RIDGE

FERRARI WORKSHOP
GTO ENGINEERING

SUSTAINABILITY STATEMENT

December 2024

FERRARI WORKSHOP
GTO ENGINEERING

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Prepared for

GTO Engineering
GTO House
Floral Mile
Hare Hatch
Twyford
RG10 9ES

Prepared by

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CONTENTS

1. INTRODUCTION

1.1. Overview

This report has been produced by Ridge & Partners LLP on behalf of GTO Engineering to outline the sustainability strategy for the proposed new Ferrari workshop in Twyford.

This report aims to outline the proposed sustainability strategy for the scheme in accordance with requirements of Wokingham Borough policy and regulatory standards.

This strategy document aims to demonstrate that the Wokingham Borough Council's sustainability objectives are met by the proposed strategy for the Site.

1.2. The Project.

Site description.
Address: GTO House, Floral Mile, Hare Hatch, Twyford, RG10, 9ES

The Site is located within the administrative boundary of Wokingham Borough Council, and currently accommodates an office building, temporary workshop and a storage shed. There is a significant amount of existing outdoor space that is expected to be retained through development.

Project description.
The proposed project consists of a demolition of an existing storage unit and the construction of a new workshop, to the east side of the site, to replace the current temporary workshop. The new building is an estimated 1330m^2 GIA and will be constructed on the existing storage unit footprint and extend on to some of the existing hardstanding.

The new workshop will comprise of a small office, storage and a workshop on the ground floor, and a parking storage bay on the mezzanine above.

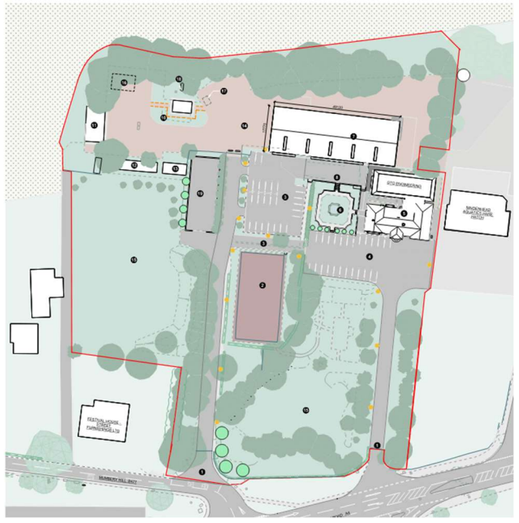

Figure 1: Proposed site plan

2. POLICY CONTEXT

2.1. Overview

The sustainability strategy for the proposed Ferrari Workshop development has been established in accordance with the requirements of national, regional, and local policies.

2.2. Local Policy

Table 1 provides a summary of current local policy requirements.

Table 1: Key messages from current Wokingham Borough Council

THEME	WOKINGHAM BOROUGH COUNCIL POLICY DOCUMENT
Building Performance	▪ Contribute towards the goal of reaching zero-carbon developments ▪ Required to demonstrate a 10% reduction in energy by including appropriate **on-site renewable energy features** ▪ Achieve **BREEAM rating** in line with best practice.
Water, Drainage & Flood Risk	▪ Include water efficiency measures to reduce overall water consumption ▪ Limit any adverse effects on water quality ▪ Avoid increasing (and where possible reduce) risks of or from all forms of flooding
Waste	▪ Minimise the consumption and use of resources and provide for recycling. ▪ All development, including conversions, alterations and extensions shall incorporate suitable waste management facilities, including on-site recycling.
Materials	▪ Development should deliver high quality design with a focus on durable and sustainable materials, addressing type, life cycle and sourcing. ▪ Ensure that a minimum of 75% of timber comes from certified sources
Biodiversity	▪ The degree of protection given should be appropriate to the status of the site in terms of its international or national importance.
Transport	▪ Opportunities for reducing the need to travel, particularly by private car should be provided.
Health and Wellbeing	▪ Avoid areas where pollution (including noise) may impact upon the amenity of future occupiers
Pollution	▪ Minimise the emission of pollutants into the wider environment

SUSTAINABILITY STRATEGY

2.3. Overview

This report has been produced by Ridge & Partners LLP on behalf of GTO Engineering to outline the sustainability strategy for the proposed new Ferrari Workshop, Twyford.

The strategy first and foremost responds to the national and local policy which shape the baseline of performance. Wokingham Borough Council aims to enhance the overall sustainability of the area by minimising the impact of their developments. The local plan states that developments should not adversely impact the environment nor the quality of life of the local residents, workers or visitors. As such, the below considerations have been made to the design of the proposed Ferrari Workshop to meet the sustainability aims set out in local planning guidance.

Table 2: GTO Ferrari Workshop sustainability strategy summary.

THEMES	FERRARI WORKSHOP PROPOSED DESIGN
Performance	- Aligning with BREEAM Very Good principles
Energy and CO_2 emissions	- The Workshop is aiming to improve on energy performance baselines as per Part L 2021.
Health & Wellbeing	- Acoustic testing will be completed in line with the BS 8233:2014 methodology. - Internal sound will not exceed
Transport & Mobility	- The project has had a Transport assessment drawn up, to inform a site-specific travel plan to be implemented during operation of the building.
Flood risk & Water Management	- The development site is in a Low Flood Risk Zone - Drainage via soakaways will prevent additional run-off post development.
Waste	- Appropriate waste storage will be provided - The building is being designed for functional adaptability
Material & Construction	- 100% of timber used for the development will be legally and sustainably sourced. - An LCA has been undertaken to
Pollution	- The development is anticipated to have a negligible impact on the local air quality with regard to NO_2, PM_{10} and $PM_{2.5.}$ - Noise levels will be tested in line with the BS 4142 methodology, and will not exceed background noise levels.
Biodiversity & Ecology	- The development is on previously occupied land. - Early-stage ecology appraisals and surveys will be completed - Minimising biodiversity loss has been accounted for in design.

2.4. Performance

2.4.1. BREEAM

The Building Research Establishment Environmental Assessment Method (BREEAM) is a performance-based sustainability assessment methodology and certification scheme for new and refurbished buildings. The performance of a scheme is quantified by the achievement of credits within the 10 key sustainability issues shown in the diagram. Developments should contribute to the mitigation and adaptation of climate change. Having a focus on sustainability not only benefits that planet but can have an economic and social benefit as well.

The development is aligning with BREEAM 'Very Good' principles, in line with the Local Authority requirements, and will be assessed under the BREEAM Version 6 New Construction scheme.

Figure 2: 10 Key Sustainability Themes. Source: BREEAM 2018

2.5. Energy and CO_2 emissions.

2.5.1. Energy strategy.

The scheme will meet Part L 2021 requirements for energy efficiency which aligns with the local plan policy which states "Non-residential schemes will be expected to meet the interim Future Buildings Standard (as required by Building Regulations) of a minimum 27% reduction in emissions"

Passive design and energy efficiency measures will be considered and those that could be implemented at the Proposed Development. This is an important step towards embedding sustainability and ensuring new developments can minimise their impacts and meet the greenhouse gas targets set out by the UK Government.

The approach will follow the "Energy Hierarchy" methodology, which will be used to develop the low carbon energy strategy. This is a staged approach – Be Lean, Be Clean, Be Green – 1. Reducing energy demand, 2. Meet the demand efficiently, 3. Assess low and zero carbon technologies which are suitable for implementation.

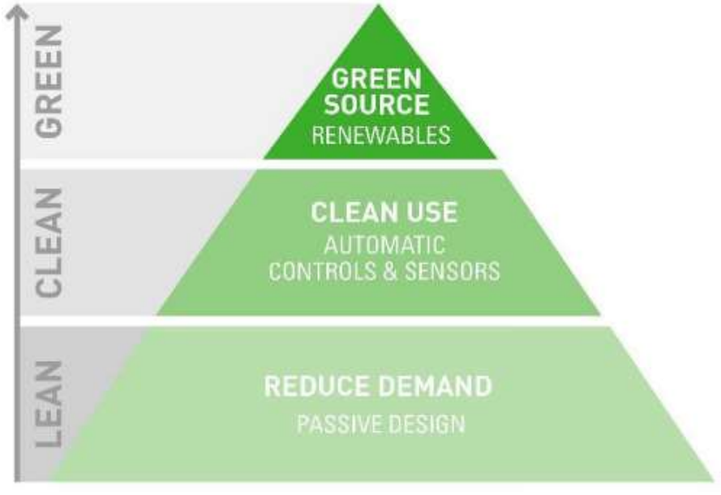

Figure 3:Energy Hierarchy. Source: Energy Strategy

2.6. Health & Wellbeing

The overall design aspirations for the GTO Engineering site will have a positive impact on the health and wellbeing of the building users. There will be a prioritisation of view out, acoustic performance and access to outdoor, green space.

The existing outdoor green space is not anticipated to decrease as a result of the development. The outdoor space provides building users with large amounts of grassland, a tennis court and a small woodland. The New Development proposes additional tree planting to the south of the site

2.6.1. Lighting Quality

Internal and external lighting will be in line with best practice for visual performance and comfort. Internal lighting will be designed in accordance with the appropriate luminance levels and areas with computer screens will comply with the CIBSE Lighting Guide 7. External areas within the construction zone will comply with BS5489-1:2013 & BS12464-2:2014 and include the following:

- Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt
- Automatic control to prevent operation during daylight hours
- Presence detection in areas of intermittent pedestrian traffic.

2.6.2. Air Quality

A site-specific air quality plan will be produced, with the objective to facilitate a process that leads to the design and specifications that minimise indoor air pollution during the occupation of the building.

To support the IAQP, the ventilation will be designed to minimise indoor concentration of pollutants by providing fresh air to the building, ventilation pathways that minimise ingress and build up of pollutants and the design will incorporate suitable filtration as defined in BS EN 16798-3:2017. The ventilation strategy will provide adequate ventilation throughout the year.

2.6.3. Noise

An acoustic report will be undertaken to ensure disturbances to the building occupants is minimised. This will ensure the reduction of noise pollution and good acoustic performance of the development.

To do this, it will require the building to have airborne sound insulation values will comply with the performance standards in BS 8233:2014. Ambient noise levels within the Proposed Development will be within in the suggested range stated in section 7 of BS 8233:2014 and where necessary, sound absorption will need to meet the building regulation standards, both of which will need to be verified by site testing.

2.7. Transport & Mobility

A travel assessment will be completed to identify existing travel patterns and amenities. This assessment will also cover the impact of the proposed development on the local public transport provision, cycle and pedestrian routes and the travel attitudes of the building users. This will inform a site-specific travel plan, which will address the sustainable transport measures facilitated by the design of the development and by GTO engineering. The suggested measures are EV charging spaces, cycle storage and accessible amenities.

2.8. Water

The Proposed Development will be water efficient, incorporating measures to reduce potable water consumption through efficient fixtures, careful management and recycling strategies. The Proposed Development will incorporate water efficiency measures.

2.8.1. Water Consumption

The Proposed Development will, where feasible install low water consumption sanitary fittings to reduce potable water consumption. If new fittings are installed, they will align with the below requirements.

It is assumed that a 12.5% improvement in water consumption over the baseline will be achieved. This would broadly equate to:

- WC's – 6l flush or better
- Wash-hand Basin taps – 5l/min or better
- Showers – 14l/min or better
- Kitchenette taps – 5l/min
- Domestic sized dishwashers (if present) – 13l/cycle
- Commercial sized washing machines – 10l/kg

The main supply to the building will be fitted with a pulsed water meter and additional sub meters to each tenancy area and any other areas that have significant water usage.

2.8.2. Water Efficient Equipment

Where systems have been identified that could mitigate or reduce the unregulated water demand of the building, a realistic design or process will be specified to reduce the unregulated water demand.

2.9. Materials

The design of the Proposed Development will minimise the impact of materials on the environment and building users.

2.9.1. Life Cycle Assessment

A Life Cycle Assessment (LCA) has been undertaken which considers 4 substantially different superstructure elements and 6 substantially different substructure or hard landscaping elements.

Completing an LCA aims to reduce the buildings environmental life cycle impacts by integrating its outcomes in the design decision-making process. The options used for this assessment are:

- Steel frame
- Timber frame
- Concrete frame
- Precast Concrete/ Hollowcore frame and floors

Further information can be found in the LCA report.

2.10. Waste

The Proposed Development will reduce the amount of waste sent to landfill during construction and throughout the lifetime of the building, by effective management and adherence to the waste management hierarchy. A 'Site Waste Management Plan' (SWMP) will be produced by the main contractor for each phase of construction and will define measures to minimise the volume of waste sent to landfill arising from demolition and construction activities.

To avoid unnecessary materials use, cost and disruption arising from the need for future adaptation works as a result of changing functional demands, building adaptability and future disassembly has been considered into the design of the Proposed Development. Building this flexibility into the design allows for changes of use later in the building's life. This promotes future adaptability of a building to accommodate a range of different uses.

2.11. Biodiversity & Ecology

The Proposed Development will be developed on previously developed land, avoiding a plot that has not been previously disturbed.

The proposed development has been designed to minimise biodiversity loss. To facilitate this, a Tree Survey and a Bat Survey have been completed in the early stages of the design. Moving forward, the appointed ecologist will follow the comprehensive methodology to determine the existing ecological state of the site, to inform a plan that manages impacts during construction and during operation.

2.11.1. Biodiversity and Nature Conservation

To minimise disturbance to local ecology, a phase 1 bat survey has been conducted to look for evidence of bats roosting in the structures within the buildings. The identification of bat roosting potential, led to a phase 2 emergence and dawn survey.

A tree survey and arboricultural impact assessment has been conducted by Hellis Solutions Ltd. Of the existing trees, the proposed development requires the full removal of one tree and partial removal of 3 others. The loss is expected to have little impact on the visual amenity and there is scope for new planting to mitigate the loss of these trees and minimise the impact to existing habitats

2.12. Pollution

The design has been developed with the prevention and control of pollution to surrounding communities and environments in mind.

During the construction stage of the project, potential impacts will be manged by the contractor in line with Pollution Prevention Guidelines. The contractor will be required to sign up to the Considerate Constructors Scheme (CCS), which will also require them to minimise pollution risks to air, land, water and nuisance from vibration, light and noise pollution.

2.12.1. Air Quality

As the domestic hot water and space heating loads will be met with electrically fuelled systems, there will be no associated on-site NOx emissions that would have a detrimental impact on local air quality. Any combustion systems specified will be low emissions following the labelling requirements of the European Directive 2009/125/EC.

A report produced by Accon UK concludes the highest risk of air pollution is nearby road traffic. The development, however, is deemed to have a negligible impact on levels of pollutants.

2.12.2. Flood Risk

According to the flood risk map provided by the Environment Agency the Proposed Development is located in Flood Zone 1 where the probability of river or sea flooding is less than 0.1% each year. The flood risk assessment report by GTA Civils and Transport confirms that the Proposed Development has a low risk of flooding from the following sources

- Tidal & Fluvial
- Artificial Sources
- Groundwater
- Sewers
- Surface water

2.12.3. Drainage Strategy.

The sustainable surface water drainage strategy has been designed in accordance to the drainage hierarchy which states that surface water runoff from a Site shall discharge to one of the following in order of priority:

- An adequate soakaway or some other adequate infiltration system;
- A watercourse; and
- Sewer.

The ground investigations conducted for planning indicate the site is suitable for infiltration. The proposed drainage is via 4 new point-load cellular soakaway solutions on site.

2.12.4. Light

Light pollution will be minimised by ensuring all external lights are designed in accordance with ILP Guidance, 2011. The lighting will also be on a timeclock to automatically switch off between 23:00 and 7:00. Any illuminated signs specified will also meet the ILP PLG05 guidance.

2.12.5. Noise

An outdoor air quality assessment has been completed by Accon UK. The methods used are in line with BS 4142:2014+A1:2019, to determine how likely it is, that there will be an adverse impact to the background noise level outside the nearest residential property. The Acoustician concludes there will be a low impact of noise, and will therefore, not require any remediation strategies to be implemented.

3. CONCLUSION

The Proposed Development has been designed to consider and respond to the regulatory, national and local planning policy requirements by proposing the following design measures for GTO Engineering's new Ferrari Workshop.

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