FORMER WHITEWEBBS PARK GOLF COURSE

ENFIELD, LONDON

SECTION TEN: TECHNICAL RESPONSE

DESIGN AND ACCESS STATEMENT

10.1 ENERGY & SUSTAINABILITY ASSESSMENT

Executive Summary to be read with the full Sustainability Statement by WSP:

Optimising the Use of Land

The Proposed Development adheres to various policies and guidelines, such as the NPPF, London Plan, Mayor's Sustainable Design and Construction policy and Enfield local policy.

Energy & CO_2 Emissions

The development has maximised energy efficient measures to exceed current Part L notional building performance and follow the GLA Energy Hierarchy, Be Lean, Be Clean, Be Green, Be Seen.

Water Efficiency

The Proposed Development has ensured the site has maximised the opportunities for incorporation of water saving measures which include the use of water saving fixtures and fittings, optimised water management through leak detection and reduced water flow rates in compliance with LP2021 Policy SI5.

Materials & Whole Lifecycle Carbon

The development has been designed of high quality, robust materials with a long service life. This minimises the need for maintenance and replacement. The development has been designed to minimise whole life embodied carbon.

Waste & Circular Economy

The Proposed Development has ensured that both the construction and the operational waste is effectively managed in accordance with national and local policy.

Climate Change Adaptation

A climate change adaptation review has been undertaken to ensure the building will remain fit for purpose over its intended lifespan without a requirement for undue modification or expenditure.

Pollution Management

The Proposed Development has ensured that the development will minimise and not increase sources of noise and vibration during the operational phase of the development. Dust and other air pollution will also be minimised during construction, and performance demonstrated through application to the Considerate Contractors Scheme (CCS).

Health & Wellbeing

The design ensures a comfortable and safe environment will be provided for all building users whilst also benefitting the local surrounded green area.

Ecology & Biodiversity

Every effort will be taken to create opportunities for attracting biodiversity and habitat to improve the Proposed Development's ecological value through the inclusion of areas of groundcover planting on the pedestrian level.

Transportation & Accessibility

The Proposed Development will provide compliant and appropriate pedestrian and cycle access, cycle spaces and servicing access.

Environmental Method Ratings

A BREEAM* Pre-assessment has been carried out by an accredited BREEAM Assessor/ AP during RIBA Stage 2. As required by Enfield's local policy (ELP 2021), the Proposed Developments are expected to achieve as a minimum a BREEAM 'Excellent' rating aiming for 'outstanding'.

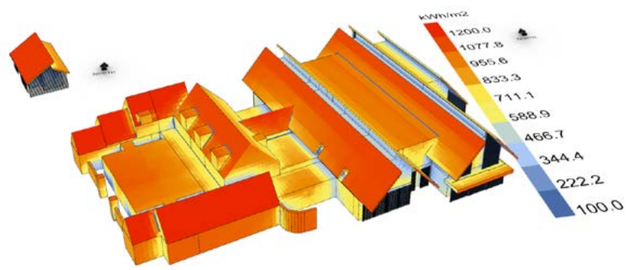

FIGURE 143. Proposed Training Centre Potential for PV Panels

10.2 BREEAM ASSESSMENT

Executive Summary to be read with the full BREEAM Pre-Assessment Report by WSP:

Scoring

Based on discussions and verbal undertakings given by the Design Team and Client, the below scoring scenarios are predicted. Please note that further changes to project scope may impact BREEAM scoring projected here.

Scoring Scenario		BREEAM Score (Cumulative)*	Indicative BREEAM Rating
BREEAM (Non-Domestic) New Construction v6 (Fully Fitted)	Targeted	76.71%	Excellent
	Potential	87.81%	Outstanding
*Score as produced by BRE's BREEAM pre-assessment scoring tool.			

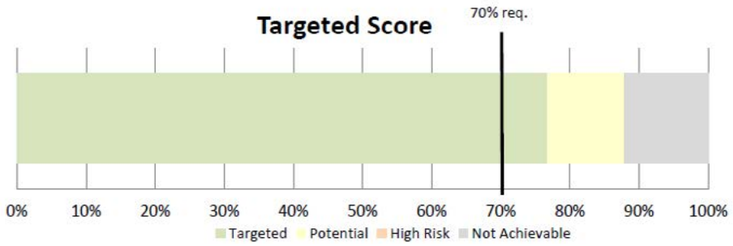

FIGURE 144. Projected BREEAM Scoring

10.3 CIRCULAR ECONOMY STATEMENT

Executive Summary to be read with the full Circular Economy Statement by WSP:

Conserve Resources

The Proposed Development has been designed to ensure that material and resources are effectively used, managed, and reduced as far as possible, in accordance with the GLA's first principle of circular economy.

Eliminate Waste

The Proposed Development has also been designed to eliminate waste generation as far as possible, in accordance with the GLA's second principle of circular economy.

Manage Waste Sustainably

The Proposed Development has been designed to manage waste sustainably, in accordance with the GLA's circular economy principles.

Summary of Circular Economy Targets:

- 20% of new materials used should contain reused/recycled content by value
- 95% of construction & demolition waste should be reused/recycled/ diverted from landfill
- 95% of excavation waste should have beneficial use
- 65% of municipal waste should be recycled by 2030 (applicable to retail, café, residential spaces)
- 75% Business waste should be recycled by 2030 (applicable to office space)

Implementation Approach

- The CES will be reviewed throughout all design stages of the project, alongside the following reports in order to achieve and exceed Circular Economy targets:
- Bill of Materials – Design Team
- Sustainable Procurement Plan-Sustainability Manager/BREEAM Assessor–RIBA 4-6
- Operational Waste Management Strategy–Sustainability Manager/ Waste Champion–RIBA 5/6

Moreover, 'as built' figures will be reported at practical completion, as requested against each of the key commitments made in the document.

10.4 WHOLE LIFE CARBON ASSESSMENT

Executive Summary to be read with the full Whole Life Carbon Assessment by WSP:

Methodology

The assessment was carried out in accordance with the GLA's Whole Life Carbon Assessment Methodology updated in March 2022 and The London Plan policy requirement (2021) SI 2 which requires all new major developments within the City of London that are referrable to the Greater London Authority (GLA) to calculate and reduce the WLC associated with the Proposed Development.

Benchmarking

The Whole Life Carbon for the Proposed development is 1432 kg CO_2e/m^2 (modules A-C, excluding B6 & B7; including sequestered carbon) which is slightly higher than the GLA's WLC benchmark of <1,400 for office developments. The largest contributor to the buildings upfront (A1-A5) emissions is the MEP Services, accounting for approximately 25% of emissions, as a result of the significant building services required for the running of the Training Centre.

It should be noted that the GLA office benchmark has been used due to the limitations with the archetype benchmarks currently available, as there is not a straight-forward comparison with the Northern Club house being classified as Leisure.

Total $kgC0_2e/m^2$ - Lifecycle Stages

The largest contributor to the building's WLC emissions is the Module B1-B5, accounting for approximately 42% of emissions. The Module B emissions are associated with the replacement and refurbishment processes expected within the lifecycle of the building and thus this section results heavily from the high replacement schedule required from the MEP components. The A1-A3 was the second largest contributor at 36%, with some of the most carbon intense material contributing to this figure being the concrete, glazing and rebar. There are very few carbon implications associated with the module C, making up approximately 8%.

	Module A1-A5 (Excluding Sequestered Carbon)	**Modules B-C** (Excluding B6-7)	**Modules A-C** (Excluding B6-7; Including Sequestered Carbon)
TOTAL $kgC0_2e/m^2$ GIA	772	751	1,432
WLC Benchmark	<950	<450	<1400
Aspirational WLC Benchmark	<600	<370	<970

FIGURE 145. GLA Office Benchmarks

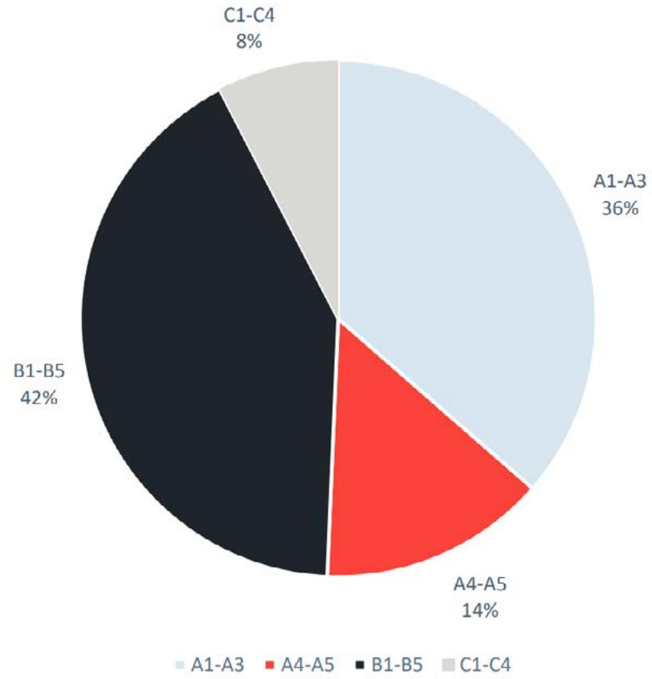

FIGURE 146. Total $kgC0_2e/m^2$ - Lifecycle Stages (Excluding Sequestration)

10.5 UTILITIES STATEMENT

Executive Summary to be read with the full Utility Statement report by WSP:

The key utility services that were considered as part of this assessment are:

- Gas
- Electricity
- Potable Water Supply
- Telecommunications

WSP have established the statutory service providers for each key service listed above.

The information provided in this Utility Statement is based on the current status of the utility networks within the vicinity of the Proposed development in Enfield site. In order to establish the level of potential new utility infrastructure, the expected demands generated by the proposed development have been calculated based on the methods set out in this study.

It is worth noting any assessments on the potential demands generated by the proposed development are high level in nature and are envisaged to change once more detailed information is available.

Consultation with local service providers to determine the status, accessibility and capacity of existing assets in the vicinity has been completed.

There is insufficient capacity within the existing infrastructure for the proposed development in terms of Gas & Electricity as such additional onsite infrastructure and offsite reinforcement will be required.

Based on the information obtained and consultation responses provided WSP see no obvious reason the development could not be supported in terms of key utility services.

UKPN have all confirmed that they are able to provide for the development subject to installation of new connections.

10.6 MEP DESIGN PRINCIPLES

Mechanical

Each building is to be provided with mechanical systems, including heating, cooling (where necessary), ventilation and associated distribution. The main plant rooms will be located at basement and roof level of the Northern Clubhouse, at ground level of the minor buildings and within plant enclosures for the pitch heating.

For the Northern Clubhouse, heating and cooling is to be provided hydronically using Low Temperature Hot Water (LTHW) & Chilled Water (CHW) generated by Closed Loop Ground Source Heat Pump (GSHP) system.

A central air handling unit (AHU) shall be located at roof level, utilising a central riser to provide fresh air to each of the levels.

All plant areas will be designed to allow ample access for installation and removal of each item of plant. All plant will be sized to ensure it can be broken down into components to fit through the related access routes.

The Design and Access strategy is as follows:

- Equipment located within the basement plant rooms including pumps, heat exchangers, WSHP's and buffer vessels will be provided with appropriate access for maintenance and replacement.
- Ambient loop pump sets will be installed to facilitate replacement of individual pumps as needed.
- Ambient loop equipment, pipework, and valves will be sized for easy transport through the building.
- Distribution will be through accessible ceiling voids and risers, without enclosing ducts or pipes in concrete.
- Replacement of equipment located within the basement plant spaces will via lifts.
- Access shall be provided to roof level to allow maintenance of AHU and fans.
- Replacement of small components within the roof plant will be via the core lifts. If larger equipment needs to be replaced a temporary crane will be required.
- General maintenance to the GSHPs would involve cleaning of heat exchanger fins.
- General maintenance to the WSHPs would involve cleaning of heat exchanger fins and removal and cleaning / replacement of strainer baskets located within the adjacent plantroom.
- Ambient loop pipework and valves will be accessible from the mechanical riser at each floor level.

Electrical

A new electrical supply will be brought to the site at high voltage and will terminate in 2No incoming HV Transformer packaged substations. The principle packaged substation will be located within the Northern Clubhouse building on site with level access to outside. The second packaged substation will be located centrally with in the pitches.

The supplies will connect via a network of ducts and trenches in the ground. As part of the Packaged Substations, main Low Voltage (LV) switchpanels shall be located within dedicated client owned LV Switchrooms. All switchpanels will generally be front access floor standing cubicle type switchboard. Meters shall be located in the main LV Switchpanel for outgoing supplies. A Generator is planned to feed directly into an essential switchpanel. The generator will be located in a dedicated enclosure along with a day fuel tank. Fuel delivery will be provided via a fill point to be located at the perimeter of the building.

There is a single main electrical riser that will distribute supplies to the floors via rising cabling in the cores. On floor distribution will be in the floor and ceiling voids. Cabling shall be via a system of modular wiring on the floor plate. Core areas shall be wired via multicore LSF cables on a tray / basket network.

Public Health

Each building is to be provided with independent Public Health systems, either served directly from the mains supplies or via water storage tanks and pumps in the Northern Clubhouse. Main equipment is located within the basements or ground floor of smaller buildings. All plant areas have been designed to allow sufficient access for installation and removal of each item ofplant. All Public Health plant will be selected to ensure items can pass through stairs, corridors and doors serving the spaces to facilitate plant replacement.

The following is a summary of Design and Access for Public Health systems –

- Water storage tanks are generally sectional bolted panel type with access provided on all sides.
- Booster pump sets will be skid-mounted for easy installation and replacement of individual pumps.
- Water treatment equipment, pipework and valves shall be of an appropriate size to allow straightforward transport into and out of the building.
- All water services distribution shall distribute via accessible ceiling voids and risers. No water pipework shall be encased in concrete.
- All drainage at high level, in voids and risers and any drainage encased in concrete or buried shall be provided with access at changes of direction to facilitate clearing of blockages.
- Access shall be provided at roof levels to facilitate clearing of rainwater drainage outlets.

10.7 LANDSCAPE VISUAL IMPACT ASSESSMENT

Executive Summary to be read with the full Landscape & Visual Impact Assessment report by The Landscape Agency:

This document assesses the likely effects on landscape and visual amenity arising from proposals for a new Tottenham Hotspurs Training Facility for Girls and Womens Football within the Site of former Whitewebbs Golf Course. The key objectives of the document are as follows:

- Consider the landscape character and visibility of the Site from the surrounding area;
- To determine the sensitivity of the landscape and visual receptors to the type of development proposed; and
- To identify any landscape and visual changes arising from the Proposed development.

The extent of the area covered by the LVIA (the Study Area) is determined by the scale and nature of the Proposed Development and its likely effects on landscape and visual receptors.

The Study Area has been defined by a combination of professional judgement and field survey verification.

Due to scale of the proposals, existing vegetation and the pattern of existing development, it is unlikely that the Proposed Development would cause any landscape and/or visual effects on receptors located further than 2km from the Site. The LVIA will therefore be limited to the study of landscape and visual baseline conditions and effects within the 2km radius from the centre of the Site.

Proposals at Whitewebbs have been designed as part of a landscape led approach to incorporate landscape and visual mitigation from the outset. In assessing landscape and visual effects all embedded mitigation measures are taken into account. The principal mitigation measures are:

- Retention of existing trees and woodland across the Site.
- Extensive new tree and woodland planting using native, locally prevalent species located to reinforce the North, East and Southern boundaries of the Site. Including localised bunding to further increase the effectiveness of screening.
- Diverse and layered woodland planting to replicate the character and species composition of adjacent Whitewebbs Wood including a canopy layer including oak, hornbeam, field maple, beech and birch set within a structural native shrub with an understorey of native herbs, ferns and wildflowers.
- Management and enhancement of woodland informed by the Woodland Management Plan. Management to include; removal of areas of rhododendron and replacement with native woodland understorey species; creation of glades and rides; provision of habitat features including log piles and nesting boxes and management of the existing path network.
- Reuse and re-purposing of existing buildings and hardstanding wherever appropriate including the former Northern Club House, Southern Club House, car parking and access track.
- Proposed public offer to be extended including enhanced public footpaths and new cafe/visitor centre within the former Southern Club House. The setting to building will include improved public car parking and the provision of a new, high quality landscape setting including paved external terrace and planting.
- Enhancement of existing Site boundaries with native hedgerow creation and species rich native buffer planting to reinforce the boundary with adjacent Public Right of Way.
- Hedgerow creation within Site to provide screening and containment to football pitches and operational boundary of the training centre.
- Enhancement of existing overgrown waterbodies and creation of new attenuation basins with native marginal planting.
- Cuffley Brook stream corridor managed and enhanced with areas of wet woodland and riparian planting
- Management of existing grassland to create areas of native, perennial meadow.
- New built form sensitively positioned behind existing tree and woodland cover with new tree and hedgerow planting to further screen views from the wider landscape.

10.8 GROUND CONDITIONS ASSESSMENT

Executive Summary to be read with the full Ground Conditions Desk-Based Assessment report by RPS Group:

Site Inspection

A site inspection was undertaken on 23rd March 2023. Current potential sources of contamination at the site were limited to: an above ground fuel storage tank located in the maintenance yard area of the former golf course; a burned out car located in a copse in the north-east of the golf course; and Made Ground likely to be present at the site as a result of the construction of features associated with the former golf course and the infilling of the former New River (Old Course).

Current off-site potentially contaminative land uses are limited to an electricity sub-station, associated with Whitewebbs House (Toby Carvery) and the coach and minibus hire business to the north.

Site History

A review of historical maps indicates that the north-west of the site has been occupied by Whitewebbs Wood since at least 1866. The remainder of the site has been occupied by Whitewebbs Park since this time, with the former golf course opened in the early 1930's. A sewage filter bed was indicated to be present in the west of the site from c.1912.

The New River (Old Course) previously crossed the central portion of the site (east-west orientation) before looping back and crossing the site a second time across the southern portion. This feature has since been infilled.

There is the potential for Made Ground associated with the infilling of the former New River (Old Course) to extend beyond the boundary of the site. No other significant historical offsite potentially contaminative land uses have been identified.

Environmental Setting

Whitewebbs Wood is a designated Ancient Woodland, categorised as "ancient," "seminatural", and/or "replanted" woodland. This designation extends approximately 700m to the west of the site.

The site is underlain by the London Clay Formation (Unproductive Stratum) with superficial deposits of the Taplow Gravel Member (Secondary A Aquifer) overlying this in the centre/north-east of the site and Alluvium (Secondary A Aquifer) in the south.

The site is indicated to be located in a Zone 2 groundwater Source Protection Zone (SPZ), associated with potable water abstractions located from approximately 1,129m to the east/south-east.

A number of surface water receptors have been identified both at the site and in the immediate surrounding area. These include: Cuffley Brook and Turkey Brook, crossing and extending off-site; a number of unnamed ponds; and land drainage features.

Conclusions and Recommendations

An outline conceptual site model (CSM) has been derived on the basis of the desktop study and site reconnaissance. Given the potential sources of contaminants of concern identified and the nature of the development proposals, potential pollutant linkages that may become active upon redevelopment restoration of the site are considered to be negligible.

It is anticipated that geotechnical ground investigation will be required to inform elements of the design proposals. It would be considered prudent to include geo-environmental analysis/assessment as part of this investigation to confirm the conclusions of this preliminary risk assessment. This should include the targeting of the potential sources of contamination identified and assessment of the persistence of any ferilisers, herbicides and/or pesticides associated with the former golf course that may prove phytotoxic to any future parkland restoration.

FIGURE 147. Whitewebbs Park - Aerial View

This geo-environmental sampling should also be used to inform the potential re-use of site won material as part of any cut/fill proposals and off-site disposal of soils, where considered necessary.

The maintenance shed and associated yard area were not accessible at the time of the site visit and this area should be subject to a walkover before the scope of any ground investigation is confirmed.

Other Considerations

Reference to the Zetica Unexploded Bomb Risk mapping indicates that the site is in an area of high potential risk from Unexploded Bombs. The Bombsight.org website holds records of a number of high explosive bomb strikes in the vicinity of the site during World War II.

It is recommended that, given the absence of on site development since this time, a detailed unexploded ordnance (UXO) desk study be carried out to assess the potential for UXO to be present at the site.

Signage indicating that roofing materials contained asbestos was observed on the southern clubhouse. It is recommended that an asbestos R&D survey be carried out for all building structures on site prior to refurbishment or demolition.

A high pressure gas pipeline was observed to potentially cross the southern corner of the site, beneath the location of the southern clubhouse and associated car parking.

10.9 NOISE ASSESSMENT

Executive Summary to be read with the full Sports Pitch Noise Assessment report by Logika Group:

The noise assessment assesses the proposed development at the Site in terms of noise impact at nearby noise sensitive receptors. The report evaluates the potential impacts in terms of the AGP Sports Pitch (2015) Guidance minimum noise criteria at 50 dB LAeq,1hr and where exceedances of existing baseline noise levels of greater than 3 dB occur.

In respect to individual pitch operations, the modelled results indicates that the majority of the 11 pitches will achieve the adopted noise criteria. Exceedances of the adopted criteria are limited to Pitches AC1.1 and AC2. Importantly, these exceedances only occur at The Limes. For both pitches, the worst-case absolute cumulative level is only 52 dB LAeq,1h, which is only a marginal exceedance of 2 dB above the 50 dB LAeq,1h criteria.

In respect to concurrent pitch operations, for all operational scenarios the modelled results indicates that the criteria are achieved at the majority of noise sensitive receptors. Exceedances of the adopted criteria are limited to The Limes only, where for all operational scenarios, the worst-case absolute cumulative level is only 53 dB LAeq,1h, which is only a marginal exceedance of 3 dB above the 50 dB LAeq,1h criteria.

Importantly, pitch use will vary day-to-day, and for long periods there will be little to no activity on the site. Consequently, when averaged over an entire daytime or evening period, the average noise levels will be lower than the worst-case values presented above.

On the basis of this assessment, the development is not considered to give rise to a significant adverse impact on health and quality of life in relation to noise, in accordance with paragraphs 180 and 191 of the NPPF.

10.10 AIR QUALITY ASSESSMENT

Executive Summary to be read with the full Air Quality Assessment report by Logika Group:

The air quality impacts associated with the proposed football training facility at the former Whitewebbs Park Golf Course, off Whitewebbs Lane in Enfield, have been assessed.

The proposed development will generate additional traffic on the local road network, but the assessment has shown that there will be no significant effects at any existing, sensitive receptor.

The assessment has also demonstrated that future users of proposed development will experience acceptable air quality, with pollutant concentrations below the air quality objectives.

Heat and hot water will be provided by an all-electric strategy which includes air source heat pumps (ASHPs) and solar photovoltaics (PV), which have no on-site emissions. As such, there will be no significant effect upon local air quality as a result of energy provision.

During the construction works, a range of best practice mitigation measures will be implemented to reduce dust emissions and the overall effect will be ‘not significant’; appropriate measures have been set out in this report.

Overall, the construction and operational air quality effects of the proposed development are judged to be ‘not significant’

10.11FLOOD RISK ASSESSMENT

Executive Summary to be read with the full Flood Risk Assessment report by Logika Group:

A Flood Risk Assessment (FRA, including a Drainage Strategy) in relation to the proposed development of a training facility at the Former Whitewebbs Park Golf Course.

The topographic survey indicates that levels generally fall from North to South although there is a slight fall from West to East which aligns with the flow direction of the existing watercourses on Site.

There are no tidal waterbodies in the vicinity of the Site, and therefore any potential flood risk at the Site is associated with fluvial flooding.

According to the Environment Agency (EA) Flood Map for Planning the majority of the Site is located within Flood Zone 1, indicating a low probability of flooding from fluvial sources. There are however areas to the South as well as in the East which are shown to be within Flood Zones 2 and 3 indicating a medium and high probability of fluvial flooding. However, a sequential approach to the development layout has been taken and there is no built development proposed in these areas.

The risk of flooding from tidal and fluvial sources is therefore considered to be low.

All built development has been set such that it does not encroach within the Flood Zones and with this in mind, development will not be situated within 8m of the main rivers to the South, ensuring that ecological and maintenance corridors are maintained. This is also the case for the New River (Old Course) located to the South and East.

The Cuffley Brook to the South is considered to be in a reasonably natural state, however it is still proposed that riparian improvements are provided in the form of native planting along its banks and woodland planting in appropriate adjacent locations, to enhance habitat creation.

As part of the development, it is proposed that pitches will be located near the existing ordinary watercourses, and therefore, the watercourse will be diverted or reinstated accordingly to maintain flows. This minor diversion is considered to provide betterment over the existing situation as the length of this feature is increased.

10.12 SITE WASTE MANAGEMENT

Executive Summary to be read with the Site Waste Management Plan by JNP Group:

The Site Waste Management Plan (SWMP) for Whitewebbs Park Stage 3, prepared by JNP Group and commissioned by F3 Architects on behalf of Tottenham Hotspur, outlines comprehensive waste management strategies for the development of the Tottenham Hotspurs Women Training Centre.

The SWMP includes roles and responsibilities for waste management, methodologies for waste minimisation, classification, and identification, along with anticipated volumes of waste.

The plan emphasizes the reuse and recycling of materials, complying with UK waste management legislation. Key activities covered include refurbishments, demolitions, and construction, with specific attention to hazardous materials like asbestos.

The document supports sustainable waste management practices, ensuring legal compliance and environmental protection throughout the project lifecycle.

10.13 OPERATIONAL WASTE MANAGEMENT

Executive Summary to be read with the full Operational Waste Management Plan by JNP Group:

The Operational Waste Management Plan (OWMP) for Whitewebbs Park Stage 3, created by JNP Group for F3 Architects on behalf of Tottenham Hotspur, outlines a strategy for managing waste generated by the Tottenham Hotspurs Women Training Centre.

The OWMP focuses on sustainable waste management during operation, emphasizing waste minimization, recycling, and efficient disposal in alignment with UK waste legislation and local authority requirements.

The plan details waste types, storage requirements, and disposal methods, aiming to ensure environmental compliance, promote recycling, and manage hazardous waste safely.