

Chapter 4: The Proposed Development

INTRODUCTION

4.1 This chapter of the ES presents a description of the Proposed Development sought for approval as part of the detailed planning application. It provides sufficient information on the Proposed Development to aid the identification and assessment of potential environmental impacts and likely environmental effects across the technical topic areas addressed by the EIA as presented in *ES Volume 1, Chapter 6: Air Quality* and *ES Volume 1, Chapter 7: Ecology*.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

4.2 The Proposed Development will provide a total of 36 residential units, in addition to a new David Lloyd Leisure Centre. The Proposed Development is illustrated in Figure 4.1 and Figure 4.2. The layout of the Proposed Development is shown in Figure 4.3.

4.3 The Proposed Development comprises the construction of ten residential blocks which will house the 36 residential units. Both the residential units and the proposed leisure centre will be three storeys in height, in line with the surrounding context.

4.4 Table 4.1 outlines the total amount of Net Internal Area (NIA), Gross Internal Area (GIA) and Gross External Area (GEA) for the Proposed Development for each land use type. Additionally, Table 4.1 outlines the number of parking spaces provided for both the residential and leisure centre space.

Table 4.1 Proposed Land Uses and Quantum of Development

Land Use (Use Class)	Parking Spaces	NIA (m ²)	GIA (m ²)	GEA (m ²)
Residential (C3)	90	5,422	5,670	6,432
David Lloyd Leisure Centre (D2)	280	4,811	5,188	5,836
Total	370	10,233	10,858	12,268

4.5 The residential element of the Proposed Development will consist of four different house sizes (2-5 bed units). Table 4.2 presents the number of residential units.

Table 4.2 Residential unit Mix

No. of Bedrooms	Number of Units
2/3 bed	5
3 bed	13
4 bed	16
5 bed	2
Total	36

Figure 4.1 Oblique Aerial View of the Proposed Development



Figure 4.2 Proposed David Lloyd Leisure Centre



Figure 4.3 Layout of the Proposed Development

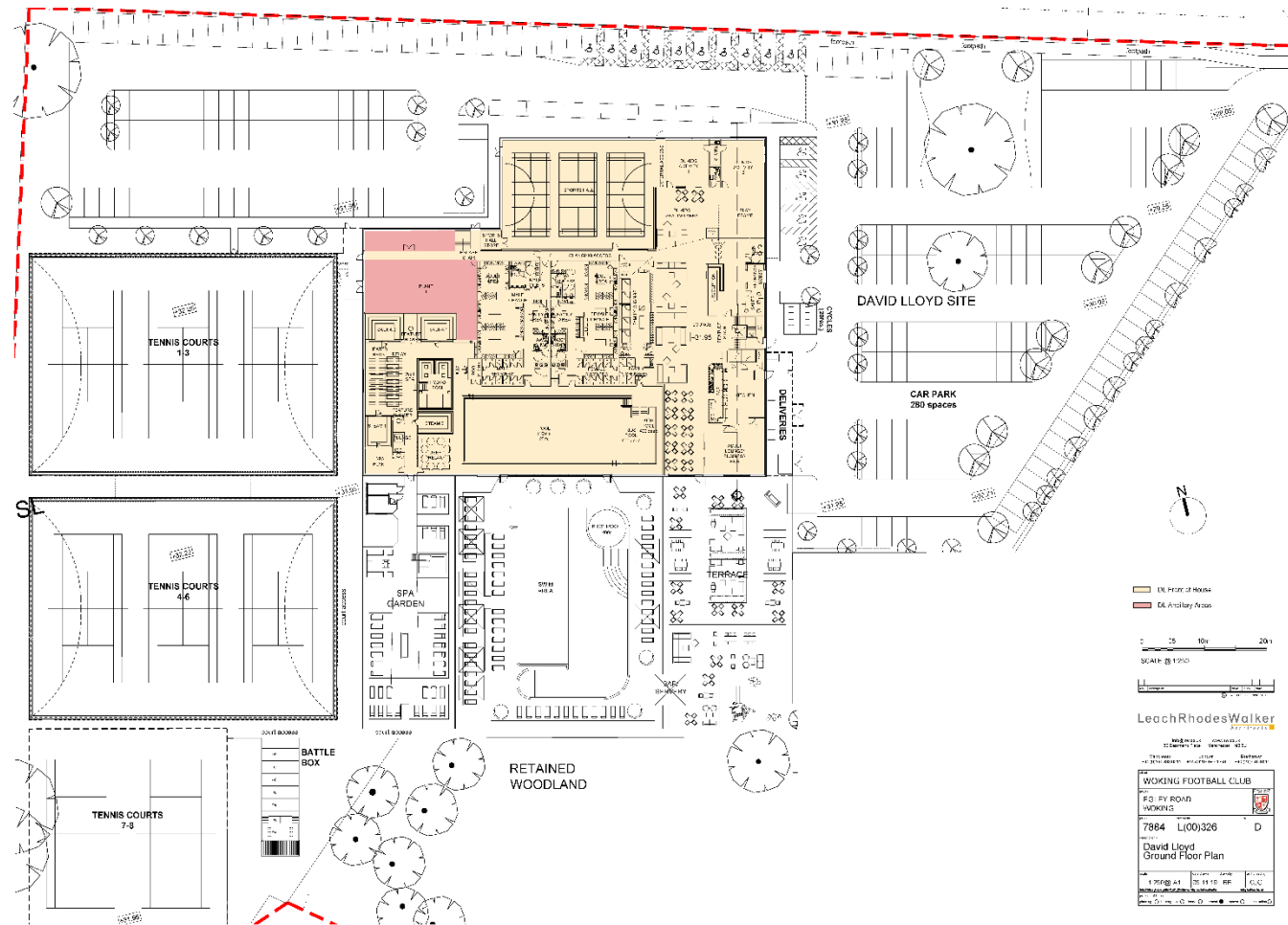


David Lloyd Leisure Centre

Layout

4.6 In addition to the main leisure centre building, external sports and leisure facilities are proposed to the west and south of the building. These include eight tennis courts, an outdoor swimming pool and a terrace, as shown in Figure 4.4. Car parking facilities are located to the north and east of the main building.

Figure 4.4 Layout of David Lloyd Leisure Centre



Massing

4.7 The proposed David Lloyd Leisure Centre will be a maximum of three storeys in height with a curved roof on the eastern side, the main entrance. The maximum height of the proposed David Lloyd Leisure Centre is 43.95m AOD.

Appearance

- 4.8 The building will use a mix of materials and finishes, as seen in Figure 4.5.
- 4.9 The eastern elevation, as indicated by 'Elevation A-A' on Figure 4.5, is predominately made up of masonry on the lower level of the façade with a timber effect feature finish above. The northern, 'Elevation D-D', and western, 'Elevation C-C', elevations incorporate a metallic effect rainscreen cladding in addition to the masonry and timber.
- 4.10 The roof will be constructed of a standing seam metallic sheet roof with polyester powder coated aluminium capping.

Figure 4.5 Appearance of David Lloyd Leisure Centre



ELEVATION A-A



ELEVATION B-B



ELEVATION C-C



ELEVATION D-D

Residential

Layout

4.11 The proposed houses form a new residential street to the east the site, culminating in the retained woodland to the south. The individual house types are mixed to create blocks with a unique style and character. Each house has front and rear access with parking to the front and private amenity space to the rear (Figure 4.6).

Figure 4.6 Layout of Residential Units



Massing

4.12 The 36 residential units will be split across ten blocks, all of which will be three storeys in height with a maximum height of 42.45m AOD. The internal and boundary street elevations can be seen in Figure 4.7.

Figure 4.7 Internal and Boundary Street Elevation of Residential Units



Appearance

4.13 Of the ten blocks, there are seven different block types in terms of appearance. Each block has a unique configuration of materials ensuring a variety of home styles are provided (Figure 4.8).

Figure 4.8 Residential Appearance



LANDSCAPING

- 4.14 The overall objective of the landscape strategy is to create a high-quality environment that provides for the residential and leisure uses of the site, see Figure 4.11. The design of the external areas will utilise a simple and complementary hard and soft palette to create an attractive place to live or visit.
 - 4.15 The site also includes a large area of existing woodland; wherever possible, mature trees will be retained.
- Hard Landscape Strategy**
- 4.16 The material palette provides the development with high quality, robust and appropriate materials to create a legible external environment for the residential streetscape and external area of the David Lloyd Leisure Centre. Figure 4.9
 - 4.17 All vehicle areas will be asphalt with buff colour tarmac to pavement to provide clear walking routes. Granite setts provide rumble strips in various locations around the development to assist in traffic calming.
 - 4.18 Herringbone block paving is proposed to parking bays within the health club car park and on the residential driveways.
 - 4.19 Buff coloured textured paving slabs will be used along pedestrian entrances to private patios.
 - 4.20 A smooth ground slab paving is proposed to define the entrance to the gym.

Figure 4.9 Hard Landscape Strategy



Planting Strategy

- 4.21 The planting strategy will utilise a combination of native and ornamental trees, shrubs, hedges and grassed areas. Figure 4.10
- 4.22 Tree selection will respond to the growing space available, using larger growing species wherever possible.
- 4.23 Evergreen planting will be used to give a robust planted framework to the spaces while the selected range of species will provide a year round visual interest and increase biodiversity through the selection of native and wildlife friendly species.

Figure 4.10 Planting Strategy



Figure 4.11 Landscape Strategy



Legend

1. Existing woodland to be retained
2. Existing trees to be retained
3. Main access to Site
4. Residential road with tree, hedge and shrub planting to front gardens, asphalt road, buff colour tarmac pavements and block paving to drives.
5. Entrance to health club car park
6. Health club car park with tarmac to access route and block paving to car parking bays
7. Proposed paved area to health club entrance
8. Proposed robust tree and shrub planting to commercial car park
9. Proposed buffer planting to railway line
10. Grassed areas
11. Rear gardens to properties

ACCESS, PARKING AND SERVICING

- 4.24 This section provides details regarding the proposed access to the site, parking provision and how servicing will be undertaken.

Access

Pedestrian and Cycle

- 4.25 Access to the site by pedestrians and cyclists will be from a newly formed road to the south of Hoe Valley School.
- 4.26 There is a network of pedestrian footways located within Mayford and the periphery of the site. The roads within the village include pedestrian footpaths on both sides of the carriageway and there are pedestrian crossing islands at all the key junctions located within the village.
- 4.27 There is a shared pedestrian and cyclist path on Egley Road which passes the site. This path continues north on Egley Road until it meets with Turnoak Roundabout. Following the shared path along Wych Hill Lane cyclists will be able to join National Cycle Network (NCN) Route 223 which can be used to link to Woking and Chertsey to the north. Guildford can be reached to the south on this cycle route. NCN Route 223 provides further access to a number of designated cycle routes such as NCN Route 22 to the south which links with South London and Portsmouth, and NCN Route 223 which continues to the south and links with Brighton.

Vehicular

- 4.28 The main service access to the site will be from the north from Egley Road. It is envisaged that the Proposed Development will utilise this access in conjunction with the existing uses. The access road will be extended in a southern direction through the form of a priority junction.
- 4.29 The access to the site will enter from Egley Road on the eastern boundary, which links with Turnoak Roundabout to the north and Guildford Road to the south. Egley Road dissects a residential area with a single carriageway 40mph route.
- 4.30 Vehicles for both the leisure centre and residential aspects of the Proposed Development will access the site from the newly formed road to the south of Hoe Valley School.

Servicing Access

- 4.31 Servicing and refuse vehicles will access the Proposed Development from the Egley Road access located to the north of the Proposed Development.
- 4.32 Servicing for unloading or deliveries is provided along the main boulevard for the residential units and next to the main entrance, facing the car park, for the David Lloyd Leisure Centre.

Car Parking

- 4.33 Car parking provision for the Proposed Development is in line with WBC requirements, as set out in the Parking Standards Supplementary Planning Document. Car parking for the David Lloyd Leisure centre will be provided to the north and east of the main building; a total of 280 spaces will be provided. Residential car parking, 90 space, will be provided off-street in front of residential units.

Cycle Parking

- 4.34 A total of 72 cycle spaces will be provided for the residential units and 20 cycle spaces will be provided for the David Lloyd Leisure Centre located to the north and east of the David Lloyd Leisure Centre.
- 4.35 Cycle Parking is in accordance with WBCs Parking Standards Supplementary Planning document.

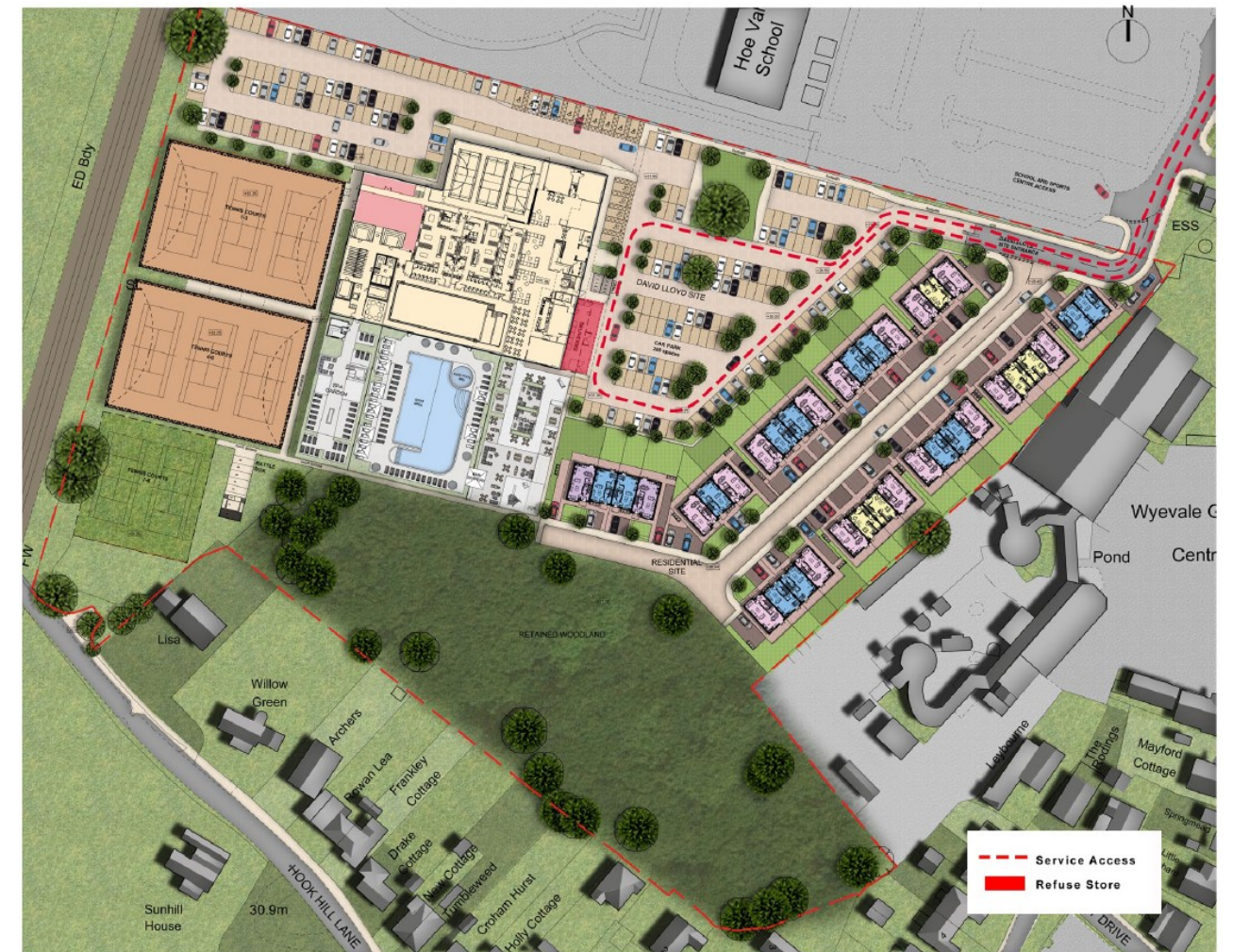
Waste Management

- 4.36 The overall strategy for refuse collection from the houses is via individual refuse stores, which have been incorporated in the design in a sympathetic manner.
- 4.37 Refuse collection will be undertaken along the new street. All bins will be moved from refuse stores to collection points within the Proposed Development and will be returned following collection.
- 4.38 The number of refuse bins provision has been calculated using standard guidance. The capacity of the external refuse stores is based on the provision of 3 x 240 litre bins per unit. This can be subdivided to take account of

recycling as described in the waste and recycling provision for new residential developments produced by WBC. These numbers will need to be agreed with WBC to ensure they meet the requirements of refuse collection.

- 4.39 All bins from the David Lloyd Leisure Centre will be stored in the service enclosure area, beside the main entrance. Waste will be collected from the service enclosure, with access through the main car park (Figure 4.12).

Figure 4.12 David Lloyd Service Enclosure Area and Access Route



ENVIRONMENTAL FEATURES OF PROPOSED DEVELOPMENT

Climate Change

- 4.40 The Institute of Environmental Management and Assessment (IEMA) principles on climate change mitigation and EIA identify climate change as one of the defining environmental policy drivers of the future, and that action to address greenhouse gas (GHG) emissions is essential.
- 4.41 The principles are based on the following considerations:
- All projects create GHG emissions that contribute to climate change;
 - Climate change will lead to significant environmental effects; and
 - There is a carbon budget that defines a level of dangerous climate changes whereby any GHG emission within that budget can be considered as significant.
- 4.42 As a result, IEMA (2017) recommend that all GHG emissions, including any residual emissions following adoption of any mitigation measures, are to be determined as significant.
- 4.43 A GHG Assessment was therefore carried out (*ES Volume 2, Appendix: EIA Methodology (Annex 4)*), the purpose of which was to quantify the anticipated GHG emissions and contextualise the project's contribution to an existing carbon budget. Based on the assessment undertaken, the contribution of emissions in the context of the budget are deemed to be low. The arising GHG emissions represent a small proportion of national GHG emissions. With the adoption of mitigation measures, as well as continuing decarbonisation of the energy network, it is anticipated that emissions will be reduced over time.
- 4.44 The total estimate of GHG emissions for the Proposed Development over the 60-year reference study period is 59,460 tCO₂e. The GHG emissions assessment associated with operational energy is the largest contributor to GHG emissions throughout the lifecycle of the Proposed Development. To reduce these emissions, over the course of the ongoing detailed design, opportunities to utilise higher efficiency equipment and comprehensive energy management will be considered.

Water Demand and Supply and Drainage (Surface Water and Foul)

- 4.45 The EA's flood map for planning identifies that the entire site lies within Flood Zone 1 and, therefore, flood risk from rivers and the sea is considered to be low. The EA's surface water flood risk map identifies that the majority of the site has a very low risk of surface water flooding. There is a small area of medium to high surface water flood risk located in the south-western extent of the site. However, the EA's flood mapping indicates that this is limited in size and does not form part of surface water flow path (i.e. it is ultimately ponded water).
- 4.46 The SFRA indicates the site lies within a postcode area with six records of sewer flooding in the past ten years therefore the site has a low risk of sewer flooding. A review of further EA maps and the SFRA have identified that there are no other significant sources of flooding at the site, i.e. from groundwater or reservoirs. The SFRA and the EA's historic flood map indicate that there are no historic flood records for the site or the surrounding area.
- 4.47 The site is located entirely within Flood Zone 1 (low risk) and therefore safe access/egress via Egley Road would not be affected by fluvial or tidal flooding. There are small areas of low surface water flood risk along Egley Road; however, the flood depth is estimated to be less than 300 mm and therefore safe access/egress from the site would still be possible.
- 4.48 The proposed drainage strategy comprises of lined permeable paving and geo-cellular storage and would ensure that surface water runoff rates for the Proposed Development would be limited to Qbar¹ which is a betterment on both the existing drainage arrangement and greenfield runoff rates. Surface water runoff would discharge into the public sewer to the north of the site. Attenuation would be provided for all return periods up to and including the 1 in 100 year event inclusive of a 40% allowance for climate change.

The FRA has therefore demonstrated that the Proposed Development will be safe and that it would not increase flood risk elsewhere. The proposed land use is classified as 'more vulnerable' for the residential element and

¹ Qbar or the mean annual flood, is the value of the average annual flood event recorded in a river. This flow rate is used to provide a measure of the greenfield runoff performance of a site in its natural state to enable flow rate criteria to be set for post development surface water discharges for various return periods.

'less vulnerable' for the leisure centre and is considered appropriate in relation to the flood risk vulnerability classifications set in the NPPF.

Energy and Sustainability

Residential

- 4.49 Elementa Consulting prepared the Energy Strategy for the residential element of the Proposed Development, which accompanies the Planning Application. In order to optimise design solutions to maximise carbon reductions, the following energy hierarchy was adopted to help guide decisions about which energy measures are appropriate:
- Be Lean: using less energy and utilising passive sustainable design measures;
 - Be Clean: using Combined Heat and Power (CHP) system and district heating networks; and
 - Be Green: using renewable energy where possible, to further reduce carbon emissions.
- 4.50 The Energy strategy provides a number of measures to ensure the Proposed Development:
- Complies with part L1A approved documents of Building Regulations; and
 - Achieves an overall 39.8% carbon emissions reduction against the building regulation minimum requirements.

Energy Plant

- 4.51 Air Source Heat Pumps (ASHP) will provide domestic hot water and space heating.

David Lloyd Leisure Centre

- 4.52 Hulley & Kirkwood Consulting Engineers prepared the Energy Strategy for the David Lloyd Leisure Centre element of the Proposed Development, which accompanies the Planning Application. In order to optimise design solutions to maximise carbon reductions, the following energy hierarchy was adopted to help guide decisions about which energy measures are appropriate:
- Energy efficient design;
 - Low carbon technologies; and
 - Renewable energy technologies.
- 4.53 The proposed strategy minimises energy loss and consumption by improving building fabrics and installing high efficiency equipment. This will provide improvements of 3.81% for the new leisure centre against Part L 2013 notional targets. The CHP and Air Source Heat Pumps that will be installed in the new leisure centre will provide a low carbon and renewable energy saving of 26.61%. Overall the new leisure centre will achieve a 30.42% improvement on Part L 2013 Building regulations. The development as a whole will achieve CO₂ savings of 292 tonnes per annum.

Energy Plant

- 4.54 One 150kWe gas fired CHP unit and three gas fired 500kW condensing boiler plant units are proposed for the heating and hot water system in the new leisure centre.

Lighting

- 4.55 A lighting scheme will be produced, which will specify light levels in accordance with the relevant standards including BS 5489-1:2013 and Institute of Lighting Professionals (ILP) Guidance. Wherever possible, light sources will be integrated within architectural features. No floodlighting will be used in any part of the Proposed Development, including the tennis courts associated with the David Lloyd Leisure Centre.
- 4.56 Lighting will be restricted to standard external lighting i.e. street and car park lighting, to ensure a safe, secure and accessible site.