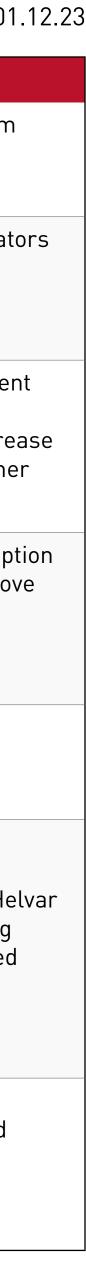


#### BREEAM International New Construction + Refurbishment

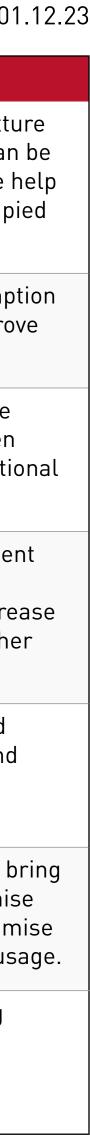
| CATEGORY  | POINTS   | DESCRIPTION   | REQUIREMENTS FOR SYSTEM  | HELVAR IMPACT  |
|---|----------|---|--|--|
| Hea 01 Visual<br>comfort                                  | Up to 2  | Ensure daylighting, artificial lighting and occupant controls are considered at the design stage to ensure best practice in visual performance and comfort for building occupants.  | Glare control<br>Daylight harvesting<br>Internal and external lighting   | Helvar solutions allow you to fine-tune your lighting system<br>to precise requirements across a variety of spaces, while<br>delivering optimal visual comfort for building occupants.   |
| Hea 02 Indoor Air<br>Quality                              | 1        | Recognise and encourage a healthy internal environment through<br>the specification and installation of appropriate ventilation,<br>equipment and finishes.   | Part of reaching one of the credits requires<br>that sensors have the ability to alert the<br>building owner or manager when CO2 levels<br>exceed a certain threshold.   | Helvar Senses can monitor CO2 concentrations with indicator<br>and alerts if concentrations exceed limits.   |
| Ene 01 Reduction<br>of energy use and<br>carbon emissions | Up to 4  | Minimise operational energy demand, primary energy consumption, and $CO_2$ emissions.   | Energy efficient design features e.g.<br>occupancy-based lighting control.<br>Adequate lighting controls must also be<br>provided to all ancillary areas (as applicable).  | Helvar's luminaire components can be paired with intelligent<br>lighting controls for a strong reduction in lighting energy<br>usage through daylight and occupancy based-control. Increas<br>energy saving opportunities further by integrating with other<br>building systems such as HVAC, blinds.                                    |
| Ene 02a Energy<br>monitoring                              | Up to 2  | Encourage the installation of energy sub-metering to allow<br>monitoring of operational energy consumption. Allow managers<br>and consultants post-handover to compare actual performance<br>with targets in order to inform ongoing management and reduce<br>any performance gap.                                      | Energy metering for lighting-specific energy usage.  | Helvar Insights allows you to measure the energy consumption<br>of your lighting systems and identify opportunities to improve<br>your energy usage.   |
| Ene 03 External<br>Lighting                               | 1        | Recognise and encourage the specification of energy efficient light fittings for external areas of the development.   | Output of external light fittings can be controlled through e.g. daylight harvesting, presence detection.  | Helvar's control solutions can easily be implemented for outdoor applications. E.g. Facade lighting, Infrastructure lighting   |
| Man 05 Aftercare  | Up to 2  | Provide post-handover aftercare to the building owner or<br>occupants during the first year of occupation to ensure the<br>building operates and adapts, where relevant, in accordance with<br>the design intent and operational demands.   | One credit can be awarded for seasonal<br>commissioning activities completed over a<br>minimum 12-month period, once the building<br>has become substantially occupied.<br>One credit can be awarded for a Post-<br>occupancy evaluation (POE) exercise one<br>year after initial building occupation. | Helvar solutions can provide Post Occupancy Evaluation<br>(POE) data to aid in checking whether the actual building<br>performance is aligned with the predicted performance. Helv<br>is also able to support with lighting-related commissioning<br>activities, such as adjusting the system to acheive a desired<br>performance level. |
| Inn 01 Innovation   | Up to 10 | Points are awarded for any new technology, design, construction,<br>operation, maintenance or demolition method or process that can<br>be shown to improve the sustainability performance of a building<br>and is of demonstrable benefit to the wider industry in a manner<br>that is not covered elsewhere in BREEAM. | Lighting and/or environmental sensing<br>technology can be used to significantly<br>improve building performance and wellbeing<br>impact in ways that are not directly covered<br>in the BREEAM standard.  | Helvar offers a diverse portfolio of lighting and sensing solutions with opportunities for additional integrations and unique control requirements.  |





### LEED v4.1 [1/2]

| CATEGORY                       | POINTS   | DESCRIPTION  | REQUIREMENTS FOR SYSTEM   | HELVAR IMPACT  |
|--------------------------------|----------|--|---|--|
| Interior Lighting              | 2        | Promote occupants' productivity, comfort, and well-being by providing high-quality lighting.   | <ol> <li>Glare Control</li> <li>Color Rendering</li> <li>Lighting Control</li> </ol>                              | Helvar solutions allow you to precisely control the light fixture<br>to tune the luminance levels of luminaires. Desired CRI can be<br>achieved by selcecting the right light sources and with the hel<br>of Tunable White LED Drivers. Dimmable lighting for occupied<br>spaces is a core function of Helvar solutions. |
| Advanced Energy<br>Metering    | 1        | Support energy management and identify opportunities for additional energy savings by tracking building-level and system-level energy use.   | Advanced energy metering capabilities.  | Helvar Insights allows you to measure the energy consumption<br>of your lighting systems and identify opportunities to improve<br>your energy usage.   |
| Daylight                       | Up to 3  | Connect building occupants with the outdoors, reinforce circadian rhythms, and reduce the use of electrical lighting by introducing daylight into the space.   | Provide manual or automatic (with manual<br>override) glare-control devices for all<br>regularly occupied spaces. | Helvar's intelligent lighting solutions help you to maximise<br>the amount of daylight in your space, by working only when<br>needed. Blinds system integrations can be set up for additiona<br>glare control possibilities.   |
| Optimise energy<br>performance | Up to 4  | Achieve increasing levels of energy performance beyond<br>the prerequisite standard to reduce environmental and<br>economic harms associated with excessive energy use that<br>disproportionately impact frontline communities.              | (Option 3)<br>1. Lighting power reduction<br>2. Daylight controls   | Helvar's luminaire components can be paired with intelligent<br>lighting controls for a strong reduction in lighting energy<br>usage through daylight and occupancy based-control. Increase<br>energy saving opportunities further by integrating with other<br>building systems such as HVAC, blinds.                   |
| Minimum energy<br>performance  | Required | Promote resilience and reduce the environmental and economic<br>harms of excessive energy use that disproportionately impact<br>frontline communities by achieving a minimum level of energy<br>efficiency for the building and its systems. | Comply with ANSI/ASHRAE/IESNA Standard<br>90.1–2016, with errata or a USGBC-approved<br>equivalent standard.      | Helvar systems can provide significant energy savings and<br>are future-proof by design, allowing for easy scalability and<br>updates when space requirements change.  |
| Integrative<br>Process         | 1        | Support high-performance, cost-effective, equitable project outcomes through an early analysis of the interrelationships among systems.  | Identify and use opportunities to achieve synergies across energy-related systems.                                | Helvar Insights works together with intelligent sensors to brin<br>actionable lighting data to the table, allowing you to optimise<br>lighting levels according to space- and energy usage. Optimise<br>for occupant wellbeing without compromising on energy usage  |
| Grid<br>harmonization          | Up to 2  | Increase participation in demand response technologies and<br>programs that make energy generation and distribution systems<br>more affordable and more efficient, increase grid reliability, and<br>reduce greenhouse gas emissions.        | Participate in demand response programs through load shedding or shifting.  | Helvar Insights enables real-time control of many lighting parameters according to Smart Grid needs.   |





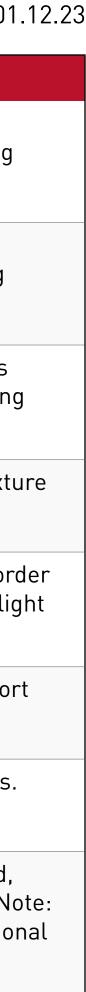
## LEED v4.1 [2/2]

| Updated 07                                   |          |   |   | Updated 01.12.23   |
|--|----------|---|---|--|
| CATEGORY                                     | POINTS   | DESCRIPTION   | REQUIREMENTS FOR SYSTEM   | HELVAR IMPACT  |
| Enhanced Indoor<br>Air Quality<br>Strategies | 1        | Promote occupants' comfort, wellbeing, and productivity by improving indoor air quality.  | (Strategy 9) Monitor CO2 levels within<br>densely occupied spaces.<br>(Strategy 10) Evaluate additional sources<br>of air contaminants through sensors and<br>monitoring systems. | In addition to monitoring and providing alerts for enhanced<br>CO2 limits, Helvar Senses can report on tVOC (Total Volatile<br>Organic Compound) concentrations for more comprehensive<br>Air Quality assessments. |
| Minimum Indoor<br>Air Quality<br>Performance | Required | Contribute to the comfort and wellbeing of all building occupants by establishing minimum standards for indoor air quality.   | For naturally ventilated spaces, CO2<br>concentrations should be monitored with<br>indicators or alerts.  | Helvar Senses can monitor CO2 concentrations within each<br>thermal zone, providing indicators and alerts if limits are<br>exceeded.   |
| Innovation                                   | Up to 5  | Encourage projects to achieve exceptional or innovative<br>performance to benefit human and environmental health and<br>equity. To foster LEED expertise throughout building design,<br>construction, and operation and collaboration toward project<br>priorities. | Achieve significant, measurable<br>environmental performance using a strategy<br>not addressed in the LEED green building<br>rating system.                                       | Helvar solutions offer a range of opportunities for additional integrations and unique control requirements.   |



### WELL Building Standard v2 [1/2]

| CATEGORY                            | POINTS       | DESCRIPTION  | REQUIREMENTS FOR SYSTEM  | HELVAR IMPACT  |
|-------------------------------------|--------------|--|--|--|
| L01 Light<br>Exposure               | Precondition | Provide appropriate light exposure in indoor environments through lighting strategies.   | (Option 4: Circadian lighting design)<br>Regulate indoor light exposure through<br>daylight and electric light control strategies. | Helvar's intelligent control solutions and luminaire components can help achieve criteria for circadian lighting design as set out by the WELL Standard.   |
| L02 Visual<br>Lighting Design       | Precondition | Provide appropriate illuminances on work planes for regular users of all age groups, as required for the tasks performed in the space.               | Comply with various requirements for illuminance thresholds, taking into account the needs of users of the space.                  | Helvar's customisable solutions allow you to address the individual needs of end-users when designing the lighting system, helping to follow standards such as EN 12464-1.   |
| L03 Circadian<br>Lighting Design    | 3            | Provide users with appropriate exposure to light for maintaining circadian health and aligning the circadian rhythm with the day-night cycle.        | Support circadian and psychological health through indoor daylight exposure and outdoor views.                                     | Intelligent lighting controls can be combined with Helvar's<br>Light over Time solution to create optimal circadian lighting<br>profiles for different spaces.   |
| L04 Electric Light<br>Glare Control | 2            | Manage glare by using strategies, such as calculation of glare and choosing the appropriate light fixtures for the space.                            | Minimise glare caused by electric light.   | Helvar solutions allow you to precisely control the light fixture to tune luminance levels in any space.   |
| L05 Daylight<br>Design Strategies   | 4            | Design spaces to integrate daylight into indoor environments,<br>so that daylight may be used for visual tasks along with electric<br>lighting.      | Provide optimal daylight exposure indoors through design strategies.   | Helvar controls can be integrated with blinds systems in order<br>to automatically adapt to daylight levels and optimise dayligh<br>exposure in your space.  |
| L07 Visual<br>Balance               | 1            | Develop and implement strategies to create a visually comfortable lighting environment.  | Create lighting environments that enhance visual comfort.  | Helvar solutions provide tools for maximising visual comfort for any range of activities throughout the day and night.   |
| L08 Electric Light<br>Quality       | 3            | Take into account characteristics of electric light used in the space, such as color rendering and flicker.  | Enhance visual comfort and minimise flicker for electric light.  | Helvar offers a range of flicker-free dimmable LED drivers.  |
| L09 Occupant<br>Lighting Control    | 3            | Implement innovative lighting strategies that take into account personal preferences of users, as well as their interaction with the physical space. | Provide individuals with access to customisable lighting environments.   | Helvar offers multiple solutions to help create customized,<br>personalized lighting scenes. E.g. ActiveTune, SceneSet. Note<br>Individual color+color temperature control requires additiona<br>capabilities in luminaires. |





# WELL WELL Building Standard v2 [2/2]

| WELL BUILDIN                         |              |   |  | Updated 01.12.2  |
|--------------------------------------|--------------|---|--|--|
| CATEGORY                             | POINTS       | DESCRIPTION   | REQUIREMENTS FOR SYSTEM  | HELVAR IMPACT  |
| S01 Sound<br>Mapping                 | Precondition | Incorporate strategic planning required to prevent issues of acoustic disturbance from various sources of noise.  | (Part 1) A floor plan or similar document<br>should be made available for occupants<br>which demonstrates different acoustic zones<br>within the occupied space. | Helvar Senses can provide acoustics data which facilitates the process of defining and monitoring acoustic zones.  |
| T01 Thermal<br>Performance           | Precondition | Provide a thermal environment that the majority of building users find acceptable.  | (Part 2) Thermal parameters in regularly occupied spaces should be measured and reported.  | Helvar Senses can provide sensor data for thermal measurements to demonstrate whether the required parameters are being met.   |
| T06 Thermal<br>Comfort<br>Monitoring | 1            | Monitor and effectively address unacceptable thermal comfort conditions and inform building managers and users of the thermal comfort parameters of their indoor environment. | (Part 1) Temperature and relative humidity<br>should be monitored according to specific<br>requirements, and displayed in an accessible<br>manner to occupants.  | Helvar Senses can meet the temperature and humidity<br>monitoring requirements while providing real time<br>measurements for display units as required.  |
| A03 Ventilation<br>Design            | Precondition | Minimize indoor air quality issues through the provision of adequate ventilation.   | (Option 4) Occupiable spaces should meet specific carbon dioxide thresholds.   | Helvar Senses can monitor CO2 levels and provide data regarding whether or not the threshold is met for occupied spaces.   |
| A06 Enhanced<br>Ventilation Design   | Up to 2      | Implement advanced ventilation strategies that bring higher air quality levels and thus benefit human health and productivity.  | (Part 1: Options 3 & 4) Implement a<br>ventilation system that can keep CO2 levels<br>within a certain threshold in occupied or<br>occupiable spaces.            | Helvar Senses can monitor CO2 and occupancy levels<br>and provide data regarding whether or not the enhanced<br>thresholds are met for occupied spaces. This helps to optimise<br>ventilation systems in occupied areas of the building. |
| Innovate WELL                        | Up to 10     | Promote the continuous evolution of WELL, by encouraging projects to propose a new intervention that addresses health and well-being in a novel way.                          | Positively impact occupants by supporting health and well-being in a novel way that is not covered in WELL v2.   | Helvar solutions offer a range of opportunities for additional integrations and unique control requirements.   |