

Issues and recommendations from TLA audits 2015-16

In 2015-16, Level 2 audits were conducted on 75 Tenancy Lighting Assessments (TLAs).

The issues identified by the auditors and the recommendations (examples shown in Attachment A):

- are being provided to all CBD assessors to assist in improving the standards of TLAs;
- were taken into consideration in the development of version 3 of the *CBD Tenancy Lighting Assessment for Offices Rules*, released in August 2016; and
- will be considered in updating the CBD assessor training modules and provided to the trainers.

The main issues identified include:

- errors in data entry to the TLA form on the assessors' portal
- inadequate evidence to support assessment, including inadequate or illegible notes, measurements, calculation of area or details about luminaires
- photos out of focus, especially close up photos of lamps
- photos not date stamped, not filed or labelled in accordance with the functional space
- using photos and notes from previous assessments
- details of luminaires not provided
- incorrect lamp type selected in assessor portal
- lighting controls not documented for each functional space
- wrong Aggregate Method or Grid Method used whereas Aggregate Method 2 or 3 would have been more appropriate
- not selecting 'whole building' in the TLA form on the assessors' portal where whole building was being assessed
- repeating grid evidence does not appropriately demonstrate repeating grid area
- lack of evidence to support assessment that all functional spaces had a regular repeating grid
- NLA survey plans not meeting PCA 1997 standard
- insufficient evidence to confirm areas as 'non-assessable'.

Attachment A provides examples of the issues identified by auditors and recommendations for addressing them in future TLAs. Some of the recommendations have been included by the CBD Program Administrator to reflect changes to this requirement in Version 3 of the Rules.

References to actual buildings and assessors have been removed.



Attachment A – Examples of issues and recommendations

Note – audits were prepared using Version 2 of the TLA Rules. The references to sections in the *Comments and Recommendations* column refer to sections in Version 3 of the TLA Rules.

Issues	Comments and recommendations
Data entry	
Number of luminaires in spreadsheet does not match the number of luminaires identified for the area on the site notes. Assessed NLPD may be incorrect.	Likely a data entry error in the portal or incorrectly recorded in the supporting documentation. Check data before submitting form.
Assessor has selected a Scope of Part Building, however it appears that a Whole Building Assessment has been completed	Ensure 'whole building' is selected in the TLA form when assessment covers all office space in building.
Documentation	
Supporting documentation very limited. No fit out plans or reflected ceiling plans (RCPs) supplied and only one photo of the grid patterns. Adequate photos not supplied for either luminaire used in the assessment.	Assessor should have used more photos within each tenancy to overcome the lack of RCPs. Photos showing the space within the tenancy and irregular array of luminaires would have greatly improved the quality of the assessment.
The grid size was described but not able to confirm if Grid Method could be used without further documents.	Ensure documentation supports grid size (such as RCP, mock-up drawings or photographs). <i>Section 6.4 Documentation requirements – NLPD</i>
There is no marked-up drawing showing grid size clearly. The photo evidence submitted for the ceiling grid covers only a small area and could have been taken with better clarity. Documentation provided does not fully satisfy requirements.	Evidence/documentation must validate data entry. Photos must clearly demonstrate regular repeating grid. <i>Section 6.4 Documentation requirements – NLPD</i>
Notes appear to have been recycled from a previous assessment and were illegible. Information on site plans very messy.	Do not recycle notes from previous assessments, prepare clear notes. <i>Section 5.6 Documentation requirements - Luminaires</i>
Generally inadequate documentation of the luminaires - no evidence of lamp wattage for the claimed 28W fittings and some ambiguity about delamping for the T8 fitting.	Evidence/documentation must be provided to support luminaries identified. Assessor cannot assume all T5 lamps are 28W as variations exist in the marketplace. <i>Section 5.6 Documentation requirements - Luminaires</i>



Photos	
Photos are poor quality	Check images before leaving each Functional Space (FS). Retake if necessary.
Luminaire photos do not clearly depict lamp details (type, wattage, number of lamps, or ballast/control gear type).	Request site contact to open luminaires to allow for photos of lamp details. If not possible, collect other evidence of luminaires used in each FS such as spare lamp stocks or as installed documentation. <i>Section 5.6 Documentation requirements - Luminaires</i>
No photos provided for FS.	Assessors should rely on photos as the primary form of evidence. Where photos are not possible due to tenant concerns, ensure this is documented in notes and collect other evidence. <i>Section 5.6 Documentation requirements - Luminaires</i>
While lots of photos were taken, they were not labelled and couldn't be aligned with the FS.	Ensure all photos are correctly labelled and filed with the FS or folders. <i>Appendix F – Example documentation storage and labelling methodology</i>
According to audit report the assessment date was 4/8/15 but photo properties show photos taken on 12/3/15 and 29/7/15.	Use of photos from previous assessments are not acceptable, unless written approval has been provided by the CBD regulator. <i>Section 5.6 Documentation requirements - Luminaires</i>
Luminaires	
Several luminaires are setup in the luminaire schedule but not included in the assessment.	Exclude any luminaires not used for NLPD assessments from the luminaire schedule. <i>Section 5.3 – Luminaire Schedule</i>
Site notes are unclear for several FS and do not differentiate between different luminaire types sufficiently for audit purposes.	Ensure notes are clear and concise, exclude any information not used in the NLPD assessment ensuring: - areas used in aggregate method calculations are clearly defined; and - luminaires are consistently named across all notes for all FS.
Assessor unable to visually identify the luminaire.	The version 3 TLA Rules provide more options for Assessors. Assessors can use default lamp values as per <i>Section 5.4.4 Default lamp values</i> where lamp details or luminaire type cannot be safely identified.
No calculations/evidence for count of luminaires within any of the Functional Spaces is provided.	Provide evidence to support the count of luminaires such as site notes.



	<i>Section 5.6 Documentation requirements - Luminaires</i>
Photos show a downlight in FS 1 and 3 and no calculation or luminaire count is made to determine if these lights make up <5% of the total wattage as required in Section 6.3.3. This cannot be determined from the photo alone.	Either calculate or count luminaires to determine if these lights make up <5% of the total wattage. <i>Section 6.3.3 Grid Method; AND</i> <i>Section 6.4 Documentation requirements – NLPD</i>
Appears that the LED fitting default has been selected based on an incorrect interpretation of cut-out diameter, resulting in an unnecessarily high default being used.	Ensure the evidence is appropriate to support the assessment. Page 6 and Page 7 of <i>Section 2.2 – Definitions</i> show examples of cut-out and face diameter of lamps. <i>Section 5.4.4 Default lamp values</i>
Systematic error was the selection of the wrong lamp type for the 2*28W luminaire which causes the vast majority of FS to have an underestimated NLPD.	Ensure correct lamp type is selected.
Luminaire schedule for the 14W, SP114T5 (A2) has conflicting specification. The written description stipulates 14Watt lamp, while the details under light source description of the document stipulates 28Watt.	Provide photo evidence to clarify correct lamp wattage. Check luminaire information before submitting form.
Generic space has a fitting which is reported as being 1*36W, but most photos of this fitting either don't give any indication of lamp number, or suggest a 2*36W fitting. Auditor believes a 2*36W installed originally; it is a major issue to not have documented the retrofit more explicitly than has been the case here, given the potential factor of 2 on NLPD. Based on evidence provided, cannot rule out possibility that some floors have been retrofitted and others not.	Ensure photos or other evidence shows details of all different luminaire types used in the assessment.
Occupancy sensor controls	
No commentary or sketches provided to confirm controls cover 50% of FS area.	Ensure photos of system of manuals are available and a count of occupancy sensors complete. Obtain a lighting control diagram showing which luminaires are controlled by each sensor, enabling accurate calculation of zone size.
Evidence for the lighting control strategy indicates after-hours control buttons for each wing of floor. Assessor included manual control in the TLA.	This is indicative of a luminaire controlled by time switch or interlinked to turn off with the setting of the site security alarm. Further investigation could have been carried out by the assessor before manual control option was included in the TLA.



Documentation (marked up RCP) does not clearly show occupancy control zone size area calculations.	Evidence for aggregate methods and control zone sizes must clearly show area measurements.
Generic lighting control is time based, with two lines of site notes on this matter covering the whole building, suggesting that it wasn't confirmed on a floor by floor basis and certainly not providing evidence on a space by space basis.	Lighting controls must be assessed for each FS and supporting evidence collected. <i>Section 7.3 Documentation requirements – Lighting Controls Assessment</i>
Aggregate methods	
Notes not clear on how areas for aggregate method have been calculated.	Show length and width, or other required measurements, or state that ceiling tile size and number of ceiling tiles has been used as the basis for measurement.
Documentation provided does not support the assessment results as there were two differently sized repeating blocks within the FS.	If two different grid block sizes exist within the same FS, Aggregate Method 1 may be a more suitable assessment method.
Naming of suites in TLA application does not match provided survey plans; unclear how the area for some spaces was calculated.	Ensure that naming conventions are applied consistently through documentation and the portal application.
Use of Aggregate Method 2 where Aggregate Method 1 appears to have been feasible.	Select the most appropriate method and provide appropriate supporting documentation (notes, floor plans and photos). The version 3 TLA Rules provides an easier process for selecting the appropriate NLPD assessment method as per <i>Section 6.3.2 NLPD assessment method selection</i> .
The sample area has been drawn onto the NLA Plan, however no dimensions are listed and the area listed on the plan differs from the area in the assessment spreadsheet.	Section 3.4.3 of the TLA Rules states “where the representative area method is used for an irregular array of luminaires the following must be implemented: - mark up the representative area on the floor plan - record the NLA of the representative area and how the NLA was obtained - sketch a diagram showing the arrangement of luminaires and grid spacing.”
Grid assessment method	
Grid assessment method used throughout building, with a number of incorrect assessments of grid size (i.e. number of tiles) resulting in incorrect NLPD calculations.	Count of tiles needs to occur from the same side of the tile in each case to avoid under counting (see examples in version 3 TLA Rules <i>Appendix D – NLPD calculation examples</i>). Ceiling tiles - take photo of specifications on



	a spare box of ceiling tiles to confirm tile size (e.g. 1.2m x 0.6m) - stronger evidence than site notes.
No documentation for ceiling tile sizes provided beyond assessor's site notes.	Include photo of the label on a ceiling tile box in evidence, or a photograph of hand measurement of a spare ceiling tile. <i>Section 6.4 Documentation requirements – NLPD</i>
Incorrect application of grid method resulting in the grid area being halved and consequently the NLPD incorrectly doubled for these spaces.	Aggregate method 2 or 3 may be more appropriate where a repeating grid cannot be easily defined.
Documentation does not support the use of the grid method in this FS. Photo evidence indicates heavy partitioned space with an irregular array of luminaires.	Aggregate method 2 or 3 may be more appropriate where a repeating grid cannot be easily defined.
Assessor has chosen Aggregate Method 1 for several FS, however, the provided documentation strongly suggests that the Grid Method could be used.	Select the appropriate method for the FS as per the version 3 TLA Rules. <i>Section 6.3.2 NLPD assessment method selection.</i>
Where the Grid Method was used, it was incorrectly sized at 2.4m x 2.4m when it should have been 2.4m x 1.8m, resulting in an incorrect NLPD that was lower than it should have been. The Grid Plan 'mock-up' shows only one luminaire.	Count of tiles needs to occur from the same side of the tile in each case to avoid under counting (see examples in version 3 TLA Rules <i>Appendix D – NLPD calculation examples</i>). A Grid mock-up or sketch needs to include enough detail to demonstrate the measurements for the repeating block. <i>Section 6.4 Documentation requirements – NLPD</i>
No evidence provided by assessor to validate grid size used in the TLA.	<i>Section 6.4 Documentation requirements – NLPD</i>
Photos showed several different grid layouts and it was unclear which one was being used as 'the grid'.	Where multiple grids exist, ensure documentation is provided to confirm that the grid area used in the assessment covers 50% or 250m ² in the space. <i>Section 6.3.3 – Grid Method</i>
Only provided evidence for level 1 FS and relied on this for all other FS. No evidence other than notes to verify that all levels/FS have a regular grid.	Separate evidence must be provided for each FS to support each assessment of the NLPD and Lighting Control Capacity.
Non-assessable areas	
Conflicting evidence provided by assessor; site notes for Level 3 Suite 3, state it is a 'restricted area, cannot access', but notes in the TLA application state 'This	Evidence must support the description of the area as outlined in <i>Section 4.3.2 Naming Functional Spaces</i> .



space is not accessible due to the tenant not being available and irregular in the use of this office.'	
Looks like floors with small cell offices are listed as non-assessable; assessor may have misunderstand definition of "Qualifying Office Space".	"Qualifying Office Space" definition has been updated to "Open Office Areas" in Version 3 of the Rules. <i>Section 2.2 – Definitions</i>
There is no third party documentation or lease to confirm that ground floor tenancy B and level 4 tenancy are non-office spaces and hence were not assessed in the TLA.	Evidence needs to be provided for a FS to be deemed Non-Assessable as per <i>Section 2.4 Non-Assessable Spaces</i> .
Assessor has declared a number of spaces non-assessable without providing adequate evidence and in some cases the evidence provided suggested accessibility. No site notes or any evidence of sample area calculations or fitting counts provided.	Ensure evidence is adequate to support the decision that space was non-assessable. <i>Section 2.4 Non-Assessable Spaces</i>
NLA plans	
Marked up floor plan showing area calculations is unclear.	Re-draft plans after completion of site visit.
Survey plan does not meet PCA 1997 standard.	Request NLA schedule or tenant stacking plan from the client, or recommend that building owner completes a certified PCA 1997 survey for space.
Some NLA plans (or other documents) were not provided to confirm NLA of some Functional Spaces.	Evidence of assessment area must be provided in documentation for all Functional Spaces.
NLA used in TLA assessment can be taken directly from PCA survey plans where available.	Assessor does not need to take into account area exclusions as per NABERS rated area. <i>Section 4.1 – Assessment Area</i>
Incorrect NLA was used for level 5, suite 4. There are two layouts showing NLA, however only one states that calculation were carried out in accordance with PCA 1997. While the difference was small, it was within the allowable error margin.	Use the PCA 1997 standard for NLA measurement.
Data centres	
A FS assessed on the ground floor stipulates the space as a data centre.	Being a non-office space, this should have been considered as Non-Assessable as per <i>Section 2.4 Non-Assessable Spaces</i> .

