



Jaguar Land Rover

SUSTAINABILITY STATEMENT

South Body in White Extension, Halewood





Jaguar Land Rover

SUSTAINABILITY STATEMENT

South Body in White Extension, Halewood

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70091479

DATE: JUNE 2022

WSP

4th Floor
6 Devonshire Square
London
EC2M 4YE

Phone: +44 20 7337 1700

Fax: +44 20 7337 1701

WSP.com

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Draft for comments	Final for issue		
Date	14/06/2022	21/06/2022		
Prepared by	Amruta Parade	Amruta Parade		
Signature				
Checked by	Jonathan Knowles	Jonathan Knowles		
Signature				
Authorised by	Yanis Savvopoulos	Yanis Savvopoulos		
Signature				
Project number	70091479	70091479		
Report number	001	001		
File reference	N/A	N/A		

CONTENTS

1	INTRODUCTION	1
1.2	DEVELOPMENT DESCRIPTION	1
1.3	PURPOSE OF THE REPORT	2
2	POLICY CONTEXT	4
2.1	NATIONAL POLICY CONTEXT	4
2.2	LOCAL POLICY CONTEXT	5
3	SUSTAINABILITY STATEMENT	10
3.2	CLIENT STRATEGY	10
3.3	ENERGY AND CO ₂	10
3.4	SUSTAINABLE AND ACTIVE TRANSPORT	12
3.5	BIODIVERSITY	12
3.6	WASTE MINIMISATION	13
3.7	NOISE	14
3.8	WATER EFFICIENCY	14
3.9	SOCIAL VALUE	15
3.10	MATERIALS	15

TABLES

Table 2-1 – Knowsley Local Plan (2016)	5
Table 3-1 – Jaguar Land Rover Sustainability Commitments	10
Table 3-2 – Material Design Strategies	16

FIGURES

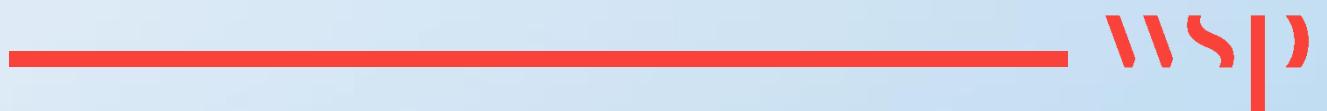


Figure 1-1 – Site layout	1
Figure 3-1 - Summary of the estimated carbon emissions reductions for the whole development	12



1

INTRODUCTION



1 INTRODUCTION

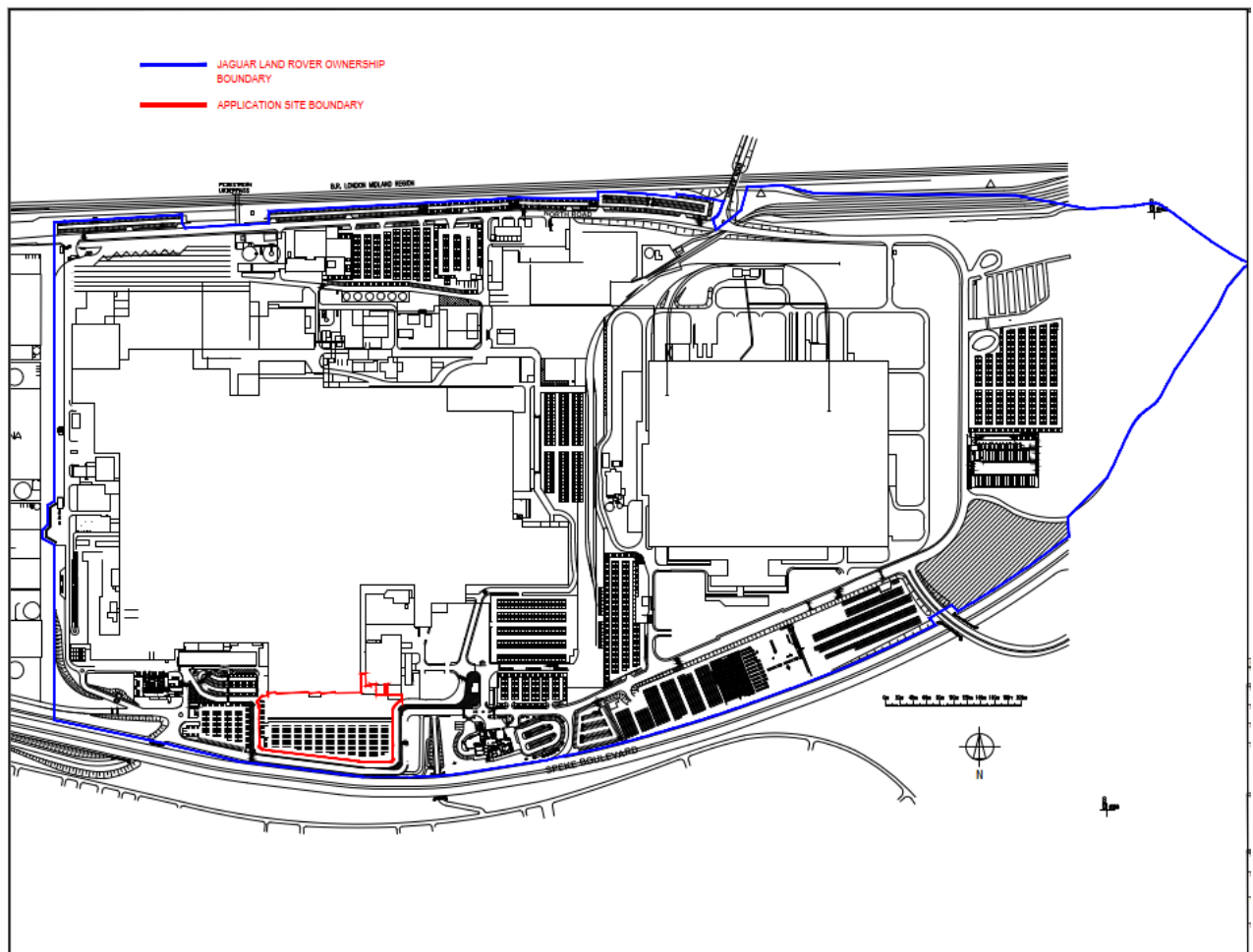
- 1.1.1 This Sustainability Statement has been prepared by WSP in support of a planning application submitted on behalf of Jaguar Land Rover.
- 1.1.2 This Statement summarises the project commitments and is underpinned by the following technical documents to provide the detail and evidence base for realising the ambition of the site.

1.2 DEVELOPMENT DESCRIPTION

- 1.2.1 The Jaguar Land Rover site extends to 1.91 ha and is situated to the immediate south of the existing Body in White South building. The site layout is shown in Figure 1-1.
- 1.2.2 The application seeks permission for:

“Erection of a two-storey building (Use Class B2 and B8) and worker amenity facilities associated with existing manufacturing unit, together with associated infrastructure and engineering operations.”

Figure 1-1 – Site layout



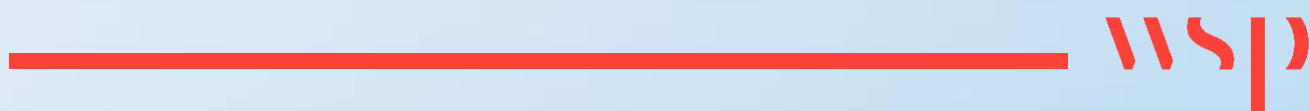
1.3 PURPOSE OF THE REPORT

- 1.3.1 The purpose of this Sustainability Statement is to explain how the proposed development will meet the relevant local policies for planning application.
- 1.3.2 A sustainable approach is presented as the desired result for human development as well as the means with which to balance current and future social, economic and environmental needs. This is taken to mean:
- 'Improving the quality of human life while living within the carrying capacity of supporting ecosystems'¹*
- 1.3.3 The proposed development has therefore endeavoured to ensure that social, economic and environmental issues are dealt with in an integrated and balanced manner. The sustainability of the design and construction of the proposed development has been assessed as well as considering its contribution to sustainable development within Knowsley.

¹ Caring for the Earth: A Strategy for Sustainable Living (Union of Conservation Scientists (IUCN), United Nations Environment Programme (UNEP) and World Wide Fund for Nature (WWF)) <https://portals.iucn.org/library/efiles/documents/cfe-003.pdf>

2

POLICY CONTEXT



2 POLICY CONTEXT

2.1 NATIONAL POLICY CONTEXT

The National Policy Framework (NPPF)

- 2.1.1 The new NPPF document (revised in July 2021)² sets out the Government's national planning policies for England and how these are to be applied. At the heart of the NPPF is a presumption in favour of sustainable development (paragraph 2), with economic, social and environmental objectives to be met through planning policy.
- 2.1.2 Sustainability is a common theme in many sections of the NPPF including most notably the sections titled "Promoting healthy and safe communities", "Promoting sustainable transport", "Meeting the challenge of climate change, flooding and coastal change", "Conserving and enhancing the natural environment" and "Facilitating the sustainable use of minerals".

Climate Change Act

- 2.1.3 The Climate Change Act 2008 (2050 Target Amendment) sets legally binding targets to reduce carbon dioxide emissions in the UK by 100% by 2050 from 1990 levels. It also established an independent body, the Committee on Climate Change, to advise the Government on the level of each carbon budget. The Committee also reports to Parliament on progress made on reducing emissions.
- 2.1.4 The Act introduced carbon budgets which put legally binding limits on the amount of greenhouse gases the UK can emit over a five-year period. To date, five carbon budgets have been put into law that run up to 2032 which require a 57% reduction by this time. The UK government is to enshrine a new target in law to cut emissions by 78% by 2035, setting also the sixth carbon budget for the period 2033-37.

Building Regulations Part L: Conservation of Fuel & Power

- 2.1.5 The Building Regulations Part L governs the conservation of fuel and power in both new construction and refurbishment of the UK building stock. Compliance with Building Regulations is a regulatory requirement for all new developments, and carbon emissions of a development comparative to compliance with Part L is the key performance indicator for many carbon targets.
- 2.1.6 The current version of the Approved Document Part L2A for new buildings other than dwellings which is applicable for the Proposed Scheme, was published in 2013 with 2016 amendments.

²Ministry of Housing Communities & Local Government, (2021). National Planning Policy Framework, London, UK.

2.2 LOCAL POLICY CONTEXT

Knowsley Local Plan Core Strategy (2016)³

2.2.1 The Knowsley Local Plan Core Strategy sets out a vision describing the type of place which Knowsley will become by 2028. This is supported by strategic objectives which identify priorities in more detail and will be delivered via Local Plan and other planning policies which will guide new development and regeneration.

Table 2-1 – Knowsley Local Plan (2016)

Knowsley Local Plan (2016)	
Policy SD1: Sustainable Development	1) When considering development proposals, a positive approach will be taken, which reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. Work will be undertaken proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area. 2) Planning applications that accord with the policies in this Local Plan (and any relevant policies in Neighbourhood Plans) will be approved without delay, unless material considerations indicate otherwise. 3) Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then permission will be granted unless material considerations indicate otherwise.
Policy CS2: Development Principles	Principle 2: Reduce carbon emissions and adapt to the effects of climate change by: a) Contributing to reductions in carbon dioxide emissions from all sources, in line with national targets; b) Ensuring an ability to adapt to future changes to national targets for carbon dioxide and other greenhouse gas emissions, including recognising the role of new technology; c) Identifying and applying measures offering effective mitigation and adaptation to likely environmental, social and economic impacts of climate change; and d) Meeting appropriate minimum standards for sustainability. Principle 5: Make the most efficient use of available resources and infrastructure by prioritising locations consistent with the spatial strategy, which: a) Do not require major investment in new infrastructure, including transport, water supply and sewerage, or where this is unavoidable, incorporate appropriate development phasing and delivery assistance; b) Ensure environmental protection is enhanced through the phasing of new development and delivery of supporting infrastructure, including working with neighbouring authorities and key partner agencies where appropriate; c) Support prudent and efficient management of natural and man-made resources; and

³ <https://localplanmaps.knowsley.gov.uk/documents/knowsley-local-plan-adopted-core-strategy.pdf>

	d) Promote sustainable construction and efficiency in resource use (including reuse and recycling of materials).
Policy CS7: Transport Networks	Location, Design and Management of New Development New development will be required to be: a) Located and designed to prioritise accessibility and sustainable modes of travel through a choice of walking, cycling, public transport, and incorporate access for private vehicles. Where deficiencies are identified, developer contributions will be required to improve the accessibility of the location; b) Located and designed to ensure that larger scale proposals (attracting a lot of visitors, customers and/or employees) are located in the most accessible locations; c) Where subject to a planning application, accompanied (except in the case of smaller scale proposals) by Transport Assessments and/or Travel Plans; d) In compliance with adopted cycle, car, disabled and service vehicle parking standards for different types and scales of new development; e) Inclusive of measures that will mitigate carbon emissions and improve air quality where appropriate; and f) Consistent with safeguarding arrangements that secure the operational integrity and safety of Liverpool John Lennon Airport.
Policy CS19: Design Quality and Accessibility in New Development	To address the challenges of climate change and future changes in social, economic and environmental priorities, new development should integrate: a) Sustainable design principles, with regard to Policy CS22: Sustainable and Low Carbon Development as appropriate; b) Biodiversity; c) Flood risk mitigation (in accordance with Policy CS24); d) Waste recycling; and e) Energy and resource efficiency
Policy CS21: Greenspaces and Trees	Greenspace protection 1) In supporting the wider Green Infrastructure functions of urban greenspace in accordance with Policy CS8, the Council will provide and maintain quantitative, qualitative and accessibility standards for different types of public open space. 2) New development which would result in the loss of urban greenspace. 3) Development will be resisted where it would significantly harm any existing or potential special qualities of greenspace in the area in terms of: a) Visual amenity; b) Residential amenity; c) Biodiversity and environmental benefits; d) Historical, cultural or community value; e) Recreational benefits; or f) Physical and/or visual linkages between adjoining urban greenspaces
Policy CS22: Sustainable and Low	Sustainable Construction Principles

Carbon Development	1) New development will be required to meet high standards of sustainable design and construction and minimise carbon emissions. This should be achieved by: a) Designing new buildings for flexible uses throughout their lifetime; b) Avoiding the creation of adverse local climate conditions by using natural systems to avoid internal overheating and excessive heat generation; c) Ensuring developments are comfortable and safe for users; d) Making the most effective and sustainable use of water, aggregates and other resources; e) Limiting energy use by incorporating high standards of insulation, heat retention, natural ventilation and passive solar techniques; f) Landscaping (including measures such as green walls or roofs) to create shelter and reduce any heat island effect; g) Using sustainable materials from local suppliers where possible; h) Supplying energy efficiently and incorporating decentralised energy systems, using renewable and low carbon energy where feasible; i) Managing flood risk, including through the use of Sustainable Drainage Systems (SuDS) and flood resilient design for infrastructure and property; and j) Promoting sustainable waste practices in new and existing developments Low Carbon Development, Community Energy Fund and Allowable Solutions 2) Government targets for carbon reduction in new development are expected to be implemented through updates to the Building Regulations.
Policy CS23: Renewable and Low Carbon Infrastructure	1) The Council will support proposals that will produce and distribute decentralised, low carbon and renewable energy, provided that they do not cause significant harm (in terms of their number, scale, siting or cumulative impacts) to: a) Natural resources, biodiversity, geodiversity, water and air quality and, landscape character; b) Aviation and transport safety; c) Historical and cultural assets; d) Public amenity and living conditions; or e) Openness and amenity of the Green Belt, except in very special circumstances. 2) Proposals must be accompanied by information that shows how the local environment will be protected, and how the site will be restored when energy production ends. Proposals resulting in an unacceptable impact must be mitigated by appropriate measures agreed by the Council.
Policy CS24: Managing Flood Risk	1) New development that may cause an unacceptable risk of flooding on the site or elsewhere will not be permitted. 2) New development should preferably be located in areas of low probability of flooding. New development in areas of medium or high flood risk will only be permitted if evidence has been submitted demonstrating that the development could not be practicably located in an area of lower flood risk and if applicable the 'exception test' has been complied with, in accordance with national guidance. 3) All development which is within or otherwise affects an area of flood risk or is larger than one hectare in size shall be accompanied by a site-specific Flood Risk Assessment (FRA). 4) New development shall include flood mitigation measures, where necessary, to manage flood risk associated with or caused by the development. These measures shall be derived

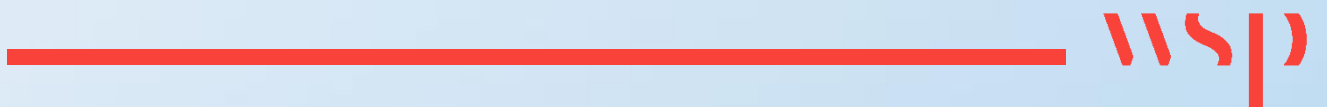
	from the Strategic Flood Risk Assessment (SFRA), relevant FRA(s) or a local strategy for flood risk management, and: a) Be designed to contribute to the biodiversity of the borough unless it can be demonstrated that this would not be technically feasible; b) Incorporate a Sustainable Drainage System; c) Be fully described in the planning application; and d) Be funded by the developer, including long term maintenance. 5) The drainage of new development shall be designed to reduce surface water run-off rates to those associated with a green-field site by treating it at its source. The chosen method of implementation should take account of site size, ground contamination or conditions, and potential damage to adjacent buildings or sites
Policy CS25: Management of Mineral Resources	Ensuring a Supply of Minerals 1) The Council will facilitate a steady and adequate supply of minerals to ensure that the borough contributes to meeting sub-regional needs. 2) Minerals Safeguarding Areas ('MSAs') for mineral resources of national and local importance will be identified in the Local Plan: Site Allocations and Development Policies and shown on the Policies Map. The purpose of such MSAs will be to ensure that such resources are not needlessly sterilised by non-mineral development whilst not creating a presumption that resources defined will be worked. Minimising the Need for Mineral Extraction 3) In considering planning applications for new development, the Council will seek to ensure that: a) A proportion of construction aggregates are from recycled or secondary sources; b) Resource efficient design and construction methods are used; c) Construction and demolition wastes are managed sustainably in accordance with the waste hierarchy; and d) Minerals are transported in a sustainable way and treated on-site where possible.
Policy CS26: Waste Management	1) The Council will promote sustainable forms of waste management in accordance with the waste hierarchy. As set out in the Merseyside and Halton Joint Waste Local Plan, it will work to: a) Identify and safeguard (where appropriate) waste management sites in appropriate locations; b) Ensure that the borough contributes to meeting the identified sub-regional waste management needs; c) Encourage good design in new development in order to minimise waste, promote the use of reclaimed and recycled materials and to facilitate the collection and recycling of waste; d) Encourage the sustainable transport of waste and promote use of site waste management plans; and e) Ensure that waste management facilities are developed whilst minimising any negative impacts on the environment and communities of the borough.

2.2.2 These policies are further explained in the relevant planning application documents.



3

SUSTAINABILITY STATEMENT



3 SUSTAINABILITY STATEMENT

3.1.1 The following chapter outlines key policy and client requirements to show how the design of the proposed development has responded to key sustainability drivers and requirements.

3.2 CLIENT STRATEGY

3.2.1 A scheme-specific Sustainability Strategy for the proposed Jaguar Land Rover development brings together planning requirements and industry good practice. Jaguar Land Rovers' Environmental and Social Policy is focused on four primary commitments namely: Society, Environment, Customers and products, and Suppliers.

3.2.2 Project specific sustainability commitments can be categorised as follows.

Table 3-1 – Jaguar Land Rover Sustainability Commitments

Theme	Commitment
Energy	Min score of 5 credits for BREEAM energy (where applicable). BREEAM is being considered for the proposed development.
Water	Consideration of drainage/ SUDs for new projects
Waste	Zero construction and demolition waste to landfill and 95% avoidance as second tier as a minimum
Sustainable sourcing	- Zero use of Jaguar Land Rover blacklisted materials; use of certified sources (FSC, ISO 14001, BES6001 etc) - Compliance with Jaguar Land Rover policies for modern slavery; corporate responsibility and bribery - Supply chain engagement as defined in Global Sustainability Web Guide, supplier environmental and social requirement
Employer of choice	Compliance with Jaguar Land Rover Minimum standard of working conditions
Pollution	- Pollution prevention assessment - Adhere to storage guidelines for hazardous materials
Green building certification	BREEAM Very Good is being considered for the proposed development.

3.3 ENERGY AND CO₂

REQUIREMENTS AND POLICY

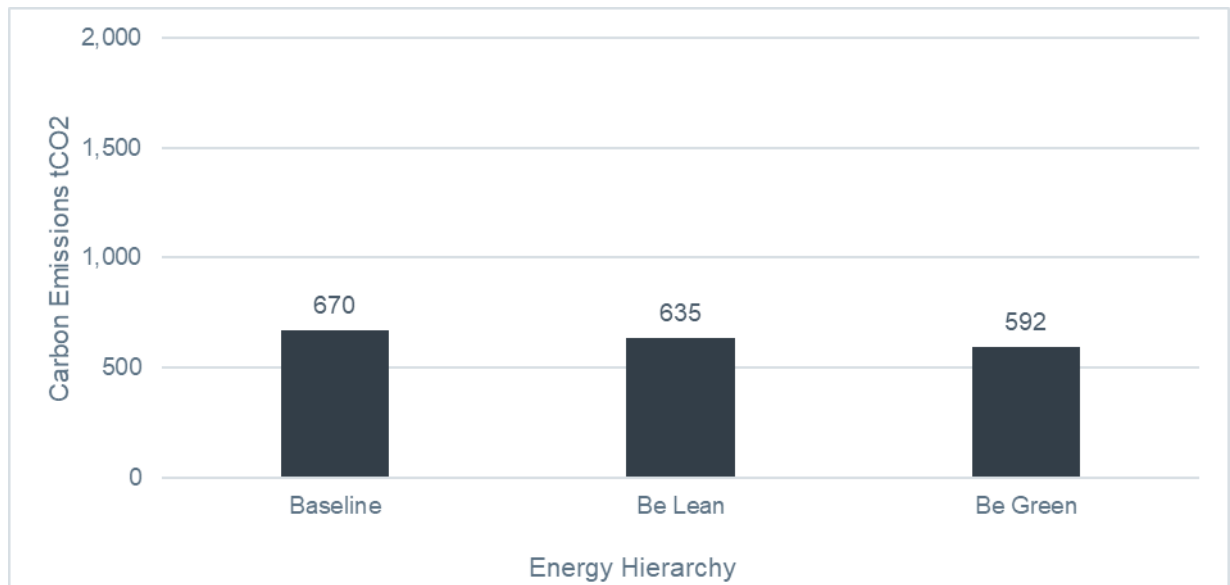
- Policy CS2: Development Principles
- Policy CS19: Design Quality and Accessibility in New Development

- Policy CS22: Sustainable and Low Carbon Development
- Policy CS23: Renewable and Low Carbon Infrastructure

Design Response

- 3.3.1 With increased pressure to meet growing energy demands and concerns over the impacts of greenhouse gases on climate change, governments around the world are putting in place commitments and targets to mitigate these impacts. In the UK, the Government has set targets of reducing overall CO₂ emissions by 80% by 2050 (compared with 1990 levels).
- 3.3.2 To help meet these targets, the focus is not only on expanding the use of renewable sources to generate energy, but also on energy conservation.
- 3.3.3 All developments are required to consider key planning policy standards for energy efficiency and the use of renewable technologies through the Energy Hierarchy:
- **Be Lean** - Reduce energy loads to a minimum through energy efficient heating and lighting systems, and efficient appliances;
 - **Be Clean** - Cut transmission losses through local generation of energy (decentralised energy generation), use combined heat and power and community heating; and
 - **Be Green** - Meet the remaining demand with clean fuels, such as renewable technologies.
- 3.3.4 The submitted Energy Statement assesses the potential incorporation of low and zero carbon technologies and the proposal incorporates PVs on the roof of the proposed buildings to provide self-generation of clean electricity. CO₂ emissions are also reduced through energy an efficient design of the site, buildings and services as detailed in the Energy Statement.
- 3.3.5 The proposed development sets out to be low carbon and will achieve a cumulative reduction in carbon emissions of 11.8% over Building Regulations Part L 2013 baseline, incorporating high levels of fabric efficiency, good controls, efficient supply of energy and the use of renewable energy.
- 3.3.6 A combination of demand-reduction measures, energy-efficiency measures and low-carbon and renewable energy will deliver Jaguar Land Rover's desired on-site reduction target around carbon emissions.
- 3.3.7 The impact of these design measures in terms of how the development will deliver the energy and carbon reduction is summarised in Figure 3-1.

Figure 3-1 - Summary of the estimated carbon emissions reductions for the whole development



3.4 SUSTAINABLE AND ACTIVE TRANSPORT

Requirements And policy

- Policy CS2: Development Principles
- Policy CS7: Transport Networks
- Policy CS23: Renewable and Low Carbon Infrastructure

Design Response

- 3.4.1 The proposed development does not result in a net increase of employees, parking demand, parking spaces, or number or frequency of deliveries.
- 3.4.2 Consequently, there is no requirement to undertake a traffic capacity assessment nor associated trip generation analysis.

3.5 BIODIVERSITY

Requirements And policy

- Policy SD1: Sustainable Development
- Policy CS2: Development Principles
- Policy CS19: Design Quality and Accessibility in New Development
- Policy CS21: Greenspaces and Trees
- Policy CS23: Renewable and Low Carbon Infrastructure

Design Response

- 3.5.1 To encourage compliance with the policies listed above, the following measures are recommended for inclusion within the Proposed Development; where possible:

- Additional planting would increase biodiversity within the wider Site. Where hedgerows and trees are to be planted, the use of native fruit and nut trees, such as hazel, should be planted to provide accessible foraging and nesting areas for birds and other protected and/or notable species.
- Landscape and building design should be undertaken with consideration for biodiversity.
- Good horticultural practice should be employed, such as the use of peat-free composts, mulches and soil conditioners and native plants of local provenance should be sought for planting whilst avoiding the use of invasive plants, listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
- Provision of bat and bird boxes in suitable locations to provide enhanced roosting and nesting opportunities. The installation of bat boxes should be facing different aspects, to provide a range of temperature conditions suitable for roosting at different times of the year.

3.5.2 Following recommendations for avoidance, mitigation and compensation measures should be included in the Proposed Development:

- The lighting of the Proposed Development should be designed to minimise impacts on nocturnal species, including bats, and should include dark corridors along the Site boundary. Lighting should use hoods, louvres or other luminaire design features to avoid light spill onto retained and newly created areas of vegetation likely to be used by foraging and commuting bats. In addition, narrow-spectrum light sources should be used where possible to lower the range of species affected by lighting, specifically avoiding shorter wavelength blue light, using instead warm/neutral colour temperature <4,200 kelvin lighting (BCT, 2018).
- In addition, general environmental protection measures must be implemented during the construction phase of the proposed scheme.

3.6 WASTE MINIMISATION

Requirements And policy

- Policy CS19: Design Quality and Accessibility in New Development
- Policy CS22: Sustainable and Low Carbon Development
- Policy CS25: Management of Mineral Resources
- Policy CS26: Waste Management

Design Response

3.6.1 Waste hierarchy is applied to the project in order to achieve the commitment of zero waste as follows:

- Prevention of Waste at Source.
- Re-use or Preparation for Re-use of Waste.
- Recycling Waste Streams in Closed Loop (Back to Jaguar Land Rover) and Open Loop. (Outside of Jaguar Land Rover) Operations.
- Recovery of Energy from Waste.
- Disposal of Waste.

3.6.2 Jaguar Land Rover has an external waste management contractor on board for all its projects. The same contractor will use the existing waste management supply chain for managing any construction and demolition waste for this project.

- 3.6.3 A Construction Environmental Management Plan (CEMP) is being prepared for the project describing how materials will be managed efficiently and disposed of legally during the construction of the works and explaining how the re-use and recycling of materials will be maximised.

3.7 NOISE

Requirements And policy

- Policy SD1: Sustainable Development
- Policy CS2: Development Principles

Design Response

- 3.7.1 Existing road traffic noise levels at the nearest residential properties are predicted to be approximately 65 dB $L_{Aeq,16h}$ (daytime) and 55 dB L_{night} (night) as per Defra strategic noise mapping (round 3).
- 3.7.2 The new building is not expected to introduce new external noise sources against the existing building, with the exception of the plant room extract and the external goods lifts. There will be no unattenuated openings from the plant room and the external goods lifts will only be used infrequently.
- 3.7.3 Thus, it is expected that noise breakout from the plant room will be below existing noise levels at sensitive receptors, such that no adverse noise impacts occur.

3.8 WATER EFFICIENCY

Requirements And policy

- Policy CS2: Development Principles
- Policy CS22: Sustainable and Low Carbon Development
- Policy CS23: Renewable and Low Carbon Infrastructure

Design Response

- 3.8.1 Water is considered a finite resource within Jaguar Land Rover policy and there are water reduction targets at Jaguar Land Rover manufacturing operations. A systematic approach will be adopted to water reduction in order to save on the amount of water used and reduce utility costs associated with both water supply and wastewater disposal.
- 3.8.2 Consumption will be reduced by using low flow fixtures and fittings or by installing rainwater capture and grey water harvesting technology. The collected water may need to be treated and used for toilet flushing or other production purposes on site.
- 3.8.3 Jaguar Land Rover standard (JLR-STN-41645) states that Sustainable Urban Drainage Systems (SuDS) and pollution prevention measures will be considered for the project to prevent water pollution and overburdening of drainage systems leading to flooding.

3.9 SOCIAL VALUE

Requirements And policy

- Policy SD1: Sustainable Development
- Policy CS19: Design Quality and Accessibility in New Development

Design Response

- 3.9.1 **Economic effects:** The proposed development will include a construction phase which will generate turnover and temporary employment for construction firms and related trades. Using the build cost estimate of £25 million to £30 million and the average turnover per construction job in 2019 of £198,029, WSP estimates the proposed development will generate approximately 126 to 151 person years of temporary construction employment. There will be no additional operational employment arising from the proposed development.
- 3.9.2 **Social value targets:** Since there is no operational employment arising from the development, the social value objectives have primarily considered construction phase of the scheme. Following targets have been identified under social value:
- Jaguar Land Rover will include pre-qualification questions relating to apprenticeship opportunities within any tender documentation issued to prospective contractors. This will ensure that apprenticeship opportunities are understood when reviewing contract award criteria.
 - Apprentices (including those who are Knowsley residents) already present at the Jaguar Land Rover Halewood Operations will continue in their current capacity, with the proposed development not leading to any loss of existing employment.
 - Jaguar Land Rover, in collaboration with their appointed contractor commit to ensuring that where job vacancies may arise either in the construction or operation phases of the proposed development, the Council will be notified.
 - Given the nature of the work undertaken at the Jaguar Land Rover Halewood facility, specialist on-the-job training is required for all staff. This is coordinated by Jaguar Land Rover and will be delivered to all new staff members, including those that are residents of Knowsley.

3.10 MATERIALS

Requirements And policy

- Policy CS2: Development Principles
- Policy CS22: Sustainable and Low Carbon Development
- Policy CS23: Renewable and Low Carbon Infrastructure
- Policy CS25: Management of Mineral Resources
- Policy CS26: Waste Management

Design Response

- 3.10.1 The design approach for the proposed development will incorporate the Material Design Strategy, in
- 3.10.2 Table 3-2 below. This strategy provides different methods to reduce the amount of embodied carbon and waste produced at this proposed development.

Table 3-2 – Material Design Strategies

Topic	Specifications	Benefit
Roof	10% of Roof Area to be rooflights as per Part L of building regulations Rooflight specification - 1.0 w/(m²K): KINGSPAN KS1000DLTR Polycarbonate rooflight. Fire rated to Euro Class B (internal), National Class AA and Euro Class BROOF (t4). Non-fragility to ACR[M]001: 2014 Class B.	To increase daylight in the interiors reducing the need for artificial lighting in the interiors thus saving energy. The polycarbonate rooflight combines excellent light transmission with superior resistance to UV degradation for exceptional long-term lighting performance
	Roof cladding specification - Providing a minimum U value = 0.18 W/(m²K) KINGSPAN KS1000RW LJ (thickness - 115mm / 80mm).	Kingspan Insulated Panels produced in the UK are certified to BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) 'Very Good'. QuadCore® Insulated Panel systems have Environmental Product Declarations in accordance with the requirements of EN 15804:2012+A1: 2013 for 100mm thickness. All Kingspan Insulated Panels manufacturing facilities across the UK and Ireland are 100% Net Zero Energy. Kingspan Insulated Panels procure steel that is made from 15 – 25% recycled content. Kingspan insulated panels directly contribute to BREEAM® / LEED® credits. An air leakage rate of 3m³ /hr/m² at 50Pa or less can be achieved when using Kingspan insulated roof and wall panels.
(Skin) Facade	Wall cladding specification - Providing a minimum Uvalue = 0.18 W/(m²K): All door and window jambs, heads and sills to be insulated with 25mm thick insulation board to prevent cold bridging. Kingspan KS1000RW QuadCore Insulated Composite Panels RAL 7038 Goosewing Grey.	
	Blockwork: 150mm Thermalite Shield Aircrete Block 3.6N 215mm x 440mm Thermal conductivity: 0.15 (W/m.K)	Contains up to 80% recycled content, offer high thermal performance, good compressive strength, lightness for handling, and very high moisture resistance. Thermalite offers excellent thermal insulation properties inherent to Aircrete, making U-value targets easier to achieve and can help reduce the CO ₂ emissions during a building's life.
Windows	Fully thermally broken PPC (RAL 7016) aluminium double glazed units with a minimum hole unit U value - 1.4W/(m²K)	Thermally broken aluminium windows provide exceptional thermal performance, reducing the energy bills whilst keeping the building well insulated all year round. Beside their thermal efficiency, they will also:

		Reduce condensation – A thermal breaker will minimise how much heat is lost from inside and how much cold is allowed through from the outside. Reducing cold spots and condensation forming. Reduce the carbon footprint – thermally broken aluminium windows and doors will help use less energy.
Services	Easy access to services	To enable easy maintenance and replacements and reduce any material waste



4th Floor
6 Devonshire Square
London
EC2M 4YE

wsp.com

CONFIDENTIAL