

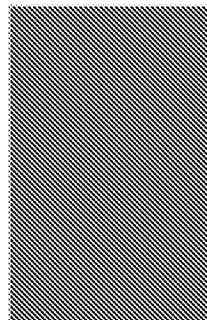
Proposed dwelling

at

86 Ancton Way
Bognor Regis
PO22 6JP

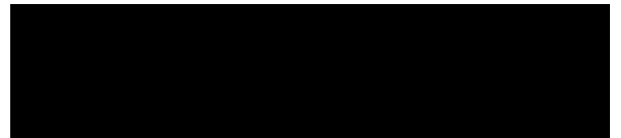
DESIGN & ACCESS STATEMENT

December 2024



HERBERT STUMPP
LIMITED

Civil & Structural Engineers
Construction Health & Safety
Party Wall Surveyors



Prepared by	Philip Pitman C Build E MCABE MCIHT MFPWS
Date	18 TH December 2024
Revisions	

Contents	Page
1. INTRODUCTION	1
2. PLANNING	3
2.1. Planning history	3
2.2. Planning Policy	3
2.3. National Planning Policy Framework	3
2.4. Arun Local Plan	4
2.5. Arun District Design Guide	4
2.6. Arun District Council Parking Standards	5
3. THE DEVELOPMENT IN THE CONTEXT OF PLANNING POLICY	6
3.1. Policy SD SP1 – Sustainable development	6
3.2. Policy H SP1 – Housing requirement	6
3.3. Policy H DM1 – Housing mix	7
3.4. Policy D SP1 – Design	7
3.5. Policy D DM1 – Aspects of form and design quality	9
3.6. Policy D DM2 – Internal space standards	12
3.7. Policy ECC SP1 – Adapting to climate change	12
3.8. Policy ECC DM1 – Renewable energy	13
3.9. Policy ENV SP1 – Natural environment	14
3.10. Policy ENV DM4 – Protection of trees	15
3.11. Policy ENV DM5 – Development and biodiversity	16
3.12. Policy W SP1 – Water	19
3.13. Policy W DM2 – Flood risk	20
3.14. Policy W DM3 – Sustainable urban drainage systems	21
4. PARKING STANDARDS AND CYCLES	22
5. MATERIALS & LANDSCAPING	26
5.1. Materials	26
5.2. Landscaping	26
6. OTHER ITEMS	27
6.1. Refuse storage	27
6.2. Accessibility	29
6.3. Boundary treatments and crime prevention	29
6.4. Foul drainage	30
7. SUMMARY	31

APPENDICES

- Appendix 1:** Renewables – Air source heat pump
- Appendix 2:** Renewables – PV Panels
- Appendix 3:** Sustainability – EV charging point
- Appendix 4:** Details of proposed roof tiles
- Appendix 5:** Details of proposed bricks
- Appendix 6:** Details of weatherboard cladding

1. INTRODUCTION

Herbert Stumpp Limited have been appointed to prepare this document in respect of a proposed replacement dwelling at 86 Ancton Way, Bognor Regis, PO22 6JP. The site occupies an area of approximately 240m² (0.024Ha). A site location plan is shown in *Figure 1.1*.

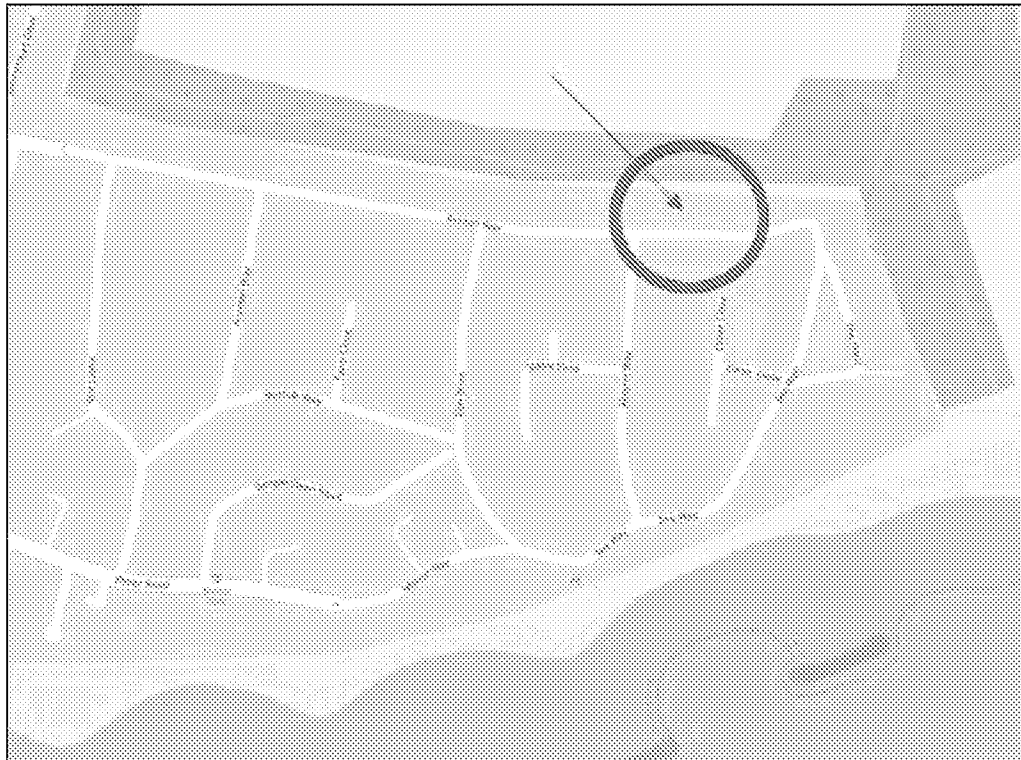


Figure 1.1: Site Location Plan © OpenStreetMap contributors

The site is currently occupied by a detached one-bedroom bungalow with a gross internal floor area of 48.9 sq.m. The proposal is to demolish the existing bungalow and to replace it with a detached two-storey, two-bedroom house with 2no. off street parking spaces.

Interrogation of historic mapping indicates that the existing bungalow was constructed at some point between 1910 and 1932. It is of poor construction when compared to current standards and is in need of complete renovation/redevelopment.

The majority of the older 1920's style bungalows in the vicinity have been redeveloped, and many have been replaced with similar two-storey detached houses.

The property immediately to the east, No. 88 Ancton Way, is a recently redeveloped two-storey detached four-bedroom house; and the property immediately to the west is a detached chalet-style property which was possibly constructed in the 1990s.

There is wooded land to the rear.

2. PLANNING

2.1 Planning History

There is no planning history available on the Arun District Council planning web site.

2.2 Planning Policy

The development proposals have been prepared in line with guidance contained in the following publications:

- National Planning Policy Framework (NPPF) December 2024
- Arun Local Plan 2011 – 2031 (April 2018)
- Arun District Design Guide 2024
- Arun District Council Parking Standards Supplementary Planning Document (SPD) January 2020

2.3 National Planning Policy Framework

The National Planning Policy Framework (NPPF) (December 2024), sets out the Government's planning policies for England and how these should be applied. The relevant paragraphs and sections of the NPPF are as follows:

- Paragraph 7 states that the purpose of the planning system is to contribute to the achievement of sustainable development.
- Paragraph 10 states that there is a presumption in favour of sustainable development.
- Section 12 deals with achieving well-designed places and states that the creation of high-quality buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities.
- Section 15 deals with conserving and enhancing the natural environment and states that planning policies and decisions should contribute to and enhance the natural and local environment.
- Paragraph 192 states that to protect and enhance biodiversity and geodiversity, plans should promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

2.4 Arun Local Plan

The Arun Local Plan 2011-2031 (April 2018) sets out policies to guide the development and use of land in Arun until 2031, and forms the basis on which planning applications will be determined in Arun. The relevant policies of the Local Plan are as follows:

- Policy SD SP1 – Sustainable development
- Policy H SP1 – Housing requirement
- Policy H DM1 – Housing mix
- Policy D SP1 – Design
- Policy D DM1 – Aspects of form and design quality
- Policy D DM2 – Internal space standards
- Policy ECC SP1 – Adapting to climate change
- Policy ECC DM1 – Renewable energy
- Policy ENV SP1 – Natural environment
- Policy ENV DM4 – Protection of trees
- Policy ENV DM5 – Development and biodiversity
- Policy W SP1 – Water
- Policy W DM2 – Flood risk
- Policy W DM3 – Sustainable urban drainage systems

2.5 Arun District Design Guide

The Arun District Design Guide 2024 provides detailed guidance that will raise design standards across the District, ensuring that only the highest quality development is delivered. The Guide aims to:

- address past and current challenges, providing for future needs;
- improve and enhance the distinctive character and qualities of Arun;
- create design principles and criteria that applications should meet and are easy to follow;
- set out the design process that should be followed in order to achieve high quality design, educating readers on best practice, design principles and terminology;
- provide an effective tool that can be used by a variety of people regardless of their familiarity with the application, master-planning and design processes; guiding applicants through a step-by-step process to ease assessment of proposed development; and
- set out ADC's expectations for future development, safeguarding the District's identity while shaping the future.

2.6 Arun District Council Parking Standards

This Supplementary Planning Document (SPD) (January 2020) outlines Arun District Council's approach to parking at new developments (residential/commercial).

3. DEVELOPMENT IN THE CONTEXT OF PLANNING POLICY

3.1 Policy SD SP1 – Sustainable development

Policy SD SP1

Sustainable development

When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will work pro-actively with applicants to jointly find solutions which mean that proposals can be approved wherever possible and to secure development that will contribute to the social, economic and environmental conditions south of the National Park through to the coast and throughout its settlements (both coastal and inland)

This presumption will not be applicable where development requires an Appropriate Assessment or where consideration of the need for one is being undertaken

Where possible all building materials will be obtained from a sustainable source, and where possible from local suppliers.

3.2 Policy H SP1 – Housing requirement

Policy H SP1

The Housing Requirement

Within the plan period 2011 – 2031 at least 20,000 new homes will be accommodated in the District

Arun's Local Plan strategic objective for Housing Delivery is to:

"Plan and deliver a range of housing mix and types in locations with good access to employment, services and facilities to meet the District's housing requirements and the needs of Arun's residents and communities both urban and rural, ensuring that issues of affordability and the provision of appropriate levels of affordable housing are addressed while supporting the creation of integrated communities."

The proposed dwelling will provide a two-bedroom house which will meet the demands of modern living whilst providing accommodation for additional persons.

3.3 Policy H DM1 – Housing mix

Policy H DM1

Housing mix

The Council will seek a mix of dwelling types and sizes, to include affordable housing units, that adhere to the latest Homes and Communities Agency⁽³⁷⁾ design guidance. For developments of 11 units or more the Council shall require a balanced mix of market and affordable dwelling sizes including family sized accommodation based on the most up to date SHMA recommendations.

The tenure mix for development schemes shall be negotiated on a case by case basis taking any necessary viability considerations into account. Developers shall have regard to the most up to date version of the SHMA.

The Council will particularly encourage the development of self-build homes on appropriately sized, serviced sites in the first instance or on appropriately sized sites that are capable of being serviced. Such sites can be provided either as part of a development scheme or on an individual basis.

Over the Plan period a proportion of the housing provided should be of a type that meet the needs of older people, as identified in the most recent SHMA. Such housing could be provided as part of the general mix of one and two bedroomed homes but should be designed to meet the needs of older people.

The residential properties in the immediate area vary in style and size. The proposed dwelling will contribute to this mix and will provide a modest two-bedroom house.

3.4 Policy D SP1 – Design

Policy D SP1

Design

All development proposals should seek to make efficient use of land but reflect the characteristics of the site and local area in their layout, landscaping, density, mix, scale, massing, character, materials, finish and architectural details. Development proposals should have been derived from a thorough site analysis and context appraisal, adherence to objectives informing sustainable design (inclusivity, adaptability, security, attractiveness, usability, health and wellbeing, climate change mitigation and habitats), and the influence these objectives have on the form of the development.

With major developments (as defined in the GDPO 1995 (as amended)⁽⁴¹⁾) or allocated sites in the Development Plan, in addition to a Design and Access Statement, a context appraisal, context plan and analysis of the site will also be required.

The proposals have been developed to make the best possible use of the available land by reflecting or improving on the character of the site and its surrounding areas. The existing bungalow is of very poor construction and is of no particular architectural merit.

and is of incongruent form and profile. The proposed dwelling will blend well with the adjacent properties and the general neighbourhood and is of similar style and form to many other two-storey detached houses in the road and in the locality which utilise a typical duo-pitch roof.

The proposed dwelling is of a similar size and style to other buildings in the area and has been carefully designed to suit its location. The materials to be used in its construction are traditional; being brick, render, timber-effect cladding and reconstituted or reclaimed slates. In respect of parking, bin storage and recycling requirements, the site is extensive and there is no shortage of space for the parking of vehicles, and the site is already well-served with bin storage and recycling and there will be no additional demand. The proposed dwelling thus satisfies the relevant requirements of Policy EN4.

3.5 Policy D DM1 – Aspects of form and design quality

Policy D DM1

Aspects of form and design quality

When considering any application for development the Council will have regard to the following aspects:

1. Character

Make the best possible use of the available land by reflecting or improving upon the character of the site and the surrounding area, in terms of its scale, massing, aspect, siting, layout, density, building materials (colour, texture), landscaping, and design features.

2. Appearance/attractiveness

Demonstrate a high standard of architectural principles, use of building materials, craftsmanship and hard and soft landscaping to reflect the local area.

3. Impact

Have minimal impact to users and occupiers of nearby property and land. For example, by avoiding significant loss of sunlight, privacy and outlook and unacceptable noise and disturbance.

4. Innovation

Raise standards of design by embracing appropriate innovative design, new technologies and construction techniques, where a development proposal has the potential to do so.

5. Adaptability

Acknowledge diversity and difference. Buildings and places should be flexible to future adaptation, including the changing needs of occupants (for example ageing users, family circumstances), changes in wider work and social trends, and be able to accommodate potential differing uses of public space.

6. Crime prevention

Provide security measures that make places feel safer. This shall be achieved through natural surveillance and human presence by locating buildings and play areas along public routes and spaces, and making a clear division between private and public land to foster a mutual protection through territorial belonging. With respect to crime prevention, regard shall be had in particular to the document 'Secured by Design' and the 'Safer Places - The Planning System and Crime Prevention'.

7. Trees and woodland

All new development will be expected to incorporate existing and new tree planting as an integral part of development proposals.

8. Solar gain

Within the constraints of the site and local context development proposals should, maximise sunlight and passive solar energy. Ideally development should be positioned (within a 15-20 degree margin) broadly south, with streets having an east-west pattern.

9. Public realm

Provide or enhance layouts, streets and public spaces so that they are attractive, socially inclusive, safe and secure, adaptable, with appropriate provision for planting, street furniture, and facilities for bicycle storage to create a place with attractive and successful outdoor areas.

10. Layout - movement

Utilise existing networks or improve access via delivery of a variety of integrated networks, to and from residential areas, commercial zones, open spaces, facilities and public transport. Development schemes should carefully consider walking and cycling as an integral part of the overall design concept.

11. Layout - legibility

Deliver or contribute to the ease of navigation within a new or existing development scheme through use of focal points (landmarks, gateways, vistas, corner buildings, active edges, existing topography), and/or a variety of detail within the public realm (sculpture, planting, street furniture, building materials, building detail, signage).

12. Public art

Public Art should be incorporated into schemes where there is capacity to do so. Public art can encompass a wide variety of elements to include art as part of the design of buildings and developments, landscape and planting, street furniture, signage and lighting in the public realm which is accessible to all. This can also result in physical, permanent artworks and sculptures.

13. Density

The density of new housing will make efficient use of land while providing a mix of dwelling types and maintaining character and local distinctiveness. Higher densities will be more appropriate in the most accessible locations. Proposals should take into account the density of the site and its surroundings. The density of large sites should be varied to guard against uniformity.

14. Scale

The scale of development should keep within the general confines of the overall character of a locality unless it can be demonstrated that the contrary would bring a substantial visual improvement.

15. Aspects of form and design quality

Development should also comply with the Arun District Council Design Guide.

The best use of the available land is to create a two-storey house, retaining a footprint similar to the existing bungalow and thus avoiding an over development of the site whilst retaining good amenity space. The footprint of the existing bungalow is approximately 68 sq.m, and the proposed replacement house has a footprint of 70 sq.m, which is a necessary but modest increase.

A street scene drawing has been included in the proposals to show the form and scale of the proposed development in relation to the neighbouring properties.

The ridge height of the proposed dwelling will be lower than the immediately adjacent properties, Nos. 84 & 88 Ancton Way.

The western flank wall (adjacent to No.84 Ancton Way) of the existing bungalow is located on the boundary of the two properties, and the eastern side wall of the existing bungalow is located approximately 100mm off the boundary wall between No. 86 & 88 Ancton Way. The western flank wall of the proposed dwelling will be approximately 300mm away from the boundary with No. 84 Ancton Way, and the rear single-storey section of the proposed dwelling will step in by approximately 0.7m. The eastern flank wall of the proposed dwelling will remain in a similar position to the existing situation and the rear single-storey section of the proposed dwelling will step in by approximately 0.7m, mirroring the opposite, western side.

The proposed new house roof eaves height has been kept to a minimum by including a sloping vaulted ceiling at first floor, with the internal spring point at 1.969m above finished first floor level. The roof pitch will be 25 degrees and this ensures that the new ridge height does not exceed the height of the existing properties on each side.

The proposed dwelling will maintain the general building frontage line along the Ancton Way and the neighbouring houses. The two-storey element of the house will be 9.775m in depth, with the single-storey rear projection at an additional 4.185m depth. The rear ground floor only element is set central to the proposed dwelling and is away from each of the east and west boundaries, being approximately 0.7m and 1.1m respectively.

The eastern side wall of No.84 is approximately 1.1m away from the boundary with the proposed dwelling; and the western side wall of No.88 is approximately 0.6m away from the boundary with the proposed dwelling.

Side facing windows have been avoided where possible. Without them, however, the quality of natural light entering the ground floor would be extremely poor, and high-level clerestory windows have been provided at ground floor level. These windows avoid overlooking and privacy issues and also comply with Building Regulations Part B (protected areas – limitations for openings in walls close to boundaries).

A single rooflight has been provided on each side of the roof of the rear single-storey projection, and a rooflight has also been provided in the first-floor bathroom.

A small proprietary cycle shed will be incorporated adjacent to the back of the house.

3.6 Policy D DM2 — Internal space standards

Policy D DM2

Internal space standards

The planning authority will require internal spaces to be an appropriate size (having regard to the exceptions that may apply as referred to in paragraph 13.3.4) to meet the requirements of all occupants and their changing needs. Nationally Described Space Standards will provide guidance.

The dwelling has been designed to meet the Nationally Described Space Standards for a two bed 4 person dwelling of two storeys.

3.7 Policy ECC SP1 – Adapting to climate change

Policy ECC SP1

Adapting to climate change

The Council will support development which is located and appropriately designed to adapt to impacts arising from climate change such as the increased probability of tidal and fluvial flooding, water stress, health impacts as a result of extreme temperatures and a decline in the quality of habitats and richness of biodiversity.

In order to achieve this, development must be designed to take account of the following issues:

- a. Location (in relation to flood risk and vulnerability to coastal erosion);
- b. Water efficiency;
- c. Shade, cooling, ventilation, solar gain;
- d. Connectivity to the green infrastructure network;
- e. Layout and massing;
- f. Resilience of buildings and building materials to extreme weather events; and
- g. Capacity of drainage systems and incorporation of Sustainable urban Drainage Systems (SuDS)

The existing bungalow is not energy efficient. It suffers extreme heat loss during winter leading to high running costs and unsustainable energy demands, and uncontrolled solar gains during the summer.

The proposed dwelling will be constructed to comply with the strict requirements of the current Building Regulations Part L and the intention is for the proposed dwelling to meet the requirements of the 'lean, clean and green' energy hierarchy by the installation of energy efficient appliances, the installation of doors and windows to comply with the

relevant requirements of Part L in order to reduce heat losses and solar gains and also to provide adequate natural ventilation.

Flood risk, water efficiency, resilience and SuDS are discussed elsewhere within this document.

3.8 Policy ECC DM1 – Renewable energy

Policy ECC DM1

Renewable energy

The Council will support renewable energy development subject to the criteria in this Policy. Schemes will be expected to contribute to the social, economic and environmental development and overall regeneration of the District.

Within areas of protected landscapes, areas or buildings, development should generally be small scale or community based.

The Council will support proposals for appropriately located renewable energy development, and their ancillary development where they meet the following criteria:

- a. The proposal is located and designed to minimise adverse impacts to landscape, habitats, the historic environment and residential amenity including visual, noise and odour impacts;
- b. The location and design of proposals will need to take account of the Council's landscape assessment and landscape sensitivity studies (or successor documents) and proposals for large scale renewable energy projects will need to be supported by a zone of theoretical visibility and viewpoint assessment;
- c. Priority should be given to proposals that integrate with existing or new development where appropriate to do so having regard to (a); and
- d. All proposals will need to demonstrate a suitable connection to the electricity distribution network, or appropriate energy storage facility, and provide evidence to demonstrate that the connection will not result in unacceptable impacts upon the landscape, natural and historic environment or visual and residential amenity.

Heating for the proposed dwelling will be provided by a renewable low carbon energy system comprising a Mitsubishi Ecodan R32 6kW air source heat pump, a Mitsubishi Ecodan R32 FTC6 water storage cylinder, and a Mitsubishi FTC6 controller. The system has an A+++ rating and will be supplied, installed and commissioned by a recognised and qualified specialist. Data sheets for the system are included in **Appendix 1**.

PV panels will also be provided. The system will comprise 12 solar panel modules of total 22m² area & 7kW of battery storage capacity. The modules will be located in 2 rows of 3 panels on each of the side elevation roof slopes (east & west facing). The specified system includes a hybrid inverter which combines both PV & battery storage utilising 2no. Pylontech batteries. Using the standard calculation method, taking account of the

number of photovoltaic solar panels and their positioning on the east and west roof slopes, a yield of 4000kW is expected. The system specification provides a good quality, high yield combination with good battery storage. It is planned to utilise an Octopus Energy tariff specifically designed for energy saving combinations where the EV car can be charged at night, firstly utilising any additional solar energy, stored in the batteries during the day, and then reverting to the Octopus EV off peak rate. The technology to divert surplus energy and sell back to grid is included in the system. Details of the PV panels are included in **Appendix 2**.

In addition to the renewable low carbon systems proposed, the house construction will include a high standard of insulation and energy efficient glass window/doors which will be above and beyond that required by the current standards indicated in the approved document of the building regulations.

All thermal and energy saving provisions will be fully detailed, proved and justified by SAP calculations, as part of the full Building Regulations approval process.

3.9 Policy ENV SP1 – Natural environment

Policy ENV SP1

Natural Environment

Arun District Council will encourage and promote the preservation, restoration and enhancement of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species. In relation to designated sites, development will be permitted where it protects sites listed in Tables 17.1-17.7 that are recognised for the species and habitats contained within them.

The existing bungalow has a fully paved and impermeable frontage, and the rear garden consists of a grassed area and boundary hedging. There is a large outbuilding at the rear of the plot. Neighbouring houses have similar paved/planted rear gardens. Immediately to the rear (north) of the property is a densely wooded copse which is approximately 16m deep and serves as a buffer between the properties and the arable fields beyond. This provides an extensive biodiverse habitat and nature corridor. Architectural planting will be added each side of the rear outbuilding. Measures to improve biodiversity will be incorporated, including the creation of hedgehog holes to the fence and the installation of two bird boxes, one placed on each side of the outbuilding.

3.10 Policy ENV DM4 – Protection of trees

Policy ENV DM4

Protection of trees

Development will be permitted where it can be demonstrated that trees protected by a Tree Preservation Order(s), (TPO) identified as Ancient Woodland, in a Conservation Area or contributing to local amenity, will not be damaged or destroyed now and as they reach maturity, unless development:

- a. Would result in the removal of one or more trees in the interests of good arboricultural practice. This shall be demonstrated by the developer following the advice of a suitably qualified person which shall be guided by BS 5837 (2012). Details of any advice received having regard to BS 5837 (2012) shall be submitted, in writing, as part of a planning application; or
- b. Would enhance the survival and growth prospects of other protected trees;
- c. The benefits of the proposed development in a particular location outweigh the loss of trees or woodland, especially ancient woodland.

Where planning permission is granted in any of the above instances, conditions shall be used to ensure that, for any trees which are removed as part of a development, at least an equivalent number of a similar species and age (where practical) are planted on the proposed development site. Sufficient space for replacement trees to mature without causing future nuisance or damage shall be provided. The planting of new trees shall form an integral part of the design of any development scheme.

Proper provision must be made for the protection and management of trees or areas of woodland on-site when undertaking development. A management plan shall be provided as part of a planning application in accordance with BS 5837 (2012) in order to ensure that trees are adequately protected during development and appropriately maintained in the future. Conditions for the continued protection of trees on sites shall be included in any planning permission given.

Where there are existing trees on or adjacent to a development site, developers shall be required to provide:

- d. Land and tree surveys
- e. A tree constraints plan
- f. An arboricultural impact assessment to include a tree protection plan and arboricultural method statement

These will ensure that development is planned to take a comprehensive view of tree issues at an early stage in the design process and that development works do not have a negative impact on existing trees.

The proposed dwelling is far enough away from the copse for it to have little to no negative effects on the trees either during construction or during occupation/use.

3.11 Policy ENV DM5 – Development and biodiversity

Policy ENV DM5

Development and biodiversity

Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.

Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person.

All developments shall have regard to Natural England's standing advice for protected species.

Measures will be incorporated into the proposed development in order to secure biodiversity net gain (BNG). A Natural England Small Sites Metric has been completed to demonstrate how BNG will be achieved and is a separate document included with the application.

All existing hardstandings and impermeable surfaces will be removed and will be reinstated with permeable surfaces, including permeable block paving and open jointed paving for the patio area. The existing grassed area will be re-turfed, and the existing planting alongside the boundary walls will be tidied and supplemented with new plants.

There is a wooded copse area immediately abutting the rear of the property which around the arable field and beyond. The wooded copse is dense and unkept with large mature trees. There is already extensive planting to the side boundaries, however the quantity and quality of this hedging will be improved and the overall soft landscaping/hedging areas will be increased by replacing the numerous sheds with grassed areas/planting/hedging. Additional animal/bird incentives are included. The net gain to the Biodiversity will be improved over existing and well above the level on other properties in the vicinity.

2nr RSPB Classic Bird Boxes will be provided, fixed to the side of the existing outbuilding. Details of these boxes are on the following page.



Side panel opens
for cleaning

Product description

Simply styled, sturdily-made timber nest box. Like all our nest boxes, it's made with thick, FSC® certified timber for insulation with a roof designed to prevent rain water running down the inside of the box. The 32mm entrance hole makes it suitable for many bird species.

Side opens for easy end-of-season cleaning. UK made.

Installing your nestbox

For secure and stable fixing, there are two hanging tabs attached to the back of the nestbox, one at the top and one at the bottom. These tabs make it quick and easy to securely fix it in place. Screws not supplied.

With a wide range of expertly-designed bird houses to choose from, you can easily provide a safe, welcoming home in your garden for different wild birds. RSPB Shop also provides advice on where to locate your bird house. Help us give nature a home!

Product ID: B401639

Enjoyed by

- Coal tit
- Blue tit
- Great tit
- House sparrow

Advice

Which size nestbox hole for which bird?

25mm - blue tit, coal tit, marsh tit

32mm - great tit, tree sparrow, pied flycatcher, house sparrow, nuthatch, lesser spotted woodpecker.

32mm entry holes can, if you wish, be reduced to 25mm using a nest box plate (R0110).

RSPB nest boxes are made with thick timber and will survive for many years, even without the use of preservatives.

If you do want to protect your nest box further, use a water-based preservative (preferably one that complies with standard EN71 part 3 as safe for children's toys). Such paint/preservative types are clearly marked on the container, and are available from DIY stores and hardware shops.

Preservatives should only be applied to the outside of the box. Apply in the winter, when there is a low likelihood of occupancy. This will allow time for any remaining volatile components to evaporate.

For more information about siting a nest box please see the Advice section of the main RSPB website.

Specification

Width 20cm | Depth 10cm | Height 22cm | 32mm entry hole



3.12 Policy W SP1 – Water

Policy W SP1

Water

Arun District Council will encourage water efficiency measures in order to protect the District's water resources and enhance the quality of the water environment which supports a range of habitats and ecosystems. Development will be encouraged to make active use of surface water as a design feature and permitted where it identifies measures to improve and enhance waterbodies, coastal habitats or provides additional flood relief.

The Council will also support development that:

- a. is appropriately located, taking account of flood risk and promotes the incorporation of appropriate mitigation measures into new development, particularly Sustainable Drainage Systems that reduces the creation and flow of surface water and improves water quality;
- b. reduces the risk to homes and places of work from flooding whilst increasing biodiversity;
- c. delivers a range of community benefits including enhancing the quality of life and providing greater resistance to the impact of climate change.

Appliances and water fittings will be specified to ensure that the target water consumption does not exceed 110 litres/head/day.

3.13 Policy W DM2 – Flood risk

Policy W DM2

Flood risk

Development in areas at risk from flooding, identified on the latest Environment Agency flood risk maps and the Council's Strategic Flood Risk Assessment (SFRA) , will only be permitted where all of the following criteria have been satisfied:

- The sequential test in accordance with the National Planning Policy Guidance has been met.
- A site specific Flood Risk Assessment demonstrates that the development will be safe, including access and egress, without increasing flood risk elsewhere and reduce flood risk overall.
- The sustainability benefits to the wider community are clearly identified.
- The scheme identifies adaptation and mitigation measures.
- Appropriate flood warning and evacuation plans are in place; and
- New site drainage systems are designed to take account of events which exceed the normal design standard i.e. consideration of flood flow routing and utilising temporary storage areas.

The reports prepared as part of the criteria above must take into account contingency allowances, taking climate change into account as set out in Flood Risk Assessments climate change allowances section of the NPPG.

In locations where strategic flood defence or resilient and resistant construction measures are necessary within the site itself, proposals will be required to demonstrate how measures have been incorporated as an intrinsic part of the scheme in a manner which is compatible with the latest Strategic Flood Risk Assessment.

All development proposals must take account of relevant Surface Water Management Plans, Catchment Flood Management Plans and related Flood Defence Plans and strategies such as the Lower Tidal River Arun Strategy. The council may require financial contributions from development on sites where measures to address flood risk or to improve the environmental quality of watercourses have been identified by these Plans and Strategies.

Flood risk has been assessed and a Flood Risk Assessment is included as a separate document with the application. All recommendations of that flood risk assessment will be incorporated into the scheme. The proposals include for the proposed ground floor finished internal floor level to be set at 300mm above external ground level.

3.14 Policy W DM3 – Sustainable urban drainage systems

Policy W DM3

Sustainable Urban Drainage Systems

To increase the levels of water capture and storage and improve water quality, all development must identify opportunities to incorporate a range of Sustainable Urban Drainage Systems (SUDS), appropriate to the size of development, at an early stage of the design process.

Proposals for both major and minor development proposals must incorporate SUDS within the private areas of the development in order to provide source control features to the overall SUDS design. These features include:

- Green roofs
- Permeable driveways and parking
- Soakaways
- Water harvesting and storage features including water butts.

Proposals for major development must also integrate SUDS within public open spaces and roads, reflecting discussion with the appropriate bodies. SUDS must therefore be integrated into the overall design of a development and must:

- a. Contribute positively to the appearance of the area, integrating access to allow maintenance of existing watercourses and the system.
- b. Effectively manage water (including its quality)
- c. Accommodate and enhance biodiversity by making connections to existing Green infrastructure assets and
- d. Provide amenity for local residents (ensuring a safe environment)
- e. Retain the existing drainage network of the site and the wider area.
- f. Be maintained in perpetuity, supported through a Maintenance and Management Plan/Regime, including its financing, agreed with the Local Planning Authority

In order to ensure that SUDS discharge water from the development at the same or lesser rate, as prior to construction, developers must:

- f. Follow the hierarchy of preference for different types of surface water drainage disposal systems as set out in Approved Document H of the Building Regulations and the SUDS manual produced by CIRIA.
- g. Undertake up to six months groundwater monitoring within the winter period.
- h. Undertake winter percolation testing in accordance with BRE365.
- i. The proposed drainage system must be designed to ensure that there is no flooding on a 1 in 30 year storm event.
- j. The design must also take account of the 1 in 100 year storm event plus 30% allowance for climate change, on stored volumes, to ensure that there is no flooding of properties or the public highway or inundation of the foul sewerage system. Any excess flows must be contained within the site boundary, and within designated storage areas.

All surface water will be routed first to water butts and will then discharge into the ground via drainage blankets. A surface water drainage scheme has been for the proposed development has been prepared and is included in a separate document with the application.

4. PARKING STANDARDS & CYCLES

Policy requires a two-bedroom house to have 2no. off road car parking spaces.

Ancton Way is a quiet private road without a dedicated pedestrian footway. The proposals for vehicle crossover/verge treatment and materials will be subject to separate application and approval from the owners of the Elmer Estate private roads and verge. The verge along this stretch of road has differing treatments including, concrete, block paving, gravel and grass and cannot easily be used by pedestrians. The existing frontage is wholly impermeable and is of rough concrete for the full width of the plot and from the front elevation to kerbside

The frontage (parking spaces and verge treatment) of No.88 comprises gravel with small soft-landscaped areas.

The frontage (parking spaces and verge treatment) of No.84 comprises block paving with a small central soft-landscaped area.

The proposed dwelling will provide 2 no. parking spaces, each 2.5m x 5.0m, at the front of the property. The surfacing will be gravel as No.88 Ancton Way to the full width of the frontage. One of the parking spaces will include an electrical vehicle (EV) charging point and additional cables will be installed at the same time to support the installation of a second EV charge point. Details of the EV charging point are included in **Appendix 3**.

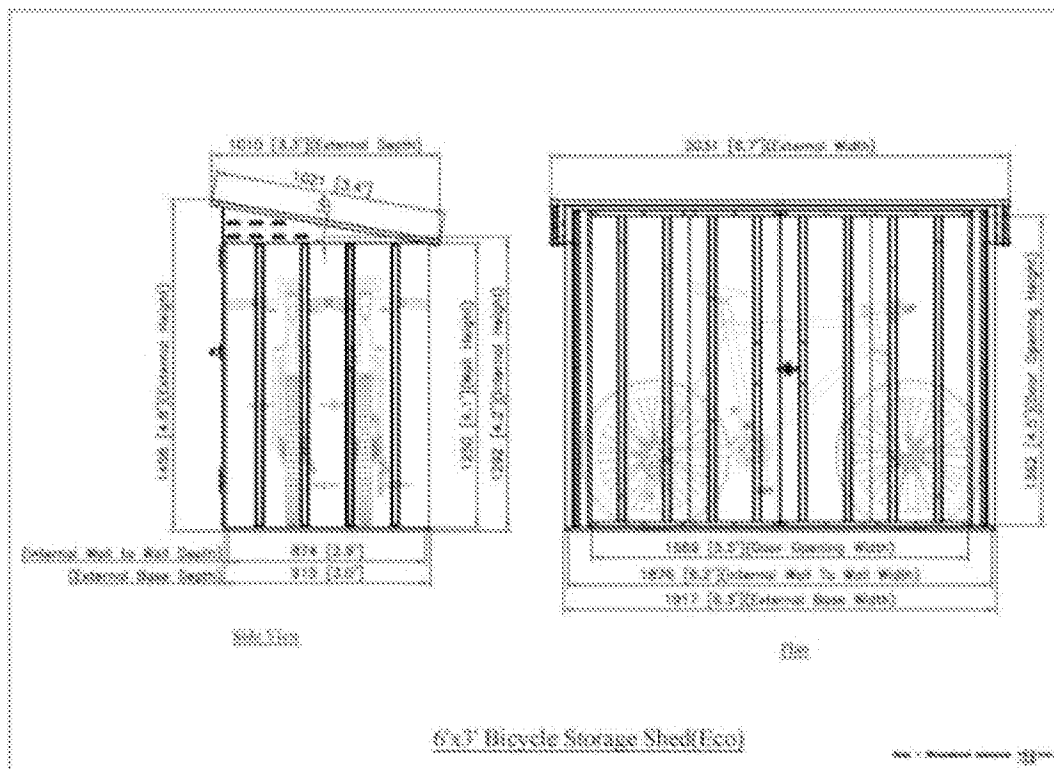
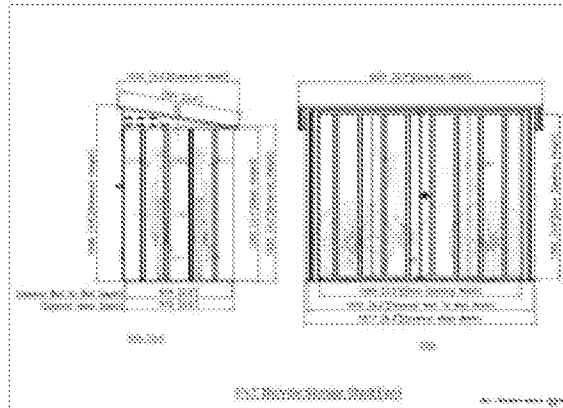
A cycle store for two cycles will be provided at the front of the property. Details of the proposed cycle store are shown on the following pages.

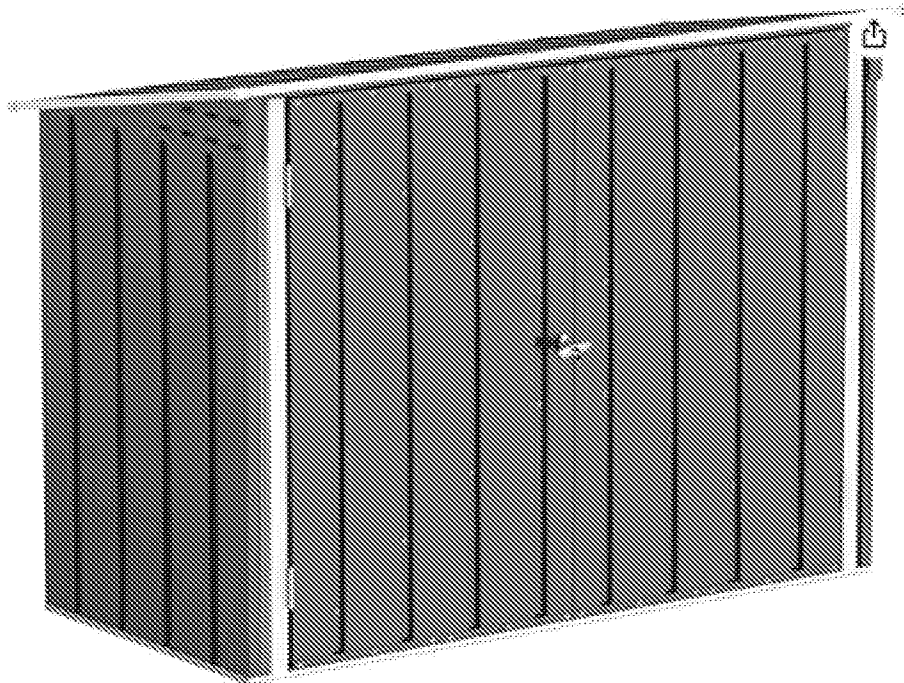
Description

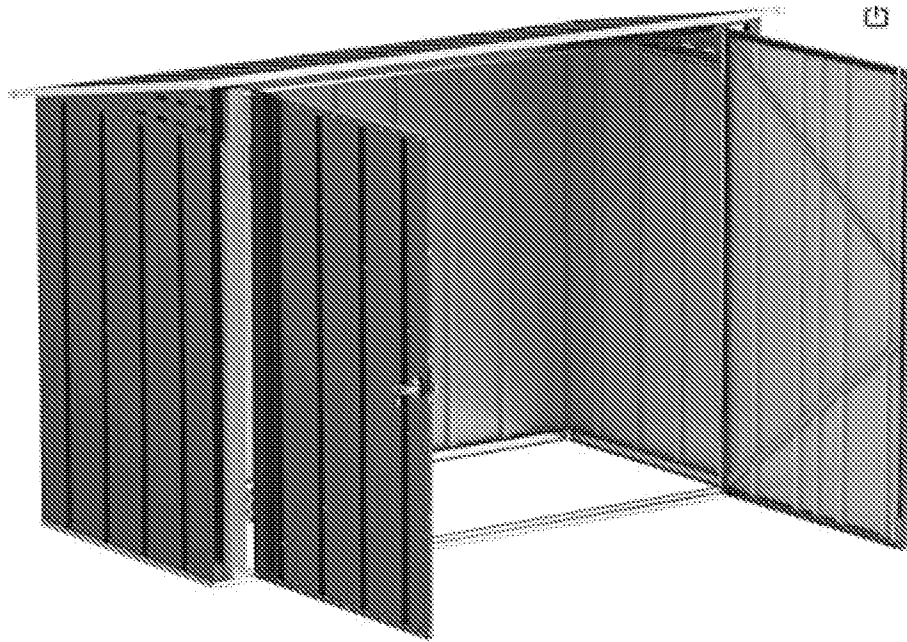
The Duramax 6' x 7' Metal Bicycle Store – EcoShield is a 6' x 7' metal bicycle shed, providing secure outdoor storage of up to 2 adult bicycles and cycling equipment. It is made from metal offering excellent security for storing of your mountain bikes, road bikes and general cycling equipment.

The reinforced roof and steel metal base on each corner add strength and security for your peace of mind. The metal storage unit will provide you with a safe place to store your bikes that is weather proof and includes a 3 point lock for added security for peace of mind. The panels on this store are 20% thicker than other conventional metal sheds for added protection.

All Duramax Eco Shield sheds must be anchored to a firm foundation to protect against wind damage.
A floor and/or foundation kit is not included with this shed.







5. MATERIALS AND LANDSCAPING

5.1 Materials

The following materials are proposed:

Roof:

Fibre cement slates, 600x300mm, colour blue/black. Details of the slates are included in **Appendix 4**.

Walls:

White render from DPC level up to first floor level, with brickwork between underside of render and ground level. Brickwork will be Vandersanden Ledbury stock facing brick (colour multi buff/yellow). Details of the bricks are included in **Appendix 5**.

Horizontal fibre-cement weatherboard cladding will be provided above the render, i.e. at first floor level. Cladding will be Cedral click grey woodgrain effect 186x12 horizontal boards. Details of the weatherboard cladding are included in **Appendix 6**.

Windows & doors:

Aluminium framed, thermally-broken windows and doors with high energy efficient rated sealed glazed units utilising low-e glass.

Car parking & verge:

Concrete block paving (permeable surface)

5.2 Landscaping

The rear garden area will be fully landscaped with shrub planting along the boundaries (much of existing to be retained) and a new permeably surfaced patio will be laid. The existing trees to the rear of the property will not be removed or damaged, they are far enough away from the proposed development to be safe from harm or construction traffic loadings over the roots. A proprietary lockable bicycle storage shed (2 cycle), will be provided as part of the completed landscaping. The proposed landscaping is shown on Drawing 001 included with the application.

6. OTHER ITEMS

6.1 Refuse storage

240 litres capacity Euro Class wheeled bins will be provided and stored in an enclosure located at the front of the property. There will be a 240L bin for general waste and a similar 240L bin (differing colour) for recycling waste. The wheeled bins will be approximately 8m wheeling distance from the edge of road, which is less than the maximum prescribed distance of 50m. The bins will be pulled to the kerbside on the day of collection.

The specification and details of the proposed bin store are as follows:

- Handmade in Lancashire, UK
- Pressure Treated Timber
- Enclosed Unit
- 50 x 50mm Framing
- Automatic Bin Lid Lifting Feature
- 2 Floor Bar Included
- Pallet Courier, Max 7.5T vehicle size. Item will arrive flat packed on a pallet

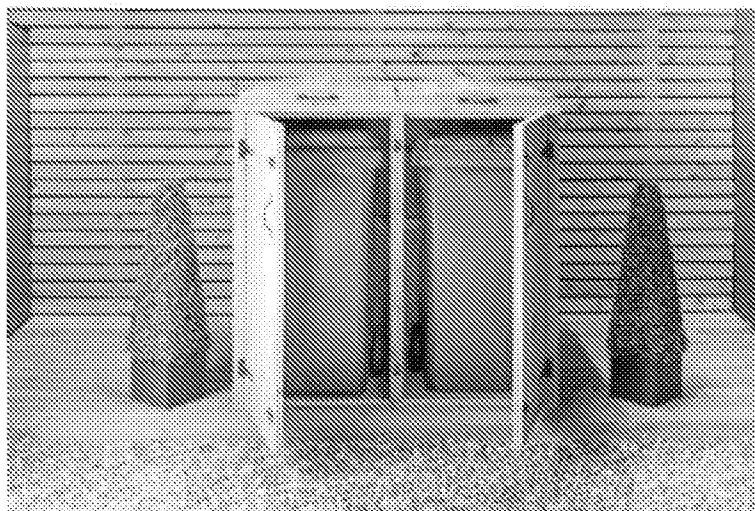
Specifications

- Dimensions: H:1200.0 x W:1225.0 x D:640.0 cm
- Colour: Multi
- Guarantee:12 Months
- Material: Timber
- Model Number: DC-140-TGV

Images of the bin store are on the following page.



PROPOSED BIN STORE



PROPOSED BIN STORE



PROPOSED BIN STORE

6.2 Accessibility

The house will include accessible width doors/halls with a large ground floor cloakroom. The front entrance door will have ramped and level access.

6.3 Boundary treatments & crime prevention

The west side boundary fencing will be replaced where required, and any gaps infilled with new timber fencing to match. The fence is approximately 1.9m high to the rear and 1.2m high at the front.

On the east side, the existing wall to the rear will remain. The wall is approximately 2.0m high. To the front the existing 1.2m high timber fence will remain.

All windows and doors will be fitted with good quality locks. The house will be alarmed and a Ring type door entry/rear CCTV camera system will further improve crime prevention measures.

6.4 Foul Drainage

New foul drainage connections will be connected back into the existing foul drainage system. There is an existing foul drain which discharges into a foul drain located in Ancton Way.

A new foul manhole will be constructed within the curtilage of the property on the line of the existing foul drain and all foul drainage from the property will connect into this new manhole. The manhole will be fitted with a sealed screw down cover. No surface water drains will connect or overflow into the foul system.

7. SUMMARY

- 7.1 This document demonstrates how the requirements of planning policy have been met.
- 7.2 The existing bungalow is of very poor construction and needs to be rebuilt to bring the facilities and energy rating of the property up to and beyond current acceptable standards. The proposed dwelling will be an energy efficient dwelling.
- 7.3 The proposed dwelling is modest in size and scale, and is in keeping with the general architectural style on the estate.
- 7.4 The proposed materials to be used externally are traditional and are in keeping with the area.
- 7.5 There will be no loss of privacy to the neighbouring properties as a result of the considered positioning of ground floor windows and the presence of existing timber fences and walls to the rear of the property.
- 7.6 Many other similar proposed developments have been approved in the area. The development does not raise any neighbour amenity issues given and the standard of accommodation of the exceeds the nationally described space standards.
- 7.7 The development accords with the policies of the Local Plan and complies with the provisions of the NPPF.

Proposed Dwelling
86 Ancton Way, Bognor Regis, West Sussex PO22 6JP
DESIGN & ACCESS STATEMENT

APPENDIX 1

Ecodan R32

Monobloc Air Source Heat Pump

R32

Key Features:

- A+++ heating efficiency (Range A+++ to D)
- Ultra quiet noise levels
- Maintains full heating capacity at low temperatures
- Zero carbon solution
- MELCloud enabled

Key Benefits:

- Ultra low running cost
- Flexible product placement
- Confident and quick product selection
- Help to tackle the climate crisis
- Remote control, monitoring, maintenance and technical support



MELCloud



Manufactured in the UK



100% (2023-2041)



ecodan.co.uk

Water inlet temperature 42°C

Ambient temperature (°C)	Capacity (kg/s)
-10.0	6.0
-5.0	6.0
0.0	6.0
5.0	6.0
10.0	6.0
15.0	6.0
20.0	6.0

[illegible]

Technical drawings of the 1000L refrigerator showing front, top, and side views with dimensions in millimeters.

Front View: Dimensions include a total width of 1000 mm, a top panel width of 994 mm, a total height of 1822 mm, a bottom panel height of 52 mm, and a main body height of 1660 mm.

Top View: Dimensions include a total width of 1000 mm, a top panel width of 994 mm, a total depth of 600 mm, a main body depth of 550 mm, and a bottom panel depth of 50 mm. Arrows indicate the front and rear orientations.

Side View: Dimensions include a total height of 1822 mm, a top panel height of 52 mm, a main body height of 1660 mm, and a bottom panel height of 50 mm.

861 dimensions (mm)



UNITED KINGDOM Mitsubishi Electric Europe Limited Environmental Systems Division, Trafford Lane, Trafford, Manchester, M1 1WG, England, Telephone: 0161 2750000 Fax: 0161 2750001
 081-610-0000 Mitsubishi Electric Europe, Deutsche Hausen AG, Hohenheim 50, Stuttgart, Germany 0714 130 0000 Fax: 0714 130 0000 information@mh-europe.de 0714 130 0010

[illegible][illegible]

Effective as of January 2008.



EHPT20X-MHEDW

FTC6 **Packaged** Cylinder
For Ecodan R32 Monobloc Units

R32

Key Features:

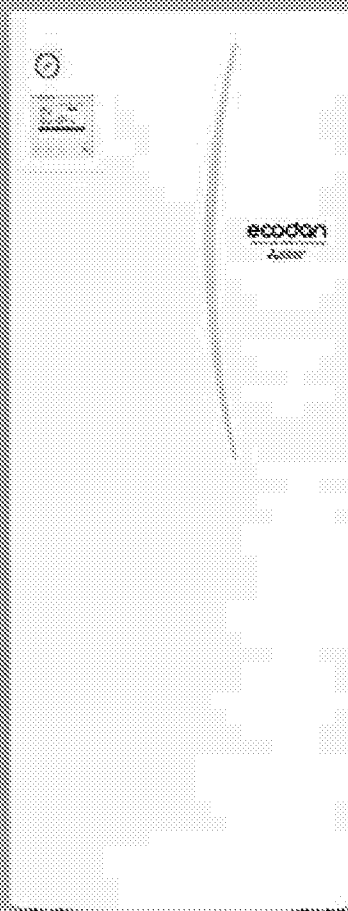
- Unvented plug & play packaged DHW cylinder
- Efficient & rapid heating
- Aesthetic, intelligent and ergonomic design
- Flexible 2-zone space heating control
- MELCloud enabled

Key Benefits:

- Minimal installation time
- Excellent hot water recovery times
- Simple to locate and install
- Improved comfort and reduced energy use
- Remote control, monitoring, maintenance and technical support



MELCloud



ecodan
Renewable Heating Technology

[illegible]

FRONT VIEW

Dimensions: 880 (width), 1800 (height), 400 (top section height), 595 (top section width).

BACK VIEW

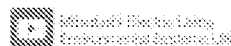
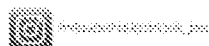
Dimensions: 880 (width), 1800 (height), 400 (top section height), 595 (top section width).

TOP VIEW

Dimensions: 880 (width), 1800 (height), 400 (top section height), 595 (top section width).

CONNECTION TABLE

Letter	Type description	Connection cable type
A	RFI shield connection	Shielded cable
B	Control cable connection	Shielded cable
C	Open feeding cable connection	Shielded cable
D	Open feeding cable connection	Shielded cable
E	Open feeding cable connection	Shielded cable
F	Open feeding cable connection	Shielded cable
G	Open feeding cable connection	Shielded cable
H	Open feeding cable connection	Shielded cable
I	Open feeding cable connection	Shielded cable
J	Open feeding cable connection	Shielded cable
K	Open feeding cable connection	Shielded cable
L	Open feeding cable connection	Shielded cable
M	Open feeding cable connection	Shielded cable
N	Open feeding cable connection	Shielded cable
O	Open feeding cable connection	Shielded cable
P	Open feeding cable connection	Shielded cable
Q	Open feeding cable connection	Shielded cable
R	Open feeding cable connection	Shielded cable
S	Open feeding cable connection	Shielded cable
T	Open feeding cable connection	Shielded cable
U	Open feeding cable connection	Shielded cable
V	Open feeding cable connection	Shielded cable
W	Open feeding cable connection	Shielded cable
X	Open feeding cable connection	Shielded cable
Y	Open feeding cable connection	Shielded cable
Z	Open feeding cable connection	Shielded cable



UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division, Twickenham Lane, Waltham, Berkshire, AL 1 1AA England Telephone 01753 686966 Fax 01753 672661
MILANO Mitsubishi Electric Europe Domestic Systems Division, Via Sallustiana 26, Milano, Italy Tel +39 02 58661 Fax +39 02 58661 international code 003902

Consent to publish in this journal entails the author's irrevocable and exclusive authorization of the publisher to collect any sums or considerations for copying or reproduction payable by third parties (as mentioned in article 17, paragraph 2, of the Dutch Copyright Act of 1912 and in the Royal Decree of June 20, 1974 (S. 351) pursuant to article 16b of the Dutch Copyright Act of 1912) and/or to act in or out of court in connection herewith.

[illegible]

Effective as of August 2008



PAC-IF072B-E

Ecodan Controller

FTC6 Standalone Controller

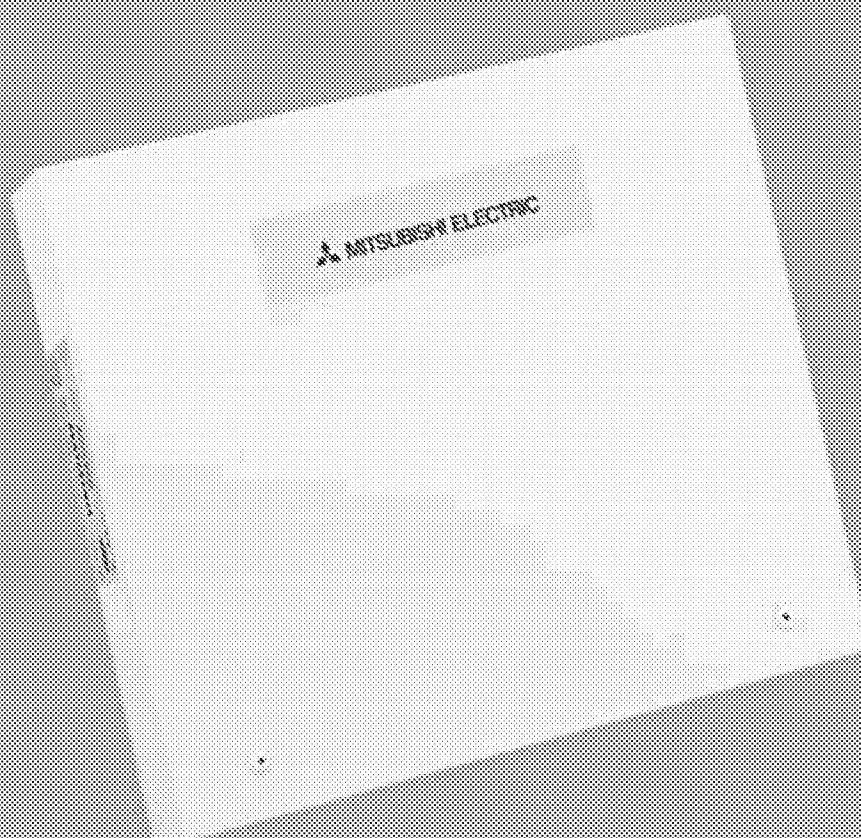
R32

Key Features:

- Smart grid ready
- Step by step installation wizard
- Multiple quiet mode options
- Smart device ready (MELCloud)
- Remote control and monitoring

Key Benefits:

- Store solar energy & benefit from agile tariffs
- Quick and easy system setup
- Tailor the system to user requirements
- Connect your heating to your smart home
- Advanced maintenance and technical support



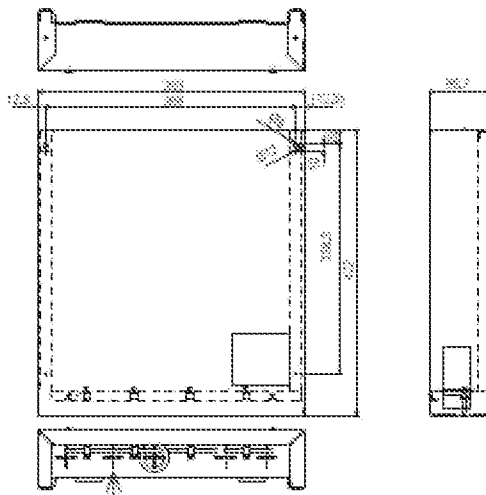
ecodan
Renewable Heating Technology

This controller is specifically designed to integrate within consumer homes and connect Mitsubishi Electric Ecodan Heat pumps with third party Domestic Hot Water tank and benefit from all MELCloud services.

COVER TYPE / MATERIAL	FTC6 - PAC-IF072B-E
GRN: W40XA	
PUZ-W400M4-B0	●
PUZ-W400M4-B5	●
PUZ-W400M4-YAAL-B5	●
PUZ-W4112N/YAAL-B5	●
PUZ-W4140N/YAAL-B5	●

INSTALLATION INFORMATION		
FTC (MAIN) POWER SUPPLY		~N 230 V 50 Hz
FTC (MAIN) INPUT CAPACITY MAIN SWITCH (BREAKER) *		16 A
WIRING (WIRING SEE p. 6122 (page))	FTC (MAIN) POWER SUPPLY	2 × Min. 1.5
	FTC (MAIN) POWER SUPPLY EARTH	1 × Min. 1.5
	FTC (MAIN) - (OUTDOOR) UNIT	2 × Min. 0.3
	FTC (MAIN) - (OUTDOOR) UNIT EARTH	-

DIMENSIONS



Electrical wire openings (x3). When the unit is installed these are facing down.

WEIGHT

PAC-IF072B-E	4.1kg
ALLOWABLE AMBIENT TEMPERATURE	0 to 35°C
ALLOWABLE AMBIENT HUMIDITY	50% RH or less

OUTPUTS	ITEM
OUT1	Water circulation pump 1 output (Space heating/cooling & DHW)
OUT2	Water circulation pump 2 output (Space heating/cooling for Zone 1)
OUT3	Water circulation pump 3 output (Space heating/cooling for Zone 2) 8/2-way valve 26 output *
OUT4	4-way valve (2-way valve 1) output
OUT5	Mixing valve output *
OUT6	Booster heater 1 output
OUT7	Booster heater 2 output
OUT8	Cooling signal output
OUT9	Immersion heater output
OUT10	Boiler output
OUT11	Error output
OUT12	Heating output
OUT13	2-way valve 2x output *
OUT14	Water circulation pump 4 output (DHW)
OUT15	Comp. ON signal
OUT16	Heating/Cooling thermo. ON signal
OUTA1	Alarm output
EC	Booster heater protection output
BT1	Thermistor for booster heater

Notes: *1 For 2-come temperature control. *2 For 3-come valve ON/OFF control.

INPUTS	ITEM
IN1	Room thermostat 1 input *
IN2	Flow switch 1 input
IN3	Flow switch 2 input (Zone 1)
IN4	Demand control input
IN5	Outdoor thermostat 2 input *
IN6	Room thermostat 2 input *
IN7	Flow switch 3 input (Zone 3)
IN8	Electric energy meter 1
IN9	Electric energy meter 2
IN10	Heat meter
IN11	Smart Grid Ready Option 1
IN12	Smart Grid Ready Option 2
INL1	Flow sensor input

Notes:

*1. Set the ON/OFF cycle time of the room thermostat to 30 minutes or more; excessive cycling can potentially reduce the lifetime of the compressor.

*2. Placing outdoor thermostat for extending operation of heaters, the lifetime of the heaters and related parts may be reduced.



Talk to our sales and distribution partner today.

energylab.co.uk • 020 3090 0000 • energylab@energylab.co.uk

Supporting you at every install.

EnergyLab is a registered trademark of EnergyLab Limited. All other trademarks are the property of their respective owners. © 2024 EnergyLab Limited. All rights reserved.

Proposed Dwelling
86 Ancton Way, Bognor Regis, West Sussex PO22 6JP
DESIGN & ACCESS STATEMENT

APPENDIX 2

Harvest the Sunshine

DEEP BLUE 3.0 Light

Mono

405W MBB
Half-cell Black Module
JAM54S31 380-405/MR Series

Introduction

Assembled with 11BB PERC cells, the half-cell configuration of the modules offers the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.



Higher output power



Lower LCOE



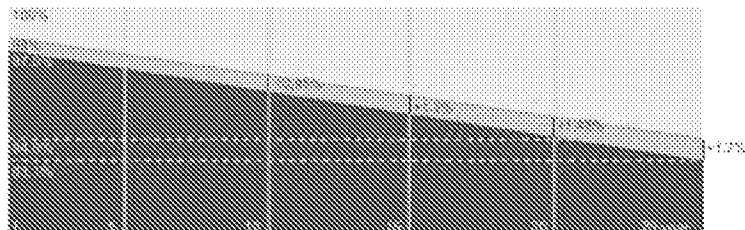
Less shading and lower resistive loss



Better mechanical loading tolerance

Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty



■ New linear power warranty ■ Standard module linear power warranty

Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval



JA SOLAR

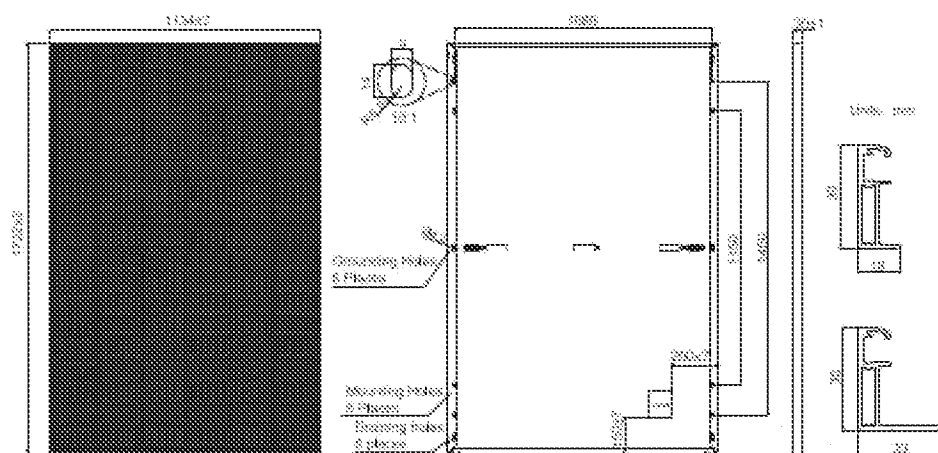
FRONT SHEET CELL CORNER MODIFIED

www.jasolar.com

Specifications subject to technical changes and tests.
JA Solar reserves the right of final interpretation.



MECHANICAL DIAGRAMS



Keywords: construction; human capital; human resources; knowledge; organizational learning

SPECIFICATIONS

Cell	Monocrystalline
Weight	21.5kg±3%
Dimensions	1722±2mm×1134±2mm×30±1mm
Cable Cross Section Size	4mm ² (IEC) / 12 AWG(UL)
No. of cells	108(6x18)
Junction Box	IP68, 3 diodes
Connector	MC4(1000V) MC4-EVO2(1600V)
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-) Landscape: 1200mm(+)/1200mm(-)
Packaging Configuration	33pcs/Pallet, 936pcs/40ft Container

ELECTRICAL PARAMETERS AT 81°C

TYPE	JAM54331 -380/MR	JAM54331 -385/MR	JAM54331 -390/MR	JAM54331 -395/MR	JAM54331 -400/MR	JAM54331 -405/MR
Rated Maximum Power(Pmax) [W]	380	385	390	395	400	405
Open Circuit Voltage(Voc) [V]	36.58	36.71	36.85	36.98	37.07	37.23
Maximum Power Voltage(Vmp) [V]	30.29	30.46	30.84	30.84	31.01	31.21
Short Circuit Current(Isc) [A]	13.44	13.52	13.61	13.70	13.79	13.87
Maximum Power Current(Imp) [A]	12.55	12.64	12.73	12.81	12.90	12.98
Module Efficiency [%]	19.5	19.7	20.0	20.2	20.5	20.7
Power Tolerance	0~+5%					
Temperature Coefficient of Isc(α_{Isc})	+0.045%/°C					
Temperature Coefficient of Voc(β_{Voc})	-0.275%/°C					
Temperature Coefficient of Pmax(γ_{Pmax})	-0.350%/°C					

STC Irradiance 1000 W/m², cell temperature 25 °C AM1.5G

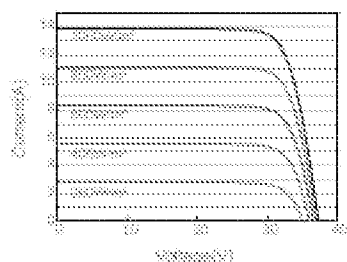
Remark: Electrical flow in the network do not refer to a single node, and they are not part of the offer. They only serve for comparison among different models being

ELECTRICAL PARAMETERS AT NOCT

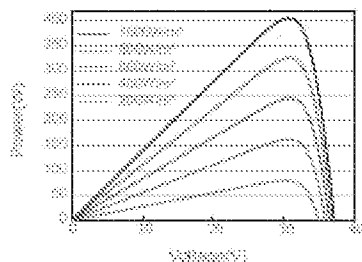
JAMS4531-385MR, JAMS4531-395MR, JAMS4531-395MR, JAMS4531-402MR, JAMS4531-402MR, JAMS4531-403MR							JAMS4531-403MR, JAMS4531-403MR	
TYPE	JAMS4531-385MR	JAMS4531-395MR	JAMS4531-395MR	JAMS4531-402MR	JAMS4531-402MR	JAMS4531-403MR	Maximum System Voltage	1000V/1500V DC
Rated Max Power(Pmax) [W]	258	266	294	298	302	308	Operating Temperature	-40℃~+85℃
Open Circuit Voltage(Voc) [V]	34.38	34.49	34.82	34.75	34.89	35.12	Maximum Series Fuse Rating	25A
Max Power Voltage(Vmp) [V]	28.51	28.68	28.87	28.68	28.26	28.47	Maximum Static Load Front*	5400Pa(113lb/ft²)
							Maximum Static Load Back*	2400Pa(50lb/ft²)
Short Circuit Current(Isc) [A]	10.79	10.82	10.89	10.86	11.03	11.10	NOCT	45±2℃
Max Power Current(Imp) [A]	10.03	10.11	10.18	10.28	10.32	10.39	Safety Class	Class II
NOCT	Irradiance 800W/m², ambient temperature 20℃, wind speed 1m/s, AM1.5G						Fire Performance	UL Type 1

OPERATING CONDITIONS

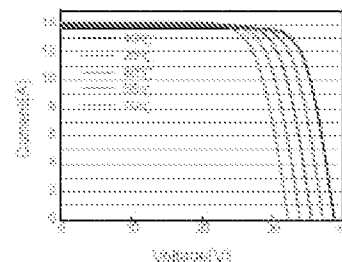
CHARACTERISTICS

Current Address: Curran@ESCI-UMD.edu 301-405-4444

Power-Spectrum Curve 34856271-405/688



Current-Voltage Curve: 302854801-2022/202



Proposed Dwelling
86 Ancton Way, Bognor Regis, West Sussex PO22 6JP
DESIGN & ACCESS STATEMENT

APPENDIX 3



ROLECEV

WALLPOD

Intelligent EV charging unit



Manufactured
in the UK

WALLPOD

Intelligent EV charging unit

The WALLPOD is an affordable and reliable EV charging unit, which is ideal for both domestic and commercial locations, providing up to 7.4kW fast charging.

This future-proof OCPP compliant unit can offer a simple plug & charge or pay-to-charge solution via the EV driver's smartphone and/or RFID card/fob through any chosen OCPP back-office management system.

Feature-rich, this EV charger supports dynamic load balancing and is equipped with PME fault detection, so there is no requirement for an earth rod, reducing installation costs.

Domestic users can also charge their vehicle as sustainably as possible using their solar PV or other home renewables for a zero-cost, zero-carbon charge.*

*Not dependent on location



FREE app & support

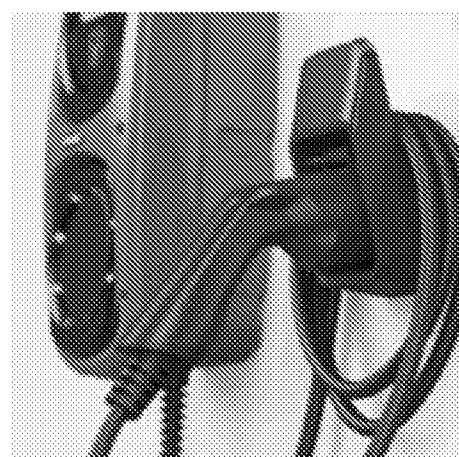
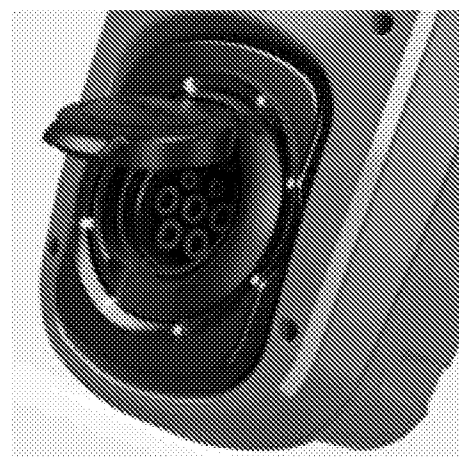
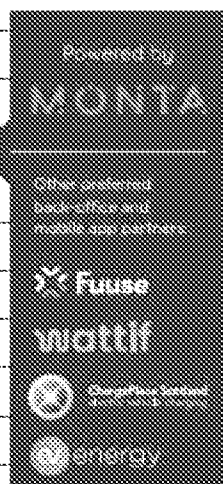
Domestic customers benefit from 3 years Monta app connectivity and support included*

*Data fees may apply if connecting via 4G

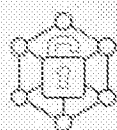


Product features

- Suitable for both domestic and commercial installations
- Plug & charge, mobile app or RFID controlled charging
- Universal charging socket or Type 2 tethered lead
- Up to 7.4kW charging output
- PME fault detection (no earth rod required)
- Dynamic load balancing (CT clamp & cable included)
- Solar PV, battery storage or wind turbine integration*
- OCPP 1.6 compliant (can integrate with any back-office)
- Over-the-air firmware / software updates
- Built-in 6mA DC leakage protection
- Dual tamper and breach security notifications
- Cable lock security feature (can be permanently locked by user)
- Integrated RFID reader
- MID-approved energy metering
- 4G / Wi-Fi / Ethernet connectivity
- IK10 impact resistant design
- Wall or post mounted
- OZEV grant fundable
- Designed & manufactured in the UK



*App dependent feature



OCPP 1.6 compliant

Ability to integrate with any OCPP compliant back-office management system and app.



Easy to operate

Three quick and easy ways to operate: mobile app, RFID cards and fobs or plug & charge.



Office for Zero Emission Vehicles

Eligible for grant funding

This range is approved for the OZEV EV Chargepoint Grant & Workplace Charging Scheme (WCS).



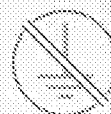
4G / Wi-Fi / Ethernet enabled

Complete with secure 4G, Wi-Fi and Ethernet connectivity, ensuring chargers are always online 24/7.



Branding & colour options available

Rolec offer a bespoke chargepoint branding service; from logos & brand colours, to vinyl wraps.



No earth rod required

Equipped with built-in PME fault detection, saving on installation time and costs.

The details

UP TO 7.4KW

This single phase charger provides up to 7.4kW fast charging.

WALLPOD is compatible with all EVs & PHEVs, charging at the fastest speed possible, ensuring vehicles are ready to go in no time.

CHARGE FOR FREE!

Sync your solar PV, battery storage or wind turbine setup to benefit from sustainable, zero-cost, zero-carbon charging.

Smart home integration is also supported, so you can control your charger using Alexa or Google assistant.*

ACCURATE BILLING

Built-in MID-approved energy metering ensures accurate consumption reporting, which is essential for businesses and residential car parks, wishing to bill for their usage. Use our back-office management platform to generate revenue by setting your own tariffs.



SAFE AND SECURE

Rest assured, Rolec's entire EV chargepoint range is fully UK Smart Charge Point Regulation compliant.

Over-the-air updates allow the chargers to receive the very latest features, ensuring a safe and future-proof product 24/7.










3 YEAR WARRANTY

Rolec EV chargepoints are designed, developed and manufactured in the UK and come with a 3 year warranty included as standard, for added peace of mind on your investment.

*Role dependent features

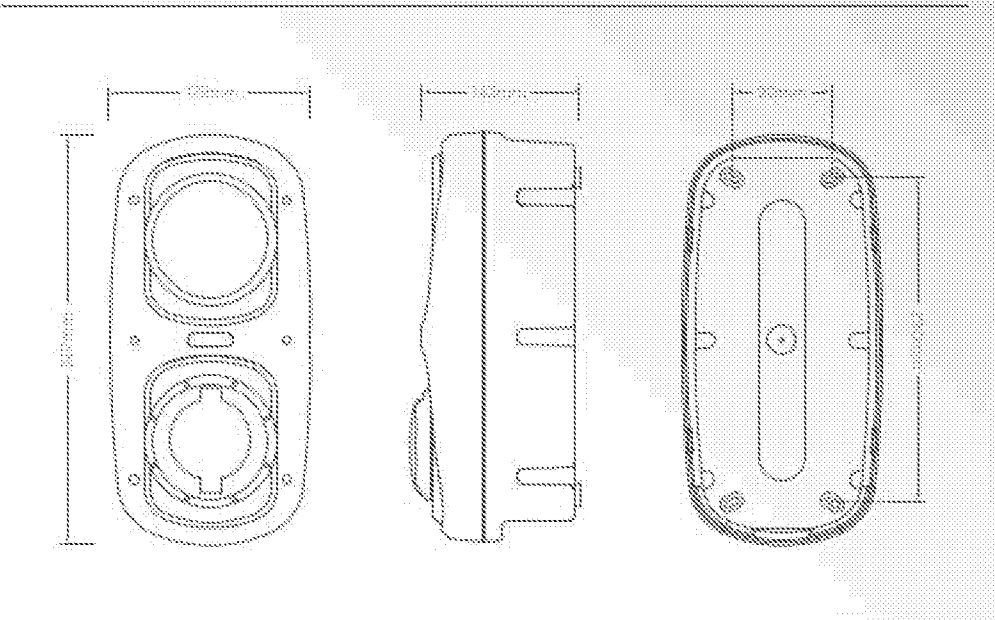
Specifications

Product Overview:

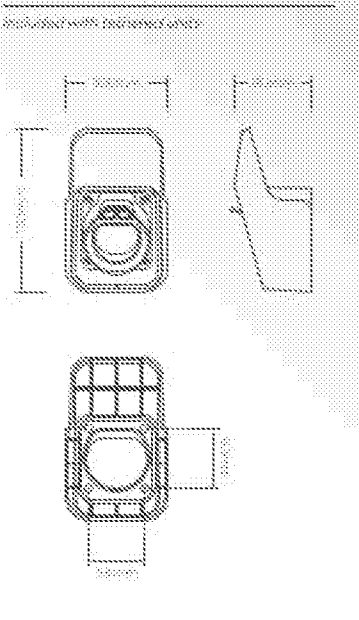
	Connection Type	Charging Output	Input Supply	Unit Colour	Product Code
Single Phase Units	1x Type 2 (IEC 62196) charging socket	Up to 7.4kW (32A)	1x 32A Single Phase 230V AC (±10 %) 50/60Hz	 Grey	ROLEC4020G
				 White	ROLEC4020W
				 Black	ROLEC4020B
	1x Type 2 (IEC 62196) 5m tethered lead*	Up to 7.4kW (32A)	1x 32A Single Phase 230V AC (±10 %) 50/60Hz	 Grey	ROLEC4140G
				 White	ROLEC4140W
				 Black	ROLEC4140B
	1x Type 2 (IEC 62196) 10m tethered lead*	Up to 7.4kW (32A)	1x 32A Single Phase 230V AC (±10 %) 50/60Hz	 Grey	ROLEC4145G
				 White	ROLEC4145W
				 Black	ROLEC4145B

*5m tethered leads (approx. 4.5m external) 10m tethered leads (approx. 9.5m external)

WallPod unit:



Type 2 charge gun holster:



Specifications

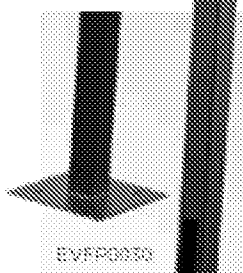
Technical Data:

User Interface	<ul style="list-style-type: none"> • Mobile app • RFID reader (MIFARE ISO/IEC 14443 A) • Plug & charge • RGB LED status indicator base - configurable
Charge Protocol	Mode 3 (IEC 61851-1)
Built-in Protection	<ul style="list-style-type: none"> • Over current protection • DC fault protection - 6mA • Lightning surge, over temperature protection • PME fault detection - No earth electrode/rod required • Supports automatic dynamic load balancing (may require additional hardware) • Supports static load management (software configurable)
Required External Protection	<ul style="list-style-type: none"> • AC overload & fault current protection - A suitably rated 30mA Type-A RCBO or equivalent protection is required at source (dependent on cable type and/or route) • Surge Protection - May be required depending on the installation
Cable Terminals	<ul style="list-style-type: none"> • Single Phase - 3x 50mm 1P + N + E
Communications	<ul style="list-style-type: none"> • 4G LTE Cat-1 (built-in nano SIM, subscription required) <ul style="list-style-type: none"> • LTE FDD-B1/B3/B5/B7/6A/66/82/8 • GSM-B2/B3/B5/6/8 • Wi-Fi 802.11 b/g/n 2.4 GHz (2412-2472 MHz / 2422-2482 MHz) • NFC 13.56 MHz • RJ45 Ethernet connection • Bluetooth Low Energy (BLE 4.1) 2402-2480 MHz (for installer configuration purposes) • OCPP 1.6J • Cyber security - Data encryption level TLS 1.2
Energy Metering	Integrated Class 1 MID compliant metering
Standby Power Consumption	< 7.5W
Dimensions	179mm x 367mm x 142mm (W x H x D)
Weight	< 3kg to < 7kg(model dependent)
Environmental	<ul style="list-style-type: none"> • Ingress protection - Enclosure IP65, Socket IP54 • Impact protection - IK10 • Security - Dual tamper and breach notifications • Operating temperature - -30°C to +50°C • Operating humidity - 5% to 95%
Materials	High impact resistant Polycarbonate
Unit Colour	 Black  Grey  White  Branding available upon request
Certifications & Compliances	<ul style="list-style-type: none"> • EV Charging Compliance - EN 61851-1:2019, EN 61851-22:2002 • Smart Charge Points - (SI 2021/1467) • Wiring Regulations - BS 7671:2018+A2:2022 • EMC Compliance - EN 61000-6-3:2007+A1:2011, EN 61000-6-2:2005, 2014/53/EU, SI 2016/1091 • Safety Compliance (LVD) - EN 62368-1:2014, 2014/35/EU, SI 2016/1101 • Communications / RED - EN 62111:2008, 2014/53/EU, SI 2017/1268, EN 300 330 V2.1.1 (2017-02), EN 301 908-1 V13.1.1 (2021-09), EN 301 908-2 V13.2.1 (2022-02), EN 301 911 V12.5.1 (2017-03), EN 300 338 V2.2.2 (2019-07), EN 300 440 V2.2.1 (2018-07) • Environmental Protection - BS EN 60529:1992+A2:2013 • Impact Rating - BS EN 62362:2002+A1:2021 • Metering - 2014/52/EU, SI 2016/1153 • RoHS - 2011/65/EU, SI 2012/3082 • REACH - 1907/2006, REACH etc. (Amendment) Regulations 2021 • Certification Markings - CE & UKCA
Warranty	3 years

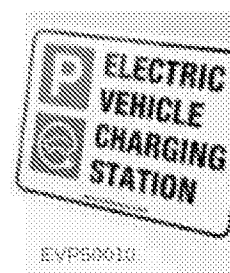


Options & accessories

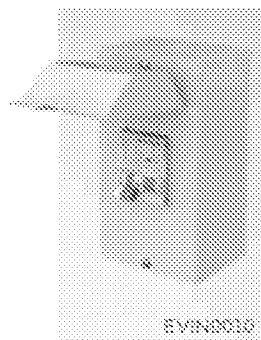
Product Code	Item Description
RFID0010	RFID card
RFID0020	RFID fob
EVFP0010	WallPod galvanised steel mounting post - 1350mm
EVFP0030	Mounting post - fits up to 2 chargers
EVFP0040	WallPod plate for mounting post
EVFP0060	WallPod holster plate for mounting post
EVCB0020	Roof mount protection barrier - 48mm
EVCB0040	Surface mount protection barrier - 48mm
EVPS0010	EV parking sign - A4 landscape (Other sizes are available)
EVPP0100	9m 32A Type 2 to Type 2 charging cable
EVPP0107	10m 32A Type 2 to Type 2 charging cable (Other cables are available, including Type 1 options)
EVIN0010	20A Single Phase EV consumer unit with Type A RCBO
EVIN0015	40A Single Phase EV consumer unit with Type A RCBO
EVR00050	Remote wall mount for Type 2 plug holster
ACSR0125	100A up to 35mm ² screened CT clamp with 10m cable

RFID0010
RFID0020

EVFP0030



EVPS0010



EVIN0010



ACSR0125



Branding & colour options available

Rolec offer a bespoke chargepoint branding service; from logos & brand colours, to vinyl wraps. This can be arranged at time of order. Contact Rolec for details.

Brands, names, logos and trademarks could remain the property of their respective owners. This listing of any firm or their logo is not intended to imply any endorsement or direct affiliation with Rolec Services Ltd and is purely to demonstrate branding opportunities.

















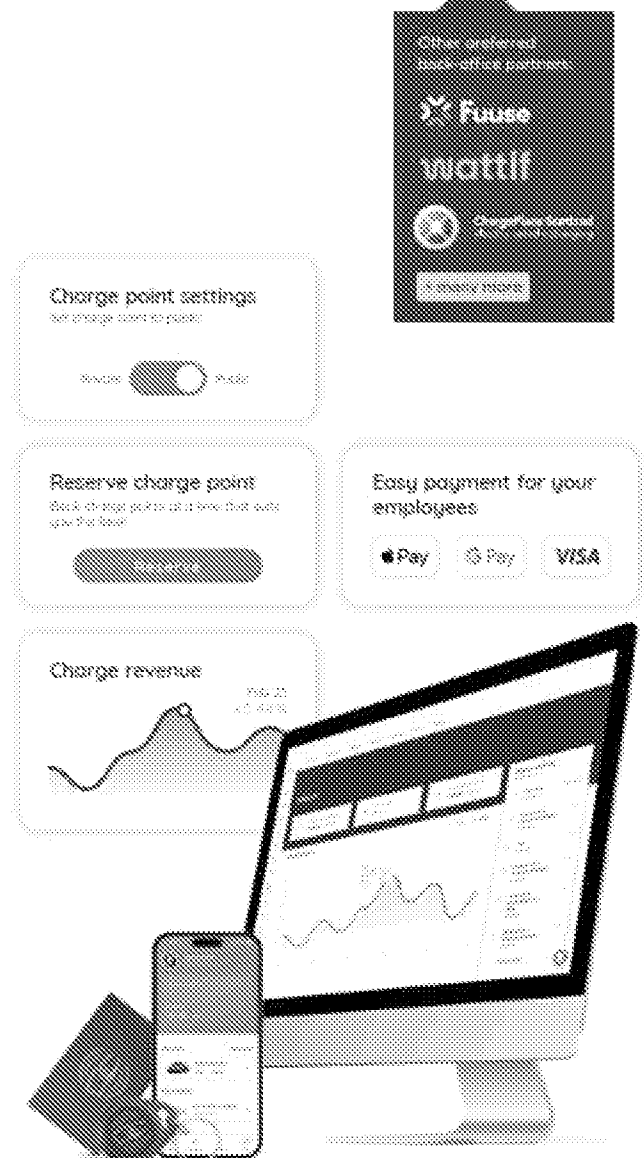
EVPP0100

Chargepoint management



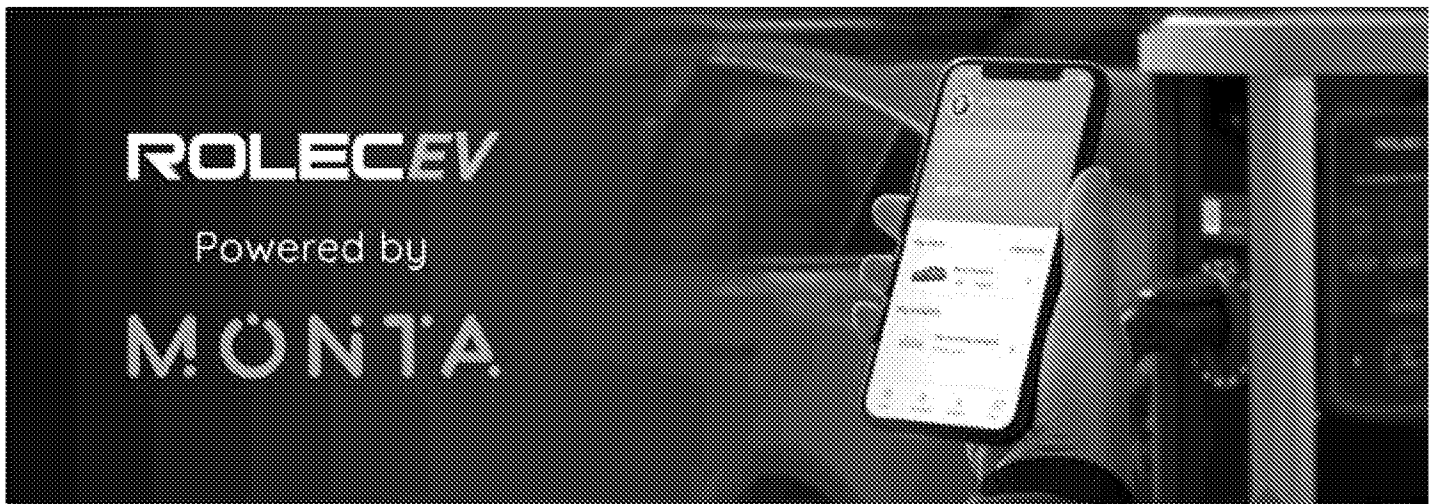
Monta's chargepoint management platform provides businesses and organisations with the ability to deploy and self-manage their very own electric vehicle charging network. Ideal for workplace, fleet, commercial and residential locations.

-  Full & automated control of your chargepoints
-  Unlock additional revenue streams
-  Set chargepoints for public and/or private use
-  Set different pricing for individual chargepoints & groups
-  Dynamic pricing allows operators to set pricing in line with their hour-by-hour energy cost
-  Fully scalable solution; add or remove chargepoints & users
-  Complete fleet management solutions with analytical feedback & reporting
-  Reduce charging costs and CO₂ with Smart Charge feature
-  Vehicle integration provides visibility of battery size, SOC, percentage & location etc.
-  Automatically reimburse employees' home charging
-  Smart queuing system that sends notifications to drivers when they become available
-  Over-the-air updates and self-healing algorithms ensure charger stability & availability
-  Static, Dynamic or True Dynamic load balancing options
-  EV Roaming feature, allowing chargepoints to be available on other apps



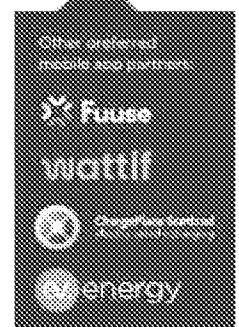
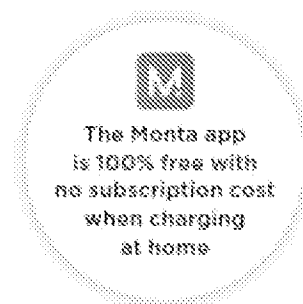
► For more information about Monta's chargepoint management solutions and pricing, see the Powered by Monta Overview Sheet

Chargepoint operation



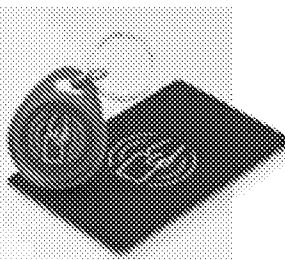
Charge your EV on your terms. With MontA you have full control over your charging experience, at home or on the road.

- 📍 Easily locate and navigate using the chargepoint map
- 📱 Remotely control your home EV charging
- ⌚ Choose your ready time and choose to prioritise lower costs, lower CO₂, or only using renewable energy
- 🕒 Schedule charges so your car is ready when you are
- 🚗 Integrate with most EV manufacturer apps and cars
- 📶 Real-time information on your car and battery levels to maximize your charging experience
- 👥 Share and give charging access to friends, family and guests
- 💰 Set your home charger for public use with custom pricing
- 📍 Access to over 550,000 public chargepoints across Europe
- 💳 Easily initiate charging and complete payments via credit card, Apple Pay, Google Pay or MontA Wallet
- 💬 24/7 online chat or email support for help when you need it most



RFID activation

Great for quick activation, RFID cards or key fobs are easily accessible and add for a much simpler charging experience, which can also be used alongside the mobile app.



DOWNLOAD THE APP



➤ For more details about the MontA solution for EV drivers and the MontA app, please visit www.monta.com/uk/home-charging



THIS DOCUMENT CONTAINS INFORMATION THAT IS SUBJECT TO CHANGE WITHOUT NOTICE.
This latest version of this publication can be downloaded at <https://www.rolecevs.com/download/ev-charging>

Specifications of the product and user interface are for marketing purposes only

Brand names, logos, and trademarks used herein remain the property of their respective owners.
The listing of any firm or firm logo is not intended to imply any endorsement or direct affiliation with Rolecevs Ltd., and it equally is not an exclusive marketing opportunity

© 2024 by Rolecevs Ltd. All rights reserved

09360-1936-07, without disclosure

ROLECEV



Proposed Dwelling
86 Ancton Way, Bognor Regis, West Sussex PO22 6JP
DESIGN & ACCESS STATEMENT

APPENDIX 4

THRUTONE SMOOTH FIBRE CEMENT SLATES

Cedral Thrutone Smooth slates have a superb smooth finish and square edges, which will result in a classic, elegant roof. Our fibre cement slates are unmatched in strength giving you peace of mind when you choose Cedral for your roof.

✓ Smooth surface

✓ Square edges

✓ Clean, sharp lines

Technical data⁶

Size of slate	600mm x 300mm	500mm x 250mm
Minimum pitch ⁷		
Moderate exposure	22.5° (100mm lap) 20° (110mm lap)	22.5° (100mm lap)
Severe exposure	25° (100mm lap) 22.5° (110mm lap)	25° (100mm lap)
Maximum pitch	90°	90°
Typical laps	100, 110mm	100mm
Slate hooks	Hook fixed 100-150mm	Hook fixed 100mm
Maximum gauge	240-250mm	200mm
Slate thickness	4mm	4mm
Covering capacity (wet)	13.4 slates/m ² at 100mm lap 13.6 slates/m ² at 110mm lap 14.8 slates/m ² at 150mm lap	20.0 slates/m ² at 100mm lap
Weight of slating (approx.)	20.4 kg/m ² (0.20 kN/m ²) at 100mm lap 20.9 kg/m ² (0.20 kN/m ²) at 110mm lap 22.8 kg/m ² (0.23 kN/m ²) at 150mm lap	21.3 kg/m ² (0.21 kN/m ²) at 100mm lap
Battens required (max)	4.00 battens/m ² at 100mm lap 4.08 battens/m ² at 110mm lap 4.45 battens/m ² at 150mm lap	5.00 battens/m ² at 100mm lap
Batten size recommended (fixed to BS 5534)	50 x 25mm for rafters/ supports not exceeding 800mm centres	50 x 25mm for rafters/ supports not exceeding 800mm centres
Fixings	Slate nails (30 x 2.65mm) Copper slot rivets (19mm dia. x 2mm stem)	Slate nails (30 x 2.65mm) Copper slot rivets (19mm dia. x 2mm stem)
Fixings screws	14 gauge self sealing	14 gauge self sealing
Slate hooks ^{8,9}	Length equal to lap	Length equal to lap
Authority	BS EN 492	BS EN 492

⁶ Cedral fibre cement slates meet the strength requirements of BS EN 492, following an average bending moment greater than 500N/m² (up to the slate size) and a minimum density of 1.78g/cm³ and a nominal thickness of 4mm.

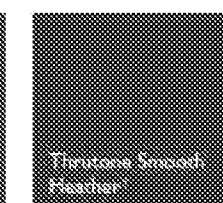
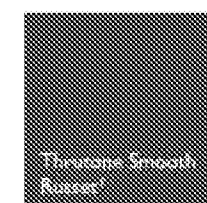
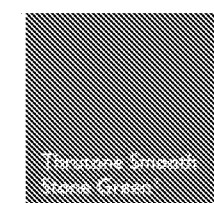
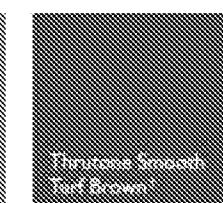
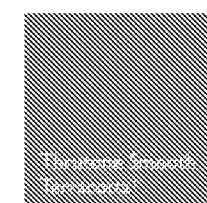
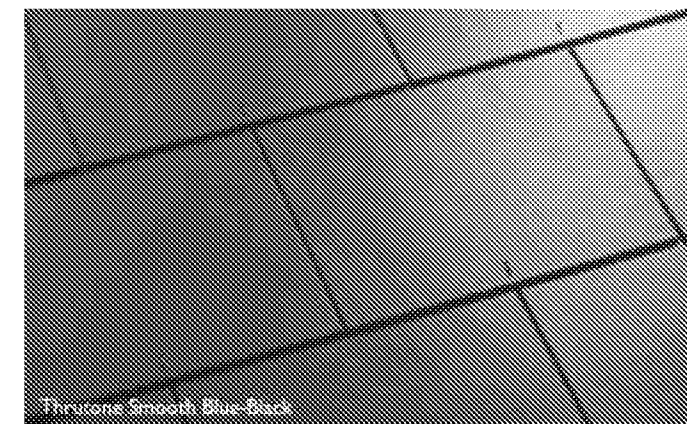
⁷ The minimum recommended pitch and lap may be influenced by local conditions please consult the Technical Advisory team for further information.

^{8,9} When using slate hooks, the pitch must not exceed 90° (as defined by BS EN 492) and require self-sealing rivets.

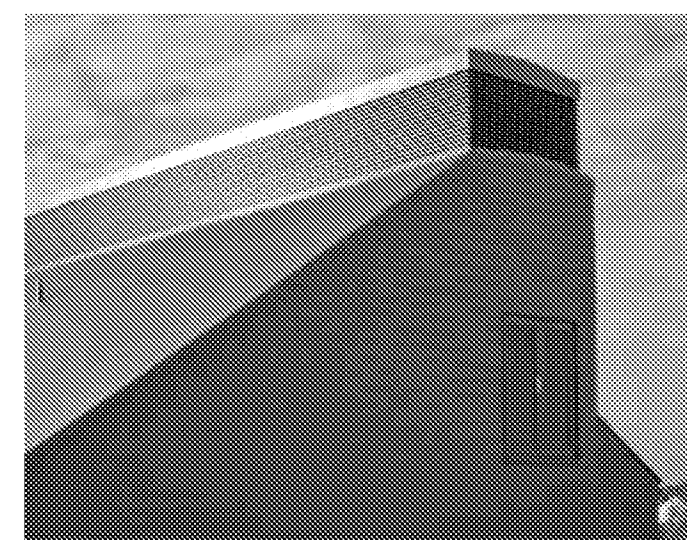
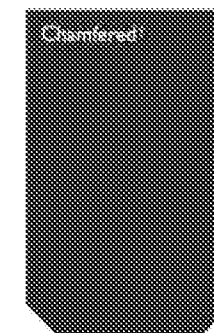
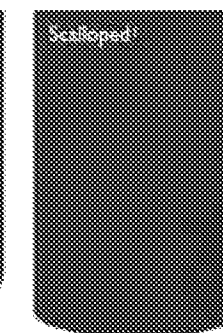
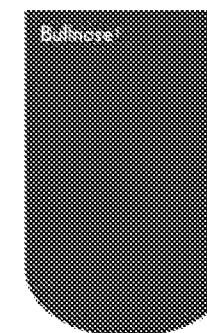
Sustainability

Green guide rating	A+ (Element ref. 812410008)
BES (2021)	Very good - can achieve 3 credits
Credit uplift available with EPD	
Embodied carbon	Low carbon footprint of 14 CO ₂ e/m ²

The printing process restricts the exact representation of each color. For true colour references, please request product samples.



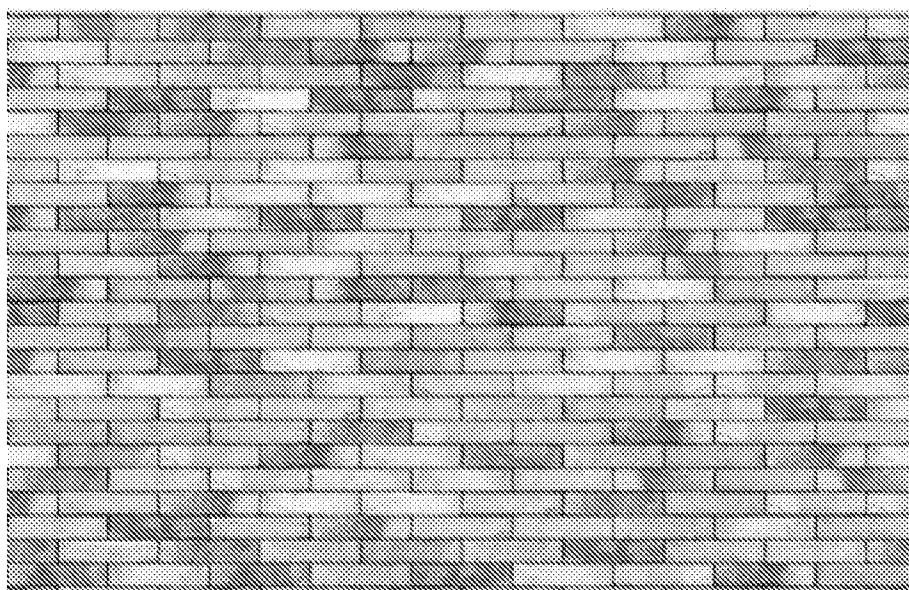
Other shapes












Proposed Dwelling
86 Ancton Way, Bognor Regis, West Sussex PO22 6JP
DESIGN & ACCESS STATEMENT

APPENDIX 5



Product name		Product group	Production location
Ledbury		L3	Lanklaar
The raw materials are excavated in Weichsel loam layers, the local loam of Aeolian origin dating from the Ice Age. This loess mainly consists of a silt-like fraction, suited ideally for the manufacturing of hand form bricks. By using specific sand types for surface covering, the desired colour is achieved.			
Colour			
a shade of yellow to brown and black			
Format			
Moulding method		Hand form	
DF: 215 x 102 x 65 mm		Between batches the average size and color may slightly differ.	
Essential Characteristics - EN771-1			
 EN 771-1 - CPR-97884 NOBO 0063 (ex 0620)		 EN 771 - 1855-CPR-24914	
2+		2+	
Dimensional tolerances	T2		
Range	R1		
Active Soluble Salts	S2		
Mean Compressive strength	≥ 20 N/mm²	Tested to the bed face	
Normalized Compressive strength	NPD	Tested to the bed face	
Dimensional stability	NPD		
Bond Strength general	0,15 N/mm²		
Bond Strength thin layer	0,30 N/mm²		
Reaction to fire	A1	Category	
Water absorption	≤ 17% m/md		
Water vapour permeability	5/10		
Net dry density	1640 kg/m³ (D1)		
Gross dry density	1530 kg/m³ (D1)		
Thermal conductivity Lambda 50/50	≤ 0,55 W/m.K		
Durability against freeze thaw	F2		
Dangerous substances	NL-B58	According to Annex ZA 3	
Other Characteristics			
Initial rate of water absorption - Non-coated Bricks	1,5 - 4,0 kg/m².min (IW3)	Value according EN771-1:2011 - 5.3.8	
Initial rate of water absorption - Coated bricks	0,5 - 1,5 kg/m².min (IW2)	Value according EN771-1:2011 - 5.3.8	
Freeze/thaw resistance - PTV 23-002	NPD	NBN 27-009	
Thermal conductivity Lambda 90/90	0,60 W/m.K		
Thermal conductivity Lambda Ui	0,644 W/m.K		
Thermal conductivity Lambda Ue	1,27 W/m.K		
<div></div>			
Storage & handling		Cutting	
- Store packs on a clean surface and cover them - Process from multiple packs at the same time - Follow the Vandersanden processing guidelines		Cutting with power tools may generate dust. This dust may contain silica or quartz particulate which may constitute a hazard. Persons undertaking work of this nature are advised to wear dust masks (FFP3).	
*All our Coated bricks are only coated on the facing sides. Coated products are specially labeled and recognisable with a "C" logo on the top left-hand side of the packaging. Always check if using coated or non-coated bricks. Match the mortar to the specified initial water absorption.			

Proposed Dwelling
86 Ancton Way, Bognor Regis, West Sussex PO22 6JP
DESIGN & ACCESS STATEMENT

APPENDIX 6

15 Year
Warranty

James Hardie brings unique designs
to life with beautiful fibre cement
products that are built to last.
It's Possible™



Hardie® VL Plank
Light Mist

ARUP DISTRICT COUNCIL 10/22/2021



JamesHardie™

Hardie® Plank

Hardie® VL Plank

Contents

- 06 It's Possible™
- 08 Introducing the Hardie® Plank products
- 10 Create interest with installation styles
- 12 Choose long-lasting colour
- 14 The finishing touch
- 16 Design flexibility
- 20 Home renovations
- 24 Future-proof your home
- 26 Information & Inspiration

We all have a dream for our home and with James Hardie, It's Possible™

If you're looking for a versatile, low maintenance with a natural and beautiful texture, look no further than Hardie® fibre cement cladding. It's the facade of choice for builders, architects and homeowners alike, protecting and beautifying millions of homes worldwide.

- Most natural look with premium colour range
- Low maintenance thanks to unique ColourPlus™ Technology finishes
- At least 20 % faster installation

15 Year
Warranty

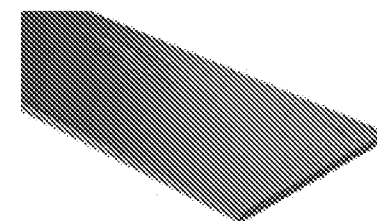




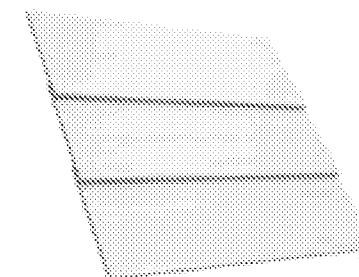
Introducing the Hardie® Plank products

Hardie® Plank products include two profiles, made from advanced material fibre cement. With an A2-s1, d0 fire rating, our boards are non-combustible and offer the best fire protection possible for any coloured facade board.

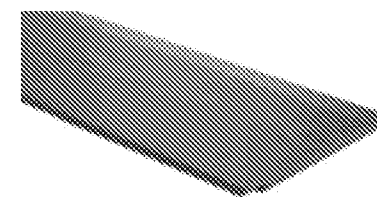
Hardie® Plank fibre cement cladding



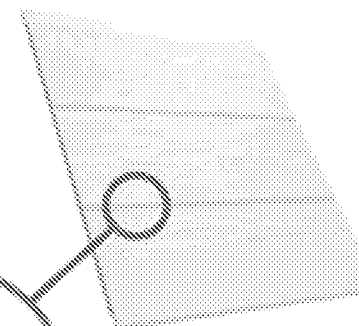
Dimensions: 3600 x 180 x 8mm
Weight per piece: 7.4kg
Pieces per m²: 1.85
Visible surface: 150 - 180mm
Colours: 21
Textures: Cedar and Smooth



Hardie® VL Plank fibre cement cladding

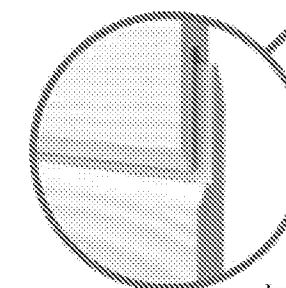


Dimensions: 3600 x 214 x 11mm
Weight per piece: 10.5kg
Pieces per m²: 1.52
Visible surface: 182mm
Colours: 8
Textures: Cedar



BBA Certified

Hardie® cladding has been assessed by the British Board of Agrément and has been awarded BBA certificate number 04/4147.



Innovative interlocking system

Hardie® VL Plank profiles offer hidden fixing, thanks to our innovative tongue and groove system that does not require any additional accessories for fixing and can easily be nailed.



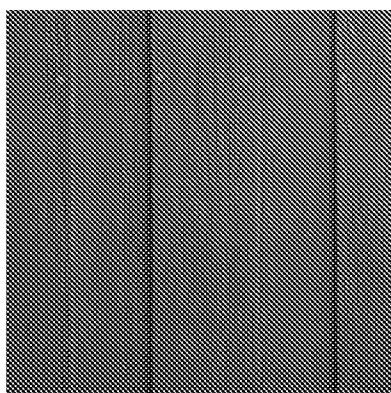
Hardie® VL Plank horizontal installation in Light Mist

Create interest with installation styles

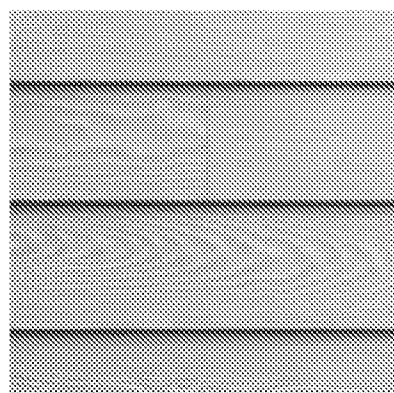
Installation is quick and easy, offering maximum flexibility with options to fit our boards horizontally, vertically, ship-lapped or open jointed.

Hardie® Plank cladding

Create a classic finish with Hardie® Plank boards in horizontal lap, vertical hit and miss or open joint styles, playing around with different colours and textures.



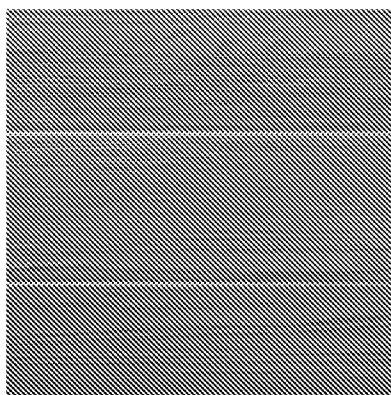
Hardie® Plank cladding
vertical hit and miss



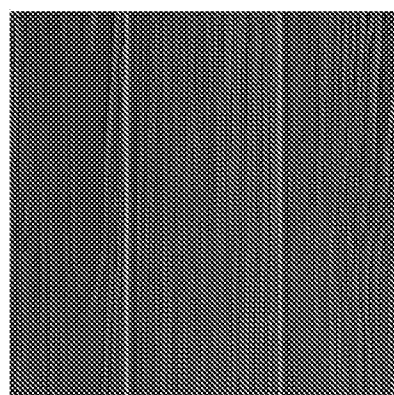
Hardie® Plank cladding
horizontal overlap

Hardie® VL Plank cladding

The seamless interlock of Hardie® VL Plank cladding epitomises architectural modern design, perfect for both horizontal and vertical installation. The clip-less system is 20% faster to install than comparable interlock solutions.



Hardie® VL Plank cladding
horizontal installation



Hardie® VL Plank cladding
vertical installation

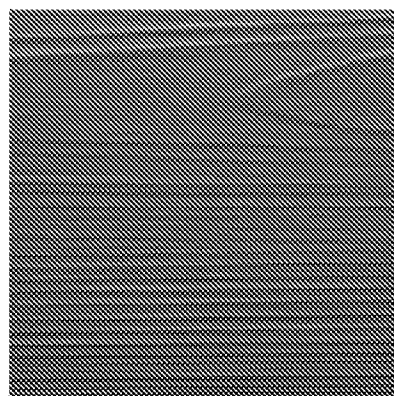


Choose long-lasting colour

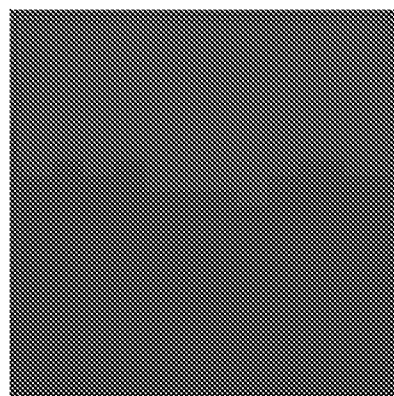
The **Hardie®** fibre cement range is available in two textures and a variety of vibrant colours using **ColourPlus™** Technology – our multi-coat, baked-on finish that gives a durable, fade-resistant finish that lasts for years to come. Combining distinct beauty and high performance in a way that no other finish does.

- 21 colours for **Hardie® Plank** cladding
- 8 colours for **Hardie® VL Plank** cladding
- Unique **ColourPlus™** Technology finishes

Textures



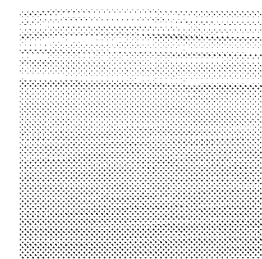
Cedar



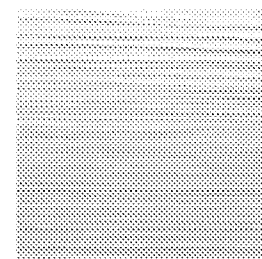
Smooth

Colours

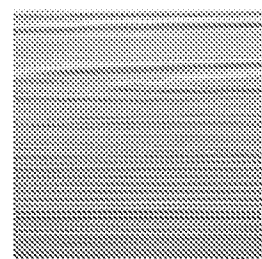
■ Hardie® Plank ● Hardie® VL Plank



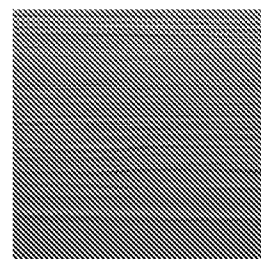
Arctic White ■ ●



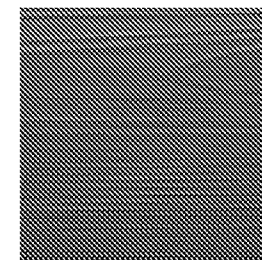
Sail Cloth ■ ●



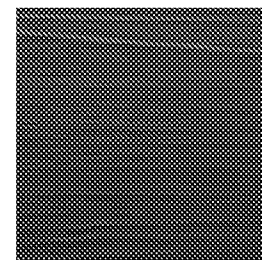
Light Mist ■ ●



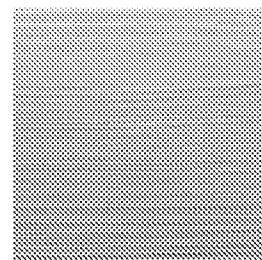
Grey Slate ■ ●



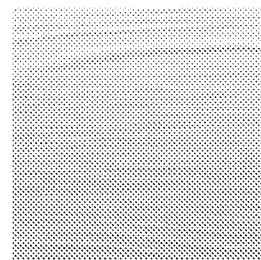
Anthracite Grey ■ ●



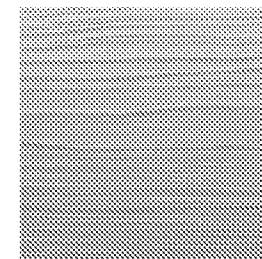
Midnight Black ■ ●



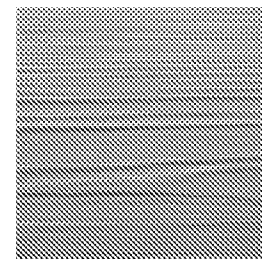
Cobble Stone ■



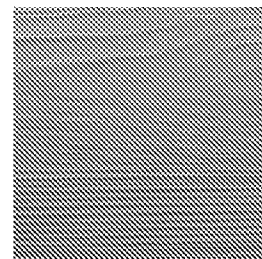
Woodland Cream ■



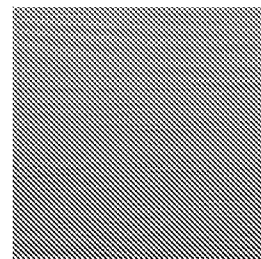
Soft Green ■



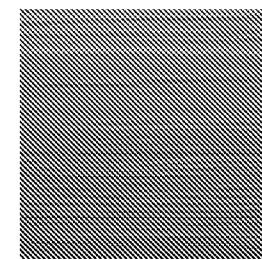
Pearl Grey ■



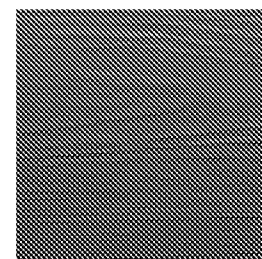
Monterey Taupe ■



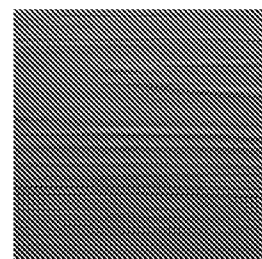
Khaki Brown ■ ●



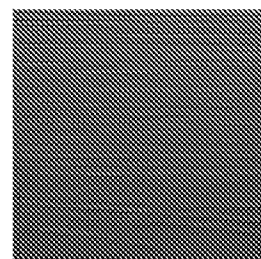
Heathered Moss ■



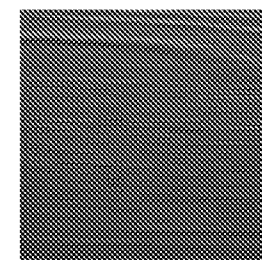
Mountain Sage ■



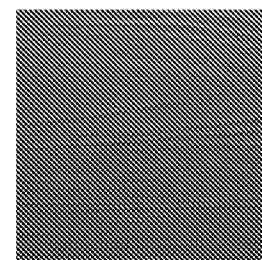
Brookhay Blue ■



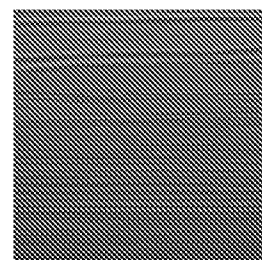
Evening Blue ■



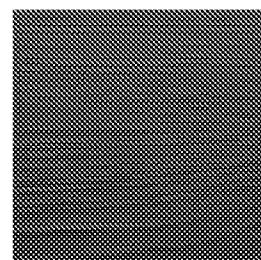
Traditional Red ■



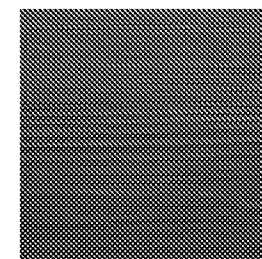
Chestnut Brown ■ ●



Timber Bark ■



Rich Espresso ■

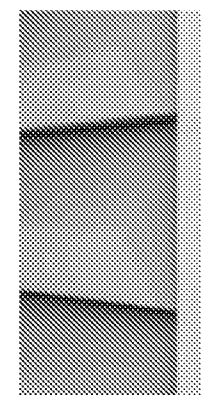


Iron Grey ■

Our colour palette has been developed with leading industry experts and is bespoke to cladding products from James Hardie.

The finishing touch

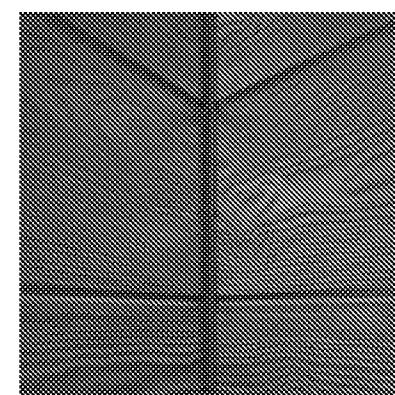
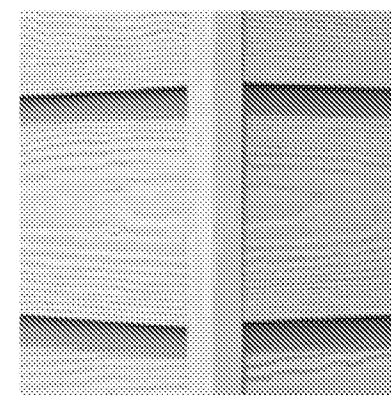
Trim is that final touch that completes your home's design. Accentuate corners, columns, doors, windows and more with our complementary trims.



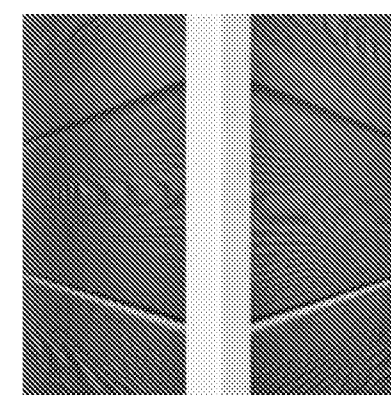
Hardie® NT3® Trim fibre cement profile
for exterior corners:
Dimensions: 3655 x 90/140 x 25mm



Hardie™ Plank MetalTrim™ profile
for exterior corners:
Length: 3000mm



Hardie® NT3® Trim profile
for interior corners:
Length: 3000mm



Hardie® VL Plank 2-Part profile
for exterior corners:
Length: 3000mm

Design flexibility



Hardie® Plank lap cladding combined with brick – Colour: Iron Grey



Hardie® Plank cladding in a combination of vertical hit and miss and horizontal overlap look –
Colours: Boothbay Blue and Arctic White



Hardie® VL Plank cladding installed horizontally – Colour: Arctic White



Hardie® VL Plank cladding installed horizontally – Colour: Anthracite Grey

Home renovations

This stunning refurbishment saw an extension and new build garage block transformed with render and Soft Green **Hardie® Plank** cladding, brought together to create an elegant countryside retreat.

The property, located near Galleywood Common in Chelmsford, was originally a self-build home constructed in the 1960s. Over time, the house aged badly and the owners decided a full refurbishment was due.



Before

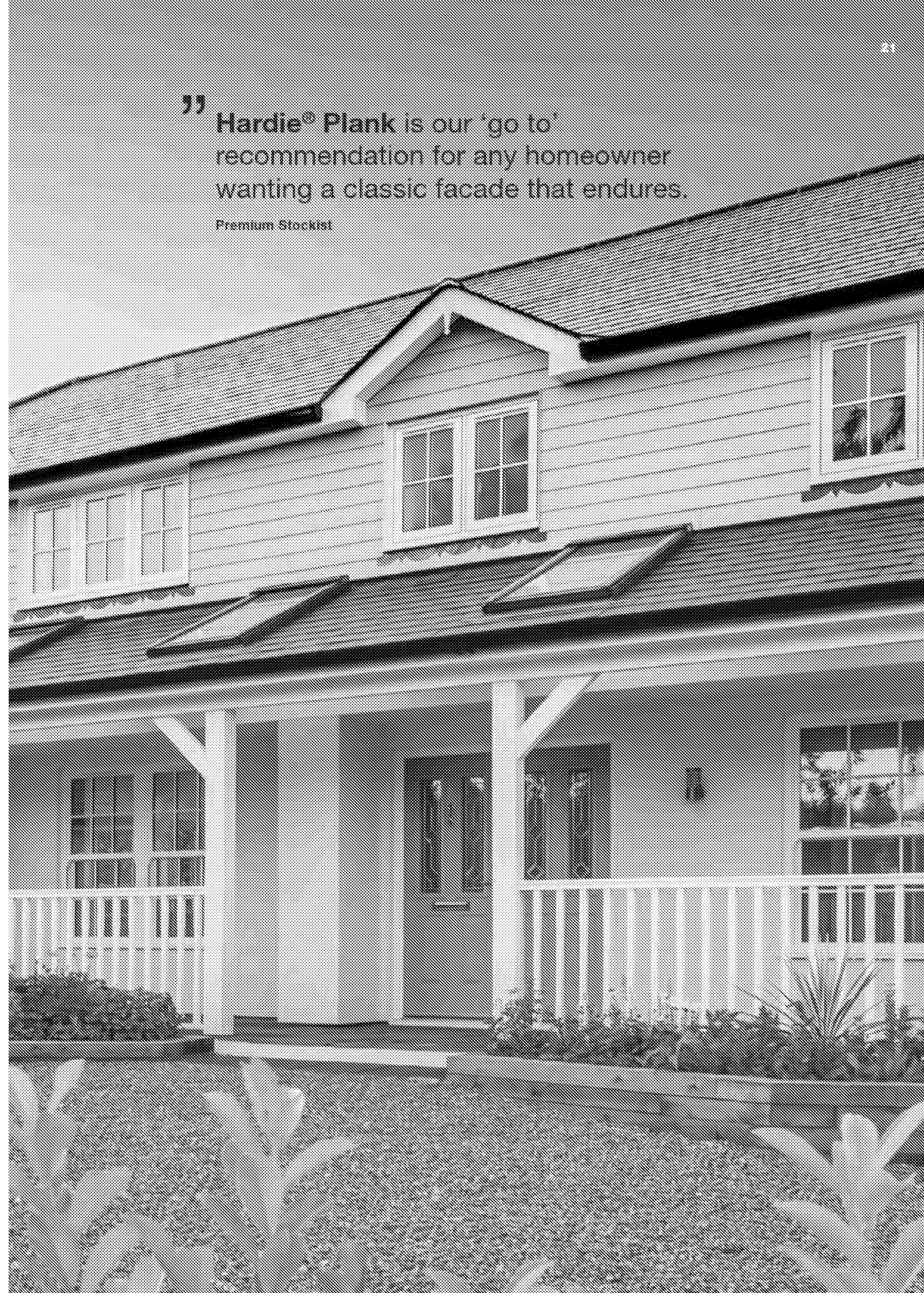
Hyland Homes was commissioned to overhaul the property through construction of a large extension and detached garage block. The end result is a complete transformation into what is now a highly desirable, classically designed home.



After

” **Hardie® Plank** is our ‘go to’ recommendation for any homeowner wanting a classic facade that endures.

Premium Stockist



” Mixing traditional with modern was key to our design and so we quickly switched to **Hardie® VL Plank** for the crisp, clean lines to contrast with the exposed stone.

Private Homeowner



This traditional home in Harrogate was extended at the rear with a new double-storey extension and contrasting tongue and groove **Hardie® VL Plank** cladding on the upper level.

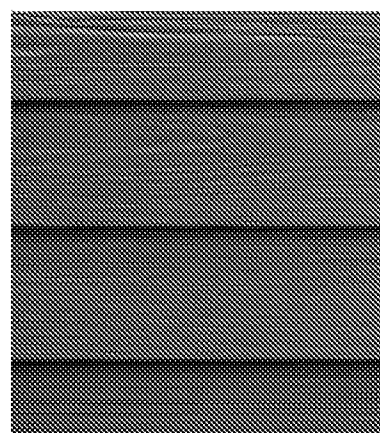
The homeowner chose Hardie® VL Plank boards for their fresh, symmetrical look and low maintenance properties.

Here, Anthracite Grey in Cedar texture complements the local stone to offer a strong contrast. The end result is a striking renovation that beautifully captures the character of the home's local heritage.

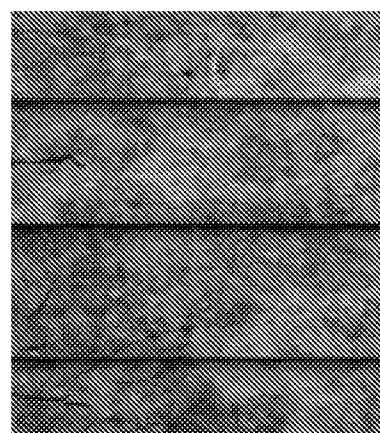


Future-proof your home

Choosing the right cladding for your home is an important decision, with each cladding type offering a variety of options in texture, colour, size, finish and installation method. Ultimately, the choice of facade material may be decided by a number of considerations.



Hardie® Plank range



Wood

Durability

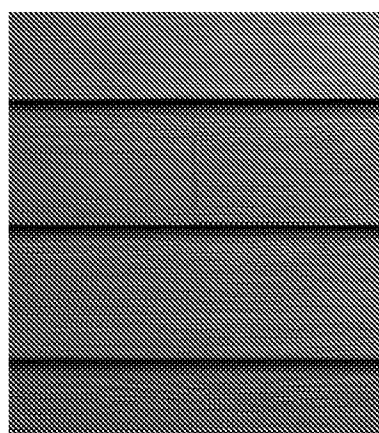
Thanks to its special yet natural composition, Hardie® fibre cement can withstand the effects of the weather in a wide variety of climates. For a permanently beautiful and durable facade.

Wood cladding and uPVC may be susceptible to fading, cracking and sagging over time.

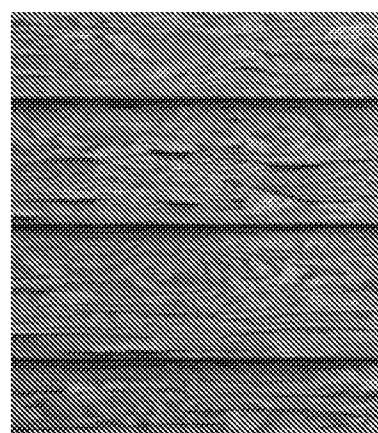
Low maintenance

Hardie® Plank range comes with ColourPlus™ Technology, a multi-coat, baked-on finish that is fade-resistant and does not require regular repainting.

As a result of fading, painted wood needs to be repainted every 5 years, and stained wood treated every 3 years. uPVC cladding may also be susceptible to fading, discolouration and cannot be repainted.



Hardie® Plank range

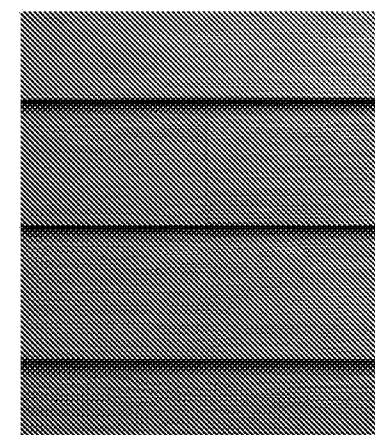


Wood

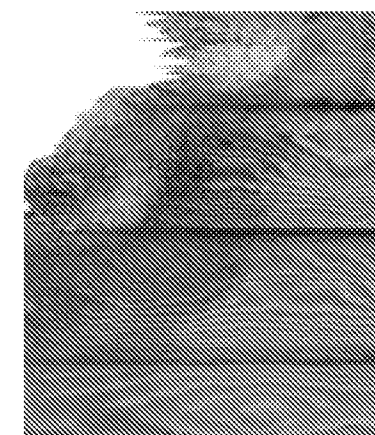
Fire resistance

Hardie® Plank range will not ignite when exposed to direct flame or extreme heat; it is non-combustible with a fire classification of A2-s1, d0 – the highest possible fire rating for a coloured facade board.

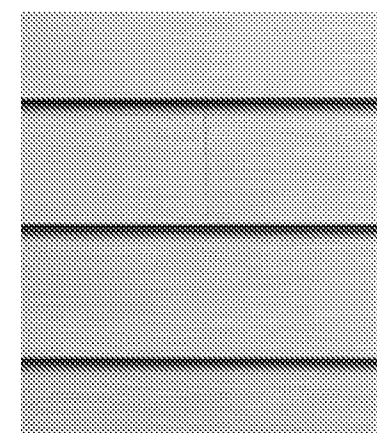
Combustible material like wood burns easily and very quickly, producing significant amounts of heat and smoke. uPVC cladding can melt and warp when exposed to fire.



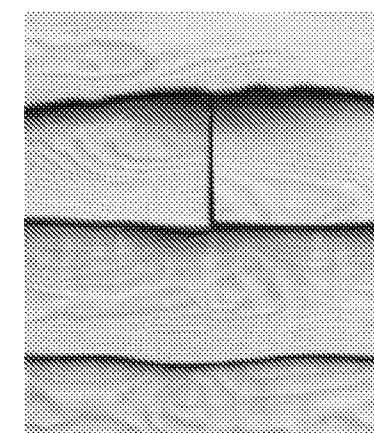
Hardie® Plank range



Wood



Hardie® Plank range



Wood

Moisture resistance

Tried and tested, our boards offer long-lasting protection and stand up beautifully, whatever the weather.

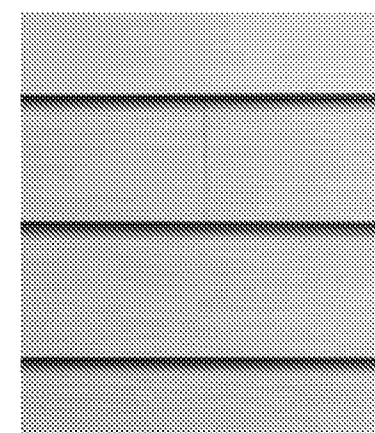
Humidity and precipitation may cause paint to crack and peel prematurely when using wood-based products as they expand and contract due to changes in climate conditions. Moisture may also cause rotting, swelling and shrinkage.

uPVC cladding is also known to become brittle and susceptible to cracking when cold.

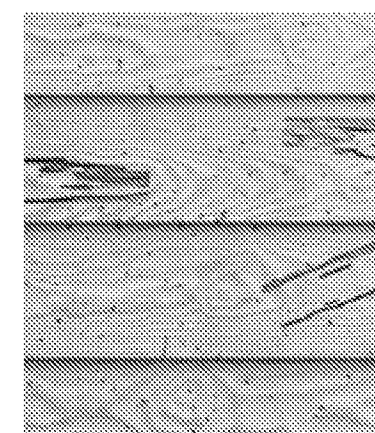
Pest resistance

Hardie® Plank range is resistant to pests and rodents, which can cause considerable damage to wooden facades.

Both wood and uPVC cladding are vulnerable to pest infestation. In the long run, the material would need to be replaced.



Hardie® Plank range



Wood

You will find the latest version of this brochure in digital form on our website. Technical modifications subject to changes. Should you require additional information, please contact our customer service. All our products with ColourPlus™ Technology come with a 15-year warranty. More detailed information can be found on our website. Last updated 03/2023.

© 2023 James Hardie Europe GmbH.
™ and ® denote registered and unregistered trademarks of James Hardie Technology Limited and James Hardie Europe GmbH.

**Hardie® Plank range
Personalised Sample Box**

Scan the code to order samples directly to your home.



**Hardie® VL Plank
Installation Video**

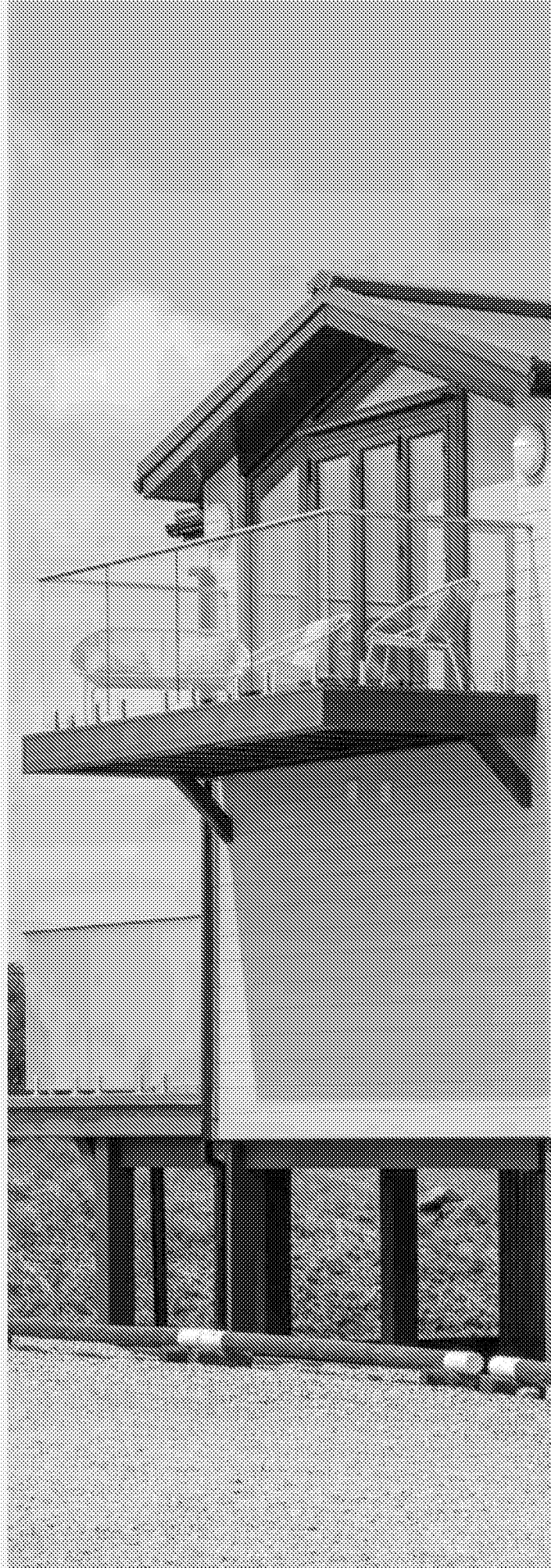
Scan the code to watch the step-by-step installation video.



James Hardie Building Products Ltd
7 The Priory
Old London Road
Canwell
Sutton Coldfield
B75 5SH

Contact information:

0121 695 6000



Hardie® Plank Products

