BREEAM Pre-assessment report

The total area for the

Site Name:	Rose of York
Planning reference number:	tbc
Client:	Cunnane Town Planning
Consultant:	Owen Thomas
Version and date:	Version1: 27/07/21 – First issue.

Scope and Project Details:

Climate Integrated solutions have been tasked by Cunnane Town Planning to conduct a BREAM Pre-assessment, initial energy assessment and accompanying report for the proposed re-development of Rose Of York Hotel to assess the likely achievable BREEAM score and carbon outcomes.

The initial BREEAM target set by Cunnane and in line with Richmond planning policy was the Excellent Rating.

The scope of the assessment is a pub and hotel. The total area of the building being assessed is 1,430m2, with approximately 594m2 consisting of a new build including a side and rear extension with additional bedrooms and about 840m2 making up the existing building to be renovated into a modernised pub and bedrooms.

As a hybrid new build/renovation building both BREEAM Refurbishment & Fitout and BREEAM New build were considered. However, none of the following situations for BREEAM Fitout criteria are the case.

For smaller projects, where the total development area is less than 1000m^2 , a single BREEAM assessment can be undertaken to cover both the new-build and refurbished areas, The choice of BREEAM New Construction or BREEAM Refurbishment and Fit-out scheme should be based on whichever (new-build or refurbishment) constitutes the majority of the assessed floor area.

BREEAM Refurbishment and Fit-out scheme may be the most appropriate as it contains thresholds under which a single Refurbishment and Fit-out assessment can be completed. (The 'original building area' term used below is the area of the original building which is retained and refurbished as part of the assessment. The definition excludes any part of the original building which is to be demolished or not part of the scope of works of the refurbishment):

1. Where the original building area is greater than 1000m^2 but smaller than 2500m^2 and the new extension is less than 20% of the original building area
2. Where the original building is greater than 2500m^2 and the new extension is no greater than 500m^2

Other options offered by BRE for mixed new/refurbishment buildings are:

-To do two separate assessments: This is impractical in this case as the building fabric and services are too intertwined to effectively conduct separate assessments.

-To get BRE to issue a bespoke BREEAM criteria: This is disproportionately expensive, time consuming and long running so only undertaken occasionally for the largest of developments.

-To assess the whole building as if it was newbuild: This is the only option left so the approach taken although it is problematic.

The necessary approach of assessing the whole building as if new build makes the Excellent BREEAM target significantly harder to achieve than in the majority of cases as BREEAM new

build is designed with entirely new buildings in mind with no mechanism to compensate for the restrictions placed upon a design by the existing building fabric and not fully reflecting the huge initial carbon savings and sustainability benefits of re-using existing building over producing new ones. This difficulty is recognised by BRE in the quote below.

For larger projects a single New Construction assessment can be undertaken, though the refurbished areas have to comply with assessment criteria designed for new builds which can be more challenging in some instances. If the development is predominantly a refurbishment with new-build extension then the

On top of these considerations Hotel developments in general struggle to achieve good BREEAM ratings, this is due to the number of bath/showers making the expected hot water use a major factor in the energy calculations combined with current non-domestic calculation methodology not having ways to reduce this.

Additionally conservation considerations place restrictions on the ability to meet a number of BREEAM credits as the building is locally listed as a Building of Townscape Merit, having been designated as such by the London Borough of Richmond upon Thames

Thus, although Excellent is targeted we are only able to achieve Very Good. For any site this would be below the “safety buffer” usually recommended to allow for inevitable setbacks from unexpected events on site or different than expected consultation results, but this is typically so for the renovation of a heritage building with their tendency to cause minor surprises that can disrupt the very precise requirement of BREEAM credits.

For all these reasons although Excellent is targeted there is every possibility that as the project develops this will turn out to not be technically achievable and we would ask that the above mitigating factors be considered in this is the case and a target of BREEAM Very Good be targeted. In this eventuality details of any credit not achieved will be provided to demonstrate that Excellent was not achievable in light of full understanding of the site unfolding during construction and the highest score that is achievable will be targeted.

Information provided:

CIS were provided existing and proposed plans for the development. Based on this we produced a preliminary assessment of what credits were likely achievable based on our substantial previous experience with similar developments. We circulated this to the design team then lead a video conference where every available BREEAM credit was discussed. With this input from the design team a number of updates to our earlier assumptions were made.

Assessment method:

As discussed above the assessment had to take place under BREEAM UK Newbuild 2018 although this doesn’t reflect the restrictions placed on the designs by the existing building.

The information gathered was entered into the official BRE Newbuild UK 2018 Pre-Assessment tool. This tallied the section and total scores from the agreed targeted credits. Notes on the reasons for targeting/not targeting of each credit were entered into this tool and are included in its outputs provided.

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We have since completed a BRUKL energy assessment and exported files that can be imputed into the BRE tool to generate the exact amount of ENE1 credits that are expected at this stage.

That said the nature of a Pre-assessment is that it is undertaken at an early stage when many relevant details are not yet known in particular the outcome of key Energy and Material credits cannot be known accurately until the full specification requirements have been worked out late in the design process allowing As Built calculations to be completed.

In addition to this we have provided to the design team a separate document highlighting where early actions are required reducing the risk of credits being lost – Under the BREEAM 2018 edition in particular a number of key credits require very early actions which are often missed by unprepared developers.

Outcomes:

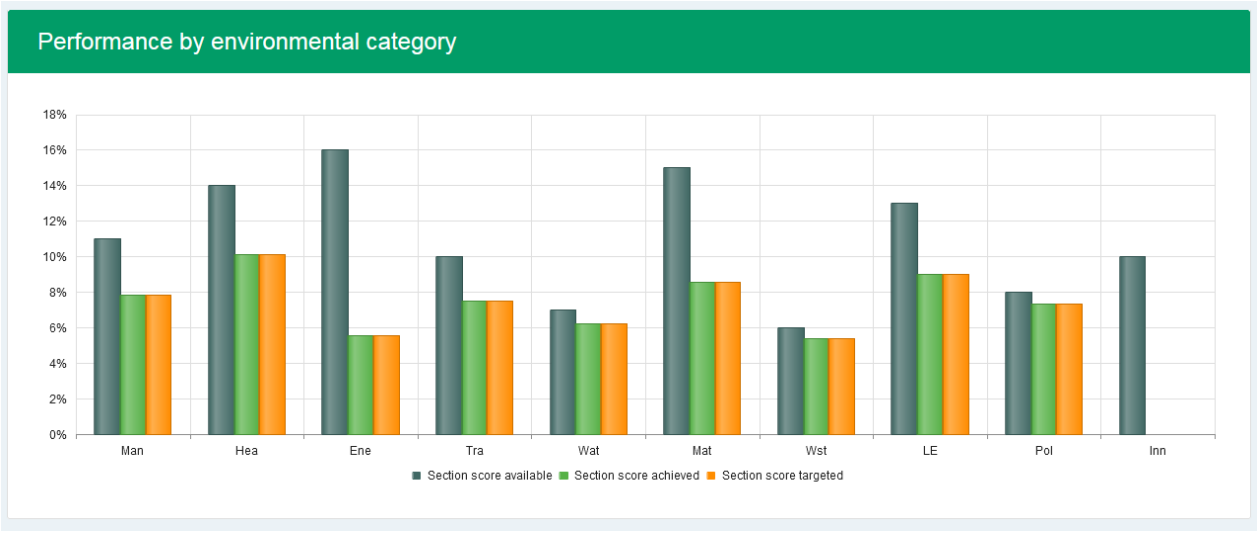
Based on the agreed credits to be targeted the outcome is 67.56% with the breakdown between categories visible in the graph below.

The score requirement for Excellent is to achieve 70%, therefor it currently seems highly unlikely that an Excellent will be achievable with such a small margin of error. As credits are investigated in more detail during the full BREEAM assessment some currently targeted credits and therefore the Excellent rating will make the target infeasible. It is not uncommon for one or two of the hundreds of BREEAM credit requirements to unavoidably become unachievable during design and construction even if the team is implementing them perfectly, this is particularly the case for part renovation projects. For this reason, it is usual to target 3-5% above the required score at this stage as a 'safety margin' which has not been possible in this case.

As example BRREAM Excellent requires a minimum of 4 credits in the ENE01 section, currently the current energy assessment only achieves 1 credit due to the constraints of the existing building fabric and issues with disproportionate water use which cannot be mitigated in the current methodology (see energy statement)

BREEAM Rating

	Credits available	Credits achieved	Credits targeted	% Credits achieved	Weighting	Category score	Target score
Man	21.0	15.0	15.0	71.43%	11.00%	7.85%	7.85%
Hea	18.0	13.0	13.0	72.22%	14.00%	10.11%	10.11%
Ene	23.0	8.0	8.0	34.78%	16.00%	5.56%	5.56%
Tra	12.0	9.0	9.0	75.00%	10.00%	7.50%	7.50%
Wat	9.0	8.0	8.0	88.89%	7.00%	6.22%	6.22%
Mat	14.0	8.0	8.0	57.14%	15.00%	8.57%	8.57%
Wst	10.0	9.0	9.0	90.00%	6.00%	5.40%	5.40%
LE	13.0	9.0	9.0	69.23%	13.00%	9.00%	9.00%
Pol	12.0	11.0	11.0	91.67%	8.00%	7.33%	7.33%
Inn	10.0	0.0	0.0	0.00%	10.00%	0.00%	0.00%
Total	142.0	90.0	90.0	63.38%	-	67.56%	67.56%
Rating	-	-	-	-	-	★★★☆☆ **Very Good**	Very Good



(note in the case of this pre assessment “achieved and Targeted” are the same.