

The Rules

# Energy for Offices

Version 2.1 –May 2024



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# 1 Introduction

## 1.1 General

NABERS UK is a performance-based rating scheme that operates across England, Wales, Scotland and Northern Ireland. It is managed by CIBSE Certification Ltd, referred to as the **Scheme Administrator**. The scheme is owned and licensed by NABERS, who also own and administer the Australian NABERS rating system.

NABERS UK ratings are expressed as a number of stars, as follows:

NABERS UK rating	Performance comparison
6 stars ★★★★★★	Market leading building performance
5 stars ★★★★★	Excellent building performance
3 stars ★★★	Market average building performance

Under the NABERS UK rating scheme, the number of stars awarded to an office is calculated by benchmarking energy consumption and comparing it against buildings of the same category, using 12 months of actual data. Key factors influence this consumption, such as building area, hours of use and climate.

The **rating scope** must be determined in accordance with Table 1.1.

**Table 1.1: Scopes for NABERS UK energy for offices ratings**

Type of rating	Scope
<b>Base building</b>	Assessment of the energy consumed in supplying building central services to office <b>Net Internal Area (NIA)</b> and common spaces.
<b>Tenancy</b>	Assessment of the energy consumed by the <b>tenancy</b> to be rated. A <b>tenancy</b> rating typically covers lighting and power within the <b>tenancy</b> , as well as any <b>special tenancy requirements</b> or <b>local air conditioning</b> . A <b>tenancy</b> rating does not cover base building central services.
<b>Whole building</b>	Assessment of the energy used by office tenancies and by <b>base building</b> services to office lettable and common spaces.

An accredited NABERS UK energy rating is awarded when the **Scheme Administrator** certifies a rating completed by an **Assessor**. The **Scheme Administrator** may independently audit the rating and assist in resolving complex technical issues.

This document presents the energy for office **Rules** that are common for all NABERS UK ratings. It is intended that this document be read in accordance with *NABERS UK The Rules — Metering and Consumption*. Its purpose is to provide clear requirements for **Assessors** when they are evaluating offices' energy usage for a NABERS UK rating. As such, it presents the minimum requirements of what **Assessors** must adhere to when they are conducting a NABERS UK rating.

This document contains **Rules** for **Assessors** conducting an energy rating for offices as follows:

- a) **Rated area**, see Chapter 4.
- b) **Rated hours**, see Chapter 5.
- c) Number of **occupied workstations**, see Chapter 6.
- d) Minimum energy coverage, see Chapter 7.
- e) Documentation requirements for accredited ratings, see Chapter 8.

These **Rules** provides guidance for **Assessors** where such schemes are present.

These **Rules** will supersede *NABERS UK The Rules — Energy for Offices*, v1.2, 2022.

## 1.2 Interpretation of the Rules and Rulings

These **Rules** are to be read in conjunction with the respective NABERS **Rulings** as they apply to the specific building type. **Rulings** are used to address specific issues that may arise after the publication of the **Rules**.

Assessments for an accredited rating must comply with the version of the **Rules**, and any relevant **Rulings**, current on the day the rating application is lodged with NABERS UK, unless—

- a) the **Scheme Administrator** has specifically approved otherwise in writing; or
- b) the assessment is conducted under the terms of a NABERS Design for Performance Agreement (refer to <https://www.cibsecertification.co.uk/nabers-uk/products/design-for-performance/useful-downloads/>) which specifies an earlier version of the **Rules**.

**Note:** **Rules** texts are amended as required by additional **Rulings** which are published on the NABERS UK website at <https://www.cibsecertification.co.uk/nabers-uk/products/design-for-performance/useful-downloads/>.

Where a conflict between these **Rules** and existing **Rulings** is present, the requirements of the **Rulings** take precedence over the **Rules**.

## 1.3 Situations not covered by the Rules

**Assessors** must comply with these **Rules** unless prior approval has been sought and approved by the **Scheme Administrator**.



Where appropriate, **Assessors** may contact the **Scheme Administrator** to propose an alternative methodology, outlining the circumstances and rationale. Prior approval for use is required and may be granted conditionally, on a case-by-case basis and at the **Scheme Administrator's** discretion.


Procedures not contained within these **Rules** may only be used for a particular rating with prior written approval from the **Scheme Administrator**. Approval to use the same procedure must be sought from the **Scheme Administrator** each time it is proposed to be used. Approval is entirely at the discretion of the **Scheme Administrator**.

## 1.4 How to use this document

The term "**Rules**" refers to a body of works produced by NABERS UK that specify what must be examined, tested and documented when an **Assessor** conducts a rating. Wherever the term is used in this document from Chapter 3 onwards, it refers to this document, *NABERS UK The Rules — Energy for Offices*. Other **Rules** documents mentioned in the text are distinguished from the present document by the inclusion of their title.


Text appearing **dark green** and **bold** is a defined term. Defined terms can be found in Chapter 2 of these **Rules** or in the terms and definitions chapter of the respective **Rules** document.

The following formatting conventions may appear in this text:

 Important requirements and/or instructions are highlighted by an information callout box.

**Note:** Text appearing with a grey background is explanatory text only and is not to be read as part of the **Rules**.

**Example:** Text appearing with a green background is intended to demonstrate a worked example of the respective **Rules** section or **Ruling** section.

 This is a documentation requirement callout box.

## 1.5 What is new in this version

This new version expands the energy for office ratings to now include **tenancy** and **whole building** ratings in addition to **base building** ratings. A detailed list of the main changes made between this version and the previous version, is given in Appendix D.

## 1.6 Related documents

The following document has been referenced within these **Rules**:

*NABERS UK The Rules — Metering and Consumption, v2.0, 2023*

Royal Institution of Chartered Surveyors (RICS), *Code of measuring practice*, 6th ed, 2015

**Note:** The following documents are NABERS Australia documents which are relevant to NABERS ratings under the NABERS UK scheme. Not all aspects of these Australian documents are applicable to NABERS UK and therefore some interpretation may be required.

*NABERS Ruling — On-site Renewable Electricity Generation Systems*, v1.1, 2021

*NABERS Ruling — Shared Services and Facilities*, v1.0, 2022

*NABERS Ruling — Treatment of Cogeneration and Trigeneration Systems*, v1.2, 2022

*NABERS The Interim Rules — Thermal Energy Systems*, v1.0, 2021

## 2 Terms and definitions

This chapter lists the key terms and their definitions that are integral to the proper use of this document.

Term	Definition
<b>acceptable data</b>	Data which meets the applicable accuracy and validity requirements of these Rules.
<b>acceptable estimate(s)</b>	<p>The values derived from an estimation method permitted by these Rules in place of incomplete or uncertain data.</p> <p>Estimates that do not satisfy the above specifications are deemed unacceptable and cannot be used in the rating.</p>
<b>after-hours air conditioning (AHAC)</b>	The delivery and maintenance of a facility's heating and air-conditioning services, outside regular operating hours, for the benefit of a tenant.
<b>agile and activity-based working (ABW) spaces</b>	Work spaces that are not solely traditional assigned seating, such as spaces/working environments that have a mixture of facility types, including regular workstations, phone booths, quiet areas, lounges and project spaces.
<b>Assessor(s)</b>	An accredited person authorised by the Scheme Administrator to conduct NABERS ratings.
<b>Auditor</b>	A person contracted to the Scheme Administrator to perform audits of NABERS rating applications.
<b>base building</b>	The technical entity defined by the services within the minimum energy coverage defined in <i>NABERS UK The Rules — Energy for Offices</i> .
<b>comfortable for office works</b>	Where the conditions in a space, in terms of temperature and outside air supply, are suitable for reasonable, normal use as an office.
<b>complete tenancy</b>	<p>The NIA a single tenant occupies, including all office spaces and office support facilities in the building that are used together as an interrelated group of facilities to accommodate its business, no matter if they are on one or more floors and regardless of whether—</p> <p>a) the spaces are occupied on the basis of one or more leases or other agreements; and</p>



Term	Definition
	<p>b) those leases or agreements are nominally held by one or more associated entities on behalf of the tenant.</p> <p>Facilities are not included in such an interrelated group if they are—</p> <ol style="list-style-type: none"> <li>1) physically distinct;</li> <li>2) managed independently;</li> <li>3) presented or branded distinctly; and</li> <li>4) independent of one another for services.</li> </ol> <p>For leases with one or more sub-leases, it is acceptable to either—</p> <ol style="list-style-type: none"> <li>i) consider the entire NLA under the head lease with the main tenant as a complete tenancy; or</li> <li>ii) for the sub-lease(s), separate and consider the NLA of the sub-lease(s) as individual complete tenancies, if sub-metering allows.</li> </ol>
<b>computer server room(s)</b>	A room designed to accommodate computer and associated communications equipment that is separated from adjacent spaces by full-height walls and a door.
<b>data centre(s)</b>	<p>A computer server room that comprises one of the following:</p> <ol style="list-style-type: none"> <li>a) At least 5 % of the total office NIA of the rated building.</li> <li>b) At least 25 % of the NIA of the floor on which it is located.</li> <li>c) A room where at least 75 % of its capacity is dedicated to external users.</li> </ol> <p>The combination of multiple computer server rooms is not considered a data centre.</p>
<b>educational office facility</b>	<p>An educational facility which occupies a tenancy within a commercial office building that is fit for office use.</p> <p><b>Note:</b> For further information, see Section 4.6.</p>
<b>embedded network(s)</b>	A privately operated electricity network where the network operator/owner has a utility meter and has the ability to on-sell electricity to users downstream of this utility meter.

Term	Definition
	<p><b>Note:</b> Most office buildings in the UK use embedded networks for supplying office tenants and the base building systems.</p>
end use(s)	A purpose or activity (or a group of related purposes and activities) that energy is used for.
exclusively for the use of office tenants	Where public access is not generally allowed by the office owner or leaseholder, except for receiving visitors to the office.
external user(s)	<p>User of an IT or communication service provided from a facility sited in the rated premises, who is not an occupant of the rated premises.</p> <p><b>Note:</b> An occupant who uses the service internally from the rated premises and who may also access the network or system remotely (such as from home or another work location) is not an external user.</p>
fit for office use	Fit for continuous occupation as an office, with adequate lighting and with suitable ventilation (such as air conditioning, natural ventilation or mixed-mode operation) of a similar or higher standard of service to the bulk of the office.
fit out works	A construction activity undertaken to install, remodel, replace or remove an office fit out.
functional space(s)	A space identified by an Assessor as a distinct space in accordance with Section 4.4.
heating, ventilation and air conditioning (HVAC)	Any system that is used for heating, ventilating or conditioning the air in an enclosed space.
internal user(s)	User of an IT or communication service provided from a facility sited in the rated premises, who is an occupant of the rated premises (i.e. not an external user).
local air conditioning	Equipment providing heating and/or cooling that is not connected to the base building air-conditioning system, typically in the form of a packaged air-conditioning unit.
measurement standard for rated area	The standard used for determining the NIA of a rated premises, which is equal to the NIA as set out in <i>RICS Code of Measuring Practice</i> .

Term	Definition
<b>medical office facility</b>	<p>A doctor's surgery, dentist's surgery or other facility operated by a health professional (e.g. physiotherapist) that occupies a tenancy within a commercial office building that is fit for office use.</p> <p><b>Note:</b> For further information, see Section 4.6.</p>
<b>meeting room(s)</b>	<p>A room designed to accommodate meetings for short periods of time on a temporary basis, as opposed to a permanent working area.</p> <p>A meeting room is separated from adjacent spaces by full-height walls and a door.</p>
<b>metering system(s)</b>	<p>A system of one or more devices providing an individual measurement.</p> <p><b>Note:</b> For further information, refer to <i>NABERS UK The Rules — Metering and Consumption</i>.</p>
<b>NABERS UK rating input form</b>	<p>The rating input form provided by the Scheme Administrator for use by Assessors in the calculation of accredited ratings.</p>
<b>Net Internal Area (NIA)</b>	<p>The floor area, determined in accordance with the measurement standard for rated area, of spaces that can be used as offices within the rated premises.</p> <p><b>Note:</b> This is essentially the space within the permanent walls of the building, but excluding spaces for:</p> <ul style="list-style-type: none"> <li>a) Public access and use, including stairs, escalators, lift lobbies and passageways.</li> <li>b) Building mechanical, air conditioning, electrical and other utility services.</li> <li>c) Staff and cleaning facilities, including toilets, tea rooms and cleaners' cupboards.</li> </ul> <p>The Assessor should refer to the relevant measurement standard for rated area documents that provide a definitive list of inclusions and exclusions.</p>
<b>non-utility metering system</b>	<p>An energy metering system that is owned or operated by a third party other than a utility.</p>
<b>occupied</b>	<p>A space within the NIA of the following buildings:</p> <ul style="list-style-type: none"> <li>a) <i>Base building ratings</i>: Ready for occupation.</li> </ul>

Term	Definition
	<p>b) <i>Tenancy ratings</i>: Ready for occupation and being actively used as an office, including use as an office support facility.</p> <p>c) <i>Whole building ratings</i>: Ready for occupation and either being actively used as an office (this includes use as an office support facility) or undergoing fit out works.</p>
<b>occupied workstation(s)</b>	A workstation with evidence of being in use at the time of the occupied workstation count in accordance with Section 6.3.2.3.
<b>occupied workstation count(s)</b>	<p>For each functional space, the total number of occupied workstations determined from the following:</p> <p>a) The number of workstations and occupied workstations in the functional space.</p> <p>b) The TOWE results,</p> <p>as specified in these Rules.</p>
<b>office</b>	<p>A workplace primarily used for administrative, clerical and similar information-based activities, including the associated office support facilities.</p> <p><b>Note:</b> For reasons of readability, this term is not highlighted throughout this document.</p>
<b>office support facility</b>	<p>A facility which—</p> <p>a) is an adjunct to an office used primarily to provide supporting facilities or services to the office or its occupants;</p> <p>b) is exclusively for the use of office tenant(s); and</p> <p>c) occupies a space which is fit for office use.</p> <p>This includes facilities used for the following:</p> <ol style="list-style-type: none"> <li>1) Receptions.</li> <li>2) Meetings.</li> <li>3) Training.</li> <li>4) Filing and storage.</li> <li>5) IT and other office equipment.</li> <li>6) Tenant-installed kitchenettes.</li> <li>7) Staff amenities.</li> </ol> <p>It can also include facilities that provide—</p> <p>i) child care; and</p>

Term	Definition
	ii) refreshment, recreation and exercise, as long as they are only available for use by office tenants in the rated premises.
<b>Owner/Tenant Agreement (OTA)</b>	<p>An OTA refers to a document that contains the following:</p> <ul style="list-style-type: none"> <li>a) A mutual agreement between the landlord and a tenant representative with adequate authority.</li> <li>b) Clearly defines the space and the period of time for which the agreement is made.</li> <li>c) Defines hours of use for the space considered, i.e. OTA hours.</li> <li>d) Provides a format that can be relied upon by the tenant for operational complaints and lease (re)negotiation.</li> </ul> <p>The OTA could be the lease agreement or any other written correspondence between the tenant and owner as long as the conditions above are met.</p>
<b>potential error(s)</b>	<p>The total of acceptable estimates (including assumptions, approximations, and unverified data) for rated area and energy consumed, and the acceptable estimates less the default value for rated hours, occupied workstation count.</p> <p>The NABERS UK rating input form automatically calculates the potential error based on the data provided.</p>
<b>public access space(s)</b>	A space that members of the public can access.
<b>rated area(s) (for an entire rating)</b>	The final area determined by following the process described in these Rules.
<b>rated hours (for a functional space)</b>	For each functional space, the total number of hours per week determined by using one or a combination of the methods described in these Rules.
<b>rated hours (for an entire rating)</b>	For an entire rating, the area-weighted average of the rated hours for all functional spaces included in the rating.
<b>rated premises</b>	The building or building section to be rated.

Term	Definition
<b>rating period</b>	The 12-month base period for the rating, requiring at least 12 continuous months of acceptable data upon which the rating is based.
<b>rating scope</b>	The scope of the rating, either base building, tenancy or whole building, see Section 1.1.
<b>ready for occupation</b>	<p>A space within the NIA of a building when a person or organisation—</p> <ul style="list-style-type: none"> <li>a) is entitled to exclusive use of the space (e.g. through ownership or a lease or other agreement); and</li> <li>b) requires normal base building services, such as access, air conditioning, lighting and power to be provided to the space.</li> </ul>
<b>Rules</b>	Authoritative document produced by the Scheme Administrator that specifies what must be covered by an Assessor in order to produce a rating.
<b>Ruling(s)</b>	An authoritative decision by the Scheme Administrator which acts as an addition or amendment to the Rules.
<b>Scheme Administrator</b>	<p>The body responsible for administering NABERS UK, in particular the following areas:</p> <ul style="list-style-type: none"> <li>a) Establishing and maintaining the standards and procedures to be followed in all aspects of the operation of the system.</li> <li>b) Determining issues that arise during the operation of the system and the making of ratings.</li> <li>c) Accrediting Assessors and awarding accredited ratings in accordance with NABERS UK standards and procedures.</li> </ul> <p>The sss.</p>

**Note:** The term “Scheme Administrator” applies to the NABERS UK context and should not be confused with the term “National Administrator” that appears in NABERS Australia publications.



Term	Definition
<b>special tenancy requirements</b>	An unusual usage of office space or office support facility (e.g. a “trading floor” within an office), resulting in an increased consumption of one or more services or a requirement for additional services to achieve comfort conditions.
<b>tenancy</b>	The technical entity defined by the services within the minimum energy coverage defined in Chapter 7.
<b>Tenant Occupancy Survey (TOS)</b>	A survey of the staff managers or supervisors responsible for the functional spaces in the rated premises, conducted in accordance with these Rules.  <b>Note:</b> For further information, see Section 0.
<b>Tenant Occupied Workstation Estimate (TOWE)</b>	A survey of full-time employees for each functional space in the rated premises, conducted in accordance with these Rules. The TOWE forms part of the Tenant Occupancy Survey.  <b>Note:</b> For further information, see Section 6.3.6.
<b>utility</b>	An organisation or company that holds a licence to retail electricity, gas or water, and that sells energy or water as its primary business. For NABERS UK purposes, building owners and their agents who on-sell electricity or gas to tenants are not considered to be utilities.
<b>validation</b>	The process of checking the configuration of a metering system for a NABERS UK rating, and if necessary, adjusting and re-checking, to ensure the configuration is correct.
<b>validity period</b>	The post-certification period during which the rating is valid for up to 12 months.
<b>whole building</b>	The technical entity defined by the services within the minimum energy coverage defined in Chapter 7.
<b>workstation(s)</b>	A desk (separate or conjoined with others) that is designed as the primary place of work for an occupant in accordance with Section 6.3.2.2.

# 3 Key concepts and procedures

## 3.1 General

As part of a NABERS UK rating scheme, **Rules** provide requirements within the specific rating tools. These **Rules** apply to any building type eligible for a NABERS UK rating using the NABERS UK energy rating tools.

## 3.2 Eligibility criteria

### 3.2.1 Base building and whole building ratings

A building is considered eligible for a NABERS UK rating if all of the following eligibility criteria are met:

- a) *Building type*: During the **rating period**, the building to be rated occupies a building or part of a building that is an office.

**Note 1:** Purpose-built educational buildings (e.g. a school or non-office buildings on a university campus) or medical centre buildings are not considered **educational office facilities** or **medical office facilities** as they are not a **tenancy** within a commercial office building. Therefore, such buildings cannot be assessed for a NABERS UK energy for offices rating.

- b) *Building consumption data*: Less than 80 % of the building's total office **NIA** has been excluded due to lack of consumption data using the method specified in Section 4.5.5.
- c) *Building energy coverage*: Minimum energy coverage for the **rating scope** and spaces included is met, as specified in Chapter 7.
- d) *New buildings and major refurbishments*: New buildings or buildings undertaking major refurbishments are eligible for a NABERS UK rating as soon as 12 months of a **rating period** can be completed. In these cases, the **rating period** can start as soon as one of the following conditions is met (whichever occurs first):
  - 1) 75 % of the office **NIA** is **occupied** by tenants.
  - 2) It has been 2 years since the certificate of completion was issued.

**Note 2:** Buildings with high levels of vacancy are eligible for a NABERS UK rating to be conducted.

A NABERS UK rating is based on a 12-month **rating period**. Once certified, the rating is valid for 12 months from the certification date (the **validity period**).

For further information, see Appendix A.

### 3.2.2 Tenancy rating

A **tenancy** is considered to be eligible for a NABERS UK **tenancy** rating if all of the following eligibility criteria are met:

- a) **Tenancy type:** **Tenancy** is used as, or, if unoccupied, capable of being used as, an office.
- b) **Tenancy consumption data:** Less than 80 % of the complete **tenancy** office **NIA** has been excluded due to lack of consumption data using the method specified in Section 4.5.5.
- c) **Tenancy energy coverage:** Minimum energy coverage for the **tenancy** rating and spaces included is met, as specified in Chapter 7.
- d) **New buildings and major refurbishments:** Tenancies in new buildings or in buildings undertaking major refurbishments are eligible for a NABERS UK rating as soon as 12-months of a **rating period** can be completed. In these cases, the **rating period** can start as soon as it has been 2 years since the certificate of completion was issued.

**Note:** Buildings with high levels of vacancy are eligible for a NABERS UK rating to be conducted.

### 3.2.3 Multiple building versus single building ratings

NABERS UK ratings are for single buildings.

In cases where it is unclear whether there is a single building or multiple buildings present, the following list must be consulted. The presence of a majority of the following features is evidence of a single building:

- a) A common entry point for occupants.
- b) Interconnected access or the potential for interconnected access between areas.
- c) Central shared provision of the common services, such as heating and cooling.
- d) Capacity to be offered to a tenant as one building.
- e) Single owner.
- f) Buildings constructed at the same or within a short period of time of each other (within 2 years) and the original design allowed for the additional construction.
- g) Potential for disability legislation compliant travel horizontally between the buildings without using basement, car park or plant rooms.
- h) Single public street address, i.e. the address the building is known publicly by.
- i) Single title.
- j) A credible and responsible person would assume it is one building.

If the majority of these features are not present, the site may contain more than one building. Sufficient metering must be installed on each building for the buildings to be rated separately.

Exceptions may be made by the **Scheme Administrator**, e.g:

- 1) Where it is not physically possible to install separate metering.
- 2) For a period of time until adequate metering can be installed.

- 3) Where there is a very small separate building on a site, that on its own would not warrant a separate rating.

Where **Assessors** are unsure if buildings should be separated for rating purposes, they should contact the **Scheme Administrator**. The **Scheme Administrator** reserves the right to determine what is considered a majority of features on a case-by-case basis.

### 3.3 Rating period

A NABERS UK rating is based on a 12-month **rating period**. Once certified, the rating is valid for a further 12 months after the **rating period** — this is called the **validity period**.

It takes time for the **Assessor** to complete a rating. Therefore 120 days is given to lodge the rating after the end of the **rating period**. Ratings lodged after the 120 days will have a reduced **validity period** to ensure all ratings are based on current data.

The **Assessor** must respond to all questions from the **Scheme Administrator** within 10 working days to avoid impacting the validity of the rating.

More information on the **rating period**, **validity period** and time limits for submission can be found in Appendix A.

### 3.4 Standards for acceptable data and estimates

#### 3.4.1 General

An assessment for an accredited NABERS UK for energy for offices rating must be based on the **acceptable data** or **acceptable estimates** specified in the **Rules** (including applicable **Rulings**) or as directed by the **Scheme Administrator**.

Data and estimates must be of an acceptable standard. The decision process for determining **acceptable data** and **acceptable estimates** in Sections 3.4.2 and 3.4.3 must be followed, except where another process is specifically allowed by a provision of these **Rules**.

**Note:** Specific procedures related to standards for **acceptable data** and **acceptable estimates** in individual sections of these **Rules** take precedence over the standards in Sections 3.4.2 and 3.4.3. Where specific procedures are followed, the requirement for compliance with Sections 3.4.2 and 3.4.3 is deemed to be satisfied.

#### 3.4.2 Acceptable data

If accurate and verifiable **acceptable data** is available, it must be used. Where a section of the **Rules** allows more than one type of data source to be used and no particular priority is given, the following order of preference applies:

- a) Data obtained directly by the **Assessor**.
- b) Data provided by a third party without a significant interest in the operation or performance of the building or its equipment (such as an energy or water **utility**), including one of the following:
  - 1) Documents or other records provided by a third party which can be verified by the source, e.g. **utility** bills.

- 2) Documents or other records which cannot be independently verified but whose authenticity and accuracy is attested to by a credible and responsible person without a conflict of interest.
  - 3) Written information provided by a credible and responsible person, which includes their full name, position and contact details of the person giving the information.
  - 4) Verbal information provided by a credible and responsible person, recorded in writing by the **Assessor** with the full name, position and contact details of the person giving the information.
- c) Data provided by the owner commissioning the rating, or a third party with a significant interest in the operation or performance of the building or its equipment (such as a facility manager, technical contractor or equipment supplier), including one of the following:
- 1) Documents or other records provided by a party to an agreement or transaction which can be verified by another party to the same agreement or transaction, e.g. contracts or other legal agreements.
  - 2) Documents or other records which cannot be independently verified but whose authenticity and accuracy is attested to by a credible and responsible person without a conflict of interest.
  - 3) Verbal information provided by a credible and responsible person, recorded in writing by the **Assessor** with the full name, position, and contact details of the person giving the information.

### 3.4.3 Acceptable estimates

If **acceptable data** is not available, estimates (including assumptions, approximations and unvalidated data) can be used if they are deemed to be **acceptable estimates** in accordance with these **Rules**.

**Acceptable estimates** must result in a total **potential error** that is no more than  $\pm 5\%$  of the overall rating kWh<sub>e</sub>, as calculated when using the **NABERS UK rating input form**. Where they lead to a total **potential error** greater than 5 %, the building cannot be rated until sufficient **acceptable data** and/or **acceptable estimates** have been obtained.

## 3.5 Site visits

### 3.5.1 General

For every rating application, **Assessors** must conduct a site visit to inspect the **rated premises**. The purpose of the site visit is as follows:

- a) Become familiar with the layout, services and features of the **rated premises**.
- b) Confirm that documentation provided for the assessment is accurate, complete and up-to-date.
- c) Check that all required spaces have been included in the **NIA**.
- d) Check for inclusions in and exclusions from the **rated area** calculation and energy coverage.

- e) Check floor configuration.
- f) Visit plant rooms to ensure that all relevant equipment is covered under the meters included in the rating.
- g) Resolve any other issues that arise.

An **Assessor's** inspection of the **rated premises** is expected to include a physical check of the servicing arrangements provided to all tenancies sampled according to Section 7.3.

There may be circumstances where access to all or part of the premises is refused due to safety or security concerns. If this occurs, the **Assessor** must explain why they could not access these spaces, and fully document this in the **NABERS UK rating input form**. Any known impacts on the quality of the information obtained for the assessment must also be fully described, e.g. an **acceptable estimate** has been used in the absence of verified data.

### 3.5.2 Delegating site visit to another Assessor

Where an **Assessor** cannot undertake a site visit to inspect the **rated premises**, **Assessors** may delegate this task to another **Assessor** accredited specifically for offices.

The **Assessor** lodging the rating is responsible for the accuracy of the data. The **Assessor** must obtain and retain all the evidence required to prove their assumptions for auditing purposes, in accordance with the documentation requirements listed in Chapter 8.

### 3.5.3 Situations where site visit cannot be conducted or delegated

Where there are significant difficulties visiting the site, the **Assessor** cannot conduct a site visit or cannot delegate this task to another **Assessor**, guidance must be sought from the **Scheme Administrator** prior to submission of the rating application.

## 3.6 Documentation and record-keeping

### 3.6.1 Required documentation

An assessment may be based on copies of original documents such as **utility** bills, signed leases and other records, as long as the **Assessor** is satisfied that they are, or can be verified to be, true and complete records of the original documents or files. Access to original documents is preferred if they are available. Partial copies of original documents must be sufficient to identify the original document including date, title and file name.

### 3.6.2 Record-keeping for auditing purposes

**Assessors** must keep all records on which an assessment is based.

The records kept by **Assessors** must be to such a standard that it would be possible for another **Assessor** or an **Auditor** to accurately repeat the rating using only the documents provided. This includes records of assumptions and all information and calculations used as the basis for **acceptable estimates**. The records kept must be the actual documents used for the assessment or verifiable copies. Summaries or other derivative documents that quote the original source documents are not acceptable, even if prepared by the **Assessor** from original documents.



Digital copies of documents are considered acceptable in all cases.

Records must be kept for 7 years from the date the rating application was lodged and be made available for audit on request.

**Note:** **Assessors** remain responsible for ratings they have conducted, even if they move companies.

A list of the usual documentation for a rating is presented in Chapter 8, however, additional documentation may also be required to permit an **Auditor** to accurately repeat the rating using only the documents provided.

### 3.7 Alternative methodologies

**Assessors** may be required to use alternative methodology for obtaining or interpreting data for an assessment where standard methods outlined in the NABERS UK **Rules** cannot be applied. At a minimum, the alternative methodology must be one of the following:

- a) Equivalent to the preferred method in terms of its results, accuracy and validity.
- b) Acceptable in place of the preferred method, subject to the data resulting from the alternative method being treated as an estimate in accordance with Section 3.3, or other specified conditions on the use of the data.
- c) All alternative methodologies must be approved by the **Scheme Administrator** prior to use. For further information, please contact the **Scheme Administrator**.

# 4 Rated area

## 4.1 General

There are several factors which impact the consumption of energy in an assessment and therefore affect a NABERS UK energy for offices rating. The first of these factors is area. The **rated area** must be correctly determined to allow for fair comparison.

**Note:** For further information on rated calculations, see Appendix C.



For documentation requirements, see Section 8.2.

## 4.2 Process overview

The process for determining the **rated area** must be in accordance with Table 4.2.

**Assessors** must comply with all steps.

**Table 4.2: Determining rated area**

Step	Task	Reference
1	Determine the total office <b>NIA</b> for the <b>rated premises</b> .	Section 4.3
2	Divide the total office <b>NIA</b> into easily workable <b>functional spaces</b> with separate spaces, vacancies and hours of operation.	Section 4.4
3	For each <b>functional space</b> , determine if the space must be excluded.	Section 4.5
4	Add up the areas of the included <b>functional spaces</b> to obtain the net office <b>NIA</b> .	N/A
5	Cap the inclusion of <b>public access space</b> to a maximum of 10 % of the net office <b>NIA</b> .	Section 4.6.2
6	Determine spaces qualifying as <b>medical</b> or <b>educational office facilities</b> and cap their inclusion to a maximum of 25 % of the net office <b>NIA</b> .	Section 0
7	Adjust for unoccupied spaces.	Section 4.7
8	The sum of the resulting occupation-weighted <b>functional space NIA</b> included in the rating is the <b>rated area</b> .	N/A

The **NIA** is the starting point for calculating the **rated area**. The **Assessor** must complete the following:

- a) Determine **NIA** spaces.
- b) Divide the **NIA** into **functional spaces**.
- c) Determine exclusions.
- d) Limit the proportion of medical or educational facility spaces and **public access spaces**.
- e) Assess vacancies.

This process will require copies of plans, leases and site investigation.

**Example:** A floor might be verified to the **measurement standard for rated area**, but for convenience of hours calculations, it might have several **functional spaces** measured from not-to-scale layouts. Since the overall area is verified, there is no need to add the **functional space** floor areas to the **potential error** for area.

## 4.3 Determining office NIA

### 4.3.1 General

#### 4.3.1.1 Base building and whole building ratings

For **base building** and **whole building** ratings the **Assessor** must consider the **NIA** of all spaces that are leased or available for lease for office tenancies in the building.

#### 4.3.1.2 Tenancy ratings

For **tenancy** ratings, the **Assessor** must consider the **NIA** of all spaces that are included in the complete **tenancy** being rated.



For documentation requirements, see Section 8.2.1.

### 4.3.2 Standard for acceptable data

The office **NIA** of the **rated premises** must be verified by the **Assessor** to have been measured in compliance with the **measurement standard for rated area**, by one of the following methods (listed in order of preference):

- a) Reference to a third-party survey or to lease documentation that is explicitly based on the **measurement standard for rated area**.
- b) Direct measurement from current plans or scaled prints, measured to the **measurement standard for rated area**.
- c) Site measurements verified by the **Assessor** to have been done to the **measurement standard for rated area**.

Regardless of the method used to determine the **NIA**, the **Assessor** must ensure that the information accurately reflects the configuration of the building and its uses during the **rating period**. Survey information must be checked through a site inspection to ensure the space has not been altered, for example by the introduction of corridors to serve multiple tenancies. **Assessors** must also confirm that the **measurement standard for rated area** has been interpreted correctly.

An unverified **tenancy** schedule is not a suitable document on which to base the **NIA** assessment.

**Note:** Spaces such as common areas, purpose-built retail facilities and accessways cannot be considered as **NIA** and are consequently never included in the **rated area**.

### 4.3.3 Area measurement estimates

If any office **NIA** of the **rated premises** cannot be verified by the **Assessor** in accordance with Section 4.3.2, then the estimated area of that space must be added to the **potential error** for area.

**Note:** Subdivision of spaces is not as critical as overall areas, e.g. a floor might be verified to the **measurement standard for rated area**, but for convenience of hours calculations, it might have several **functional spaces** measured from not-to-scale layouts. Since the overall area is verified, there is no need to add the **functional space** floor areas to the **potential error** for area.

## 4.4 Dividing office NIA into functional spaces

### 4.4.1 General

After determining the office **NIA** of the **rated premises**, this office **NIA** must be divided into **functional spaces** in order to calculate the effects of vacancies and differing operational hours across the total office **NIA**. These spaces should be based on existing functional distinctions such as physical boundaries, leases, or operational divisions.

Most office support facilities do not need to be separated into their own **functional spaces** as they will have the same periods of occupation and operating hours as the office space. For **tenancy** and **whole building** ratings, **office support facilities** (besides **computer server rooms**) are only required to be separated out into their own **functional space** when there is a significant difference in period of occupation or operating hours.



For documentation requirements, see Section 8.2.2.

### 4.4.2 Minimum requirement for division of office NIA

For all ratings, a **functional space** must be the smallest in one of the following:

- Each individual contiguous floor plate of the building, i.e. for buildings with multiple units or towers, this refers to each floor of each unit or tower.
- Each individual and distinct **tenancy**, regardless of its size.

- c) Within any **tenancy**, any section that must be treated as distinct because of a significant difference in period of occupation or operating hours. This must include the following:
  - 1) Spaces in which significant construction activity has taken place for fit-out works during the **rating period**.
  - 2) Spaces associated with different **after-hours air-conditioning (AHAC)** zones and **AHAC** hour counts or **office support facilities** that have a significant difference in operating hours to the surrounding office space.
- d) Any **computer server room** or series of contiguous **computer server rooms** that constitute more than 5 % of that respective floor plate's **NIA**.
- e) Any **meeting room** or series of contiguous **meeting rooms** with **local air conditioning** that constitute more than 10 % of that respective floor plate's **NIA**.
- f) Any **office support space** with **local air conditioning** that constitutes more than 10 % of that respective floor plate's **NIA**.
- g) Any open plan or cell office area that has **local air conditioning**.

In addition, any space which meets one of the following two conditions must also be separated into its own **functional space** for the purpose of exclusion under Section 4.5.5:

- 1) **Acceptable data** or **acceptable estimates** of energy consumption are not available for reasons beyond the control of the **Assessor** or customer.
- 2) Where it is not possible to include all the energy required to be included under the energy coverage (typically because of **local air conditioning** that has been allocated to the rating under Section 7.2 but is covered under the tenant metering).

**Note 1:** This does not apply to any **computer server room**, **meeting room** or **office support space** not required to be separated under Items d), e) and f) above.

It is not recommended that **Assessors** divide the **NIA** into smaller divisions other than required above, or in accordance with Section 4.7.2 of these **Rules**. Where an **Assessor** considers such further division to be necessary, they must first contact the **Scheme Administrator**.


**Note 2:** The requirements in this section are intended to make it easier for the **Assessor** to separate independent spaces and record the necessary data, not to fragment the **NIA** into multiple similar spaces for no real benefit.

**Note 3:** Small **office support facilities** whose operating hours depend on the spaces nearby should be treated as an integrated component of the surrounding office space. They should not normally be separated out into a different **functional space**.

**Note 4:** In many UK offices, components of the **base building** minimum energy coverage, such as fan coil motors, are covered under the tenant metering.

Processes for inclusion of such energy are provided in Section 7.2.1 of *NABERS UK The Rules — Metering and Consumption*. Whenever these processes can be applied, the lack of direct metering coverage is not grounds for the space to be excluded.

**Note 5:** Division into smaller spaces other than required above conflicts with the intent of provisions around the handling of **local air conditioning**. Smaller divisions by the **Assessor** may unfairly disadvantage the rating.

 For documentation requirements, see Section 8.2.2.

## 4.5 Excluding functional spaces

### 4.5.1 General

After dividing the office **NIA** into **functional spaces**, the **Assessor** must determine the purpose of each of the **functional spaces** and include or exclude them as required.

The following must be excluded from the **rated area** calculation:


- a) Spaces within the office **NIA** that have not been used as offices (in accordance with the requirements of Section 4.5.2) during the **rating period**.
- b) **Computer server rooms** in accordance with the requirements of Section 4.5.3.
- c) Areas with **local air conditioning** that is not metered to enable inclusion in -  
+\*accordance with the requirements of Section 4.5.
- d) Spaces with no consumption data.

This ensures that ratings are consistently based on office usage of buildings and provides a fair comparison between different offices.

**Note 1:** Exclusions are only considered after calculating the office **NIA** as described in Section 4.3. The criteria in this section cannot be applied to areas that are not within the office **NIA**, as these are never included in the **rated area** calculation.

**Note 2:** The energy consumption associated with an excluded space may still need to be included in the assessment in accordance with Chapter 6.

**Note 3:** For consistency and ease of auditing, the area of spaces which have been excluded should be entered into the **NABERS UK rating input form** but their occupancy days should be marked as "0". This area can be approximated by the **Assessor** as it is not used in the calculation of the NABERS UK rating.

 For documentation requirements, see Section 8.2.3.

### 4.5.2 Excluding spaces that cannot be considered offices

A **functional space** area must be excluded when one of the following occurs:



- a) It is either not used, or not available to be used for, accommodating an office or an **office support facility**. This applies whether or not these spaces were primarily intended as office accommodation.
- b) It is not **occupied** for all or part of the **rating period**.
- c) It is not **fit for office use**.

It is not necessary to exclude a space with a floor area less than 5 m<sup>2</sup> unless it is a well-defined separate facility, e.g. surrounded by walls. However, where several similar excludable spaces or facilities are located next to each other, they must be considered to be a single group and not individual items.

A corridor (or section thereof) must be excluded under this requirement only if the following occurs:

- 1) It is purely a thoroughfare, bounded by walls.
- 2) It has at least one wall that is adjacent to area that is not **NIA**.
- 3) It is not **fit for office use**.

See Table 4.5.2 and Figures 4.5.2(A), (B) and (C) for examples.



For documentation requirements, see Section 8.2.3.

#### Examples:

**Table 4.5.2: Area exclusions**

Example	Interpretation
<p>A space originally designed for office accommodation but not used as an office, such as the following:</p> <ul style="list-style-type: none"> <li>a) A suite of training rooms for hire.</li> <li>b) A commercial art gallery.</li> <li>c) A showroom.</li> <li>d) An information centre.</li> </ul>	<p><i>Excluded:</i> They are not used as offices or <b>office support facilities</b>.</p>
<p>A space designed for retail use, but used as an office space, e.g. a <b>tenancy</b> in a shopping centre used as an accountant's office.</p>	<p><i>Excluded:</i> The space is not considered as office <b>NIA</b>.</p>
<b>Spaces used primarily for providing services to the public</b>	
<p>Retail spaces selling goods and products (shops).</p>	<p><i>Excluded:</i> They are not used as offices or <b>office support facilities</b>. They are retail outlets.</p>

**Examples:**

**Table 4.5.2: Area exclusions**

Example	Interpretation
Government shopfronts.	<i>Limited inclusion:</i> Customer service areas requiring appointments or escort can be considered as office spaces. Waiting areas are still considered as <b>public access spaces</b> and must be included in the 10 % allowance of <b>public access spaces</b> .
Other <b>tenancy</b> spaces with a primary purpose of providing services to walk-in customers and also where the office portion supports the retail space, e.g. bank branch open to the public, post office, real estate agency, travel agency, information centre and print shop.	<i>Excluded:</i> These are retail outlets.
<b>Commercial cafeterias and cafes</b>	
<b>Exclusively for the use of office tenants</b> (and their visitors).	<i>Included:</i> They are <b>office support facilities</b> .
With public access (but can also be used by tenants).	<i>Excluded:</i> They are retail outlets.
<b>Gymnasiums, child minding centres, treatment rooms and similar</b>	
<b>Exclusively for the use of office tenants</b> (and their visitors).	<i>Included:</i> They are <b>office support facilities</b> .
With public access (but can also be used by tenants).	<i>Excluded:</i> They are retail outlets.
Call centres and trading rooms.	<i>Included:</i> They are high-density office spaces.
Breakout spaces, <b>meeting rooms</b> , eating areas or tea rooms and kitchenettes built as part of the tenant fit out.	<i>Included:</i> They are <b>office support facilities</b> .
<b>Tenant-fitted-out toilets and showers</b>	
Toilet and shower facilities with an area over 5 m <sup>2</sup> .	<i>Excluded:</i> Although they are <b>office support facilities</b> , they are not <b>fit for office use</b> .
Small ensuite toilets, etc. with individual floor area under 5 m <sup>2</sup> .	<i>Included:</i> Although they could be excluded as not <b>fit for office use</b> , this is not required as the area is so small.

**Examples:**

**Table 4.5.2: Area exclusions**

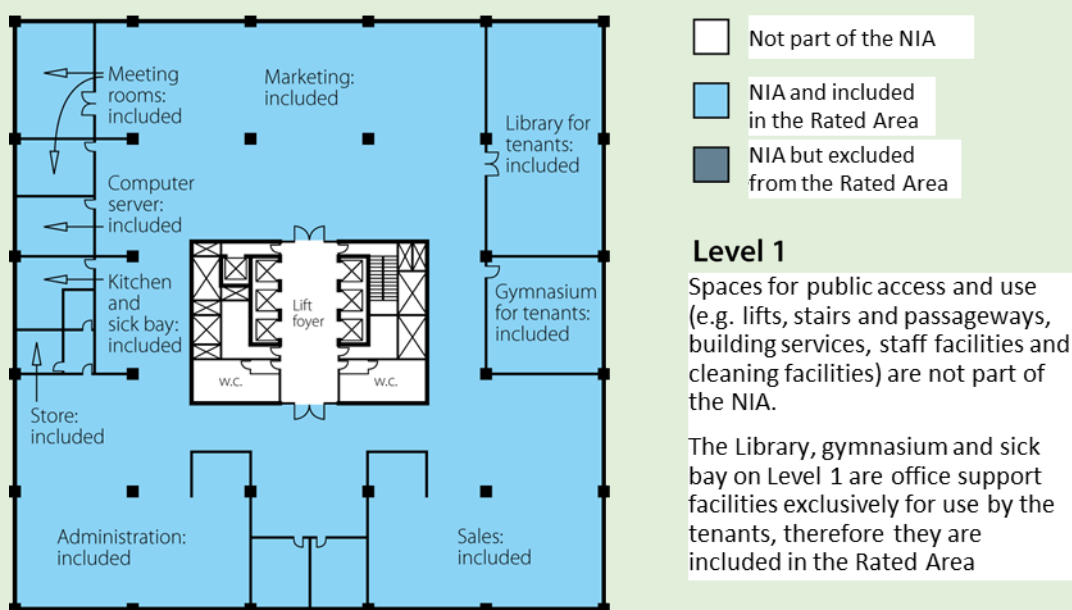
Example	Interpretation
End of trip facilities with designated facilities (such as showers and lockers) within the building, that are designed to support people who exercise during their lunch break, or cycle, jog or walk to work rather than driving or taking public transport.	<i>Excluded:</i> Although they are <b>office support facilities</b> , they are not <b>fit for office use</b> .
<b>Change rooms (within the NIA)</b>	
Integral to the toilet and shower facility, with only exhaust air systems and low-level lighting.	<i>Excluded:</i> Although they are <b>office support facilities</b> , they are not <b>fit for office use</b> .
Partitioned-off office space with air conditioning and lighting which is the same as the rest of the office.	<i>Included:</i> They are <b>office support facilities</b> , and located in spaces <b>fit for office use</b> .
<b>Storage spaces</b>	
A chain-wire enclosed store in the basement.	<i>Excluded:</i> This space is not (and cannot become) <b>fit for office use</b> .
A similar enclosed space within the fitted-out <b>tenancy</b> floor.	<i>Included:</i> This is an <b>office support facility</b> and is <b>fit for office use</b> .
An archival store with lighting, temperature and humidity settings for preserving paper, not for comfort.	<i>Excluded:</i> This space is not <b>fit for office use</b> .
A compactus file storage facility within the fitted-out <b>tenancy</b> floor with air conditioning and lighting as for the rest of the office.	<i>Included:</i> This is an <b>office support facility</b> and is <b>fit for office use</b> .
<b>Other spaces</b>	
A professional library in a lawyer's or consultant's office.	<i>Included:</i> This is an <b>office support facility</b> for professional work.
A public library in an office building.	<i>Excluded:</i> This is a facility for the general public and is not an office.
A large vault designed as a secure store (such as for paper or gold) and not for continual occupation by people.	<i>Excluded:</i> Even if empty, this store is not <b>fit for office use</b> .
The same vault that is part of the <b>NIA</b> , converted to office space with air conditioning and lighting.	<i>Included:</i> Although originally a store, the space is now <b>fit for office use</b> .

**Examples:** **Table 4.5.2: Area exclusions**

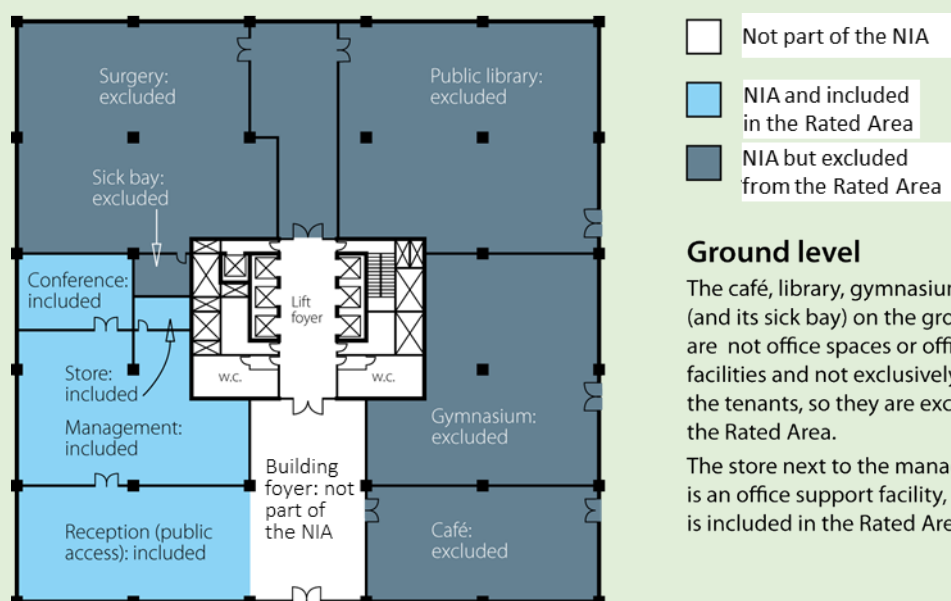
Example	Interpretation
Building manager's office, where it is not part of the <b>NIA</b> and therefore not leased.	<i>Excluded:</i> The space is not part of the <b>NIA</b> .
Building manager's office, where it is part of the <b>NIA</b> .	<i>Included:</i> If the space is serviced at the same condition as the surrounding office space and there is a lease in place.
<b>Basement areas</b>	
A basement area not fit for continual occupation by people.	<i>Excluded:</i> The space is not <b>fit for office use</b> .
A basement area part of <b>NIA</b> and converted to office space and <b>fit for office use</b> .	<i>Included:</i> This is an office space and is <b>fit for office use</b> .
A basement area that is not part of <b>NIA</b> but has been converted to office space and is <b>fit for office use</b> .	<i>Excluded:</i> This space is not office <b>NIA</b> .
An enclosed store in the basement part of <b>NIA</b> that is <b>fit for office use</b> and currently used as a storage space.	<i>Included:</i> The space is <b>fit for office use</b> and is used as an <b>office support facility</b> .

The following diagrams in Figure 4.5.2 represent an office building over three levels and show how the areas are to be treated.

**Examples:** **Figure 4.5.2(A): NIA, rateable area inclusions and exclusions — Level 1 office building**



**Figure 4.5.2(B): NIA, rateable area inclusions and exclusions — Ground level office building**



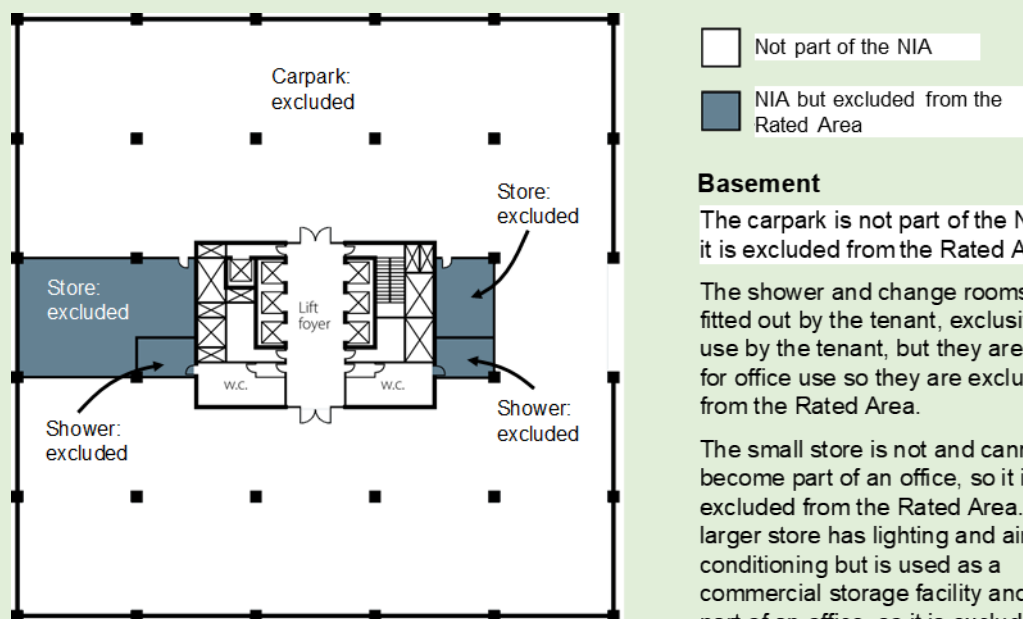
### Ground level

The café, library, gymnasium, surgery (and its sick bay) on the ground level are not office spaces or office support facilities and not exclusively for use by the tenants, so they are excluded from the Rated Area.

The store next to the management area is an office support facility, therefore it is included in the Rated Area.

**Note:** Figures 4.5.2(A) and (B) show that the two gymnasiums (Level 1 and ground level) are treated differently depending on their use, so the defining criteria is not so much the actual function of the space but the way it is used by the occupants in the context of a specific office.

**Figure 4.5.2(C): NIA, rateable area inclusions and exclusions — Basement office building**



### Basement

The carpark is not part of the NIA, so it is excluded from the Rated Area.

The shower and change rooms were fitted out by the tenant, exclusively for use by the tenant, but they are not fit for office use so they are excluded from the Rated Area.

The small store is not and cannot become part of an office, so it is excluded from the Rated Area. The larger store has lighting and air conditioning but is used as a commercial storage facility and is not part of an office, so it is excluded from the Rated Area.

### 4.5.3 Excluding computer server rooms and data centres

#### 4.5.3.1 General

This section outlines the conditions where a **computer server room** must be excluded. This section is only used where a **computer server room** is required to be separated into its own **functional space** as described in Section 4.4.2.

**Note:** Depending on circumstances, the energy consumption of the **computer server room** may be included or excluded from the rating. The inclusion or exclusion of both the energy consumption and the floor area of **computer server rooms** are determined in the same way, see Section 7.5.



For documentation requirements, see Section 8.2.3.

#### 4.5.3.2 Computer server rooms — Base building ratings

Where a **computer server room** has been separated into its own **functional space** and is not considered a **data centre** (as defined in Section 4.5.3.4), the air conditioning arrangement must be checked by the **Assessor** and the **computer server room** excluded from the **rated area** if one of the following occurs:

- a) No direct **heating, ventilation and air conditioning (HVAC)** is provided by the **base building** to that space, i.e. all direct **HVAC** is provided by **local air conditioning** under the tenant coverage.
- b) Direct **HVAC** is provided by the **base building** but at a lesser standard than that of the surrounding spaces.
- c) Direct **HVAC** is provided by the **base building** and is being adequately sub-metered and excluded from the rating in line with Section 7.2.2.2.


**Example:** **Computer server rooms** provided by condenser water only from the **base building** (i.e. air supply is connected to the tenant electrical distribution board) are serviced at a lesser standard than the rest of the office space. Therefore, such area is excluded.

**Note 1:** Only **computer server rooms** that are not considered to be a **data centre** and have direct **HVAC** energy provided centrally by the **base building** to at least the same standard as the surrounding space (with this direct **HVAC** energy being included in the rating) should be included for the **rated area** calculation.

**Note 2:** The presence of a tenant supplementary unit does not immediately exclude the **computer server room** from the **rated area**. As long as the **base building** provides direct **HVAC** to the same or higher standard as the surrounding office space, the **computer server room** is still considered to be centrally serviced.

Where it is determined that a **computer server room** must be excluded, the **base building** rating must exclude the area of the **computer server room's functional space** from the **rated area** calculation.



 For documentation requirements, see Section 8.2.3.

#### 4.5.3.3 Computer server rooms — Tenancy and whole building ratings

When a **computer server room** has been separated into its own **functional space**, the floor area of a **computer server room** must be treated as follows:

- a) Wholly included in the calculation of the **rated area** if the following conditions are satisfied:
  - 1) The **computer server room** does not qualify as a **data centre**, see Section 4.5.3.4.
  - 2) The **computer server room** is not used as a disaster recovery site for another external **data centre**.
  - 3) The **computer server room** is used entirely by **internal users**.
- b) Partially excluded from the calculation of the **rated area** if the following conditions are satisfied:
  - 1) The **computer server room** is a mixture of internal use and external use, to a maximum of 75 % of its capacity dedicated to external use.
  - 2) The energy consumption of the externally used IT equipment and/or facility services are separately sub-metered.

The floor area of the **computer server room** that is to be excluded is determined by measuring the area covered by the externally used IT equipment only.

The **Assessor** must obtain written documentation from the tenant that confirms that the IT equipment in the area to be excluded is either for external use or as a disaster recovery site for another external **data centre**.

**Note 1:** A **computer server room** where at least 75 % of the users are **external users** qualifies as a **data centre**; see Section 4.5.3.4.

- c) Proportionately excluded from the calculation of the **rated area** if the following conditions are satisfied:
  - 1) The **computer server room** is a mixture of internal use and external use, to a maximum of 75 % of its capacity dedicated to external use.
  - 2) The energy consumption of the **computer server room** IT equipment and/or facility services are sub-metered.
  - 3) The externally used equipment is not or cannot be separately sub-metered from internal use.
  - 4) The number of **internal users** and **external users** of the IT equipment can be determined.

**Note 2:** No proportionate exclusions are available for **external users** of public web servers because of the difficulty in accurately counting the number of users.

The floor area of the **computer server room** that may be excluded under Item c) is determined through the following steps:

- i) **Step 1:** Determine the number of **internal users** of the IT equipment, based on the computer count.
- ii) **Step 2:** Determine the number of **external users** of the IT equipment.

**Note 3:** To determine the number of **external users** of the IT equipment, **Assessors** could analyse system usage logs to establish the number of unique users, and then find the location of each from asset tracking, phone records or similar data.

**Note 4:** To avoid double counting, occupants of the **rated premises** who access the systems remotely are included in the number of **internal users** of IT equipment only.

- iii) **Step 3:** Calculate the area allocated for external use, based on the proportion of **external users** to total users.

**Example:** If the floor area of a **computer server room** is 50 m<sup>2</sup> and there are 100 **internal users** and 400 **external users**, the area to be excluded from the **rated area** is calculated as follows:

$$50 \times \frac{400}{(400 + 100)} = 40 \text{ m}^2$$

The **Assessor** must obtain one of the following:

- A) Written documentation from the tenant that confirms the number of **external users** of the **computer server room**.
- B) Records which allow the **Assessor** to accurately calculate (not estimate) the number of **external users**.



For documentation requirements, see Section 8.2.3.

#### 4.5.3.4 Data centres

Where a **computer server room** qualifies as a **data centre**, then area must be excluded from the **rated area** calculation.

The combination of multiple **computer server rooms** is not considered a **data centre**. Each individual **computer server room** must meet the criteria as defined above to be considered as a **data centre**.

**Note:** As a **data centre** is considered a non-office use, the **base building** energy to the **data centre** is always excluded from the rating.



For documentation requirements, see Section 8.2.3.

## 4.5.4 Other functional spaces with local air conditioning

### 4.5.4.1 General

This section (4.5.4) applies to all **functional spaces** other than **computer server rooms** that are required to be separate **functional spaces** under Section 4.4.2 and are served by **local air conditioning**. **Computer server rooms** are covered under Section 4.5.3.

### 4.5.4.2 Base building ratings

If an area within the **NIA** that has **local air conditioning** is not required to be separated into its own **functional space** as specified in Section 4.4.2, its area must be combined with an adjacent **functional space** included in the **rated area**.

Where a space with **local air conditioning** has been separated into its own **functional space** under the requirements of Section 4.4.2, the metering of the **local air conditioning** must be checked by the **Assessor** and comply with the following requirements:

- a) The space must be included in the **rated area** if all the energy within the minimum energy coverage to the space is metered such that it can be included in the rating.
- b) The space must be excluded from the **rated area** if it is not possible with current metering to include all energy within the minimum energy coverage in the rating.

### 4.5.4.3 Tenancy and whole building ratings

The floor area of a **meeting room** or other **office support facility** must be included in a **tenancy** or **whole building** rating.



For documentation requirements, see Section 8.2.4.

## 4.5.5 Functional space without consumption data

Where **acceptable data** or **acceptable estimates** of the energy consumption for a **functional space** are not available for reasons beyond the control of the **Assessor** or customer, then the **functional space** must be excluded from calculation of the **rated area**.

**Note 1:** This includes scenarios where the use of **acceptable estimates** results in a **potential error** above the 5 % threshold.


**Example:** **Functional space** exclusions include the following:

- a) When **utility** bills for energy consumption within the minimum energy coverage cannot be obtained for **functional spaces**, in cases where these **functional spaces** are within buildings that do not have an **embedded network**. Situations where this may occur include where a previous owner or occupant of the building cannot be contacted to obtain, or refuses to provide, required energy bills.
- b) When the **utility** was unable to provide the necessary data to cover the minimum energy coverage for the **functional space**.

- c) When a **non-utility metering system** was unable to provide the data necessary to cover the minimum **energy** coverage for the **functional space** and estimates were above the 5 % total **potential error** allowance.

**Note 2:** The full range of consumption data required for a **functional space** is specified in Chapter 7.

**Note 3:** **Functional spaces** without hours data cannot be excluded in the same way as spaces without consumption data. These spaces must be included and another method of measuring hours used. (Such a situation can occur, e.g. when tenant has moved out and a **TOS** cannot be obtained.).

 For documentation requirements, see Section 8.2.5.

## 4.6 Limiting medical or educational office facilities and public access spaces

### 4.6.1 General

After excluding **functional spaces**, the **Assessor** must limit the proportion of **public access spaces** followed by medical or **educational office facility** spaces.

**Note:** The **functional spaces** included so far may include some space open to public access such as inquiry desks, courier counters and reception areas.

The primary purpose of these spaces is to accommodate arrivals, deliveries and despatches associated with office activities. These spaces are distinct from non-**NIA** or commercially negotiated **NIA** public spaces in building foyers and other common spaces, which are never included in the **rated area** calculation.

### 4.6.2 Public access spaces

In calculating the **rated area** of a **rated premises**, the allowable total floor area of such **public access space** is capped to a maximum of 10 % of the net office **NIA**.


For this section, net office **NIA** is defined as follows:

$$\text{Net office NIA} = \text{Total office NIA} - \text{Area of public access space}$$

Any additional amount must be excluded from the **rated area** calculation. The maximum **public access space** in a given area that can be included in a rating is calculated using the following formula:

$$\frac{\text{Net office NIA}}{0.9} - \text{Net office NIA} = \text{Maximum public access space}$$

The 10 % ratio applies to the aggregate area of the spaces to be included in the rating. It is not calculated separately for individual functional spaces, floors or (for **base building** or **whole building** ratings) individual tenancies.

 For documentation requirements, see Section 8.2.6.

**Example 1:** An office has a total **NIA** of 500 m<sup>2</sup>. A large reception space that measures 5 m x 12 m (60 m<sup>2</sup>) is located within the total **NIA**.

The net office **NIA** is calculated as follows:

$$500 \text{ m}^2 - 60 \text{ m}^2 = 440 \text{ m}^2$$

Therefore, the maximum **public access space** that can be included for this rating is calculated as follows:

$$\left(\frac{440 \text{ m}^2}{0.9}\right) - 440 \text{ m}^2 = 48.9 \text{ m}^2$$

As the reception space is greater than the maximum allowable, only 48.9 m<sup>2</sup> of the reception space can be included.

**Example 2:** An office with a total **NIA** of 1,000 m<sup>2</sup> has two tenancies.

**Tenancy** No. 1 has a total **NIA** of 600 m<sup>2</sup>, including a large reception space that measures 72 m<sup>2</sup>.

**Tenancy** No. 2 has a total **NIA** of 400 m<sup>2</sup> and has no **public access space**.

*Base building or whole building rating*

For a **base building** or **whole building** rating, the net office **NIA** is calculated as follows:

$$1,000 \text{ m}^2 - 72 \text{ m}^2 = 928 \text{ m}^2$$

Therefore, the maximum **public access space** that can be included for this rating is calculated as follows:

$$\left(\frac{928 \text{ m}^2}{0.9}\right) - 928 \text{ m}^2 = 103.1 \text{ m}^2$$

As the reception space is less than the maximum allowable, the entire reception area can be included.

*Tenancy rating*

For a **tenancy** rating for **Tenancy** No. 1, the net office **NIA** is calculated as follows:

$$600 \text{ m}^2 - 72 \text{ m}^2 = 528 \text{ m}^2$$

Therefore, the maximum **public access space** that can be included for this rating is calculated as follows:

$$\left(\frac{528 \text{ m}^2}{0.9}\right) - 528 \text{ m}^2 = 58.7 \text{ m}^2$$

As the reception space is greater than the maximum allowable, only 58.7 m<sup>2</sup> of the reception space can be included.

### 4.6.3 Medical or educational office facility spaces

#### 4.6.3.1 General

After limiting the proportion of **public access spaces**, the **Assessor** must determine and limit the proportion of **medical** and/or **educational office facility** spaces. If there is any doubt as to whether a facility or part of a facility is included in either of these categories (i.e. medical or educational) the **Assessor** should contact the **Scheme Administrator**.

A **medical office facility** may include the following:

- a) Consulting rooms.
- b) Patient reception areas.
- c) Break-out spaces.
- d) **Meeting rooms**.
- e) Medical administration areas.
- f) Associated store rooms for medical equipment, supplies or records.

A space within the facility that is not serviced by **base building** services does not qualify as a **medical office facility**.

If a medical facility contains—

- 1) hospitals;
- 2) operating theatres;
- 3) specialist medical imaging practices;
- 4) laboratories;
- 5) day-stay treatment areas;
- 6) wards;
- 7) specialist emergency medicine facilities; and
- 8) pharmacies,

then the entire facility cannot be considered as a **medical office facility** and must be excluded from the rating. The determining factor here is whether there is significant medical or scientific equipment present or a requirement to operate continually.


An **educational office facility** may include the following:

- i) Classrooms.
- ii) Seminar rooms.
- iii) Break-out spaces.
- iv) **Meeting rooms**.
- v) Student computer labs.
- vi) Administration areas.
- vii) Store rooms.

A space within the facility that is not serviced by **base building** services does not qualify as an **educational office facility**.

**Note 1:** Workshops, laboratories, art studios, teaching kitchens or associated prep areas are not considered **educational office facilities**.

**Note 2:** In instances where a portion of the floor area has been excluded, **Assessors** should refer to the “exclusions based on area weighting” requirements in Section 7.2.3 of *NABERS UK The Rules — Metering and Consumption* or *NABERS The Interim Rules — Thermal Energy Systems*, which may provide some exclusion of the energy related to the excluded areas.

 For documentation requirements, see Section 8.2.7.

#### 4.6.3.2 Permitted treatment for base building ratings

Although they are not office spaces as such, **medical office facilities** and **educational office facilities** can be included in the calculation of the **rated area** for the purposes of a NABERS UK energy for offices rating. This is acceptable only if services provided by the **base building** within the minimum energy coverage cannot be wholly excluded by sub-metering, and with the caveat that the inclusion of **medical** and **educational office facilities** combined is capped to a maximum of 25 % of the office **NIA**.

Where all services provided by the **base building** within the minimum energy coverage can be wholly excluded by sub-metering, the **medical office facilities** and **educational office facilities** must be excluded in the calculation of the **rated area**.

For this section, net office **NIA** is defined as follows:

Net office NIA = Total office NIA – Combined area of medical and educational office facility

This inclusion is calculated after having adjusted the office **NIA** for the **public access spaces** 10 % cap in accordance with Section 4.6.2.

The maximum **medical office facilities** and **educational office facilities** in a given area that can be included in a rating is calculated using the following formula:

$$\left( \frac{\text{Net office NIA}}{0.75} \right) - \text{Net office NIA} = \text{Maximum medical and educational office facility}$$

A rating including **medical** or **educational office facilities** must include the energy consumption relevant to the minimum energy coverage for this space in full. No apportionment is allowed.

**Note:** Public reception or patient waiting rooms within **medical** or **educational office facilities** should have already been included in the **public access space** requirement.

**Example 1:** A building has a total **NIA** of 2,500 m<sup>2</sup>. Within this **NIA**, 1,500 m<sup>2</sup> is **occupied** by a tenant that is an English college.

The net office **NIA** is calculated as follows:



$$2,500 \text{ m}^2 - 1,500 \text{ m}^2 = 1,000 \text{ m}^2$$

Therefore, the maximum **medical office facilities** and **educational office facilities** that can be included for this rating is calculated as follows:

$$\left(\frac{1,000 \text{ m}^2}{0.75}\right) - 1,000 \text{ m}^2 = 333.3 \text{ m}^2$$

As the English college **occupies** a space greater than the maximum allowable, only 333.3 m<sup>2</sup> can be included.

**Example 2:** A building has a total **NIA** of 8,000 m<sup>2</sup> with the following **NIA** details:

- a) 1,500 m<sup>2</sup> is **occupied** by a tenant that is an English college.
- b) 400 m<sup>2</sup> is **occupied** by a tenant that is a doctor's surgery.

The net office **NIA** is calculated as follows:

$$8,000 \text{ m}^2 - (1,500 \text{ m}^2 + 400 \text{ m}^2) = 6,100 \text{ m}^2$$

Therefore, the maximum **medical office facilities** and **educational office facilities** that can be included for this rating is calculated as follows:

$$\left(\frac{6,100 \text{ m}^2}{0.75}\right) - 6,100 \text{ m}^2 = 2,033.3 \text{ m}^2$$

As the combined area of the **medical office facilities** and **educational office facilities** in this building is less than the maximum allowable, the entire combined area can be included.

#### 4.6.3.3 Tenancy and whole building ratings

**Medical** or **educational office facility** spaces can never be included in the **rated area** for the purpose of **tenancy** and **whole building** ratings. They are not classed as office area, and therefore their energy use must be excluded from the rating where it is adequately sub-metered.

## 4.7 Adjustment for unoccupied spaces

### 4.7.1 General

After limiting the proportion of **public access spaces** and **medical** and **educational office facilities**, the **Assessor** must assess the number of occupation days and number of **fit out works** days during the **rating period**.

Occupation days and **fit out works** days are used as adjustment factors to calculate the **rated area** from the office **NIA**.


### 4.7.2 Occupation days

For **base building** ratings, the number of occupation days for each **functional space** is the number of days (including weekends and public holidays) the space was **ready for occupation**.

For **tenancy** ratings, the number of occupation days for each **functional space** is the number of days (including weekends and public holidays) the space was **ready for occupation** and actively used by the tenants as an office, including use as an **office support facility**.

For **whole building** ratings, the number of occupation days for each **functional space** is the number of days (including weekends and public holidays) the space was **ready for occupation** and actively used by the tenants as an office, including use as an **office support facility**.

If a **functional space** has different occupation days for different areas, the **functional space** must be split so the occupation days can be entered separately.


 For documentation requirements, see Section 8.2.8.

#### 4.7.3 Fit out works days

The number of **fit out works** days for each **functional space** is the number of days where the space was being refurbished or **fit out works** were being undertaken and **base building** air-conditioning services were required for that space. Up to a maximum of 30 days can be entered for each **functional space**.

It does not include periods of work where the **base building** services were not required for that space. It does not include periods during which the building was under construction or being extensively renovated and was not suitable for normal occupation.

Any period during which it is not possible to clearly distinguish between **fit out works** and other construction activity must not be included. Similarly, if there is no evidence whether or not normal **base building** services were required by the occupiers during that period, then the **Assessor** must assume that the services were not required.

 For documentation requirements, see Section 8.2.8.

**Note 1:** For **whole building** ratings, the period for **fit out works** is discounted by 50 %. For **tenancy** ratings, the period for **fit out works** is discounted by 100 % (no **fit out works** days are accounted for). These adjustments are calculated automatically by the **NABERS UK rating input form**, and the **Assessor** should simply enter the total number of **fit out works** days.

**Note 2:** For a **base building** rating the following applies:


- a) Where a space was not being used as an office while **fit out works** were taking place, the hours of occupation are deemed to be the same as the average hours of occupation for that space for the **rating period**.

- b) Where a space was being used as an office during business hours and **fit out works** were taking place outside the normal business hours, then any additional hours (i.e. while the space was provided with **base building** services) should be added to the **rated hours** calculation. If there are different hours for different times of the year, these should be entered into the **NABERS UK rating input form** separately. The **Assessor** should contact the **Scheme Administrator** for further information.

# 5 Rated hours

## 5.1 General

There are several factors which impact the consumption of energy in an assessment and therefore affect a NABERS UK energy for offices rating. The second of these factors is hours. The **rated hours** must be correctly determined to allow for fair comparison.

 For documentation requirements, see Section 8.3.

## 5.2 Process overview

### 5.2.1 Base building ratings

Table 5.2.1 outlines the process for calculating **rated hours** for **base building** energy ratings. **Assessors** must comply with all steps.

**Note:** For further information on **rated hours** calculations, see Section C.2.

**Table 5.2.1: Calculating rated hours for base building energy ratings**

Step	Task	Reference
1	Use the breakdown of <b>functional spaces</b> within the <b>rated premises</b> .	Section 4.4
2	For each type of <b>functional space</b> , (with the exception of <b>computer server rooms</b> and <b>office support facilities</b> ), use one of the following methods in priority order: <ul style="list-style-type: none"> <li>a) <b>Owner/Tenant Agreement (OTA)</b> core hours and AHA.</li> <li>b) <b>Tenant Occupancy Survey (TOS)</b>.</li> <li>c) Average core hours.</li> <li>d) Default hours.</li> </ul>	Sections 5.3.2 and 5.3.3 Section 0 Section 5.3.5 Section 5.3.6
3	Determine hours for <b>computer server rooms</b> .	Section 5.3.7
4	Determine hours for other <b>office support facility</b> spaces, including <b>meeting rooms</b> .	Section 5.3.7.2
5	Verify long hours if the <b>rated hours</b> for any <b>functional space</b> is greater than 60 h/week.	Section 5.4

## 5.2.2 Tenancy and whole building ratings

Table 5.2.2 outlines the process and priority for calculating **rated hours** for **tenancy** or **whole building** energy ratings conducted without a **base building** energy rating (a stand-alone **tenancy** or **whole building** rating).

**Assessors** must comply with all steps.

**Note:** For further information on **rated hours** calculations for **tenancy** and **whole building** ratings, see Section C.2.

**Table 5.2.2: Calculating rated hours for tenancy and whole building energy ratings**

Step	Task	Reference
1	Use the breakdown of <b>functional spaces</b> within the <b>rated premises</b>	Section 4.4
2	For each other type of <b>functional space</b> , (with the exception of <b>computer server rooms</b> and <b>office support facilities</b> ), use one of the following methods in priority order below:  a) <b>Tenancy Occupancy Survey</b> . b) <b>OTA</b> core hours and <b>AHAC</b> . c) Average core hours. d) Default hours.	Section 0 Sections 5.3.2 and 5.3.3 Section 5.3.5 Section 5.3.6
3	Determine hours for <b>computer server rooms</b> .	Section 5.3.7
4	Determine hours for other <b>office support facility</b> spaces, including <b>meeting rooms</b> .	Section 5.3.7.2
5	Verify long hours if the <b>rated hours</b> for any <b>functional space</b> is greater than 60 h/week.	Section 5.4

## 5.3 Determining rated hours

### 5.3.1 General

There are several methods for determining **rated hours**. The following sections must be used according to the order specified in Tables 5.2.1 and 5.2.2.


### 5.3.2 Core hours

#### 5.3.2.1 Owner/Tenant Agreement (OTA) hours method

An **Assessor** may use the **OTA** hours method if a higher priority method for determining **rated hours** as specified in Section 5.2 cannot be used.

The **OTA** hours method can only be used if there are hours defined in the **OTA**. When **OTA** hours are used, **OTA** core hours are based on the hours mutually agreed upon in writing within the **OTA** by the building owner and the tenant for which the space will be **comfortable for office work**. The **OTA** should be able to be applied to the **rating period**.

The **OTA** may refer to another document, commonly known as the “House Rules”, which contains information about the core hours. Where this document is specifically referred to in the **OTA**, the information in it can be used by the **Assessor** to determine the core hours. The requirements around language as outlined in Section 8.3.2 must still be followed.

 For documentation requirements, see Section 8.3.2.

### 5.3.2.2 Determining acceptable data hours

#### 5.3.2.2.1 General

Hours determined using the steps below are considered **acceptable data**.

#### 5.3.2.2.2 Step 1: OTA hours when directly referring to “comfort conditions”

The key question for an **Assessor** is whether the tenants have requested that the space be **comfortable for office work** during specific hours. This is not the same as the operating hours of the plant servicing the space as the plant requires start up time to provide comfort conditions to the space.

The **Assessor** must consider the current lease in relation to building hours as most leases contain specific clauses that describe the Lessor’s obligations to the tenant. Such clauses are to be used to investigate whether the tenants have requested the space to be **comfortable for office work** or not.

The **Assessor** must identify and keep record of these specific clauses as evidence of the correct method being used for determining **OTA** hours.

If it is clear that the hours detailed in the **OTA** are the normal hours for which the space will be **comfortable for office work**, the **OTA** hours must be used. The wording in the **OTA** must be interpreted carefully to distinguish between plant operation and comfort conditions within the space. Acceptable wording includes, but is not limited to, one of the following:

- a) “Hours for which the space will be **comfortable for office work**”.
- b) “Hours of occupation”.
- c) “Hours of comfort conditions”.
- d) Hours for which a temperature range compatible with being **comfortable for office work** must be met.

Wording that is not acceptable evidence on its own to demonstrate “comfort conditions” includes, but is not limited to, one of the following:

- 1) “Air-conditioning hours” — These may be plant operating hours.
- 2) “Hours of access”, “building availability” or “business hours” — These may be when security doors are open.
- 3) “Hours of restricted access” — These may be when security doors are closed.

**Assessors** can seek to obtain a new or updated **OTA** with acceptable wording which accurately captures the hours for which the space is **comfortable for office work**. This may be done if the wording used in the **OTA** is not acceptable, or if the existing **OTA** does not accurately reflect the current situation.

If the wording in the most up-to-date **OTA** remains unacceptable, the **Assessor** must move on to Step 2. If the **OTA** wording clearly states plant running times, and no updated **OTA** is obtained, the **Assessor** must move straight on to Step 3.

#### 5.3.2.2.3 Step 2: OTA hours and BMS data

Building Management System (BMS) data demonstrating that the plant starts before the stated **OTA** hours for the **rating period** can be used to clarify ambiguous wording within the **OTA**.

The **OTA** hours can be used if it is verified that the plant starts up with enough time prior to the start of **OTA** hours to bring the space to comfort conditions.

**Example 1:** If an **OTA** uses the words “air-conditioning hours” but the **Assessor** has independently verified that the air conditioning starts 1 h to 2 h before the **OTA** time every day, this would be sufficient to know that the words “air-conditioning hours” have been interpreted to mean “hours of comfort”.

The **Assessor** must obtain additional evidence to determine the **OTA** hours can be interpreted as “hours of comfort” when—

- a) the plant starts with a small start-up time before **OTA** hours, e.g. 30 min prior; or
- b) air conditioning plants with an optimised start strategy are present.

**Example 2:** The **OTA** refers to air-conditioning hours from 8 am to 6 pm. It is unclear if this refers to comfort conditions or plant run times. The BMS shows that the plant starts at 7 am every week day. As the hour between the plant start time and the **OTA** hours is considered sufficient to achieve comfort conditions, the **OTA** hours can be interpreted as hours for which comfort conditions are met.

This Step 2 can only be used where wording in the **OTA** is ambiguous and/or does not specifically refer to plant running hours, and no new or updated **OTA** with acceptable wording has been obtained. Where BMS data does not demonstrate the **OTA** intention of comfort conditions, the **Assessor** must move on to Step 3.

#### 5.3.2.2.4 OTA hours minus 2

Two h/day must be subtracted from the **OTA** hours when—

- a) the **OTA** clearly refers to plant run times and no new or updated **OTA** with acceptable wording has been obtained; or
- b) wording in the **OTA** is unclear and there is no BMS data available, or the data within the BMS does not clearly demonstrate the intention of the **OTA** being comfort conditions.

**Note:** The 2 h/day is to account for plant start-up time.



#### 5.3.2.2.5 Step 4: OTA hours correction for tenancy and whole building ratings

When core hours are determined using Steps 1, 2 or 3 above for **tenancy** or **whole building** ratings, an additional 5 h/week must be subtracted from the **OTA** hours. This may be on top of the 2 h/day subtracted in accordance with Step 3.

**Note:** The 5 h/week have been determined using NABERS data for offices. The analysis showed that, within a building, **OTA** hours were on average 5 h longer than hours determined through a **TOS**.

**Example 1:** A lease has been provided for a building which states that the space must be **comfortable for office work** between 8 am and 6 pm, i.e. 50 h/week.

On this basis, core hours of 50 h/week can be used for the **base building** rating.

For a **tenancy** and **whole building** rating, core hours of 45 h must be used, i.e. 50 h - 5 h.

**Example 2:** A lease has been provided for a building which states that plant hours are 8 am and 6 pm, i.e. 50 h/week.

For a **base building** rating, core hours of 40 h/week can be used as follows:

$$50 \frac{\text{h}}{\text{week}} - 2 \frac{\text{h}}{\text{day}} \times 5 \text{ days} = 50 - 10 = 40 \frac{\text{h}}{\text{week}}$$

(in accordance with Step 3)

For a **tenancy** and **whole building** rating, core hours of 35 h must be used as follows:

$$50 \frac{\text{h}}{\text{week}} - 2 \frac{\text{h}}{\text{day}} \times 5 \text{ days} - 5 \frac{\text{h}}{\text{week}} = 50 - 10 - 5 = 35 \frac{\text{h}}{\text{week}}$$

(in accordance with Steps 3 and 4)

#### 5.3.2.3 Conflicting information on core hours

Core hours are the regular hours for which tenants have mutually agreed with the building owner that a space is **comfortable for office work**. The building owner is obligated to provide services during these hours.

However, if the building owner knows that all the tenants have gone home by the end of the agreed hours, they might turn the air conditioning off early. This would present the **Assessor** with conflicting information on core hours, as in practice, the air-conditioning plant has shut down before the agreed end time stated in the **OTA**.

This is an effective strategy that should be recognised, as it is not efficient if the plant runs longer than required. Therefore, the core hours must remain as those stated in the **OTA**.

### 5.3.3 After-hours air-conditioning requests

#### 5.3.3.1 Standard for acceptable data

**After-hours air-conditioning (AHAC)** requests to service spaces outside core hours can be included in the calculation of **rated hours** for a **functional space** only if the **OTA** hours method has been used to determine core hours of this space.

**Acceptable data** for **AHAC** requests includes the following:

- a) Logs of **AHAC** requests by tenants, showing the date and time of each request and the **functional space** to which it applied.
- b) Evidence of other **AHAC** requests, such as correspondence between the tenant and the owner or building manager or information written into the **OTA** which has been verified to be correct and up-to-date. This evidence must include the date, time, and space to which **AHAC** has been agreed to be applied.

Air-conditioning operation records that do not show the date, time and source of requests are not acceptable, even if supported by evidence of after-hours occupation of the space. Similarly, records which only show the total “hours run” or “after-hours run” for the air conditioning plant are not acceptable.

The determining factor is the tenant’s request to the building owner for air-conditioning services outside core hours.



For documentation requirements, see Section 8.3.3.

### 5.3.3.2 Requests related to core hours comfort conditions

The **Assessor** must verify that **AHAC** requests do not overlap with the core hours. This includes any requests for service that occur in the normal start-up period for the plant or in the hour before the start of core hours.

**After-hours air-conditioning** requests must be reviewed by the **Assessor** to ensure that all **AHAC** in the hour before start-up are due to early occupancy rather than to comfort issues. This can be typically demonstrated by providing correspondence with the tenant. If the **Assessor** cannot accurately assess the duration of the start-up period for the plant to ensure that no **AHAC** hours have been double counted during this time, then **AHAC** hours included in the entire hour before the start of core hours must be disregarded.

### 5.3.3.3 Maximum duration of individual requests

If a tenant’s **AHAC** request or associated documentation does not include the duration for which a request was made, the maximum duration for each such request must be taken as 1 h.

Similarly, if the standard run time per push-button activation is more than 1 h and there is no evidence showing that the tenant requested that run time or agreed to it in an **OTA** with the building owner, the maximum duration for each such request must be taken as 1 h.

**Note:** This is to limit possible overestimation of **AHAC** hours and to discourage excessive provision of **AHAC** in response to a single request when it has not been clearly required by the tenant.

### 5.3.3.4 Spaces that individual requests apply to

An individual **AHAC** request applies only to the **functional space** for which the request was made. If a single request results in **AHAC** being provided to multiple **functional spaces** and the tenant has not specified which **functional space** they want to be serviced, then the request is taken to apply only to the smallest of the affected **functional spaces**. See the list of examples in Table 5.3.3.4.

**Examples:** **Table 5.3.3.4: Spaces AHAC requests apply to**

Example	Interpretation
A <b>functional space</b> that occupies 1 out of 25 floors or 5 % of the building requests <b>AHAC</b> , but 20 % of the building is operated to service this request.	The request applies to the smallest affected space of the single floor (5 % of the building).
A tenant occupies a multi-tenanted floor and requests <b>AHAC</b> for the floor.	The request applies only to the tenant's <b>functional space</b> on that floor.
Push-button request for <b>AHAC</b> from a <b>tenancy</b> that occupies 20 % of the building, with more than one <b>functional space</b> .	The request applies only to the smallest <b>functional space</b> serviced by that push-button request.

A push-button request cannot apply to more than one **functional space** unless written confirmation from the tenant is available that the request was for a larger number of spaces.

### 5.3.3.5 Requests serving different zones within a single functional space

When different independent requests are serving different smaller zones within a main functional space, each of these smaller zones must become their own **functional space**.

If the **Assessor** cannot obtain detailed areas for the zones served, a simple average calculation (arithmetical mean) must be used, see the example in Table 5.3.3.5.

**Example:** **Table 5.3.3.5: Requests serving different zones**

Example	Interpretation
<b>Functional space</b> of 1,000 m <sup>2</sup> comprising three <b>AHAC</b> zones, where the areas of the <b>AHAC</b> zone(s) are unknown are as follows: a) Total <b>AHAC</b> count for push-button 1: 100 h. b) Total <b>AHAC</b> count for push button 2: 200 h. c) Total <b>AHAC</b> count for push button 3: 300 h.	The <b>AHAC</b> hours for the <b>functional space</b> should be as follows: $(100 + 200 + 300) \div 3$ $= 600 \div 3$ $= 200 \text{ h}$

## 5.3.4 Tenancy occupancy survey

### 5.3.4.1 General

An **Assessor** may use the **TOS** core hours and unusual hours method if a higher priority method for determining **rated hours** as detailed in Section 5.2 cannot be used.

A **TOS** cannot be used for the following:

- a) **Computer server rooms** not part of a larger **functional space**, see Section 5.3.7.
- b) **Meeting rooms** not part of a larger **functional space**, see Section 5.3.7.2.
- c) Any **office support facility functional space** that is significantly sized and is not usually **occupied**, for example a compactus room that occupies half a floor.

When **TOS** hours are used, hours are based on the hours confirmed by any occupant whose primary place of occupation is in the **functional space** for which the space is typically at least 20 % **occupied**.



For documentation requirements, see Section 8.3.4.

### 5.3.4.2 Standard for acceptable data

For each **functional space**, a **TOS** must be completed by any occupant whose primary place of occupation is in the space and has specific knowledge of the levels of occupancy for the space. The **TOS** template is provided in Appendix B.

Each survey should be completed by a different occupant as it is not expected that any one individual will know the hours of **functional spaces** on all floors. A **TOS** across multiple **functional spaces** completed by a single occupant is only acceptable where it is reasonable that the individual would be aware of the hours in those spaces. Otherwise, each **TOS** must be completed by a different occupant. Examples of what is considered reasonable are as follows:

- a) Multiple small **functional spaces** on a single floor.
- b) One manager or supervisor covering three floors or less of activity-based working, where they work across all those floors on a regular basis.

A **TOS** must also be completed for the following:

- 1) Each shift where more than one shift is worked per functional space. For example, a 24-h call centre is one **functional space** but would require a **TOS** for each shift.
- 2) Each distinct period where the hours of occupation or the numbers of shifts in a **functional space** changed during the **rating period**.
- 3) Each distinct period where the occupants in a **functional space** changed during the **rating period**. For example, where an occupant is only able to provide information about occupation of a **functional space** for part of the **rating period**, a separate survey needs to be completed by the primary occupants for the remaining parts of the **rating period**.

**Note:** A distinct period varies depending on the situation. It may be one period (an entire year) if there are no changes to the occupant. It could be multiple periods if tenants change.

A **TOS** is considered unusable if one of the following occurs:

- i) The **TOS** does not verify that the source of information is an occupant who's primary place of occupation is in the **functional space** over the full course of the **rating period**. This includes **TOS** completed by building or facility managers.
- ii) The **TOS** has missing or ambiguous data. This includes **TOS** that do not have name, position; or contact number of the occupant who provided the information, dates of validity of the survey or identification of the **functional space** clearly detailed.

Preference is given to **TOS** directly completed and signed by the occupant of the space. However, documentation provided by an **Assessor** resulting from interaction with the occupant of the space is acceptable.

### 5.3.4.3 Unusual hours

Unusual hours from the **TOS** can only be used if the **TOS** method is used to determine core hours for the **functional space**. If core hours are determined using any other method, no unusual hours can be used.

**After-hours air conditioning** cannot be used when using a **TOS**.

## 5.3.5 Average core hours

### 5.3.5.1 General

An **Assessor** may estimate the average core hours if a higher priority method for determining **rated hours** as specified in Section 5.2 cannot be used.

Core hours estimated under this method are **acceptable estimates** and contribute to the **potential error** for hours.

**After-hours air conditioning** or unusual hours cannot be allocated to a **functional space** that uses the average core hours method.



For documentation requirements, see Section 8.3.5.

### 5.3.5.2 Standard for acceptable estimates

When average core hours are used for a **functional space**, the **Assessor** can use one of the following methods to estimate **rated hours** in order of priority:

- a) Period-weighted core hours of the space where **acceptable data** is only available for some shifts or some periods of operation in the **rating period**.
- b) The average of the core hours of nearby **functional spaces** with similar uses and tenants, if **acceptable data** is available for these spaces.
- c) The average of the core hours for the remainder of **functional spaces** included in the rating, if **acceptable data** is available for these spaces.

There is an exception for **fit out works**. Where a space was not being used as an office while **fit out works** were taking place, then the hours of occupation are calculated using Item a). Additional evidence is not required for the calculation of these hours, nor does it add to the **potential error**.

**Note:** Average core hours calculated in accordance with the above are entered into the **NABERS UK rating input form** under the category used for the remainder of the core hours, e.g. lease documentation or **TOS**.

### 5.3.6 Default core hours

Default hours of 45 h/week for **base building** ratings, and 40 h/week for **tenancy** and **whole building** ratings, may be used if a higher priority method for determining **rated hours** if a higher priority method as specified in Section 5.2 cannot be used. Where the **Assessor** estimates less hours than this as default hours, the reasons for doing so must be documented for this estimate to be deemed acceptable.

**After-hours air conditioning** or unusual hours cannot be allocated to a **functional space** that uses default business hours.



For documentation requirements, see Section 8.3.6.

### 5.3.7 Computer server rooms

#### 5.3.7.1 Base building ratings

Where a **computer server room** has not been separated into its own **functional space**, the **rated hours** are the same as the **rated hours** for the adjoining **functional space**.

**Note:** For a **base building** rating, where a **computer server room** has been separated into its own **functional space**, its area is excluded so hours do not need to be evaluated.

#### 5.3.7.2 Tenancy and whole building ratings

Where a **computer server room** has not been separated into its own **functional space**, the **rated hours** are the same as the **rated hours** for the adjoining **functional space**.

Where a **computer server room** has been separated into its own **functional space**, the hours for a **computer server room** are the hours the ventilation or air conditioning is provided.

### 5.3.8 Other office support facilities

This section (5.3.8) applies to all **office support facilities**, including **meeting rooms**.

This section (5.3.8) does not apply to **computer server rooms** which is covered under Section 5.3.7.



For documentation requirements, see Section 8.3.7.

#### 5.3.8.1 Base building ratings

Where an **office support facility** or **meeting room** has been separated into its own **functional space** and the **functional space** has not been excluded from the **rated area**, the **rated hours** are determined using the following methods in order of preference:

- a) Sections 5.3.2 and 5.3.3: This is **acceptable data**.
- b) Section 5.3.5: This is **acceptable data**.
- c) Section 5.3.6: This is **acceptable data**.

Where an **office support facility** or **meeting room** has not been separated into its own **functional space**, the **rated hours** are the same as the **rated hours** for the **functional space** it is located within.

**Note:** **Assessors** should determine whether the **office support facility** or **meeting room** area is included in the rating prior to considering the hours of operation of the space.

### 5.3.8.2 Tenancy and whole building ratings

Where an **office support facility** has been separated into its own **functional space**, the **rated hours** are determined using the following methods in order of priority:

- a) Hours derived from booking system records, if the **Assessor** has checked with the manager of the space that the records correspond to the actual occupancy of space. This method particularly applies to **meeting rooms** and is **acceptable data**.
- b) The area-weighted average of the core hours of all **functional spaces** which contribute to the usage of the office support space. This is **acceptable data**.
- c) Section 5.3.5: This is **acceptable data**.
- d) Section 5.3.6: This is **acceptable data**.

## 5.4 Verifying long hours

### 5.4.1 General

If the **rated hours** for any **functional space** is equal to or greater than 60 h/week, then the **Assessor** must verify these hours using the following procedures, see Sections 5.4.2 and 5.4.3.

**Note:** The intent of verification of long hours is to ensure **rated hours** outside of the typical range (beyond 60 h/week) are expected and reasonable for the space. It is to prevent situations where building services are being operated “just in case” they are needed, or for a lease that is no longer appropriate for current conditions.

For most ratings, verification should not be difficult but a matter of simply double-checking the hours determined are relevant for the space.

### 5.4.2 Procedure for verifying long OTA and AHAC hours

The **Assessor** must determine if the hours are as typically expected and reasonable for the space, see Section 5.4.4. If the hours are as expected and reasonable, the hours are considered verified and the **Assessor** must document the reasons for this decision.



If the hours are not as typically expected and/or reasonable, the **Assessor** must obtain evidence from the tenant of the relevant **functional space** that the **rated hours** are as expected and reasonable, and the reasons they are considered to be so. The documentation must be in writing and be signed by the manager or supervisor of the **functional space**.

If the tenant does not agree that the hours are reasonable and expected, or cannot provide independent documentation of this, the **Assessor** must recalculate **rated hours** using a **TOS**. Where the survey hours are within 10 % of the **rated hours** originally calculated, the original **rated hours** are considered verified and must be used. Where the survey hours are not within 10 %, the lower hours value must be used.

If the tenant cannot be contacted to verify the **rated hours**, an alternative method must be used. The **Assessor** must contact the **Scheme Administrator** for approval of an alternative method.



For documentation requirements, see Section 8.3.8.

### 5.4.3 Procedure for verifying long TOS hours

The **Assessor** must determine if the hours are as typically expected and reasonable for the space, see Section 5.4.4. If the hours are obviously as expected and reasonable, the hours are considered verified and the **Assessor** must document the reasons for this decision.

If the hours are not as typically expected and/or reasonable, the **Assessor** must confirm the tenant surveyed has properly interpreted the **TOS** questions. This may be conducted at the time the **TOS** is completed.

If the tenant surveyed does not confirm that all questions have been properly interpreted, a second **TOS** must be completed. This **TOS** may be completed by the same manager/supervisor once the **TOS** has been properly explained.



For documentation requirements, see Section 8.3.9.

### 5.4.4 Checking expected hours

**Assessors** must complete a common-sense check to determine if the hours are “as typically expected and reasonable for the space”, e.g:

- a) 24-h service for parts of a call centre operating three shifts is reasonable, but not for a call centre operating one or two shifts.
- b) 24-h operation for a **computer server room** is reasonable.
- c) Core hours of 60 h/week plus an additional 20 **AHAC** h/week requested by the floors as needed (such as by push-button requests) is reasonable and based on demand by the tenants.
- d) Core hours of 60 h/week plus an additional 20 **AHAC** h/week requested using a long-standing order written at the start of the **OTA** 3 years ago may not be reasonable if the recent occupancy of the space outside the core hours is low.
- e) Core hours of 60 h/week plus an additional 1,000 unusual h/year based on a **TOS** for standard **tenancy** might not be reasonable.



For documentation requirements, see Section 8.3.10.

# 6 Occupied workstation count

## 6.1 General

NABERS energy for offices ratings for **tenancy** and **whole buildings** are affected by the number of regular occupants and their associated equipment energy use. Conducting a proper **occupied workstation count** is necessary to allow for fair comparison. This chapter sets out the requirements for conducting such an **occupied workstation count**.



For documentation requirements, see Section 8.4.

## 6.2 Process overview

Table 6.2 below outlines the process for determining the **occupied workstation count**. Calculations use for this are provided in Section C.3.

**Assessors** must comply with all steps.

**Table 6.2: Calculating occupied workstation count**

Step	Task	Reference
1	Use the breakdown of the <b>rated premises</b> into <b>functional spaces</b> .	Section 4.4
2	Determine which configurations of <b>workstations</b> are present, complete and in regular use.	Section 6.3.2
3	Count the number of <b>workstations</b> and <b>occupied workstations</b> . Take account of acceptable standards for data, and agile and <b>activity-based working</b> environments in the space.	Section 6.3.3
4	If it is not possible to conduct a count in a <b>functional space</b> where a count is required, then use the default count, or estimate the count for the space if an estimate is an acceptable value.	Sections 6.3.4 and 6.3.5
5	Conduct a <b>Tenant Occupied Workstation Estimate (TOWE)</b> for each <b>functional space</b> .	Section 6.3.6
6	Enter the number of <b>workstations</b> , number of <b>occupied workstations</b> and <b>TOWE</b> results in the <b>NABERS UK rating input form</b> , to calculate the <b>occupied workstation count</b> .	N/A

## 6.3 Occupied workstation count

### 6.3.1 Occupied workstation count requirements

**Occupied workstation counts** are only required for **tenancy** and **whole building** ratings. An **occupied workstation count** is not required for **base building** ratings, see Table 6.3.1.

**Table 6.3.1: Office ratings requiring an occupied workstation count**

Rating type and scope	Occupied workstation count
NABERS energy for offices <b>base building</b>	Not required
NABERS energy for offices <b>tenancy</b>	Required
NABERS energy for offices <b>whole building</b>	Required

### 6.3.2 Principle and definitions

#### 6.3.2.1 General

The **occupied workstation count** is based on the number of **workstations** within a **functional space** that are regularly **occupied**.

Regularly **occupied** can mean **occupied** by one individual on a regular basis or **occupied** by various individuals, as might be the case in an agile workspace or a hot desking environment.

The assessment is limited to **workstations** and excludes breakout spaces and **meeting rooms**, irrespective of the extent to which these are **occupied**.

The **occupied workstation count** is calculated in the **NABERS UK rating input form**, based on the following input data:

- A count of **workstations** in each **functional space** by the **Assessor**.
- A count of **occupied workstations** in each **functional space** by the **Assessor**.
- Workstation** occupancy data for the rated period provided via the **TOWE**.

Only **occupied workstations** in **functional spaces** are counted.



For documentation requirements, see Section 8.4.1.

#### 6.3.2.2 Workstations

A **workstation** consists of a desk (separate or conjoined with others) that is designed as the primary place of work for an occupant. This is characterised by the presence of the following features:

- A work surface that is either suitable for seated work or standing work, or some combination of the two.
- The presence of one or more power outlets dedicated to the work location, i.e. distributed adjacent to the work location.

- c) For a work location being used for seated work, there must be an office chair present at the work location. An office chair is a chair that is designed for long-term use at a desk, and must be one of the following:
  - 1) A conventional chair for seated work that is height adjustable and have a back.
  - 2) A non-conventional chair designed to replace an office chair for people who find conventional chairs uncomfortable, such as a kneeling chair or a saddle chair.
- d) For a work location being used for standing work, the availability of height adjustment of the work surface.
- e) In the case of any ambiguity, a work location must be at least 90 cm wide and 60 cm deep.

This definition excludes work locations in breakout spaces and **meeting rooms**, which typically lack some or all these features.

Examples of what is or is not counted as a **workstation** are listed in Table 6.3.2.2.

Figure 6.3.2.2 shows an example of workplace desk space for multiple users.

<b>Example:</b> <b>Table 6.3.2.2: Counting workstations</b>	
<b>Description</b>	<b>Workstation status</b>
An individual (seated height) desk with dedicated power outlets (under or over the desk) with an office chair. A space on a (seated height) bench desk designed for multiple workplaces (i.e. desk space) with dedicated power outlets and an office chair. An individual height adjustable standing desk with dedicated power outlets. A space on a standing height bench desk designed for multiple workplaces (i.e. desk space) with dedicated power outlets and individual work location height adjustment.	Acceptable
A seated height table or desk, with or without dedicated power outlets, with a fixed height chair or a stool. A chair at a coffee table. A standing desk with no individual work surface height adjustment. A space at a <b>meeting room</b> table that has centralised in-table power boards but no distribution of power on a work location basis.	Not acceptable

**Example: Figure 6.3.2.2: Bench desk space designed for multiple workplaces**



### 6.3.2.3 Occupied workstation

For a **workstation** to be counted as an **occupied workstation**, the **workstation** must show evidence of being in use at the time of the count in one of the following ways:

- a) A person using the **workstation** as a place of work at the time of the count.
- b) Indirect evidence that a person uses the **workstation** as a place of work, even if they are not there at the time of the count. This may include personal effects or files and in-trays on the desk, or that the computer system is switched on.

A **workstation** must not be counted if the following occurs:

- 1) There is no evidence that it is in regular use visible at the time of the count, irrespective of any other advice or evidence that it may be in use at other times.
- 2) It is not being used as a place of work, i.e. it is being used primarily as storage or for a non-work function such as child-minding, refreshments or display.

## 6.3.3 Counting workstations and occupied workstations


### 6.3.3.1 Standard for acceptable data

The number of **workstations** and **occupied workstations** counted will be combined with the **TOWE**, to determine the **occupied workstation count**.

The number of **workstations** must be based on an actual site count of **workstations** in each **functional space**, conducted by the **Assessor**. Desk layouts may be used to assist this but do not suffice as they may not be current, or correctly representative of spaces available as **workstations** as defined in these **Rules**.

Staffing data such as full-time equivalent staff numbers or computer logins are not acceptable as data for the **occupied workstation count** as they do not provide differentiation between occupants on site or off site.

Where **acceptable data** or **acceptable estimates** of the energy consumption for that **functional space** is not available for reasons beyond the control of the **Assessor** or customer, then **occupied workstations** in the **functional space** must not be counted.

 For documentation requirements, see Section 8.4.2.

### 6.3.3.2 Agile and activity-based working

Agile and **activity-based working (ABW) spaces** typically include a variety of office environments to support different activities in the workplace. **Activity-based working spaces** typically do not have set desks for workers.

Conducting **occupied workstation counts** in a **functional space** using **ABW space** should be carried out following the same principles outlined in Section 6.3.2.

When counting in **functional spaces** which are operating using agile and **ABW space** principles, NABERS recommends conducting the counts between 9:30 am and 12:00 pm, or between 2:00 pm and 4:30 pm to ensure an appropriate representation of the number of occupants on-site is obtained.


**Occupied workstation counts** taken at the very start or end of the day, or during lunch hours, may give a lower result than during the premise's typical occupancy, which could impact the rating's result.

### 6.3.4 Estimating numbers of occupied workstations

If an **Assessor** cannot access a space to physically count the **workstations** or **occupied workstations** in a **functional space**, then the **Assessor** may estimate the number of **workstations** and **occupied workstations** for that **functional space**. It is acceptable to ask staff familiar with the space, or to estimate the number of **workstations** and **occupied workstations** based on **workstation** and **occupied workstation** densities for nearby similar spaces.

This section (6.3.4) does not apply to unoccupied spaces. If a **functional space** is unoccupied at the time of the count and there is no acceptable evidence of the number of **occupied workstations**, then the default computer count method must be used, see Section 6.3.5.

Estimates of **workstation** and **occupied workstation counts** add to the **potential error** for computers to the extent that they are higher than the default count described in Section 6.3.5.

 For documentation requirements, see Section 8.4.3.

### 6.3.5 Default workstation and occupied workstation count

If an **Assessor** cannot visit a space to undertake a count, such as when access to a **functional space** is limited, or for spaces that were **occupied** during the **rating period** but unoccupied at the time of the **Assessor's** site visit, then the **Assessor** may use the following default figures:

- a) **Workstation** count of  $1/20 \text{ m}^2$  of **rated area**, rounded to the nearest whole number.
- b) **Occupied workstation count** of  $1/24 \text{ m}^2$  of **rated area**, rounded to the nearest whole number.



These figures do not add to the **potential error** of the rating.

**Note:** The default **occupied workstation count** is less than the **occupied workstation count**, to account for **workstations** that are not in use.



For documentation requirements, see Section 8.4.4.

### 6.3.6 Tenant occupied workstation estimate

#### 6.3.6.1 General

An **Assessor** must also conduct a **TOWE**.

**Note:** Owing to the possibility of significant variations of **occupied workstation** density throughout the **rated period** both seasonally and day-to-day, tenants are also surveyed for information on **occupied workstations**. This is used as a potential modifier to the **Assessor's occupied workstation count**.

#### 6.3.6.2 Standard for acceptable data

For each **functional space**, a **TOWE** must be completed by one full-time employee who works in that space and has specific knowledge of the levels of occupancy for the space. The **TOWE** template is provided in Appendix B.

Each survey should be completed by a full-time employee as it is not expected that any one individual will know the operation of **functional spaces** on all floors. A **TOWE** across multiple **functional spaces** completed by a single individual is only acceptable where it is reasonable that the individual would be aware of the hours in those spaces. Otherwise, each **TOS** must be completed by a different full-time employee. Examples of what is considered reasonable are as follows:

- a) Multiple small **functional spaces** on a single floor.
- b) One individual covering three floors or less of activity-based working, where they work across all those floors on a regular basis.

A **TOWE** must also be completed for the following:

- 1) Each shift where more than one shift is worked per **functional space**, e.g. a 24-h call centre is one **functional space** but would require a **TOWE** for each shift.
- 2) Each distinct period where the full-time employee in a **functional space** changed during the **rating period**.

**Example:** Where an individual is only able to provide information about occupation of a **functional space** for part of the **rating period**, a separate survey needs to be completed by an individual who was a full-time employee during the remaining parts of the **rating period**.

A **TOWE** is considered unusable if one of the following occurs:

- i) The **TOWE** does not verify that the sources of information are full-time employees who worked in the **functional space** over the full course of the **rating period**, or the part of the **rating period** to which their answers pertain.
- ii) The **TOWE** has missing or ambiguous data. This includes **TOWE** that do not include the following information:
  - a) Name and contact number of the individual who provided the information.
  - b) Verification by that individual that they are a full-time employee.
  - c) Dates of validity of the survey.
  - d) Identification of the **functional space** clearly detailed.

Preference is given to **TOWE** directly completed and signed by the responding full-time employee of the space. However, documentation provided by an **Assessor** resulting from interaction with such an individual is acceptable.

#### **6.3.6.3 Tenant occupied workstation estimate defaults**

Where a **TOWE** is unavailable for a **functional space**, the **Assessor's occupied workstation count** will be used in its place (including, if necessary, the use of the associated default). This calculation is performed automatically by the **NABERS UK rating input form**, and the **Assessor** should simply indicate whether a **TOWE** could be conducted and if the results were useable. This does not add to the **potential error** for the rating unless the **Assessor's occupied workstation count** is covered by the provisions of Section 6.3.4.

# 7 Minimum energy coverage

## 7.1 General

### 7.1.1 Requirements for calculations

**Assessors** will need to determine the energy a building uses for a NABERS UK rating. This must be done in compliance with Chapter 3 of *NABERS UK The Rules — Metering and Consumption* as well as this chapter.

This chapter summarises the minimum energy coverage for NABERS UK office ratings which must be considered in these calculations.

For minimum energy requirements in relation to shared services, refer to *NABERS Ruling — Shared Services and Facilities*.



For documentation requirements, see Section 8.5 and refer to *NABERS UK The Rules — Metering and Consumption*.

### 7.1.2 Minimum energy coverage

**Assessors** must ensure that all the required energy **end uses** as listed in this chapter are covered by the sources and supply points identified in accordance with Sections 4.2 and 4.3 of *NABERS UK The Rules — Metering and Consumption*.

If an **end use** is required to be included in the rating but is not covered by one of the supply points identified, then the **Assessor** must use one of the alternative allowable methods listed in Chapter 7 of *NABERS UK The Rules — Metering and Consumption* to ensure the minimum energy coverage requirements can be met.

**Note:** Alternative allowable methods include small **end use** estimations and, for exclusions, use of financially reconciled **utility** costs and area weighting, refer to Section 8.2 of *NABERS UK The Rules — Metering and Consumption*. There are special provisions for the relatively common situation where components of the **HVAC** system, such as fan coil motors and tertiary pumps, are not covered by **base building** metering.



For documentation requirements, see Section 8.5.1.

### 7.1.3 Unoccupied spaces

The energy use (within the scope of the required minimum energy coverage of the rating) of unoccupied office spaces must always be included, even though the space may have been excluded from or discounted in the **rated area** calculation.

## 7.1.4 Exclusions for all rating types

### 7.1.4.1 General

Energy use may only be excluded from a rating if the following occurs:

- a) The energy is not part of the minimum energy coverage of the rating.
- b) There is a methodology within the **Rules** that permits the exclusion.
- c) The coverage, accuracy and **validation** requirements for the metering of the exclusion are met.

The metering for any exclusion must not include any **end uses** that are required under the minimum energy coverage.

### 7.1.4.2 Electric vehicle charging points

The energy associated with electric vehicle charge points does not form part of the minimum energy coverage and is not required to be included. Emissions associated with moving vehicles are not included in the scope of ratings.

### 7.1.4.3 Transmission towers

The energy used by antennas/transmission towers that provide service to the locality/suburb are not part of the energy coverage. Typically, this would be where a building leases roof space to a telecommunications company to operate their telecommunications equipment for servicing of the locality.

## 7.2 Base building minimum energy coverage

### 7.2.1 General

The required minimum energy coverage is energy consumed in supplying building central services to office **NIA** and common spaces during the **rating period**. This energy coverage includes all energy associated with the following:

- a) Any services such as air conditioning (heating, cooling and/or ventilation), chilled water, hot water, condenser water, domestic hot water, hydraulic services, or vertical transport that are—
  - 1) available to more than one office tenant in the building or more than 30 % of the office **NIA** (irrespective of whether they are used); or
  - 2) used to provide air conditioning services (heating, cooling and/or ventilation), to included **functional spaces**.
- b) Any components added or changed to reconfigure the services in Item a) for office fit out requirements, e.g. additional fan coils, reheats and other additional terminal components.
- c) All services to:
  - 1) Non-**NIA** spaces such as lobbies, common area amenities, plantrooms and foyers; and

- 2) Any amenities space (e.g. a shower or toilet block) that is accessible from a common space or car park without passing through **NIA**, whether the amenities space is being used by a single tenant or otherwise.
- d) Exterior lighting.
- e) Car park ventilation and lighting, where internal or external car parks within the legal boundaries of the site are provided for tenant use, subject to the requirements of Section 7.6.
- f) Exterior signage that—
  - 1) is primarily used for identifying or advertising the building owners;
  - 2) displays the building name, even if unrelated to a tenant or building owner; or
  - 3) is provided to a tenant by the building owner as a condition of lease.
- g) Generator fuel for any generator that—
  - 1) provides power to any of the services in Items a) to f); and/or
  - 2) provides power to the lighting and plug loads of more than one office tenant in the building or more than 30 % of the office **NIA**.

The energy use (within the scope of the required minimum energy coverage of the rating) of unoccupied office spaces must always be included, even though the space may have been excluded from or discounted in the **rated area** calculation.

Sections 7.2.2 and 7.2.3 provide the detailed interpretation of the minimum coverage. Where these sections appear to contradict the list above, Sections 7.2.2 and 7.2.3 override this section.

## 7.2.2 Base building exclusions

### 7.2.2.1 Specific exclusions

Energy associated with the following services, systems and components is excluded from the **base building** minimum energy coverage:

- a) Lighting within the **NIA**.
- b) Plug loads such as office equipment within the **NIA**.
- c) Stand-alone domestic hot water units in tenant-only kitchens, tea rooms or toilets, unless accessible from a common space or car park without passing through **NIA**.
- d) Local pollutant ventilation fans (i.e. toilet exhausts, kitchen exhausts, but not general ventilation) that serve areas within the **NIA** and that—
  - 1) serve only one tenant; or
  - 2) are available to less than 30 % of the building's **NIA**.
- e) **Local air conditioning** energy where excluded under Section 7.2.2.2 or Section 7.2.2.3.
- f) Electric vehicle charge points (energy use associated with moving vehicles is not included in the scope of the rating).
- g) Antennas/transmission towers that provide service to the locality/suburb.

**Note:** Typically, this would be where a building leases roof space to a telecommunications company to operate their telecommunications equipment for servicing of the locality.

h) Services to non-office spaces.

For situations where **HVAC** services are provided centrally, thermal metering may be required to determine the proportion of energy use. In these situations, *NABERS The Interim Rules — Thermal Energy Systems* must be used.

### 7.2.2.2 Computer server rooms

Where a **computer server room** is provided with energy services in the form of chilled water, hot water or condenser water from the **base building**, this energy is included within the minimum energy coverage.

Where a **computer server room** is provided with **local air conditioning**, that energy is excluded from the minimum energy coverage.

These provisions apply irrespective of whether the **computer server room** is a separate **functional space** or not.

**Note 1:** When chilled water energy is provided to a **computer server room**, the measured thermal energy is included within the minimum energy coverage and is used to provide an adjustment to the benchmark energy use of the building at a rate of  $0.4 \text{ kWh}_e/\text{kWh}_{th}$ , based on an assumed COP of 2.75.

For condenser water services, the benchmark adjustment is  $0.04 \text{ kWh}_e/\text{kWh}_{th}$ , based on 40 W/kW of heat rejected and for hot water the adjustment is  $0.9 \text{ kWh}_e/\text{kWh}_{th}$  based on a heating system efficiency of 85 %.

These adjustments compensate buildings for the provision of such additional services. They also provide incentive for such services at an efficiency greater than or equal to the baseline efficiency assumptions. If no thermal metering is provided, no benchmark adjustment is made.

**Note 2:** Where **local air conditioning** is provided to a **computer server room**, the energy is excluded from the minimum energy coverage and typically will be on the tenant's meter. If it is on the **base building** meter, then it may be sub-metered for exclusion.

### 7.2.2.3 Spaces with local air conditioning

Where a **functional space**, other than a **computer server room**, is provided with **local air conditioning**, the associated **local air-conditioning** energy is included within the minimum energy coverage for **base building** ratings.

Where **local air conditioning** is provided, but Section 4.4.2 does not require the space be separated into its own **functional space**, the **local air conditioning** energy use is excluded from the minimum energy coverage.

Where it is not possible to distinguish **local air conditioning** from **base building** air conditioning (such as a building where all air conditioning is based on packaged air conditioning units) then all air conditioning energy is included in the **base building** minimum energy coverage.

### 7.2.3 Examples of base building energy use allocations

Examples of energy use allocations for the **base building** rating are given in Table 7.2.3. Items not within the rating (marked “No” in the second column of Table 7.2.3) can be excluded from the rating if there is an acceptable methodology within the **Rules** to permit this; otherwise, this energy must be included.

Example: <b>Table 7.2.3: Energy use allocations</b>		
Example	Rating	Reasons
Chiller water/hot water service to air-conditioning equipment across the <b>NIA</b> in general.	Yes	Section 7.2.1a)
Chilled water/hot water/condenser water use of a <b>computer server room</b> .	Yes	Section 7.2.2.2
<b>Local air conditioning</b> energy of a <b>computer server room</b> .	No	Section 7.2.2.2
<b>Local air conditioning</b> to <b>functional spaces</b> as identified under Section 4.4.2e), f) or g).	Yes	Section 7.2.2.3
General outside air ventilation service across the <b>NIA</b> including to spaces served by <b>local air conditioning</b> .	Yes	Section 7.2.1a)
Central domestic hot water supply.	Yes	Section 7.2.1a)
Fans (e.g. AHU fans, fan coils, terminal fans), electric duct heaters, local chilled water and hot water pumps operating to deliver air-conditioning services included within <b>functional spaces</b> .	Yes	Section 7.2.1a)



**Example:** **Table 7.2.3: Energy use allocations**

Example	Rating	Reasons
A critical chilled water services loop serving multiple tenant <b>computer server rooms</b> or available to more than 30 % of <b>NIA</b> .	Yes	Section 7.2.1a)
General tenant kitchen ventilation provision serving multiple tenants.	Yes	Section 7.2.1a)
Tenant kitchen ventilation serving one tenant kitchen.	No	Section 7.2.2.1d)
A lift solely serving 3 floors within on <b>tenancy</b> of a 20 storey building, accessible only via the <b>NIA</b> .	No	Section 7.3.1c)
A lift serving 10 floors within a tenancy of a 20 storey building, accessible only via the <b>NIA</b> .	Yes	Section 7.3.1c)

## 7.3 Tenancy minimum energy coverage

### 7.3.1 General

The required minimum energy coverage for **tenancy** ratings is energy consumed by the occupant in the **tenancy** to be rated during the **rating period**. This energy coverage includes:

- a) Lighting within the **tenancy NIA**.
- b) Plug loads such as office equipment within the **tenancy NIA**, including computer servers and tenant-installed signage within the building.
- c) Any services such as chilled water, hot water, condenser water, domestic hot water, hydraulic services, generator power or vertical transport that is available solely to the tenant and are—
  - 1) available across no more than 30 % of the building's total office **NIA** (irrespective of whether they are used);
  - 2) used to provide or support **local air conditioning** as detailed under Sections 7.3.2.2 and 7.3.2.3 or other services to **functional spaces**;
  - 3) not providing heating, cooling or outside air ventilation, other than **local air conditioning**; and
  - 4) in the case of vertical transport, only accessible within the tenant's **NIA**.

- d) **Computer server room** air-conditioning energy, irrespective of source, other than condenser water energy.
- e) External signage for a tenant not provided by the building owner as a condition of the lease.

## 7.3.2 Tenancy exclusions

### 7.3.2.1 Specific exclusions

Any space that is for the exclusive use of office tenants is considered part of the office **rated premises**. The energy used in these spaces must be included in **tenancy** ratings. This is the case regardless of whether that space is included or excluded from the **rated area** calculation.

For **tenancy** ratings, car park areas are excluded, as specified in Section 7.6.

### 7.3.2.2 Computer server rooms

The energy consumption of a **computer server room**, including the air-conditioning energy associated with that **computer server room**, must be included in the energy coverage of a **tenancy** rating. For this purpose, **base building** chilled water and hot water provided to the **tenancy computer server room** must be included. **Base building** condenser water provided to the **tenancy computer server room** does not need to be included.

A **tenancy** with a **computer server room** that is provided with unmetered chilled water or hot water energy from the **base building** cannot be rated as a result of this requirement.

The proportion of **computer server room** energy included may also be modified in accordance with Section 7.5.

### 7.3.2.3 Spaces with local air conditioning

Where a **functional space** (identified under Section 4.4.2e), f) or g)) other than a **computer server room** is provided with **local air conditioning**, the associated **local air conditioning** energy is excluded from the minimum energy coverage for the **tenancy** rating.

Where **local air conditioning** is provided, but Section 4.4.2e), f) or g) does not require the space be separated into its own **functional space**, the **local air conditioning** energy use is included in the **tenancy** minimum energy coverage.

## 7.3.3 Examples of tenancy energy use allocations

Examples of energy use allocations for the **tenancy** rating are given in Table 7.3.3. Items not within the rating (marked “No” in the second column of Table 7.3.3) can be excluded from the rating if there is an acceptable methodology within the **Rules** to permit this; otherwise, this energy must be included.

Example: <b>Table 7.3.3: Energy use allocations</b>		
Example	Rating	Reasons
Chilled water/hot water use of a <b>computer server room</b> .	Yes	Sections 7.3.1d) and 7.3.2.2

**Example:** **Table 7.3.3: Energy use allocations**

Example	Rating	Reasons
Condenser water use of a <b>computer server room</b> , where provided by the <b>base building</b> .	No	Sections 7.3.1d) and 7.3.2.2
<b>Local air conditioning</b> energy of a <b>computer server room</b> .	Yes	Sections 7.3.1d) and 7.3.2.2
<b>Local air conditioning</b> to <b>functional spaces</b> as identified under Section 4.4.2e), f) or g).	No	Sections 7.3.1c) and 7.3.2.3
<b>Local air conditioning</b> to <b>functional spaces</b> other than a <b>computer server room</b> or a <b>functional space</b> identified under Section 4.4.2e), f) or g).	Yes	Sections 7.3.1c) and 7.3.2.3
Toilet exhaust fan only serving a tenant installed toilet within the <b>NIA</b> .	Yes	Section 7.3.1c)
Local (within <b>tenancy</b> ) domestic hot water supply.	Yes	Section 7.3.1c)
Fans (e.g. AHU fans, fan coils, terminal fans), electric duct heaters, local chilled water and hot water pumps operating to deliver air conditioning services within included <b>functional spaces</b> .	No	Section 7.3.1c)
A critical chilled water services loop serving only the tenant <b>computer server rooms</b> and not available to more than 30 % of <b>NIA</b> .	Yes	Section 7.3.1d)
General tenant kitchen ventilation provision serving multiple tenants.	No	Section 7.3.1c)
Tenant kitchen ventilation serving only a tenant kitchen.	Yes	Section 7.3.1c)

**Example:** **Table 7.3.3: Energy use allocations**

Example	Rating	Reasons
A lift accessible only via the <b>tenancy NIA</b> , serving only a segment of the <b>tenancy NIA</b> that comprises less than 30 % of the building <b>NIA</b> .	Yes	Section 7.3.1c)
A lift accessible via the building lobby, serving only a segment of the <b>tenancy NIA</b> that comprises less than 30 % of the building <b>NIA</b> .	No	Section 7.3.1c)
A lift accessible only via the <b>tenancy NIA</b> , serving only a <b>tenancy NIA</b> segment that comprises more than 30 % of the building <b>NIA</b> .	No	Section 7.3.1c)

## 7.4 Whole building minimum energy coverage

### 7.4.1 General

The required minimum energy coverage for **whole building** ratings is all energy used by office tenancies and by **base building** services to lettable office and common spaces during the **rating period**.

### 7.4.2 Whole building exclusions

The proportion of **computer server room** energy included may be modified in accordance with Section 7.5.

**Note:** For further information on exclusions from whole building ratings, see Section 7.1.4.

## 7.5 Computer server rooms

The energy consumption of a **computer server room** may be partially or wholly excluded from **tenancy** and **whole building** ratings on the grounds of external usage of the equipment.

**Note:** This applies if the consumption of IT equipment and/or facility services to the space are separately metered.

However, the same methods and criteria as those used to exclude the floor area of the same **computer server room** from the **rated area** calculation in Section 4.5.3 must be used. Specifically, the following apply:


- a) If the floor area of the **computer server room** has been completely included in the calculation of the **rated area**, then the energy consumption must be completely included in the assessment.
- b) If the floor area of the **computer server room** has been completely excluded from the calculation of the **rated area**, then the energy consumption must be completely excluded from the assessment.
- c) If the floor area of the **computer server room** has been partially excluded from the calculation of the **rated area**, where the externally used IT equipment and/or facility services (this includes lighting, power, UPS, air conditioning and dehumidification) are separately sub-metered, then the measured energy consumption of the externally used IT equipment and/or facility services must be excluded from the assessment.
- d) If the floor area of the **computer server room** has been proportionately excluded from the calculation of the **rated area**, where—
  - 1) the externally used IT equipment and/or facility services are not separately sub-metered; however
  - 2) it is possible to determine the number of **external users** of the IT equipment.

If the above criteria is present then the energy consumption of the IT equipment and/or facility services must be excluded from the assessment in the same proportion as the floor area exclusion.

**Note:** If the energy consumption over 12 months of a **computer server room** is 25 megawatt hours (MWh) and there are 100 **internal users** and 400 **external users**, the energy consumption for the **external users** is calculated as follows:

$$25 \times \frac{400}{(400 + 100)} = 20 \text{ MWh}$$

The documentation required for energy consumption exclusions for **computer server rooms** is the same as the documentation required for exclusions from the **rated area** calculation under Section 4.5.4.3.

 For documentation requirements, see Section 8.5.2.

## 7.6 Car parks

### 7.6.1 General

Car parks are only considered for **base building** and **whole building** ratings, not for **tenancy** ratings.

For **base building** and **whole building** ratings, the energy use of lighting and ventilation in car parks in the **rated premises** must be included in the rating to the extent that parking is provided to office tenants as a benefit of their **tenancy**, e.g. as part of an agreement associated with a lease. This applies whether the energy use is separately metered or not.

It is not uncommon for car park metering to also include other basement services, such as hydraulic pumping. In such cases, proportioning of consumption data, as outlined in this section, is not permitted.

**Note:** Where parking is provided to a tenant as a result of a separate agreement (e.g. a standard contract with a public car park operator that is independent of building ownership and management) then it is not a benefit of the **tenancy** and is not included.

### 7.6.2 Complete exclusion

The energy use of lighting and ventilation in car parks provided for office use may be completely excluded from the rating where—

- a) the car park is not located on the site of the **rated premises**; or
- b) both—
  - 1) the ownership and management of the car park are independent of the ownership and management of the **rated premises**; and
  - 2) there is a separate meter (or group of meters) that covers the entire energy use associated with the car park, but does not cover any other aspect of the building's central services energy use that must be included in the assessment.

**Note:** No complete exclusion applies based solely on the grounds that the car park is leased to, or otherwise operated by, a manager separate from the building owner and building facilities manager. The car park can, however, be excluded if tenants do not have access to the car park in accordance with Section 7.6.3.

### 7.6.3 Proportional exclusion of energy use

Where building office tenants do not have use of all of the building's car park, then a proportion of the energy use associated with the non-office tenant car parking spaces may be excluded from the rating in accordance with the following:

- a) Proportional exclusion of car park energy use is only permitted where there is a separate meter (or group of meters) that covers the entire energy use associated with the car park but does not cover any other aspect of the building's central services energy use that must be included in the assessment.
- b) Where lease documents explicitly assign a proportion of the measured car park energy use to the office tenants, then the share(s) specified in the documentation must be used in the assessment.
- c) If no specific allocation of the energy use is given to office tenant(s) in lease documentation, the relevant proportion is calculated by dividing the number of parking spaces allocated to office tenants by the total number of parking spaces.

Where pass cards or keys have been issued to office tenants, the number of parking spaces allocated to office tenants is the greater of—

- 1) the number of physically dedicated parking spaces, and
- 2) the number of pass cards or keys issued (to a limit of the total number of parking spaces).

Dedicated parking space, pass or key allocation data must be sourced from the lease documentation.

- d) If there is no lease documentation available, then it is acceptable to determine the proportions by obtaining documentation signed by office tenants that identifies the proportion of allocation.
- e) If there is no documentation and office tenant(s) are unable to identify proportions, then all of the energy use associated with the car park must be included in the assessment.
- f) Regardless of the method used to proportion the energy use, the maximum that can be excluded is 100 % of the measured car park energy usage.

The **Assessor** must fully document both the method and all data used to proportion car park energy usage.

Where car parks are solely associated with education and medical office tenants, the following applies:

- 1) **Base building ratings**: The energy consumption for these spaces must be included in the rating, even where some of the area has not been included in the rating.
- 2) **Whole building ratings**: These spaces can be considered as “non-office” tenants and the energy can be excluded, provided the requirements listed above in Items a) to f) are met.

**Note:** Where no spaces are provided to office tenants as a benefit of their **tenancy** and there is no car park energy use assigned to the **base building** in lease documentation then the proportion that can be excluded is 100 %.

#### 7.6.4 Standard for acceptable data

Compliance with this section on car parks (7.6) is deemed to satisfy the accuracy requirements of Section 3.3.



For documentation requirements, see Section 8.5.5.



# 8 Documentation requirements for accredited ratings

## 8.1 General

The **Assessor** must keep all records on which an assessment is based, including any specific guidance or approvals given by the **Scheme Administrator**. Data retained for audit must be in a form which facilitates reviews and makes anomalies easily apparent.

Access to original documents is preferred if they are available. Copies of original documents may be used as evidence as long as the **Assessor** is satisfied that they are, or can be verified to be, true and complete records of the original documents or files.

Information may be contained in many different formats. The purpose of the documentation is to provide an acceptable, credible source of the required information. In some instances, specific document types may be unnecessary for an individual rating. However, under different rating circumstances, the specific document types may carry multiple items of information required for the rating. The qualifying factor is not the type of document but that the documentation contains the required information in an acceptable format.

The information in Sections 8.2 to 8.5 is required for a rating. It is organised based on the divisions of previous chapters, see Chapters 4 to 7. All the required information should be obtained from the owner/manager of the premises before a site visit, and then confirmed during the site visit and subsequent assessment. An on-site inspection helps to verify that the information provided is accurate, current and complete.

Individual ratings may require additional information or documentation depending on the individual circumstances of the **rated premises**.

## 8.2 Chapter 4: Rated area

Topic	Requirements	Documentation
8.2.1 Determining office NIA	Section 4.3	<p>To confirm and validate the office <b>NIA</b>, the following is required, in order of preference:</p> <ul style="list-style-type: none"> <li>a) Surveys.</li> <li>b) Leases (including information about <b>tenancy</b> types, hours of operation and subsequent negotiations and changes).</li> <li>c) Other third-party documentation.</li> <li>d) Direct measurement from drawings, plans or prints; and/or</li> <li>e) Site measurement verified by the <b>Assessor</b> identifying the <b>rated premises</b>.</li> </ul> <p>All of the documentation listed above must be made to/based on the <b>measurement standard for rated area</b>.</p>
8.2.2 Dividing office NIA into functional spaces	Section 4.4	<p>To confirm the division of office <b>NIA</b> into <b>functional spaces</b>, the following is required:</p> <ul style="list-style-type: none"> <li>a) A complete list of <b>functional spaces</b> identified by the <b>Assessor</b>, including details of— <ul style="list-style-type: none"> <li>1) each individual and distinct <b>tenancy</b>;</li> <li>2) all spaces with different <b>AHAC</b> zones or operating hours;</li> <li>3) <b>computer server rooms</b>;</li> <li>4) <b>meeting rooms</b> with <b>local air conditioning</b>;</li> <li>5) <b>office support facilities</b> with <b>local air conditioning</b>; and</li> <li>6) open plan or cell office areas with <b>local air conditioning</b>.</li> </ul> </li> </ul>

		<p>b) Measurements and calculations for the <b>functional spaces</b> and the method of measurement employed in these determinations, e.g. <b>measurement standard for rated area</b>.</p> <p>c) Any documentation relating to significant construction activity during the <b>rating period</b>.</p>
8.2.3 Excluding functional spaces	Section 4.5.1	<p>For an excluded <b>functional space</b>, the following is required:</p> <p>a) Written information and/or <b>Assessor's</b> notes relating to the usage of spaces and the services provided to them.</p> <p>b) The grounds for their exclusion from the <b>rated area</b> calculation.</p> <p>c) Documentation regarding the area to be excluded from <b>rated area</b> calculation.</p>
	Section 4.5.2	<p>A list of all areas which cannot be considered offices must be retained. The appropriate reason for exclusion of the space must be stated in terms of one of the following categories:</p> <p>a) It cannot be used as an office or <b>office support facility</b>.</p> <p>b) It is not <b>occupied</b>.</p> <p>c) It is not <b>fit for office use</b>.</p>
	Section 4.5.3	<p>For the exclusion of <b>computer server rooms</b> and <b>data centres</b>, the following must be retained:</p> <p>a) Location of the <b>computer server room</b> or <b>data centre</b>.</p> <p>b) Documentation regarding the area to be excluded from <b>rated area</b> calculation.</p>
8.2.4 Other functional spaces with local air conditioning	Section 4.5.4	<p>For the exclusion of <b>functional spaces</b> with <b>local air conditioning</b>, the following documentation is required:</p> <p>a) Written information, drawings or <b>Assessor's</b> notes identifying the coverage and metering of <b>local air conditioning</b>.</p> <p>b) Documentation regarding the area to be excluded from <b>rated area</b> calculation.</p>

8.2.5 Functional space without consumption data	Section 4.5.5	<p>The documentation required for the exclusion of <b>functional spaces</b> without consumption data must include:</p> <ul style="list-style-type: none"> <li>a) <b>Assessor's</b> notes on the nature and reasons for the lack of necessary consumption data.</li> <li>b) Documentation regarding the area to be excluded from <b>rated area</b> calculation.</li> </ul>
8.2.6 Public access spaces	Section 4.6.2	<p>Documentation such as measurements and calculations must be retained of the floor area of the <b>public access spaces</b>.</p> <p>The <b>Assessor</b> must report if such spaces comprise more than 10 % of the office <b>NIA</b> and, if so, what proportion cannot be included in the rating.</p>
8.2.7 Medical or educational office facility spaces	Section 0	<p>Any <b>medical</b> and <b>educational office facilities</b> must be identified and the following documentation retained:</p> <ul style="list-style-type: none"> <li>a) The nature of the facility, e.g. consulting room, store room, <b>meeting room</b>.</li> <li>b) Information regarding whether the space is serviced by <b>base building</b> services.</li> <li>c) All calculations and measurements used to determine whether or not the space <b>occupied</b> by the <b>medical</b> or <b>educational office facility</b> can be included in the rating.</li> </ul> <p>The <b>Assessor</b> must retain documentation substantiating the grounds for any exclusion from the <b>rated area</b> calculation for the rating.</p>
8.2.8 Adjustment for unoccupied spaces	Section 4.7	<p>The documentation required for adjusting for unoccupied spaces includes the following:</p> <ul style="list-style-type: none"> <li>a) Written evidence obtained from the building manager, owner or tenant(s) confirming the number of <b>fit out works</b> days for the space and evidence showing that <b>base building</b> air-conditioning services were required. This may include notes that <b>fit out works</b> days occurred during the lease period and tenant confirmation that they did not require <b>base building</b> air-conditioning services to be turned off or down.</li> <li>b) Written evidence confirming the number of occupation days, including evidence showing that the space was <b>ready for occupation</b> during these days.</li> </ul>

		<p>The <b>Assessor</b> must obtain documentation that shows for how much of the <b>rating period</b> the occupiers—</p> <ol style="list-style-type: none"> <li>1) had the right to make exclusive use of that part of the <b>rated premises</b> (e.g. leases or similar agreements when the <b>fit out works</b> days are before the start date of the lease), and</li> <li>2) required services to be supplied to that part of the <b>rated premises</b>, e.g. copies of requests to the building owner for service, or a statement by the building owner or facility manager.</li> </ol>
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## 8.3 Chapter 5: Rated hours

### 8.3.1 General

The documentation required to determine correctly the **rated hours** depends on the data available and the method used. For each rating, the **Assessor** must ensure that the method used is clearly stated and any documentation listed below is included, relevant to the methods used.

Topic	Requirements	Documentation
8.3.2 Core hours	Section 5.3.2	<p>For the confirmation of the <b>rated hours</b> under this method, the following documentation is required:</p> <ol style="list-style-type: none"> <li>a) Written documentation stating the hours of service for normal and after-hours operation as agreed upon by the building manager and tenant.</li> <li>b) Copies of most up-to-date <b>OTA</b>.</li> <li>c) Records of specific lease clauses referring to Lessor's obligations; and</li> <li>d) Details of any conflicting information regarding core hours (if applicable).</li> </ol> <p>If the <b>OTA</b> hours and BMS data method is used, the <b>Assessor</b> must retain BMS data representative of the plant operation for the <b>rating period</b>, i.e. at a minimum one day from each of the four seasons for each primary air handling system serving the space under the <b>OTA</b>.</p>

Topic	Requirements	Documentation
		<p>The <b>Assessor</b> must obtain additional evidence to determine the <b>OTA</b> hours can be interpreted as “hours of comfort” when—</p> <ol style="list-style-type: none"> <li>1) the plant starts with a small start-up time before <b>OTA</b> hours (e.g. 30 min prior); or</li> <li>2) air conditioning plants with an optimised start strategy are present.</li> </ol> <p>The additional evidence may include a BMS or mechanical contractor signed statement or temperature data within the space from the BMS, demonstrating that the system is programmed to bring the space to comfort conditions in time for the start of <b>OTA</b> hours. This evidence should represent at minimum one day from each of the four seasons for each primary air handling system serving the space under the <b>OTA</b>.</p>
8.3.3 After-hours air-conditioning requests	Section 5.3.3	<p>For the confirmation of the <b>rated hours</b> under this method, the following documentation is required:</p> <ol style="list-style-type: none"> <li>a) Copies of <b>AHAC</b> request data showing the date and time of each request and the space to which it applied.</li> <li>b) Evidence of run times for each request showing that the tenant requested that run time, or agreed to it in an <b>OTA</b> or related written agreement with the building owner.</li> <li>c) Evidence that no <b>AHAC</b> has been counted during the core hours and during the plant start-up period or the hour before the start of core hours if the plant start-up period is unknown.</li> <li>d) Drawings and measurements showing <b>AHAC</b> zones for requests serving different zones within a single <b>functional space</b>.</li> </ol>
8.3.4 Tenancy occupancy survey	Section 0	<p>For the confirmation of the <b>rated hours</b> under this method, a completed and signed <b>TOS</b> for each <b>functional space</b> and shift must be retained.</p>
8.3.5 Average core hours	Section 5.3.5	<p>For the confirmation of the <b>rated hours</b> under this method, the following evidence must be retained:</p> <ol style="list-style-type: none"> <li>a) Details of how the estimates have been calculated.</li> </ol>

Topic	Requirements	Documentation
		<ul style="list-style-type: none"> <li>b) A clear list of <b>functional spaces</b>.</li> <li>c) Associated core hours used to determine average core hours for each space.</li> </ul>
8.3.6 Default core hours	Section 5.3.6	<p>For the confirmation of the <b>rated hours</b> under this method, evidence that no other method with a higher priority could be used for the <b>functional space</b> must be retained, i.e. evidence that <b>OTA</b> and <b>AHAC</b>, <b>TOS</b> or average core hours could not be used for the <b>functional space</b>.</p> <p><b>Note:</b> <b>Tenancy</b> ratings are not required to provide this documentation.</p> <p>The <b>Assessor</b> must state their reasons if giving an estimate of less than the default hours of 45 h/week for <b>base building</b> ratings, and 40 h/week for <b>tenancy</b> and <b>whole building</b> ratings.</p>
8.3.7 Tenancy and whole building ratings	Section 5.3.8.2	<p>Depending on the method used, confirmation of the <b>rated hours</b> for other <b>office support facilities</b> including <b>meeting rooms</b> must be retained in one of the following formats:</p> <ul style="list-style-type: none"> <li>a) Copies of <b>OTA</b> and <b>AHAC</b> requests.</li> <li>b) Evidence on how the average core hours have been calculated.</li> <li>c) If default values are used, evidence that no other method could be used.</li> </ul>
8.3.8 Procedure for verifying long OTA and AHAC hours	Section 5.4.2	<p>Depending on the process used, confirmation of the <b>rated hours</b> must be retained for long <b>OTA</b> and <b>AHAC</b> hours—</p> <ul style="list-style-type: none"> <li>a) (where the hours are obviously as expected and reasonable for the space) <b>Assessor's</b> notes explaining the reasons why long hours are typically expected and reasonable; or</li> <li>b) (where the hours are not typically as expected and reasonable for the space) written and signed tenant confirmation that the <b>rated hours</b> are as expected and reasonable and the reasons why they are considered so.</li> </ul>
8.3.9 Procedure for verifying	Section 5.4.3	<p>Depending on the process used, confirmation of the <b>rated hours</b> must be retained for long <b>TOS</b> hours—</p>



Topic	Requirements	Documentation
long TOS hours		<ul style="list-style-type: none"> <li>a) (where the hours are obviously as expected and reasonable for the space) <b>Assessor's</b> notes explaining the reasons why long hours are typically expected and reasonable; or</li> <li>b) (where the hours are not typically as expected and reasonable for the space) written evidence showing that the <b>TOS</b> questions have been properly interpreted by the occupant surveyed. This can take the form of copies of email exchanges or detailed minutes of a phone conversation.</li> </ul>
8.3.10 Checking expected hours	Section 5.4.4	For confirmation of the <b>rated hours</b> for all <b>functional spaces</b> a common-sense check of the hours must be performed. This must take the form of <b>Assessor's</b> notes stating their judgement of whether the hours are "obviously as expected and reasonable for the space" and giving reasons why or why not.

## 8.4 Chapter 6: Occupied workstation count

Topic	Requirements	Documentation
8.4.1 Principle and definitions	Section 6.3.2	<p>As evidence of a site visit to count the number of <b>workstations</b>, the following must be retained:</p> <ul style="list-style-type: none"> <li>a) A record of how many <b>workstations</b> and <b>occupied workstations</b> have been identified within each <b>functional space</b>.</li> <li>b) Where necessary, evidence of regular use of <b>workstations</b>, such as: <ul style="list-style-type: none"> <li>1) A report by a manager or other authoritative source that a <b>workstation</b> is in regular use.</li> <li>2) For <b>workstations</b> in training rooms, etc, booking or attendance records that the <b>Assessor</b> has verified to be accurate and which show both the number of <b>workstations</b> used and the amount of time they were used for.</li> </ul> </li> </ul>
8.4.2 Counting workstations	Section 6.3.3	<p>As evidence a <b>workstation</b> count has been conducted, one of the following must be retained:</p> <ul style="list-style-type: none"> <li>a) Marked-up <b>workstation</b>/desk layouts for all spaces in the <b>rated premises</b>, if available.</li> </ul>

Topic	Requirements	Documentation
and occupied workstations		<p>b) Marked-up <b>workstation</b>/desk layouts completed by the <b>Assessor</b> and showing the computer count.</p> <p>c) Copies of the <b>Assessor's</b> site notes taken during the count if desk layouts are not available.</p> <p>In addition, the <b>Assessor</b> must identify which spaces (if any) are agile and ABW spaces, and document at which times counts have been conducted.</p>
8.4.3 Estimating numbers of <b>occupied</b> workstations	Section 6.3.4	<p>Whenever an estimate of <b>workstation</b> (<b>workstation</b> and/or <b>occupied workstation</b>) numbers has been made, the following must be retained for each <b>functional space</b>:</p> <p>a) Statements giving reason(s) why the estimate had to be made.</p> <p>b) Calculations of the figure used, including all assumptions, estimates and interpretations involved.</p>
8.4.4 Default workstation and occupied workstation count	Section 6.3.5	<p>The <b>Assessor</b> must list each <b>functional space</b> for which the default method of counting <b>workstations</b> has been used.</p>
8.4.5 Tenant occupied workstation estimate	Section 6.3.6	<p>Whenever a survey has been conducted, the following must be retained:</p> <p>a) A record of the sampling method used, including a copy of the random list that clearly shows which of the <b>functional spaces</b> were selected.</p> <p>b) For each <b>functional space</b> in which a <b>workstation</b> count was conducted, a copy of one of the following:</p> <ol style="list-style-type: none"> <li>1) Marked-up desk layouts completed by the <b>Assessor</b> and showing the <b>workstation</b> count.</li> <li>2) If desk layouts are not available, copies of the <b>Assessor's</b> site notes taken during the count.</li> </ol>

## 8.5 Chapter 7: Minimum energy coverage

### 8.5.1 General

The documentation requirements for minimum energy coverage are covered in Section 5.7 of *NABERS UK The Rules — Metering and Consumption*. Additional documentation requirements specific to offices are listed below.

Topic	Requirements	Documentation
8.5.2 Base building minimum energy coverage	Section 7.2	For documentation required to confirm minimum energy coverage see Section 9.2.3 of <i>NABERS UK The Rules — Metering and Consumption</i> .
8.5.3 Base building exclusions	Section 7.2.2	For documentation required to confirm exclusions from minimum energy coverage see Section 9.2.3 of <i>NABERS UK The Rules — Metering and Consumption</i> .
8.5.4 Spaces with local air conditioning	Section 7.2.2.3	Where it is not possible to include <b>local air conditioning</b> energy, the <b>Assessor</b> must retain written documentation that identifies the coverage of the <b>local air conditioning</b> .
8.5.5 Car parks	Section 7.6	<p>The <b>Assessor</b> must fully document both the method and all data used to proportion car park energy usage.</p> <p>Dedicated parking space, pass or key allocation data must be sourced from the lease documentation.</p> <p>Documentation to support the proportioning of energy use, includes one of the following:</p> <ul style="list-style-type: none"> <li>a) Lease documentation.</li> <li>b) Documentation signed by office tenants that identifies the proportion of allocation.</li> <li>c) <b>Assessor's</b> calculation of relevant proportions.</li> </ul>

# Appendix A Rating period

## A.1 Allowance for lodgement

### A.1 General

A NABERS UK rating is based on 12 months of **acceptable data**, called the **rating period**. Once certified, the rating is valid for up to 12 months, called the **validity period**.

It can take time for an **Assessor** to complete a rating. Therefore, a period of 120 calendar days is given to lodge the rating after the end of the **rating period**. Ratings lodged after the 120 calendar days will have a reduced **validity period** to ensure all ratings are based on current data.

Sections A.1.2 and A.1.3 provide examples of this principle.

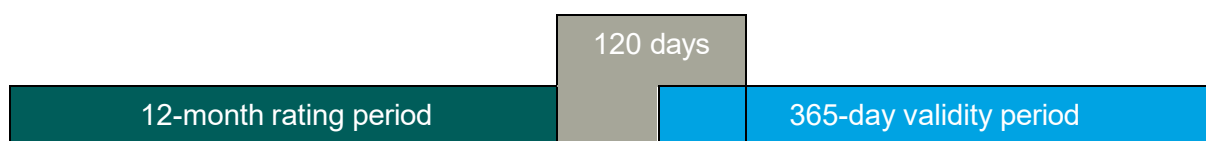
#### A.1.1 Scenario 1

A NABERS UK rating is lodged with the **Scheme Administrator** within 120 calendar days of the end of the **rating period**. It will be valid for 365 days from the date of certification, see Figure A.1.2.

**Example:** The process for date of certification will be as follows:

- The **rating period** is 1 January 2022 to 31 December 2022. The due date is therefore 30 April 2023.
- The **Assessor** lodges the rating on 1 February 2023, and the **Scheme Administrator** certifies it on 5 February 2023. This is before the due date.
- The rating will therefore be valid for 365 days from the date of certification (5 February 2023).
- The rating will expire on 5 February 2024.

**Figure A.1.2: Rating lodged within 120 days of end of rating period**



#### A.2 Scenario 2

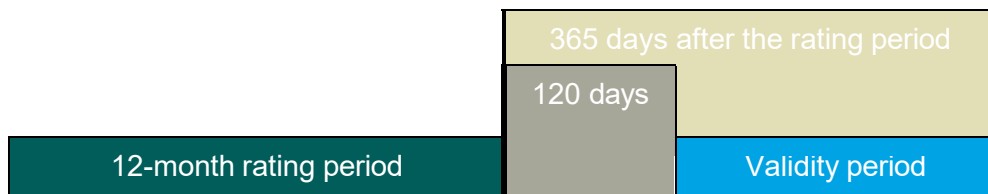
A NABERS UK rating is lodged with the **Scheme Administrator** more than 120 calendar days after the end of the **rating period**. It will be valid for 365 days from the end of the **rating period**, see Figure A.1.3.

**Example:** The process for date of certification will be as follows:

- The **rating period** is 1 January 2022 to 31 December 2022. The due date is therefore 30 April 2023.

- b) The **Assessor** lodges the rating on 1 June 2023, and the **Scheme Administrator** certifies it on 6 June 2023. This is after the due date.
- c) The rating will therefore be valid for 365 days from the end of the **rating period** (31 December 2022).
- d) The rating will expire on 31 December 2023.

**Figure A.1.3: Rating lodged after 120 days from end of rating period**



## A.2 Allowance for responses

### A.2.1 General

The **Assessor** is given 120 days after the **rating period** to lodge ratings with the **Scheme Administrator**. The **Assessor** should allow 10 working days within this 120-day period for a response from the **Scheme Administrator**. The **Scheme Administrator** then allows a further 10 working days for the **Assessor** to respond to any queries that arise from quality assurance checks before certification.

When the **Assessor** is required to provide clarification multiple times, this must be done within the allowable 10 working days period.

If the **Assessor** has not responded adequately to all queries and the rating has not been certified within 120 days of the end of the **rating period** + 10 working days, the rating will only be valid for up to 365 days from the end of the **rating period**. This does not include the time taken by the **Scheme Administrator**.

Section A.2.2 provides an example of this principle.

### A.2.2 Scenario

A NABERS UK rating is lodged with the **Scheme Administrator** one day before the lodgement due date (120 days from the end of the **rating period**). Depending on how quickly the **Assessor** responds to clarifications, the rating will either be valid for 365 days from the date of certification or 365 days from the end of the **rating period**.

**Example:** The process for date of certification will be as follows:

- a) The **rating period** is 1 January 2022 to 31 December 2022. The due date is therefore 30 April 2023.
- b) The **Assessor** lodges the rating on 29 April 2023, 119 days after the end of the **rating period**.

- c) The **Scheme Administrator** responds on 3 May 2023 requesting further clarification. The **Assessor** must provide adequate clarification by 14 May 2023 (120 days from the end of the **rating period** plus 10 working days) for the rating to be valid for 365 days from the date of certification.
- d) If the **Assessor** responds on the 8 May 2023, the rating will be certified and valid until the 8 May 2024.
- e) If the **Assessor** does not respond with clarification until the 30 May 2023, the rating will only be valid until 365 days from the end of the **rating period** and therefore will expire on the 31 December 2023.

### A.3 Adjusting the rating period

After the rating has been lodged, the **Assessor** may require the **rating period** to be changed. The **rating period** may only be adjusted by a maximum of 62 days from the first lodgement. A new rating will need to be created if the **Assessor** would like to adjust the **rating period** by more than this initial timeframe.

**Note:** A rating is required to comply with the **Rules** that are current at the time of lodgement. **Assessors** are advised to seek advice and request a **Ruling** (if needed) prior to lodging ratings that may require one.

### A.4 Lodging successive ratings

#### A.4.1 General

For a building which already has a current rating, there are two options to complete another rating of the same type, i.e. replace or renew.

**Note:** The **Assessor** will be prompted to select “replace” or “renew” when creating a rating. This selection can be changed just before the rating is lodged but not after.

#### A.4.2 Option 1: Replace

The replace option allows the new certified rating to replace the existing rating immediately upon certification.

There will be loss of the existing rating’s remaining **validity period**. This option may be chosen if the new rating is better than the existing rating, see Figure A.4.2.

**Figure A.4.2: Existing rating replaced by a new rating**



### A.4.3 Option 2: Renew

The renew option allows the new certified rating to begin its **validity period** immediately after the existing rating **validity period** expires. This option is often chosen when a site is most concerned with maximising the **validity period**.

As ratings are based on current data, the new **validity period** cannot not exceed 485 days from the end of the **rating period**. To ensure the new rating maximum **validity period** is achieved, the **validity period** must start within 120 days after the end of the **rating period**.

Section A.4.4 provides an example of this principle.

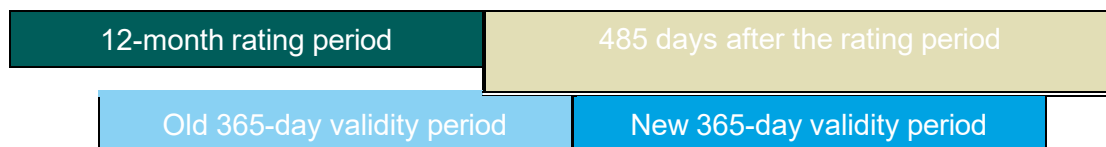
### A.4.4 Scenario 1

A NABERS UK rating is lodged with the **Scheme Administrator** and the renew option has been selected. The new rating begins its **validity period** within 120 days after the end of the **rating period**, see Figure A.4.4.

**Example:** The process for date of certification will be as follows:

- The current rating's **validity period** expired 31 December 2022.
- The **rating period** is 1 October 2021 to 30 September 2022 for the renewal rating.
- The **Assessor** lodges the renewal 1 November 2022 and it is certified by the **Scheme Administrator** 7 November 2022.
- The **validity period** for the renewal will be 1 January 2023 to 31 December 2023.

**Figure A.4.4: Validity period for new rating begins once old rating expires and new validity period is 365 days**



If the new rating's **validity period** begins more than 120 days after the end of the **rating period**, the validity will be reduced as the **validity period** will exceed 485 days from the end of the **rating period**.

**Note:** An expired rating can be renewed. The **validity period** will begin on the date of certification, rather than the date the previous rating expired.

Section A.4.5 provides an example of this principle.

### A.4.5 Scenario 2

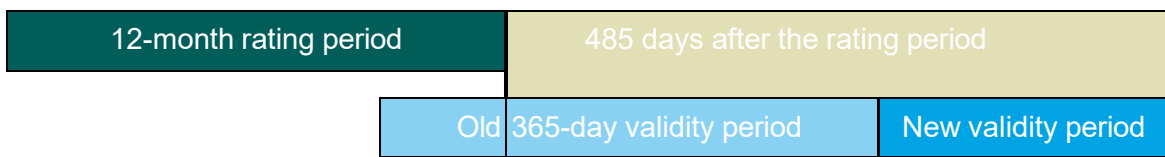
A NABERS UK rating is lodged with the **Scheme Administrator** and the renew option has been selected. The new rating begins its **validity period** over 120 calendar days after the end of the **rating period**, see Figure A.4.5.



**Example:** The process for date of certification will be as follows:

- a) The current rating's **validity period** expired 31 December 2022.
- b) The **rating period** is 1 August 2021 to 31 July 2022 for the renewal rating.
- c) The **Assessor** lodges the renewal 1 November 2022 and it is certified by the **Scheme Administrator** 7 November 2022.
- d) The **validity period** for the renewal will be 1 January 2023 to 28 November 2023, 485 days after the end of the **rating period**.

**Figure A.4.5: Validity period for new rating begins once old rating expires and new validity period is less than 365 days**



# Appendix B Tenant occupancy survey

The following form must be completed by a primary occupant of the nominated **functional space**. At least one form must be printed and completed for every shift operating in each **functional space**. The **Assessor** must keep all files for auditing purposes.

The questions in this survey are aimed at finding the average number of h/week that at least 20 % (1 in 5) of people who work in the **functional space** were present for the **rating period**. This information is only used to assess the energy consumption and greenhouse gas performance of the building relative to how many hours it is used.

Tenant occupancy survey form	
<b>Note:</b> The below section is to be completed by the Assessor.	
Functional space:	
Rating period:	From ___ / ___ / ___ to ___ / ___ / ___
<b>Note:</b> The below section is to be completed by the nominated primary occupant.	
Please answer the following questions with respect to the functional space and rating period specified above.	
Name of primary occupant:	
Position:	
Primary place of occupancy:	
What are the typical days of work within the area you manage?	
By what time at the start of the typical day have approximately 20 % (1 in 5) people arrived within the area you manage?	
By what time at the end of the typical day have most people gone except for approximately 20 % (1 in 5) people who are still in the area you manage?	

Tenant occupancy survey form	
Describe any periods where more than 20 % of people would be present outside these typical hours, e.g. "Four hours one Saturday each month", or "A total of 50 hours at the end of financial year":	
Do all the these answers apply for the whole rating period indicated above?	
If not, what period do the answers apply to? Please give alternative responses for the rest of the rating period (ignoring periods when the space was vacant):	
Signature of primary occupant:	
Date:	

<b>Tenant Occupied Workstation Estimate (TOWE) form</b>				
<b>Note:</b> The below section is to be completed by the Assessor.				
Number of workstations:				
<b>Note:</b> The below section is to be completed by the nominated primary occupant.				
Current assessed occupancy percentage, based on observation by the Assessor:				
Over the rating period, estimate what percentage of these workstations have been occupied mid-morning/mid-afternoon on a normal working day:				
<b>Dates</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
	<div style="text-align: center;"> <u>  /  /  </u> to  <u>  /  /  </u> </div> <p style="text-align: center;">Tick only ONE as appropriate</p>	<div style="text-align: center;"> <u>  /  /  </u> to  <u>  /  /  </u> </div> <p style="text-align: center;">Tick only ONE as appropriate</p>	<div style="text-align: center;"> <u>  /  /  </u> to  <u>  /  /  </u> </div> <p style="text-align: center;">Tick only ONE as appropriate</p>	<div style="text-align: center;"> <u>  /  /  </u> to  <u>  /  /  </u> </div> <p style="text-align: center;">Tick only ONE as appropriate</p>
All/nearly all: 80 % to 100 %				
Most: 60 % to 80 %				
Approximately half: 40 % to 60 %				

Tenant Occupied Workstation Estimate (TOWE) form				
Some: 20 % to 40 %				
Few: 0 % to 20 %				

# Appendix C Calculations

## C.1 Rated area calculation

Calculate the **rated area** as follows:

- Identify the **functional spaces** in accordance with Section 4.4.
- For each **functional space**, determine the proportion of time the space is **occupied**, i.e. not vacant.
- For each **functional space**, determine the time-weighted area by multiplying the floor area of the space by the proportion of time the area was **occupied**.
- Determine the **rated area** by adding all the time-weighted areas for each of the **functional spaces**.

This calculation is expressed in the following formula:

$$A = \sum_{i=1}^N o_i a_i$$

where:

$A$  = **rated area** (m<sup>2</sup>)

$i$  = each **functional space**

$a_i$  = floor area of each **functional space** (m<sup>2</sup>)

$o_i$  = proportion of the **rating period** that the space was **occupied**

**Example:** A building has two 1,000 m<sup>2</sup> **functional spaces**, but one of them has been vacant for 3 months during the **rating period**.

The **rated area** is assessed as follows:

$$A = \left(\frac{12}{12}\right) 1,000 + \left(\frac{9}{12}\right) \times 1,000 = 1,000 + 750 = 1,750$$

## C.2 Rated hours calculation from OTA core hours and AHAC

### C.2.1 Rated hours from OTA core hours and AHAC

The total **rated hours** are calculated by the **NABERS UK rating input form** with data input by the **Assessor**. The **NABERS UK rating input form** does this with the following methodology:

- Core hours ( $H_c$ ) is calculated according to the method specified in this section (C.2).
- After-hours times ( $H_a$ ) is calculated using the following method:
  - The **AHAC** hours in equivalent h/week are determined for **functional space**.
  - The equivalent **AHAC** hours for the **rated premises**  $H_a$  is determined with the following formula:

$$H_a = \frac{\sum_{i=1}^N h_{a,i} o_i a_i}{A}$$

where:

$H_a$  = equivalent **AHAC** hours for the **rated premises**

$h_{a,i}$  = equivalent **AHAC** hours for each **functional space** (h/week)

- c) The equivalent **AHAC** hours are added to the  $H_c$  to calculate the total **rated hours** (H) as follows:

$$H = H_c + H_a$$

### C.2.2 Rated hours from TOS

When **TOS** are used to determine the **rated hours**, the occupation-weighted area is calculated by the **NABERS UK rating input form** with data input by the **Assessor**. The **NABERS UK rating input form** does this for each **functional space** determined in Section 4.4 with the following methodology:

- For each distinct period during the **rating period** in which the space was occupied and the hours of occupation were constant, multiply its h/week by the proportion of the 12-month **rating period** that the distinct period represents.
- Add the hours for each such distinct period.
- Multiply the area of the **functional space** by the total number of h/week.
- Add the occupation-weighted areas of all the **functional spaces** together and then divide by the total **rated area** to calculate the area-weighted average h/week for the **rated premises**.

This method applies equally to normal and after-hours operation. This calculation is expressed in the following formula:

$$H = \frac{\sum_{i=1}^N h_i o_i a_i}{A}$$

where:

$H$  = **rated hours** (h/week)

$A$  = **rated area** (m<sup>2</sup>)

$i$  = each **functional space**

$h_i$  = hours allocated to each **functional space** (h/week)

$a_i$  = area of each **functional space** (m<sup>2</sup>)

$o_i$  = the proportion of the **rating period** that the space is occupied

### C.3 Occupied workstation count calculation

The number of **occupied workstations** is calculated by the **NABERS UK rating input form** with data input by the **Assessor**. The **NABERS UK rating input form** does this with the methodology shown in Figure C.3.

In part of the methodology shown in Figure C.3, the **TOWE** responses the **Assessor** provides the **NABERS UK rating input form** are used to determine the tenant **workstation** estimate ( $T_n$ ) for each **functional space**.

In the **TOWE** responses, each cell  $[Q,f]$  is translated to a numerical value by the form as follows:

- A tick represented as being  $t_{Q,f} = 1$ .
- No tick represented as being  $t_{Q,f} = 0$ .

Table C.3 provides an example of the information required for the formula.

**Example:** **Table C.3: Determining tenant workstation estimate for functional space**

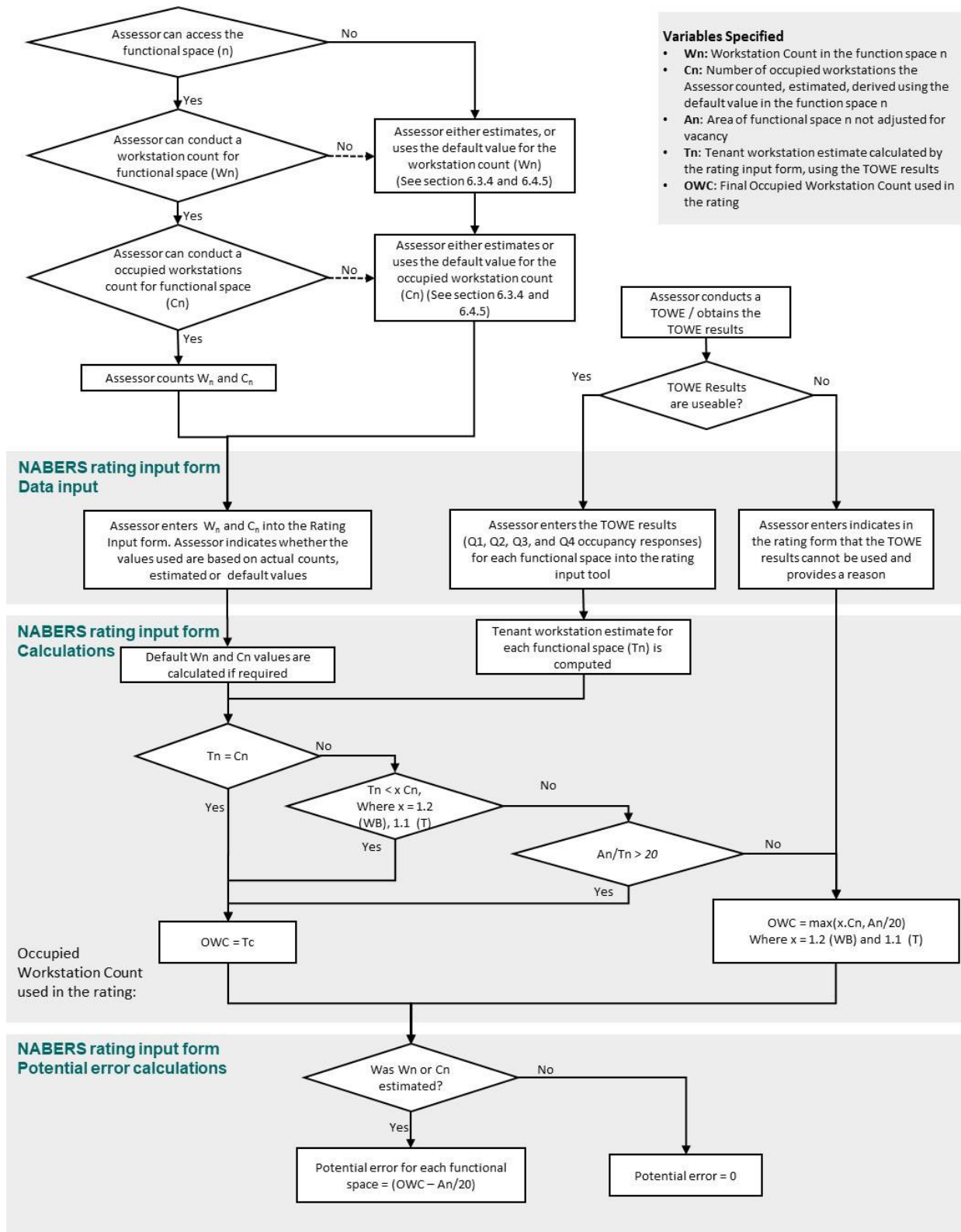
	Q1	Q2	Q3	Q4
Dates	<div> <div> <div>/</div> <div>/</div> <div>/</div> </div> <div>to</div> <div> <div>/</div> <div>/</div> <div>/</div> </div> </div> <div>Tick only ONE as appropriate</div>	<div> <div> <div>/</div> <div>/</div> <div>/</div> </div> <div>to</div> <div> <div>/</div> <div>/</div> <div>/</div> </div> </div> <div>Tick only ONE as appropriate</div>	<div> <div> <div>/</div> <div>/</div> <div>/</div> </div> <div>to</div> <div> <div>/</div> <div>/</div> <div>/</div> </div> </div> <div>Tick only ONE as appropriate</div>	<div> <div> <div>/</div> <div>/</div> <div>/</div> </div> <div>to</div> <div> <div>/</div> <div>/</div> <div>/</div> </div> </div> <div>Tick only ONE as appropriate</div>
All/nearly all: 80 % to 100 %	$[t_{1,0.9}]$	$[t_{2,0.9}]$	$[t_{3,0.9}]$	$[t_{4,0.9}]$
Most: 60 % to 80 %	$[t_{1,0.7}]$	$[t_{2,0.7}]$	$[t_{3,0.7}]$	$[t_{4,0.7}]$
Approximately half: 40 % to 60 %	$[t_{1,0.5}]$	$[t_{2,0.5}]$	$[t_{3,0.5}]$	$[t_{4,0.5}]$
Some: 20 % to 40 %	$[t_{1,0.3}]$	$[t_{2,0.3}]$	$[t_{3,0.3}]$	$[t_{4,0.3}]$
Few: 0 % to 20 %	$[t_{1,0.1}]$	$[t_{2,0.1}]$	$[t_{3,0.1}]$	$[t_{4,0.1}]$

The **NABERS UK rating input form** calculates the tenant's **workstation** estimate ( $T_n$ ) for each **functional space** using the following formula:

$$T_n = \frac{W_n}{4} \sum_{Q=1}^4 \sum_{f=0.1}^{0.9} t_{Q,f} f$$

where:

$W_n$  = workstation count in the **functional space**

**Figure C.3: Occupied workstations calculation methodology**



## C.4 Accuracy calculations procedure

### C.4.1 General

For all data inputs, except hours and **occupied workstation count**, the **potential error** is the total of all **acceptable estimates** (including assumptions, approximations, and unverified data) used in place of **acceptable data**.

**Note:** The **NABERS UK rating input form** includes sections for calculating the **potential error** that could result if inaccurate assumptions, approximations or unverified data are used in an assessment. It is important that this “worst-case” **potential error** is known and is kept within limits so that NABERS UK ratings can be relied upon for comparison.

### C.4.2 Potential error — Hours

**Potential error** is calculated differently for hours because potential inaccuracy in the area-weighted average is not readily apparent from the raw occupancy data. The calculations are based on the following procedure:

- a) Calculate the **rated hours** as specified in Chapter 5 and record the result.
- b) Set the hours for all **functional spaces** with uncertain hours to the default weekly hours and record the value for **rated hours** that would result, i.e. this is the average case figure. Return the hours to their “rated” values.
- c) Calculate the overall **potential error** in hours by the **rated hours** from Step a) above minus the average case total calculated in Step b).

The **potential error** associated with hours is determined via the following formula:

$$|\sum_n (E_n - D_n)|$$

where:

$E$  = value (hours multiplied by area and occupancy) for the **functional space** ( $n$ ), where that is being treated as an estimate with a **potential error**

$D$  = default value for the **functional space** ( $n$ )

$| |$  (i.e. vertical bars) = absolute value after summing the **potential errors** for each **functional space** ( $n$ ), is used

### C.4.3 Potential error — Occupied workstation count

There will be a **potential error** contribution from the **occupied workstation count** when the **Assessor** is unable to count or use the default value for the **workstation** count, and/or the **occupied workstation count** for at least one **functional space**, shown in Figure C.1.

The **potential error** associated with **occupied workstation count** is determined via the following formula:

$$|\sum_n (OWC_n - d_n)|$$

where:

$OWC$  = final **occupied workstation count** as determined in Figure C.1, for **functional space**  $(n)$

$d$  = default value **occupied workstation count**, for **functional space**  $(n)$

$||$  (i.e. vertical bars) = the absolute value after summing the **potential errors** for each **functional space**  $(n)$ , is used.

The **potential error** for each **functional space** is calculated as the difference between the rateable **occupied workstation count** and the default **occupied workstation count**. This value can be negative or positive. The overall **potential error** for the rating is the absolute value after the **potential errors** for individual **functional spaces** are summed.

#### C.4.4 Total rating accuracy

The combined effect of all assumptions, **acceptable estimates**, and unverified **data** on a rating is calculated in the **NABERS UK rating input form** as follows:

- a) Calculate a “Case A” rating using all the assumptions, **acceptable estimates**, and unverified **data** intended to be used in the assessment.
- b) Calculate the **potential error** for each **data** input.
- c) Calculate a “Case B” rating in which the **potential errors** are—
  - 1) (for **rated area**, **rated hours** and **occupied workstation count** data) added to the “Case A” inputs; or
  - 2) (for energy consumption data) subtracted from the “Case A” inputs.
- d) The “Case A” rating meets the accuracy requirements of this section (C.4) if the results for the “Case A” and “Case B” ratings differ by no more than 5 % (in  $\text{kgCO}_2/\text{m}^2$  or  $\text{kL}/\text{m}^2$ , as appropriate).

# Appendix D List of changes

The following table lists the changes to the content of *NABERS UK The Rules — Energy for Offices*, v1.2, 2022 in order to produce this version 2.0.

Overview		
Version 2.0 (superseded)	Version 2.1 (current)	Content changes
Document location		
All Chapters		
Reference to Scheme Administrator	New Scheme administrator	Minor editorial changes. Amended document to reference new Scheme Administrator.

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