall, Whitechapel Road, E1 1FR

1. SuDS overview

SuDS components used	• Living roofs • Tree pits • Attenuation tank
Size of the scheme and its local context	
Approximate age of scheme (years)	1 year (opened March 2023)
Benefits of the scheme	• Zero discharge to the combined public sewer, this lessens the burden on the local combined sewer network. Achieved using active attenuation, holding the water for reuse within the building. Demand for harvested water outweighs the supply, as a result, it is likely the site will never discharge to the sewer. • Living roofs, bird boxes and insect hotels provide biodiversity gains, attenuation, passive irrigation, reduce the urban heat island effect, and improve air quality and urban amenity space. • Project has a daily capacity of up to 2,470 civil staff plus visitors. The sustainable drainage scheme will provide a minimum of 75% of their daily WC flushing demand, addressing water scarcity issues. • Scheme designed to work with the site as inherited, placing the attenuation tank to eliminate the need for circa 500m^3 of excavation and the same in imported fill material that would otherwise be required. This improves the local environment during construction with reduced site logistics and vehicle movements whilst also improving buildability. • Using active attenuation technology reduced the volume of water storage that would otherwise be required for separated rainwater harvesting and attenuation. Combining rainwater harvesting and attenuation through the emerging technology realised a reduction in the size of the new basement construction that would have otherwise been required for harvesting tanks and plant.

Briefly describe the scheme	We recognise that this project is not a typical exemplar SuDS scheme, it uses hard engineered buried solutions, but it does showcase innovative responses on a restricted heritage site offering broader societal benefits despite limitations. A circa £150m re-development of the 1757 Grade II former Royal London Hospital into a new Civic Centre for the London Borough of Tower Hamlets (LBTH). The building occupies approximately 80% of the site area.  The residual 20% external areas were constrained by: • Buried archaeology • Shallow London Underground tunnels • Buried substation • Existing Root protection areas Historic demolition to the rear of the listed building took it down to the former basement slab. As a result, the site was inherited with a low-lying area under which the new-build wrap around extension would be constructed. However, no basement was required in this area. Instead of importing fill, we identified and used this opportunity for locating an attenuation tank to exploit this inherited void over other techniques we were considering, such as blue roofs.  This solution worked with the grain of the inherited site conditions and is elevated further by active attenuation to tackle water scarcity and reduce the peak site discharge to zero. The former site discharged surface water to a 450mm diameter Thames Water combined sewer in Whitechapel Road.

2. SuDS details

No.	Question	Answer
1	What difference has this scheme made to the local community or area?	The new town hall will make full use of its location in the most accessible part of Tower Hamlets. The building has been designed to be more than just an office for council staff. At its core will be an accessible environment, which will bring residents together and enables them to access council services in one centralised location.
2	What is exceptional about this scheme beyond a standard approach?	Leveraging inherited site conditions as an opportunity to produce a zero discharge site against the backdrop of a heavily constrained heritage site. This approach allowed us to produce a scheme that tackles water scarcity, minimise material movements and site logistics and thus impact on the local community during construction whilst also improving flood risk locally.
3	How much work went into getting this scheme realised?	The Town Hall project has been almost a decade in the making. The first outline feasibility study was undertaken in 2014. Since then, a monumental amount of time, energy and expertise has gone into realising the transformation of the old Royal London Hospital building. It is an incredibly constrained site that has presented a plethora of engineering and architectural challenges. Each one of these challenges has been worked through with a high degree of skill and innovation and the outcome is a building we are all proud of.
4	Is this scheme part of a masterplan or integrated into other initiatives?	The proposed site is not part of a masterplan but it does sit at the heart of an area of Tower Hamlets where ongoing development is guided by the regeneration strategy “The Whitechapel Vision”, as ratified by LBTH in 2013.
5	What value does this scheme provide to the local area and beyond?	As well as being an incredibly exciting build project, the relocation of the Town Hall to the old Royal London Hospital site will ensure the Borough’s rich history is preserved and celebrated by generations to come. The entire ground floor will be dedicated for public use. Residents will be able to access council services, attend public meetings and utilise touchdown workspace. Council staff will be

		joined by colleagues from Tower Hamlets Homes and the local Clinical Commissioning Group to ensure improved access to services, better partnership working and more efficient service delivery.
6	What challenges/problems needed to be addressed to realise this scheme?	Undertaking the necessary works to sympathetically breathe new life into the Grade II listed building whilst also working around many challenges such as a shallow buried London Underground tunnels, buried archaeology, neighbouring buildings or essential access on three of the four sides of the site boundary.
7	How does the scheme address related issues such as water scarcity, nutrient neutrality, or biodiversity net gain?	The scheme uses active attenuation technology to retain all rainwater for non-potable reuse on site (WC flushing, washing machines and irrigation) addressing the issue of water scarcity. In addition, the use of living roofs combined with bird boxes and insect hotels provides biodiversity gains.
8	Is learning from the scheme continually captured and communicated? Please give examples.	Since opening, the active attenuation system has been monitored remotely via the building management system. This system allows you to see the water levels in the tank, volume re-used and inflow volume expected in the near future. Through monitoring this system, it is possible to modify safety margins and usage to enable us to benchmark the real-world feedback against the theoretical targets. From this, we can work with the facilities management team to review and possibly amend system variables such as the safety margins to increase the yield.
9	What approaches/measures are taken to ensure the scheme is properly managed and maintained?	The scheme has been carefully designed to minimise ongoing maintenance. Products and suppliers have been selected to ensure replacement parts and servicing are easily attainable. In addition, with the client also being the end user, it has allowed us to embed LBTH personnel into every stage of the design through stakeholder engagement. This level of involvement has provided design transparency to LBTH and scheme familiarity. Combined with thorough O&M documentation and handovers to their facilities management team in a phased manner at the end of the project, management and maintenance of the scheme should be straight forward.

		The project is also BIM Level 2 compliant. This provides a digital model of the project where individual built elements and parts can be isolated, allowing key information to be extracted such as manufacturers, model numbers, O&M manuals and other key documentation that will assist in the ongoing management and maintenance of the scheme.
10	Have you collected any feedback on your scheme? What do people say about it? Can you provide any quotes?	Greater London Authority – Stage 1 feedback at planning: *"The development will achieve zero peak run-off for the site through the use of rainwater harvesting, living roofs and sub-surface attenuation tanks. This approach is a welcome response to a complex and challenging heritage redevelopment…"* John Biggs, Mayor of Tower Hamlets: *"At its heart will be a community feel with a café, outdoor spaces, and an idea store. Whether you want to host a meeting, borrow a book or get involved in what is happening in your neighbourhood, the town hall will bring people together and make Tower Hamlets a better place."*

3. **Supporting materials**

Image (low resolution)	**Caption**	**Image credit**
	Grocers Wings	Elliott Wood

	Location of attenuation tank prior to being covered	Elliott Wood
	Finished internal space – residents' hub	Tower Hamlets Town Hall
	Attenuation tank internals form within void left from past demolition	Elliott Wood
	Stats of the design saving for materials and vehicle movements	Elliott Wood