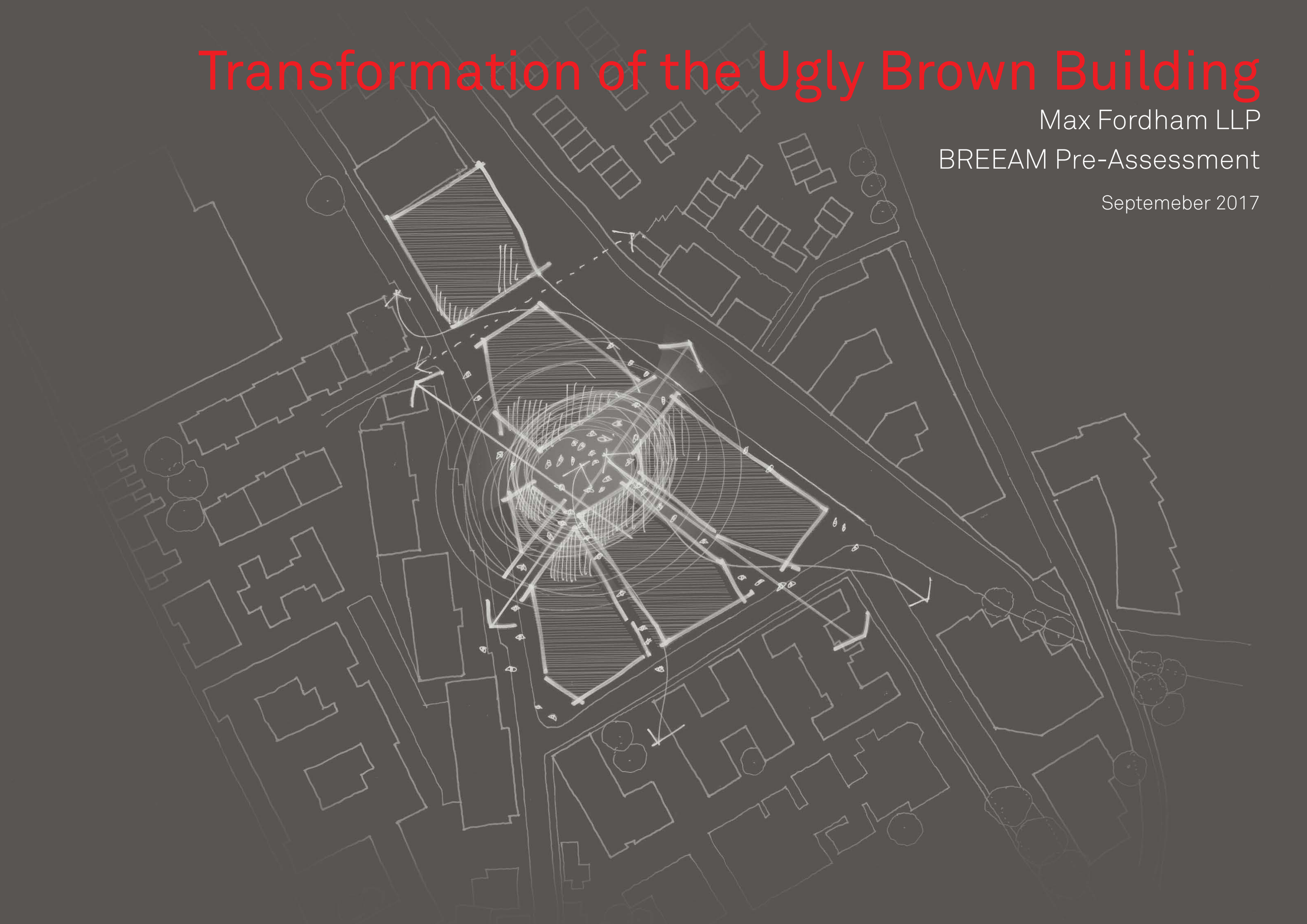
Transformation of the Ugly Brown Building

Max Fordham LLP

BREEAM Pre-Assessment

Septemeber 2017



Ugly Brown Building: St Pancras North

BREEAM Stage 2 Pre-Assessment

Rev 5

01 Sept 2017

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ISSUE HISTORY

Issue	Date	Description
01	16.05.17	BREEAM Report Draft
02	09.06.17	Revised Report
03	05.07.17	Revised planning policy
04	01.09.17	Revised for planning

MAX FORDHAM LLP TEAM CONTRIBUTORS

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1.0 EXECUTIVE SUMMARY

This report provides a summary of the BREEAM Pre-Assessments applied to the Ugly Brown Building/ St Pancras Way (UBB) project site.

The project will involve the assessment of three plots which include a number of different BREEAM Assessment types.

Summary dashboards to Plot A, C, and Ted Baker can be found in the appendices. For the ease of review, this report presents the outcomes of discussion with the design team in RIBA Stages 1 and 2, based upon the current design strategy and review of the score cards in reference to each plot. Further consultation was undertaken with the local council, Camden, to discuss the pre-application, energy and sustainability strategies. Please refer to the energy and sustainability reports for more detail.

Additional guidance and information in regard to BREEAM can be found within later sections of the report, and within the scorecards. The design team was also issued with detailed guidance in early RIBA Stage 2 called Credit Owner Packs (COPS), which were issued separately.

This summary report details the following areas:

1. Project overview
2. Overview of BREEAM
3. Project Requirements and Management
4. Plot A Office
5. Plot C Office
6. Plot C Retail
7. Ted Baker Office
8. Ted Baker Hotel
9. BREEAM Requirements
10. Summary and Next Steps
11. Appendices:
    a. Planning Policy
    b. Team Responsibilities
    c. Plot A Office Dashboard
    d. Plot C Office, Retail Dashboard.
    e. Ted Baker Dashboard

1.1 BREEAM Assessment Summary

The UBB project is located within a dense urban area within the Borough of Camden. Each of the buildings within the three plots are required to achieve a BREEAM Excellent rating for planning. As noted in the following sections, the development includes the following assessment types.

- Plot A Office
- Plot C1 & C2 Office and Pavilion Retail
- Ted Baker Office, Hotel

In order to progress the development of BREEAM, a pre-assessment of the scheme has been undertaken based upon each of the plots and site wide criteria. Expected scores are currently as follows.

Table 1: Current Scores RIBA Stage 2

Assessment	Score Targeted
Plot A Offices NC Core & Shell	**77.9%**
Plot C1 & C2 (Combined) Offices Core & Shell	**76.8%**
Plot C Pavilion Retail Core & Shell	75.0%
Office Ted Baker Core & Shell	76%
Hotel Core & Shell	74%

** Please note these scores are likely to fluctuate, and can be improved upon as well as reduced if significant value engineering or design change is undertaken within RIBA Stage 3 onwards.*

As shown, each project is currently on target to achieve an Excellent rating, however, the project scoring and buffer is at a risk and continued review and update of the design against the intended performance will need to be undertaken.

2.0 INTRODUCTION

This summary document presents the opportunities and routes to BREEAM certification for the Ugly Brown Building/ St Pancras Way (UBB) development. This document identifies the BREEAM credits available to the team, as well as associated risks.

For the purposes of this report, the assessments looks at the non-domestic plots, which are required to achieve a BREEAM Excellent certification, as required by Camden Council. A summary of local planning policy can be found in Appendix A.

The BREEAM assessments for the site include the following:

Table 2: BREEAM Assessment types

Plot	Use	BREEAM Type
Plot A	Office	New Construction Offices Shell and Core
Plot C 1&2*	Office	New Construction Offices Shell and Core
Plot C Pavilion **	Retail	New Construction Offices Shell and Core TBC
Ted Baker Office	Office Ted Baker	New Construction Offices Shell and Core
Ted Baker Hotel	Hotel	New Construction Hotel Shell and Core

**Please note, there will be one office assessment for Plot C, making the assumption that the design for each unit will be similar, specification will be similar in performance and that where modelling and assessment needs to be undertaken, the worst performing space will be used for the purposes of BREEAM.*

*** Please note, the Pavilion Retail unit is the only retail unit that exceeds 500sqm in size, therefore it will be assessed under Core and Shell.*

2.1 Non Assessed Units

Table 3: Non Assessed Spaces

Plot	Use	
Plot A	Retail	Not included, retail units do not exceed 500sqm
Plot C 1&2*	Retail	Not included, retail units do not exceed 500sqm

For the purposes of meeting planning and to ensure that BREEAM is applied in an appropriate manner on the site, the BREEAM scheme is being applied to the office, hotel and pavilion development spaces only.

Retail units
Most retail units are excluded from the BREEAM assessment, as Camden Council requires that areas larger than 500sqm undergo assessment. The majority of the units do not exceed 500sqm. Moreover, these small units would be a speculative design. For such spaces to be assessed, it would require a small retailer to undertake a number of onerous requirements to achieve a BREEAM rating. In light of this, and that 45.5% of a BREEAM score is effectively already being achieved through the site wide credits, and as these spaces comprises a small proportion of the total commercial space on the site, it is not proposed they it will undergo an assessment.

2.2 Project Requirements and Management

The UBB project is located in Camden Borough. Part of Camden Council's sustainability requirements is that any new non-residential development over 500sqm should target a BREEAM rating of **Excellent**. The following table provides a summary of the requirements placed against the developer by the council in terms of delivering sustainability. A full summary of the planning policy requirements can be found in Appendix A.

Figure 1: UBB Project Site and Plots

2.3 Meeting Planning Policy

There are a number of documents that the building must adhere to in its approach to energy use and sustainability.

- Building Regulations – Approved Document Part L2
- Greater London Authority – London Plan and Proposed Local Plan 2017

A summary of the new local plan can be found within Appendix A:

Table 4: Summary Camden Proposed Local Plan

Assessment Deliverables	Notes	Responsible Parties
Non Residential: BREEAM New developments are required to achieve a **BREEAM Excellent rating (70% plus)** . Applies to 500sqm or more of floorspace.	Pre-assessment report summarising the design strategy for achieving the chosen level of BREEAM and include details of the credits proposed to be achieved.	All Sustainability

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3.0 OVERVIEW OF BREEAM

3.1 Background

The Building Research Establishment Environmental Assessment Method for New Construction 2014 (BREEAM New Construction 2014) helps Clients and Local Authorities to set environmental targets and demonstrate environmental performance for new and refurbished buildings. To date over 200,000 buildings have been certified under BREEAM worldwide since it was first launched in 1990. The figure below illustrates countries in which BREEAM assessments have taken or are currently taking place.

BREEAM New Construction 2014 incorporates the following categories:

- Management
- Health and Wellbeing
- Energy
- Transport
- Water
- Materials
- Waste
- Land use and Ecology
- Pollution
- Innovation (Exemplary Performance)

There is also an Innovation Category, where additional Credits can be awarded for any innovative features of the building project that are not assessed as standard and that the design team feel are worth credit. An application for these additional Credits has to be made to BRE for approval.

Countries with BREEAM Certified Buildings

Countries to have developed their own BREEAM Scheme

Figure 2: Countries where BREEAM is in use

3.2 The Value of BREEAM

When a project brief requires a sustainable building, BREEAM is an industry recognised tool that can be used to fulfil this requirement. Promoting an integrative design process where all stakeholders are involved in the BREEAM assessment from project inception, it is a tool that design teams and developers, alike, can understand and implement. There are some capital costs associated with BREEAM, but these must be seen in the wider context of the overall value that BREEAM can potentially offer, including:

- Reduced operational costs
- Limiting investor and developer risk
- Increased sales and letting values
- Creating a more productive and healthy environment

With careful planning, the capital costs of BREEAM can be reduced through targeting areas that fit with the overall project aspiration.

1.1 Scoring Process

Credits are allocated under each category and an environmental weighting is applied to determine an overall building score. The building will be allocated a rating of Pass, Good, Very Good, Excellent, or Outstanding as follows:

Table 5: BREEAM Scoring

BREEAM RATING	% SCORE
Outstanding	85
Excellent	70
Very Good	55
Good	45
Pass	30
Unclassified	<30

For those familiar with previous BREEAM versions (2008/ 2011), it should be noted that a number of changes have been introduced in the latest scheme (BREEAM New Construction 2014), including more stringent requirements, significant credit consolidation, and new requirements under a number a credits.

When tabulating a target rating, it is recommended that a contingency of at least 5% over and above the target rating should be incorporated as a minimum, to allow for any design developments or changes that may have an adverse effect on the rating. Therefore, as the team is looking to achieve an Excellent rating, a score of 75% should ideally be targeted as a minimum to manage risk (design and cost issues permitting).

1.2 Assessment Process

As part of the BREEAM assessment scheme, two formal assessments will be required. The first assessment is to take place during the design stage following the appointment of the contractor (Interim or Design Stage Certification). Design-based evidence and commitments from the team for various items to be included in the final product are required as evidence at this stage.

The client will be required to confirm the appointment of a BREEAM Assessor for the detailed design stage. This should be actioned as soon as possible in order to secure BREEAM credits and to ensure the smooth delivery of BREEAM during the detailed and technical design stages.

The final assessment will take place following Practical Completion (Post Construction Certification). A second batch of as-built information will be required that will confirm that the design stage information is valid. This will be carried out by a combination of on-site assessor auditing, and additional as-built drawings / records. The general BREEAM process is outlined in the following figure.

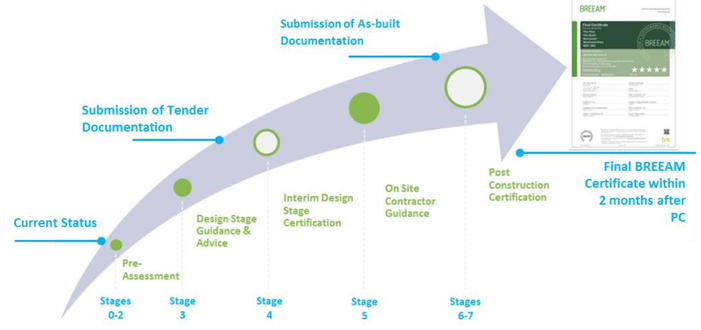

Figure 3: BREEAM Assessment process

4.0 PLOT A SHELL AND CORE OFFICE

4.1 Plot A Office Summary

Plot A Office Shell and Core is required to achieve a BREEAM Excellent rating (70%+). Based on review and discussions with the design team, this plot is currently on target to achieve 77.9%. There will need to be continued review of the project to ensure targets are on track. The following pre-assessment results are to provide an indicative score for the office project, and this score might fluctuate as the project progresses and actions additional credits are targeted, or such as value engineering is undertaken.

The following figure highlight the scoring for the Plot A Offices Shell and Core assessment. The scoring indicates the minimum predicted, or baseline, target scores, and through additional design and work, what the scoring would be if additional credits are targeted, through either additional costs or additional work.

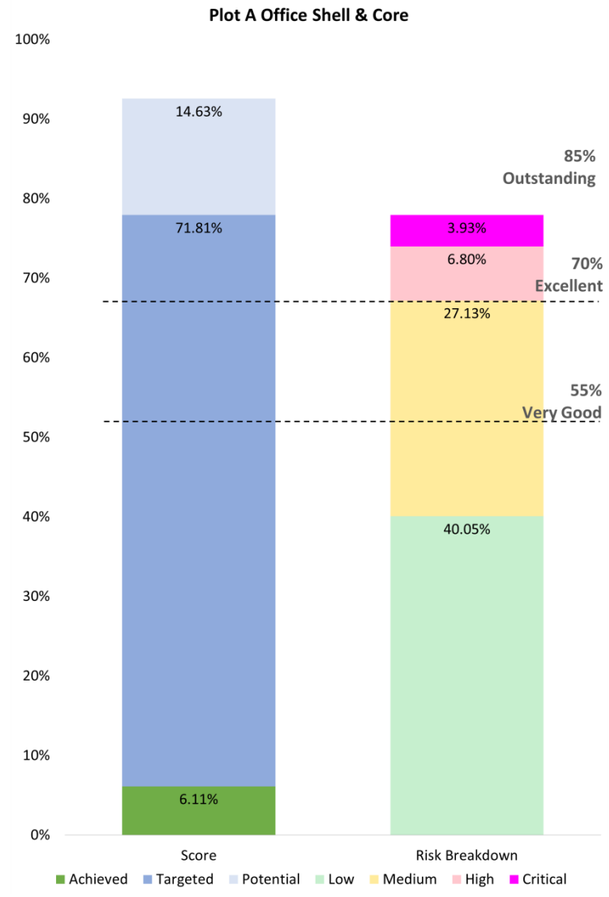

Figure 4: Plot A Offices Shell and Core Pre-Assessment

4.2 Opportunities for Enhancing the Scoring

Based on the baseline predicted score of 77.9%. there is scope to achieve additional points under the Shell and Core assessment. Key credits that could be addressed are as follows:

- Increase performance under Wat 01 Water Consumption through use of more efficient fixtures and fittings
- Increase in low impact material sourcing through contractor performance (Mat 01 Life Cycle Impacts and Mat 03 Responsible Sourcing of Materials) (high risk/as design progresses)
- Increasing ecology points under LE04 Enhancing Site Ecology

These potential additional credit scores could provide the project with an additional score of 7.1%, thus securing a much more robust and safe score over the Excellent threshold of 70%. Below is a list of additional credits that could still be secured. These credits are highlighted in the score card with a red arrow (↑). Please refer to Appendix for the Dashboard.

Table 6: Potential credits/ options to score Excellent (Plot A Shell & Core)

Plot A Potential Additional Credits	% Available	% Targeted Credits	% Realistic Additional Credits
Man	11.00%	11.0%	0.0%
Hea	10.50%	6.3%	0.0%
Ene	15.00%	12.1%	0.7%
Tra	10.00%	10.0%	0.0%
Wat	7.50%	5.0%	0.8%
Mat	14.50%	8.9%	3.3%
Wst	9.50%	7.4%	0.0%
Leo	11.00%	7.7%	2.2%
Pol	11.00%	8.5%	0.0%
Inn	10.00%	1.0%	0.0%
Total	**110.00%**	77.9%	**7.1%**
			85.0%

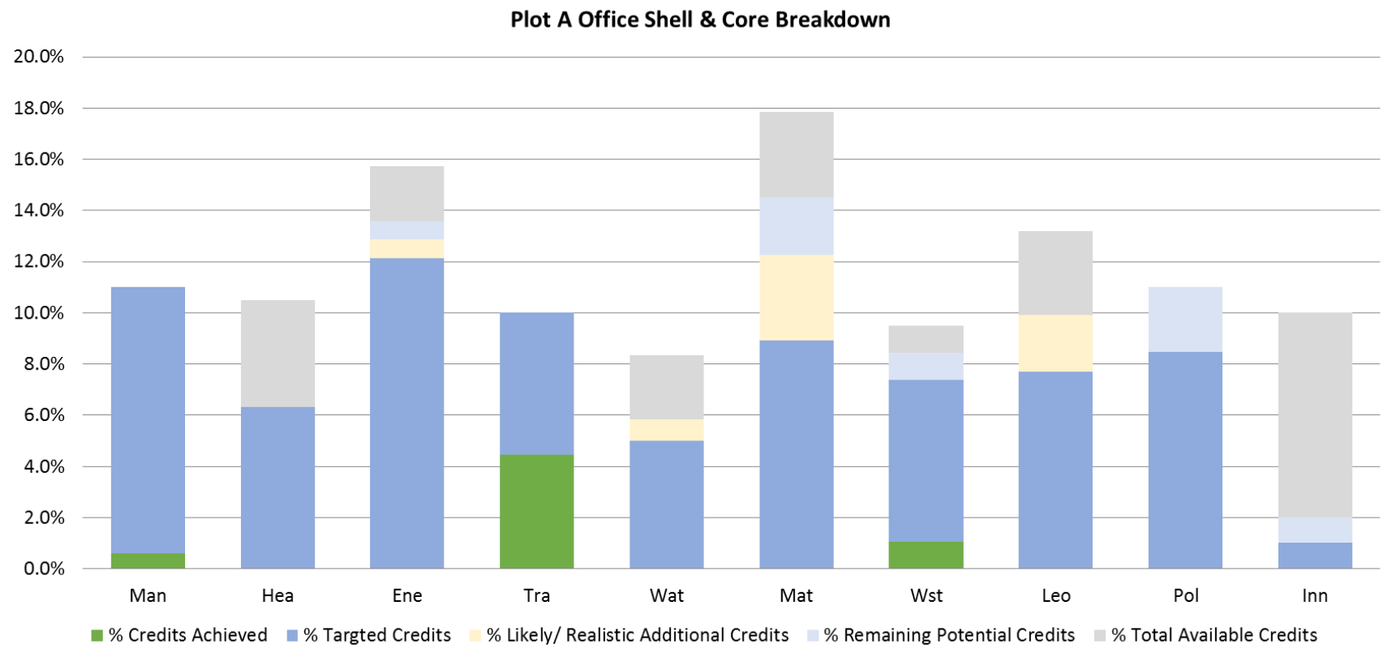

Figure 5: Potential credit options for Excellent Score (Plot A Core & Shell)

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5.0 PLOT C SHELL AND CORE OFFICE

5.1 Offices Summary

Plot C Office Shell and Core are required to achieve a BREEAM Excellent rating (70%+). Based on review and discussions with the design team, all separate plots are currently on target to achieve 76.8%. However, there will need to be continued review of the project to ensure targets are on track. The following pre-assessment results are to provide an indicative score for each of the office projects, and this score might fluctuate as the project progresses and actions additional credits are targeted, or such as value engineering is undertaken.

The following figure highlight the scoring for the Offices Shell and Core assessment. The scoring indicates the minimum predicted, or baseline, target scores, and through additional design and work, what the scoring would be if additional credits are targeted, through either additional costs or additional work.

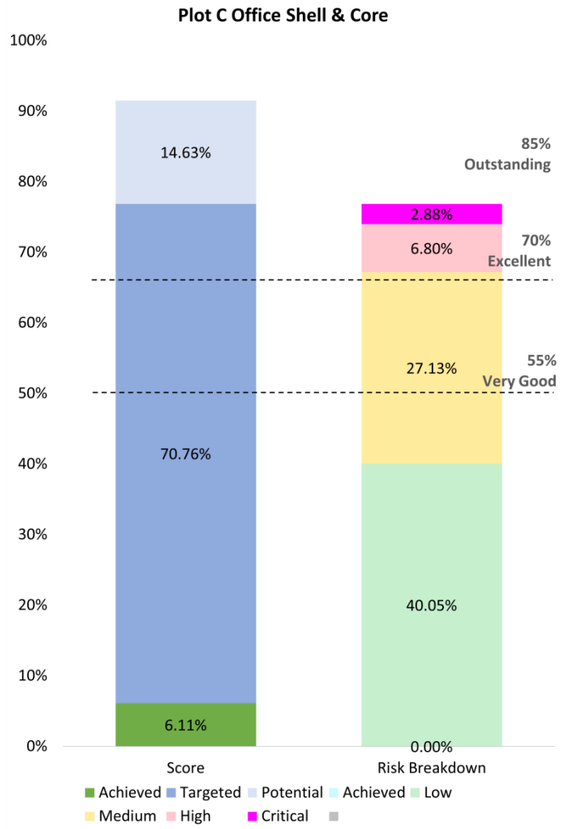

Figure 6: Plot C Offices Shell and Core Pre-Assessment

5.2 Opportunities for Enhancing Scoring

Based on the baseline predicted score of 76.8%, there is scope to achieve additional points under the Shell and Core assessment. Key credits that could be addressed are as follows:

- Increase performance under Wat 01 Water Consumption through use of more efficient fixtures and fittings
- Increase in low impact material sourcing through contractor performance (Mat 01 Life Cycle Impacts and Mat 03 Responsible Sourcing of Materials) (high risk/as design progresses)
- Increasing ecology points under LE04 Enhancing Site Ecology

These potential additional credit scores could provide the project with an additional score of 7.1%, thus securing a much more robust and safe score over the Excellent threshold of 70%. Below is a list of additional credits that could still be secured. These credits are highlighted in the score card with a red arrow (↑). Please refer to Appendix for the Dashboard.

Table 7: Potential credits/ options to score Excellent (Plot C Shell & Core)

Plot A Potential Additional Credits	% Available	% Targeted Credits	% Realistic Additional Credits
Man	11.00%	11.0%	0.0%
Hea	10.50%	5.3%	0.0%
Ene	15.00%	12.1%	0.7%
Tra	10.00%	10.0%	0.0%
Wat	7.50%	5.0%	0.8%
Mat	14.50%	8.9%	3.3%
Wst	9.50%	7.4%	0.0%
Leo	11.00%	7.7%	2.2%
Pol	11.00%	8.5%	0.0%
Inn	10.00%	1.0%	0.0%
Total	**110.00%**	76.9%	**7.1%**
			79.7%

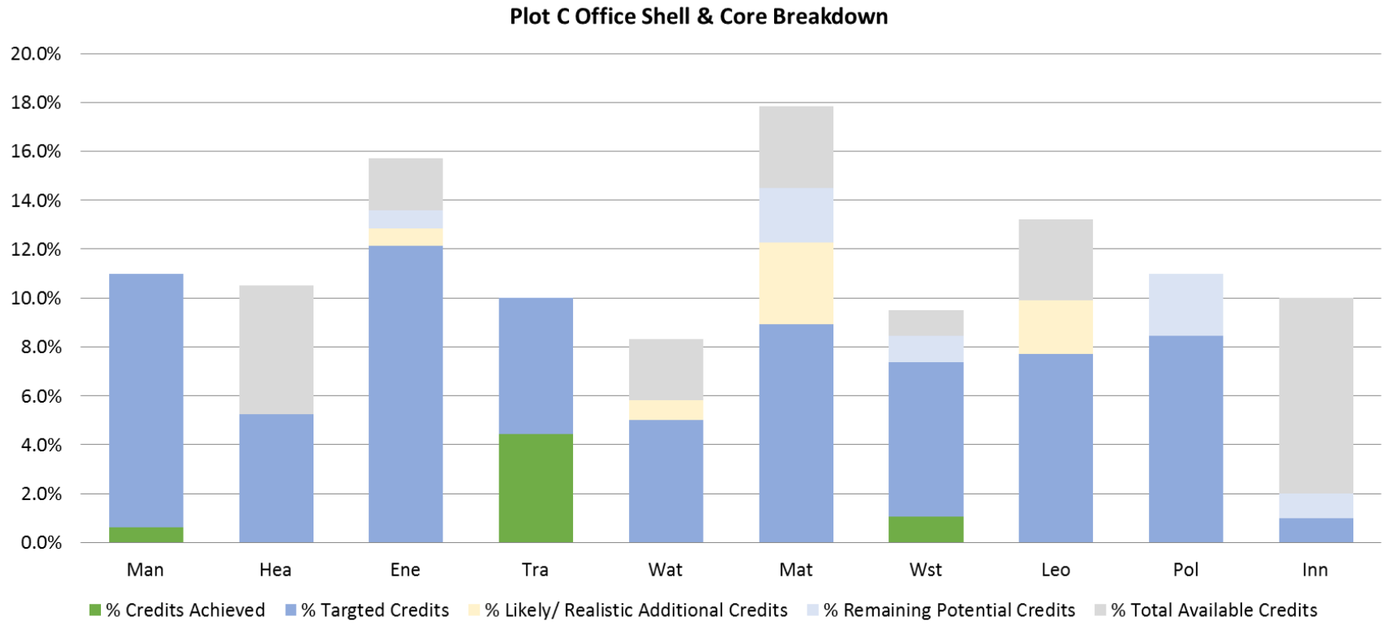

Figure 7: Potential credit options for Excellent Score (Plot C Core & Shell)

6.0 PLOT C SHELL AND CORE RETAIL

6.1 Pavilion Summary

Plot C Pavilion Shell and Core are required to achieve a BREEAM Excellent rating (70%+). Based on review and discussions with the design team, all separate plots are currently on target to achieve 75.0%. However, there will need to be continued review of the project to ensure targets are on track. The following pre-assessment results are to provide an indicative score for each of the office projects, and this score might fluctuate as the project progresses and actions additional credits are targeted, or such as value engineering is undertaken.

The following figure highlight the scoring for the Retail Shell and Core assessment. The scoring indicates the minimum predicted, or baseline, target scores, and through additional design and work, what the scoring would be if additional credits are targeted, through either additional costs or additional work

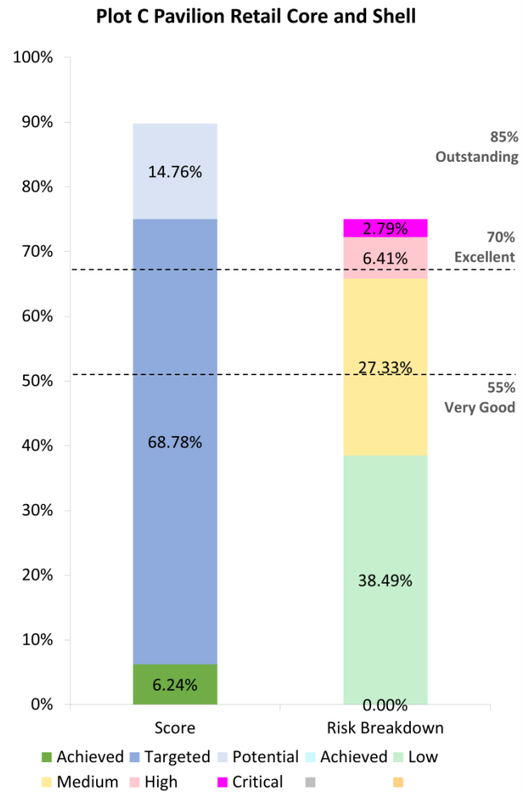

Figure 8: Plot C Retail Shell and Core Pre-Assessment

6.2 Opportunities for Enhancing Scoring

Based on the baseline predicted score of 75,0%, there is scope to achieve additional points under the Shell and Core assessment. Key credits that could be addressed are as follows:

- Increase performance under Wat 01 Water Consumption through use of more efficient fixtures and fittings
- Increase in low impact material sourcing through contractor performance (Mat 01 Life Cycle Impacts and Mat 03 Responsible Sourcing of Materials) (high risk/as design progresses)
- Increasing ecology points under LE04 Enhancing Site Ecology

These potential additional credit scores could provide the project with an additional score of 7.1%, thus securing a much more robust and safe score over the Excellent threshold of 70%. Below is a list of additional credits that could still be secured. These credits are highlighted in the score card with a red arrow (↑). Please refer to the Appendix for the Dashboard.

Table 8: Potential credits/ options to score Excellent (Plot C Retail Shell & Core)

Plot A Potential Additional Credits	% Available	% Targeted Credits	% Realistic Additional Credits
Man	11.00%	11.0%	0.0%
Hea	10.50%	4.8%	0.0%
Ene	15.00%	11.4%	0.7%
Tra	10.00%	10.0%	0.0%
Wat	7.50%	5.0%	0.8%
Mat	14.50%	8.9%	3.3%
Wst	9.50%	7.1%	0.0%
Leo	11.00%	7.7%	2.2%
Pol	11.00%	8.5%	0.0%
Inn	10.00%	0.6%	0.0%
Total	**110.00%**	75.0%	**7.1%**
			82.1%

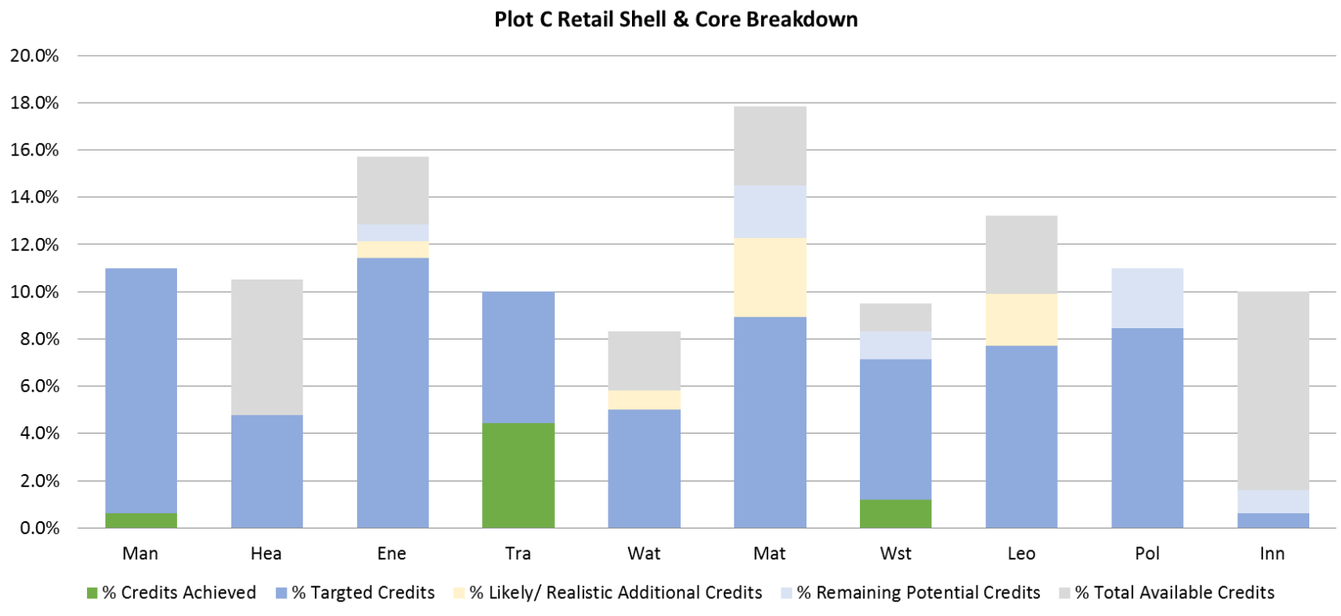

Figure 9: Potential credit options for Excellent Score (Plot C Retail Core & Shell)

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7.0 TED BAKER OFFICE SHELL AND CORE

7.1 Summary Ted Baker Office

Ted Baker Office, Shell and Core is required to achieve a BREEAM Excellent rating (70%+). Based on review and discussions with the design team, Plot A is currently on target to achieve 76.0%, However, there will need to be continued review of the project to ensure targets are on track. The following pre-assessment results are to provide an indicative score for the project, and this score might fluctuate as the project progresses and actions additional credits are targeted, or such as value engineering is undertaken.

The following figure highlight the scoring for Ted Baker Office Shell and Core. The scoring indicates the minimum predicted, or baseline, target scores, and through additional design and work, what the scoring would be if additional credits are targeted, through either additional costs or additional work.

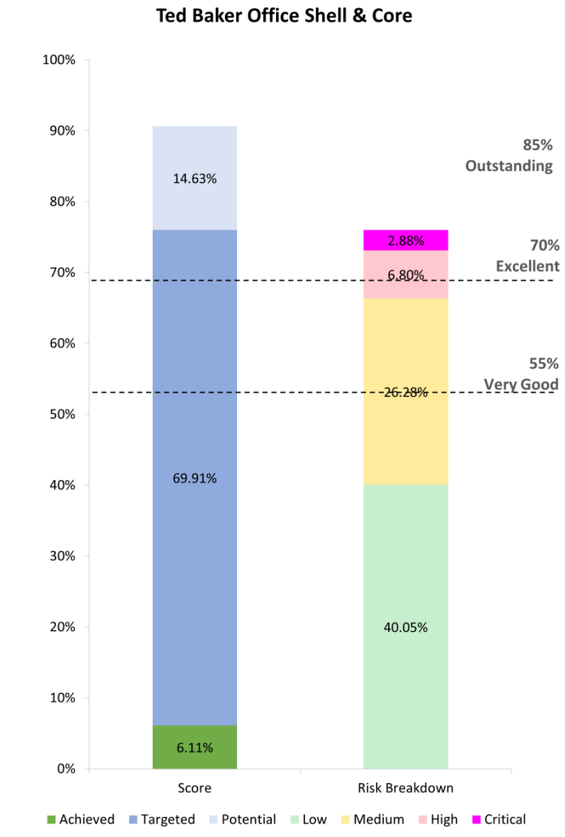

Figure 10: Ted Baker Offices Pre-Assessment

7.2 Opportunities for Enhancing Scoring

Based on the baseline predicted score of 76.0% there is scope to achieve additional points under the Shell and Core assessment. Key credits that could be addressed are as follows:

- Increase performance under Wat 01 Water Consumption through use of more efficient fixtures and fittings
- Increase in low impact material sourcing through contractor performance (Mat 01 Life Cycle Impacts and Mat 03 Responsible Sourcing of Materials) (high risk/as design progresses)
- Increasing ecology points under LE04 Enhancing Site Ecology

These potential additional credit scores could provide the project with an additional score of 7.1%, thus securing a much more robust and safe score over the Excellent threshold of 70%. Below is a list of additional credits that could still be secured. These credits are highlighted in the score card with a red arrow (↑). Please refer to the Appendix for the Dashboard.

Table 9: Potential credits/ options to score Excellent (Plot C Shell & Core

Plot C Potential Additional Credits	% Available	% Targeted Credits	% Realistic Additional Credits
Man	11.00%	11.0%	0.0%
Hea	10.50%	5.3%	0.0%
Ene	15.00%	12.1%	0.7%
Tra	10.00%	10.0%	0.0%
Wat	7.50%	5.0%	0.8%
Mat	14.50%	8.9%	3.3%
Wst	9.50%	7.4%	0.0%
Leo	11.00%	7.7%	2.2%
Pol	11.00%	7.6%	0.0%
Inn	10.00%	1.0%	0.0%
Total	**110.00%**	76.0%	7.1%
			83.1%

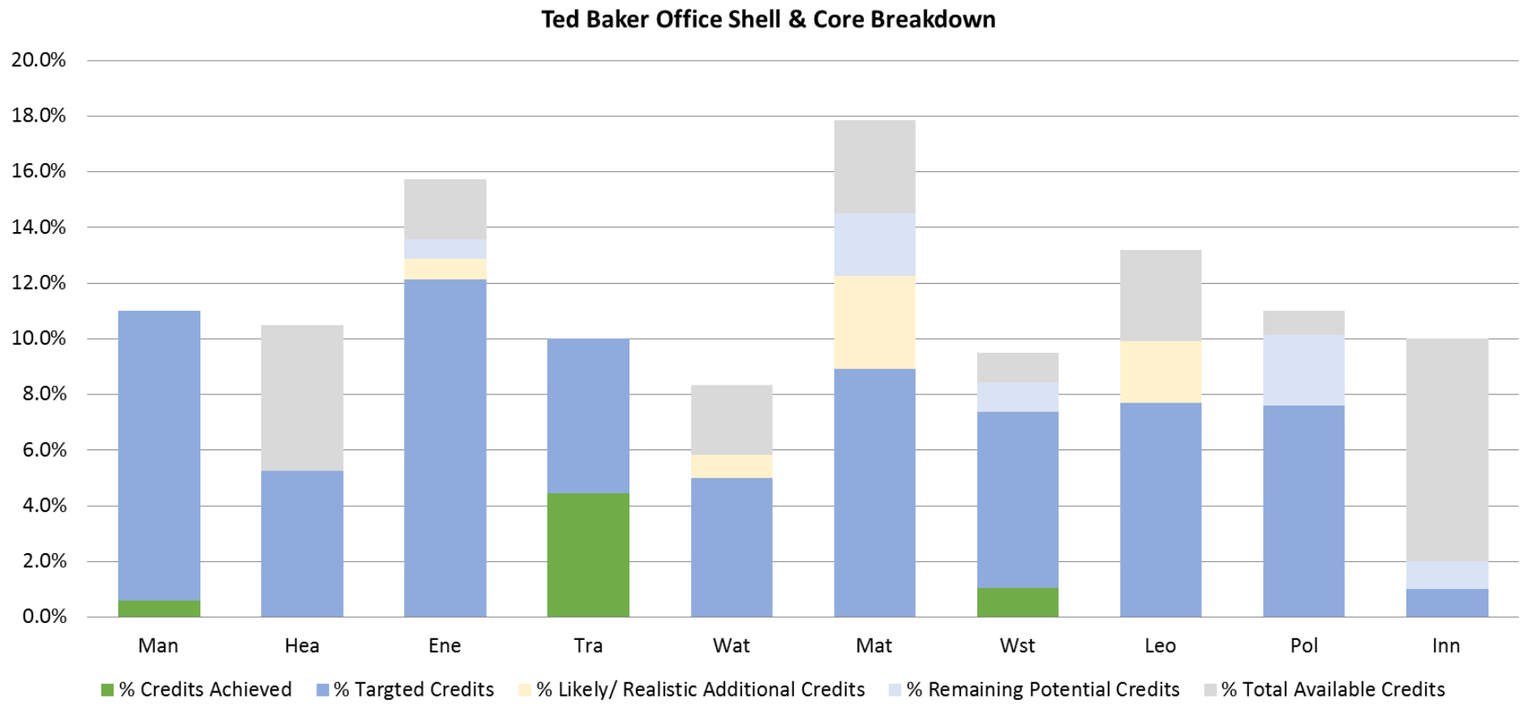

Figure 11: Potential credit options for Excellent Score (Ted Baker Office)

8.0 TED BAKER HOTEL SHELL AND CORE

8.1 Ted Baker Hotel Summary

Ted Baker Hotel Shell and Core is required to achieve a BREEAM Excellent rating (70%+). Based on review and discussions with the design team, Plot A is currently on target to achieve 74.9%.. However, there will need to be continued review of the project to ensure targets are on track. The following pre-assessment results are to provide an indicative score for the project, and this score might fluctuate as the project progresses and actions additional credits are targeted, or such as value engineering is undertaken.

The following figure highlight the scoring for Ted Baker Hotel Shell and Core. The scoring indicates the minimum predicted, or baseline, target scores, and through additional design and work, what the scoring would be if additional credits are targeted, through either additional costs or additional work.

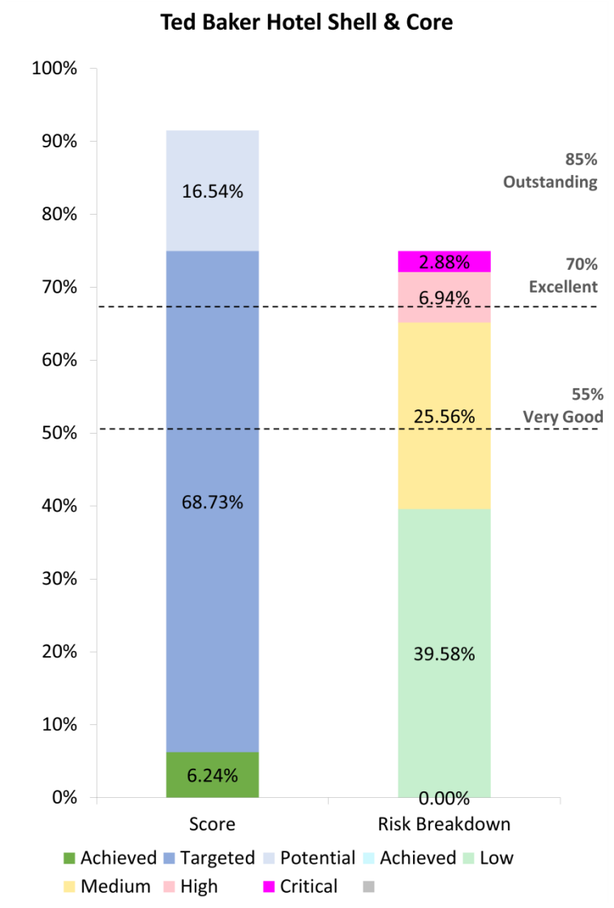

Figure 12: Ted Baker Hotel Pre-Assessment

8.2 Opportunities for Enhancing Scoring

Based on the baseline predicted score of 74.9 there is scope to achieve additional points under the Shell and Core assessment. Key credits that could be addressed are as follows:

- Increase performance under Wat 01 Water Consumption through use of more efficient fixtures and fittings
- Increase in low impact material sourcing through contractor performance (Mat 01 Life Cycle Impacts and Mat 03 Responsible Sourcing of Materials) (high risk/as design progresses)
- Increasing ecology points under LE04 Enhancing Site Ecology

These potential additional credit scores could provide the project with an additional score of 7.1%, thus securing a much more robust and safe score over the Excellent threshold of 70%. Below is a list of additional credits that could still be secured. These credits are highlighted in the score card with a red arrow (↑). Please refer to the Appendix for the Dashboard.

Table 10: Potential credits/ options to score Excellent (Hotel Shell & Core)

Plot A Potential Additional Credits	% Available	% Targeted Credits	% Realistic Additional Credits
Man	11.00%	11.0%	0.0%
Hea	10.50%	5.3%	0.0%
Ene	15.00%	12.0%	0.8%
Tra	10.00%	10.0%	0.0%
Wat	7.50%	5.0%	0.8%
Mat	14.50%	8.3%	3.1%
Wst	9.50%	7.1%	0.0%
Leo	11.00%	7.7%	2.2%
Pol	11.00%	7.6%	0.0%
Inn	10.00%	1.0%	0.0%
Total	**110.00%**	75.0%	6.9%
			81.9%

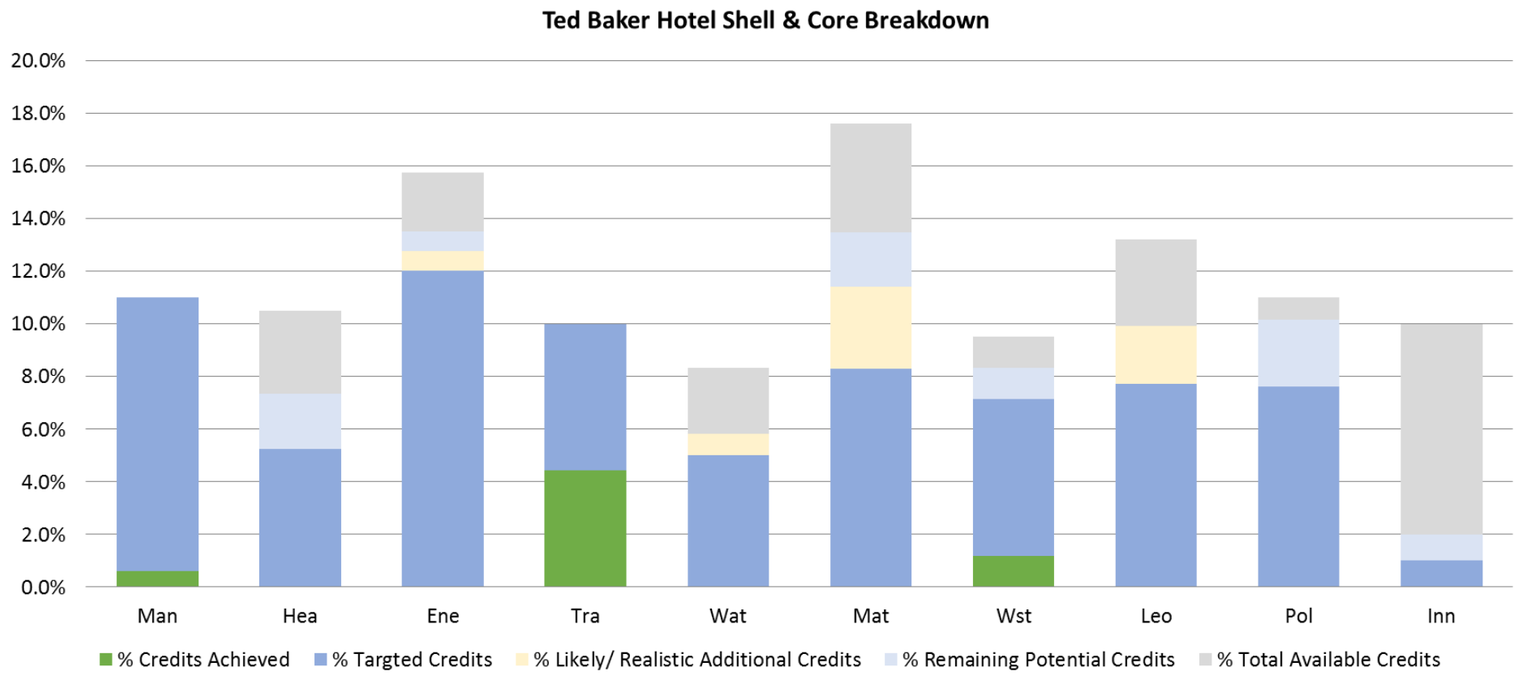

Figure 13: Potential credit options for Excellent Score (Ted Baker Hotel Core & Shell)

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9.0 BREEAM REQUIREMENTS

9.1 Mandatory Minimum Requirements for Excellent

In BREEAM New Construction 2014 there are Minimum Standards required for each rating. The requirements for Excellent have been incorporated into the expected score and are noted in Appendix C and D.

In order to ensure that the intention of BREEAM is maintained, certain credits in BREEAM have also been identified as being minimum requirements for the sustainability delivery for the project based on requirements that Camden council have set out. These are highlighted in the table below against their corresponding credits. The design team and contractor should pay careful attention these credits, as they serve the dual purpose of attaining BREEAM Excellent and achieving the requirements of wider project drivers.

Key (Applicability to Shell and Core Type)	
Applicable to assessment type	✓
Not applicable to assessment type	⊗
Action to be updated/ addressed	
Action addressed and targeted	
No action yet taken, stage dependant	

9.2 Innovation Credits

Innovation credits were introduced in the previous versions of BREEAM (2008). The innovation credits provide additional recognition for a procurement strategy, design feature, management process or innovative technologies that go beyond current BREEAM guidelines. Achieving an innovation credit involves an application process with an associated fee. There are currently no innovations sought on this project.

Table 11 Commentary on Mandatory Requirements for Excellent

Credit	Excellent	RIBA Stage	Requirement	Owner	Shell and Core	Key Action
Man 03: Responsible construction practices	One Credit – Considerate Construction	3/4	Contractor achieves 'compliance' with Considerate Constructors Scheme by achieving a score between 35-39 with a score of 7 in each category.	Contractor	✓	At design stage this will be committed to through client commitment letters and specification requirements.
Man 04: Commissioning	Criterion 10 - Building User Guide	6	Criterion 10: Building User Guides are provided and are appropriate to general building users, staff, and non-technical facilities managers.	Contractor	✓	At design stage this will be committed to through client commitment letters and specification requirements.
Man 05: Aftercare	One credit (Seasonal commissioning	6/7	Seasonal Commissioning is undertaken over a 12 month period once building becomes occupied.	Contractor	⊗	At design stage this will be committed to through client commitment letters and specification requirements.
Ene 01: Reduction of CO2 emissions	Five credits	3/4	Design achieves a minimum Energy Performance Ratio on a scale of 0.0575 to 0.90 (1 – 12 credits available). Minimum 6 credits required for Excellent (25% improvement on TER).	MEP Engineer	✓	At design stage the MEP engineer will be required to undertake a BRUKL Part L model to confirm compliance, the design will be expected to demonstrate at least a 35% reduction over part L, beyond the requirement for ENE 01.
Ene 02: Energy Monitoring	One credit (First sub-metering credit)	3/4	Energy monitoring using BMS or separate accessible energy sub-meters with pulsed output that enable at least 90% of the estimated annual energy to be monitored.	MEP Engineer	✓	At design stage this will be committed to through specification requirements.
Wat 01: Water Consumption	One credit	3/4	Achieve at least a 12.5% reduction of water usage as compared to a notional baseline performance.	MEP Engineer Architect	✓	At design stage this will be committed to through specification requirements. It is expected that the project will be able to achieve at last 2 points under WAT 01.
Wat 02: Water Monitoring	Criterion 1 only	3/4	Water meter on mains water supply to each building.	MEP Engineer	✓	At design stage this will be committed to through specification requirements.
Mat 03: Responsible Sourcing of Materials	Criterion 1 only	4/5	All timber must be sourced in accordance with the UK Government's Timber Procurement Policy.	Architect, Contractor	✓	At design stage this will be committed to through client commitment letters and specification requirements.
Wst 03: Operational waste	One credit	7	Where dedicated, accessible and properly sized storage space is provided for recycling. Where consistent generation in large volumes of waste or compostable materials are generated, compactors, balers, and/or composting vessels or facilities with water outlet must be provided.	Architect	✓	At design stage this will be committed to through client commitment letters and specification requirements and on site client management plans.
LE 03: Mitigating Ecological Impacts	One credit	1-7	Minimal negative change to ecological value of site, or a positive change is proven by a Suitably Qualified Ecologist.	Landscape Architect, Ecologist	✓	A site specific ecology survey has been undertaken by a suitably qualified professional. However more guidance and recommendations are needed to help inform design and to enhance the ecological opportunities on site

9.3 Early Stage BREEAM Credits

There are a number of early stage credits that needed to be completed within RIBA stages 1 and 2.

While there is a choice over which credits the project pursues, it is likely that most early stage credits must be achieved in order to secure an aspirational Excellent rating. The following table lists a number of actions that need to be finalised as soon as possible in order to secure the appropriate BREEAM credits.

Key	
Action addressed and targeted	
Action targeted, final consultation/ agreements to be confirmed (at the time of writing), expected close out RIBA Stage 2/3	

Table 12: Credits that require early stage action

Credit	Deadline	Requirement	Additional Appointment?	Action	Owner
Man 01: Project Brief and Design (credit 3)	RIBA Stage 1	Credits are available for appointing a Sustainability Champion (BREEAM Accredited Professional (AP) from stage 1 to attend key DTMs, and provide guidance and progress updates. Target rating should be contractually set by RIBA Stage 2 and be achieved to gain these credits.	✓	BREEAM AP to attend key DTMs to monitor progress and to issue regular score updates to team. To be updated per stage.	Client to instruct
Mat 06: Material Efficiency	RIBA Stage 1, 2,3 4	Opportunities and measures to optimise the use of materials in building design, procurement, construction, maintenance and end of life have been identified, investigated and implemented by the design/construction team as appropriate in consultation with the relevant parties at every RIBA stage from Preparation and Brief to Construction.		A Statement/ report detailing decisions on optimising the use of materials at RIBA Stage 1 should be produced (Standalone or in a Stage report). Materials workshop completed for RIBA Stage 1/2	Architect (support from structural engineer) *Note: MF facilitated a workshop to complete this credit*
LE 02,03,04,05 Land Use and ecology	RIBA Stage 1 + Ongoing	An ecologist should be appointed to conduct the following: a Phase I habitat survey and advise on minimising ecological impact and maximising ecological enhancement and providing input into a habitat management plan. It is important that the ecologist's scope covers all requirements to gain full credits. They should include the requirements of 'BREEAM Appendix F' in their report, and this should be updated as necessary in later stages.	✓	Item in progress: Site ecologist survey undertaken, more recommendations needed.	Client
Pol 03: Surface Water Run-off	RIBA Stage 1/2	A Flood Risk Assessment must be carried out to cover ALL sources of pollution. Design SUDS in line with the drainage hierarchy to attenuate to at least pre-development levels	✓	Civil engineer to advise on flood risk and opportunities to provide SUDS. Civil design addressing issues.	Civil Engineer
Man 01: Project Brief and Design	RIBA Stage 2	Prior to completion of the Concept Design (RIBA Stage 2), the client, occupier, design team, and contractor have met to identify and define their roles, responsibilities, and contributions for each of the key phases of project delivery. Responsibilities must be defined for: • End user requirements • Aims of the design and design strategy • Particular installation and construction requirements/limitations • Occupiers' budget and technical expertise in maintaining any proposed systems • Maintainability and adaptability of the proposals • Requirements for the production of project and end user documentation. • Requirements for commissioning, training and aftercare support		Roles and responsibilities up to post-completion to be defined and details of appointment confirmed in a project meeting(s). Responsibilities schedule should be issued Provide meeting minutes, or statement demonstrating how early involvement has influenced the design. This credit could be coordinated by a Soft Landings Champion Item secured through consultation meeting.	Project Manager

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Credit	Deadline	Requirement	Additional Appointment?	Action	Owner
Man 01: Stakeholder Consultation (credit 3)	RIBA Stage 2	Prior to completion of the Concept Design stage (RIBA Stage 2), a consultation plan has been produced and all relevant third party stakeholders have been consulted by the design team. This must cover the minimum consultation content. Final consultation information to be reviewed by end of Stage 3.		Produce a consultation plan mapping out • who will be consulted • roughly when • the format of consultation • how they will be kept informed of changes • Item being addressed through consultation plan.	Project Manager
Man 02: Life Cycle Cost & Service Life Planning	RIBA Stage 2	Two credits – Elemental Life Cycle Cost at Concept Design stage (RIBA Stage 2)The LCC analysis should include: An outline LCC plan for the project based on the buildings basic structure and envelope, appraising a range of options and based on multiple cash flow scenarios e.g. 20, 30, 50+ years; The fabric and servicing strategy for the project outlining services component and fit-out options (if applicable) over a 15 year period, in the form of an 'elemental LCC Plan'	✓	Appoint QS to conduct LCC. All to agree design option(s) to be analysed Item being addressed through client agreement.	QS (Client input)
Hea 06 Safety and Security (credit 2)	RIBA Stage 2	Suitably Qualified Security Specialist (SQSS) conducts a Security Needs Assessment during or prior to Concept Design (RIBA Stage 2). They develop a set of recommendations and solutions. These must be incorporated into the final design. Deviation from their recommendations must be agreed by the SQSS. SQSS can be the local Architectural Liaison Officer from the local police department.		Architect has been in contact with local Architectural Liaison Officer. Item being addressed through architectural consultation.	Architect
Ene 04: Low Carbon Design	RIBA Stage 2	Passive design analysis during Concept Design (RIBA Stage 2) – Carry out an analysis of the proposed building design to identify opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services.		Carry out passive design analysis Item being addressed through MEP consultation.	MEP
Ene 04: Low Carbon Design	RIBA Stage 2	A feasibility study is carried out by the completion of the Concept Design stage (RIBA Stage 2) by an energy specialist to establish the most appropriate local low or zero carbon (LZC) energy source for the project. The recommendations of the study must be incorporated into the building.		Carry out LZC feasibility study Item being addressed through MEP consultation.	MEP
Wst 05: Adaptation to Climate Change	RIBA Stage 2	Conduct a systematic risk assessment by the end of Concept Design (RIBA Stage 2) (specific to structural and fabric resilience) to identify and evaluate the impact of the expected increase in extreme weather conditions arising from climate change on the building over the projected life-cycle of the building.		Carry out a climate change adaptation strategy (specific to structural and fabric resilience) Workshop undertaken.	Structural Engineer/ Architect
Wst 06: Functional Adaptability	RIBA Stage 2	Client and design team must conduct a functional adaptation strategy study by Concept Design (RIBA stage 2), which includes recommendations for measures to be incorporated to facilitate future adaptation. These measures must be adopted in the design, where practical. Omissions must be justified.		Carry out a functional adaptation strategy study Workshop undertaken.	ALL

9.4 Additional Early Stage Considerations

Beyond minimum requirements and early stage appointments and actions, there are a number of credits that should be addressed early in the design to help guide performance. Such credits should be considered and embedded at an early stage of design as the opportunity to address them later might be a hindrance or a risk to the progression of the project. Key early stage considerations are as follows:

Key	
Action addressed and targeted	
Action targeted, final consultation/ agreements to be confirmed (at the time of writing), expected close out RIBA Stage 2	

Table 13: Credits that require early stage design consideration

Credit	Deadline	Requirement	Action	Owner
Tra 03 Cyclist Facilities	RIBA Stage 2	Provision of lockable cycle storage externally and lockers and showers internally. Where the new buildings form part of a larger existing site, the required number of facilities can be determined on a development wide basis. The number of compliant facilities should cater for the assessed buildings and other buildings that will share the facilities. • Number compliant spaces: • The site has a high PTAL index and would achieve 50% of available public transport accessibility credits. It would therefore reduce the storage requirements. • Exact numbers tbc. Roughly 1 per 20 occupants up to 500 and sliding scale beyond. • Occupant numbers are required to calculate the cyclist requirements. • Internal space for cycling facilities is also required: • Either 1 shower per 10 cycle spaces and changing facilities or, • 1 shower per 10 cycle spaces and lockers drying space or, • 1 shower per 10 cycle spaces and drying space	Client to provide occupant numbers. Agree cycle facilities provision and strategy with client and incorporate areas into design as appropriate Agreed targeted.	Client Architect
Wst 03: Operational Waste	RIBA Stage 2	There must be dedicated spaces to cater for the segregation and storage of operational waste and recyclable waste volumes generated by the building, its occupants, and activities. Internally and externally. It must be accessible and within 20m of building entrance. Where relevant waste can be dealt with on a building scale or on a centralised / multiple building scale incorporating existing building facilities. Documentation must include meeting minutes from the design stage.	Consider appointing specialist waste consultant Agreed targeted.	Architect
Wst 01: Construction Waste Management	RIBA Stage 3	Where pre-construction demolition must be performed, the team should perform a demolition audit and include this audit in the credit documentation.	Confirm there are no hard structures to be demolished and therefore n/a Agreed targeted.	Architect
Hea 01: Visual Comfort (Glare Control - 1 credit)	RIBA Stage 2/3	Disabling glare has been designed out via building form and layout and/or design features such as low eaves, occupant controlled devices, external shading, brise soleil, etc.	Not Targeted.	Architect
Hea 01: Visual Comfort (View Out - 1 credit)	RIBA Stage 2/3	• 95% of desks/work benches are within 7m of a window providing a view out. • Livings spaces / lounges / bedrooms: positions to be within 5m of wall providing view out. • The window/opening must be ≥ 20% of the surrounding wall area.	Not Targeted.	Architect
Hea 02: Indoor Air Quality	RIBA Stage 2/3	For air-conditioned and mixed-mode buildings: air intakes and exhausts > 10m apart to minimise recirculation, intakes > 20m from sources of external pollution. For naturally-ventilated buildings: openable windows/ventilators > 10m from external pollution sources.	Ensure layout compliant. Prepare draft IAQ to include in RIBA Stage 3/4 reports. Design team reviewing for compliance.	Services

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10.0 SUMMARY AND NEXT STEPS

10.1 Summary

Achieving a high aspiration of BREEAM Excellent requires engagement and commitment from all project stakeholders from an early stage. It is the responsibility of each individual discipline to ensure that they understand the requirements of their assigned credits. There is always a risk that team members do not fully understand the requirements but do not raise concerns early enough for them to be addressed.

Equally, there are risks that the design changes and the BREEAM assessor/BREEAM AP is not made aware. They are then unable to advise on credit impacts and problems are only discovered when it is too late. The BREEAM assessor/BREEAM AP is available to answer any queries or concerns, but relies on team members to flag design changes or express concerns.

10.2 Next Steps

At the earliest part of the next design stage, the design team and client must re-engage with the BREEAM process. The following actions must be undertaken to ensure that confirmation and enhancement of the credits is achieved.

- Early RIBA Stage 3 BREEAM workshop to understand, review and confirm credit commitments.
- Complete outstanding design RIBA Stage 2 actions
- Design team to review in detail the COP documents for guidance and clarifications.
- Ensure requirements are embedded within employer's requirements.

10.3 Outstanding Credit Actions for RIBA Stage 2

The design team is required to address a number of key credit actions in order to secure the appropriate credits at the correct design stage. The aim is to be able to secure as many early stage credits as possible so that the process toward certification runs smoothly, and potentially at a lower cost.

Please note that all of these credit requirements are to be read in conjunction with the full BREEAM New Construction 2014 v 5.0 manual. The requirements have and will continue to be communicated by the Assessor as the project enters the detailed design stages. Key actions being that need clarification and completion for RIBA Stage 2 are as follows:

Man 02 Life Cycle Costing (RIBA Stage 2/4)

- A life cycle cost (LCC) analysis demonstrates that elements in a least two of the following building components have been analysed at a strategic and system level comparing alternative options: envelope, services, finishes, external spaces. Lowest discounted LCC is preferred, assuming it lowers building energy consumption or reduces maintenance, and is of critical value to project. LCC is required to be developed from the design information following the interim design review of RIBA Stage 2.
- During RIBA Stage 4, results of study will be implemented in the design and specifications. In addition, a maintenance strategy will be developed that is informed by the LCC analysis.

Ene 04 Low and Zero Carbon Design (LZC) (RIBA Stage 2)

- A passive design and LZC feasibility study has been completed in an effort to analyse the most appropriate options which will help optimise passive design within the building and reduce CO_2, however, there will be some additional updates required in the next stage in order to demonstrate full compliance.

Wst 05 and Wst 06 Adaptation to Climate Change and Functional Adaptability (RIBA Stage 2)

- Adaptation to climate change and functional adaptability workshop have been undertaken in the interim design review stage of RIBA Stage 2. It captured the good work done with regards to the design in order to mitigate the impacts of climate change on the building and how the building can respond to future user needs. The design team will be required to comment on and reconfirm design strategies in RIBA Stage 3 and 4.

LE 04 Land Use and Ecology (RIBA Stage 1/2)

- An ecologist has undertaken a site wide survey, however, design guidance in terms of selecting appropriate features for ecological enhancement has not yet been reviewed/ developed. The ecologist will be required to update any design advice based on the design strategy and they will be required to complete the LE calculation tools to inform and enhance the targeted credits.
- It will be the responsibility of the contractor to appoint their own ecologist who will provide advice on how to enhance site ecology in line with the targeted credits for the construction stage. The landscape architect must participate in this process to ensure the final landscape design incorporates the ecologist's advice.

Other Items

- There are number of items which the team is due to clarify in the next stage which will help confirm some other early stage credits, such as: cycle storage, recycling, energy efficient equipment, local amenities and hard landscaping.

Credits Documented Via Confirmation Letter

- There are a number of credits that can be documented at design stage through a confirmation letter. These will be highlighted with guidance given on how to word this letter.

External Site Credits

- The external site credits for BREEAM will only apply in the landscaped area. The landscape architect will be required to produce an external landscaping drawing defining external space on the site which will be considered against the BREEAM criteria. The landscape architect must liaise with the ecologist to ensure that the landscape design incorporates the ecologist's advice.

10.4 Additional Credits for Improvement

- Ene 01: Increase in energy performance based on clarification of the energy strategy (as design progresses)
- Wat 01: Increase performance under Wat 01 Water consumption through use of more efficient fixtures and fittings
- Mat 01 and Mat 03: Increase in low impact material sourcing through contractor performance (Mat 01, and Mat 03) (high risk/as design progresses)
- LE 02-LE 04: Increasing ecology points under LE04
- Pol 03: Increasing strategy with regards to pollution (clarification of water run off design needed).

11.0 APPENDIX A: PLANNING POLICY REVIEW

11.1 Camden Local Plan 2017

Link: http://www.camden.gov.uk/ccm/navigation/environment/planning-and-built-environment/planning-policy/local-development-framework/

In response to sustainability policy issues:

Policy A1 Managing the impact of development
The Council will seek to protect the quality of life of occupiers and neighbours. We will grant permission for development unless this causes unacceptable harm to amenity:

- seek to ensure that the amenity of communities, occupiers and neighbours is protected;
- seek to ensure development contributes towards strong and successful communities by balancing the needs of development with the needs and characteristics of local areas and communities;
- resist development that fails to adequately assess and address transport impacts affecting communities, occupiers, neighbours and the existing transport network; and
- require mitigation measures where necessary.

Design to consider:

- visual privacy, outlook;
- sunlight, daylight and overshadowing;
- artificial lighting levels;
- transport impacts, including the use of Transport Assessments, Travel
- Plans and Servicing and Delivery Management Plans;
- impacts of the construction phase, including the use of Construction Management Plans;
- noise and vibration levels;
- odour, fumes and dust;
- microclimate;
- contaminated land; and
- impact upon water and wastewater infrastructure.

Policy A2 Open space
The Council will protect, enhance and improve access to Camden's parks, open spaces and other green infrastructure.

Design to consider:

- work with partners to preserve and enhance the Regent's Canal, including its setting, and balance the differing demands on the Canal and its towpath.
- The council will seek developer contributions for open space enhancements using Section 106 agreements and the Community Infrastructure Levy (CIL).
- ensure developments seek opportunities for providing private amenity space;
- seek opportunities to enhance links between open spaces recognising the multiple benefits this may bring;
- tackle deficiencies to open space through enhancement measures; and seek temporary provision of open space where opportunities arise.

Policy A3 Biodiversity
The Council will protect and enhance sites of nature conservation and biodiversity.

Design to:

- designate and protect nature conservation sites and safeguard protected and priority habitats and species;
- seek the protection of other features with nature conservation value, including gardens, wherever possible;
- assess developments against their ability to realise benefits for biodiversity through the layout, design and materials used in the built structure and landscaping elements of a proposed development, proportionate to the scale of development proposed;
- secure improvements to green corridors, particularly where a development scheme is adjacent to an existing corridor;
- seek to improve opportunities to experience nature, in particular where such opportunities are lacking;
- require the demolition and construction phase of development, including the movement of works vehicles, to be planned to avoid disturbance to habitats and species and ecologically sensitive areas, and the spread of invasive species;
- resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation;
- require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 'Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout;
- expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;
- expect developments to incorporate additional trees and vegetation wherever possible.

Policy D1 Design
The Council will seek to secure high quality design in development.

Design should:

- respect local context and character;
- is sustainable in design and construction, incorporating best practice in resource management and climate change mitigation and adaptation;
- is of sustainable and durable construction and adaptable to different activities and land uses;
- comprises details and materials that are of high quality and complement the local character;
- integrates well with the surrounding streets and open spaces, improving movement through the site and wider area with direct, accessible and easily recognisable routes and contributes positively to the street frontage;
- is inclusive and accessible for all;
- promotes health;
- is secure and designed to minimise crime and antisocial behaviour;
- responds to natural features and preserves gardens and other open space;
- incorporates high quality landscape design (including public art, where appropriate) and maximises opportunities for greening for example through planting of trees and other soft landscaping,
- incorporates outdoor amenity space;
- preserves significant and protected views;
- or housing, provides a high standard of accommodation; and
- carefully integrates building services equipment.

Policy D1 Design
The Council will seek to secure high quality design in development: Tall buildings.
All of Camden is considered sensitive to the development of tall buildings. Tall buildings in Camden will be assessed against the design criteria set out above.

The council will give particular attention to:

- how the building relates to its surroundings, both in terms of how the base of the building fits in with the streetscape and how the top of a tall building affects the skyline;
- the historic context of the building's surroundings;
- the relationship between the building and hills and views;
- the degree to which the building overshadows public spaces, especially open spaces and watercourses; and the contribution a building makes to pedestrian permeability and improved public accessibility.

Policy D1 Design
The Council will seek to secure high quality design in development: Public Art

The Council will only permit development for artworks, statues or memorials where they protect and enhance the local character and historic environment and contribute to a harmonious and balanced landscape design.

Policy CC1 Climate change mitigation
The Council will require all development to minimise the effects of climate change and encourage all developments to meet the highest feasible environmental standards that are financially viable during construction and occupation.

Design should:

- promote zero carbon development and require all development to reduce carbon dioxide emissions through following the steps in the energy hierarchy;
- require all major development to demonstrate how London Plan targets for carbon dioxide emissions have been met;
- ensure that the location of development and mix of land uses minimise the need to travel by car and help to support decentralised energy networks;
- support and encourage sensitive energy efficiency improvements to existing buildings;
- require all proposals that involve substantial demolition to demonstrate that it is not possible to retain and improve the existing building; and
- expect all developments to optimise resource efficiency.

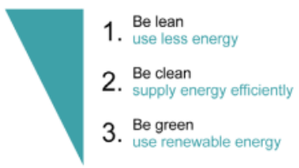
For decentralised energy networks, we will promote decentralised energy by:

- working with local organisations and developers to implement decentralised energy networks in the parts of Camden most likely to support them;
- all major developments to assess the feasibility of connecting to an existing decentralised energy network, or where this is not possible establishing a new network.

To ensure that the Council can monitor the effectiveness of renewable and low carbon technologies, major developments will be required to install appropriate monitoring equipment.

Energy Notes:
The Design shall produce an energy strategy & statement addressing the following:

- Energy Statement (energy hierarchy, decentralised energy, renewable energy)



What will the council expect?

All new developments are expected to be designed to minims CO2 emissions by being as energy efficient as feasible and viable.

- All developments are to be design to reduce carbon dioxide emissions.
- Energy strategies are to be designed following the steps set out by the energy hierarchy.
- Developments involving 5 or more dwellings and/or 500sq m (gross internal) floors pace or more are required to submit an energy statement.
- All new residential development will also be required to demonstrate a 19% CO2 reduction below Part L 2013 Building Regulations.
- The Council will expect developments of five or more dwellings and/or more than 500 sqm of any gross internal floorspace to achieve a 20% reduction in carbon dioxide emissions from on-site renewable energy generation (which can include sources of site related decentralised renewable energy) unless it can be demonstrated that such provision is not feasible

Reporting shall cover:

- Baseline energy demand & CO2 emissions
- Reduce energy demand
- Supply energy efficiently
- Implementation/ feasibility of low carbon and renewable energy technologies

Considerations

- Optimising design for passive measures (daylight, nat vent, reduce over heating, natural cooling, thermal performance).

What information does the council require?

A full model of the building should be carried out to ensure the building design optimises solar gain and daylight without resulting in overheating for developments comprising 5 dwellings or more or 500sq m or more of any floorspace.

Policy CC2 Adapting to climate change
The Council will require development to be resilient to climate change. All development should adopt appropriate climate change adaptation measures.

Any development involving 5 or more residential units or 500 sqm or more of any additional floorspace is required to demonstrate the above in a Sustainability Statement.

Adaption measures:

- protection of existing green spaces and promoting new appropriate green infrastructure;
- not increasing, and wherever possible reducing, surface water run-off through increasing permeable surfaces and use of Sustainable Drainage Systems;
- incorporating bio-diverse roofs, combination green and blue roofs and green walls where appropriate; and
- measures to reduce the impact of urban and dwelling overheating, including application of the cooling hierarchy.

Policy CC2 Adapting to climate change
Sustainable design and construction measures. The Council will promote and measure sustainable design and construction.

Construction Measures:

- ensuring development schemes demonstrate how adaptation measures and sustainable development principles have been incorporated into the design and proposed implementation;
- encourage new build residential development to use the Home Quality Mark and Passivhaus design standards;
- expecting developments (conversions/extensions) of 500 sqm of residential floorspace or above or five or more dwellings to achieve “excellent” in BREEAM domestic refurbishment; and
- expecting non-domestic developments of 500 sqm of floorspace or above to achieve “excellent” in BREEAM assessments and encouraging zero carbon in new development from 2019.

Policy CC3 Water and flooding
The Council will seek to ensure that development does not increase flood risk and reduces the risk of flooding where possible.

Where an assessment of flood risk is required, developments should consider surface water flooding in detail and groundwater flooding where applicable.

Design should:

- incorporate water efficiency measures;
- avoid harm to the water environment and improve water quality;
- consider the impact of development in areas at risk of flooding (including drainage);
- incorporate flood resilient measures in areas prone to flooding;
- utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy, unless inappropriate, to achieve a greenfield run-off rate where feasible; and
- not locate vulnerable development (such as basement dwellings) in flood-prone areas.

Policy CC4 Air quality
The Council will ensure that the impact of development on air quality is mitigated and ensure that exposure to poor air quality is reduced in the borough.

The Council will take into account the impact of air quality when assessing development proposals, through the consideration of both the exposure of occupants to air pollution and the effect of the development on air quality.

Consideration must be taken on:

- Council’s Air Quality Action Plan.
- Air Quality Assessments (AQAs) are required where development is likely to expose residents to high levels of air pollution. Where the AQA shows that a development would cause harm to air quality, the Council will not grant planning permission unless measures are adopted to mitigate the impact.

Development that involves significant demolition, construction or earthworks will also be required to assess the risk of dust and emissions impacts in an AQA and include appropriate mitigation measures to be secured in a Construction Management Plan.

Policy CC5 Waste
The Council will seek to make Camden a low waste borough.

Design should:

- aim to reduce the amount of waste produced and increase recycling and the reuse of materials
- make sure that developments include facilities for the storage and collection of waste and recycling.

Policy T1 Prioritising walking, cycling and public transport
The Council will promote sustainable transport by prioritising walking, cycling and public transport in the borough.

Design should provide for:

Walking

- improve the pedestrian environment by supporting high quality public
- realm improvement works;
- make improvements to the pedestrian environment including the
- provision of high quality safe road crossings where needed, seating,
- signage and landscaping;
- are easy and safe to walk through ('permeable');
- are adequately lit;
- provide high quality footpaths and pavements that are wide enough for
- the number of people expected to use them. Features should also be
- included to assist vulnerable road users where appropriate; and
- contribute towards bridges and water crossings where appropriate.

Cycling:

- provide for and makes contributions towards connected, high quality, convenient and safe cycle routes, in line or exceeding London Cycle Design Standards, including the implementation of the Central London Grid, Quietways Network, Cycle Super Highways and;
- provides for accessible, secure cycle parking facilities exceeding minimum standards outlined within the London Plan and design requirements outlined within our supplementary planning document Camden Planning Guidance 7: Transport. Higher levels of provision may also be required in areas well served by cycle route infrastructure, taking into account the size and location of the development;
- makes provision for high quality facilities that promote cycle usage including changing rooms, showers, dryers and lockers;
- is easy and safe to cycle through ('permeable'); and
- contribute towards bridges and water crossings suitable for cycle use where appropriate.

Public Transport:

- development contributes towards improvements to the bus network including access to bus stops, shelters, passenger seating, waiting areas, signage and timetable information.
- Where appropriate, development will also be required to provide for interchanging between different modes of transport including facilities to make interchange easy and convenient for all users and maintain passenger comfort.

Policy T2 Parking and car-free development

- The Council will limit the availability of parking and require all new developments in the borough to be car-free.

Ensure design considers:

- No on street parking
- limit on-site parking to:
  - spaces designated for disabled people where necessary, and/or
  - essential operational or servicing needs;
  - resist the development of boundary treatments and gardens to provide vehicle crossovers and on-site parking.

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12.0 APPENDIX B: TEAM RESPONSIBILITIES

Even at this early stage it can be said that achieving the target rating of 'Excellent' is possible. However, it will require a strong and continued commitment from all design team members. Also, the cost implications of certain credits need to be evaluated in order to ensure they can be achieved.

The following table is the outcome of an early design team meeting where roles and responsibilities were assigned for the each of the relevant phases of the project. The following figure highlights where responsibilities have been allocated at the design stage.

Key	
Responsible - those roles that have to execute the task.	R
Accountable -the one ultimately answerable for the correct and thorough completion of the deliverable or task, and the one who delegates the work to those responsible. In other words, an accountable must sign off (approve) work that responsible provides. There is typically only one accountable specified for each task or	A
Consulted - those whose opinions are sought, typically stakeholders or subject matter experts, and with whom there is two-way communication	C
Knowledge (Informed) - those that need to be updated on the progress of that task.	K
Not Applicable - Not applicable at this stage of the project	N
NB: we have changed 'I' to 'K' in order to deconflict with the number 1.	

		Design team										Contractor (construction representative)	Method / Forum / Consultation undertaken during Brief Development stage
	Roles and Responsibilities in relation to usability and maintenance	**Client**	**Building Occupier**	**Building FM**	**Project Manager**	**Quantitiy Surveyor**	**Architect**	**Services Engineer**	**Landscape Architect**	**Acoustics**	**Structural & Civil Engineer**		
	Organisation and Name of Representative	**Reef**	**A/B/C**	**TBC**	**Reef**	**Gardiner & Theobalds**	**Bennetts**	**Max Fordham**	**TBC**	**TBC**	**GDP**	**TBC**	
Concpet Design Stage 0-2	Defining end user requirements	A	A	R	A	K	A	R	R	R	R	C	
	Designing in relation to end user requirements (Aims of the design and design strategy)	C	C	C	A	K	R	R	R	R	R	C	
	Particular installation and construction requirements	C	K	C	A	K	A/R	R	R	R	R	R	
	Occupiers budget and technical expertise in maintaining any proposed systems	C (Ensure Considered)	C (Ensure Considered)	A	R	R	R	R	R	R	R	C	
	Usability and manageability of any proposals	C	C	A	R	R	A	A	A	A	A	C	
	Production of maintenance strategy	C	C	A	R	K	R	R	R	R	R	A	
	Outline Building User Guide	C	C (Ensure Considered)	A	R	K	R	R	R	R	R	A	
	Commissioning, training and aftercare support including budget allocation	C	C (Ensure Considered)	A	R	K	R	A	R	R	R	R	

Table 14: Project Responsibilities: UBB Stage 2

13.0 APPENDIX C : PLOT A OFFICE DASHBOARDS

BREEAM 2014 Dashboard

Project: Plot A Office Core and Shell

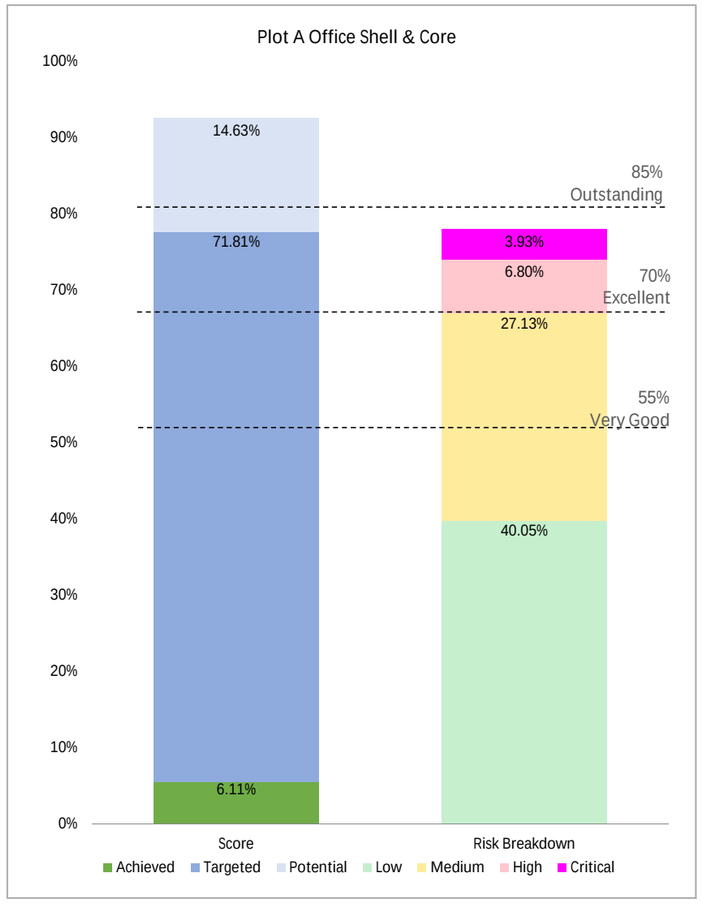
Assessor: Anna Foden/ Rebecca Gibson

BREEAM Scheme: New Construction 2014 v4.1 UK

ACHIEVED	6.11%	Unclassified
TARGETED	77.92%	Excellent
POTENTIAL	92.55%	Excellent

Minimum Requirements

	TARGETED	ACHIEVED
Pass	Yes	No
Good	Yes	No
Very Good	Yes	No
Excellent	Yes	No
Outstanding	No	No



		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Management			Credit Value	0.61%		
Man 01 - Project Brief and Design	Stakeholder Consultation (project delivery)	1		1	0	L
	Stakeholder Consultation (third party)	1		1	0	C
	Sustainability Champion (design)	1		1	0	L
	Sustainability Champion (monitoring progress)	1		1	1	H
Man 02 - Life Cycle Cost and Service Lift Planning	Elemental LCC	2		2	0	C
	Component Level LCC Plan	1		1	0	H
	Capital Cost Reporting	1		1	0	H
Man 03 - Responsible Construction Practices	Legally Sourced Timber	-			0	H
	Environmental Management	1		1	0	M
	Sustainability Champion	1		1	0	M
	Considerate Construction	2	1	2	0	M
	Exemplar Performance - Considerate Construction	1		1	0	H
	Monitoring of Construction-site Impacts - Utility Consumption	1		1	0	M
	Monitoring of Construction-site Impacts - Transport	1		1	0	M
Man 04 - Commissioning and Handover	Commissioning and Testing Schedule and Responsibilities	1		1	0	M
	Commissioning Building Services	1		1	0	M
	Testing and Inspecting Building Fabric	1		1	0	M
	Handover	1	#10	1	0	L
Man 05 - Aftercare	Aftercare Support	0		0	0	
	Seasonal Commissioning	0	1	0	0	
	Post Occupancy Evaluation	0		0	0	
	Exemplar Performance - Extended Aftercare	0		0	0	
Management total:		11.00%		11.00%	0.00%	
Health & Wellbeing			Credit Value	1.05%		
Hea 01 - Visual Comfort	Glare Control	0		0	0	
	Daylighting	1		0	0	
	Exemplar Performance - Daylighting	1		0	0	
	View Out	1		0	0	
	Internal and External Lighting Levels, Zoning and Control	1		1	0	L
Hea 02 - Indoor Air Quality	IAQ Plan	0		0	0	
	Ventilation	1		1	0	C
	VOC Emission Levels (design)	0		0	0	
	VOC Emission Levels (post construction)	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.06mg/m³ air	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.01mg/m³ air	0		0	0	
	Potential for Natural Ventilation	1		0	0	
Hea 03 - Safe Containment in Laboratories	Laboratory Containment Devices and Containment Areas	0		0	0	
	Buildings with Containment Level 2 and 3 Laboratory Facilities	0		0	0	
Hea 04 - Thermal Comfort	Thermal Modelling	1		1	0	M
	Adaptability	1		1	0	M
	Thermal Zoning and Controls	0		0	0	
Hea 05 - Acoustic Performance	Sound Insulation	0		0	0	
	Internal Indoor and Ambient Noise Levels	1		1	0	C
	Reverberation	0		0	0	
Hea 06 - Safety and Security	Safe Access	1		0	0	
	Security of Site and Building	1		1	0	L
Health & Wellbeing total		10.50%		6.30%	0.00%	
Energy			Credit Value	0.71%		
Ene 01 - Reduction of Energy Use and Carbon Emissions	Energy Performance	12	5	9	1	L
	Exemplar Performance - Zero Regulaterd Carbon	4		0	0	
	Exemplar Performance - Carbon Negative	1		0	0	
Ene 02 - Energy Monitoring	Sub-metering of Major Energy Consuming Systems	1	1	1	0	L
	Sub-metering of High Energy and Tenancy Areas	1		1	0	M
Ene 03 - External Lighting	External Lighting	1		1	0	L
Ene 04 - Low Carbon Design	Passive Design Analysis	1		1	0	H
	Free Cooling	1		0	1	
	Low Zero Carbon Feasibility Study	1		1	0	L
Ene 05 - Energy Efficient Cold Storage	Refrigeration Energy Consumption	0		0	0	
	Indirect Greenhouse Gas Emissions	0		0	0	
Ene 06 - Energy Efficient Transportation Systems	Energy Consumption	1		1	0	H
	Energy Efficient Features	2		2	0	H
Ene 07 - Energy Efficient Laboratory Systems	Objective Risk Assessment	-		0	0	
	Design Specification	0		0	0	
	Best Practice Energy Efficient Measures	0		0	0	
Ene 08 - Energy Efficient Equipment	Energy Efficient Equipment	0		0	0	
Ene 09 - Drying Space	Drying Space	0		0	0	
Energy totals:		15.00%		12.14%	1.43%	

Key

- Achieved
- Targeted
- Potential
- Targeted - Low Risk, thought to be achievable
- Targeted - Medium Risk, some uncertainty and/or technically complex
- Targeted - High Risk, may be highly uncertain, expensive and/or historically difficult to achieve
- Targeted - Critical Risk, requires immediate action
- Credits with minimum requirements

Note: The risk measure is a quantitive score assigned by the assessor

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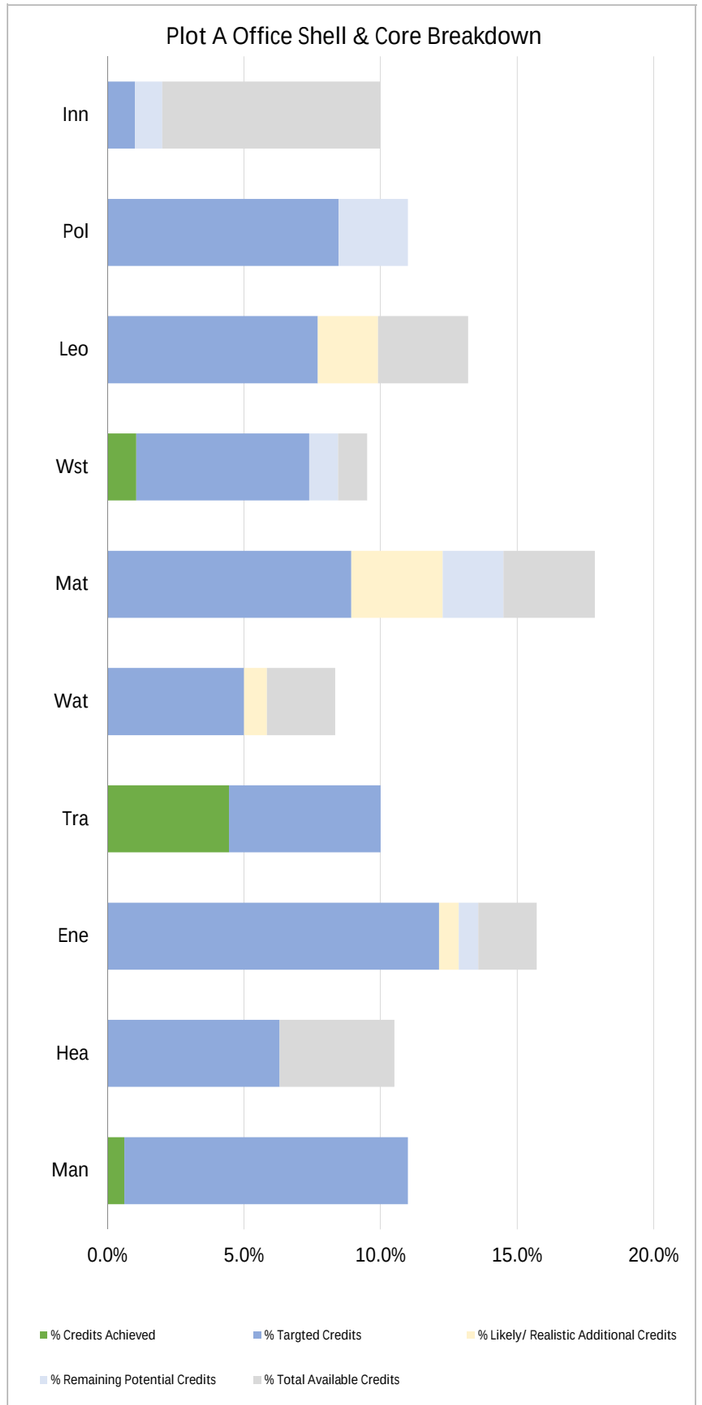

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		AVAILABLE	MIN REQ'S	TARGETED	POTENTIAL	RISK
Transport		Credit Value		1.11%		
Tra 01 - Public Transport Accessibility	Accessibility Index	3		3	0	L
	Dedicated Bus Service	0		0	0	
Tra 02 - Proximity to Amenities	Proximity to Amenities	1		1	0	L
Tra 03 - Cycle Facilities	Cycled Storage	1		1	0	L
	Cyclist Facilities	1		1	0	L
	Cycle Storage and Facilities	0		0	0	
Tra 04 - Maximum Car Parking Capacity	Car Parking Capacity	2		2	0	L
Tra 05 - Travel Plan	Travel Plan	1		1	0	H
Transport total:		10.00%		10.00%	0.00%	
Water		Credit Value		0.83%		
Wat 01 - Water Consumption	Water Consumption	5	1	2	1	L
	Exemplar Performance - Water Consumption	1		0	0	
Wat 02 - Water Monitoring	Water Monitoring	1		1	0	L
Wat 03 - Water Leak Detection	Leak Detection System	1		1	0	L
	Flow Control Devices	1		1	0	L
Wat 04 - Water Efficient Equipment	Water Efficient Equipment	1		1	0	L
Water total:		7.50%		5.00%	0.83%	
Materials		Credit Value		1.12%		
Mat 01 - Life Cycle Impacts	Life Cycle Impacts	5		3	3	M
	Exemplar Performance - Life Cycle Impacts	1		0	0	
Mat 02 - Hard Landscaping and Boundary Protection	Hard Landscaping and Boundary Protection	1		0	0	
Mat 03 - Responsible Sourcing of Materials	Legally Sourced Timber	-	#1		0	H
	Sustainable Procurement Plan	1		1	0	L
	Responsible Sourcing of Materials	3		1	2	M
	Exemplar Performance - Responsible Sourcing of Materials	1		0	0	
Mat 04 - Insulation	Embodied Impact	1		1	0	M
Mat 05 - Designing for Durability and Resilience	Protecting Vulnerable Parts of the Building from Damage	1		1	0	L
Mat 06 - Material Efficiency	Material Efficiency	1		1	0	L
Materials total:		14.50%		8.92%	5.58%	
Waste		Credit Value		1.06%		
Wst 01 - Consturction Waste Management	Construction Resource Efficiency	3	0	2	1	M
	Diversion of Resources from Landfill	1		1	0	M
	Exemplar Performance - Waste Generation and Diversion from Landfill	1		0	0	
Wst 02 - Recycled Aggregates	Recycled Aggregates	1		0	0	
	Exemplar Performance - Recycled Aggregates	1		0	0	
Wst 03 - Operational Waste	Operational Waste	1	1	1	0	L
Wst 04 - Speculative Floor and Ceiling Finishes	Speculative Floor and Ceiling Finishes	1		1	0	L
Wst 05 - Adaptation to Climate Change	Adaptation to Climate Change	1		1	0	L
	Exemplar Performance - Holistic Approach to Climate Change Adaptation	1		0	1	
Wst 06 - Functional Adaptability	Functional Adaptability	1		1	0	L
Waste total:		9.50%		7.39%	1.06%	
Land Use & Ecology		Credit Value		1.10%		
LE 01 - Site Selection	Previously Development Land	1		1	0	L
	Contaminated Land	1		0	0	
LE 02 - Ecol. Value of Site and Protection of Ecol. features	Ecol. Value of Site	1		1	0	M
	Protection of Ecol. Features	1		1	0	M
LE 03 - Minimising Impact on Existing Ecology	Change in Ecol. Value 1	1	1	1	0	L
	Change in Ecol. Value 2	1		0	1	
LE 04 - Enhancing Site Ecology	Ecologist's Report and Recommendations	1		1	0	M
	Increase in Ecological Value	1		0	1	
LE 05 - Long Term Impact on Biodiversity	Long Term Impact on Biodiversity	2		2	0	L
Land use & Ecology total:		11.00%		7.70%	2.20%	
Pollution		Credit Value		0.85%		
	No Refrigerant Use	0		0	0	
Pol 01 - Impact of Refrigerants	Impact of Refrigerant	2		2	0	M
	Refrigerant Leak Detection	1		1	0	M
Pol 02 - NOx Emissions	NOx Emissions	3		3	0	M
Pol 03 - Surface Water Run-Off	Flood Resilience	2		1	1	M
	Surface Water Run-Off - Run-Off	1		1	0	M
	Surface Water Run-Off - Flooding of Property	1		0	1	
	Minimising Watercourse Pollution	1		0	1	
Pol 04 - Reduction of Night-time Light Pollution	Reduction of Night-time Light Pollution	1		1	0	L
Pol 04 - Reduction of Noise Pollution	Reduction of Noise Pollution	1		1	0	L
Pollution total:		11.00%		8.46%	2.54%	
Innovation		Credit Value		1.00%		
Approved Innovation		1		0	0	
Innovation/Exemplar Performance total:		10.00%		1.00%	1.00%	

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14.0 APPENDIX D: PLOT C OFFICE, RETAIL DASHBOARDS

BREEAM 2014 Dashboard

Project: Plot C Offices Shell and Core

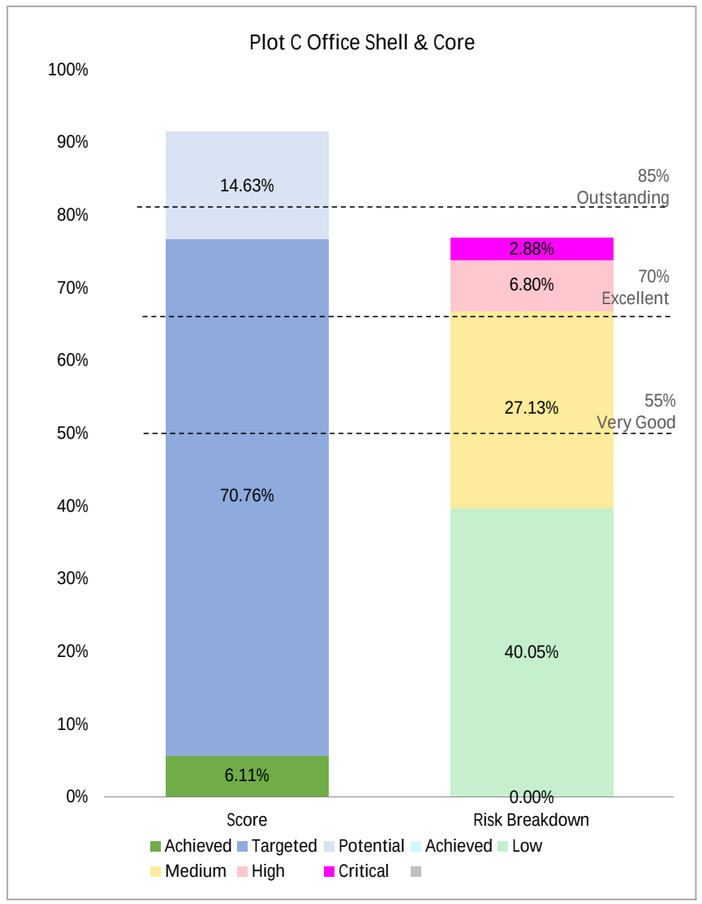
Assessor: Anna Foden/ Rebecca Gibson

BREEAM Scheme: New Construction 2014 v4.1 UK

ACHIEVED	6.11%	Unclassified
TARGETED	76.87%	Excellent
POTENTIAL	91.50%	Excellent

Minimum Requirements

	TARGETED	ACHIEVED
Pass	Yes	No
Good	Yes	No
Very Good	Yes	No
Excellent	Yes	No
Outstanding	No	No



		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Management			Credit Value	0.61%		
Man 01 - Project Brief and Design	Stakeholder Consultation (project delivery)	1		1	0	L
	Stakeholder Consultation (third party)	1		1	0	C
	Sustainability Champion (design)	1		1	0	L
	Sustainability Champion (monitoring progress)	1		1	0	H
Man 02 - Life Cycle Cost and Service Lift Planning	Elemental LCC	2		2	0	C
	Component Level LCC Plan	1		1	0	H
	Capital Cost Reporting	1		1	0	H
Man 03 - Responsible Construction Practices	Legally Sourced Timber	-			0	H
	Environmental Management	1		1	0	M
	Sustainability Champion	1		1	0	M
	Considerate Construction	2	1	2	0	M
	Exemplar Performance - Considerate Construction	1		1	0	H
	Monitoring of Construction-site Impacts - Utility Consumption	1		1	0	M
	Monitoring of Construction-site Impacts - Transport	1		1	0	M
Man 04 - Commissioning and Handover	Commissioning and Testing Schedule and Responsibilities	1		1	0	M
	Commissioning Building Services	1		1	0	M
	Testing and Inspecting Building Fabric	1		1	0	M
	Handover	1	#10	1	0	L
Man 05 - Aftercare	Aftercare Support	0		0	0	
	Seasonal Commissioning	0	1	0	0	
	Post Occupancy Evaluation	0		0	0	
	Exemplar Performance - Extended Aftercare	0		0	0	
Management total:		11.00%		11.00%	0.00%	
Health & Wellbeing			Credit Value	1.05%		
Hea 01 - Visual Comfort	Glare Control	0		0	0	
	Daylighting	1		0	0	
	Exemplar Performance - Daylighting	1		0	0	
	View Out	1		0	0	
	Internal and External Lighting Levels, Zoning and Control	1		1	0	L
Hea 02 - Indoor Air Quality	IAQ Plan	0		0	0	
	Ventilation	1		0	0	
	VOC Emission Levels (design)	0		0	0	
	VOC Emission Levels (post construction)	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.06mg/m³ air	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.01mg/m³ air	0		0	0	
	Potential for Natural Ventilation	1		0	0	
Hea 03 - Safe Containment in Laboratories	Laboratory Containment Devices and Containment Areas	0		0	0	
	Buildings with Containment Level 2 and 3 Laboratory Facilities	0		0	0	
Hea 04 - Thermal Comfort	Thermal Modelling	1		1	0	M
	Adaptability	1		1	0	M
	Thermal Zoning and Controls	0		0	0	
Hea 05 - Acoustic Performance	Sound Insulation	0		0	0	
	Internal Indoor and Ambient Noise Levels	1		1	0	C
	Reverberation	0		0	0	
Hea 06 - Safety and Security	Safe Access	1		0	0	
	Security of Site and Building	1		1	0	L
Health & Wellbeing total		10.50%		5.25%	0.00%	
Energy			Credit Value	0.71%		
Ene 01 - Reduction of Energy Use and Carbon Emissions	Energy Performance	12	5	9	1	L
	Exemplar Performance - Zero Regulaterd Carbon	4		0	0	
	Exemplar Performance - Carbon Negative	1		0	0	
Ene 02 - Energy Monitoring	Sub-metering of Major Energy Consuming Systems	1	1	1	0	L
	Sub-metering of High Energy and Tenancy Areas	1		1	0	M
Ene 03 - External Lighting	External Lighting	1		1	0	L
Ene 04 - Low Carbon Design	Passive Design Analysis	1		1	0	H
	Free Cooling	1		0	1	
	Low Zero Carbon Feasibility Study	1		1	0	L
Ene 05 - Energy Efficient Cold Storage	Refrigeration Energy Consumption	0		0	0	
	Indirect Greenhouse Gas Emissions	0		0	0	
Ene 06 - Energy Efficient Transportation Systems	Energy Consumption	1		1	0	H
	Energy Efficient Features	2		2	0	H
Ene 07 - Energy Efficient Laboratory Systems	Objective Risk Assessment	0		0	0	
	Design Specification	0		0	0	
	Best Practice Energy Efficient Measures	0		0	0	
Ene 08 - Energy Efficient Equipment	Energy Efficient Equipment	0		0	0	
Ene 09 - Drying Space	Drying Space	0		0	0	
Energy totals:		15.00%		12.14%	1.43%	

Key

Achieved	
Targeted	
Potential	
Targeted - Low Risk, thought to be achievable	
Targeted - Medium Risk, some uncertainty and/or technically complex	
Targeted - High Risk, may be highly uncertain, expensive and/or historically difficult to achieve	
Targeted - Critical Risk, requires immediate action	
Credits with minimum requirements	

Note: The risk measure is a quantitive score assigned by the assessor

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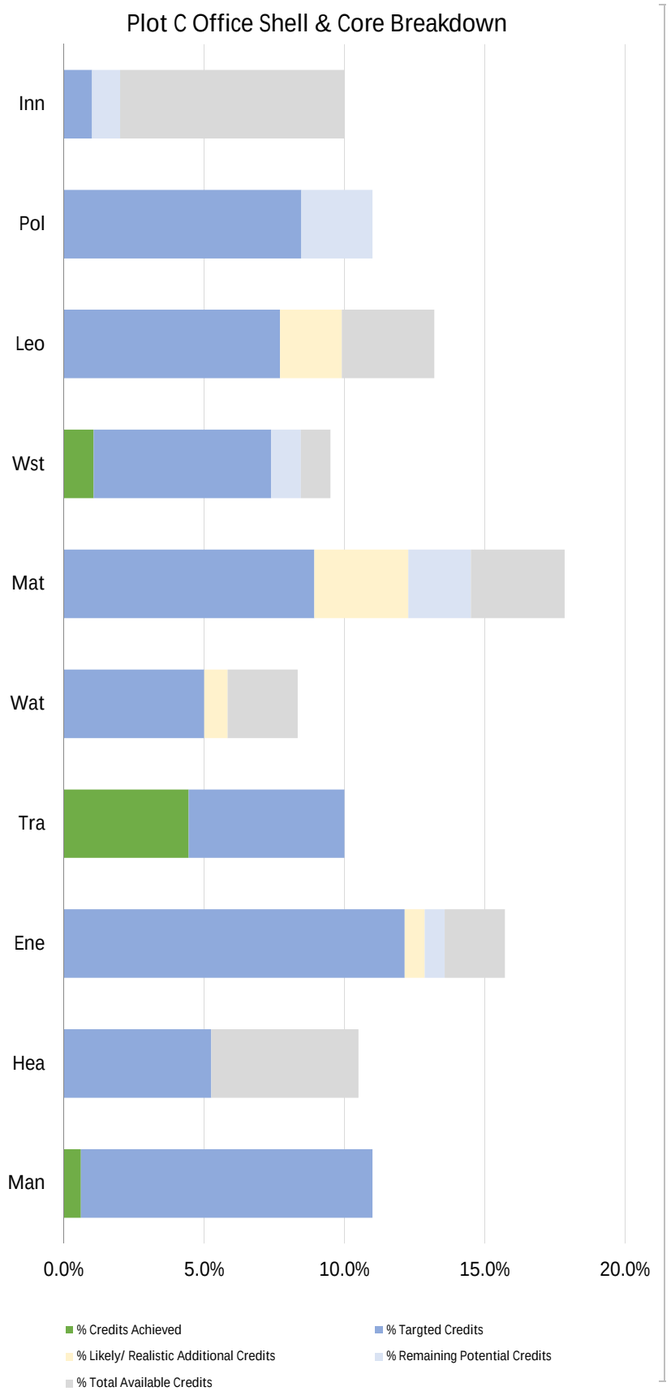

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		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Transport			Credit Value	1.11%		
Tra 01 - Public Transport Accessibility	Accessibility Index	3		3	0	L
	Dedicated Bus Service	0		0	0	
Tra 02 - Proximity to Amenities	Proximity to Amenities	1		1	0	L
Tra 03 - Cycle Facilities	Cycle Storage	1		1	0	L
	Cyclist Facilities	1		1	0	L
	Cycle Storage and Facilities	0		0	0	
Tra 04 - Maximum Car Parking Capacity	Car Parking Capacity	2		2	0	L
Tra 05 - Travel Plan	Travel Plan	1		1	0	H
Transport total:		10.00%		10.00%	0.00%	
Water			Credit Value	0.83%		
Wat 01 - Water Consumption	Water Consumption	5	1	2	1	L
	Exemplar Performance - Water Consumption	1		0	0	
Wat 02 - Water Monitoring	Water Monitoring	1		1	0	L
Wat 03 - Water Leak Detection	Leak Detection System	1		1	0	L
	Flow Control Devices	1		1	0	L
Wat 04 - Water Efficient Equipment	Water Efficient Equipment	1		1	0	L
Water total:		7.50%		5.00%	0.83%	
Materials	Credit Value		Credit Value	1.12%		
Mat 01 - Life Cycle Impacts	Life Cycle Impacts	5		3	3	M
	Exemplar Performance - Life Cycle Impacts	1		0	0	
Mat 02 - Hard Landscaping and Boundary Protection	Hard Landscaping and Boundary Protection	1		0	0	
Mat 03 - Responsible Sourcing of Materials	Legally Sourced Timber	-	#1		0	H
	Sustainable Procurement Plan	1		1	0	L
	Responsible Sourcing of Materials	3		1	2	M
	Exemplar Performance - Responsible Sourcing of Materials	1		0	0	
Mat 04 - Insulation	Embodied Impact	1		1	0	M
Mat 05 - Designing for Durability and Resilience	Protecting Vulnerable Parts of the Building from Damage	1		1	0	L
Mat 06 - Material Efficiency	Material Efficiency	1		1	0	L
Materials total:		14.50%		8.92%	5.58%	
Waste			Credit Value	1.06%		
Wst 01 - Consturction Waste Management	Construction Resource Efficency	3	0	2	1	M
	Diversion of Resources from Landfill	1		1	0	M
	Exemplar Performance - Waste Generation and Diversion from Landfill	1		0	0	
Wst 02 - Recycled Aggregates	Recycled Aggregates	1		0	0	
	Exemplar Performance - Recycled Aggregates	1		0	0	
Wst 03 - Operational Waste	Operational Waste	1	1	1	0	L
Wst 04 - Speculative Floor and Ceiling Finishes	Speculative Floor and Ceiling Finishes	1		1	0	L
Wst 05 - Adaptation to Climate Change	Adaptation to Climate Change	1		1	0	L
	Exemplar Performance - Holistic Approach to Climate Change Adaptation	1		0	1	
Wst 06 - Functional Adaptability	Functional Adaptability	1		1	0	L
Waste total:		9.50%		7.39%	1.06%	
Land Use & Ecology			Credit Value	1.10%		
LE 01 - Site Selection	Previously Development Land	1		1	0	L
	Contaminated Land	1		0	0	
LE 02 - Ecol. Value of Site and Protection of Ecol. features	Ecol. Value of Site	1		1	0	M
	Protection of Ecol. Features	1		1	0	M
LE 03 - Minimising Impact on Existing Ecology	Change in Ecol. Value 1	1	1	1	0	L
	Change in Ecol. Value 2	1		0	1	
LE 04 - Enhancing Site Ecology	Ecologist's Report and Recommendations	1		1	0	M
	Increase in Ecological Value	1		0	1	
LE 05 - Long Term Impact on Biodiversity	Long Term Impact on Biodiversity	2		2	0	L
Land use & Ecology total:		11.00%		7.70%	2.20%	
Pollution			Credit Value	0.85%		
	No Refrigerant Use	0		0	0	
Pol 01 - Impact of Refrigerants	Impact of Refrigerant	2		2	0	M
	Refrigerant Leak Detection	1		1	0	M
Pol 02 - NOx Emissions	NOx Emissions	3		3	0	M
Pol 03 - Surface Water Run-Off	Flood Resilience	2		1	1	M
	Surface Water Run-Off - Run-Off	1		1	0	M
	Surface Water Run-Off - Flooding of Property	1		0	1	
	Minimising Watercourse Pollution	1		0	1	
Pol 04 - Reduction of Night-time Light Pollution	Reduction of Night-time Light Pollution	1		1	0	L
Pol 04 - Reduction of Noise Pollution	Reduction of Noise Pollution	1		1	0	L
Pollution total:		11.00%		8.46%	2.54%	
Innovation			Credit Value	1.00%		
Approved Innovation		1		0	0	
Innovation/Exemplar Performance total:		10.00%		1.00%	1.00%	

BREEAM 2014 Dashboard

Project: Plot C Pavilion Shell and Core

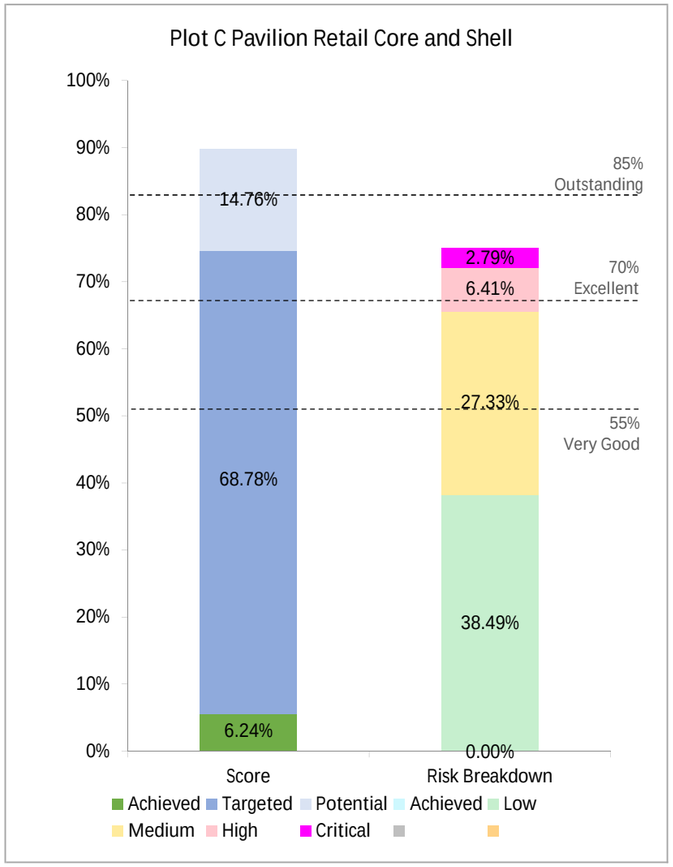
Assessor: Anna Foden/ Rebecca Gibson

BREEAM Scheme: New Construction 2014 v4.1 UK

ACHIEVED	6.24%	Unclassified
TARGETED	75.02%	Excellent
POTENTIAL	89.79%	Excellent

Minimum Requirements

	TARGETED	ACHIEVED
Pass	Yes	No
Good	Yes	No
Very Good	Yes	No
Excellent	Yes	No
Outstanding	No	No



		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Management			Credit Value	0.61%		
Man 01 - Project Brief and Design	Stakeholder Consultation (project delivery)	1		1	0	L
	Stakeholder Consultation (third party)	1		1	0	C
	Sustainability Champion (design)	1		1	0	L
	Sustainability Champion (monitoring progress)	1		1	0	H
Man 02 - Life Cycle Cost and Service Lift Planning	Elemental LCC	2		2	0	C
	Component Level LCC Plan	1		1	0	H
	Capital Cost Reporting	1		1	0	H
Man 03 - Responsible Construction Practices	Legally Sourced Timber	-			0	H
	Environmental Management	1		1	0	M
	Sustainability Champion	1		1	0	M
	Considerate Construction	2	1	2	0	M
	Exemplar Performance - Considerate Construction	1		1	0	H
	Monitoring of Construction-site Impacts - Utility Consumption	1		1	0	M
	Monitoring of Construction-site Impacts - Transport	1		1	0	M
Man 04 - Commissioning and Handover	Commissioning and Testing Schedule and Responsibilities	1		1	0	M
	Commissioning Building Services	1		1	0	M
	Testing and Inspecting Building Fabric	1		1	0	M
	Handover	1	#10	1	0	L
Man 05 - Aftercare	Aftercare Support	0		0	0	
	Seasonal Commissioning	0	1	0	0	
	Post Occupancy Evaluation	0		0	0	
	Exemplar Performance - Extended Aftercare	0		0	0	
Management total:		11.00%		11.00%	0.00%	
Health & Wellbeing			Credit Value	0.95%		
Hea 01 - Visual Comfort	Glare Control	0		0	0	
	Daylighting	1		0	0	
	Exemplar Performance - Daylighting	1		0	0	
	View Out	1		0	0	
	Internal and External Lighting Levels, Zoning and Control	1		1	0	L
Hea 02 - Indoor Air Quality	IAQ Plan	0		0	0	
	Ventilation	1		0	0	C
	VOC Emission Levels (design)	0		0	0	
	VOC Emission Levels (post construction)	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.06mg/m³ air	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.01mg/m³ air	0		0	0	
	Potential for Natural Ventilation	1		0	0	
Hea 03 - Safe Containment in Laboratories	Laboratory Containment Devices and Containment Areas	0		0	0	
	Buildings with Containment Level 2 and 3 Laboratory Facilities	0		0	0	
Hea 04 - Thermal Comfort	Thermal Modelling	1		1	0	M
	Adaptability	1		1	0	M
	Thermal Zoning and Controls	0		0	0	
Hea 05 - Acoustic Performance	Sound Insulation	0		0	0	
	Internal Indoor and Ambient Noise Levels	1		1	0	C
	Reverberation	0		0	0	
Hea 06 - Safety and Security	Safe Access	1		0	0	
	Security of Site and Building	1		1	0	L
Health & Wellbeing total		10.50%		4.77%	0.00%	
Energy			Credit Value	0.71%		
Ene 01 - Reduction of Energy Use and Carbon Emissions	Energy Performance	12	5	8	1	L
	Exemplar Performance - Zero Regulaterd Carbon	4		0	0	
	Exemplar Performance - Carbon Negative	1		0	0	
Ene 02 - Energy Monitoring	Sub-metering of Major Energy Consuming Systems	1	1	1	0	L
	Sub-metering of High Energy and Tenancy Areas	1		1	0	M
Ene 03 - External Lighting	External Lighting	1		1	0	L
Ene 04 - Low Carbon Design	Passive Design Analysis	1		1	0	H
	Free Cooling	1		0	1	
	Low Zero Carbon Feasibility Study	1		1	0	L
Ene 05 - Energy Efficient Cold Storage	Refrigeration Energy Consumption	0		0	0	
	Indirect Greenhouse Gas Emissions	0		0	0	
Ene 06 - Energy Efficient Transportation Systems	Energy Consumption	1		1	0	H
	Energy Efficient Features	2		2	0	H
Ene 07 - Energy Efficient Laboratory Systems	Objective Risk Assessment	-		0	0	
	Design Specification	0		0	0	
	Best Practice Energy Efficient Measures	0		0	0	
Ene 08 - Energy Efficient Equipment	Energy Efficient Equipment	0		0	0	
Ene 09 - Drying Space	Drying Space	0		0	0	
Energy totals:		15.00%		11.43%	1.43%	

Key	
Achieved	
Targeted	
Potential	
Targeted - Low Risk, thought to be achievable	
Targeted - Medium Risk, some uncertainty and/or technically complex	
Targeted - High Risk, may be highly uncertain, expensive and/or historically difficult to achieve	
Targeted - Critical Risk, requires immediate action	
Credits with minimum requirements	

Note: The risk measure is a quantitive score assigned by the assessor

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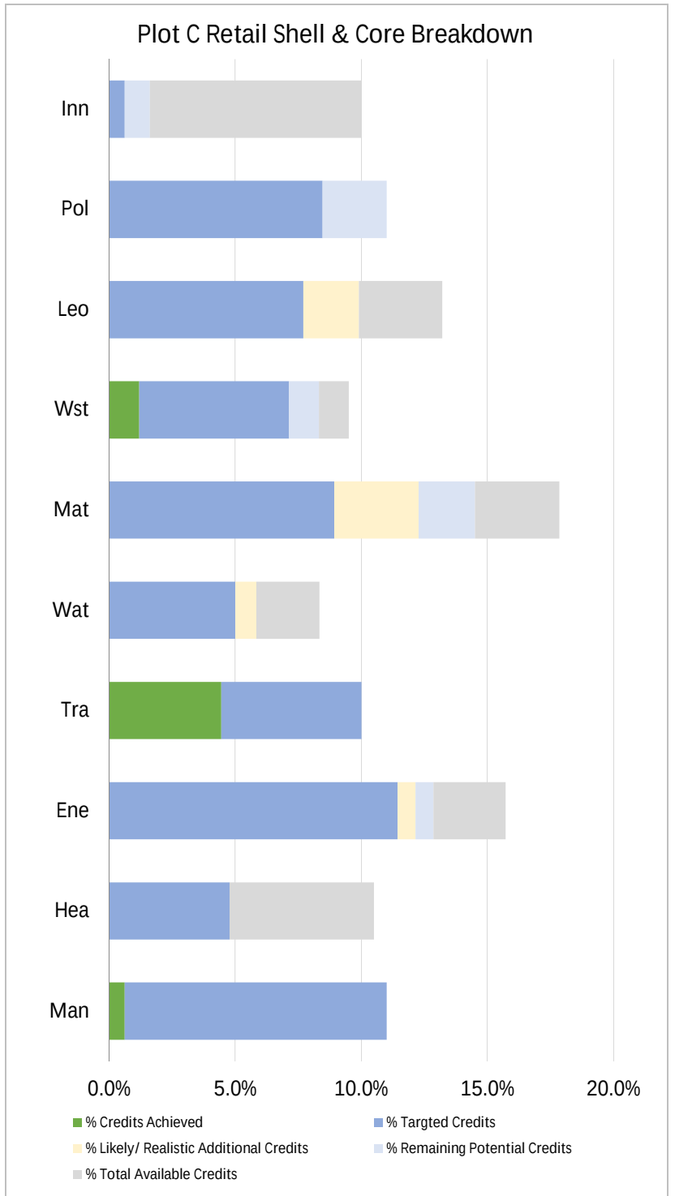

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		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Transport			Credit Value	1.11%		
Tra 01 - Public Transport Accessibility	Accessibility Index	3		3	0	L
	Dedicated Bus Service	0		0	0	
Tra 02 - Proximity to Amenities	Proximity to Amenities	1		1	0	L
Tra 03 - Cycle Facilities	Cycle Storage	1		1	0	L
	Cyclist Facilities	1		1	0	L
	Cycle Storage and Facilities	0		0	0	
Tra 04 - Maximum Car Parking Capacity	Car Parking Capacity	2		2	0	L
Tra 05 - Travel Plan	Travel Plan	1		1	0	H
Transport total:		10.00%		10.00%	0.00%	
Water			Credit Value	0.83%		
Wat 01 - Water Consumption	Water Consumption	5	1	2	1	L
	Exemplar Performance - Water Consumption	1		0	0	
Wat 02 - Water Monitoring	Water Monitoring	1		1	0	L
Wat 03 - Water Leak Detection	Leak Detection System	1		1	0	L
	Flow Control Devices	1		1	0	L
Wat 04 - Water Efficient Equipment	Water Efficient Equipment	1		1	0	L
Water total:		7.50%		5.00%	0.83%	
Materials			Credit Value	1.12%		
Mat 01 - Life Cycle Impacts	Life Cycle Impacts	5		3	3	M
	Exemplar Performance - Life Cycle Impacts	1		0	0	
Mat 02 - Hard Landscaping and Boundary Protection	Hard Landscaping and Boundary Protection	1		0	0	
Mat 03 - Responsible Sourcing of Materials	Legally Sourced Timber	-	#1		0	H
	Sustainable Procurement Plan	1		1	0	L
	Responsible Sourcing of Materials	3		1	2	M
	Exemplar Performance - Responsible Sourcing of Materials	1		0	0	
Mat 04 - Insulation	Embodied Impact	1		1	0	M
Mat 05 - Designing for Durability and Resilience	Protecting Vulnerable Parts of the Building from Dama	1		1	0	L
Mat 06 - Material Efficiency	Material Efficiency	1		1	0	L
Materials total:		14.50%		8.92%	5.58%	
Waste			Credit Value	1.19%		
Wst 01 - Consturction Waste Management	Construction Resource Efficiency	3	0	2	1	M
	Diversion of Resources from Landfill	1		1	0	M
	Exemplar Performance - Waste Generation and Diversion from Landfill	1		0	0	

		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Wst 02 - Recycled Aggregates	Recycled Aggregates	1		0	0	
	Exemplar Performance - Recycled Aggregates	1		0	0	
Wst 03 - Operational Waste	Operational Waste	1	1	1	0	L
Wst 04 - Speculative Floor and Ceiling Finishes	Speculative Floor and Ceiling Finishes	1		0	0	L
Wst 05 - Adaptation to Climate Change	Adaptation to Climate Change	1		1	0	L
	Exemplar Performance - Holistic Approach to Climate Change Adaptation	1		0	1	
Wst 06 - Functional Adaptability	Functional Adaptability	1		1	0	L
Waste total:		9.50%		7.13%	1.19%	
Land Use & Ecology			Credit Value	1.10%		
LE 01 - Site Selection	Previously Development Land	1		1	0	L
	Contaminated Land	1		0	0	
LE 02 - Ecol. Value of Site and Protection of Ecol. features	Ecol. Value of Site	1		1	0	M
	Protection of Ecol. Features	1		1	0	M
LE 03 - Minimising Impact on Existing Ecology	Change in Ecol. Value 1	1	1	1	0	L
	Change in Ecol. Value 2	1		0	1	
LE 04 - Enhancing Site Ecology	Ecologist's Report and Recommendations	1		1	0	M
	Increase in Ecological Value	1		0	1	
LE 05 - Long Term Impact on Biodiversity	Long Term Impact on Biodiversity	2		2	0	L
Land use & Ecology total:		11.00%		7.70%	2.20%	
Pollution			Credit Value	0.85%		
Pol 01 - Impact of Refrigerants	No Refrigerant Use	0		0	0	
	Impact of Refrigerant	2		2	0	M
	Refrigerant Leak Detection	1		1	0	M
Pol 02 - NOx Emissions	NOx Emissions	3		3	0	M
Pol 03 - Surface Water Run-Off	Flood Resilience	2		1	1	M
	Surface Water Run-Off - Run-Off	1		1	0	M
	Surface Water Run-Off - Flooding of Property	1		0	1	
	Minimising Watercourse Pollution	1		0	1	
Pol 04 - Reduction of Night-time Light Pollution	Reduction of Night-time Light Pollution	1		1	0	L
Pol 04 - Reduction of Noise Pollution	Reduction of Noise Pollution	1		1	0	L
Pollution total:		11.00%		8.46%	2.54%	
Innovation			Credit Value	1.00%		
Approved Innovation		1		0	0	
Innovation/Exemplar Performance total:		10.00%		0.61%	1.00%	

15.0 APPENDIX D: TED BAKER OFFICES, HOTEL DASHBOARDS

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BREEAM 2014 Dashboard

Project:	Ted Baker Office
Assessor:	Anna Foden/ Rebecca Gibson

BREEAM Scheme: New Construction 2014 v4.1 UK

ACHIEVED	6.11%	Unclassified
TARGETED	76.02%	Excellent
POTENTIAL	90.65%	Excellent

Minimum Requirements

	TARGETED	ACHIEVED
Pass	Yes	No
Good	Yes	No
Very Good	Yes	No
Excellent	Yes	No
Outstanding	No	No

		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Management			Credit Value	0.61%		
Man 01 - Project Brief and Design	Stakeholder Consultation (project delivery)	1		1	0	L
	Stakeholder Consultation (third party)	1		1	0	C
	Sustainability Champion (design)	1		1	0	L
	Sustainability Champion (monitoring progress)	1		1	1	H
Man 02 - Life Cycle Cost and Service Lift Planning	Elemental LCC	2		2	0	C
	Component Level LCC Plan	1		1	0	H
	Capital Cost Reporting	1		1	0	H
Man 03 - Responsible Construction Practices	Legally Sourced Timber	-			0	H
	Environmental Management	1		1	0	M
	Sustainability Champion	1		1	0	M
	Considerate Construction	2	1	2	0	M
	Exemplar Performance - Considerate Construction	1		1	0	H
	Monitoring of Construction-site Impacts - Utility Consumption	1		1	0	M
	Monitoring of Construction-site Impacts - Transport	1		1	0	M
Man 04 - Commissioning and Handover	Commissioning and Testing Schedule and Responsibilities	1		1	0	M
	Commissioning Building Services	1		1	0	M
	Testing and Inspecting Building Fabric	1		1	0	M
	Handover	1	#10	1	0	L
Man 05 - Aftercare	Aftercare Support	0		0	0	
	Seasonal Commissioning	0	1	0	0	
	Post Occupancy Evaluation	0		0	0	
	Exemplar Performance - Extended Aftercare	0		0	0	
Management total:		11.00%		11.00%	0.00%	
Health & Wellbeing			Credit Value	1.05%		
Hea 01 - Visual Comfort	Glare Control	0		0	0	
	Daylighting	1		0	0	
	Exemplar Performance - Daylighting	1		0	0	
	View Out	1		0	0	
	Internal and External Lighting Levels, Zoning and Control	1		1	0	L
Hea 02 - Indoor Air Quality	IAQ Plan	0		0	0	
	Ventilation	1		0	0	
	VOC Emission Levels (design)	0		0	0	
	VOC Emission Levels (post construction)	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.06mg/m³ air	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.01mg/m³ air	0		0	0	
	Potential for Natural Ventilation	1		0	0	
Hea 03 - Safe Containment in Laboratories	Laboratory Containment Devices and Containment Areas	0		0	0	
	Buildings with Containment Level 2 and 3 Laboratory Facilities	0		0	0	
Hea 04 - Thermal Comfort	Thermal Modelling	1		1	0	M
	Adaptability	1		1	0	M
	Thermal Zoning and Controls	0		0	0	

		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Hea 05 - Acoustic Performance	Sound Insulation	0		0	0	
	Internal Indoor and Ambient Noise Levels	1		1	0	C
	Reverberation	0		0	0	
Hea 06 - Safety and Security	Safe Access	1		0	0	
	Security of Site and Building	1		1	0	L
Health & Wellbeing total		10.50%		5.25%	0.00%	
Energy			Credit Value	0.71%		
Ene 01 - Reduction of Energy Use and Carbon Emissions	Energy Performance	12	5	9	1	L
	Exemplar Performance - Zero Regulaterd Carbon	4		0	0	
	Exemplar Performance - Carbon Negative	1		0	0	
Ene 02 - Energy Monitoring	Sub-metering of Major Energy Consuming Systems	1	1	1	0	L
	Sub-metering of High Energy and Tenancy Areas	1		1	0	M
Ene 03 - External Lighting	External Lighting	1		1	0	L
Ene 04 - Low Carbon Design	Passive Design Analysis	1		1	0	H
	Free Cooling	1		0	1	
	Low Zero Carbon Feasibility Study	1		1	0	L
Ene 05 - Energy Efficient Cold Storage	Refrigeration Energy Consumption	0		0	0	
	Indirect Greenhouse Gas Emissions	0		0	0	
Ene 06 - Energy Efficient Transportation Systems	Energy Consumption	1		1	0	H
	Energy Efficient Features	2		2	0	H
Ene 07 - Energy Efficient Laboratory Systems	Objective Risk Assessment	-		0	0	
	Design Specification	0		0	0	
	Best Practice Energy Efficient Measures	0		0	0	
Ene 08 - Energy Efficient Equipment	Energy Efficient Equipment	0		0	0	
Ene 09 - Drying Space	Drying Space	0		0	0	
Energy totals:		15.00%		12.14%	1.43%	

Key

- Achieved
- Targeted
- Potential
- Targeted - Low Risk, thought to be achievable
- Targeted - Medium Risk, some uncertainty and/or technically complex
- Targeted - High Risk, may be highly uncertain, expensive and/or historically difficult to achieve
- Targeted - Critical Risk, requires immediate action
- Credits with minimum requirements

Note: The risk measure is a quantitive score assigned by the assessor

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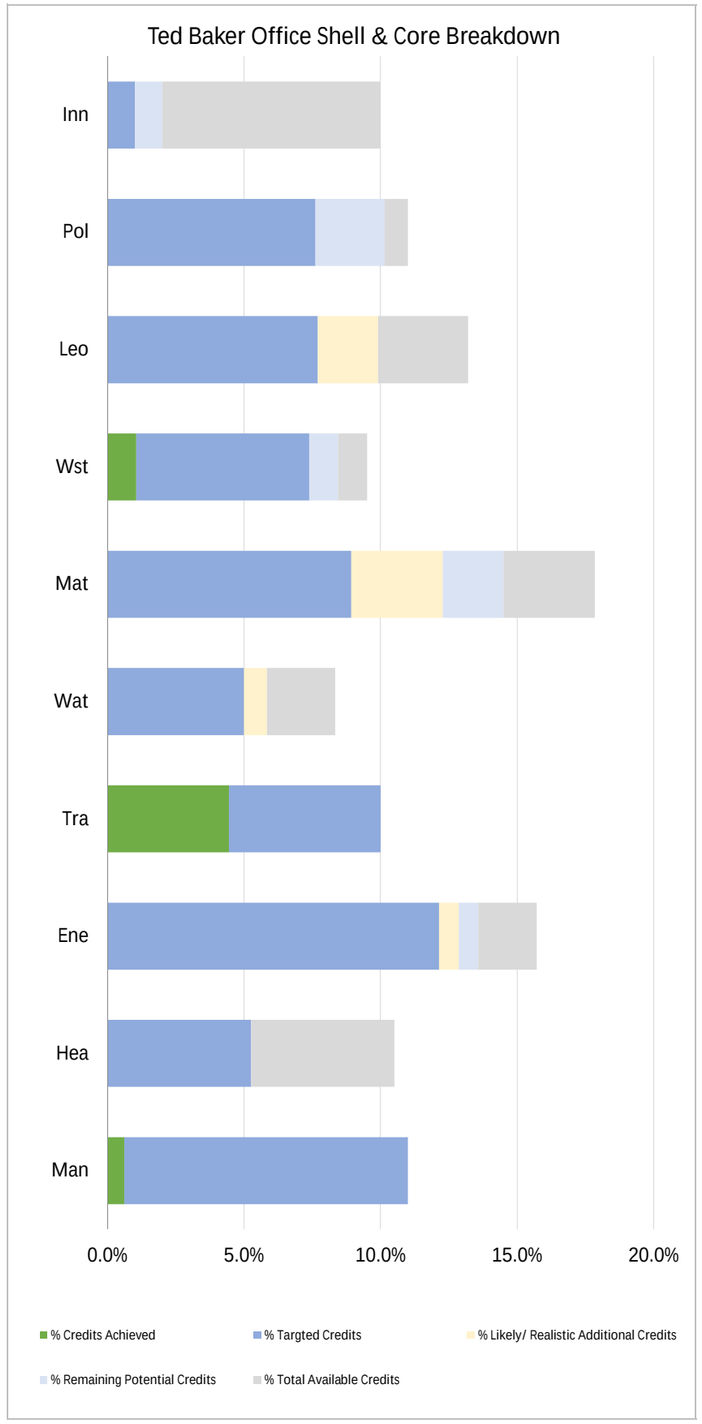

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		AVAILABLE	MIN REQ'S	TARGETED	POTENTIAL	RISK
Transport		Credit Value		1.11%		
Tra 01 - Public Transport Accessibility	Accessibility Index	3		3	0	L
	Dedicated Bus Service	0		0	0	
Tra 02 - Proximity to Amenities	Proximity to Amenities	1		1	0	L
Tra 03 - Cycle Facilities	Cycled Storage	1		1	0	L
	Cyclist Facilities	1		1	0	L
	Cycle Storage and Facilities	0		0	0	
Tra 04 - Maximum Car Parking Capacity	Car Parking Capacity	2		2	0	L
Tra 05 - Travel Plan	Travel Plan	1		1	0	H
Transport total:		10.00%		10.00%	0.00%	
Water		Credit Value		0.83%		
Wat 01 - Water Consumption	Water Consumption	5	1	2	1	L
	Exemplar Performance - Water Consumption	1		0	0	
Wat 02 - Water Monitoring	Water Monitoring	1		1	0	L
Wat 03 - Water Leak Detection	Leak Detection System	1		1	0	L
	Flow Control Devices	1		1	0	L
Wat 04 - Water Efficient Equipment	Water Efficient Equipment	1		1	0	L
Water total:		7.50%		5.00%	0.83%	
Materials		Credit Value		1.12%		
Mat 01 - Life Cycle Impacts	Life Cycle Impacts	5		3	3	M
	Exemplar Performance - Life Cycle Impacts	1		0	0	
Mat 02 - Hard Landscaping and Boundary Protection	Hard Landscaping and Boundary Protection	1		0	0	
Mat 03 - Responsible Sourcing of Materials	Legally Sourced Timber	-	#1		0	H
	Sustainable Procurement Plan	1		1	0	L
	Responsible Sourcing of Materials	3		1	2	M
	Exemplar Performance - Responsible Sourcing of Materials	1		0	0	
Mat 04 - Insulation	Embodied Impact	1		1	0	M
Mat 05 - Designing for Durability and Resilience	Protecting Vulnerable Parts of the Building from Damage	1		1	0	L
Mat 06 - Material Efficiency	Material Efficiency	1		1	0	L
Materials total:		14.50%		8.92%	5.58%	
Waste		Credit Value		1.06%		
Wst 01 - Consturction Waste Management	Construction Resource Efficiency	3	0	2	1	M
	Diversion of Resources from Landfill	1		1	0	M
	Exemplar Performance - Waste Generation and Diversion from Landfill	1		0	0	
Wst 02 - Recycled Aggregates	Recycled Aggregates	1		0	0	
	Exemplar Performance - Recycled Aggregates	1		0	0	
Wst 03 - Operational Waste	Operational Waste	1	1	1	0	L
Wst 04 - Speculative Floor and Ceiling Finishes	Speculative Floor and Ceiling Finishes	1		1	0	L
Wst 05 - Adaptation to Climate Change	Adaptation to Climate Change	1		1	0	L
	Exemplar Performance - Holistic Approach to Climate Change Adaptation	1		0	1	
Wst 06 - Functional Adaptability	Functional Adaptability	1		1	0	L
Waste total:		9.50%		7.39%	1.06%	
Land Use & Ecology		Credit Value		1.10%		
LE 01 - Site Selection	Previously Development Land	1		1	0	L
	Contaminated Land	1		0	0	
LE 02 - Ecol. Value of Site and Protection of Ecol. features	Ecol. Value of Site	1		1	0	M
	Protection of Ecol. Features	1		1	0	M
LE 03 - Minimising Impact on Existing Ecology	Change in Ecol. Value 1	1	1	1	0	L
	Change in Ecol. Value 2	1		0	1	
LE 04 - Enhancing Site Ecology	Ecologist's Report and Recommendations	1		1	0	M
	Increase in Ecological Value	1		0	1	
LE 05 - Long Term Impact on Biodiversity	Long Term Impact on Biodiversity	2		2	0	L
Land use & Ecology total:		11.00%		7.70%	2.20%	
Pollution		Credit Value		0.85%		
	No Refrigerant Use	0		0	0	
Pol 01 - Impact of Refrigerants	Impact of Refrigerant	2		2	0	M
	Refrigerant Leak Detection	1		1	0	M
Pol 02 - NOx Emissions	NOx Emissions	3		2	0	M
Pol 03 - Surface Water Run-Off	Flood Resilience	2		1	1	M
	Surface Water Run-Off - Run-Off	1		1	0	M
	Surface Water Run-Off - Flooding of Property	1		0	1	
	Minimising Watercourse Pollution	1		0	1	M
Pol 04 - Reduction of Night-time Light Pollution	Reduction of Night-time Light Pollution	1		1	0	L
Pol 04 - Reduction of Noise Pollution	Reduction of Noise Pollution	1		1	0	L
Pollution total:		11.00%		7.62%	2.54%	
Innovation		Credit Value		1.00%		
Approved Innovation		1		0	0	
Innovation/Exemplar Performance total:		10.00%		1.00%	1.00%	

BREEAM 2014 Dashboard

Project: Ted Baker Hotel

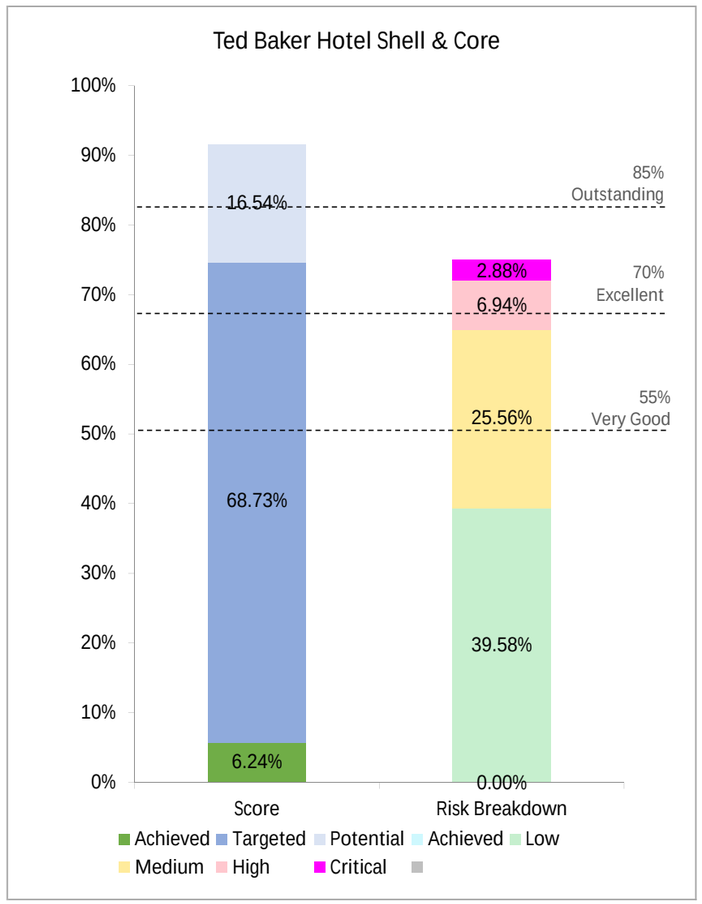
Assessor: Anna Foden/ Rebecca Gibson

BREEAM Scheme: New Construction 2014 v4.1 UK

ACHIEVED	6.24%	Unclassified
TARGETED	74.98%	Excellent
POTENTIAL	91.51%	Excellent

Minimum Requirements

	TARGETED	ACHIEVED
Pass	Yes	No
Good	Yes	No
Very Good	Yes	No
Excellent	Yes	No
Outstanding	No	No



		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Management			Credit Value	0.61%		
Man 01 - Project Brief and Design	Stakeholder Consultation (project delivery)	1		1	0	L
	Stakeholder Consultation (third party)	1		1	0	C
	Sustainability Champion (design)	1		1	0	L
	Sustainability Champion (monitoring progress)	1		1	0	H
Man 02 - Life Cycle Cost and Service Lift Planning	Elemental LCC	2		2	0	C
	Component Level LCC Plan	1		1	0	H
	Capital Cost Reporting	1		1	0	H
Man 03 - Responsible Construction Practices	Legally Sourced Timber	-			0	H
	Environmental Management	1		1	0	M
	Sustainability Champion	1		1	0	M
	Considerate Construction	2	1	2	0	M
	Exemplar Performance - Considerate Construction	1		1	0	H
	Monitoring of Construction-site Impacts - Utility Consumption	1		1	0	M
	Monitoring of Construction-site Impacts - Transport	1		1	0	M
Man 04 - Commissioning and Handover	Commissioning and Testing Schedule and Responsibilities	1		1	0	M
	Commissioning Building Services	1		1	0	M
	Testing and Inspecting Building Fabric	1		1	0	M
	Handover	1	#10	1	0	L
Man 05 - Aftercare	Aftercare Support	0		0	0	
	Seasonal Commissioning	0	1	0	0	
	Post Occupancy Evaluation	0		0	0	
	Exemplar Performance - Extended Aftercare	0		0	0	
Management total:		11.00%		11.00%	0.00%	
Health & Wellbeing			Credit Value	1.05%		
Hea 01 - Visual Comfort	Glare Control	0		0	0	
	Daylighting	1		0	1	
	Exemplar Performance - Daylighting	1		0	0	
	View Out	1		0	1	
	Internal and External Lighting Levels, Zoning and Control	1		1	0	L
Hea 02 - Indoor Air Quality	IAQ Plan	0		0	0	
	Ventilation	1		0	0	
	VOC Emission Levels (design)	0		0	0	
	VOC Emission Levels (post construction)	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.06mg/m³ air	0		0	0	
	Exemplar Performance - Formaldehyde Emissions ≤ 0.01mg/m³ air	0		0	0	
	Potential for Natural Ventilation	1		0	0	
Hea 03 - Safe Containment in Laboratories	Laboratory Containment Devices and Containment Areas	0		0	0	
	Buildings with Containment Level 2 and 3 Laboratory Facilities	0		0	0	
Hea 04 - Thermal Comfort	Thermal Modelling	1		1	0	M
	Adaptability	1		1	0	M
	Thermal Zoning and Controls	0		0	0	
Hea 05 - Acoustic Performance	Sound Insulation	0		0	0	
	Internal Indoor and Ambient Noise Levels	1		1	0	C
	Reverberation	0		0	0	
Hea 06 - Safety and Security	Safe Access	1		0	0	
	Security of Site and Building	1		1	0	L
Health & Wellbeing total		10.50%		5.25%	2.10%	
Energy			Credit Value	0.75%		
Ene 01 - Reduction of Energy Use and Carbon Emissions	Energy Performance	12	5	9	1	L
	Exemplar Performance - Zero Regulaterd Carbon	4		0	0	
	Exemplar Performance - Carbon Negative	1		0	0	
Ene 02 - Energy Monitoring	Sub-metering of Major Energy Consuming Systems	1	1	1	0	L
	Sub-metering of High Energy and Tenancy Areas	0		0	0	
Ene 03 - External Lighting	External Lighting	1		1	0	L
Ene 04 - Low Carbon Design	Passive Design Analysis	1		1	0	H
	Free Cooling	1		0	1	
	Low Zero Carbon Feasibility Study	1		1	0	L
Ene 05 - Energy Efficient Cold Storage	Refrigeration Energy Consumption	0		0	0	
	Indirect Greenhouse Gas Emissions	0		0	0	
Ene 06 - Energy Efficient Transportation Systems	Energy Consumption	1		1	0	H
	Energy Efficient Features	2		2	0	H
Ene 07 - Energy Efficient Laboratory Systems	Objective Risk Assessment	0		0	0	
	Design Specification	0		0	0	
	Best Practice Energy Efficient Measures	0		0	0	
Ene 08 - Energy Efficient Equipment	Energy Efficient Equipment	0		0	0	
Ene 09 - Drying Space	Drying Space	0		0	0	
Energy totals:		15.00%		12.00%	1.50%	

Key

Achieved	
Targeted	
Potential	
Targeted - Low Risk, thought to be achievable	
Targeted - Medium Risk, some uncertainty and/or technically complex	
Targeted - High Risk, may be highly uncertain, expensive and/or historically difficult to achieve	
Targeted - Critical Risk, requires immediate action	
Credits with minimum requirements	

Note: The risk measure is a quantitive score assigned by the assessor

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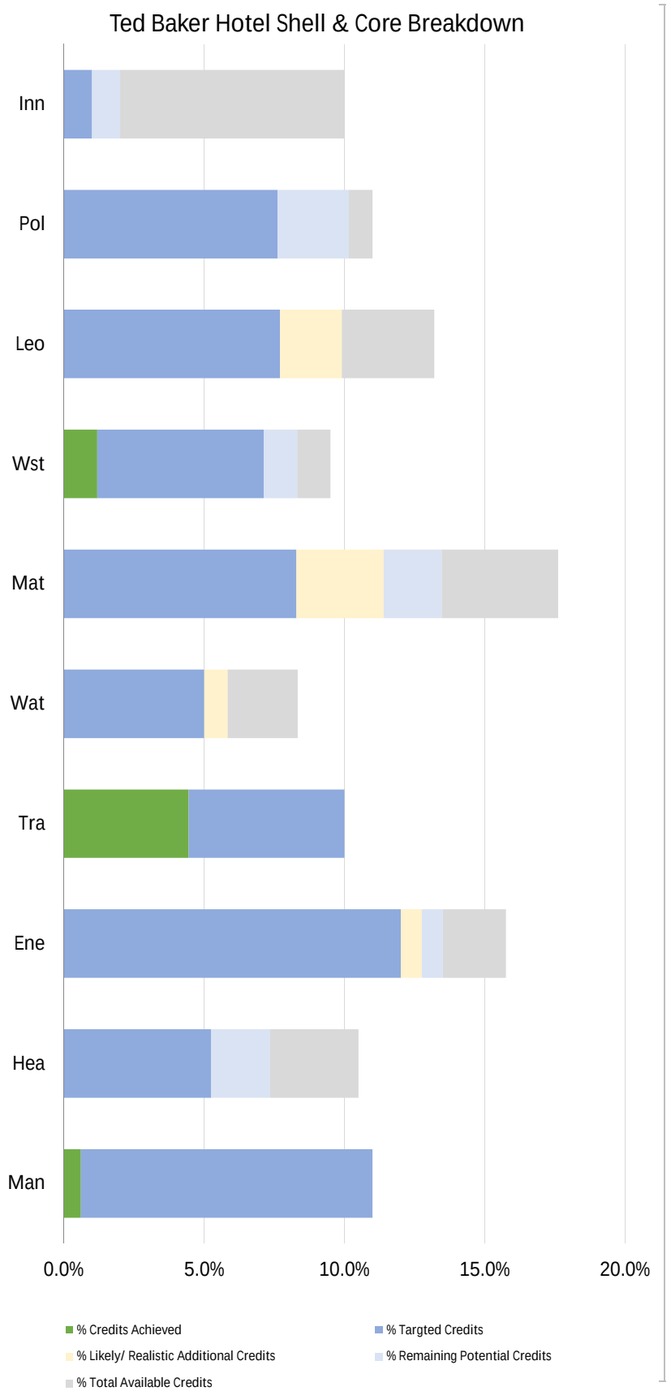

MAX FORDHAM

		AVAILABLE	MIN REQS	TARGETED	POTENTIAL	RISK
Transport			Credit Value	1.11%		
Tra 01 - Public Transport Accessibility	Accessibility Index	3		3	0	L
	Dedicated Bus Service	0		0	0	
Tra 02 - Proximity to Amenities	Proximity to Amenities	1		1	0	L
Tra 03 - Cycle Facilities	Cycle Storage	1		1	0	L
	Cyclist Facilities	1		1	0	L
	Cycle Storage and Facilities	0		0	0	
Tra 04 - Maximum Car Parking Capacity	Car Parking Capacity	2		2	0	L
Tra 05 - Travel Plan	Travel Plan	1		1	0	H
Transport total:		10.00%		10.00%	0.00%	
Water			Credit Value	0.83%		
Wat 01 - Water Consumption	Water Consumption	5	1	2	1	L
	Exemplar Performance - Water Consumption	1		0	0	
Wat 02 - Water Monitoring	Water Monitoring	1		1	0	L
Wat 03 - Water Leak Detection	Leak Detection System	1		1	0	L
	Flow Control Devices	1		1	0	L
Wat 04 - Water Efficient Equipment	Water Efficient Equipment	1		1	0	L
Water total:		7.50%		5.00%	0.83%	
Materials	Credit Value		Credit Value	1.04%		
Mat 01 - Life Cycle Impacts	Life Cycle Impacts	6		3	3	M
	Exemplar Performance - Life Cycle Impacts	1		0	0	
Mat 02 - Hard Landscaping and Boundary Protection	Hard Landscaping and Boundary Protection	1		0	0	
Mat 03 - Responsible Sourcing of Materials	Legally Sourced Timber	-	#1		0	H
	Sustainable Procurement Plan	1		1	0	L
	Responsible Sourcing of Materials	3		1	2	M
	Exemplar Performance - Responsible Sourcing of Materials	1		0	0	
Mat 04 - Insulation	Embodied Impact	1		1	0	M
Mat 05 - Designing for Durability and Resilience	Protecting Vulnerable Parts of the Building from Damage	1		1	0	L
Mat 06 - Material Efficiency	Material Efficiency	1		1	0	L
Materials total:		14.50%		8.29%	5.18%	
Waste			Credit Value	1.19%		
Wst 01 - Consturction Waste Management	Construction Resource Efficency	3	0	2	1	M
	Diversion of Resources from Landfill	1		1	0	M
	Exemplar Performance - Waste Generation and Diversion from Landfill	1		0	0	
Wst 02 - Recycled Aggregates	Recycled Aggregates	1		0	0	
	Exemplar Performance - Recycled Aggregates	1		0	0	
Wst 03 - Operational Waste	Operational Waste	1	1	1	0	L
Wst 04 - Speculative Floor and Ceiling Finishes	Speculative Floor and Ceiling Finishes	0		0	0	
Wst 05 - Adaptation to Climate Change	Adaptation to Climate Change	1		1	0	L
	Exemplar Performance - Holistic Approach to Climate Change Adaptation	1		0	1	
Wst 06 - Functional Adaptability	Functional Adaptability	1		1	0	L
Waste total:		9.50%		7.13%	1.19%	
Land Use & Ecology			Credit Value	1.10%		
LE 01 - Site Selection	Previously Development Land	1		1	0	L
	Contaminated Land	1		0	0	
LE 02 - Ecol. Value of Site and Protection of Ecol. features	Ecol. Value of Site	1		1	0	M
	Protection of Ecol. Features	1		1	0	M
LE 03 - Minimising Impact on Existing Ecology	Change in Ecol. Value 1	1	1	1	0	L
	Change in Ecol. Value 2	1		0	1	
LE 04 - Enhancing Site Ecology	Ecologist's Report and Recommendations	1		1	0	M
	Increase in Ecological Value	1		0	1	
LE 05 - Long Term Impact on Biodiversity	Long Term Impact on Biodiversity	2		2	0	L
Land use & Ecology total:		11.00%		7.70%	2.20%	
Pollution			Credit Value	0.85%		
	No Refrigerant Use	0		0	0	
Pol 01 - Impact of Refrigerants	Impact of Refrigerant	2		2	0	M
	Refrigerant Leak Detection	1		1	0	M
Pol 02 - NOx Emissions	NOx Emissions	3		2	0	M
Pol 03 - Surface Water Run-Off	Flood Resilience	2		1	1	M
	Surface Water Run-Off - Run-Off	1		1	0	M
	Surface Water Run-Off - Flooding of Property	1		0	1	
	Minimising Watercourse Pollution	1		0	1	M
Pol 04 - Reduction of Night-time Light Pollution	Reduction of Night-time Light Pollution	1		1	0	L
Pol 04 - Reduction of Noise Pollution	Reduction of Noise Pollution	1		1	0	L
Pollution total:		11.00%		7.62%	2.54%	
Innovation			Credit Value	1.00%		
Approved Innovation		1		0	0	
Innovation/Exemplar Performance total:		10.00%		1.00%	1.00%	