Residential Development of

336 No. Dwellings

at,

Ballymany,

Newbridge,

Co. Kildare.

Briargate Developments Newbridge Limited

Rev 2

FEBRUARY 2022

Building Lifecycle Report

1.0 Introduction

The Sustainable Urban Housing Design Standards for New Apartments – Guidelines for Planning Authorities (published in March 2018), introduced a requirement to include details on the management and maintenance of any apartments that may be contained within housing developments.

The Guidelines state that consideration of the long-term running costs and manner of compliance of the proposal with the Multi- Unit Developments Act, 2011 are matters which should now be considered as part of any assessment of a proposed apartment development.

Section 6.13 of the guidelines requires that apartment applications shall:

- *'…. include a building lifecycle report, which in turn includes an assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application';*
- *'….demonstrate what measures have been specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents.'*

This Building Life Cycle Report document sets out to address the requirements of Section 6.13 of the Apartment Guidelines, and includes an assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of this application, as well as demonstrating what measures have been specifically considered by the applicant to effectively manage and reduce costs for the benefit of residents. It is broken into two sections as follows:

Section 1: An assessment of long term running and maintenance costs as they would apply on a per residential unit basis at the time of application

Section 2: Measures specifically considered by the proposer to effectively manage and reduce costs for the benefit of residents.

2.0 Proposed Development

This report relates to the apartment elements of the proposed development on the southeastern edge of Newbridge. The overall development will comprise the construction of a scheme comprising 336 No. residential units (comprising 245 No. houses) and 91No. apartments and duplex units.

The development will also consist of the construction of improved pedestrian and cycle paths throughout the site and, and connected tot eh new link road between Ballymany and Standhouse Road.

The development will also include the construction of: associated car parking spaces and bicycle parking spaces, respectively; vehicular, pedestrian and cycle access and egress; provision of electric vehicle charging points; provision of boundary treatments including associated lighting; changes in levels, associated hard and soft landscaping including a number of playgrounds and all other associated site excavation, and infrastructural and site development works above and below ground, including undergrounding of an existing electricity lines as necessary.

The location of the proposed apartments / duplex units are shown in Appendix A and comprise;

- 32 No. one bedroom ground and first floor maisonettes with own door access;
- 16 No. two-bedroom duplex apartments with own door access;
- 16 No. three-bedroom duplex apartments with own door access;
- 27 No. one, two and three bedroom apartments, accessed off a common stairwell.

The maximum building height will be 4-storeys.

SECTION 1:

AN ASSESSMENT OF LONG TERM RUNNING AND MAINTENANCE COSTS AS THEY WOULD APPLY ON A PER RESIDENTIAL UNIT BASIS AT THE TIME OF APPLICATION.

1.1 Long-Term Running Costs

The aim of the developer is to manage and minimise potential unnecessarily high running costs on a per residential unit basis. Anthony Neville Homes (Briargate Developments Newbridge Ltd.) have a proven track record in the delivery of high-quality homes and apartments, and have applied their experience to ensure the provision of a product which will be well managed and easily maintained.

1.2 Property Management of the Common Areas of the development

A property management company will be employed at an early stage to ensure that all property management functions are dealt with and that the running and maintenance costs of the common areas are kept within the agreed Annual operational budget. The property management company will enter into a contract directly with the Owners Management Company (OMC) for the ongoing management of the built development. This contract will be for a maximum period of 3 years and in the form prescribed by the PSRA.

The Property Management Company also has the following responsibilities for the apartment development once constructed:

- Timely formation of an Owners Management Company (OMC) – which will be a company limited by guarantee having no share capital. All future purchasers will be obliged to become members of this OMC.
- Preparation of annual service charge budget for the development common areas.
- Fair and equitable apportionment of the Annual operational charges in line with the Multi Units Development Act 2011 (MUD Act);
- Engagement of independent legal representation on behalf of the OMC in keeping with the MUD Act - including completion of Developer OMC Agreement and transfer of common areas;
- Transfer of documentation in line with Schedule 3 of the MUD Act;
- Estate Management;
- Third Party Contractors Procurement and management;
- OMC Reporting;
- Accounting Services;
- Corporate Services;
- Insurance Management;
- Staff Administration;
- After Hours Services.

1.3 Service Charge Budget

The property management company has a number of key responsibilities, primarily the compiling of the service charge budget for the development for agreement with the OMC. The service charge budget covers items such as cleaning, landscaping, refuse management, utility bills, insurance, maintenance of mechanical/electrical lifts/ life safety systems, security, property management fee, etc., to the development common areas in accordance with the *Multi Unit Developments Act 2011.*

This service charge budget also includes an allowance for a Sinking Fund and this allowance is determined following the review of the Building Investment Fund (BIF) report prepared for the OMC. The BIF report once adopted by the OMC, determines an adequate estimated annual cost provision requirement based on the needs of the development over a 30-year cycle period. The BIF report will identify those works which are necessary to maintain, repair, and enhance the premises over the 30-year life cycle period, as required by the *Multi Unit Development Act 2011.*

In line with the requirements of the MUD Act, the members of the OMC will determine and agree each year at a General Meeting of the members, the contribution to be made to the Sinking Fund, having regard to the BIF report produced.

A sample format of the typical BIF report is set out in Appendix B.

Note: the detail associated with each element heading i.e. specification and estimate of the costs to maintain / repair or replace, can only be determined after detailed design and the procurement/ construction of the development and therefore the figures provided are estimates.

1.4 Sinking Fund

It is expected that a sinking fund allowance will account for future major maintenance and upgrade costs. A 10-year Planned Preventative Maintenance (PPM) strategy will determine the level of sinking fund required.

SECTION 02

MEASURES SPECIFICALLY CONSIDERED BY THE PROPOSER TO EFFECTIVELY MANAGE AND REDUCE COSTS FOR THE BENEFIT OF RESIDENTS.

The following are an illustration of the energy measures that are planned for the units to assist in reducing costs for the occupants.

2.1 Building Design

Measure	Description	Benefit
Daylighting to apartments	Where possible, as outlined in *'Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities'* to have regard for quantitative performance approaches to daylight provisions *'outlined in guides like the BRE guide 'Site Layout Planning for Daylight and Sunlight' (2nd edition) or BS 8206-2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting'* when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision'.	Reduces the requirement, and therefore expense, for continuous artificial lighting.
Daylighting to circulation areas	Natural lighting provided via windows at both the front and rear elevations.	Reduces the requirement, and therefore expense, for continuous artificial lighting.
External Lighting	The proposed lighting scheme within the development consists of LED public lighting pole mounted fittings. Luminaires selected are the Veelite Metro Streetlights 27w LED (51 x Street Optic S, 28 x Forward Throw Optic) mounted on 6m columns with a 5 degree tilt. Each light fitting shall be controlled via an individual Photoelectric Control Unit (PECU). The operation of the lighting shall be on a dusk-dawn profile.	Lighting will be designed to achieve the required standards, provide a safe environment for pedestrians, cyclists, and vehicular traffic, provide surveillance and limit the impact on the artificial lighting on surrounding existing flora and fauna. Having PECU allows for the optimum operation of lighting which minimizes costs

2.2 Landscape

Measure	Description	Benefit
Paving and Decking Materials	Sustainable, robust materials, with high slip resistance to be used for paving. Durable and hardwearing equipment (e.g. play, exercise, fencing etc.) to be used throughout.	Robust materials and elements reduce the frequency of required repair and maintenance.
Soft Landscape	Planting proposals have been formulated to complement the local setting as well as being fit for purpose in respect of private and public realm uses and spatial constraints imposed by garden sizes and the width of planting strips. Native tree species have been selected in significant numbers for planting along boundaries and across open spaces while non-native species have also been selected where spatial constraints are a factor.	Reduction in the frequency of required soft landscape maintenance
Site Layout	High quality landscaping both hard surface (for the cycle /car parking and pavements) and soft landscaping with planting and trees. The landscaping will be fully compliant with the requirements for Part M / K of the Technical Guidance Documents and will provide level access and crossings for wheelchair users and pedestrians with limited mobility. Designated car parking including accessible & visitor car parking reduces the travel distances for visitors with reduced mobility.	Plenty of room for cycles and pedestrians along with car spaces provide a good balance between pedestrians and car users. Wheelchair user-friendly.
Maintenance & Management	Maintenance and management requirements have been considered through the design process. Complex planting arrangements have been omitted thus avoiding onerous maintenance and management requirements	Estate maintenance costs reduced
Balconies & openable windows	Use of balconies & openable windows allow individuals to clean windows themselves	Reduces the cost and reliance on 3rd party contractors for cleaning & maintenance.

Sustainability & Biodiversity	Sustainability aspects of the proposed development include the retention of trees and hedgerows along site boundaries and the use of native trees where possible across the site. Other species have been carefully selected for compatibility with the size of available spaces which is an important factor in long term management of the housing estate. The overall objective is to enhance the biodiversity potential of the site in addition to providing seasonal interest and variety. Judiciously placed flowering shrub and groundcover planting have been included to further promote biodiversity (pollinator species attracting insects and birdlife).	Enhanced sustainability of long-term estate management

2.3 Energy & Carbon Emissions

Measure	Description	Benefit
BER Certificates	A Building Energy Rating (BER) certificate will be provided for each dwelling in the proposed development which will provide detail of the energy performance of the dwellings. A BER is calculated through energy use for space and hot water heating, ventilation, and lighting and occupancy. It is proposed to target an A2/A3 rating for the apartments this will equate to the following emissions: • A2 – 25-50 kwh/m2/yr with CO2 emissions circa 10kgCO2/m2 year • A3 – 51-75 kwh/m2/yr with CO2 emissions circa 12kgCO2/m2 /year	A BER rating is a reduction in energy consumption and running costs
Fabric Energy Efficency.	The U-values being investigated will be in line with the requirements set out by the current regulatory requirements of the Technical Guidance Documents Part L, '*Conservation of Fuel and Energy Buildings other than Dwellings'*. All buildings will be NZEB compliant.	Lower U-values and improved air tightness is being considered to help minimise heat losses through the building fabric, lower of energy consumption and thus minimise carbon emissions to the environment.

	Thermal bridging at junctions between construction elements and at other locations will be minimised in accordance Paragraphs 1.2.4.2 and 1.2.4.3 within the Technical Guidance Documents Part L. See below Table 1 of Part L, Building Regulations.	

2.4 Low Energy Technologies Considered.

Measure	Description	Benefit
Exhaust air heat pump	An exhaust air heat pump system is under consideration for heating, hot water and ventilation of the apartment units.	Heat pumps operate with efficiencies >400%. Exhaust air heat pumps utilise extract air as the air source for the heat pump. This will re-cycle the heat from the dwelling's ventilation system. These machines are ideal for apartments and more compact air-tight low energy or passive homes. Air is drawn through ducts to the heat pump from the bathrooms, utility and kitchen areas. The cold waste air is discharged to outside through another duct, and condensation to a drain. Additional heat generated internally from lighting, people and domestic appliances is also utilised through heat recovery from outgoing exhaust air.
Low energy LED Lighting	Shall be designed and specified in accordance with the BER requirements in each unit and in the landlord areas in accordance with Part L.	Lower consumption of energy and therefore lower carbon emissions.

Central extract/ demand-controlled ventilation	Central extract and demand-controlled ventilation will be considered to provide ventilation with low energy usage.	Central extract ventilation provides continuous ventilation with low energy usage. Central extract operates at a low trickle speed constantly and ramp up in response to an increase in humidity from wet areas. Demand control ventilation incorporates automated wall vents which open/close dependent on internal humidity conditions.
PV Solar Panels	PV Solar Panels are being considered which converts the electricity produced by the PV system (which is DC) into AC electricity The panels are typically placed on the South facing side of the building for maximum heat gain and in some instances, can also be used to assist the heating system.	PV Solar Panels offer the benefit of reducing fossil fuel consumption and carbon emissions to the environment. They also reduce the overall requirement to purchase electricity from the grid.
ECAR Charging Points	Ducting shall be provided from a local landlord distribution board to designated E-car charging car park spaces. This will enable the management company the option to install E-car charging points within the carpark to cater for E-car demand of the residence. This system operates on a single charge point access card. A full re- charge can take from one to eight hours using a standard charge point.	Providing the option of E-car charging points will allow occupants to avail of the ever-improving efficient electric car technologies.
Combined Heat and Power	Combined Heat and Power, (CHP), is a technology being evaluated in the event a number of apartments remain in a single ownership. This technology generates electricity and captures the waste heat from the generation unit that can be used within the development.	CHP can achieve energy efficiencies by reusing waste heat from the unit to generate heat required for space heating & domestic hot water services in the apartment developments.

2.5 Materials / Material Specification.

The practical implementation of the Design and Material principles has informed design of building facades, internal layouts and detailing of the proposed apartment buildings.

The proposed envelope of the building is a mix of stone, brick and durable render finish, with high-performance double or triple-glazed aluminium / uPVC windows. These materials are considered durable and would not require regular replacement or maintenance.

It is expected that a sinking fund allowance will account for future major maintenance and upgrade costs. A 10-year Planned Preventative Maintenance (PPM) strategy will determine the level of sinking fund required.

The Apartment Buildings are designed in accordance with the Building Regulations, in particular Part D 'Materials and Workmanship', which includes all elements of the construction. The Design Principles and Specification are applied to both the apartment units and the common parts of the building and specific measures taken include:

Measure	Description	Benefit
Implementation of the Design and Material principles to the design of the proposed development.	Materials have been selected with a view to longevity, durability and low maintenance with Consideration given to Building Regulations and include reference to BS 7543:2015 'Guide to Durability of Buildings and Building elements, Products and Components'.	Longevity, durability and low maintenance of materials.
Metal Cladding and/or Brickwork to the envelope	A range of complimentary brickwork and metal cladding has been selected to enhance the public realm through the creation of distinctive character areas. The robust materials have been chosen for their longevity and solid characteristics, to endure for the lifetime of the buildings.	Requires minimal maintenance and does not require regular replacement
Installation of factory finished aluminium / uPVC windows and doors	Fenestration has been designed with optimum thermal and daylighting factors considered. The necessity for thermally efficient windows and doors to meet a dwellings' energy requirements is essential for a whole-envelope approach to building fabric design. Frame colours have been proposed to compliment overall building / location character.	Requires minimal maintenance and does not require regular replacement
Installation of factory finished Precast steel / glass balcony railings	Apartment buildings are provided with private amenity spaces in the form of balconies and ground floor terraces. The balustrading and finish to these elements is designed for strength and protection in the first instance, while detailed design will ensure that these elevational elements provide a pleasing aesthetic.	Security and protection are paramount while ease and access to maintenance are achieved.

2.6 Waste Management

Measure	Description	Benefit
Construction & Operational Waste Management Plan	This application is accompanied by a Construction Waste Management Plan. A Construction and Operational Waste Management Plan will be prepared by Anthony Neville Homes (Briargate Developments Newbridge Ltd.) and submitted to Kildare County Council prior to commencement of the development.	The report demonstrates how the scheme has been designed to comply with best practice.
Storage of non-recyclable waste and recyclable household Waste	Inclusion of a number of covered & locked bin storage areas for each apartment. Domestic waste management strategy: Grey, Brown and Green bin distinction. Competitive tender for waste management collection.	Easily accessible by all residents and minimises potential littering of the scheme
Composting	Addition of organic waste bins to be provided throughout the development	Helps to reduce waste charges and the amount of waste going to landfill.
Additional Recycling Centre	Additional recycling centre to be provided within the associated housing scheme.	Helps to reduce waste charges and the amount of waste going to landfill.

2.7 Human Health and Well Being.

Measure	Description	Benefit
Natural Daylight	The design, separation distances and layout of the apartments have been optimised for the ingress of natural daylight/sunlight to the proposed dwellings to provide good levels of natural light.	Reduces reliance on artificial lighting thereby reducing costs.
Accessibility	All units, including access and egress, will comply with the requirements of Part M / K	Reduces the level of adaptation, and associated costs, potentially necessitated by residents' future circumstances.
Private Amenity Space	Provision of private amenity spaces in the form of gardens, balconies and communal areas for apartment buildings provide compliant areas for the external enjoyment of dwellings and also allow a space for play / interaction.	Facilitates interaction with outdoors, increasing health benefits.

Security	The scheme is designed to incorporate good passive surveillance with the following security strategies likely to be adopted: • Secure bicycle storage areas for each apartment; • CCTV for common areas; • Routine access fob audits	Access to all residents to reduce the risk of crime, littering within the scheme and reduction of potential waste charges.
Natural Amenity	A number of green spaces proposed throughout the scheme, connecting to a large active and passive area along the southern / eastern boundary.	Facilitates community interaction, socialising and play – resulting in improved Well-being.

2.8 Transport and Accessibility

Measure	Description	Benefit
Access to Public Transport.	Rail Services Newbridge Train Station is located on the main Dublin – Waterford rail service and is approximately a 25 minute walk from the site. Bus Services Bus stops on Newbridge Main Street are situated within a 20-minute walk of the subject development, with a regular Airport Bus link also in operation.	The availability, proximity and ease of access to public transport services contributes to reducing the reliance on the private motor vehicle for all journey types.
Permeable Connections	There is provision of dedicated pedestrian and cycle infrastructure within the site. The upgrading and provision of new high quality pedestrian and cyclist facilities form part of the works within the development site. These connect with existing paths on the wider urban network, subsequently providing convenient access to local services including shops, schools, restaurants and medical facilities.	Ensures long-term attractiveness of walking, and cycling to a range of local facilities. This strong infrastructure ensures that there will be a balance of transport modes used by future residents of the proposed development.

Cycle Links	There is currently cycle infrastructure in the immediate vicinity of the site, which is being enhanced with eh new link road, under construction. The provision of private secure & covered bicycle parking facilities for each apartment, together with quality short term and long-term parking requirements.	Accommodates the uptake of cycling and reducing the reliance on the private motor vehicle.

2.9 Management

Measure	Description	Benefit
Resident Information Packs	Once a purchaser completes their sale, a homeowner box will be provided which will include: • Homeowner manual – this will provide important information for the purchaser on details of their new property. It typically includes details of the property such as MPRN and GPRN, Information in relation to connect with utilities and communication providers, contact details for all relevant suppliers and User Instructions for appliances and devices in the property. • A Residents Pack prepared by the Developer which will typically provide information on contact details for the Managing agent, emergency contact information, transport links in the area and a clear set of rules and regulations.	Residents will be as informed as possible so that any issues can be addressed in a timely and efficient manner.

APPENDIX A – APARTMENT / DUPLEX LOCATIONS WITHIN PROPOSED DEVELOPMENT

Apartment Locator

APPENDIX B – ITEMS INCLUDED IN A TYPCIAL BIF

Items Included in a Typical BIF

The BIF table below illustrates what would be incorporated for the calculation of a Sinking Fund.

Ref	Element	Life Expectancy (Years)	Cost
1.0	**Roofs**		
1.1	Replacement of flat roof covering including insulation to warm roof build ups.	20 (40 for tiled roofs)	
1.2	Replacement parapet details	20	
1.3	Replacement/ repairs to facias	20	
2.0	**Elevations**		
2.1	Repairs & preparation for decorations of rendered areas	20	
2.2	Replace exit/ entrance doors	25	
2.3	Replace rainwater goods	25	
2.4	Recoat powder coated finishes to balconies	15	
2.5	Periodic replacement and overhauling of external fixings	5	
2.6	Replace balcony floor finishes	25	
3.0	**Stair Cores and Lobbies**		
3.1	Decorate ceilings & walls (stairwells & lobbies)	2	
3.2	Decorate Joinery (stairwells & lobbies)	2	
3.3	Replace fire doors (stairwells & lobbies)	25	
3.4	Replace carpets (stairwells & lobbies)	10	
3.5	Replace entrance mats (stairwells & lobbies)	10	
3.6	Replace nosings (stairwells)	10	
3.7	Replace ceramic floors tiles (stairwells & lobbies)	20	
3.8	Fixed Furniture & Equipment (Provisional Sum)	18	

4.0	**M&E Services**		
4.1	General - Internal re-lamping (stairwells & lobbies)	5	
4.2	Replace Internal light fittings (stairwells & lobbies)	15	
4.3	Replace external light fittings (at entrance lobbies)	15	
4.4	Replace smoke detector heads	18	
4.5	Replace manual break glass units/ disabled refuge call points	18	
4.6	Replace fire alarm panel	18	
4.7	Replace AOV's	25	
4.8	Replace security access control installation	15	
4.9	External mains water connection	20	
4.10	Electrical mains and sub mains distribution.	20	
4.11	Emergency lighting	20	
4.12	Overhaul and/or replace waste pipes, stacks & vents	20	
5.0	**Exterior**		
5.1	External boundary treatments - recoat powder coated finishes to railings	40	
5.2	Replace external signage	15	
5.3	Replace cobble-lock areas	20	
5.4	15-year cutback & thinning of trees & general overhaul of the landscaping	15	
5.5	Replace CCTV provision	10	
5.6	External handrails and balustrade	15	
5.7	Replace Bicycle Stands	25	

APPENDIX C – FABRIC REQUIREMENTS – BUILDING REGULATIONS PART L

Table 1	**Maximum elemental U-value (W/m^2K)[1, 2]**	
Column 1 Fabric Elements	**Column 2 Area-weighted Average Elemental U-Value (Um)**	**Column 3 Average Elemental U-value – individual element or section of element**
Roofs Pitched roof - Insulation at ceiling - Insulation on slope Flat roof	 0.16 0.16 0.20	 0.3
Walls	0.21	0.6
Ground floors[3]	0.21	0.6
Other exposed floors	0.21	0.6
External doors, windows and rooflights	1.6[4]	3.0

Notes:

1. *The U-value includes the effect of unheated voids or other spaces.*
2. *For alternative method of showing compliance see paragraph 1.3.2.3.*
3. *For insulation of ground floors and exposed floors incorporating underfloor heating, see paragraph 1.3.2.2.*
4. *Windows, doors and rooflights should have a maximum U-value of 1.6 W/m^2K when their combined area is 25% of floor area. However areas and U-values may be varied as set out in Table 2.*

APPENDIX D – PHASES OF THE LIFE CYCLE BS7543:2015

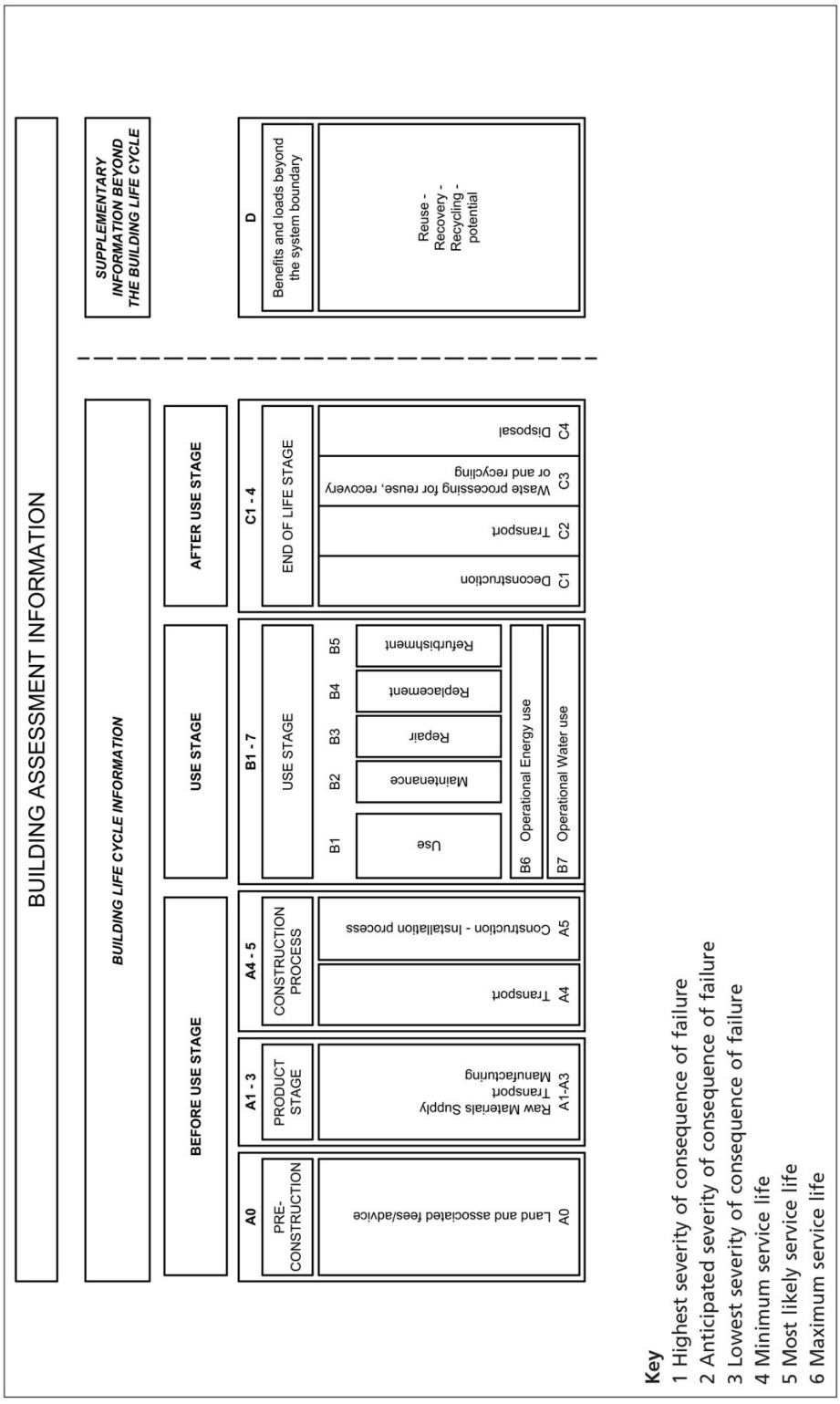

Figure 4 **Phases of the life cycle**