



## Energy & Sustainability Monitoring Report For the London Borough of Lambeth

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## 1. Executive Summary

This report presents the energy saving and sustainability measures proposed and delivered in the London Borough of Lambeth by major developments during 2016.

### Key statistics:

- 50% of all referrals made to CIS were DET's, 30% were FUL.
- 43% of all referrals were major, 54% were minor, and the rest provided insufficient information to determine this.
- Of the major applications 44% of developments were mixed use, 34% were non-residential and the remaining 23% were residential.
- Solely residential developments incorporate less units than mixed use developments. Only 8% of the nearly 10,000 units are in residential only developments.
- There is a much more even distribution of non-residential floor areas between mixed use and non-residential only developments. 58% of this occurs in mixed use developments.

### Sustainability Statistics:

- When permitted developments with BREEAM requirements were reviewed nearly 10% exceeded a minimum requirement for Very Good and achieved Excellent.
- However 13% did not achieve any BREEAM rating, these were mostly old applications.
- Very few (4%) final BREEAM certificates have been submitted for review.
- No as built residential water use details have been submitted for review as this is a relatively new requirement it is expected that none of these developments have completed yet.
- 88% of developments committed to achieve Code for Sustainable Homes Level 4 when the minimum target was Level 3.
- 82% of developments proposed emissions met relevant targets.

### Recommendations:

- Ensure applicants are aware of the applicable policies. Despite the London Plan and Lambeth Local Plan being clear of the requirements they are still ignored or missed by a number of developments both large and small. It is possible this could be done by the introduction of interactive tools online to allow development specifications to be entered, resulting in an output of requirements.
- Ensure BREEAM conditions specify the type of assessment and area to be assessed. This will help to avoid any confusion and also to simplify discharge.
- Include energy targets in conditions to help to simplify discharge.
- Ensure post construction conditions are being discharged and evidence is passed to an energy and sustainability expert to review.
- At the next opportunity incorporate residential water use and BREEAM Domestic Refurbishment into the Lambeth Local Plan.

## 2. Introduction

The aim of this report is to present the energy saving and sustainability measures proposed and delivered in the London Borough of Lambeth by major developments during 2016.

The report will provide:

- details of the mix of major developments that have been referred to CIS
- details of the policies relevant to the developments
- details of the approved energy and sustainability commitments including BREEAM, Code for Sustainable Homes, residential water use and onsite reductions & offsite reductions in emissions
- details of the actual energy and sustainability results achieved including BREEAM, Code for Sustainable Homes, residential water use and onsite reductions & offsite reductions in emissions
- case study summaries
- comments on any key issues and how policies may be developed in the future

These details have been collated as CIS have reviewed planning applications for LB Lambeth. This information is available for review in a separate excel document.

### 3. Types of developments

#### Referral type:

Climate Integrated Solutions received nearly 400 requests for energy and sustainability support from LB Lambeth in 2016. The breakdown of the type of referrals is shown below.

Referral Type	Count	Percent
FUL	117	30%
DET	194	50%
VOC	43	11%
NMC	12	3%
OUT	1	0%
PreApp	5	1%
LB	1	0%
EIASCP	1	0%
Appeal	1	0%
RG4	1	0%
S106	3	1%
Miscellaneous	12	3%

Table 1 – Types of referral

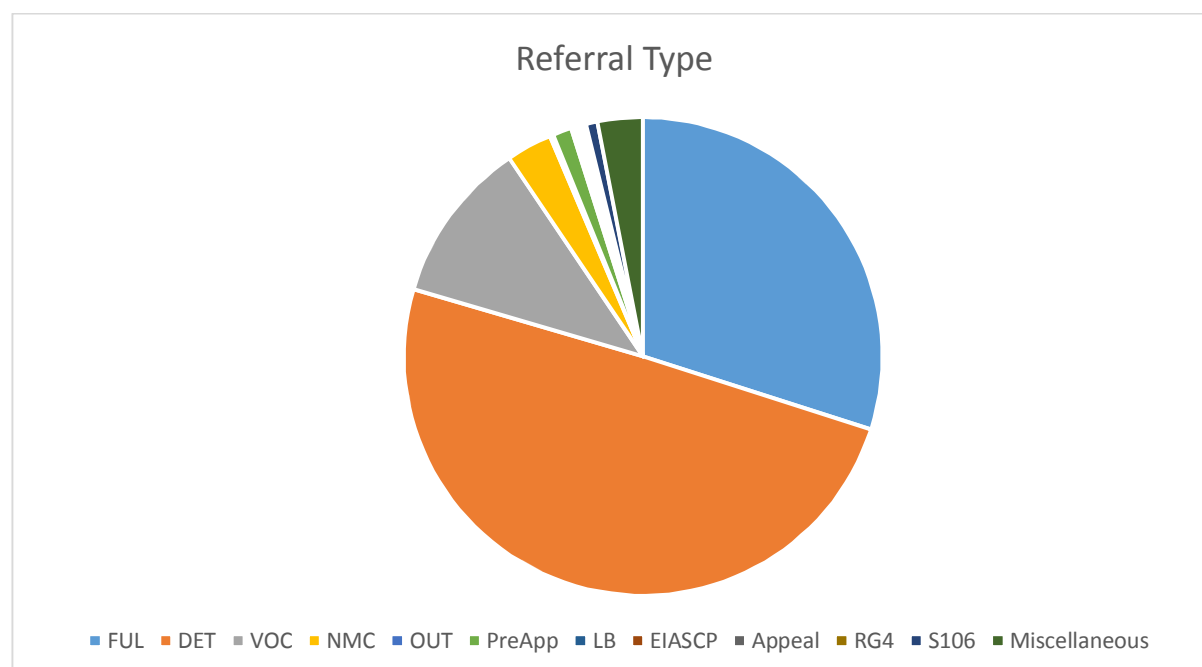


Figure 1 – Types of referral

### Development classification:

The table and chart below shows the distribution of all applications referred to CIS between major and minor. In a few cases there was insufficient information provided to determine this and as the applications didn't proceed further information was not provided for review.

Development Classification	Count
Major	110
Minor	137
Other or unknown	6

Table 2 – Development classification

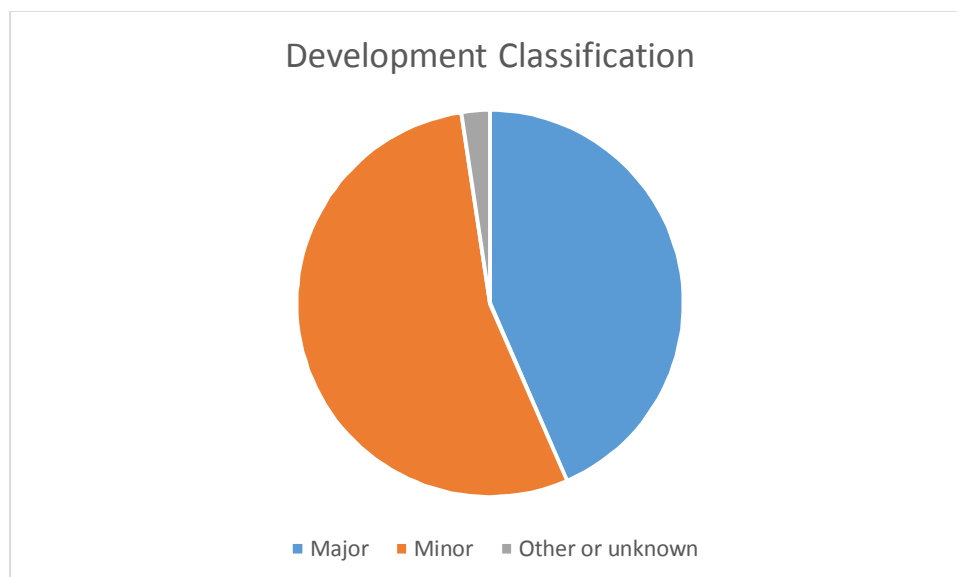


Figure 2 – Development classification

### Development use:

The table and chart below shows the distribution of the development use of major applications received by CIS.

Development use	Count
Residential	25
Non-residential	37
Mixed Use	48

Table 3 – Development use

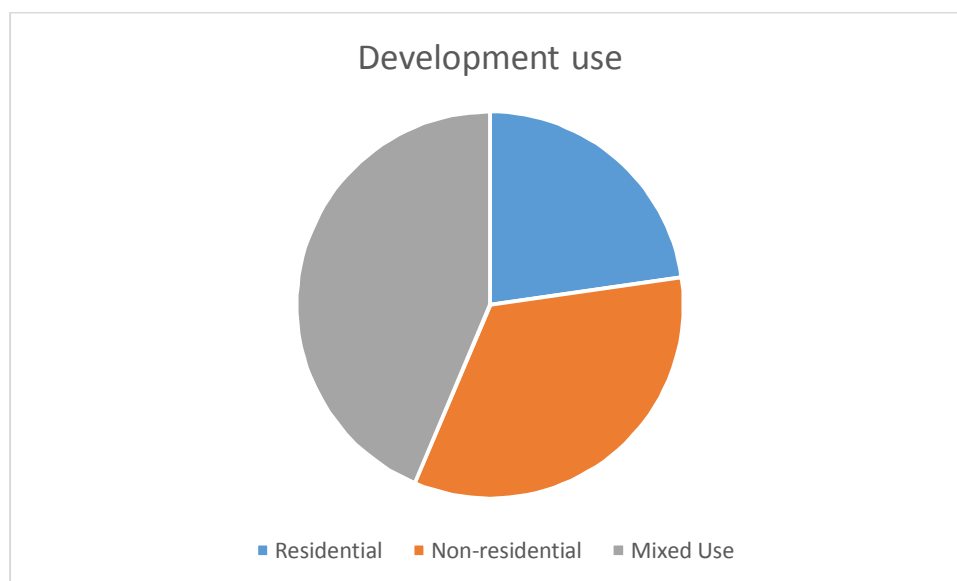


Figure 3 – Development use

### Commercial developments building uses:

The table below shows the proposed uses of the non-residential and mixed use major developments.

Use class	Count
A1 – Shops	34
A2 – Financial and professional services	17
A3 – Restaurants and cafes	27
A4 – Drinking establishment	10
A5 – Hot food takeaways	7
B1 – Business	41
B8 – Storage or distribution	3
C1 – Hotels	10
C2 – Residential institutions	6
D1 – Non-residential institutions	31
D2 – Assembly and leisure	14
Sui Generis	6

Table 4 – Commercial development building use

## Development size:

The table and graphs below shows total size of major applications received by CIS.

Development use	Residential units	Non-residential floor area (m <sup>2</sup> )*
Residential	740	0
Non-residential	0	265,590
Mixed Use	9,051	369,608
Total	9,791	635,198

\*In some cases this information was not available.

Table 5 – Development size

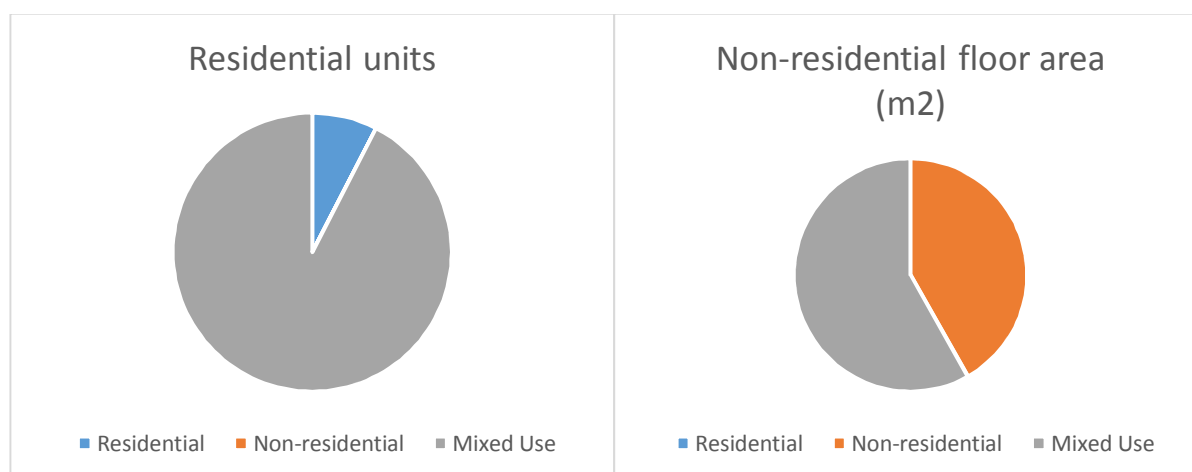


Figure 4 – Residential development size

Figure 5 – Non-residential development size

## Affordable Housing

For the 73 residential and mixed use developments CIS looked for information relating to affordable housing. This was available for 31 of the developments. The table and graph below demonstrate the split between private and affordable dwellings for the developments we were able to find this information for.

Dwellings	Count
Total	2,914
Affordable	1,176

Table 6 – Affordable Housing



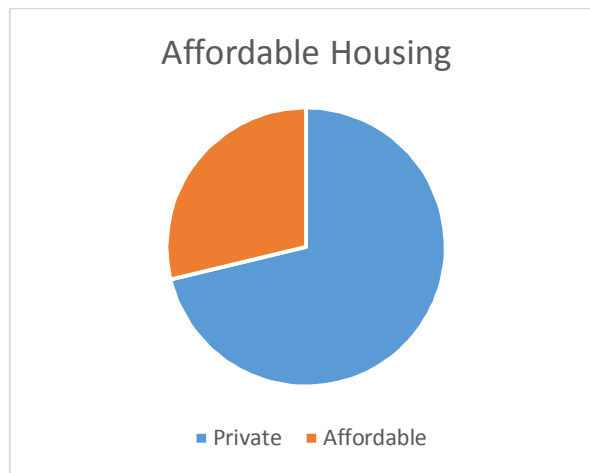


Figure 6 – Affordable Housing

## 4. Applicable policies

The table and graphs below shows the policies relevant to the major applications received by CIS.

Policies	Count
Zero Carbon Homes	5
40% on Part L 2010 / 35% on Part L 2013	74
25% on Part L 2010 / 19% on Part L 2013	26
BREEAM Excellent	41
BREEAM Very Good aspiring to Excellent	46
LV 4 Code for Sustainable Homes	5
LV 3 Code for Sustainable Homes aspiring to LV 4	26
Internal water use <105L/person/day	42

Table 7 – Applicable policies

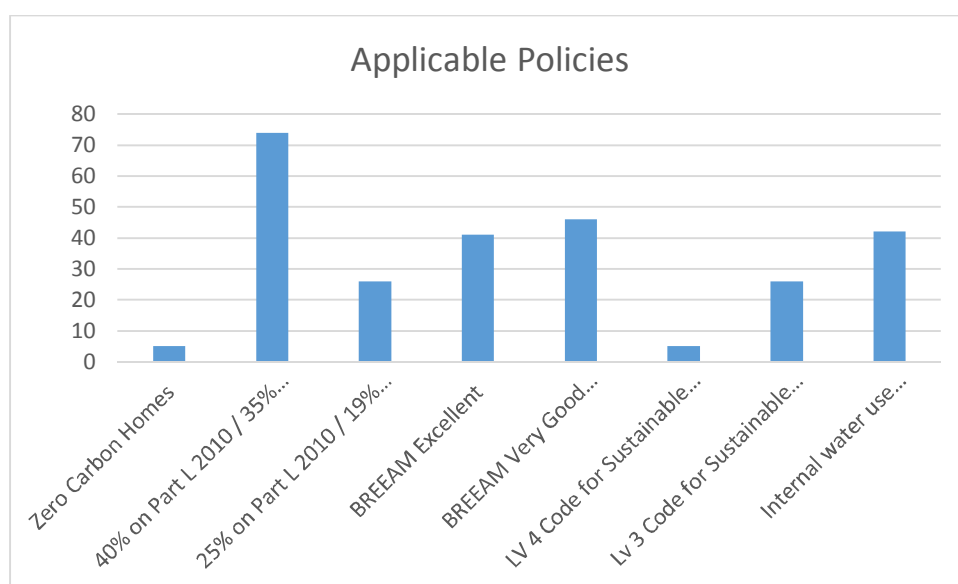


Figure 7 – Applicable policies

This shows that despite there being 73 residential or mixed use major developments, only 5 of these were made after the 1<sup>st</sup> October 2016, therefore these are the only ones required to meet zero carbon homes. This standard only applies to major developments submitted after this date.

## 5. Sustainability

### BREEAM:

The performance of the non-residential and mixed use major developments with BREEAM requirements are shown below. This also includes some domestic refurbishments.

	Required	Proposed	Achieved
BREEAM Excellent	41	32	1
BREEAM Very Good	46	42	1
None	0	7	7

Table 8 – Total BREEAM

Proposed refers to developments where conditions have been set for a BREEAM rating or where applicants have submitted pre-assessments prior to a decisions notice being issued.

Achieved refers to developments where as-built evidence has been submitted to demonstrate that certification has been achieved allowing conditions to be discharged.

Required and proposed figures do not match in all cases due to developments refused permission and awaiting decisions. In addition to this some developments may require multiple BREEAM assessments for different areas which achieve different levels.

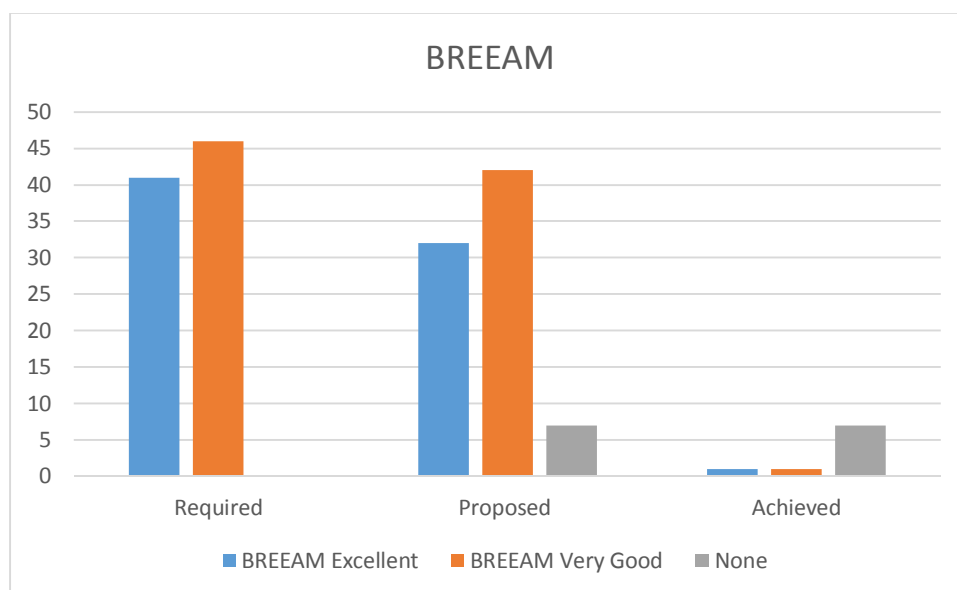


Figure 8 – Total BREEAM

This shows that 7 developments which should have had a BREEAM condition did not, these are old applications which CIS reviewed to discharge other conditions. In addition it shows very few final BREEAM conditions have been forwarded to CIS to be discharged in the last year. This could be because case officers are confident in discharging these conditions themselves or it could be that very few developments with BREEAM conditions have reached completion this year.

When looking at only the developments which have been granted permission a clearer picture can be gained.

	Required	Proposed	Achieved
BREEAM Excellent	9	14	1
BREEAM Very Good	46	39	1
None	0	7	7

Table 9 – Granted permission BREEAM

Proposed refers to developments where conditions have been set for a BREEAM rating.

Achieved refers to developments where as-built evidence has been submitted to demonstrate that certification has been achieved allowing conditions to be discharged.

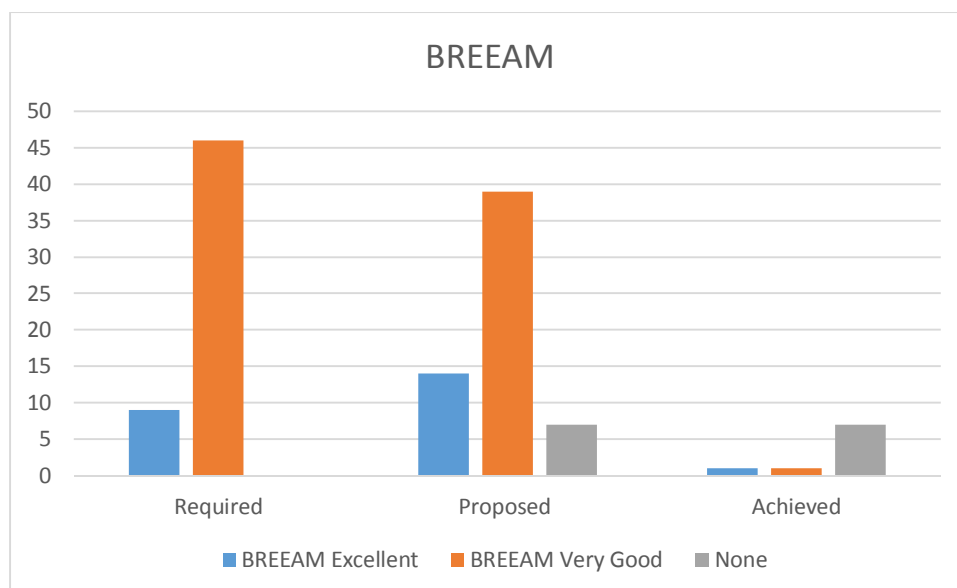


Figure 9 – Granted permission BREEAM

This shows that a number of developments have achieved BREEAM Excellent when Very Good was required. This is most likely a result of the previous policy requiring developments to aspire towards BREEAM Excellent.

### Residential Water Use:

Residential and mixed use major developments are required to achieve an internal residential water use below 105L/person/day. This has been required since the Housing Standards review, previously this would have been a mandatory requirement under Code for Sustainable Homes levels 3 and 4.

	Required	Proposed	Achieved
<105L/person/day	42	19	0

Table 10 – Total residential water use

Proposed refers to developments where conditions have been set for internal water use or where applicants have submitted calculations prior to a decisions notice being issued.

Achieved refers to developments where as-built evidence has been submitted to demonstrate that the required water use has been achieved allowing conditions to be discharged.

Required and proposed figures do not match in all cases due to developments refused permission and awaiting decisions.

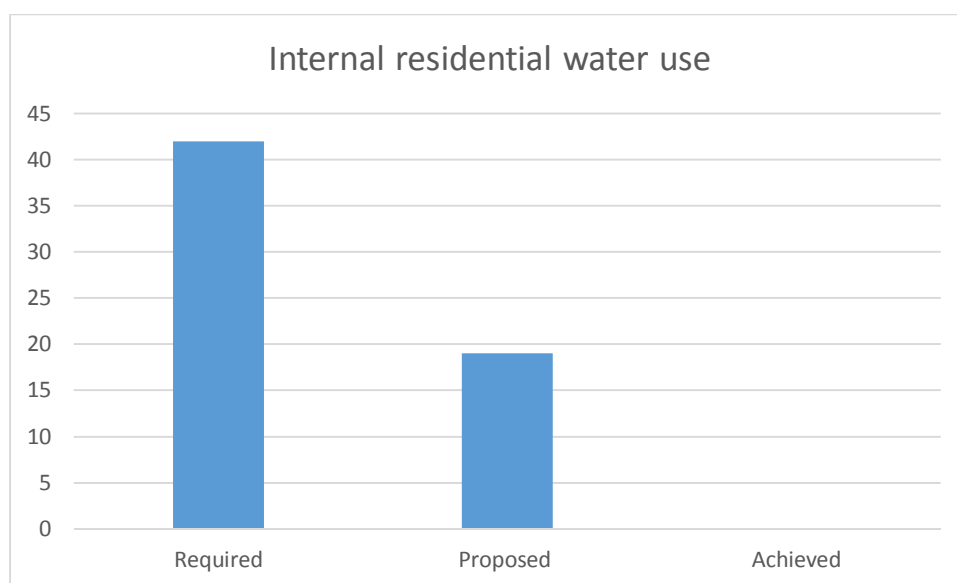


Figure 10 – Total residential water use

When looking at only the developments which have been granted permission a clearer picture can be gained.

	Required	Proposed	Achieved
<105L/person/day	11	7	0

Table 11 – Granted permission residential water use

Proposed refers to developments where conditions have been set for internal water use.

Achieved refers to developments where as-built evidence has been submitted to demonstrate that the required water use has been achieved allowing conditions to be discharged.

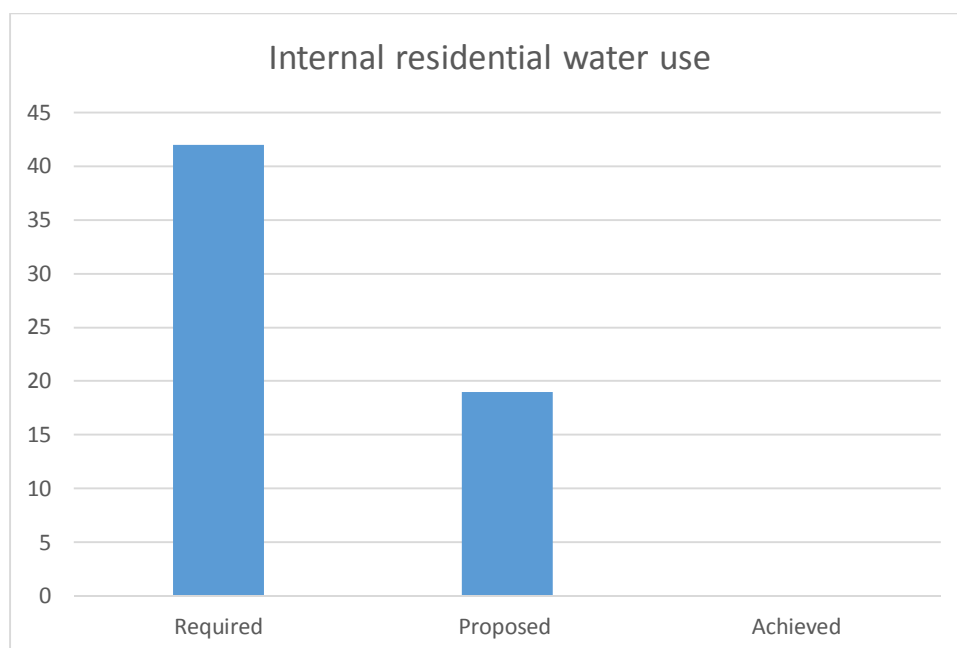


Figure 11 – Granted permission residential water use

This shows that 4 developments which could have been required to meet the target internal water use of <105L/person/day were not given conditions to do this. This is most likely due to the quick change in national policy following the Housing Standards Review.

CIS have not yet been provided with as built water use calculations to discharge internal water use conditions. This is probably due to developments with these conditions not yet being completed.

### Code for Sustainable Homes:

Of the residential and mixed use major developments with Code for Sustainable Homes requirements their performance is shown below.

	Required	Proposed	Achieved
LV 4	5	28	6
LV 3	26	5	2
None	0	2	2

Table 12 – Code for Sustainable Homes

Proposed refers to developments where conditions have been set for a CSH rating.

Achieved refers to developments where as-built evidence has been submitted to demonstrate that the certificate has been achieved allowing conditions to be discharged.

Required and proposed figures do not match in all cases due to developments carrying out multiple CSH assessments and targeting different ratings for different dwellings.

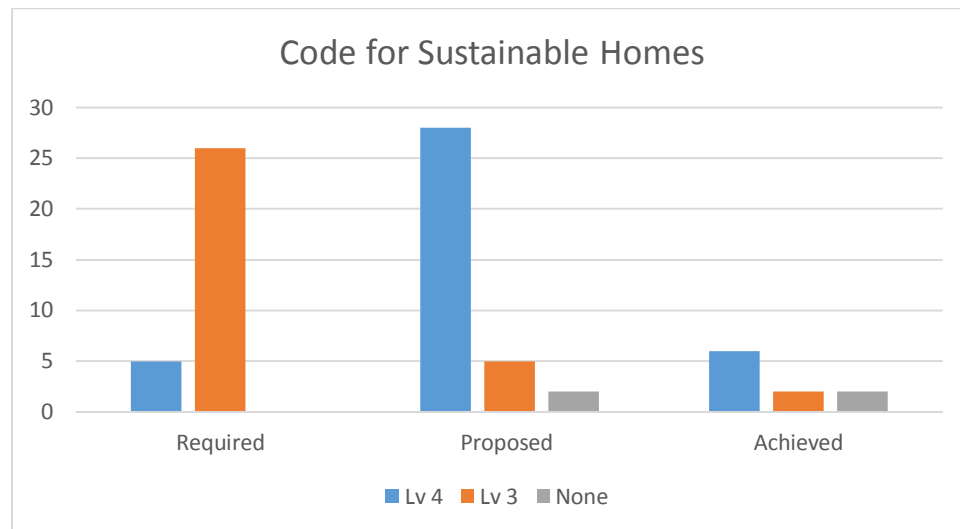


Figure 12 – Code for Sustainable Homes

This shows that 2 developments which should have had a CSH condition did not. In addition it shows few final CSH conditions have been discharged in the last year. A large number of developments which were required to achieve CSH LV 3 exceeded this and aimed for CSH LV 4. This is most likely a result of the previous policy requiring developments to aspire to CSH LV 4.

## 6. Emissions

### Meeting targets:

Of the major 110 applications reviewed sufficient information was provided for 102 to determine if emissions targets were met. The performance of these developments is shown below.

	Proposed	Achieved
Meeting targets	84	8
Failing to meet targets	18	0

Table 13 – Emissions targets

Proposed refers to developments where conditions have been set for emissions or where applicants have submitted calculations prior to a decisions notice being issued.

Achieved refers to developments where as-built evidence has been submitted to demonstrate that the certificate has been achieved allowing conditions to be discharged.

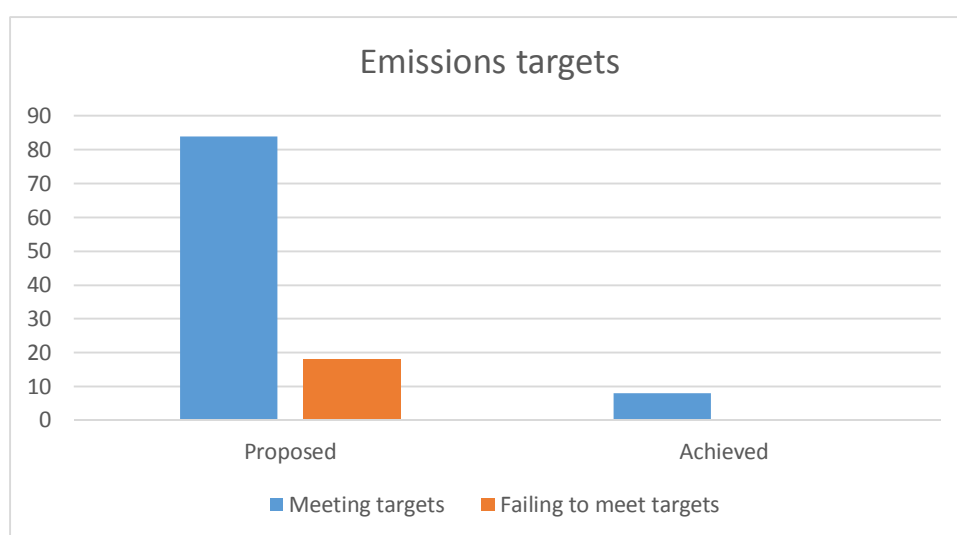


Figure 13 – Emissions targets

Of the 18 developments which submitted applications stating they could not meet targets, 8 have been granted permission, 4 have been refused and the rest are awaiting a decisions or still in discussions.

Sufficient as built information has been provided for 8 developments to demonstrate that emissions are as proposed and in line with relevant policies. CIS have reviewed information for other developments, however further evidence was requested to confirm emissions and allow the discharge of conditions.

### Reduction in emissions:

The table below shows the emissions saved for major developments through implementation of The London Plan policies.



	Proposed emissions reduction Tonnes/CO <sub>2</sub> /yr	Achieved emissions reduction Tonnes/CO <sub>2</sub> /yr
On site	22,031	709
Off site	-	-
Carbon off-set payment	292	-

Table 14 – Reduction in emissions

Proposed refers to developments where conditions have been set for emissions or where applicants have submitted calculations prior to a decisions notice being issued.

Achieved refers to developments where as-built evidence has been submitted to demonstrate that the certificate has been achieved allowing conditions to be discharged.

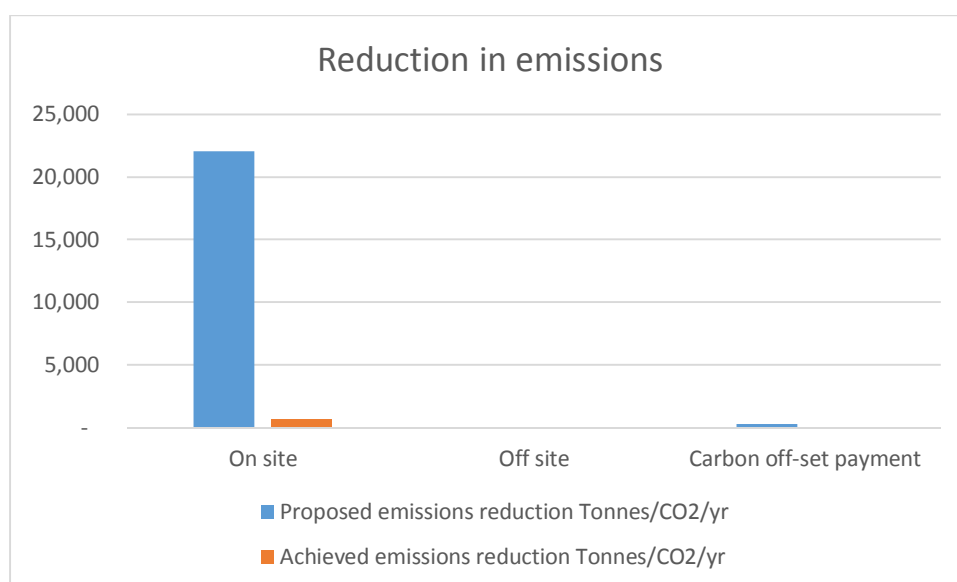


Figure 14 – Reduction in emissions

Developments have achieved most reductions in emissions on site. No off site reductions have been proposed and very little reduction has been made through the use of carbon offset payments. With zero carbon homes introduced in October 2016 this is likely to increase over the next year.

### Carbon offset payments:

The table and graph below show the carbon offset payments reviewed by CIS.

	Proposed £	Actual £
Total payment	£424,703.95	£0.00

Table 15 – Carbon offset payments

Proposed refers to developments applicants have submitted calculations and proposed carbon offset payments prior to a decisions notice being issued.

Achieved refers to developments where as-built evidence has been submitted to demonstrate that the certificate has been achieved and confirming the final payment required, allowing conditions to be discharged.

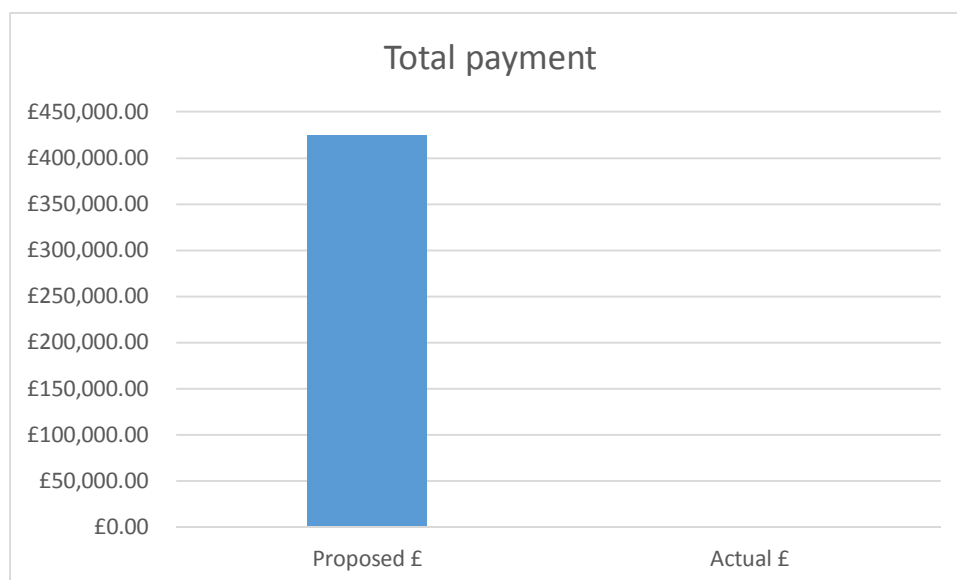


Figure 15 – Carbon offset payments

This includes 9 developments;

- 5 of these have zero carbon homes requirement, only 2 have allowed for this currently, the remaining 3 should be submitting revised documents including a payment so the above figure will increase.
- 4 developments proposed payment as they were failing to meet previous targets, 2 of these were refused, and another one is awaiting a decision.

## 7. Case studies

The case studies below demonstrate some of the problem areas which CIS have encountered over the last year.

### **16/06668/FUL – 340A Clapham Road, London, SW9 9AJ.**

Submission date: 25/11/16

Example of: This is an example of a major development which originally did not target zero carbon homes. Upon discussions with the consultants this is due to changes in the submission date that they were unaware of. CIS have seen reviewed a number of reports which do not allow for zero carbon homes, do not split residential and non-residential emissions and do not calculate carbon offset payments. Although this should get better in time CIS recommend LB Lambeth ensure this requirement is communicated to applications as early as possible.

This is also an example of 2 common BREEAM issues:

- Sufficient evidence to demonstrate BREEAM Excellent is not feasible if not often provided when BREEAM Very Good is targeted. Although the policy is clear on this the supporting evidence often lacks detail.
- BREEAM assessments are often required to be shell only or shell and core, without further conditions for the fit-out contractor to complete a BREEAM Refurbishment and Fit-out assessment large aspects of the construction will not have to meet any sustainability standards.

Description: Major, mixed use, new build.

Proposal: Redevelopment of the site involving demolition of existing building and erection of a building up to 9-storeys in height plus basement level to provide offices (Use Class B1) at lower ground and ground floor, a cafe (Use Class A1) at ground floor and 62 residential units (Use Class C3) at upper floor levels, together with provision of cycle parking, refuse storage and amenity space.

Requirements	Comments
<b>35% reduction in emissions on part L 2013 on site by following the energy hierarchy</b>	<p>Figures were not originally broken-down between residential and commercial areas.</p> <p>The energy hierarchy was followed.</p> <p>The commercial area fails to meet this standard independently. Whereas the residential areas exceed this. This impacts the zero carbon homes payment. Reduction over the 35% target for the residential areas cannot be counted towards both the commercial target and reducing carbon offset payments.</p>
<b>Zero Carbon Homes</b>	This standard was not incorporated into the original report. Payment had not been calculated.
<b>BREEAM Excellent (unless demonstrated it is not technically feasible, in which case Very Good with a minimum score of 63%)</b>	<p>The BREEAM New Construction pre-assessment stated BREEAM Excellent could not be achieved. Additional information was required to demonstrate this was not feasible.</p> <p>The applicant does not yet know if the commercial area will be shell and core or fully fitted. If it is shell and core a BREEAM fit-out and refurbishment assessment will also be required. Conditions are required to allow for either option.</p>
<b>Internal residential water use less than or equal to 105L/person/day</b>	The original submission did not state that this standard would be achieved.

## 16/02973/FUL -Waterloo Station London SE1 8SW

Submission date: 17/05/16

Example of: This is an example of another BREEAM issue. BREEAM Refurbishment and Fit-out is split into 4 parts, it is important to check that all applicable parts are included in the pre-assessment and then ensure that this information is incorporated into conditions to ensure expectations are clear and to simplify the discharge process.

This is also a good example of a development where the applicant is resistant to BREEAM targets due to the size of individual units, however currently policies require BREEAM on all new non-residential developments regardless of the size and on all refurbishments with a total floor area over 500m<sup>2</sup>.

Description: Major, commercial, refurbishment.

Proposal: Change of use of existing Waterloo International Terminal (WIT) to a mix of Class A1-A5 (retail) uses and Class D2 (assembly & leisure) use, the installation of mezzanine floorspace, external alterations, servicing and associated works.

Requirements	Comments
<b>Reduce emissions when compared to the existing building by following the energy hierarchy</b>	A 60% reduction in emissions was identified when compared to the existing building.  The energy hierarchy was followed.
<b>BREEAM Excellent (unless demonstrated it is not technically feasible, in which case Very Good with a minimum score of 63%)</b>	The BREEAM Refurbishment & Fit-Out pre-assessment demonstrated BREEAM Excellent could not be achieved.  There are 4 parts to BREEAM Refurbishment & Fit-Out, the pre-assessment was for Part 2 only. Conditions were recommended for the fit-out contractors to complete Part 3 & 4 assessments. Discussions are ongoing with the application regarding the size of the units which will be required to complete this.

## 15/06029/FUL - 17 Newport Street London Lambeth SE11 6AH

Submission date: 21/10/15

Example of: This is an example of a site with future potential to connect to a district heat network. Without the connection the site will fail to meet the target reduction in emissions. As required by the London Plan a connection is prioritised, and this will be ensured through S106. It is expected that this will become more common as heat networks are extended.

Description: Major, residential, new build.

Proposal: Demolition of existing five storey residential building and erection of a fifteen storey building including basement providing 12 self-contained flats (4x 1bed; 7x 2bed; and 1x 3bed) with associated private amenity balconies, communal amenity space at first floor level, cycle parking and refuse and recycling storage area.

Requirements	Comments
<b>35% reduction in emissions on part L 2013 on site by following the energy hierarchy</b>	<p>A 27% reduction will be achieved, however this is predicted to increase to 69% following connection to the VNEB district heat network. A S106 was recommended to ensure this connection happened within an acceptable timeframe.</p> <p>The energy hierarchy was followed.</p>
<b>Internal residential water use less than or equal to 105L/person/day</b>	<p>A copy of the water efficiency calculator for new dwellings was submitted to demonstrate how the target would be met.</p>

## 16/02324/FUL – St Gabriel's College Langton Road London SW9 6UL

Submission date: 14/04/16

Example of: School sites are often problematic. As there is a need for school the Education Funding Agency argues that BREEAM and emissions targets cannot be met. This is particularly frustrating as energy efficiency measures and renewable technologies could create learning opportunities for students. This is an example of a school where a compromise was made both on emissions and BREEAM with the applicant improving upon their original submission but still not meeting targets.

Description: Major, mixed use, new build.

Proposal: Demolition of the existing school buildings and caretaker's house and replacement with a 3 storey teaching and sports hall block with landscaping, parking and associated ancillary works.

Requirements	Comments
<b>35% reduction in emissions on part L 2013 on site by following the energy hierarchy</b>	<p>A 5.4% reduction in emissions was proposed. The applicant identified a suitable area for solar PV and proposed making the roof suitable for retrofit, this was felt unacceptable.</p> <p>With the addition of PV a 25% reduction could be achieved. This has been incorporated into a S106 agreement. It still misses the 35% target. Due to the development being a school funding is limited.</p> <p>The energy hierarchy was followed.</p>
<b>BREEAM Excellent (unless demonstrated it is not technically feasible, in which case Very Good with a minimum score of 63%)</b>	<p>The BREEAM New Construction pre-assessment stated BREEAM Excellent could not be achieved due to a lack of funding provided by the EFA. Initially a low Very Good score was targeted. Additional information was required to demonstrate that BREEAM Excellent was not feasible.</p> <p>BREEAM Very Good with a minimum score of 63% was agreed upon. This has been incorporated into a S106 agreement.</p>

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## 8. Conclusions and Recommendations

### **BREEAM:**

Some developments find achieving BREEAM targets difficult. This stresses the importance of requiring pre-assessments and design stage certificates to ensure that developers are considering the developments BREEAM strategies at all early stage.

At this time it is felt that Policy EN4 is well worded as it offers some degree of flexibility to developments that can demonstrate BREEAM Excellent is not achievable.

CIS have been provided with few final BREEAM certificates to discharge conditions. It is important to ensure these conditions are discharged as design stage certificates can be issued based mainly on letters of commitment. If case officers are reviewing these certificates themselves they should be careful to check if certificates are fully-fitted, shell and core or shell only, and ensure that this matches what was proposed.

It is important that conditions specify if a fully fitted, shell and core or shell only assessment is expected to save confusion when trying to discharge conditions. For the same reason conditions should include which areas are to be assessed if there a multiple buildings or end uses.

CIS has encountered a number of developments where a shell and core or shell only assessment was proposed. In these cases a BREEAM Refurbishment and Fit-out assessment has also been required. In a number of cases applicants were resistant to this. CIS would recommend this requirement is made clear in any future revisions to policies.

### **Residential Water Use:**

An internal water use below 105L/person/day should not be challenging as it was a mandatory requirement for CSH Lv 3 & 4. It is still important to include these conditions and ensure evidence is submitted to discharge them to prevent a degradation in standards.

In a number of cases applicants were reluctant to provide this information at application stage, preferring a pre-commencement condition for the information. As sanitary ware is not installed early in the build process CIS do not object to this. However to reduce this future versions of the Lambeth Local Plan should clearly state that this is required.

Currently LB Lambeth cannot require a lower internal water use, however in the future this may be something to consider. Grey water and rainwater may also be areas to explore for major development in the future.

### **Emissions:**

With changes to policies such as the London Plans introduction of zero carbon homes a number of initial reports were submitted with the incorrect targets, or information presented incorrectly. There is a need to communicate requirements to developers through guidance documents, pre-application consultation and meetings.



As carbon offset payments will be becoming more common it is important to review as-built figures as well as proposed figures to ensure that targets have been met and payments have been calculated correctly.

Over the past year CIS have not recommended the discharge of many post construction energy strategy conditions. LB Lambeth should ensure that these conditions are enforced.

As these requirements are included in the London Plan it is important for LB Lambeth to keep up to date with any amendment or updates made to this document. Currently there is no scope for LB Lambeth to amend these targets. It is however possible to introduce a requirement for renewable energy generation on site.