

Wallcliffe House

Sustainability Report

Wallcliffe House Pty Ltd
C/O The Landsmith Collection

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Executive Summary

This report outlines the Ecological Sustainable Design (ESD) strategy for the proposed Wallcliffe House development.

The development is located in the Shire of Augusta Margaret River and is currently zoned Tourism, and hence is required to conform to relevant local planning policies. Relevant federal and state legislation regarding sustainability has also been considered.

Table 1 shown below confirms that the proposed Wallcliffe House development will respond to these requirements and outlines which sections of the report are relevant for each requirement.

Table 1 – Relevant Policies, Strategies, and Commitments for the proposed development.

Policy	Requirement fulfilled?	Section in this Report for further detail / comments
Federal Net Zero Commitment		
1. Legislated federal target of net-zero by 2050, and 43% reduction by 2030.	✓	Development will contribute to net-zero by reducing energy use and eliminating gas use. Please refer to Section 2.1.
Western Australian Climate Policy (2020)		
1. Better integration of large-scale renewable and distributed energy resources and reduced carbon emissions (pg. 18) 2. Reduced emissions and increased carbon sequestration (pg. 20) 3. Increased uptake of low- and zero-emissions vehicles, fuels, and transport technologies. Improved public transport, freight transport and active transport options (pg. 22). The Policy also contains a target to: 4. Achieve our aspiration of net zero emissions by 2050.	✓	Development will contribute to net-zero and is gas and LPG free. Please refer to Section 2.1. On-site landscaping and riparian planting will help sequester carbon. Please refer to Section 2.5. Low and zero-emission vehicles will be supported within the development. Please refer to Section 2.7.
Local Planning Policy 23 – Renewable Energy Systems		
Objectives 1. To facilitate the introduction of renewable energy technologies on a broad scale and address planning related matters associated with their development. 2. Provide for the protection of the quality of the streetscape, surrounding landscape, and amenity (particularly visual and acoustic amenity) of nearby properties and surrounding areas in the establishment of renewable energy systems. 3. Provide guidance for the development of renewable energy systems on land controlled under Local Planning Scheme No. 1.	✓	The design team has opted to exclude solar PV from the design to uphold the heritage value and visual amenity of the site. The development will be gas free. Please refer to Section 2.1.
Local Planning Policy 27 – Heritage Places		
Objectives In accordance with the aims of the Scheme the following objectives of this policy are: (a) To conserve and protect places that have been identified within the Heritage Inventory and Heritage List; (b) To ensure that development does not adversely affect the significance of those places identified within the Heritage Inventory and Heritage List;	✓	Interpretative reconstruction of the heritage buildings will be occurring; where possible material will be salvaged and reused. Please refer to Section 2.6.3.

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1.0

Introduction

1.0 Introduction

1.1 Project overview

Wallcliffe House is a boutique hotel development that seeks to rebuild and redevelop the historic and heritage-listed buildings on the site, as well as continued care and maintenance of the extensive curated gardens and natural foreshore edge, following extensive bushfire damage in 2011.

The new design proposes a hotel with a total of 25 keys overall and includes a restaurant, wellness facilities, activity spaces for guests, and service areas for staff.

The original Wallcliffe House and Dairy, destroyed in the 2011 bush fires, will be rebuilt to the extent that modern building codes permit.

1.2 Development description

The proposed development site currently consists of two fire damaged stone structures - Wallcliffe House and the dairy and a number of hardscaped gardens and water features. The integrity of the remaining fire-affected limestone material used to build the original house and dairy have been severely compromised, not only by the fires in 2011 but the elements of wind, rain etc. over the past decade. However, it is intended to reuse as much material as possible for non-structural use all around the site.

A road leads down into the property and runs towards a timber boatshed that survived the fires, where gardens and landscaped areas remain and over the past decade the property has been managed by a full-time gardener.

The intention is to rebuild on the same footprints as the house and dairy with new structures. All other new buildings will be constructed carefully and sensitively on and around existing trees; the remaining retaining walls of the gardens will also be kept.



Figure 1-1 Site Plan for the proposed Wallcliffe House development. Source: MJA Studio

1.2.1 Project location

The development application (DA) is to apply to Lot 101 (№ 752) Wallcliffe Road, Margaret River on DP No 49026 (the Land) and will include a hotel with guestrooms, cottages, food and beverage offerings, and ancillary buildings.

1.3 Purpose

The purpose of this report is to outline the key Ecological Sustainable Design (ESD) initiatives for the Wallcliffe House development, with a focus on the built form environment in support of the DA. A second objective is to assess these initiatives in relation to relevant policies from the Shire of Augusta Margaret River, which are described in the following section.

The Landsmith Collection is a diverse portfolio of hotel, tourism, agriculture, viticulture, and winemaking operations. Consistent with this type of business breadth, sustainability initiatives are implemented across each business and considered carefully in relation to the key sustainability impacts and opportunities, location, site, sector, and overall context for each project. For Wallcliffe House, the following minimum core sustainability objectives are considered at all stages of the development:

- **Energy** – enable reduced energy use, energy efficiency in design and operations, and use of renewable energy where possible, and overall reduced greenhouse gas emissions compared to a business-as-usual scenario.
- **Indoor environment quality** – design for adequate daylight and thermal conditions to support occupant comfort and select interior finishes that are low in volatile organic compounds.
- **Water** – design for reduced overall water use and adopt water efficient design in both buildings and landscapes.
- **Materials** – source materials with responsible and lower-carbon construction methods, and re-use or repurposing of materials from the site where possible.
- **Waste** – avoid and/or reduce waste generation and consumption of single-use products on the site, and a focus on recycling and resource recovery in both construction and operations.
- **Ecology and landscape** – protect and restore local habitats and ecosystems and encourage a connection to nature.
- **Social** – design indoor and outdoor spaces to be accessible to a wide range of guests (e.g., age, mobility) and cater for their varied needs.
- **Heritage** – respect and protect both the Aboriginal and European heritage elements of the site.
- **Local economy** – provide opportunities for local businesses to supply the project, as well as local employment opportunities in operation and the reduced carbon footprint that this can provide.
- **Transport** – promote use of low emission transport, by providing electric vehicle charging and shared electric bicycles for occupant use.

1.4 Alignment

Sustainability initiatives presented in the proposed design have been developed in close alignment with local government policies and initiatives.

A summary of the policies and initiatives considered is provided below.

1.4.1 Federal commitment to net zero

Commitments to reduce net carbon emissions to zero by 2050 are now legislated at a federal level within Australia. The specific targets in the relevant Bills are as follows:

- Emissions reduction target of 43% by 2030; and
- Net zero emissions by 2050.

1.4.2 Western Australian Climate Policy

The Western Australian Climate Policy was published in November 2020 by the Government of Western Australia. The Policy states a commitment and aspiration toward a low carbon future for the State.

The aspirational targets contained within the policy include reaching net zero by 2050. The policy outlines several key themes and their associated actions. Themes relevant to this development include the following.

- Transforming energy generation and use,
- Storing carbon and caring for our landscapes,
- Lower-carbon transport,
- Resilient cities and regions, and
- Government leadership.

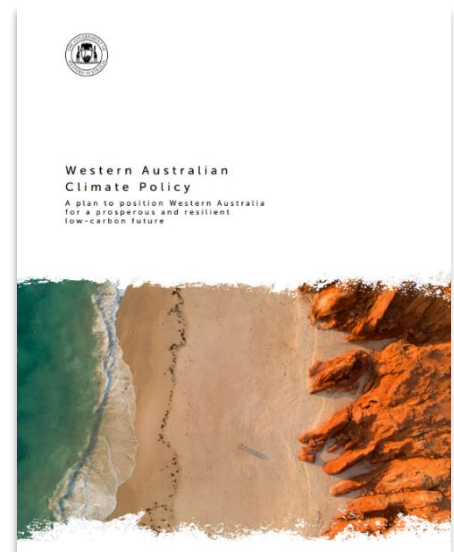


Figure 1-2 Front cover of the WA Climate Policy.
Source: State Government.

1.4.3 Local Planning Policy 20 – Sustainable Design

This policy sets out specific sustainable design standards for new developments within the Shire of Augusta Margaret River.

1.4.4 Local Planning Policy 23 – Renewable Energy Systems

The purpose of this policy is to provide guidance on the appropriate location, scale, and design of renewable energy systems. A renewable energy system for the purpose of this policy includes solar PV arrays and wind turbine installations and describes the Council's position on requirements for planning approval.

1.4.5 Local Planning Policy 27 – Heritage Places

The Shire of Augusta Margaret River contains a significant collection of heritage assets as identified within the Heritage Inventory and Heritage List. This Policy guides the protection and enhancement of heritage places under the Scheme. In particular, the Policy sets out measurements to ensure any development or redevelopment has due regard to the heritage significance of the place.

2.0

Sustainability initiatives

2.0 Sustainability initiatives

2.1 Embodied and operational energy

Buildings consume considerable natural resources in their demolition, construction, and operation. This section of the report will provide details about the potential impacts caused by the building and how these impacts are expected to be reduced when compared to typical buildings of this nature.

The proposed development will aim to reduce the total embodied carbon in the construction materials and aim to maximise the operational energy efficiency of the building's services.

2.1.1 Embodied energy

Embodied energy refers to the total amount of energy required to produce a product or system, and includes energy inputs for raw material extraction, processing, manufacturing, and distribution. In doing so, it considers both direct and indirect energy inputs and is often used as a holistic measure of environmental impact.

The development will consider embodied energy of materials and products used in construction during the design.

To reduce emissions, several initiatives are currently included or are being investigated for the design, as listed below.

- Reuse of existing materials present on site including limestone from fire damaged areas and other components of heritage facades and retaining walls, where safe and feasible to do so.
- Use of locally sourced and reclaimed timber, from known and sustainable sources. This is currently being sourced.
- Use of recycled aggregates in the road base. This is currently being sourced.
- Reduced Portland cement content products, where structurally feasible.



Figure 2-1 Image of the fire damaged Wallcliffe House.
Source: Wallcliffe House Blog

2.1.2 Operational energy efficiency

The proposed development has considered the importance of reducing operational energy. This will be achieved through several initiatives, as detailed below, and other opportunities will be firmed up during detailed design.

High performance building fabric

The development will aim to incorporate insulation and glazing materials that help maintain a stable internal temperature, reducing HVAC energy requirements.

The proposed development will specify double glazing for the majority of windows to prevent excessive summer heating, while allowing useful passive solar gains in winter.

A low glazing U-Value would minimise the conductive loss or gain of heat between the interior and exterior of the building.

Thermal bridging

Thermal bridging describes the transference of heat at a point through which it can bypass insulating layers of the structure. The presence of such points in a building's envelope can produce unwanted heat gains and losses.

The development will consider reducing the effects of thermal bridging through the use of roof spacer systems and thermal break strategies in the framing system.

Lighting

Energy efficient lighting fixtures are targeted for the development. Rather than designing to prescriptive target lux values, the lighting scheme will apply 'just enough' illumination to ensure a safe and enjoyable guest experience and support the functional requirements of staff, without unnecessary over illumination.

Lighting controls will also be in place help reduce energy consumption, through adaptive controls such as sensors, dimmers, and timers, providing energy savings and targeted illumination, rather than an 'always on' approach.

The external lighting scheme to the development will be one where ecological and functional needs co-exist. Lighting solutions will be designed to preserve and protect the environment by:

- minimising upward waste light and excessive sky glow, in accordance with International Dark Sky principles and AS/NZS 4282: Obtrusive Effects of Outdoor Lighting;
- considering the natural rhythms of fauna, both nocturnal and diurnal;
- nominating luminaires of an appropriate scale to minimize the visual impact on the natural landscape.

Luminaire specification will adhere to strict control of light output parameters, including excellent beam control and use of glare shields, to mitigate upward light spill (wasted light) and concentrate illumination to focus areas as required.

The colour temperature of light is an important factor in the preservation of the night sky and the natural rhythms of fauna. Light primarily at the blue end of the colour spectrum brightens the night sky more than any other colour of light.

Using colour temperatures of less than 2600K is proposed.

Airtightness

The buildings will be designed and constructed with consideration of airtightness. This refers to the ability of the building to seal in conditioned air and helps reduce operational energy associated with heating and cooling.

Shade structures

The proposed design includes eaves and other shade structures to areas with extensive glazing to reduce excessive heat gain through the façade.



Figure 2-2 Render of proposed shade structures. Source: MJA Studio.

Energy monitoring

Energy use on-site will also be closely monitored through sub-metering and a building management or monitoring system. Please refer to Section 2.9 for further detail on this.

Gas free development

The development will be designed to operate without the use of natural gas or LPG.

2.2 Indoor environment quality

The indoor environment quality (IEQ) within a building contributes significantly to user wellbeing and is therefore a critical part of any design. It comprises a range of factors, including but not limited to air quality, lighting, acoustics, and thermal comfort. Poor IEQ can result in a range of negative effects on human health and productivity, such as allergies, respiratory problems, fatigue, and decreased cognitive function.

The proposed development has considered the above and adopted several strategies to enhance indoor environment quality, as outlined in this section of the report.

2.2.1 Thermal comfort

The human body regulates its core temperature within a narrow range of 36 to 38 degrees. An indoor environment that does not support this range can affect mood, performance, and productivity. To control internal comfort and minimise excessive heat loss in winter and heat gains in summer, several strategies and performance metrics will be targeted for the proposed development, as listed below.

- Use of shade structures to reduce façade heat gains and create comfortable outdoor spaces.
- The façade will be well sealed to avoid draughts and air leakage for conditioned areas.
- High quality glazing with low-moderate solar heat gain properties to avoid excess heat gain.
- Use of light-coloured exterior finishes, where this does not contradict the heritage aesthetic of the site.

2.2.2 Daylight and views

Like thermal comfort, the human body feels best when receiving natural levels of daylight and high-quality views of the outdoor environment. Moreover, excessive light in the form of glare is detrimental to user wellbeing and should be mitigated.

To ensure these conditions are available to building occupants, several strategies are being considered to optimise daylight access and overall light quality.

- External shading structures or eaves for areas with extensive glazing.
- Selection of light fittings to ensure that lighting levels are adequate, and glare is limited.
- Large windows, with appropriate Visual Light Transmittance (VLT) to allow daylight entry (where this does not compromise solar heat gain coefficients required for energy efficiency).
- High quality landscaping throughout the development, enhancing external views.
- Provision of comfortable and inviting outdoor spaces for guests to encourage time spent viewing the surrounding river and bushland.



Figure 2-3 High quality views and comfortable outdoor spaces are included within the design. Source: MJA Studio.

2.2.3 Emissions and toxicity

Volatile organic compounds (VOCs) are gases emitted by a wide array of products, such as paint, cleaning products, and building materials and furnishings. VOCs encompass a variety of chemicals, some of which may have short- and long-term adverse health effects.

To create a healthy indoor environment for all building occupants, the proposed development will specify materials with low-VOC and low formaldehyde content to avoid contaminating the indoor air.

2.3 Water

In southwest Western Australia, rainfall and surface run-off amounts have decreased significantly since 1970 due to climate change. As a result, water resources within the region, including rivers, dams, and aquifers, are under pressure from over-extraction. Managing potable water demand within developments is essential to avoid this.

The proposed development has incorporated several design initiatives to reduce water consumption, which are outlined below. This includes use of a water sensitive design (WSD) approach for the project landscaping and other initiatives detailed in the following sections.

2.3.1 Fittings and fixtures

The development will target the installation of efficient water fixtures to reduce potable water demand during operations.

2.3.2 Water Sensitive Design

The proposed development has considered on-site water management and impacts to the nearby Margaret River estuary in the design.

The presence of the estuary near the site has prompted consideration from civil and landscape design teams. No direct discharge of any runoff to the River currently occurs, and this is not planned or contemplated for this development. The approach to stormwater management will continue to be developed as the design progresses and Water Sensitive Urban Design (WSUD) principles will be adhered to, with the following initiatives being given further consideration to reduce landscape water impacts.

- All pavement areas will be graded, shaped, and managed to dispose of runoff by sheet flow.
- Natural soaks or vegetated infiltration basins, where they are needed to avoid direct run off from the site.
- Retaining walls to reduce slope gradients thereby slowing surface run-off.
- In-ground infiltration basins (non-vegetated) present throughout the site.
- Incorporation of more endemic species which have naturally low water and fertiliser requirements.
- Drip irrigation used for all non-lawn areas.



Figure 2-4 Render of vegetated and landscaped areas. Source: MJA Studio

2.3.3 Wastewater treatment

An onsite, private package wastewater treatment plant, FujiClean, will be used. FujiClean (2023) is Australia's largest and most advanced single tank sewage treatment system, capable of producing recycled water of sufficient quality to be wholly disposed of on the site, has been identified to treat and dispose of wastewater generated by the proposed development.

The site will be served by means of a small network of gravity collection property sewers with collected wastewater pumped to an on-site package wastewater treatment plant. The onsite disposal system will demonstrate appropriate consideration of nutrients and human health.

Further details can be found in the "Engineering Aspects, Lot 101 Wallcliffe Road, Margaret River" report prepared by The Civil Group and "Water Management Plan, Lot 101 Wallcliffe Road, Margaret River", by Emerge Associates, October 2023, which support this Development Application.

2.3.4 eWater cleaning

eWater (2023) cleaning is a process that uses electricity to convert water into two separate streams, creating a cleaning and disinfecting solution. It's an eco-friendly alternative to traditional cleaning chemicals, utilising electrolysis to create effective cleansers. The eWater system replaces harsh chemicals with a sustainable on-site generator and refill solution for an unlimited supply of disinfectant, sanitiser and cleaner.



2.3.5 Metering and monitoring

The consumption of potable water will be monitored throughout the development by a series of meters and submeters. These will be integrated into part of a larger building management system. Please refer to Section 2.9 for further detail.

2.4 Materials and waste

The generation of municipal waste is a major sustainability challenge for any kind of hotel during operations and requires careful upfront planning and design. A reduction of both construction and operational waste is therefore an important target of Wallcliffe House, with specific initiatives detailed below. Waste management will be a critical ongoing consideration and additional initiatives will be added as the design progresses, and as different products, technologies and solutions become available.

2.4.1 Demolition waste

The proposed development has considered methods to ensure demolition waste is managed responsibly on-site. Most notably, this includes targeting a majority of demolition waste to be diverted from landfill and towards reuse and recycling, where possible. The diversion of construction waste from landfill helps to promote circular economy principles within the building industry.



Figure 2-5 Fire damaged materials, including limestone, will be salvaged, and reused where possible. Source: MJA Studio.

2.4.2 Operational waste

A Waste Management Plan has been prepared by Encycle to support the Development Application and presents the preferred approach for managing waste at Wallcliffe House. This is to firstly minimise the amount of waste generated on site, segregate recyclables and food organics at source and transfer waste in bins using a private vehicle which takes waste to an off-site facility operated by The Landsmith Collection.

Regardless of the final approach to waste management, there will be a strong focus on waste reduction and waste materials produced on-site during operation, with the following key operational waste strategies currently considered for the development.

- An eWater reticulated system for cleaning, which reduces both chemical and individual container use.
- Where possible, avoidance of single use plastic in hotel rooms, for example no products containing plastic microbeads, bulk-dispensing of personal care products and no plastic-wrapped amenities.

- All food and beverages will be served using reusable crockery, cups, glassware, and cutlery (avoiding the use of single use packaging).
- Design for waste storage areas to be sized and located to ensure safe access and sufficient room for all anticipated waste streams.
- Separate collection and storage for food and garden organics at source and transferring to an off-site facility operated by The Landsmith Collection.

2.5 Land use and ecology

Southwest Western Australia is a biodiversity hotspot, and developments within the region should seek to uphold onsite ecological values. High quality landscape design can protect and enhance this biodiversity, through strategies such as the selection of native and indigenous plant species and managing erosion on steep-sloping sites such as this one. Moreover, remnant plant communities that exist on any site should be managed and protected where possible.

The following section summarises the specific initiatives included at Wallcliffe House in relation to protecting and restoring local ecosystems, and ecology.

2.5.1 Foreshore improvement and protection

The site has already received additional riparian planting to support the health of the foreshore area and Margaret River estuary (Spring 2023). The Landsmith Collection will continue to maintain and infill to ensure a healthy riparian zone.

The development will continue to take a careful approach to protection of flora and fauna as part of its approach to planning and construction, as was the case with the relocation of the Osprey nest prior to the removal of unsafe buildings from the site in 2021.

2.5.2 Landscape design

Through strategic landscape design, including incorporating vegetated basins and native gardens, the development aims to support the ecological value of the existing landscape. The Landscape Architecture Report prepared by See Design for this Development Application details how the proposed landscape design will ensure that Wallcliffe House reflects a culturally and environmentally considerate landscape design. The approach includes incorporating endemic plant species to complement the existing distinct European approach (a focus since the property's original construction), and the expression of the Wadandi peoples' stories (with permission and in consultation with Traditional Custodians).

Edible gardens are also included in the current design, with the intention for produce from a kitchen garden to be used within the on-site restaurant. This will supplement sourcing from quality local producers, including other nearby Landsmith properties.



Figure 2-6 Render of proposed landscape design featuring extensive planting. Source: MJA Studio.

2.5.3 Climate change resilience

Southwest Western Australia has been heavily impacted by climate change already, and new developments must consider future risks associated with increased temperatures.

The development will consider the potential shocks and stresses associated with climate change and ensure the design can respond to and recover from these events. This includes responding to risk of sea level rise, given the proximity of the estuary. All buildings within the development, excluding the boat shed, are currently several metres above sea level.

2.5.4 Light pollution

Light pollution is an environmental issue especially for developments near natural areas. Excessive amounts of light being projected upwards is not only a waste of energy and resources but has also been proven to impact on local wildlife by affecting species' vision, mating, nesting, and built-in migration instincts.

Control of lighting will contribute to the development's sustainable approach, through adaptive controls such as sensors, dimmers, and timers, providing energy savings and targeted illumination, rather than an 'always on' approach.

2.6 Social

Sustainable building design is not just about environmental impacts; this approach also considers how to provide social value to building users, enhance the surrounding area, and respect and uphold local cultural values. The development will incorporate several design features that aim to provide social benefits. These strategies are detailed below.

Throughout all stages of development, the proposal will seek to support local suppliers, engage the regional economy, and employ a diverse range of people from the region.

2.6.1 Responsible procurement

Construction projects have impacts on people and environments far beyond the site to be developed. Decisions around where to source materials and what industries to support can have significant impacts. As a result, the proposed development will be conducting all procurement processes in a responsible manner, including the use of recycled or reclaimed materials, for example timber, which is also in keeping with the heritage values of the site.

A commitment to sustainable procurement will be continued through the detailed design process and ongoing planning stages, and continue through to the operational stage, for example in catering supplies and personal care products.

2.6.2 Heritage values

The proposed development seeks to retain the heritage values that are both present on the site in the form of heritage listing, but also as they relate to the European history of the wider Margaret River region. The Landsmith Collection is also highly aware and respectful of the property's Aboriginal heritage significance. The company will continue their consultation with Traditional Custodians on a range of design and planning elements, including those that relate to any sharing or celebrating Aboriginal heritage and culture.

The new Wallcliffe House will be rebuilt on the original building footprint, and as noted throughout this report, wherever possible materials will be repurposed or incorporated into suitable structures. Materials will also be selected to be durable and long-lasting wherever possible.

2.6.3 Connection to nature

Spending time in nature has been shown to have a positive impact on people's wellbeing and overall health. To support this, the development will provide comfortable and inviting outdoor spaces, high-quality views, a healthy and diverse riparian zone, and encourage engagement with the surrounding environment.

Wallcliffe House's location and proximity to a range of existing opportunities for further natural connection includes the Cape-to-Cape Track, the Indian Ocean, and the surrounds of the Leeuwin-Naturaliste National Park, visible from the site on the northern side of the river.



Figure 2-7 The design will be integrated with native and existing vegetation. Source: MJA Studio.

2.7 Transport

The proposed development has considered the importance of sustainable transport of guests both to and from their arrival point in Western Australia, and locally within Margaret River during their stay. It is recognised that where a local, lower-emission transport alternative can be offered, it is an opportunity to have a reduced impact. As a result, several alternate transport options are supported within the development, as detailed below.

2.7.1 Low carbon and electric vehicles

Electric vehicles are increasing in popularity, with future growth expected to increase the number of electric cars on the roads to between 125 and 220 million by 2030, according to the International Energy Agency (International Energy Agency, 2018).

To accommodate and encourage this growth, the proposed development will design for the inclusion of several EV bays and the required electrical infrastructure necessary to charge these vehicles.



Figure 2-8 Example of an electric vehicle charging station.

2.7.2 Cyclist and pedestrian facilities

There are several walking and cycling trails present in the Prevelly Area. Bicycle racks for staff and for guests, and electric bikes will be provided on-site for guest use, to support use of low-carbon forms of transport.

2.8 Facilities and operational

The effective management of a building and its services, during operation, plays a critical role in ensuring sustainability benefits occur post-construction. To support this level of management, the initial design must consider ways to inform facilities management personnel of building performance in a reliable and timely fashion.

This design has considered the above and several operational management strategies are targeted for the development, as described below.

2.8.1 Smart metering

Accurate collection of resource consumption rates is essential for measuring performance against sustainability targets and for identifying early indications of any resource inefficiencies. This is primarily achieved through smart energy and water meters that are integrated with a central data collection service.

For this development, metering will be included throughout the development and likely operate alongside a monitoring program, which together will enable high-quality data to be collected for all major uses. This will support the overall development aims of reducing water and energy consumption by helping to identify areas for improvement.

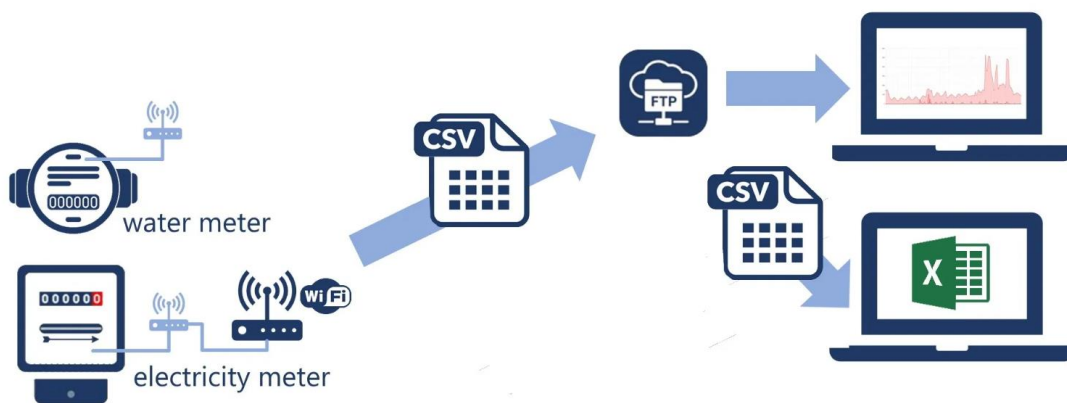


Figure 2-9 Schematic of how smart metering can work. Figure is example only. Source: Freva.

2.8.2 Green cleaning

Landscape maintenance and indoor cleaning procedures are frequently carried out within developments. If not managed correctly, these activities can introduce chemicals and toxic materials into the natural environment, as well as negatively affect building occupants.

To combat this, the proposed development will consider use of responsible cleaning products and maintenance practices that minimise pollution. This will be aided by the proposed inclusion of an eWater service on site.

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