



3 Duke Street,
Richmond
Sustainability Statement

Job No: 5386

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1.0 Introduction

- 1.1 This Sustainability Statement has been prepared to support a planning application for the proposed redevelopment of the site at 3 Duke Street, Richmond, TW9 1HP.
- 1.2 The report takes an overarching strategy for improvements and measures to be adopted in order to reduce the environmental impact of the scheme.
- 1.3 It looks primarily at measures other than those which reduce Energy Consumption and CO₂ emissions, which are outlined fully within the Energy Statement submitted with the planning application.
- 1.4 . These are:
 - Passive Design Measures
 - Potable Water Usage
 - Surface Water and Flooding
 - Transport
 - Sustainable Construction

2.0 Project Summary

- 2.1 The proposal is to extend above the existing single storey building on the site to provide 1no. new two-bedroom and 3no. one-bedroom residential dwelling apartments across the erection of three additional storeys.
- 2.2 The site location is shown below.

Site Location



3.0 Policy Requirements and Drivers

3.1 The relevant planning policy documents for this site, relating to sustainability are:

- The National Planning Policy Framework (NPPF)
- The London Plan (2021)
- LBRuT Sustainable Construction Checklist.

3.2 It is our understanding that the new Richmond Local Plan will be adopted in Winter 2024/25.

3.3 In light of these documents and through the developer and design team's commitment to reducing the impact of the development on the environment, this report sets out some of the measures that will be adopted or considered.

4.0 Passive Design Measures

- 4.1 The design team will incorporate features to reduce the environmental impact of the scheme wherever possible.
- 4.2 Passive design is a method of using the features of the building to reduce the energy consumption and environmental impact, without the use of mechanical or electrical plant.
- 4.3 These techniques include solar orientation, natural ventilation, dual aspect design where possible, low-medium thermal mass, air tightness, and fenestration design.
- 4.4 Some of these techniques are not possible on all sites, but the design team for this project have endeavoured to include them where feasible.
- 4.5 Proximity to existing buildings and associated outlook from apartments has also informed orientation, massing, organisation of internal spaces and fenestration.
- 4.6 All proposed units will be dual aspect, allowing fresh air to pass freely through the building.
- 4.7 All of the units have access to a private balcony.

5.0 Potable Water Usage

- 5.1 It is a policy requirement that new residential dwellings are expected to have internal water usage of less than the 105l/person/day in accordance with Building Regulations Part G.
- 5.2 A target of 95l/person/day has been proposed for this site, which goes beyond any targets set by the local authority.
- 5.3 This is calculated using the Part G Water Usage tool. This has been used at this early stage to give a guide to the potential internal water usage.
- 5.4 Please note that the overall usage is per person and so is not affected by the number of fittings installed, provided they are all the same.
- 5.5 The assumptions used for the calculations are.

- Basin Taps and Kitchen taps: 3l/min at 3bar
- Showers: 8l/min at 3bar
- Baths: 145l to overflow
- WCs: Dual flush - 4/2.6l
- No Waste Disposal
- No Water Softener
- Washing Machine: Default value (8.17l/kg load)
- Dishwasher: Default value (1.25l/place setting)

Total Predicted Usage 94.7l/person/day

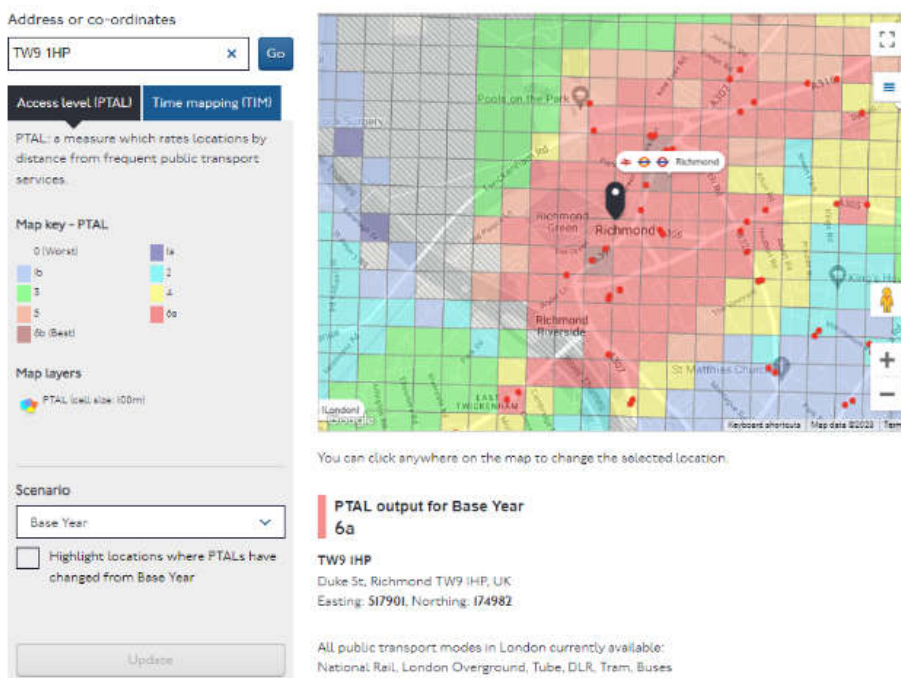
6.0 Surface Water and Flooding

- 6.1 New developments should seek to mitigate against the future effects of climate change and so far as possible, reduce water runoff from the site and buildings to alleviate the problems of flooding.
- 6.2 At the very least, developers should aim to make the situation after construction no worse than it was before. This is considered to be the case here, as the impermeable area of the site will not increase as a result of the new development.
- 6.3 It is proposed that a blue roof drainage system will capture rainwater on the main roof of the building and attenuate the flow to the surface water sewer.
- 6.4 The site is located in Flood Zone 1, which means it is at a low risk of flooding from rivers and the sea.
- 6.5 Further details regarding the Flood Risk & Drainage Strategy for the site will be submitted separately.

7.0 Transport

- 7.1 Transport arrangements are a key consideration for any new development. The accessibility of public transport to a site is of high importance to both developers and end users.
- 7.2 This can be assessed using the PTAL (Public Transport Access Levels) system. This site has a rating of 6a, where 0 is the worst score and 6b is the best.
- 7.3 The site is within a short walking distance of Richmond Underground Station and multiple daytime bus routes.
- 7.4 Secure and accessible cycle storage is to be provided to help encourage the future occupants to make more journeys by bicycle.
- 7.5 There is no dedicated off-street parking space proposed for the development.

WebCAT



Site PTAL Rating - © TFL

8.0 Sustainable Construction

- 8.1 It is clearly important that a building should be designed to reduce its environmental impact so far as is reasonably practical and the measures proposed for doing this are detailed in this report and the accompanying Energy Statement.
- 8.2 Whilst the specific measures to be taken to ensure this is also mitigated will be the responsibility of the contractor once building work commences. This section sets out suitable measures that should be considered and adopted where appropriate.
- 8.3 **Site Waste Management:**
- The build will be operated under a Site Waste Management Plan which will identify the key sources of construction waste, methods for diverting this waste from landfill, identify those responsible for doing so and monitor performance.
 - There are numerous tools available for doing this, including online facilities such as BRE's SMARTWaste system.
 - This allows the contractor to log all waste-related activities and report on performance at all stages of the build.
 - It also allows monitoring and reporting of energy and water use on site (see "Consumption Monitoring", below) and analysis of the carbon impact for transportation and material usage.
 - Although Site Waste Management Plans are no longer a legal requirement, they offer significant environmental benefits and also cost savings, by encouraging waste reduction across the construction team.

8.0 Sustainable Construction

8.7 Pollution

- The contractor will have in place policies on site to minimize air and water pollution from site-based activities.
- Air and water pollution on site can have a detrimental impact on the environment and on the health of local residents
- Examples of the clauses that such policies should contain are:

8.7.1 All surface water must discharge into a surface water drain.

8.7.2 All foul water must discharge into the foul water drain.

8.7.3 All oil and diesel drums must be stored on an impervious base with oil-tight bund with no drainage outlet. All drill pipes, fill pipes and sight gauges must also be stored on this bund.

8.7.4 Leaking or empty oil drums must be removed from site and disposed of via a licensed waste disposal contractor.

8.7.5 A stand pipe and hose is to be made available at all times on site to damp down arising dust from the demolition process. Particular attention must be paid to damping down procedures during periods of dry and hot weather.

8.7.6 All skips must be covered with a suitable cover i.e. tarpaulin or plastic dust sheets.

8.7.7 Any lorries removing waste from site must be suitably covered prior to leaving site.

8.7.8 A wheel wash will be provided where practical.

8.0 Sustainable Construction

8.12 Consumption Monitoring

- In line with the ideals of the Site Waste Management Plan the developer will monitor resources consumption on site in line with industry KPI benchmarks.
- Electricity and water usage will be monitored on site and targets set.
- The results of the meter readings will then be compared to the set benchmark targets using industry standard KPIs so that feedback can be given to the site staff.
- This will have the effect of encouraging responsible resource usage and consumption reduction where possible.

9.0 Conclusions

- 9.1 The Sustainability Strategy for the development has been developed with the design team to comply with the relevant environmental policies of the NPPF, The London Plan, and the LBRuT Sustainable Construction Checklist.
- 9.2 Measures to be included within the design cover areas such as reductions in potable water use, resource efficiency and pollution both through the build process and post-occupation,
- 9.3 The proposed development at 3 Duke Street TW9, honours, and aims to go beyond, the intentions of the policy requirements in order to provide a well-designed and built development which limits its impacts on the environment both during its construction and beyond.



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