

**Private Markets** 

# Sustainable Design Brief

Netherlands

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### Introduction

The purpose of this Sustainable Design Brief<sup>1</sup> is to promote and improve sustainable developments, to standardise the sustainability approach across the new development portfolio<sup>2</sup>, and to ensure that real estate funds<sup>3</sup> deliver on the Aviva Investors sustainability KPIs.

### We are looking for a concise way to improve standards. One that:

- Doesn't overburden the design team with discursive processes;
- Focusses on results, achieving and measuring outcomes; and
- Is embedded within all design stages.

#### **Design Standards**

All Minimum Standard oriteria within the design standards must be met in accordance with the building type.

All Stretch Target criteria should be assessed and considered. Some building types will perform better than others within particular categories. If Stretch Target criteria cannot be met, they should be justified per target on a case-by-case basis <sup>4</sup>.

#### Priority goals

- Fossil fuel free development
- Achieve or exceed EPC requirement
- Achieve or exceed minimum standard for CRREM
- Achieve or exceed minimum standard for operational energy performance
- Achieve or exceed minimum standard for upfront embodied carbon

This document has been prepared in alignment with the asset classes currently sitting within the Aviva Investors European portfolio alongside industry backed benchmarking research. The asset classes included within the document will be expanded upon in future iterations as the portfolio continues to scale and reliable benchmarking evidence is available in the market.

| Key  |                             | Criteria | Compliance                   |  |  |
|--|-----------------------------|----------|------------------------------|--|--|
| EC   | Energy and Carbon           | EC1-EC12 |                              |  |  |
| ВС   | Building Certification      | BC1      | Meet all<br>criteria,        |  |  |
| BD   | Biodiversity                | BD1      | achieving or exceeding the   |  |  |
| CR   | Climate Resilience          | CR1      | Minimum<br>Standard.         |  |  |
| WA   | Water use                   | WA1      | Justify case                 |  |  |
| RS   | Resources                   | RS1      | by case if<br>Stretch Target |  |  |
| SV   | Social Impact and Wellbeing | SV1-SV5  | is not feasible.             |  |  |
| The asset classes included within this document are listed below:  All All building types Resi. Residential buildings (multi-family) |                             |          |                              |  |  |
| Office Office buildings Indust. Industrial buildings   |                             |          |                              |  |  |

- 1. Compliance with this document is responsibility of the external Project Delivery Team during design and construction stages appointed by Aviva Investors or approved development partners
- 2. Refer to real estate properties during UK RIBA stages 0 to 6 or national European equivalent stages as appropriate
- 3. Refer to pooled investment vehicles that invest in a diversified portfolio of European real estate assets
- 4. Compliance with the Minimum Standard and/or Stretch Targets under this SDB are to be assessed on a project-by-project basis and cannot be guaranteed

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Design standards

# Design standards

| Туре   | Туре               |   | Asset | Minimum standard   | Stretch target  |
|--------|--------------------|---|-------|--|---|
| Energy | and Carbon         |   |       |  |   |
| EC1    | Operational energy | Energy performance modelling should be used to estimate the total energy consumed in a building annually. It includes both regulated (fixed systems for lighting, heating, hot water, air conditioning and mechanical ventilation) and unregulated (cooking and all electrical appliances, and other small power) energy. It should be expressed using gross internal area (GIA).  For buildings where other non-electricity based fuel types are used, the weighting factors in REEB (Real Estate Environmental Benchmark) should be applied to convert to kWh electricity equivalent (kWhe).  Calculation methodology for estimating operational energy use should follow national regulatory compliant approach. | All   | 10% improvement on NZEB  | 25% improvement on NZEB   |
| EC2    | Fuel type          | For the whole building energy strategy, all-electric fossil fuel free approach. District heat networks (DHN) with decarbonisation plans should be prioritised.  | All   | Fossil fuel free, with the exception of temporary power solutions where required due to grid congestion. Backup/emergency generators are excluded from requirements. | Fossil fuel free. Backup/emergency generators are excluded from requirements. |
| EC3    | Energy efficiency  | Energy Performance Certificate (EPC) to estimate how efficient the building is.   | All   | A+++   | A++++   |

| Туре   |  |  | Asset  | Minimum standard   | Stretch target   |
|--------|--|--|--|--|--|
| Energy | and Carbon   |  |  |  |  |
|        |  |  | Resi.  | PV or solar thermal installation on 50% of non-critical roof space, optimising available free area and orientation where feasible. | PV or solar thermal installation on 70% of non-critical roof space, optimising available free area and orientation where feasible. |
| EC4    | Specify on site energy generation through solar photovoltaic panels (PV).  On site energy generation  Non-critical roof space is defined as space non-essential to the building functionality, this does not include recreational space such as roof terraces. | Office   | PV or solar thermal installation on 50% of non-critical roof space, optimising available free area and orientation where feasible. | PV or solar thermal installation on 70% of non-critical roof space, optimising available free area and orientation where feasible. |  |
|        |  |  | Indust.  | 75% of regulated energy<br>(without industrial process loads<br>and emergency generators) to be<br>generated on-site.              | 100% of regulated energy<br>(without industrial process loads<br>and emergency generators) to be<br>generated on-site.             |
| EC5    | CRREM  | Undertake a Carbon Risk Real Estate Monitor (CRREM) assessment using the CRREM tool for assets after Practical Completion (PC) and for new developments or acquisitions in alignment with the 1.5°C climate pathway. | All  | Stranding date of 10 years after practical completion.   | Stranding date >10 years after practical completion.   |
| EC6    | Refrigerants   | Low GWP (Global Warming Potential) refrigerants to be used for new construction and refurbishment where possible. Include leak detection installation for all systems above 6 kW charge.                             | All  | < 675 GWP  | < 150 GWP  |

| Туре   | Туре   |   | Asset             | Minimum standard   | Stretch target                                      |
|--|--|---|-------------------|--|---|
| Energy   | and Carbon   |   |                   |  |   |
| Undertake an upfront embodied carbon assessment during design and construction stage in line with BS EN 15978 and RICS Professional Statement methodology. |  | Resi.   | 300 kgCO₂e/m² GIA | 220 kgCO <sub>2</sub> e/m <sup>2</sup> GIA   |   |
| EC7  | Embodied carbon  | Modules A1 to A5 expressed as kgCO <sub>2</sub> e/m <sup>2</sup> GIA, excluding sequestration and including all building elements, MEP and FF&E (fittings, furnishings and equipment). PV to be accounted for   | Office            | 475 kgCO₂e/m² GIA  | 250 kgCO <sub>2</sub> e/m <sup>2</sup> GIA          |
|  | but reported separately. Upfront embodied carbon assessment reports should include Environmental Product Declarations (EPDs) of materials. | Indust.   | 475 kgCO₂e/m² GIA | 250 kgCO <sub>2</sub> e/m <sup>2</sup> GIA   |   |
|  |  |   | Resi.             | 10% active and 100% passive.   | 30% active and 100% passive.                        |
| EC8  | EV charging point  | Provide charging facilities for electric vehicles (EV). Active parking spaces or EV-ready defined as being fully wired and ready to use and passive parking spaces known as having the necessary infrastructure in place at the time of development.  | Office            | 10% active for visitors/employees and 100% passive.  | 20% active for visitors/employees and 100% passive. |
|  |  |   | Indust.           | 10% active for visitors/employees and 100% passive.  | 20% active for visitors/employees and 100% passive. |
| EC9  | Energy metering  | Automated energy metering and open protocol BMS system that is accessible remotely by Aviva Investors.  In limited circumstances where a BMS is not appropriate, ensure an energy management system is installed to provide Aviva Investors with remote access to energy consumption data from all sub-meters.  Data is logged and stored for 18 months.  Metering strategy in line with BREEAM Ene 02 criteria 1–5 and linked to the BMS and accessible remotely by Aviva Investors. | Resi.             | Install 100% of the metering as Automated Meter Reading (AMR) on all main incoming feeds (electricity, water and gas), domestic hot water, landlord lighting and small power, tenants lighting and small power, all energy using equipment (e.g. heating and cooling plant) and energy generation from PVs.  Metering strategy aligned with BREEAM Ene 02 criteria 1-5 and linked to the BMS and accessible remotely by Aviva Investors. |   |

| Туре   | Туре  |  | Asset   | Minimum standard   | Stretch target  |
|--------|---|--|---------|--|---|
| Energy | and Carbon  |  |         |  |   |
| EC9    | Automated energy metering and open protocol BMS system that is accessible remotely by Aviva Investors.  In limited circumstances where a BMS is not appropriate, ensure an energy management system is installed to provide Aviva Investor with remote access to energy consumption data from all sub-meter Data is logged and stored for 18 months.  Metering strategy in line with BREEAM Ene 02 criteria 1–5 and linked to the BMS and accessible remotely by Aviva Investors. |  | Office  | Install 100% of the metering as Automated Meter Reading (AMR) on all main incoming feeds (electricity, water and gas), domestic hot water, landlord lighting and small power, tenants lighting and small power, all energy using equipment (e.g. heating and cooling plant) and energy generation from PVs. For offices, landlord metering separately from tenant metering.  Metering strategy aligned with BREEAM Ene 02 criteria 1-5 and linked to the BMS and accessible remotely by Aviva Investors. |   |
|        |   |  | Indust. | incoming feeds (electricity, water a<br>and small power, tenants lighting a<br>(e.g. heating and cooling plant) and  | EEAM Ene 02 criteria 1-5 and linked to the                          |
|        |   | Systems can be turned down when not needed without compromising efficiency (e.g. lighting and ventilation). Building's heating and cooling systems are zoned to ensure energy is only used when needed in offices and industrial assets.   | Resi.   | Manual control   | App based thermostats (for heating & cooling) and lighting control. |
| EC10   | Controls  |  | Office  | Temperature and lighting.  | Temperature, lighting, windows and CO <sub>2</sub> .                |
|        |   | Enable Aviva Investors to retain control over and set requirements for plant controls and sequences and tenancy set points.  | Indust. | Temperature and lighting.  | Temperature, lighting, windows and CO <sub>2</sub> .                |
| EC11   | Enhanced<br>commissioning   | Seasonal commissioning, meters are clearly labelled with serial numbers and end uses. Meter readings are verified (e.g. manual compared to half hourly, and cross-referencing meters).  Enhanced testing of building fabric including air tightness testing and thermographic survey. Implement maintenance plan with facilities management.  Commissioning scope to include all energy and water systems. | All     | Compliance with BREEAM Internat  | tional v6 Man 04 Criteria 1-11.                                     |

1. Design standards

| Type     | Туре                        |  | Asset | Minimum standard   | Stretch target   |
|----------|-----------------------------|--|-------|--|--|
| Energy   | and Carbon                  |  |       |  |  |
| EC12     | Handover & verification     | First two years of quarterly energy data is broken down by end use and supplied to Aviva Investors.  Post Occupancy Evaluation (POE) for year 1 for residential and offices in line with BREEAM Man 05. A simplified user guide is produced that outlines design intent and systems operation. | All   | Compliance with BREEAM International<br>v6 Man 05 Criteria 1-5.  | Compliance with BREEAM International v6 Man 05 Criteria 1-6. |
| Building | g certification             |  |       |  |  |
| BC1      | BREEAM                      | Undertake a BREEAM assessment during all design stages and achieve certification at post construction stage.   | All   | Excellent  | Outstanding  |
| Biodive  | rsity                       |  |       |  |  |
| BD1      | Ecological<br>consideration | Enhance and protect biodiversity on-site and in surrounding area.  | All   | Compliance with BREEAM International vo<br>Qualified Ecologist route.  | 6 LE02 Criteria 1-3, following the Suitably                  |
| Climate  | Climate resilience          |  |       |  |  |
| CR1      | Climate risk                | Ensure development is adapted to climate change.   | All   | Review the climate risk assessment undertaken in line with the EU Taxonomy climate adaptation guidance.  Where the asset has been deemed at risk, identify compliant adaptation design interventions and implement to align with EU Taxonomy Construction of new buildings contribution to climate adaptation, substantial contribution. |  |

| Туре     | Туре                                 |   | Asset | Minimum standard  | Stretch target  |  |
|----------|--------------------------------------|---|-------|---|---|--|
| Water    | Water                                |   |       |   |   |  |
| WA1      | Water use                            | Efficient use of water.   | All   | Flow rate specifications to align with EU T<br>contribution to climate adaptation, do no s<br>Compliance with BREEAM International ve | significant harm criteria for water.  |  |
| Resour   | ces                                  |   |       |   |   |  |
| RS1      | Waste diversion                      | Ensure non-hazardous construction and demolition waste generated on the construction site is reused, recycled or recovered. Report performance for construction, demolition (including strip-out) and excavation waste streams separately, where applicable at construction stage.  Both hazardous & non-hazardous waste streams should be monitored. Targets apply to non-hazardous waste. | All   | 90% diversion from landfill.  | 95% diversion from landfill.  |  |
| Social I | mpact                                |   |       |   |   |  |
| SV1      | Social Impact                        | Write social impact requirements into construction and operational contracts in line with Aviva Investors Supply Chain Charter.   | All   | Align with Aviva Investors Supply<br>Chain Charter – 'Expected' criteria.   | Align with Aviva Investors Supply<br>Chain Charter – 'Encouraged' criteria. |  |
| SV2      | Place-based needs<br>analysis (PBNA) | Place-based needs analysis (PBNA) to be completed to inform the appropriate action. The findings of the PBNA to be shared with the project design team and next steps to be agreed with Aviva Investors Private Markets ESG Team.   | All   | -   | Undertake place-based needs analysis.                                       |  |



| Туре     | Туре                     |   | Asset | Minimum standard   | Stretch target                                     |
|----------|--------------------------|---|-------|--|--|
| Social I | mpact                    |   |       |  |  |
| SV3      | Green space<br>on site   | Consider physical activity and/or mindfulness when designing green spaces and/or amenity spaces. Consider opportunities for sports, connecting with nature and/or meditation that is accessible to residents/building occupants.  Where feasible, include an outdoor space amenity that is free of charge to all regular occupants and should include seating and shelter. Outdoor space of an area of at least 5% of the project interior area must be accessible to all regular occupants. 70% of this must include biophilia. This is excluding refurbishments where it is not possible to provide additional outdoor space. | All   | Provision of green outdoor space.                        | 5% of GIA as outdoor amenity space with biophilia. |
| SV4      | Social<br>Infrastructure | <ul> <li>Where feasible, consider the provision of the following spaces:</li> <li>A dedicated a meanwhile space to a voluntary community and social enterprise (VCSE) or a small and medium sized enterprise (SME).</li> <li>Include a publicly, accessible external green or amenity space.</li> <li>Dedicate space to public art.</li> </ul>  | All   | _  | Provision of amenity space.                        |
| SV5      | Bicycle Parking          | Provision of bicycle parking spaces for building users.   | All   | Provide bicycle parking spaces for 15% of user capacity. | average or 10% of total building                   |

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BREEAM minimum credits Sustainable Design Brief - Netherlands

### BREEAM minimum credits

The table below outlines the credits that should be achieved as a minimum for all developments. Credits refer to BREEAM International New Construction v6.5

| BREEAM credit  | Criteria      | Additional requirement   |
|--|---------------|--|
| Man 03 Responsible construction practices                            | Criteria 3-4  |  |
| Man 04 Commissioning and handover                                    | Criteria 1-11 |  |
| Man 05 Aftercare   | Criteria 1-5  |  |
| Hea 02 Indoor air quality  | Criteria 9-17 |  |
| Ene 02 Energy monitoring   | Criteria 1-5  |  |
| Ene 08 Energy efficient equipment                                    | Criteria 1-3  |  |
| Mat 06 Material efficiency   | Criteria 1-2  |  |
| Wst 06 Functional adaptability*                                      | Criteria 1-2  | Residential developments are expected to align with the EU Taxonomy Do No Significant Harm criteria for Circular Economy. This may be achieved via aligning with the processes outlined in Wst 06. |
| LE 01 Site selection **  | Criteria 1    |  |
| LE 02 Ecological value of site and protection of ecological features | Criteria 1-3  | Must follow Criteria 1.b, Suitably Qualified Ecologist route.  |
| LE 04 Enhancing site ecology   | Criteria 1-3  |  |

<sup>\*</sup> Wst06 only applies to non-residential buildings. Residential buildings are expected to align with the EU Taxonomy Do No Significant Harm criteria for Circular Economy.

\*\* Le01 only possible if land is previously occupied.

<sup>5.</sup> Prerequisite criteria are excluded from this list, as it is assumed they will be achieved.

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## BREEAM target credits

The table below outlines the credits that should be targeted for all developments. If the target credits cannot be achieved, justification should be provided to Aviva Investors Private Markets ESG team. Credits refer to BREEAM Internation New Construction v6.6

| BREEAM credit  | Criteria           | Additional requirement |
|--|--------------------|------------------------|
| Man 04 Commissioning and handover                    | Criteria 10-11     |                        |
| Man 05 Aftercare                                     | Criteria 6         |                        |
| Hea 04 Thermal comfort                               | Criteria 1-8       |                        |
| Ene 04 Low carbon design                             | Criteria 1-3 / 7-8 |                        |
| Ene 05 Energy efficient cold storage                 | Criteria 1-5       |                        |
| Wat 01 Water consumption                             | Criteria 1-5       |                        |
| Wat 02 Water monitoring                              | Criteria 1-4       |                        |
| Mat 01 Life cycle impacts                            | Criteria 1-7       |                        |
| Mat 03 Responsible sourcing of construction products | Criteria 1-5       |                        |
| Wst 01 Construction waste management                 | Criteria 1-11      |                        |
| Wst 02 Recycled aggregates                           | Criteria 1-4       |                        |
| Pol 01 Impact of refrigerants                        | Criteria 2 / 4-8   |                        |
| Pol 03 Surface water run-off                         | Criteria 4-14      |                        |

<sup>6.</sup> Prerequisite criteria are excluded from this list, as it is assumed they will be achieved.

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Appendix A – Design principles

# Appendix A – Design principles

### Energy and Carbon

| Building fabric - Resider  | Building fabric - Residential   |  |  |
|----------------------------|---|--|--|
| Maximise insulation, air t | ightness (3m³/(h.m²)) and glazing specification (1.0 W/m².K)  |  |  |
| Glazing                    | Glazing ratio (based on floor area) is between 20% and 30%.   |  |  |
| Form                       | Prioritise projecting balconies over inset balconies to reduce form factor and thermal bridges.   |  |  |
| Ventilation                | Cross ventilation and secure nighttime purge if possible. MVHR provides consistent background ventilation. Carry out analysis on a sample of dwellings at greatest risk of overheating. Aim to provide natural ventilation. |  |  |
| Construction details       | Accredited thermal bridging.  |  |  |
| Hot water                  | Minimise dead legs, specify low flow fittings aligned with EU Taxonomy DNSH criteria, pipework insulation, leak detection and wastewater heat recovery.   |  |  |

| Building fabric - Non-residential |  |  |
|-----------------------------------|--|--|
| Glazing                           | Glazing ratio (based on floor area) is between 20% and 30%.  |  |
| Floor depths                      | 7m (depth to enable daylight and natural ventilation).   |  |
| Ventilation                       | Mixed mode and demand controlled.  |  |
| Lighting                          | Daylight sensing, with appropriate zoning and PIR linked to reduce energy consumption.   |  |
| Hot water                         | Minimise dead legs, specify low flow fittings aligned with EU Taxonomy DNSH criteria, pipework insulation, leak detection and occupant sensors where possible.   |  |
| Temperature set points            | Design to achieve 22°C cooling but enable operation at 26°C, Design to achieve 21°C heating but enable operation at 19°C. Maintain temperature between 21-25°C and ensure temperatures do not exceed 25°C more than 10% of hours annually. |  |
| Lighting set points               | Design controls to maximise use of daylight but enable operation at 20% output.  |  |

### Materials and Supply Chain

#### Material considerations and embodied carbon impact

| Building element | Carbon impact | Suggestions and considerations   |
|------------------|---------------|--|
| Substructure     | High          | <ul> <li>Consider avoiding basements and atriums,</li> <li>Prioritise pad over raft foundations,</li> <li>Use high cement replacement,</li> <li>Use local aggregates,</li> <li>Reuse existing foundations where possible.</li> </ul>   |
| Frame            | High          | <ul> <li>Use efficient frame structures, avoid cantilevers where possible,</li> <li>Facilitate steel re-use and high recycled content steel,</li> <li>Reduce grid column spacing,</li> <li>Consider lighter material options such as waffle slabs.</li> </ul>  |
| Facade           | Medium        | <ul> <li>Avoid using brick slips and fully unitized glazing systems,</li> <li>Promote modular construction,</li> <li>Design for deconstruction,</li> <li>Avoid high metal content façade systems,</li> <li>Pre-cast concrete, handset brick and aluminium rainscreen with SFS backing,</li> <li>Avoid low lifespan facades,</li> <li>Aim for 20-30% glazing ratios based on floor area,</li> <li>Avoid second skin facades,</li> <li>Consider using reclaimed / recycled materials i.e. aluminium, steel, bricks.</li> </ul> |

| Building element                 | Carbon impact | Suggestions and considerations  |  |
|----------------------------------|---------------|---|--|
| Building services                | High/ medium  | <ul> <li>Select equipment for longer lifetimes and lower weight,</li> <li>Provide equipment maintenance plans to improve longevity of systems,</li> <li>Low impact refrigerants such as water and CO<sub>2</sub></li> <li>Identification of equipment still existing on site and prioritization of potential reuse cases,</li> <li>Ensure careful refrigerant management especially when using VRF,</li> <li>Assess PV and whole life carbon benefits,</li> <li>Easy access for inspection, maintenance and replacement,</li> <li>Adopt passive measures where possible.</li> </ul> |  |
| External works<br>(m² dependent) | Medium        | <ul> <li>Reclaim demolition material- splitting bricks used as pavers,</li> <li>Minimise heavy vehicle loading access to reduce sub-base impact,</li> <li>Use natural materials,</li> <li>Integrate green/natural materials where possible,</li> <li>Avoid plastics,</li> <li>Recycled/local sub-bases.</li> </ul>  |  |
| Internal finishes                | Low           | <ul> <li>Avoid raised access flooring or reuse where necessary,</li> <li>Avoid carpets,</li> <li>Reduce material intensity i.e. use exposed surfaces,</li> <li>Prioritise open plan floor plates as opposed to small offices,</li> <li>Consider using products with high recycled material content,</li> <li>Only fit out to S&amp;C / CAT A to avoid tenant ripping out CAT B,</li> <li>Avoid suspended ceilings,</li> <li>Avoid materials found on the Living Building Challenge 'Red List' &amp; prioritise products with health product declarations.</li> </ul>                |  |
| Furniture                        | Low           | <ul> <li>Use of natural materials including wood, stone. Avoid materials high in volatile organic compounds (VOCs),</li> <li>Promote reused or recycled furniture,</li> <li>Explore furniture leasing,</li> <li>Avoid replacing every 5 years, seek products with longer lifespans.</li> </ul>  |  |

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#### Circular Economy

# The six circular economy principles which should be a fundamental part of the building design process are:

- Building in layers ensuring that different parts of the building are accessible and can be maintained and replaced where necessary.
- Designing out waste ensuring that waste reduction is planned in from project inception to completion, including consideration of standardised components, modular build, and reuse of secondary products and materials.
- Designing for longevity.
- Designing for adaptability or flexibility.
- Designing for disassembly.
- Using systems, elements or materials that can be reused and recycled.

### Supply chain

#### **General recommendations:**

- Locally sourced where possible.
- Low material intensity generally means high material efficiency so designing efficiently and prioritising low embodied carbon materials where possible.
- Try to engage with supply chain to reduce unnecessary material packaging.
   Prioritise materials and packaging that can be easily recycled.

#### Material efficiency

Using the design for material efficiency process, the project team will ensure material resource efficiency is maximized throughout design and construction, by:

1. Identifying design options to optimise materials use and/or waste creation by reviewing the design and delivery plan. Prioritise those options that will have the largest impact on material efficiency and are the most feasible for implementation.

The UK Waste and Resources Action Programme (WRAP) has identified five key principles that design teams can use during the design process to reduce waste:

- Design for Waste Efficient Procurement
- Design for Materials Optimisation
- Design for Off-Site Construction
- Design for Reuse and Recycling
- Design for Deconstruction

- 2. Investigating the priority design options to ascertain their viability and quantifying their associated waste, cost and programme benefits and impacts, where possible, to provide an evidence base for decision making.
- 3. Implementing the agreed design solutions in project documents, such as drawings, specifications, reports and the procurement process. Record the agreed solutions in the project Site Waste Management Plan (SWMP) and use the project SWMP to communicate the options to the principal contractor and ensure their implementation on site. Ensure signage for construction waste diversion is clear on site and consider incentives for contractors for recovering, reusing and recycling building materials.

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Appendix B -EU Taxonomy criteria



# Appendix B - EU Taxonomy criteria

Alignment to the EU Taxonomy is used as a metric to determine if an asset is considered sustainable1. Taxonomy alignment is required to be disclosed for assets in Article 8 and 9 funds. There are specific criteria assigned to real estate, namely for the construction of new buildings and the renovation of existing buildings.

### Alignment is measured against three types of criteria:

- Do No Significant Harm new construction must align with all of these.
- 2. Minimum Safeguards practices must alignment with both of these.
- 3. Substantial contribution criteria new construction must achieve the criteria for one of the sub themes within this.

| Must achieve:   | Achieve one:   |   |  |
|---|--|---|--|
| Do no significant harm (DNSH) criteria themes   | Minimum safeguards   | Substantial contribution criteria themes  |  |
| <ul> <li>Climate adaptation</li> <li>Climate mitigation</li> <li>Water</li> <li>Circular economy</li> <li>Pollution prevention</li> <li>Biodiversity</li> </ul> | <ul> <li>OECD Guidelines for Multinational<br/>Enterprises</li> <li>UN Guiding Principles on Business and<br/>Human Rights Fundamental Principles<br/>and Rights at Work International Bill<br/>of Human Rights</li> </ul> | <ul> <li>Climate Mitigation (Energy)</li> <li>Climate Adaptation (Risk assessment)</li> <li>Circular Economy (waste and material spec)</li> </ul> |  |

<sup>7.</sup> Aviva Investors funds do not have an intended EU Taxonomy alignment as part of any ESG characteristics promoted under Article 8 of the Sustainable Finance Disclosure Regulation (SFDR). As per EU regulatory requirements, Aviva Investors will endeavor to report against EU Taxonomy requirements as part of SFDR Periodic Reporting



| Objective            | Theme                                  | Criteria                 | Requirement   |
|----------------------|--|--------------------------|---|
| Climate mitigation   | Operational energy                     | Substantial contribution | <ul> <li>Primary Energy Demand is at least 10% &lt; NZEB requirements.</li> </ul>   |
|                      | Fabric performance and construction    | Substantial contribution | <ul> <li>For buildings larger than 5000 m<sup>2</sup> air tightness and thermal integrity is to be tested upon building completion<br/>and any defects disclosed to investors.</li> </ul>   |
|                      | Whole life carbon                      | Substantial contribution | • For buildings over 5000 m² the life cycle GWP is to be calculated and disclosed to investors.   |
|                      | Fossil fuels                           | Do no significant harm   | The building is not dedicated to extraction, storage, transport or manufacture of fossil fuels.   |
|                      | EPC                                    | Do no significant harm   | • The energy performance of the building is certified by EPC and demonstrates that the primary energy demand does not exceed the nearly zero-energy building requirements.8   |
| Pollution prevention | Material specification and air quality | Do no significant harm   | • Building materials to align with the low volatile organic compounds (VOCs) criteria.9   |
|                      | Contaminated land                      | Do no significant harm   | <ul> <li>Where the new construction is located on a potentially contaminated site (brownfield site), the site has been<br/>subject to an investigation for potential contaminants, for example using standard ISO 18400.</li> </ul> |
|                      | Construction<br>management             | Do no significant harm   | Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.  |

<sup>8.</sup> Nearly-zero energy and zero-emission buildings9. Refer to Do no significant harm, Pollution prevention for further specification details EU Taxonomy Navigator Construction of new buildings



| Objective          | Theme   | Criteria                 | Requirement   |
|--------------------|---|--------------------------|---|
| Water              | Water efficiency                              | Do no significant harm   | <ul> <li>Meet the maximum flow rate specifications for water appliances, with the exception of installations in residential building units: <sup>10</sup></li> <li>Taps: 6 litres/minute,</li> <li>Showers: 8 litres/minute,</li> <li>WCs: including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3.5 litres,</li> <li>Urinals: 2 litres/bowl/hour, 1 litre flush,</li> <li>Avoid impact on water resources from construction. <sup>11</sup></li> </ul> |
| Climate adaptation | Climate change risk assessment                | Do significant harm      | <ul> <li>Undertake a climate risk assessment considering chronic and acute climate risks including<br/>economic impact.<sup>12</sup></li> </ul>   |
|                    | Climate change risk assessment and mitigation | Substantial contribution | <ul> <li>Undertake a climate risk assessment aligned with the DNSH requirement,</li> <li>Adaptation solutions implemented aligned with the specified criteria.<sup>13</sup></li> </ul>  |
| Biodiversity       | Mitigation measures                           | Do no significant harm   | <ul> <li>An EIA has been completed in accordance with the Directive 2011/92/EU and where required, mitigation and<br/>compensation measures are implemented.</li> </ul>   |

<sup>10.</sup> Technical specifications for water appliances11. Criteria for DNSH to sustainable use and protection of water and marine resources12. Climate change adaptation DNSH13. Refer to climate adaptation substantial contribution criteria Construction of new buildings



| Objective        | Theme                   | Criteria                 | Requirement   |
|------------------|-------------------------|--------------------------|---|
| Biodiversity     | Site selection          | Do no significant harm   | <ul> <li>New constriction is not built on the following:</li> <li>Arable and crop land with a moderate to high level of soil fertility (as per EU LUCAS survey),<sup>14</sup></li> <li>Greenfield land of recognized high biodiversity value or endangered species habitat,</li> <li>Forest land in line with FAO definitions.</li> </ul>   |
| Circular economy | Whole life carbon       | Substantial contribution | The life cycle GWP is to be calculated and disclosed to investors (regardless of building size).  |
|                  | Design and construction | Substantial contribution | • Construction design and techniques support design for adaptation and deconstruction (compliant with Level(s) indicators 2.3 and 2.4). 15  |
|                  | Materials               | Substantial contribution | <ul> <li>Raw material limits:</li> <li>for the combined total of concrete, natural or agglomerated stone, a maximum of 70% of the material come from primary raw material,</li> <li>for the combined total of brick, tile, ceramic, a maximum of 70% of the material come from primary raw material,</li> <li>for bio-based materials, a maximum of 80% of the total material come from primary raw material,</li> <li>for the combined total of glass, mineral insulation, a maximum of 70% of the total material come from primary raw material,</li> <li>for non-biobased plastic, a maximum of 50% of the total material come from primary raw material,</li> <li>for metals, a maximum of 30% of the total material come from primary raw material,</li> <li>for gypsum, a maximum of 65% of the material come from primary raw material.</li> </ul> |



| Objective        | Theme   | Criteria                 | Requirement   |
|------------------|---|--------------------------|---|
| Circular economy | Environmental Product<br>Declarations (EPDs)<br>and tools | Substantial contrition   | Use of electronic tools to describe characteristics of buildings, materials and components and EPDs.  |
|                  | Construction and demolition waste                         | Substantial contribution | At least 90% non-hazardous waste (by weight) diverted from landfill.  |
|                  | Construction and demolition waste                         | Do no significant harm   | At least 70% non-hazardous waste (by weight) diverted from landfill.  |
|                  | Design and construction                                   | Do no significant harm   | <ul> <li>Building designs and construction techniques support circularity and in particular demonstrate, with reference to ISO 20887 or other standards for assessing the disassembly or adaptability of buildings, how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling.</li> </ul> |



### Contact us

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#### **Key Risks**

Past performance is not a guide to future returns. The value of an investment and any income from it can go down as well as up and can fluctuate in response to changes in currency and exchange rates. Investors may not get back the original amount invested.

Where funds are invested in real estate, infrastructure and private equity, investors may not be able to switch or cash in an investment when they want because real estate/infrastructure/private equity may not always be readily saleable. If this is the case we may defer a request to switch or cash in units. Investors should also bear in mind that the valuation of real estate is generally a matter of valuers' opinion rather than fact. Valuations for other assets may also contain subjective elements and are unlikely to be based on a public market price.

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