HODKINSON

BREEAM
Communities Report

GE Aviation

Hamble, Eastleigh

Final

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ABOUT HODKINSON CONSULTANCY

Our team of technical specialists offer advanced levels of expertise and experience to our clients. We have a wide experience of the construction and development industry and tailor teams to suit each individual project.

We are able to advise at all stages of projects from planning applications to handover.

Our emphasis is to provide innovative and cost effective solutions that respond to increasing demands for quality and construction efficiency.

Executive Summary

The GE Aviation, Hamble development is required to achieve a BREEAM Communities rating of 'Excellent'. This requires the Outline application to achieve Step 1 (interim) certification.

This document does not confirm compliance with all BREEAM Communities requirements currently, but it reflects documents received up to the date of writing and it is expected that all requirements will be achieved.

BREEAM Communities is an environmental assessment methodology which provides a way to improve, measure and certify the sustainability of new, large-scale developments. It ensures sustainability is considered at an early stage in the master planning process.

BREEAM Communities is assessed in three steps, as outlined below:

> Step 1: Establishing the Principle of Development – the first step in BREEAM Communities assessed the constraints and opportunities relating to the sustainability of the site and requires consideration of how the development will impact on the wider community.

> Step 2: Determining the Layout of the Development – the second step commences with the start of a Reserved Matters application. It involves using the detailed surveys undertaken to find the most sustainable design solutions for the site.

> Step 3: Designing the Details – the final step coincides with the finalisation of design details ready for a Reserved Matters submission.

Although this sets out the current likely path to achieving BREEAM Communities 'Excellent', this route is not fixed and individual developers who take forward the Reserved Matters applications would be fully able to adjust the credits targeted to meet their own individual requirements. The actual route to full certification would be determined by the final developers during Steps 2 and 3. The majority of credits are awarded at this stage, and it would be up to the final developers to determine the appropriate credits and strategy for achieving a rating of 'Excellent'.

CONTENTS

1. INTRODUCTION

1.1 This document has been prepared by Hodkinson Consultancy, a specialist energy and environmental consultancy for planning and development, appointed by GE Aviation. This report sets out the route to achieving Step 1 of BREEAM Communities.

Site Location

1.2 The site is located within the Borough of Eastleigh in Hampshire, in Hamble-le-Rice.

1.3 The proposed development will comprise of 148 new homes; all dwellings will benefit from private amenity space, cycle storage and refuse/recycling facilities. There will be extensive areas of planting and the proposal also includes the retention and improvement of the lawn bowls and football club facilities.

Figure 1: Site Location – Map data © 2018 Google

2. BREEAM COMMUNITIES

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3. GO 01 CONSULTATION PLAN

Public Consultation

3.1 A Statement of Community Consultation has been prepared by Meeting Place Communication to support the application. This identifies the stakeholders and explains the various consultation methods that have been undertaken during the course of the pre-planning development work up to the point of submission.

3.2 There has been significant consultation with local residents, officers of Eastleigh Borough Council, local interest groups, and specialist consultees.

3.3 In addition, as part of the BREEAM Communities assessment, best practice public consultation was required and has been undertaken, informed by a Consultation Plan and coordinated by Meeting Place Communication. This identified all appropriate stakeholders for consultation, empowering local people with the means and ability to have their say in the development proposals.

3.4 Two public exhibitions were held at GE Aviation Main Reception on 30th November and 2nd December 2017 and leaflets were posted to all local residents and businesses. Posters were provided to the Parish Council to be displayed around Eastleigh as well as on the Council's website and press articles were released advertising the public consultations events within the Daily Echo and the local Village Life magazine. Forms were available at the public exhibition for completion and a full analysis of the comments received and how they have been addressed is included in the Statement of Community Consultation.

3.5 In order to ensure that the whole community had engaged with the consultation, further consultation events were arranged at GE's Hamble Campus in the evening on Thursday 12th April and in the morning on Saturday 14th April. This gave the opportunity to review the developed scheme, the scheme amendments made in response to the previous consultation and provide further comment on the proposals.

4. SE 01 & SE 02 ECONOMIC IMPACT, DEMOGRAPHIC NEEDS AND PRIORITIES

4.1 Eastleigh has a population of approximately 126,800 people and provides employment for approximately 61,400 people. There is a high level of economic activity in Eastleigh with employment rates higher and unemployment rates lower than found in the wider Solent Local Economic Partnership (LEP) area. The local economy of Eastleigh Borough was worth £2.96 million in 2011 with the main contributing sectors being Professional and other Private Services and Wholesale and Retail.

4.2 As part of the BREEAM Communities assessment, an economic study has been completed with the purpose of identifying the needs and opportunities within the local area and surrounding economy. The study will ensure that the development complements and enhances existing economic activity in the local area and will seek to understand how the proposed development can enhance the economic well-being of future occupants. In accordance with the BREEAM Communities assessment the development will seek to target the following:

> No net reduction in employment in the local area as a result of the development;

> The development will contribute to and complement existing business in the area.

4.3 The study estimates that approximately 178 construction jobs would be created each year as a result of the development on the site, estimating that at least 50% of workers would come from the local area. The construction process would include a range of occupational levels from unskilled or labouring jobs to more senior positions across a range of professional disciplines. Furthermore, the project alongside other future developments could facilitate the growth of the local construction industry, therefore enabling firms to expand and potentially take on employees.

4.4 The proposed development provides an opportunity for GE Aviation to dispose of underutilised land, through the consolidation and relocation of the sports uses on site, demolition of existing buildings and relocation of existing car parking; to enable funds to be reinvested back into the business. GE Aviation plan to retain their existing operation on site, maintaining their role as a significant employer within the area and to enable reinvestment to maintain the current employment operations on site.

4.5 In summary, the proposed development would provide a net gain in employment opportunities and complement existing businesses as well as providing additional workers which will support economic growth in the Borough. The provision of high quality new homes and contributions to the local transport infrastructure will also attract the economic activity to the area further improving and strengthening the local economy.

5. SE 03 FLOOD RISK ASSESSMENT

5.1 The BREEAM Communities assessment requires a site specific Flood Risk Assessment (FRA) to be carried out in accordance with current best practice and planning policy. The BREEAM assessment requires the FRA to include the following:

> Risk and consequences of flooding from all sources on the site and from the site to the surrounding area and how any risks will be managed;

> Changes in flood risk due to climate change;

> Consultation with appropriate statutory bodies (i.e. the Environment Agency).

5.2 A Flood Risk Assessment (FRA) has been compiled by RSK Land and Development Engineering Ltd (RSK). The FRA states that the proposed development is located within Flood Zone 1, which represents less than a 1 in 1,000 annual probability of river or sea flooding (<0.1%).

5.3 The assessment concludes that all potential sources of flood risk at the application site have been assessed, and the risks of flooding occurring within the development site have been assessed as low. Climate change impact has also been assessed and the report concludes that the proposed development site would not be affected by flood risk as a result of climate change.

6. SE 04 NOISE POLLUTION

6.1 In order to reduce the likelihood of noise complaints and to ensure a high quality development is created, the development will be aiming to achieve airborne sound insulation values that will improve upon the performance standards outlined within the Building Regulations Part E standards.

6.2 Construction traffic will be minimised by restricting deliveries and arrival times in order to manage potential impacts on existing and future occupants. Work will be limited to appropriate hours to be agreed with the Council, and suppressors will be used to reduce noise from machinery in line with the Considerate Constructor's Scheme.

6.3 As part of the mandatory requirements of BREEAM Communities and the Environmental Statement, an Acoustic Design Assessment has been carried out by RPS Group.

6.4 The Acoustic Design Assessment details that ambient surveys have been carried out at the site to determine existing noise levels primarily from noise generated by road traffic on Hamble Lane. For internal noise in residential dwellings, outline recommendations for glazing and ventilation have been provided which ensure that noise within habitable rooms would comply with maximum levels

with adequate ventilation. The external noise levels are considered by the assessment to be at an acceptable level.

6.5 The Acoustic Design Assessment concluded that an appropriate acoustic environment can be provided to the proposed dwellings, both externally and internally. The full report by RPS Group should be referred to for further information and detail.

7. RE 01 ENERGY STRATEGY

7.1 An Energy Statement has been compiled by MES Building Solutions in support of the planning application which has been prepared in response to the energy and carbon dioxide targets included in local planning policy, current and future versions of the Building Regulations.

7.2 It outlines indicative routes to compliance with the following standards:

> 19% reduction in regulated CO_2 emissions over Part LA 2013 minimum standards (equivalent to Code for Sustainable Homes Level 4) for the residential units;

> 15% reduction in regulated CO_2 emissions over Part LB 2013 minimum standards for the non-residential buildings; and

> Building Regulations Part L (2013).

7.3 It is proposed to incorporate a high standard of energy efficient design and construction in all dwellings which will be developed in detail as part of the Reserved Matters applications.

7.4 As detailed proposals are developed, the use of building orientation, solar shading and efficient use of natural daylight will all be considered in order to maximise energy and carbon dioxide reductions.

7.5 The Energy Statement which accompanies this application should be referred to for further information and detail.

8. RE 02 EXISTING BUILDINGS AND INFRASTRUCTURE

8.1 As part of the BREEAM Communities assessment, all existing buildings and infrastructure on the site will be assessed in order to determine what materials can be re-used, recycled and maintained and which are of significant value. The assessment of existing buildings and infrastructure will consider the following:

> Heritage and local identify;

> The location and condition of existing buildings and infrastructure;

> The embodied carbon in existing materials;

> The potential uses of buildings and infrastructure;

> The possible use of materials either on or off site; and

> Any community and local authority knowledge and opinion.

8.2 A Build Heritage Statement has been prepared by CgMS Heritage, part of the RPS Group Plc. This report includes an assessment of designated built heritage assets within a one kilometre radius of the Site, including the Grade II* Sydney Lodge, with the site, and registered Royal Victoria Country Park, their setting and a description and assessment of other heritage assets within the Site itself.

9. RE 03 WATER STRATEGY

Water Reduction

9.1 In accordance with the BREEAM Communities assessment, the developer will engage with water suppliers, the local authority and the appropriate regulatory body to develop overall water consumption targets for the development, taking account of the following:

> The current availability of water and demands in the area;

> The future predicted availability taking climate change into account; and

> The predicted water demand for the area resulting from growth and climate change.

9.2 A detailed water strategy will be prepared to manage water demand on the development site taking into account climate change such as allowing for impacts on precipitation levels, increased evaporative losses and changing use patterns. The strategy will include:

> Actions to minimise the predicted use of the development;

> Design options and measures to reduce the water demand in landscaping; and

> Targets for water use in the residential dwellings (more information below).

9.3 All new homes will not exceed 105 litres/person/day (in line with the mandatory requirements of the Code for Sustainable Homes Level 4 and tighter Part G Building Regulations).

9.4 Internal water consumption in the new dwellings will be reduced through the use of practical and hygienic water saving measures. An evaluation of the devices to be used will be undertaken based on technical performance, cost and appeal. These may include dual flushes, low flow taps and shower heads and, if white goods are to be provided, they should be best practice with respects to both water use and energy efficiency. A suitable strategy would include the following:

> Dual flush WCs (6/4L per min);

> Wash hand basin tap flows of 3L/min;

> Shower flow rates of 9L/min;

> Bath capacity of up to 150L; and

> Kitchen tap flows of 4L/min.

9.5 Waste water reduction advice will be provided to the occupants within a comprehensive Home User Guide, to enable optimum use to be made of the devices installed.

9.6 The developer is committed to ensuring that the water consumption targets set within the water strategy are achieved in all buildings within the development. Their commitment includes the design of landscaping, planting and hard surface areas where they have an impact on the water strategy for the site. The developer will also ensure that responsibilities for the management and maintenance of water supply/collection facilities are established prior to first occupation of the dwellings.

10. LE 01 ECOLOGY STRATEGY

10.1 BREEAM Communities aims to ensure that developments protect existing natural habitats wherever possible and where not, minimises and mitigates its impact on existing habitats and promotes measures to enhance biodiversity on site and in the locality.

Current Ecological Value

10.2 A Preliminary Ecological Appraisal has been undertaken by RSK Environmental Ltd. The Report includes the following information regarding the existing site and its surroundings:

> Semi-natural and plantation broadleaved and mixed woodland, scattered broadleaved and coniferous trees, dense scrub, introduced scrub, hedges and amenity land were present on the site;

> The site and its disposable land are within the Site of Special Scientific Interest (SSSI) Impact zone for the Lee-on-the-Solent to Itchen Estuary SSSI;

> An area of ancient semi-natural woodland borders part of the disposable land area. Additionally, some of the broadleaved woodland on the site has been listed as deciduous woodland under the Priority Habitat Inventory for England. Any proposed development should be planned to avoid effects on these areas if possible;

> No evidence of badgers was found on the site; and

> Buildings and mature trees could provide habitat for roosting bats, and the site provides foraging habitat between two national parks.

Enhancement of Ecological Value

10.3 Following a Preliminary Ecological Appraisal, detailed ecological studies of the relevant protected species have been carried out on site. A summary of the conclusions and proposed mitigation is set out below:

> **Great Crested Newts** – Habitats on site were deemed to be suitable for Great Crested Newts and a single pond was identified using aerial imagery. The location of the pond was visited, and it was discovered that the pond no longer held water and, as a result, was unsuitable for Great Crested Newts. No further survey work or mitigation is required with regard to this species.

> **Reptiles** – A medium population of Slow Worm (Anguis fragilis) was found during surveys in 2017. Slow Worms were concentrated around the northern and southern boundaries of the site in areas of scattered broadleaved trees and mixed plantation woodland. The majority of the site is amenity grassland and hard standing which is not suitable habitat for common reptiles. Development proposals retain all suitable habitat for reptiles; as a result, a translocation will not be required.

> **Breeding Birds** – Breeding bird surveys were undertaken in April, May and June, thirty species of bird were recorded – of these 24 species were either confirmed breeding (five), probable breeding (eight) or possible breeding (11). Vegetation clearance will be undertaken outside of the nesting bird season (where possible) or checked by an ecologist prior to removal.

> **Wintering Birds Surveys** – recorded 40 species of birds, including Schedule 1, UKBAP and BoCC species and species included in the Solent and Southampton Water SPAs and Ramsar sites. None of these species were found within the site boundary, suggesting that the site is not used by wintering birds, possibly due to the heavy levels of disturbance. Due to the size of the development, a financial levy will be provided to the Solent Recreational Mitigation Strategy, this strategy is supported by Natural England and aims to provide sufficient mitigation to offset any disturbance from new developments with the Eastleigh borough.

> **Dormice Surveys** – the survey found that Hazel Dormice (Muscardinus avellanarius) were absent from the site and no further actions were required.

> **Badgers** – No Badger setts or evidence of foraging Badger were found during the Preliminary Ecological Appraisal undertaken in February 2017. Further detailed surveys are not necessary.

> **Bats** – All trees on site were assess for their potential for roosting bats; three had low potential, 21 had moderate potential and nine had high potential for roosting bats. All trees are due to be retained so no further surveys are required. In relation to foraging and commuting, current proposals also aim to improve the connectivity of the site by planting additional tree lines and hedgerows.

11. LE 02 LAND USE

11.1 In accordance with the BREEAM Communities assessment, RSK Environmental Ltd has carried out a Preliminary Risk Assessment (PRA). The study aims principally to identify and assess the potential risks and liabilities associated with contamination of the ground, on and in the vicinity of the site.

11.2 The study identifies the following potential sources of contamination:

> Made ground associated with development and former buildings on site;

> On site operations, past and present associated with GE Aviation;

> Electricity substations located and M K Leach Heavy haulage to the southeast; and

> Ground gas associated former gravel pits to the north and potentially backfilled pond to the east.

11.3 The PRA considers the risk of impact from the above potential sources to generally be low to medium. The PRA therefore recommends the following measures:

Zone 1:

> Approximately eight to ten shallow boreholes to provisionally 3-4m depths, primarily to provide soil samples for environmental and geotechnical testing;

> Installation of six dual-purpose groundwater and gas monitoring wells to provisionally 4-5m depths, with a minimum of three ground gas monitoring visits over a three month period.

Zone 3:

> Approximately eight to ten shallow boreholes to provisionally 3-4m depths, primarily to provide soil samples for environmental and geotechnical testing;

> Installation of four dual-purpose groundwater and gas monitoring wells to provisionally 4-5m depths, with a minimum of three ground gas monitoring visits over a three month period; and

> Environmental and geotechnical laboratory testing.

Across entire site:

> Associated sampling and subsequent screening of volatile organic compounds using Photo-ionisation detector;

> Targeted and non-targeted analysis of shallow made ground and natural soils samples for potential contaminants, including metals, polycyclic aromatic hydrocarbons, polychlorinated

biphenyls, total organic carbon, petroleum hydrocarbons, total/free cyanide, volatile organic compounds, total phenols; and

> Installation of six dual-purpose groundwater and gas monitoring wells to provisionally 4-5m depths, with a minimum of three ground gas monitoring visits over a three month period. Monitoring tidally influenced groundwater levels over 48 hour cycle to assess maximum and minimum depths.

11.4 The full report by RSK Environmental Ltd should be referred to for further information and detail.

12. TM 01 TRANSPORT ASSESSMENT

12.1 Sustainable transport links are central to the sustainability debate. They provide a positive contribution to the environmental, societal and economic sustainability of the places they serve.

12.2 Transport Assessments form a key part of the BREEAM Communities methodology to ensure that transport and movement strategies reduce the impact of the development upon the existing transport infrastructure and where possible improve environmental and social sustainability through transport.

12.3 A Transport Assessment has been compiled by Markides Associates. The Transport Assessment identifies the proposed development's compliance with national and local transport planning policy and measures to mitigate anticipated transport effects of the development and to improve accessibility and safety for all transport modes. The Transport Assessment details the following mitigation and enhancement measures which are included in the development proposal:

> Realignment of Kings Avenue to the north of its existing alignment in order to provide a new off-street parking courtyard for existing residents;

> Extension of Coronation Parade to the north to provide more visitor parking for the local shops and a dedicated servicing bay for larger delivery vehicles;

> Three additional pedestrian accesses to the footpath running along the north boundary of the site; and

> 115 car parking spaces will be provided for visitors and employees of the sports facilities.

12.4 The full Transport Assessment compiled by Markides Associates should be referred to for further information and detail.

12.5 The site is located within part of the wider campus occupied by GE Aviation, the entire campus occupies an area of approximately 20 hectares. The site is situated to the north-east of Hamble-le-Rice. Hamble-le-Rice centre includes local amenities such as a Post Office, convenience stores, restaurants and bars and is within approximately 1km of the development site. There is an existing bus route into the centre of Hamble-le-Rice served by stops along Hamble Lane, to the east of the application site.

12.6 Hamble Railway Station is located approximately 1.2km from the proposed development site.

Pedestrian Access

12.7 The main pedestrian access will be from Kings Avenue with footways approximately 1.5m wide provided on both sides of the road. Outside of the pedestrian access, three additional pedestrian accesses to the footpath running along the north boundary of the site will be provided. The footpath leads to King's Avenue and provides a direct pedestrian route to the bus stops on Hamble Lane and to the Hamble Rail Station.

Cycle Parking

12.8 Cycle parking spaces will be provided in line with Eastleigh Borough Council's cycle parking standards.

12.9 In addition, it should be noted that 115 parking spaces will be provided for visitors and employees of the sports facilities. This will be of significant benefit to the wider area and will limited the extent of on street overspill parking that currently occurs when these facilities are in use.

Framework Travel Plan

12.10 A Framework Travel Plan has been prepared in support of the application by Markides Associates. This sets out a sustainable transport strategy for the proposed development on the site, and aims to:

> To reduce the number of single occupancy car journeys to the site;

> To improve accessibility to the site by non-car modes of transport.

12.11 The benefits of a Framework Travel Plan include improved health, fitness, travel opportunities, social interaction and a better local environment.

13. CONCLUSION

13.1 The GE Aviation, Hamble development is required to achieve a BREEAM Communities rating of 'Excellent'. This requires the Outline application to achieve Step 1 (interim) certification.

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APPENDICES

Appendix A

BREEAM Communities 2012 ‘Excellent’ Tracker

BREEAM Communities (2012) - GE Aviation, Hamble

BREEAM®

72.1	Total Predicted	Development Description	Completed by
Pass Good Very Good **Excellent** Outstanding	30 Points 45 Points 55 Points **70 Points** 85 Points	**Application for c.150 homes in Eastleigh Borough Council.** **This document presents the proposed strategy to achieving Excellent certification, but the actual route to achieving this level may vary as design progresses.**	**Chris Scobie** **Registered Assessor - CS35** **24.07.18**

Issue	Step	Credits Available	Credit Predicted	Issue Weighting	Requirements
Section 1 - Governance					
GO01 - Consultation Plan	**Step 1**	**1**	**1**	**2.3**	Consultation Plan prepared, identifying all relevant members of the community and wider stakeholders. Local authority consulted on the Plan.
					Independently facilitated community consultation event used to engage the community
GO02 - Consultation and engagement	**Step 2**	**2**	**1**	**3.5**	The Consultation Plan used to determine consultation to support the Reserved Matters application. Good practice consultation methods are used to engage members of the community and appropriate stakeholders in the process of designing development proposals.
					Influence to masterplan demonstrated, or fully justified if not.
GO03 - Design Review	**Step 2**	**2**	**2**	**2.3**	Credit not sought.
GO04 - Community Management of Facilities	**Step 3**	**3**	**3**	**1.2**	All community management facilities developed and managed during the construction phases with procedures in place to allow handover to the responsible party at project completion.
					Training and user manuals provided to responsible party on the operation and maintenance of the facilities, particularly in relation to sustainable design.
					The developer agrees to support the development of a Community Development Trust (CDT) or management company for the new community and an implementation plan is developed to support this. The Local Authority agrees to work in partnership with the CDT or management company for the new community and the roles, responsibilities and the management structure are clearly defined.
Section 2 - Social and Economic Wellbeing - Local Economy					
SE 01- Economic Impact	**Step 1**	**2**	**2**	**8.9**	Economic study undertaken for the Outline application focusing on understanding how the proposed development can enhance the economic well-being of future residents. This includes skills gap analysis. The infrastructure and facilities will complement existing businesses in the area.
					Opportunities to attract inward investment to the area are included
					The scheme will have a net gain on employment in the region and local area.
SE17 - Training and Skills	**Step 3**	**3**	**1**	**5.9**	The developer consults locally (training providers, community, business, authorities) to identify training and skills initiatives that would be beneficial to local area.
					The development will support and promote the provision of training and/or apprenticeships in the local area during the planning and/or construction phase.
					The developer will partner with a training provider to promote and contribute to a legacy of local training and skills opportunities for residents and businesses in the development and wider area.
					The local training and skills will align with those identified through consultation.

Issue	Step	Credits Available	Credit Predicted	Issue Weighting	Requirements
Section 3 - Social and Economic Wellbeing - Environmental Conditions					
SE03 - Flood Risk Assessment	**Step 1**	2	2	1.8	Site specific FRA produced, including: risks and consequences of flooding from all sources on the site and from the site to the surroundings and how risks will be managed; changes in flood risk due to climate change; consultation with appropriate statutory bodies; knowledge of possible flood risk held within local community.
					Low risk of flooding
SE04 - Noise Pollution	**Step 1**	3	2	1.8	Noise Impact Assessment carried out by suitably qualified acoustician.
					All noise attenuation measures recommended in the NIA incorporated into masterplan.
					Building locations and orientations within the masterplan to be informed by NIA.
					Developer commits to indoor ambient noise levels in buildings/spaces within the development, and where appropriate external noise levels, that satisfy the 'reasonable' target set out in BS8233 and achieve a noise level rating no greater than +5dB during the day and +3dB during the night. Developer commits to achieving a rating noise level that is no greater than the background noise level during both the day and night from all factories and sources of an industrial nature.
SE08 - Microclimate	**Step 2**	3	0	1.8	Credit currently not sought.
SE10 - Adapting to Climate Change	**Step 2**	3	3	2.7	Evidence from the LPA used to understand the predicted impacts of climate change.
					The masterplan takes account of the impacts of climate change on the site and demonstrates in design plans how risk minimised.
SE13 - Flood Risk Management	**Step 2**	3	3	1.8	FRA - showing peak rate of run-off for the site no greater than predeveloped site (similar to Code requirement)
					Any additional run-off attenuated with infiltration/SUDS
					Flooding not to occur in the event of local drainage system failure
SE16 - Light Pollution	**Step 3**	3	3	0.9	The lighting design guide for the development completed in line with LPA guidance.
					100% high efficiency street lighting with limited upward transmission
					Final lighting guide outlines how light pollution will be minimised, and the spec of the lighting confirms that lighting is low powered and designed/ installed to reduce light pollution

Issue	Step	Credits Available	Credit Predicted	Issue Weighting	Requirements
Section 4 - Social and Economic Wellbeing - Social Wellbeing					
SE02 - Demographic Needs and Priorities	**Step 1**	**1**	**1**	2.7	Scope of the development (inc. housing mix, community facilities, employment opportunities) has been informed by a review of the current demographic profiles and future trends for the area. Based on planning policy and consultation with the local authority. Views are prioritised under order of desirability (low, medium and high).
					Suitable delivery mechanism established to ensure delivery of required functions on an appropriate timescale and to ensure that demands are fulfilled whilst avoiding the creation of facilities that will be unsustainable in the short-term.
SE05 - Housing Provision	**Step 2**	**2**	**2**	2.7	Housing type and tenure based on the needs in the local area and the local authority strategic housing market assessment.
					The developer commits to achieving minimum space standards.
					Proposed affordable housing units are distributed across the development and integrated with the other dwellings on the site in terms of design. The LPA agree on affordable levels to be provided.
					Suitable financial models and conditions or a letter of commitment have been established to ensure that the affordable units will be available to meet the future demographic trends in the area.
SE06 - Delivery of Services, Facilities and Amenities	**Step 2**	**7**	**5**	2.7	The list of local needs is used to confirm which services, facilities and amenities will be provided. These are confirmed as part of a planning condition.
					The local needs identified as medium priorities have been incorporated, located a safe distance from all dwellings via a safe and convenient pedestrian route.
					The local needs identified as high priorities have been incorporated, located a safe distance from all dwellings via a safe and convenient pedestrian route.
					The local needs identified as low priorities have been incorporated, located a safe distance from all dwellings via a safe and convenient pedestrian route.
SE07 - Public Realm	**Step 2**	**2**	**1**	2.7	Consultation has taken place with the LPA. The public realm is designed to allow multiple uses for different development users, including children, the elderly and disabled.
					An assessment has been made into the appropriateness of using Home Zones or shared space. Where appropriate, these are shown on plans. Where inappropriate, the designs show where space for social interaction is provided.
SE09 - Utilities	**Step 2**	**3**	**0**	0.9	Provision of a single point of access for utilities.
					Service providers have committed to the coordinated installation of infrastructure.
					Individual service providers have committed to provide access to the network for maintenance with not severely interrupt customer supply or cause unnecessary disruption, expense or nuisance to the public domain.
					Ducting is provided in addition to the necessity capacity.
SE11 - Green Infrastructure	**Step 2**	**4**	**4**	1.8	Consultation taken place with the local authority, existing residents and potential users of the development to understand desired uses, design, quantity and location of accessible and natural greenspace.
					A green infrastructure plan is developed as a part of the masterplan. A summary of the consultation responses and any constraints restricting the provision of accessible and natural greenspace are explained in this document.
					The masterplan allows all residents to be in walking distance to greenspace. There is a management strategy in place or the developer confirms it will be in place to provide long term management of the greenspace.
					The green infrastructure plan sets out the provision of the desired uses and design set out in consultation.
					The green infrastructure plan sets out the provision of the desired quantity and location set out in consultation. Any deviation from consultation responses should be reasonably justified.

Issue	Step	Credits Available	Credit Predicted	Issue Weighting	Requirements
SE12 - Local Parking	Step 2	1	1	0.9	Consultation taken place with local authority, highway authority and other stakeholders. Results analysed and an appropriate level of parking for the development has been agreed.
					Parking is integrated in development and overlooked by houses, and is discrete where appropriate.
SE14 - Local Vernacular	Step 3	2	2	0.9	Review of the area undertaken to establish local vernacular. Consultation taken place into appropriate vernacular. Results of consultation analysed and key elements included in design.
					The architects have demonstrated that the key elements form the review are implemented in design.
					Steps have been taken to further reinforce the local identify in a number of ways.
SE15 - Inclusive Design	Step 3	3	2	1.8	An inclusive design and management strategy is produced at the outset including issues of accessibility, inclusion and emergency egress for all occupants and visitors.
					Community engagement is used to develop the strategy through GO02.
					A person is identified to champion and provide oversight on inclusive design.
					Where available, national and local authority guidance on procurement of inclusive communities and design has been followed.
Section 5 - Resources and Energy					
RE01 - Energy Strategy	Step 1	11	3	4.1	Energy Statement prepared, which assesses site-wide consumption and includes breakdown of heating, cooling and electricity; emissions from regulated and unregulated; emissions associated with street lighting and other electrically power street furniture. To address connection to any DH networks; installation of communal systems; opportunities for other LZC technology.
					Minimum 19% reduction over Part L 2013 assumed. Percentage reduction over baseline to be confirmed through Reserved Matters.
RE02 - Existing Buildings and Infrastructure	Step 1	2	2	2.7	An assessment of existing buildings has been undertaken to establish what can be reused, recycled or maintained. This addresses: heritage and identify; location and condition of any buildings; embodied carbon; potential uses of buildings; possible use of materials; community or local knowledge; local policy and guidance. A decision is made and justified with evidence regarding the use and/or demolition of all existing buildings and infrastructure.
					The developer commits to reuse or recycling building materials where possible.
					The developer commits to refurbishing any existing buildings and/or infrastructure that have been identified in the assessment.
					The developer commits to refurbishing any existing buildings and/or infrastructure that have been identified in the assessment as being of significant value to the local community or for sustainability reasons.
RE03 - Water Strategy	Step 1	1	1	2.7	Developer engages with water suppliers, local authority and statutory drainage board taking account of the current availability of water and local demand; future predicted availability with climate change; predicted water demand for the area resulting from growth and climate change.
					A strategy is prepared to manage water use, including actions to minimise use; ownership and maintenance of any shared facilities; design options to reduce water demand in landscaping, and any other predicted water use and on-site collection/ storage; targets for water use in residential and non-residential.
					A commitment is in place to enforce the adoption of water consumption targets. Responsibilities for management and maintenance of water supply are in place.
RE04 - Sustainable Buildings	Step 3	6	1	4.1	The developer is committed to using best practice standards for key issues such as energy water etc. The commitment is confirmed through planning condition or other binding mechanism.
RE05 - Low Impact Materials	Step 3	6	0	2.7	Where over 60% of the materials on-site achieve an A+ B rating as defined by the Green Guide to specification
					Contractors and sub-contractors have environmental management policies and procedures in lace to ensure the sustainable management and supply of materials used in the assessment
RE06 - Resource Efficiency	Step 3	4	3	2.7	Where existing buildings on the site have been identified for re-use or demolition, an audit is undertaken to maximise recovery of materials. This must be referenced in the site waste management plan.
					Where the works are likely to produce excavation waste, an estimate of the amount of excavation waste is generated and an assessment made of how to reuse waste on site (if feasible) and which is included in the Waste Management Plan.
					The design team has embedded resource efficiency within the overall scheme design with specific reference to best practice guidelines.
					A waste management strategy or plan has been completed to confirm the estimated amount and types of construction, demolition and excavation waste from the site development, including infrastructure development and landscaping.
					Landscape design has been informed by and make reference to the waste management strategy, with aims to retain construction, demolition and excavation material on site.
					The developer has provided a written commitment that an agreement will be in place at the start of construction to divert non-hazardous construction and non-hazardous demolition waste from landfill.
RE07 - Transport Carbon Emissions	Step 3	1	1	2.7	A feasibility study is undertaken using the information from the TA/TS to establish appropriate alternative transport options for the development. A Travel Plan sets out the appropriate alternative options.
					At least one alternative means of sustainable transport has been established/incorporated into design.

Issue	Step	Credits Available	Credit Predicted	Issue Weighting	Requirements
Section 6 - Land Use & Ecology					
LE01 - Ecology Strategy	**Step 1**	**1**	**1**	3.1	Ecological Impact Assessment (EcIA) to be undertaken which identifies: valued ecological features and potential impacts from the development. The EIA takes into account local knowledge. An ecological strategy covering construction and operation has been drawn up avoid damage to valued ecological features. Where damage is unavoidable, a mitigation plan or compensation plan has been agreed by the statutory body and ecologist to ensure there is no net loss of any of the valued features.
					The EcIA includes enhancement measures so that a net gain in biodiversity can be achieved.
LE02 - Land Use	**Step 1**	**3**	**2**	2.1	A preliminary study has been carried out to determine any potential land contamination issues. Where land contamination issues have been identified, an SI has been undertaken and risk assessment prepared to determine the presence and levels of any contamination affecting the site and make recommendations on remediation required.
					Remediation strategy prepared by land specialist
LE03 - Water Pollution	**Step 2**	**3**	**3**	1	Up-to-date drainage plan of the site available to the authorities responsible for drainage. Measures put in place to ensure any potential water pollution during construction is in accordance with EA pollution prevention guidelines.
					Where a drainage engineer ensures all run-off from the site to achieve appropriate level of treatment in accordance with SUDS manual.
					Specification of oil or petrol separators where there is a high risk of contamination.
					The appropriately qualified professional confirms that there will be no discharge from the site for rainfall depths up to 5mm.
LE04 - Enhancement of Ecological Value	**Step 2**	**3**	**3**	3.1	The masterplan enhances ecology through the creation of appropriate new habitats or through the increase in scale of existing habitats on the site
					The masterplan enhances ecology through the protection, enhancement and /or creation of wildlife corridors on the site linking establish and/or new wildlife habitats.
					The ecological plans are integrated within a green infrastructure plan to maximise social amenity, conservation, adaptation to climate change, aesthetic value of greenspaces.
LE05 - Landscape	**Step 2**	**5**	**4**	2.1	The ecologist confirms that the landscaping and planting design confirm with the ecology strategy.
					A commitment is made to appoint an ecology clerk of works to ensure the ecological strategy is implemented through construction.
					At least 80% of tree and planting consists of appropriate locally native species (or equivalent value for wildlife).
					There is a commitment to prepare and implement a landscape management strategy to ensure the long-term achievement of the ecology objectives and their maintenance during occupation.
					Water efficiency is considered when selecting planting species.
LE06 - Rainwater Harvesting	**Step 3**	**3**	**0**	1	Credits not sought

Issue	Step	Credits Available	Credit Predicted	Issue Weighting	Requirements
Section 7 - Transport & Movement					
TM01- Transport Assessment	**Step 1**	**2**	**2**	3.2	Transport Assessment and Travel Plan are prepared following consultation with the local authority, and which positively influence travel patterns and well being of future residents. Recommendations are provided to: reduce travel; reduce length of trips, promote multi-purpose trips; promote sustainable patterns of development; reduce physical separation of land uses; reduce distances from buildings to travel nodes; improve sustainable travel choices; ensure safe and easy access to jobs, shopping, leisure etc; consider transport capacity to ensure there is sufficient provision.
					The TA confirms there is spare capacity to meet the demands of the proposed development and public transport services will be subsidised to ensure residents occupying early phases can use services from outset
TM02 - Safe and Appealing Streets	**Step 2**	**4**	**4**	3.2	Context appraisal undertaken to form objectives for design of streets using the TA/TP. Movement framework undertaken to determine layout and design of streets that will promote sustainable modes of movement.
					Street layouts are safe and secure by incorporating a range of measures. Vehicle delivery areas are not accessed through parking areas and do not share pedestrian or cycle routes.
					The landscape design enhances pedestrian routes through design and provision of attractive landscaping. Pedestrian routes allow easy navigation.
					Within the traffic management plan, targets are set regarding road traffic accident reduction and these targets have been agreed and informed by the local authority.
					Potential vehicle noise disturbance and potential visual and vibration disturbance from heavy vehicles to site users has been mitigated.
					A maintenance contract will be in place for external areas that are not covered by local authority for at least the first five years from the time development is occupied.
TM03 - Cycling Network	**Step 2**	**1**	**1**	2.1	The movement framework (TM02) covers cycle routes meeting key design criteria, including: - cycle routes connect to, or are a continuation of existing routes from the surrounding area; - cycle routes connect residential areas to, and between, community focal points in the development and surroundings; - cycle routes area direct and safe (well lit, safe road markings etc.); - cycle routes are segregated from vehicles and pedestrians as appropriate: - below 20mph cyclists can be integrated with vehicles; - busy streets or higher speeds there should be clearly defined cycle lanes; - separate cycle tracks should be introduced where space allows, in particular for speeds in excess of 30mph; - pedestrians and cyclists can share the space, but steps should be taken to separate them including raised kerbs or clear markings. Where pedestrians or cyclists share the same space and segregation is not possible, a minimum width of 3m should be provided. - adequate signage and route information is provide to aid cyclist navigation around the development and into the surrounding area. - special provision is provided for cyclists at junctions. Cyclists are given priority at interchanges through the phasing of lights, priority crossing points and advanced stop lines. - cycle lanes to be attractive and designed to be enjoyable.
TM04 - Access to Public Transport	**Step 2**	**4**	**0**	2.1	Distance from individual buildings to compliant transport nodes must be via a safe and convenient route and not exceeding key distances - ≤ 900m assumed. A further credit can be awarded where distances are ≤700m, measurements taken show this to be around 700m so will be recalculated upon final layout.
TM05 - Cycling Facilities	**Step 3**	**2**	**2**	1.1	Consultation has taken place between the local authority, developer, community and other stakeholders to establish the likely facility requirements. An appropriate level of cycling facilities provided.
					Commitment made to provide adequate space for cycle storage to accommodate the minimum standards below. A commitment to a maintenance strategy is agreed between the community and developer including dedicated funds to be allocated.
TM06 - Public Transport Facilities	**Step 3**	**2**	**0**	2.1	Consultation has determined the use of public transport and bus shelters provided to meet community needs, compliant with a list of requirements.