

Energy and Sustainability Statement

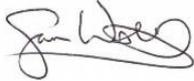
Infinity House, Anderson Way, Belvedere

Prepared for Lysander
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envision

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1 EXECUTIVE SUMMARY

- 1.1 Envision has been appointed by Lysander (the applicant) to produce an Energy and Sustainability Statement in support of an application for full planning permission for a proposed development at Infinity House, Anderson Way, Belvedere, London, DA17 6BG.
- 1.2 Planning permission is sought for the demolition of existing buildings and redevelopment of the site to provide a deck for the storage of operational vehicles, associated parking, access alterations, guard hut, welfare block, landscaping, and associated infrastructure.

Summary of Sustainable Construction & Climate Change Strategy

- 1.3 The development is being brought forward to address a relevant sustainability policy held within the London Plan and the London Borough of Bexley Core Strategy (2012).

1. Carbon Emissions & Energy Efficiency

There are no buildings governed by Part L of the Building Regulations on site. The principal development consists of an unheated van storage deck. Whilst energy and carbon policies with the London Borough of Bexley and the London Plan 2021 are not directly applicable, the development will address carbon emission and energy efficiency where appropriate.

In 2019, transport accounted for 34% of all carbon dioxide emissions in the UK. The large majority of emissions from transport are associated with road transport. The applicant has sought to address this fundamental issue by futureproofing the development to facilitate transport decarbonisation, by:

- i. Providing electric vehicle (EV) spaces for 20% of all spaces on-site, with passive provision for the remainder;
- ii. By 2030, purchase all electric used in the site's operation from renewable sources;
- iii. In the interim period before 100% EV vehicle operation, work towards all vans being Euro 6, which is the latest standards to regulate the level of pollutants released from the tailpipes of vehicle engines.

As part of the wider strategy, the following measures are also proposed:

- iv. Futureproofing the two ancillary buildings on-site (the welfare building and guard hut) by specifying them as all-electric and ensuring they are well-insulated to reduce energy demand.
- v. Ensuring an energy-efficient, all-LED external lighting scheme with appropriate controls to restrict use during daylight hours.

2. Sustainable and Modern Methods of Construction

It is envisaged that the construction of the van storage deck will utilise modern methods of construction, including pre-fabricated offsite systems to promote material efficiency and reduce waste. The vehicle storage deck frame will be fabricated in steel offsite under controlled conditions. In addition, the appointed contractor will be required to ensure the principles of sustainable construction are brought forward on-site by ensuring:

- i. They operate to an established Environmental Management System demonstrating as a company there are robust environmental management practices in place;
- ii. They implement an affective waste management system;
- iii. Thy procure materials responsibly, showing preference to materials which have verified Environmental Product Declarations and responsible sourcing standards, Such as BES6001; and
- iv. All timber used in construction comes from responsible sources.

3. Sustainable Transport

A key benefit of the sites transport strategy is the proposal to consolidate freight movements from the distribution centre at Crabtree Manorway North through the construction of a nearby van storage site. As no increase to the capacity of the distribution centre is proposed, the traffic flows associated with the proposed scheme will already be present on the wider network and thus do not constitute new trips in their own right. The proposed van storage site will therefore:

- i. Remove vans from the road network during out-of-operation hours;
- ii. Allow the incorporation of passive/active Electric Vehicle (EV) charging for future increase in an EV fleet;
- iii. Actively promote sustainable transport to drivers to reduce reliance on single-occupancy vehicle trips before and after shifts.
- iv. Provide measures to promote cycling, including the provision of 8 cycle spaces as well as welfare facilities.

4. Climate Adaptation

The development has been designed to ensure it can respond to the risks from a changing climate. Design measures have been incorporated to ensure the development can respond to the following key issues:

- i. Increased temperature;
- ii. Present and future flood risk;
- iii. Increased precipitation;
- iv. Drought risk;
- v. Air pollution; and
- vi. High winds.

5. Biodiversity & Green Infrastructure

The scheme has been designed to attempt to minimise impacts on existing trees where possible. The storage deck has been located to the eastern part of the site to avoid the removal of trees with high retention value. Existing trees will also be augmented with native varieties. Planting has been designed to enhance retained or adjacent vegetation, sourced from local nurseries to enhance foraging opportunities for local birds and bats. Also, where trees are proposed to be planted, a functional understory has will be included.

6. Circular Economy

The development will address waste in accordance with the UK Waste Hierarchy, which is both a legal requirement and a guide to sustainable waste management. This would limit the amount of material requiring end of life disposal in landfill. In later stages of the project the contractor will be required to operate a Site Waste Management Plan, which will demonstrate how at least 95% of the non-hazardous waste (by tonnage) can be diverted from landfill.

In addition, the development will seek to use materials with high recycled content, including though the use of recycled and secondary aggregates.

7. Pollution

The applicant has sought to address all forms of potential pollution arising from the site's operation. The planning application is submitted with air quality, noise and lighting assessments which demonstrate how impacts can be successfully mitigated.

- 1.4 The measures presented within this Energy and Sustainability Statement are considered to demonstrate alignment with relevant sustainability policies in the London Plan 2021 the LB Bexley Core Strategy (2012).

2 INTRODUCTION

2.1 Envision has been appointed by Lysander (the applicant) to produce Energy and Sustainability Statement in support of an application for full planning permission for a proposed development at Infinity House, Anderson Way, Belvedere, London, DA17 6BG.

Structure of this Statement

2.2 This report is structured as follows:

- Section 3 provides a description of the main planning policies for sustainability and energy and their relevance to this application;
- Section 4 provides a summary of the sustainability commitments for the project against a series of relevant themes;
- Section 5 provides a concluding summary.

Location and Existing Situation

2.3 The site, which is located in Belvedere, London, comprises of a rectangular shaped plot of land with existing industrial buildings, an office building an external yard used for storing materials and Heavy Goods Vehicles (HGVs), and a car parking area. The site location is shown in Figure 2.1.

2.4 There is mature tree planting around the perimeter of the site, which is especially present along the eastern, western and southern boundary, with a larger wooded area in the south western corner just outside of the site boundary fronting onto Anderson Way. Access to the site is from Anderson Way via an access point for vehicles and pedestrians controlled with a vehicle gate and separate pedestrian gate.

2.5 The site is bounded to the north by an area of industrial and commercial buildings, including the existing warehouse on Crabtree Manorway North. Directly to the south of the site is the Horse Roundabout and beyond are industrial and commercial properties in the Belvedere Industrial Area. Belvedere station is located 650 metres to the south. To the south west of the site there is existing development comprised predominately of residential properties, a Travel Lodge, restaurant and gym.

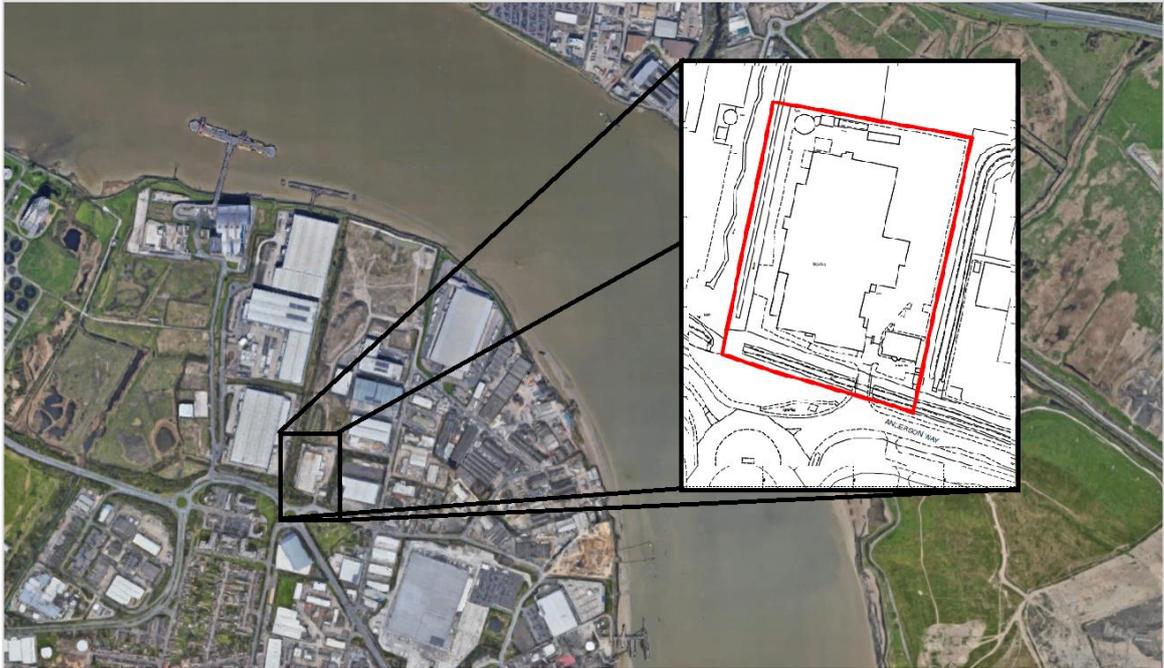


Figure 2.1. Site Location

Development Proposal

2.6 The proposed development includes the demolition of the existing warehouse and the erection of a decked van storage facility which would provide dedicated storage facilities for the vans required to operate the existing distribution warehouse at on Crabtree Manorway North. The vans are only used to facilitate the operations at the distribution warehouse through the collection and delivery of packages and/or goods originating from or returning to that distribution warehouse. Without the vans to affect these movements of packages and/or goods, the distribution warehouse cannot operate effectively. Equally, the van storage use on this site would only take place because the vehicles are required for the distribution warehouse operations. Therefore, the storage of the vans at this Site is a functionally linked necessity for the effective operation of the distribution warehouse. The site and the distribution warehouse form one single planning unit with the primary distribution warehouse use falling into use class B8 and the proposed van storage use constituting an ancillary use to that primary distribution warehouse B8 use. This means the proposed development will also operate pursuant to Use Class B8 (storage use) as an ancillary use to the primary distribution warehouse use within the overall single planning unit.

2.7 The scheme includes:

- 490 van storage spaces split across the 3 storeys of the deck;
- Associated parking, consisting of 3 motorcycle spaces, 8 cycle spaces and 1 dedicated car parking space for security staff;
- Access alterations;
- A guard hut and welfare block;
- Smoking shelter;

- Landscaping; and
- Associated development and infrastructure.

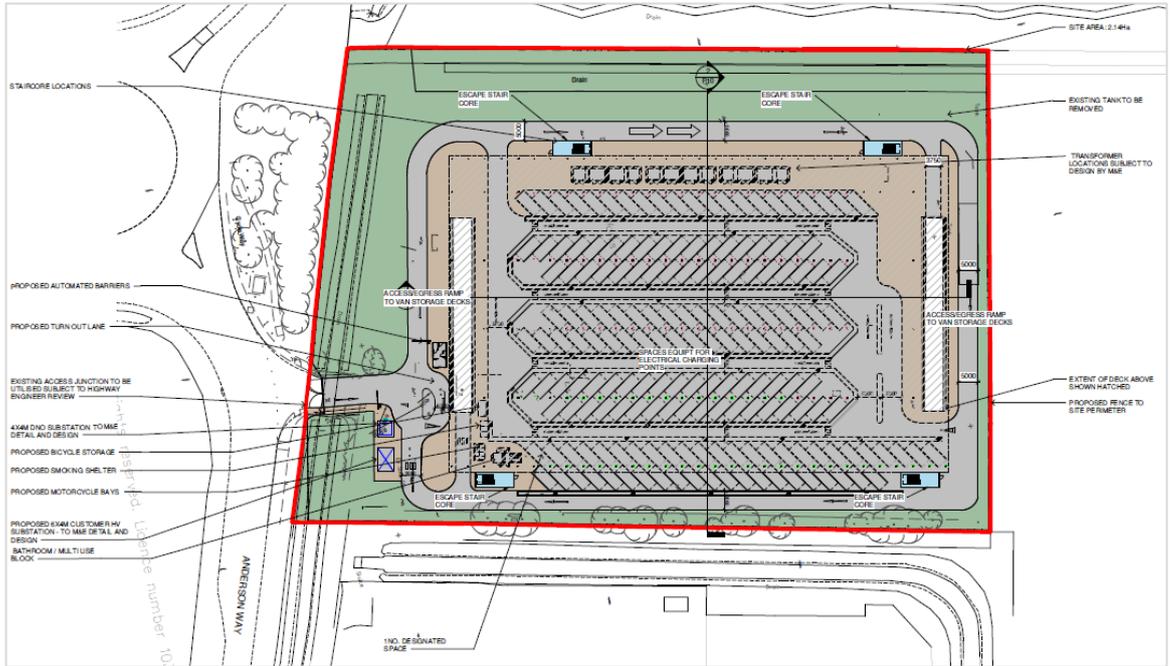


Figure 2.2. General Site Layout

3 ENERGY & SUSTAINABILITY POLICY

3.1 A key mechanism for delivering the principles of sustainable and low-carbon development lies within the UK planning system, which is implemented through national guidance along with regional and local planning policies. A review of all the relevant policy documents was undertaken in order to gain an understanding of the guiding policies for energy standards and sustainability.

National Planning Policy Framework

3.2 The revised National Planning Policy Framework (NPPF) was published in February 2019. It sets out the framework for all planning policy in England and how these policies are expected to be applied. The NPPF sets out a presumption in favour of sustainable development, and the need to support economic growth through the planning system.

3.3 Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

- an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
- a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and
- an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

3.4 Planning plays a key role in helping shape places to radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy and associated infrastructure. This is central to the economic, social and environmental dimensions of sustainable development. The NPPF does not include detailed measures on sustainable design codes and standards to apply, although expects that when setting any local requirement for a building's sustainability, local planning authorities should do so in a way consistent with the national technical standards.

London Plan Policy

London Plan 2021

3.5 The London Plan 2021 contains a number of policies directly related to standards for energy and sustainability, including:

- Policy G1 Green Infrastructure;
- Policy G5 Urban Greening;
- Policy G 6 Biodiversity and Access to Nature;
- Policy SI 1 Improving Air Quality;
- Policy SI 2 Minimising greenhouse gas emissions;
- Policy SI 3 Energy Infrastructure;
- Policy SI 4 Managing heat risk;
- Policy SI 7 Reducing Waste and supporting the circular economy;
- Policy SI 12 Flood Risk Management;
- Policy SI 13 Sustainable Drainage; and
- Policy T 5 Cycling.

London Borough of Bexley Policy

3.6 The most relevant policies which need to be considered when assessing the scheme’s compliance to sustainability and climate policies are those provided within local development documents. The London Borough of Bexley is currently working to its adopted Core Strategy (2012). Work is also underway to prepare a new Local Plan for the London Borough of Bexley, however The Core Strategy is therefore considered to be the most up to date plan.

Policy CC01 - Achieving Sustainable Development

3.7 The Council will seek to achieve sustainable development, in line with the vision set out in Bexley’s Sustainable Community Strategy, to create a ‘strong, sustainable and cohesive community’, in order to provide people equal access to a better quality of life, protect the environment, promote the local economy and encourage an active and healthy lifestyle.

3.8 With regards to sustainable design and construction requirements, the policy recognises that sustainable development will be achieved by applying the following principles:

- adapting to and mitigating the effects of climate change, including sustainably retrofitting existing building stock where possible;
- maximising the effective and efficient use of natural and physical resources, including land, water and energy, whilst addressing pollution issues, such as contamination, noise and air quality, to contribute to the health and wellbeing of the community and the environment;

- ensuring existing or proposed infrastructure (including green infrastructure), services and facilities are safeguarded to help improve accessibility and address deficiencies, and that adverse impacts of development, including waste arisings, are mitigated.

Policy CS08 - Adapting to and mitigating the effects of climate change, including flood risk management

3.9 *“All development should contribute to the delivery of sustainable development by planning for, adapting to, and mitigating the impacts of climate change, by reducing the carbon emissions related to the construction and operation of all development.*

3.10 *The Council will achieve this by applying the requirements and targets outlined in national and regional planning policy and guidance to new development. In particular, this will encompass the requirements of the Mayor’s London Plan with regard to environment policies such as: reducing CO₂ emissions; the Mayor’s energy hierarchy; integrating energy efficiency; decentralised energy (in particular district heating where appropriate); site-wide communal heat networks supported by CHP; adopting on-site renewable energy technologies; sustainable transport (in particular public transport, cycling and walking); green infrastructure; flood risk management; and sustainable urban drainage systems (SUDS), including supporting the Mayor’s drainage hierarchy.*

3.11 *In addition, this will comprise:*

- *requiring the use of sustainable design and construction techniques in new built development, including exceeding current Building Regulations requirements through energy efficiency alone, and sustainably retrofitting existing building stock where possible;*
- *following the sequential approach to flood risk management advocated in national planning policy and its associated practice guidance;*
- *applying the recommendations of Bexley’s Strategic Flood Risk Assessment;*
- *supporting green infrastructure (e.g. green and brown roofs) and the contribution it can make, to managing flood risk and surface water, and to the mitigation of the urban heat island effect;*
- *working with partners to prepare a joint urban drainage strategy for London, as well as a local Surface Water Management Plan (SWMP) for Bexley, to address surface water drainage flooding, including sewer flooding”.*

3.12 With regards to the energy hierarchy, it is relevant that there will be no buildings on site that are required to meet the provisions of Part L of the Building Regulations (2013). The two buildings which are on site (the guard hut and welfare building) are both less than 50 m², thus exempt. On this basis the conventional energy hierarchy and any associated carbon targets should not be applicable, albeit that the scheme will still demonstrate good practice energy efficiency principles as explained by this statement.

Bexley Sustainable Design and Construction Guide (2007)

- 3.13 This Sustainable Design & Construction Guide is a Supplementary Planning Document (SPD) within Bexley's Local Development Framework (LDF). It was prepared to supplement the policies and proposals of the previously adopted Bexley Unitary Development Plan (UDP) 2004 and the London Plan 2004. It is a material consideration when the Council considers planning applications.

4 ENERGY & SUSTAINABILITY STATEMENT

4.1 This section provides an account of the sustainability benefits of the proposed development, and how relevant policy has been addressed in the development proposals. The following headlines are considered in this section:

- Carbon Emissions and Energy Efficiency;
- Sustainable and Modern Methods of Construction;
- Sustainable Transport;
- Climate Adaption, including Flood Risk & Surface Water Management and Water Conservation.
- Biodiversity & Green Infrastructure;
- Circular Economy; and
- Pollution Control.

Carbon Emissions & Energy Efficiency

4.2 Policy SI 2 Minimising greenhouse gas emissions of the London Plan 2021 states that major development should be net zero. This should be achieved by following the energy hierarchy. Whilst the policy is noted, this can only be applicable to buildings governed by Part L of the Building Regulations. The scheme proposes a van storage deck, with the only thermally enclosed spaces being the guard hut and ancillary buildings, both of which are less than 50 m² and exempt from Part L of the Building Regulations 2013. Whilst energy and carbon dioxide policy relevant to buildings is not directly applicable to the scheme, the applicant has considered the impacts of the proposals and addressed these accordingly.

4.3 In 2019 transport accounted for 34% of all carbon dioxide emissions in the UK¹. The large majority of emissions from transport are from road transport. The applicant recognises the potential impact the operation of vehicles can have on carbon emissions in a both a local and national context. The operator is aiming to make its operations more sustainable and to this end it is seeking to include 20% electric vehicles being stored on the development site and serving the distribution warehouse. Electric vehicles lead to lower overall CO₂ emissions, even if the electricity used to power them comes from a National Grid that still contains fossil combustion. More carbon is emitted in the manufacture of electric vehicles than of internal combustion engine cars, however over a vehicles lifecycle, the benefits are heavily in favour of electric, by up to 70% in countries with decarbonised power generation.²

¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/875485/2019_UK_greenhouse_gas_emissions_provisional_figures_statistical_release.pdf

² Knobloch, F., Hanssen, S., Lam, A. et al. Net emission reductions from electric cars and heat pumps in 59 world regions over time. Nat Sustain 3, 437–447 (2020). <https://doi.org/10.1038/s41893-020-0488-7>

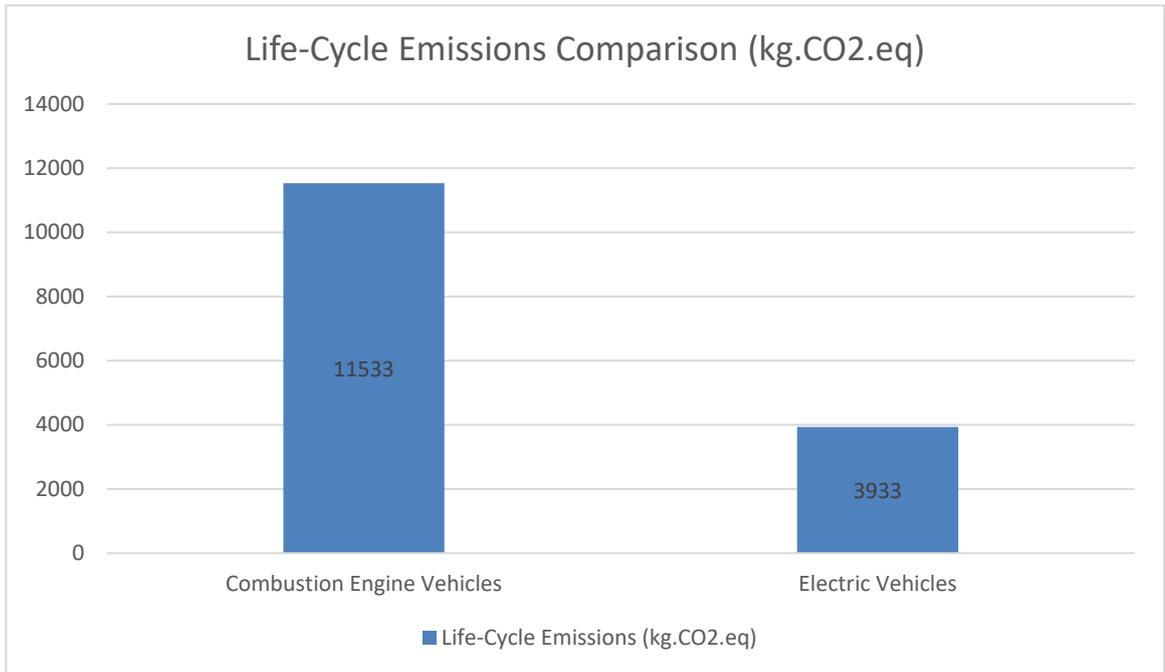


Fig 3.1 – Life Cycle Comparison

- 4.4 The applicant has determined that for each electric van used instead of a diesel van, a conservative estimate is that the life-cycle carbon emissions of operating that van have been reduced by **60%+** from 11,533kg CO₂e annually to 3,933 kg CO₂e annually.
- 4.5 As the National Grid in the UK continues to decarbonise, the emissions associated with charging the vans will continue to fall to the point where carbon associated with vehicular operation is virtually eliminated. In addition, the two buildings on-site (the guard hut and welfare building) will be fully electrified, resulting in the site as a whole being futureproofed for decarbonisation.

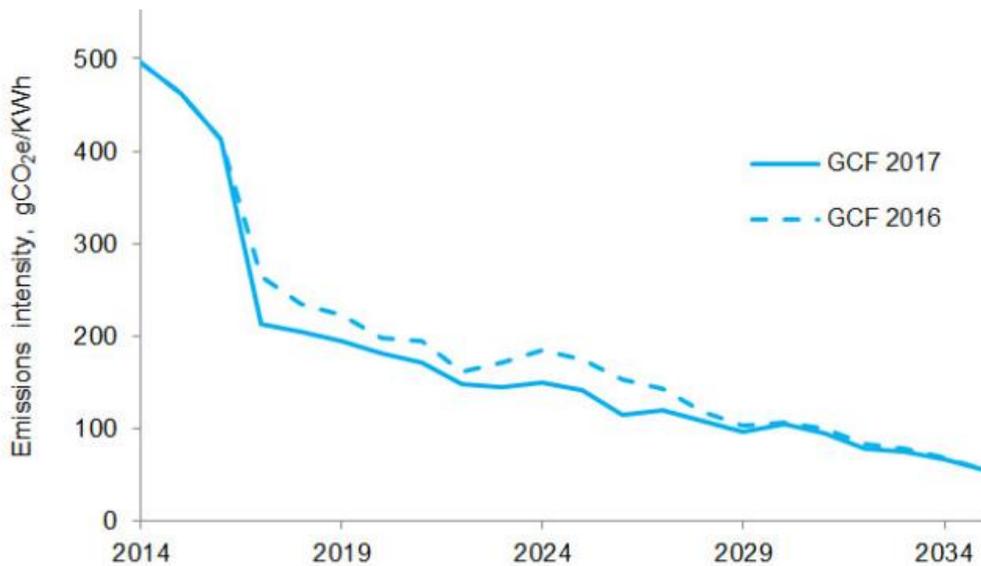


Fig 3.2 - BEIS Updated Energy and Emissions Projections (April 2019).

Energy Efficiency of Guard Hut & Welfare Cabin

4.6 The two proposed buildings on site consist of a welfare hut and a guard cabin. As these constitute stand-alone buildings other than dwellings, each with a total useful floor area of less than 50m² they are exempt from the requirements laid out in Part L of Building Regulations. Notwithstanding this exemption, these will be constructed with robust sustainable design principles to align with the sites overall environmental ambition:

- They will be well insulated and draught proofed, conserving heat;
- The buildings will be fully electrified, meaning that their heating and hot water demands are met by electric led systems. No gas will be consumed within these buildings, ensuring they are futureproof for progressive grid decarbonisation;
- They will be constructed of robust and durable materials with low embodied impact; and
- All internal lighting will be LED and energy efficient.

Energy Efficiency of External Lighting Scheme

4.7 External lighting would typically represent one of the highest energy consumers on a site of this nature. All external lighting specified on site will be high-performance LED with daylight controls and movement sensors. Further details are provided in the External Lighting Assessment, submitted with the planning application.

Sustainable and Modern Methods of Construction

4.8 The design team have considered opportunities to maximise construction efficiency. The proposed development will be constructed from a steel frame, manufactured offsite and delivered to site in a kit of parts for final assembly on site. The use of structural steel frames and concrete floors ensures that materials are strong, robust and provide a long life with minimal maintenance. These systems are also flexible and can be adapted to suit future needs.

4.9 Ensuring the appointed contractor instils robust sustainable construction measures into their operation will be a key consideration. The applicant will require the contractor to operate an established set of sustainable construction principles, reflecting principles within the Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction (2014):

- Environmental Management – The contractor is to operate to an Environmental Management System demonstrating as a company there are robust environmental management practices in place. This will include measures to record and monitor energy, water and movement of vehicles during construction with the objective to put in place effective controls. In addition, at all times the contractor is to implement best practice pollution prevention policies and procedures on site in accordance with previous Environment Agency Best practices - Working at construction and demolition sites: PPG6, Pollution Prevention Guidelines.

- Reducing Waste – The Principal Contractor shall ensure that an effective waste management system is implemented. Waste must be effectively segregated on site and in no cases stored outside the confines of the site boundary unless with specific agreement with the client and relevant permits from the local authority. Further details on waste targets are provided in the section ‘circular economy’.
- Legal & Sustainable Timber - All timber and timber-based products used during the construction of the project will be legal and sustainable timber, i.e. FSC/PEFC certified.
- Responsible Procurement – The contractor will be expected to maintain their own responsible procurement plan, ensuring that materials used can demonstrate alignment with standards such as BES 6001 – Responsible Sourcing of Construction Products, and have Environmental Product Declarations (EPDs).
- Emergency Access - Access to the site and surrounding roads, properties and businesses shall be kept free and open at all times, to allow free access for emergency vehicles.

Sustainable Transport

- 4.10 Sustainable transportation is the capacity to support the mobility needs of a society in a manner that is the least damaging to the environment and does not impair the mobility needs of future generations.
- 4.11 A Transport Assessment has been produced by Vectos as part of the planning application, which demonstrates the measures to be incorporated into the development are in line with the National Planning Policy Framework, the London Plan and local policy, in particular policies CS15 of the Bexley Core Strategy (Achieving and integrated and sustainable transport system), and CS16 (Reducing the need to travel and the impact of travel).
- 4.12 The proposals include the provision of 490 van storage spaces, 1 dedicated disabled parking space, 3 motorcycle spaces and 8 covered cycle parking spaces.
- 4.13 A fundamental aspect of the site’s transport strategy and the overall approach to sustainability is the proposal to consolidate freight movements from the distribution centre at Crabtree Manorway North through the construction of a nearby van storage site which would house the vans overnight whilst the drivers are not out on deliveries.
- 4.14 In this regard and given the capacity of the distribution centre will not be increased as a result of these proposals, the traffic flows associated with the proposed scheme will already be present on the wider network and thus do not constitute new trips in their own right.
- 4.15 The proposed van storage site will therefore:
- Remove vans from the road network during out-of-operation hours; and
 - Allow the incorporation of passive/active Electric Vehicle (EV) charging for future increase in an EV fleet as detailed above under the ‘Carbon Emissions and Energy Efficiency’ section.

- 4.16 In addition to consolidating freight movements and reducing trip generation, the applicant is committed to promoting sustainable transport and reducing single occupancy vehicle trip by drivers arriving to/from work. This will be achieved by implementing the following measures:
- Induction Packs and an Information board promoting alternative sustainable transport options;
 - On site welfare facilities;
 - A cycle to work scheme; and
 - Encouragement of car-sharing.

Climate Adaptation, including Surface Water Management and Water Conservation

- 4.17 According to the London Plan 2021, climate change means London is already experiencing higher than historic average temperatures and more severe hot weather events. This combined with a growing population, urbanisation and the urban heat island effect, means that London must manage risk in new developments. In addition, higher levels of winter rainfall have been experienced often in increasingly heavy rainfall events leading to more flooding and damage to buildings and infrastructure. These patterns are consistent with projections of more and heavier rainfall for the UK in a warmer global atmosphere. Annual average UK temperature was 0.9°C higher during the period 2005-2014 compared with 1961-1990. Moreover, sea levels around the UK have risen by 15-20 centimetres since 1900³. These figures are forecast to continue to change as a result of climate change. At the same time, there are upward trends in rainfall across the UK.
- 4.18 Therefore, there is a need for strategies to mitigate the impact of these events on our built environment and in particular to ensure that new buildings and infrastructure are designed and constructed to minimise future risks, while avoiding over specification and resource use in the meantime.
- 4.19 Design measures have been incorporated into the development to reduce risks from a changing climate as follows:

Table 3.1– Climate Change Adaptation Measures

Identified Risk	Design Measure
Increased Temperature	<p>Risk of high temperatures is less relevant in the context of the site’s use; however, the scheme in its own right can contribute to increased urban heat. A landscaping scheme is proposed which will provide enhanced urban greening around the site, providing a net increase in trees with greater canopy cover over time.</p> <p>The van storage deck will ensure that the majority of vehicles stored are in shade from the sun, reducing the initial demand on vehicle air conditioning.</p>

³ Committee on Climate Change. UK Climate Change Risk Assessment 2017: Synthesis report: priorities for the next five years. 2016.

	<p>A robust material palette has been selected which is appropriate for the UK climate. Durable materials will be specified with integrated movement joints will be incorporated as needed.</p>
Flood Risk	<p>A comprehensive Flood Risk Assessment (FRA) has been prepared by Enzygo and submitted as part of this planning application which identifies flood risks from all sources. The primary source of flooding is likely to be from tidal sources from the Thames Estuary. The site is located within Flood Zone 3a, benefiting from tidal flood defences which will be in place through the lifetime of the development. Various mitigation measures are proposed to manage flood risk as listed within the FRA, including utilising flood resilient construction techniques for onsite buildings, which allow the buildings to be operational soon after a flood event.</p>
Increased Precipitation	<p>Surface water run-off from the proposed development will be collected in a new surface water drainage network which will fall by gravity to an underground attenuation system located underneath the van storage area. A geo-cellular attenuation system will be located beneath the van storage deck. The attenuation system will provide an attenuation storage volume for all storm events to greenfield runoff rate, based on a 1 in 100-year event plus an additional 40% allowance for climate change.</p>
Drought	<p>Drought can lead to increases in dust alongside degradation in external landscaping. No irrigation system is proposed for the development and landscape irrigation will be via rainfall and manual watering where required to help landscaping establish.</p> <p>The site will be expected to have a relatively low level of water consumption given the only water consuming components present on-site are found within the welfare building and guard cabin.</p> <p>Best practice derived from BREEAM guidance requires water consumption to be reduced by 25% from a calculated baseline, in line with BREEAM 'Excellent'. The following systems would be expected to align with a this:</p> <ul style="list-style-type: none"> • WC – 4.5 effective flush volume; • Wash Hand Basin – 7.5 litres/minute; • Kitchen tap – 7.5 litres/minutes.
Air Pollution	<p>Deterioration will be mitigated through specification of robust, well tested materials for hard landscaping and the two buildings on-site. Typically building membranes will not be directly exposed to the environment protected / covered by other building elements.</p>
High Winds	<p>Materials used will be durable and connection details designed to withstand wind / storm events.</p> <p>Landscaping specifications will be robust and account for high wind and storm events.</p>

Biodiversity & Green Infrastructure

- 4.20 Policy G1 of the London Plan 2021 states that development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network. The site has been subject to an ecological appraisal and an Arboricultural Survey to identify the baseline environment.
- 4.21 The scheme proposes a net increase in trees on the site, with those that are to be removed to facilitate the development largely in Category C – lower retention value. The arboriculturally report describes how trees which are to be retained will be protected. These practices will be adopted by the future contractor.
- 4.22 The retained trees will also be augmented with native varieties. Planting has been designed to enhance retained or adjacent vegetation and will be sourced from local nurseries to enhance foraging opportunities for local birds and bats. New trees will be planted with a functional understory, providing cover and foraging opportunities for local species.

Circular Economy

- 4.23 Policy SI 7 of the London Plan 2021 relates to reducing waste and supporting the circular economy. The policy sets targets for construction and demolition projects, requiring – 95 per cent reuse/recycling/recovery and 95 per cent of excavation waste to be applied for beneficial use. In addition, there is a requirement for all developments to be designed with adequate, flexible, and easily accessible storage space and collection systems that support, as a minimum, the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food.

Sustainable Waste Management

- 4.24 Principles of the Waste Hierarchy will be reflected during the demolition and construction phases. The proposed development requires demolition of the existing buildings on site. These buildings will be subject to a pre demolition audit with the objective to maximise recovery options for the materials. During this investigation, opportunities to reuse materials as part of the foundation and piling mat for the new van storage deck will be explored.
- 4.25 The contractor will be required to achieve high levels of landfill diversion, targeting a minimum 95% of non-demolition waste (by tonnage) in line with London Plan targets.

Material Use

- 4.26 Maximising the sustainability of all the materials used in the build will be an important factor from the outset. The design team will commit to the following criteria to ensure as low an environmental impact as possible;

1. Materials Specification

Where possible, hard landscaping materials will be selected to minimise environmental impact. Owing to the Aggregates Levy and the Landfill Tax, recent evidence indicates that the amount of aggregates being disposed of in landfill and being used as low-grade fill has decreased markedly in recent years. BREEAM itself recognises that primary aggregates can

still be considered a sustainable option, where locally sourced, sustainably transported and from a region where that aggregate type is abundant. The design team will consider material sourcing and the use of recycled materials, where practical and appropriate.

2. Designing for Durability and Resilience

The design will ensure protection of exposed elements, therefore minimising the frequency of replacement and maximising materials optimisation. This will include measures to protect the two buildings from vehicle movements, as well as protection on the internal columns to prevent damage.

Operational Waste

- 4.27 In general, the scheme will generate very limited waste associated with the operational site. It is envisaged that waste recycle bins will be located at key points around the site, near to the stair cores and the welfare cabin to ensure that the site is maintained to a high standard.

Pollution Control

- 4.28 The construction of any development can potentially lead to detrimental environmental effects. The development is not of the scale that would require an Environmental Impact Assessment (EIA); however, a number of technical reports have been prepared for the planning application.
- 4.29 With regards to air and noise pollution from the two ancillary buildings, these will be fully electrified with no external plant, meaning there will be no fossil fuel combustion (and resultant air pollution) or external condensers (and resultant noise pollution) from their operation.

Avoidance of Air Pollution

- 4.30 The whole London Borough of Bexley has been declared as an Air Quality Management Area (AQMA) designated for exceedances in NO₂ and PM10.
- 4.31 With regards to air pollution from construction, the Air Quality Assessment identifies a range of site-specific mitigation measures to manage and potential impact from dust emissions. A qualitative assessment of the potential impacts on local air quality from construction activities has been carried out. This identified that there is a medium to low risk of dust soiling impacts and a medium to low risk of increases in particulate matter concentrations due to unmitigated construction activities. Through good site practice and the implementation of suitable mitigation measures outlined within that report, the effects of dust and PM10 releases would be significantly reduced.
- 4.32 With regards to the vehicular storage area and its operation, the operation of a large number of road vehicles would typically represent an air quality concern – something the applicant has sought to address through two key principles:

Electrifying Operations

- 4.33 As detailed in the 'Carbon Emissions' section the applicant is committed to sustainability, and to lowering carbon emissions. The operator is aiming to make its operations more sustainable and

to this end it is seeking to include 20% EV charging, with the remainder of the site being designed for passive provision.

Euro 6

- 4.34 The storage facility allows the operator to control the standard of delivery vans that serve the site. The operator will work towards all vans being compliant with the Euro 6 emissions standard.
- 4.35 Euro 6 is the latest standards introduced by the European Commission to regulate the level of pollutants released from the tailpipes of vehicle engines. Euro 6 aims to reduce the levels of harmful emissions including nitrogen oxide (NOx), carbon monoxide, and particulate matter i.e., soot from diesel engines.
- 4.36 Different emissions standards have been set for petrol and diesel engines. The permitted level of NOx emitted from a diesel engine has been drastically reduced by 55% from 180mg/km to just 80mg/km. In contrast, the NOx limit for petrol engines has not been altered from the Euro 5 standards and remains at 60mg/km. The commitment towards Euro 6 will support the protection of local air quality.

Avoidance of Noise Pollution

- 4.37 A Noise Impact Assessment has been completed by Delta Simons and submitted with the application. This considers the effects of noise effects from vehicles using the site as well as from mechanical plant, which in this case will be very limited. The Site lies in a commercial area with the closest residential dwellings lying approximately 130m to the south west of the Site boundary.
- 4.38 The assessment shows that the rated level of noise from the van operations will meet the typical daytime background sound levels. Accordingly, the level of noise generated by the site at the closest residential dwelling will result in a negligible noise impact.

Avoidance of Light Pollution

- 4.39 The proposed development is not expected to have an adverse impact on surrounding properties and natural habitats with regards to light pollution. A lighting scheme has been designed for the Site and submitted with the planning application which avoids light overspill. The lighting will be a highly efficient LED type and will avoid upward light spillage through following the ILE guidance on the Reduction of Obtrusive Light design guidance.

5 CONCLUSION

- 5.1 Envision has been appointed by Lysander (the applicant) to produce an Energy and Sustainability Statement in support of an application for full planning permission for a proposed development at Infinity House, Anderson Way, Belvedere, London, DA17 6BG.
- 5.2 Planning permission is sought for the demolition of existing buildings and redevelopment of the site to provide a deck for the storage of operational vehicles, associated parking, access alterations, guard hut, welfare block, landscaping, and associated infrastructure.
- 5.3 The development is being brought forward to address relevant sustainability policies held within the London Plan and those within the London Borough of Bexley Core Strategy. Policy CS08 - Adapting to and mitigating the effects of climate change, including flood risk management is the principal policy of relevance for local authority decision making. This energy and sustainability statement demonstrates how the energy aspects of this policy do not directly relate to the scheme of this type, albeit the principle of this policy, to mitigate carbon emissions, is facilitated by the proposals to consolidate and electrify fleet operations from the existing operations at Crabtree Manorway North, alongside wider proposals for energy and resource efficiency.
- 5.4 On this basis the scheme is considered to be in full accord with relevant sustainability policies.