

Sustainability requirements for land allocation

Kolkajen

SUSTAINABILITY ACTION PROGRAM

*for planning, design, construction and maintenance of
residential and business premises in Kolkajen*



NORRA STOCKHOLM ROYAL SEAPORT
DJURGÅRDSSTADEN

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Revision

Revision	Comments	Date	Responsible
1.1	Annex to land allocation agreement	2017-11-24	Christina Salmhofer
1.2	Annex to land allocation agreement	2018-04-20	Christina Salmhofer
1.3	English translation of sustainability requirements for land allocation	2019-06-24	Christina Salmhofer

BACKGROUND

Stockholm Royal Seaport (Royal Seaport) is the new sustainable urban re-development area in Stockholm after Hammarby Sjöstad. The City of Stockholm's vision is for Stockholm Royal Seaport to be a frontrunner and a role model for sustainable urban re-developments.

The new urban district is planned to be a place where it's easy to have an environmentally conscious and sustainable lifestyle

The sustainability program for the development focus on the following areas:

- Environmental management
- Climate adaptability and a thriving outdoor environment
- Sustainable energy system
- Sustainable resource use and recycling
- Sustainable water and drainage system
- Sustainable transport
- Sustainable buildings
- Sustainable lifestyle
- Sustainable businesses
- Digital infrastructure.

To achieve the Cities high sustainability goals, the Royal Seaport will need to maneuver many challenges, both technical as well as in the planning, logistics and construction process. In addition to building the district, the maintenance phase is a critical part in the district achieving their high set targets.

The Royal Seaport, its builders and designers will promote sustainable city development, technical solutions and products used within the urban district.

PRERQUISITES AND PLANNING

The aim with the development phase, Kolkajen, is to continue the expansion of Hjorthagen and provide a plan for residential apartments, services and businesses. In addition, the aim is to create public meeting places that attract a large group of residents and visitors. The area covers approximately 13 hectares and can accommodate approximately 1,200-1,400 apartments, 2 kindergartens and 3,000m² of office space, retail and services.

Commercial businesses are primarily planned in proximity to the local transport hub, Ropsten, which is part of a separate zoning plan. Commercial businesses are also proposed on main streets and in central locations. The area is planned to be of a high standard for public services such as; meeting places, kindergartens, streets, plazas, parks, quays and swimming areas.

SUSTAINABILITY REQUIREMENTS

The sustainability requirements for the Kolkajen development phase are based on the city's overall sustainability policy for Royal Seaport, Sustainable Urban Development Program (2017). A site specific Sustainability Action Program is created for each development phase, based on the sustainability targets of the policy.

This Action Program is intended for developers in the Kolkajen development area and outlines the sustainability requirements for existing and new buildings.

The Swedish Environmental Code, The National Board of Housing, Building and Plannings 'Boverket's Building Regulation' and 'The Planning and Building act' set the framework for the buildings in Kolkajen. Additionally, the city of Stockholm has set its own Environmental Program, Chemicals Action Plan, Stormwater Strategy etc. The sustainability goals for the Royal Seaport are more ambitious than in other parts of the city, hence the additional goals and targets enclosed in this Sustainability Action Program.

The detailed sustainability requirements for Kolkajen, and the responsibility for its implementation, will be included as a condition in the contract between the municipality and the developers. The exact sustainability goals and monitoring system for planning, design, construction and maintenance phase will be settled the date the development agreement is drawn up, with the sustainability requirements enclosed. This Sustainability Action Program outlines the minimum requirement level, but will be clearly defined the time of drafting the development agreement. A condition for developers to sign the land allocation agreement is that the developer commit to the sustainability requirements in this document.

To take the lead towards a sustainable future; developers, infrastructure companies and other actors are expected to deliver their products and services to a high sustainability standard. This requires developers and building planners to show a strong commitment and cooperate with the municipality, companies and other actors.

TIME PLAN

For each requirement a method of verification is specified. The specified document/ calculation/ indicator, etc, has to be submitted and verified in the applicable stage(s) (example below). The reporting to done in the City of Stockholm's Sustainability Portal 'Hållbarhetsportalen'.

SD	DD	C	AB	2 years
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SD = Schematic Design

DD = Detailed Design

C = Construction

AB = As Built

2 yrs = Maintenance phase (24 months of operation)

A colored box means that a verification must take place.

I. ENVIRONMENTAL MANAGEMENT

In order to achieve the environmental requirements, the planning, design, construction and management process must be done in accordance with a management system. The developer must have a management system for controlling and monitoring environmental work (eg ISO 14000, BF9K or equivalent).

The developer is to draw up an Environmental Management Plan that shown how the project is set to achieve the sustainability requirements of the Royal Seaport.


The developer is responsible for communicating and educating all their staff about the sustainability requirements.

Non-compliances with this Action Program must be documented in a non-compliance report that as a minimum has to include a justification, measure of compliance or an alternative compliance pathway. All sustainability strategist before a deviation can be granted. A non-compliance can be accepted if there are no alternatives or when the required technical solution requires a different approach.

2. CLIMATE CHANGE ADAPTATION AND THE GREEN ENVIRONMENT

Requirements

2.1 Storm water is to be managed in accordance with the storm water policy of Kolkajen-Ropsten. ('Dagvattenstrategi Kolkajen - Ropsten, 2015-12-21').¹

<p><i>Verification:</i> Report measures in accordance with the general stormwater guidelines. A drawing demonstrating how the stormwater is to be managed at the property level is to be submitted. Outline the calculated drainage coefficient for the property (the volume of a typical rain even that can be detained at the property).</p>	<p><i>Evidence is to be submitted for each phase represented by a coloured box below:</i></p> 
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^{1 1} The policy includes some detention/ storage for water irrigation to distribute the water flow, detain water after heavy rains (climate adaptation) and elevation guidelines so that water can be diverted to surrounding areas. Contaminated water is to be cleaned to set guidelines before being released etc

2.2 A minimum Green Space Index (GSI)² of 0.6 for residential buildings and 0.4 for commercial buildings must be achieved. The GSI contributes to the creation of a locally adapted green environment, strengthens the ecosystems, contributes with recreational functions and reduces the negative effects of the changing climate.

The GSI calculations should be completed in accordance with reports:

- Reports' "GSI for Hjorthagen, dpl Kolkajen, residential, (2016-04-07) and
- GSI for Hjorthagen, dpl Kolkajen, office and hotel, (2016-04-07).

<p><i>Verification:</i> Submit the GSI calculation for the property including the basis of calculations. Submit evidence of each measure such as; soil depth, choice of plants, green area, size of trees etc..</p>	<p>Evidence is to be submitted in:</p> <table border="1"> <tr> <td style="background-color: #00AEEF; color: white;">SD</td> <td style="background-color: #70AD47; color: white;">DD</td> <td style="background-color: #FFC000; color: white;">C</td> <td style="background-color: #A6A6A6; color: white;">AB</td> <td style="background-color: #C00000; color: white;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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2.3 A maintenance plan for the property's green must be drawn up and implemented. The maintenance plan must take into account the natural values and the ecological infrastructure. Maintenance must be carried out using ecological methods, without artificial fertilizers and pesticides.

<p><i>Verification:</i> Submit: a maintenance plan showing how the green area will be maintained and by whom.</p>	<p>Evidence is to be submitted in:</p> <table border="1"> <tr> <td style="background-color: #00AEEF; color: white;">SD</td> <td style="background-color: #70AD47; color: white;">DD</td> <td style="background-color: #FFC000; color: white;">C</td> <td style="background-color: #A6A6A6; color: white;">AB</td> <td style="background-color: #C00000; color: white;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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3. SUSTAINABLE ENERGYSYSTEMS

Requirements

3.1 Energy performance requirements (net energy consumption per m² A_{temp}, excluding energy consumption of households and businesses³) for:

- Residential apartments: maximum 50 kWh/m² A_{temp}.year for heating, hot water, cooling and building electricity³
- Commercial space: maximum of 45 kWh/m² A_{temp}.year for heating, hot water, comfort cooling and building electricity
- Net energy is defined as:
 - The energy supplied to the building from the technical systems in the building for heating, hot water, comfort cooling and building electricity.
 - Net energy for heating is the energy used for heating, air conditioning systems and hot water.

² Green Space Index (Grönytefaktor) is a model originally created in Berlin, Germany and imported to Sweden via Malmö. The tool rates the surfaces based on different factors and calculates an average value, of how much the green area positively contributes to the local ecosystem, climate and social values related to water and green area of the site.

³ According to BBR's nomenclature

- Net energy for cooling is the energy used for comfort purposes supplied to the building from the cooling system (district cooling and cooling unit).
- Generally: the surcharge for the fresh air supply is calculated according to Boverket's instructions and other corrections according to the user data for Sveby⁴ offices. Re-used process energy may not be credited in the energy performance calculation or metered data.

<p><i>Verification:</i></p> <ul style="list-style-type: none"> • The energy calculations is to be submitted at schematic design, detailed design, construction documentation and the as built drawings. • For commercial buildings, once the buildings end use is decided, a calculation should be completed using specific data, however Svebys office data should be used in schematic and detailed design phase for all office buildings (even when the actual data is known). • The calculated energy in the above-mentioned circumstances (are to be revised to include any non-compliances during production before building commissioning) is calculated according to the energy verification of Sveby. The energy consumption is to be calculated in accordance with ISO EN 13790 or with a validated dynamic calculation program (eg IDA, VIP +). • The Energy declaration is based on measured values and normalized annual energy calculation based on two years of use per type of energy (base building energy, heating, cooling and hot water). • Measured values based off one and two years use per type of energy (base building, heating, cooling and hot water). <p>Enter data in accordance with Svebys verification model.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td style="background-color: #00a0e3; color: white;">SD</td> <td style="background-color: #70ad47; color: white;">DD</td> <td style="background-color: #ffc000; color: white;">C</td> <td style="background-color: #a6a6a6; color: white;">AB</td> <td style="background-color: #c0392b; color: white;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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3.2 During the operational phase, 100% of the energy purchased should be from renewable resources and have an eco-label according to the regulations of the contracting authority 'Electricity from renewable energy sources', level 2.

<p><i>Verification:</i></p> <p>Renewable Energy Certificate..</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td style="background-color: #00a0e3; color: white;">SD</td> <td style="background-color: #70ad47; color: white;">DD</td> <td style="background-color: #ffc000; color: white;">C</td> <td style="background-color: #a6a6a6; color: white;">AB</td> <td style="background-color: #c0392b; color: white;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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3.3 At least 2 kWh/m² A_{temp} solar energy or alternatively 6 kWh/m² A_{temp} solar heat, or a combination with an equivalent distribution is to be generated on each building. The locally produced energy is excluded when calculating the energy performance and measuring the energy performance values of the building.

<p><i>Verification:</i></p> <p>Submit calculations including how and where the energy is produced, including the amount of locally produced renewable energy. Submit metered values after two years of -generated energy.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td style="background-color: #00a0e3; color: white;">SD</td> <td style="background-color: #70ad47; color: white;">DD</td> <td style="background-color: #ffc000; color: white;">C</td> <td style="background-color: #a6a6a6; color: white;">AB</td> <td style="background-color: #c0392b; color: white;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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⁴ <http://www.sveby.org/>

3.4 Measurement of domestic water and electricity use:

- Residential apartments must be prepared to install hot water meters.
- Electricity is to be measured per individual apartment.

The following must be measured

- The energy consumption of the building (base building services, heat with a separate meter energy for heating appliances, comfort cooling hot water⁵, total electricity for domestic use and total company electricity).
- Locally produced renewable energy.

<p><i>Verification:</i> Domestic electricity use is metered per apartment and the meter must be prepared for hourly measurements. Each apartment must have a space for the installation of a hot water meter. There must be a base building meter for hot water, total energy consumption for households and businesses, energy for heating appliances and for locally produced renewable energy. Submit the statistics in kWh per energy type and building.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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3.5 Energy-efficient appliances must be chosen based on the National Agency for Public Procurement’s criteria for appliances, advanced level.

<p><i>Verification:</i> Submit the energy label of selected products according to the guidelines for energy labeling 2010/30/EU.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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3.6 Electricity used during construction must have an eco-label according to the regulations of the contracting authority “Electricity from renewable sources”, level 2.

<p><i>Verification:</i> Submit renewable energy certificate</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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3.7 The energy consumption (purchased energy) for site- and office sheds⁶ is not to exceed 125 kWh/m² Atemp per year. This corresponds to approximately 3 000 kWh / year per site shed.

<p><i>Verification:</i> Submit the energy statistics in kWh per year per construction shed and energy type. Heating and the sheds energy performance is to be reported separately. Specify the location of the construction sheds, as well as the number of office sheds.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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⁵ A separate meter is to be installed for businesses that use a lot of water such as restaurants, gyms, etc.

⁶ The energy performance assumes a site- and office shed with approximately 21 m² of indoor space

- 3.8 A goal during the operational phase is to establish a long-term supply agreement between the users and the energy supplier for households and businesses to purchase renewable energy in accordance with the regulations of the contracting authority “Electricity from renewable energy sources”, level 2.

Verification: Submit renewable energy certificate	Evidence is to be submitted in: <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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5. SUSTAINABLE RECYCLING SYSTEM

Requirements

- 4.1 Apartments and offices shall be designed for source-separation of waste according to “Requirements and instructions for waste management in Norra Djurgårdsstaden”, Stockholms Vatten, May 2016.

Verification: According to verification in the requirements and instructions.	Evidence is to be submitted in: <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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- 4.2 Construction waste must in the first instance be reused or the material must be recycled, and secondly, the energy must be recycled. 100% of construction waste must be sorted⁷ (by weight) no more than 5% (by weight) may be deposited on landfill.

Verification: Submit statistics in accordance with the waste processing guidelines. Outline total waste per fraction and method of disposal, incl. the total amount of waste generated (tonnes).	Evidence is to be submitted in: <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 4.3 The amount of construction waste may not exceed 20 kg/m² (GFA)

Verification: Submit statistics in accordance with the waste processing guidelines. Submit the waste prevention plan according the guidelines for waste processing for building and demolition Outline waste statistics in kg/m ² (GFA).	Evidence is to be submitted in: <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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⁷ During the construction and renovation, construction waste must be sorted according to The Waste Processing Guidelines, updated November 2015, Ground and waste guidelines for construction and demolition, the Swedish construction industry, www.bygg.org

6. SUSTAINABLE WATER AND WASTE WATER MANAGEMENT SYSTEM

Requirements

- 5.1 Water meters are to be installed for commercial spaces with intense water use, such as restaurants, gyms, etc. The water consumption is to be measured per building.

<p><i>Verification:</i> Submit water consumption liters / building.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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- 5.2 Apartments and office spaces with food waste disposer should be prepared with a separate drain that leads to a designated connection point.

<p><i>Verification:</i> Food waste disposer Separate sewer to the food waste disposer installed. An area of 10m² is to be reserved for the equipment.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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- 5.3 The building must be prepared for source separation and collection of wastewater streams separately. Toilets must be of low water use (maximum one liter per flush) and must be prepared to be connected to a designated connection point.

<p><i>Verification:</i> Separate sewer to the toilets installed. An area of 10 m² is to be reserved for the installation.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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7. SUSTAINABLE TRANSPORT

Requirements

- 6.1 Bicycle parking on the property is to be provided as follows (as a minimum):
- 2.8 places / 100 m² GFA (apartments with an average surface area of > 40 m²)
 - 4 places / 100 m² of GFA (apartments with an average surface area of < 40 m²)
 - 15 places / 1000 m² GFA (office)
 - 25 places / 1000 m² GFA (retail)
 - 1 place / 10 children + 0.25 places per employee (nursery / kindergarten)

<p><i>Verification:</i> The number of bicycle parking spaces per category.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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6.2 Car parking spaces are to be provided as follows:

- 0.5 space / apartment + 0.02 places for carpooling / apartment.
- 0-4 places / 1000 m² GFA (office)
- 1-6 places / 1000 m² GFA (retail)

<p><i>Verification:</i> The number of car parking spaces per category.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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6.3 The Mobility Index is calculated in accordance with the guidelines “Mobility index - assessment of sustainable travel in Kolkajen-Ropsten, version 1.0” (or later). The aim is for the Index to contribute to an improvement of the mobility in the area. A minimum mobility index of 65% of the maximum available score must be achieved.

<p><i>Verification:</i> Mobility Index for the project / building. Submit the calculations (in accordance with instructions). The documentation of each measure is to be submitted (reports, drawings, agreements, etc.). A submission shall be made at the design and as built stage with associated calculations, descriptions and illustrations..</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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6.4 All garage parking spaces is to be equipped with a charging facility for electric vehicles, all installed sockets must be able to be used at the same time. At least 20% of the parking places must have a charging facility at Day One.

<p><i>Verification:</i> The number of parking spaces with charging points.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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6.5 Delivery trucks and work machines must comply with the “Municipal environmental requirements for contracting 2018”, dd. 2018-03-02 of the Municipality of Stockholm). A logistic plan must be drawn up before the start of the construction phase.

<p><i>Verification:</i> Submit the building logistics plan Report statistic of km driven, working hours and type of fuel used</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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8. ENVIRONMENTALLY SOUND BUILDINGS

Requirements

- 7.1 All building material and chemical products used in construction must meet the following requirements:
- 7.1.1 The chemical content criteria of one of the following assessment systems must be met:
- a) The characteristic criteria of BASTA or
 - b) 'Recommended' or 'accepted' (on content) in Byggsvarubedömningen; or
 - c) A SundaHus rating A, B or C+
- 7.1.2 In addition, the following substances may not be used:
- a) Substances classified as endocrine disruptors on the SIN list.
 - b) PVC and other halogenated materials.
 - c) Zinc in structures where it is discharged into the soil and water.
 - d) Copper, except in closed systems.

The requirements in 7.1.1 and 7.1.2 applies to all chemical products, built in construction products, HVAC and other installations (in accordance with the definition by Swedish Green Building Council rating 'Miljöbyggnad' Version 2.2).

The requirement also applies to material used externally on the property, such as the materials in courtyards and installation products underground. See: "Help document to chapter 7, environmentally friendly buildings", dd. 2016-05-03, for more information about which products should be assessed.

<p><i>Verification:</i> Digital logbook of material 7.2 Products that do not meet the requirements above must be treated as an internal deviation with written permission from the Developer. Products that contain gradually eliminating substances or are in conflict with 7.1.2 and 7.1.3 must be treated as a deviation from the requirement.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="background-color: #0070C0; color: white;">SD</td> <td style="background-color: #70AD47; color: white;">DD</td> <td style="background-color: #FFC000; color: white;">C</td> <td style="background-color: #A6A6A6; color: white;">AB</td> <td style="background-color: #A6A6A6; color: white;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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- 7.2 A digital logbook must be prepared verifying the used building material and chemicals. The logbook must state the type of product, the product name, a content declaration (BVD), the manufacturer and the location of the installed/used product. A note must be added to the logbook when a product contains nanomaterial or nanoparticles. The logbook must include written information of any deviation from the requirements in Chapter 7. When there's a non-compliance, the documentation must include a written justification for using the product and reason for approval.

<p><i>Verification:</i> Digital logbook. If a digital logbook isn't compiled in one of the official assessment systems, the builder will need to submit material data sheets in addition to the information mentioned within the requirement.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="background-color: #A6A6A6; color: white;">SD</td> <td style="background-color: #70AD47; color: white;">DD</td> <td style="background-color: #FFC000; color: white;">C</td> <td style="background-color: #A6A6A6; color: white;">AB</td> <td style="background-color: #A6A6A6; color: white;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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- 7.3 The building frame, including the basement and building fabric, must be optimized from an LCA perspective with regard to climate impact and the emission of fossil fuels (non-renewable energy use) in its design, construction and choice of material.

<p><i>Verification:</i> Climate impact calculations A management plan for improvements. A section and an in-depth description of the used components.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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- 7.4 Timber products must be sourced from documented sustainable forestry according to the following priority order:
- a. FSC / PEFC-labeled wood.
 - b. Documentation that verified the timber sourced from a sustainable forestry.
 - c. If the timber product in question is not available with documented sustainable origin, measures taken to try to obtain sustainable wood products must be documented. This document must contain quotes from at least five suppliers.

<p><i>Verification:</i> FSC certificate or PEFC documentation or other documentation according to requirement 7.4.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 7.5 Timber treatments should in the first instance be avoided by placing timber constructions in an unexposed area. Secondly the timber treatment should be non-toxic (free of biocides and heavy metals). Lastly a demand response timber protection system is used where the treatment is decided and motivated by the specific exposure class.

<p><i>Verification:</i> Written documentation.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 7.6 The quantity of reused building material and products with a large amount of recycled content is to be documented. See: "Help document in Chapter 7, Environmentally friendly buildings" for more information about the reason and calculation methods.

<p><i>Verification:</i> Written documentation in accordance with the help document 'Hjälpdokument till kapitel 7, Miljöanpassade bostäder och localer (byggnader)'.</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 7.7 Emissions for the following product groups may not exceed the TVOC emission ratio <math><200 \text{ g / m}^2, \text{ h}</math> or TVOC content <math><200 \text{ } \mu\text{g / m}^3</math>. Measurable levels, the substances representing the top 5 substances must be specified. This applies to floor materials, wall and ceiling coverings, paint and varnish, balancing materials and insulation.

<p><i>Verification:</i> Logbook according to 7.2 including the measured levels for</p>	<p><i>Evidence is to be submitted in:</i></p> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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relevant products as described above.

- 7.8 Swedish building certification scheme, Miljöbyggnad, class Gold for indoor environment quality parameters is to be achieved for all new buildings in regards to noise, radon, ventilation rates, nitrogen dioxide, thermal comfort (winter/summer), moisture ingress, daylight and legionella. Exceptions can be made where these parameters are not achieved due to innovative solutions.

Verification:

Submit documentation in accordance with Miljöbyggnad Guld, manual 3.0 (Environmental class Gold, manual 3.0) (version 170510) or later..

Evidence is to be submitted in:

SD DD C AB 2 YRS

- 7.9 The apartment buildings common courtyard shall have at least one terrace of 20 m² with a traffic noise level up to a maximum of 70 dBA and a daily equivalent of 50 dBA. If there is no communal courtyard, there must be at least one terrace per apartment / terraced house that meets the above traffic noise level.

Verification:

Submit the building design, location of courtyard and noise calculations..

Evidence is to be submitted in:

SD DD C AB 2 YRS

9. SUSTAINABLE LIFESTYLE

Requirements

- 8.1 Residential dwellings shall be equipped with user-friendly systems to measure and visualize their energy consumption and waste generation in an easy, clear and educational manner.

Verification:

Submit a description of system.

Evidence is to be submitted in:

SD DD C AB 2 YRS

- 8.2 Potential residents shall receive information on the Royal Seaports environmental profile and what it means to be a resident of The Royal Seaport. This information shall be provided during the selling process.

Verification:

Submit evidence of information meeting, handouts.

Evidence is to be submitted in:

SD DD C AB 2 YRS

- 8.3 The manager / housing corporation shall get access to all information needed to manage the property in an environmentally responsible manner.

<i>Verification:</i> Submit environmental documentation.	<i>Evidence is to be submitted in:</i> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

10. SUSTAINABLE COMPANIES

Requirements

- 9.2 All business premises shall be equipped with user-friendly systems to measure and visualize the energy consumption and quantity of waste in a clear and educational way.

<i>Verification:</i> Submit a description of system.	<i>Evidence is to be submitted in:</i> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 9.3 Potential businesses shall receive information about the environmental profile of the Royal Seaport and what this means for the companies located within the area.

<i>Verification:</i> Submit evidence of informative meeting etc.	<i>Evidence is to be submitted in:</i> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 9.4 Green lease agreements shall be drawn up for office tenants, according to the 'Green appendix to the standard agreement'.

<i>Verification:</i> Green Lease Agreement.	<i>Evidence is to be submitted in:</i> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 9.5 The possibility to create employment for people who are currently outside the labor market must be examined. A dialogue will be started with the Labor Administration, see “More residents of Stockholm at work, dated 2016-11-21” to investigate employment and to draw up an action plan.

<i>Verification:</i> Action plan and the number of persons employed, type of work and type of appointment.	<i>Evidence is to be submitted in:</i> <table border="1"> <tr> <td>SD</td> <td>DD</td> <td>C</td> <td>AB</td> <td>2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

II. DIGITAL INFRASTRUCTURE

Requirements

- 10.1 An access point shall be installed in the property so that the network's fiber optic cable can be connected to the property's network.

<i>Verification: The fiber optic cable (s) can be connected to the access point of the building, yes / no.</i>	<i>Evidence is to be submitted in:</i>					
	<table border="1" style="display: inline-table;"> <tr> <td style="padding: 2px;">SD</td> <td style="padding: 2px; background-color: #d4edda;">DD</td> <td style="padding: 2px; background-color: #ffc107;">C</td> <td style="padding: 2px; background-color: #6c757d;">AB</td> <td style="padding: 2px;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 10.2 A vertical indoor network shall be installed in each apartment. This network consists of at least four fiber optic cables and runs from the access point to the apartment node. In addition, space for real estate services that requires digital connectivity, including garage, refuse chute, refuse sorting room, shall be serviced with to at least two fiber optic cables.

<i>Verification: Four fiber optic cables are provided to each apartment, yes / no.. Two fiber optic cables are provided to space for real estate services, yes / no..</i>	<i>Evidence is to be submitted in:</i>					
	<table border="1" style="display: inline-table;"> <tr> <td style="padding: 2px;">SD</td> <td style="padding: 2px;">DD</td> <td style="padding: 2px; background-color: #ffc107;">C</td> <td style="padding: 2px; background-color: #6c757d;">AB</td> <td style="padding: 2px;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 10.3 At least two fiber optic cables per apartment shall be reserved for real estate services and public digital welfare services. The reserved fiber optic cables must be publicly accessible without any hindrance.

<i>Verification: Two fiber optic cables are reserved for real estate services and public digital welfare services, yes / no.</i>	<i>Evidence is to be submitted in:</i>					
	<table border="1" style="display: inline-table;"> <tr> <td style="padding: 2px;">SD</td> <td style="padding: 2px; background-color: #d4edda;">DD</td> <td style="padding: 2px; background-color: #ffc107;">C</td> <td style="padding: 2px; background-color: #6c757d;">AB</td> <td style="padding: 2px;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
SD	DD	C	AB	2 YRS		

- 10.4 A distribution network with at least two outlets per stay room shall be installed in apartments and premises. Distribution networks should be connected to the apartment and local node.

<i>Verification: Does the apartment / premises have a network with two missing data sockets per stay room, yes / no.</i>	<i>Evidence is to be submitted in:</i>					
	<table border="1" style="display: inline-table;"> <tr> <td style="padding: 2px;">SD</td> <td style="padding: 2px;">DD</td> <td style="padding: 2px; background-color: #ffc107;">C</td> <td style="padding: 2px; background-color: #6c757d;">AB</td> <td style="padding: 2px;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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- 10.5 A dialogue with mobile net providers must be had to ascertain if any additional equipment is required to ensure a good mobile coverage indoors.

<i>Verification: the developer / real estate owner has consulted with the providers during the planning phase to ensure good mobile coverage indoors, yes / no</i>	<i>Evidence is to be submitted in:</i>					
	<table border="1" style="display: inline-table;"> <tr> <td style="padding: 2px;">SD</td> <td style="padding: 2px; background-color: #d4edda;">DD</td> <td style="padding: 2px; background-color: #ffc107;">C</td> <td style="padding: 2px; background-color: #6c757d;">AB</td> <td style="padding: 2px;">2 YRS</td> </tr> </table>	SD	DD	C	AB	2 YRS
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- 10.6 The property owner shall measure, and make the total use of natural resources

available based on the measuring points specified in the requirements 3.1, 3.3, 3.4, 4.1 and 5.1 during building operation. The property owner has to report the annual consumption figures to the city, this is stipulated within their contract documentation.

<i>Verification:</i> <i>Agreement.</i>	<i>Evidence is to be submitted in:</i> <table border="1"><tr><td data-bbox="1062 353 1126 394">SD</td><td data-bbox="1126 353 1190 394">DD</td><td data-bbox="1190 353 1254 394">C</td><td data-bbox="1254 353 1318 394">AB</td><td data-bbox="1318 353 1410 394">2 YRS</td></tr></table>	SD	DD	C	AB	2 YRS
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Sustainability requirements for land allocation

Kolkajen

SUSTAINABILITY ACTION PROGRAM

*for the planning, design, construction and maintenance of
residential and business premises in Kolkajen*

www.stockholm.se/norradjurgardsstaden



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KONTORET

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DJURGÅRDSSTADEN