

## Checklist for a compliant functional adaptation strategy study and implementation plan report

### 1. Daylight Comfort and View Out

2 credits			2 credits	
	80% of the following building areas meet good practice daylight factors	AND	Average daylight illuminance (averaged over entire space)	Minimum daylight illuminance at worst lit point
Kitchen:	1.5%		100% At least 100 lux for 3450 hours per year or more	At least 30 lux for 3450 hours per year or more
Living Room and home office	1.2%		At least 100 lux for 3450 hours per year or more	At least 30 lux for 3450 hours per year or more
			OR At least 80% of the room has a view of sky from desk or table top height (0.85m in residential buildings and residential institutions, 0.7m in other buildings).	

NOTE: A daylight study is needed to make evidence of the of compliance.

- 95% of the floor area space where desk (workstations) exist should be within 5 metres of a window that is at least 20% of the surrounding wall area.

## 2. Ventilation

### Air Intakes and Exhausts Placement

**Design Standard:** Follow EN 13779:2007 Annex A2 for the location of air intakes and exhausts.

**Separation:**

- Maintain a minimum horizontal distance of 5 meters between intakes and exhausts if the building is not naturally ventilated.
- Consider external sources of pollution (e.g., roads) in placement.

### HVAC Filtration

**Requirement:** HVAC systems must include suitable filtration to minimize external air pollution.

**Standard:** Filtration must comply with EN 13779:2007 Annex A3.

## 3. Safe Cycle and footpaths

### Shared Pedestrian and Cycle Routes

**Width:** Minimum total width of 3.0m for combined pedestrian and cycle paths.

**Separation:** The car route must be additional to this 3m and clearly differentiated from the cycle/pedestrian path in all drawings.

### Connectivity

The cycle/pedestrian path must connect:

- Site entrance
- Cycle storage
- Building entrances

### Drop-off and Pedestrian Safety

Provide drop-off areas adjacent to the access road, with direct access to pedestrian footpaths. Design and signpost footpaths at all pedestrian crossings over vehicle access routes.

### Amenity and Delivery Access

Delivery Areas:

- Separate from general parking and pedestrian/cyclist routes.
- Do not cross or share space with amenity areas used by building users or the public.

### Goods Vehicles:

Dedicated parking or waiting area, clearly separated from:

- Maneuvering areas
- Staff and visitor car parking

### Parking and Maneuvering

- Design parking and turning areas to allow for simple, safe maneuvering.

## 4. Accessible spaces

- Parking: On plot' (non-communal) parking: at least one parking space per dwelling (if the dwelling has a dedicated parking space) length should be capable of enlargement to achieve a minimum width of 3300mm.
- Approach to dwelling from parking (distance, gradients and widths) should be the shortest possible.
- All entrances should be illuminated, have level access over the threshold, have effective clear opening widths and nibs as specified below. In addition, main entrances should also have adequate weather protection and have a level external landing.
- There should be space for turning a wheelchair in dining areas and living rooms and basic circulation space for wheelchair users elsewhere.
- In dwellings with two or more storeys, with no permanent bedroom on the entrance level, there should be space on the entrance level that could be used as a convenient temporary bed-space.
- Accessible bathroom provided in the entry level (Walls in all bathrooms and WC compartments should be capable of firm fixing and support for adaptations such as grab rails).
- The design within a dwelling of two or more storeys should incorporate potential for stair lift installation and a suitable identified space for a through-the-floor lift from the entrance level to a storey containing a main bedroom and an accessible bathroom.
- Windows in the principal living space (typically the living room), should allow people to see out when seated. In addition, at least one opening light in each habitable room should be approachable and usable by a wide range of people, including those with restricted movement and reach.
- Service controls should be within a height band of 450mm to 1200mm from the floor and at least 300mm away from any internal room corner.

## 5. Accessible and usable outside space

### Accessibility & Usage

- **Size:** Sufficient to allow all occupants to sit outside.
- **Access:** Fully accessible, including for wheelchair users.
- **Restriction:** Reserved for occupants of designated dwellings only.

### Location & Proximity

**Adjacency:** Adjacent to or in close proximity to the dwellings.

### Space Allocation per Bedroom

1.5m<sup>2</sup> per bedroom for private space and 1m<sup>2</sup> per bedroom for semi-private space, i.e. shared access by all dwelling occupants.

## 6. Energy and water meters and leak isolation to be located in a place of easy access.

## 7. Integration of passive design and LZC technologies

### Concept Design Stage Analysis

**Scope:** The project team must analyze the site and proposed development to identify opportunities for passive design solutions that reduce building energy demand.

#### Areas of Analysis:

Site location and weather

Microclimate

Building layout, orientation, and form

Building fabric and thermal mass

Occupancy type

Daylighting and ventilation strategies

Climate change adaptation

#### Implementation Requirements

**Energy Reduction:** Implement passive design measures that reduce overall building energy demand by at least 10%, based on analysis findings.

#### Low/Zero Carbon Energy Feasibility

- **Study:** Conduct a feasibility study by the end of the Concept Design stage, led by an energy specialist.
- **Objective:** Identify the most suitable local (on-site or near-site) low or zero carbon energy sources.
- **Action:** Implement at least one identified technology.

## 8. Cycle storage spaces

### Quantity & Allocation

#### Cycle Spaces:

- 1 space per T1 dwelling
- 2 spaces per T2 and T3 dwelling

### Storage Standards

- **Type:** Compliant individual or communal storage.
- **Conditions:** Safe, secure, convenient, weather-proof, and with easy, direct access.
- **Location:** Communal stores must be within 100m of the front door or main entrance.

### Security & Accessibility

- **Fixings:** Each space must allow both wheel and frame to be locked securely.
- **Structure:** Covered overhead and fixed to a permanent structure (building or hardstanding), or within a locked structure with surveillance.

### Space & Layout

- **Clearance:** Adequate distance between cycle spaces and obstructions (e.g., walls) for easy storage and access.

### Visibility & Signage

- **Location:** Prominent, viewable, or overlooked from an occupied building or main access.
- **Signage:** Clear signage required if storage is inside the building.

## 9. Electric car charging points and car sharing spaces

Provide 1 electric recharging station per dwelling (for 1 bedroom units) and 2 electric recharging stations per each of the other dwellings.

## 10. Home Office

### Home Office Requirements per Dwelling Space Allocation

#### 1–2 Bedroom Dwellings/Studios:

- Home office space provided in the living room, a bedroom, or another suitable area (e.g., large hall or dining area).

#### 3+ Bedroom Dwellings:

- Dedicated working space provided in a room other than the kitchen, living room, master bedroom, or bathroom.

### Space & Usability

- **Non-Interference:** The home office setup must not prevent the intended use of the room (e.g., a double bed and necessary furnishings must still fit in a bedroom).
- **Minimum Space:**
  - a. **Standard:** 1.8m wall length to accommodate a desk, chair, and filing cabinet/bookshelf, with space to move around the desk and use the chair and cabinet safely.
  - b. **Flexibility:** Alternative arrangements (e.g., alcoves) are acceptable if drawings demonstrate compliance with all criteria.

### Services & Amenities

- **Power & Connectivity:**
  - Minimum of two double power sockets.
  - Two telephone points (or one double point), or one telephone point if cable/broadband is available at the address.
- **Daylight:** The room must have a compliant average daylight factor.
- **Ventilation:** Adequate ventilation via an openable window or alternative systems (e.g., passive stack, mechanical ventilation).

## 11. Where the vulnerable areas of the building are, have these been protected?

- Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the building façade for all car parking areas and within 2m for all delivery areas.
- The relevant parts of the building incorporate appropriate design and specification measures to limit material degradation due to environmental factors.

Applicable building elements	Environmental factors	Material degradation effects (includes, but not necessarily limited to the following)
1. Foundation, substructure, lowest floor, retaining walls 2. External walls 3. Roof or balconies 4. Glazing: windows, skylight 5. External doors 6. Railings or balusters (where exposed to external environment) 7. Cladding (where exposed to external environment) 8. Staircases or ramps (where exposed to external environment) 9. Hard landscaping.	1. Environmental agents, including: a. Solar radiation b. Temperature variation c. Water or moisture d. Wind e. Precipitation, e.g. rain and snow f. Extreme weather conditions: high wind speeds, flooding, driving rain, snow 2. Biological agents, including: a. Vegetation b. Pests, insects 3. Pollutants, including: a. Air contaminants b. Ground contaminants.	1. Corrosion 2. Dimensional change, e.g. swelling or shrinkage 3. Fading or discolouration 4. Rotting 5. Leaching 6. Blistering 7. Melting 8. Salt crystallisation 9. Abrasion.

## 11. Material efficiency

Opportunities have been identified, and appropriate measures investigated and implemented, to optimise the more efficient use of materials in building design, procurement, construction, maintenance and end of life. The above is carried out by the design or construction team in consultation with the relevant parties at each of the following project work stages:

- Preparation and Brief
- Concept Design
- Developed Design
- Technical Design
- Construction.

## 12. Storage of operational recyclable and general waste

### External Waste Storage

#### Space Allocation:

- Follow local authority minimum recommendations OR
- If no local guidance: 100L for a single-bedroom dwelling, plus 70L per additional bedroom.

#### Location & Access:

- On a level, hardstanding surface.
- Easily accessible to all occupants.

### Internal Recyclable Waste Storage

- **Where Recycling Collection Exists:**

**Option 1:** Three internal bins, each  $\geq 7L$ .

**Option 2:** One bin  $\geq 35L$  (only if local collection uses a single container for multiple waste types).

#### Where No Recycling Collection Exists:

- Five internal bins, each  $\geq 15L$ .

#### Placement:

- Dedicated, non-obstructive position (not free-standing on floor or in cupboard).
- Located in or adjacent to the kitchen (within 10m), e.g., utility room or connected garage.

### Composting Facilities

#### External Provision:

- Dedicated, accessible space for composting household compostable waste.

**Information:** Provide a leaflet to each dwelling or communal kitchen, explaining how composting works.

### 13. Potential for the disassembly and adaptability of the building should it be used for another purpose or demolished?

A building-specific functional adaptation strategy study is to be undertaken by the client and design team by completion of the concept design which includes recommendations for measures to be incorporated to facilitate future adaptation.

Functional adaptation measures have been implemented in the design by completion of the technical design in accordance with the functional adaptation strategy recommendations, where practical and cost effective.

**Table 51: Design measures allowing future adaptation**

Examples of functional design measures that may be adopted for each assessment part when considering accessibility, spatial adaptability and expandability:

	Accessibility	Spatial adaptability	Expandability
<b>Fabric and structure:</b> <ul style="list-style-type: none"> <li>External walls</li> <li>Cladding</li> <li>Ground and first floor</li> <li>Roof.</li> </ul>	Use of products or systems which allow easy replacements.	Location of structural components within the floor space.	Provision to add extensions or alterations to increase building capacity.
<b>Core and local services:</b> <ul style="list-style-type: none"> <li>Mechanical and electrical</li> <li>Plumbing Stairs and lifts</li> <li>Fire.</li> </ul>	Inclusion of facilities management requirements and construction design management feedback for future operational needs.		Provision of capacity in infrastructure to enable future expansion and adaptation.
<b>Interior design:</b> <ul style="list-style-type: none"> <li>Finishes</li> <li>Floors</li> <li>Interior walls</li> <li>Connections.</li> </ul>	Use of products or systems which allow easy replacements.	Layout in standardised grids. Use of inherent finishes to allow replacement. Use of standardised material sizes.	Identifying or recognising potential future functional requirements. Efficient use of space to allow for any increase in occupancy.

### 14. Site drainage, surface water run-off, retention effect on flooding to the local area.

An appropriate consultant is appointed to carry out, demonstrate or confirm the development's compliance with the following criteria:

Where all run-off from the roof for rainfall depths up to 5mm from all new and existing parts of the building have been managed on site using source control methods.

## 15. Irrigation and swimming pool

**Irrigation** must be drip-fed or from rainwater reuse.

**Swimming pools** (external) need to use coverage when not in use to avoid evaporation. Also chose a cleaning system that allows less replacements.

For the calculation of Rainwater tank please use:

1. Collection area (m<sup>2</sup>).
  2. Yield coefficient (a coefficient (%)) to recognise that some rainwater is lost due to splashing, evaporation, leakage and overflow etc. This coefficient will vary depending on the surface from which the rainwater is collected).
  3. Hydraulic filter efficiency (a coefficient (%)) to recognise the efficiency of the hydraulic filter).
  4. Rainfall (average mm/year).
- OR
5. Daily rainfall collection (litres) calculated in accordance with credible and verifiable national.

The rainwater tank needs to be able to catch at least 50% of the catchment area and the water should be use in toilet flushing or other intrinsic demands (not just irrigation) to allow for more credits in WAT01.

## 16. Material specification considerations (MAN02, ENE08, WAT01, HEA01, ENE03 and POL04 included)

Specify materials with longer life spans (specially finishes and installations).

### Specify water fittings as follow:

WC: 3.75 l/flush

Wash hand basin taps: 3.75 l/min

Showers: 4 l/min

Bath: 120 L

Kitchen tap: 5l/min

Dishwasher: 11 l/cycle

Washing machine: 35 l/use

### Specify white goods:

Fridges, fridge-freezers, freezers: E

Washing machines: B

Dishwashers: D

Washer-dryers: D-D

External lighting to have an efficiency of at least 70 lum/w and use daylight sensors. Movement sensors are to be installed in ways of passage. The external lighting needs to be connected to a manual switch so that it can be disconnected if needed.