

SEPA Headquarters, Aberdeen



Priora, Natural

Challenge

There is no greater testament to the quality and sustainability of a product range than when the organisation that advises on environmental best practice chooses Marshalls' paving products for its new regional headquarters.

The project, co-ordinated by the Scottish Environment Protection Agency (SEPA), is a joint initiative between SEPA and Grampian Housing Association (GHA). The completed facility will create new office accommodation, laboratory facilities for SEPA and housing for GHA.

The development is a low energy office and laboratory facility that has been designed to achieve a BREEAM Excellent rating. This includes scoring almost 80 percent and achieving an 'A' rating for energy performance for the whole building.

The building is a partnership project under the SEARS (Scotland's Environment and Rural Services) banner, providing office accommodation, for staff

from SEPA, Scottish Natural Heritage (SNH) and the Joint Nature Conservation Committee (JNCC).

The architect's brief was to create a building and landscaped areas to the highest environment standards, which reflects SEPA's work in protecting Scotland's natural environment.

The 4,500m² building features three floors, including laboratories and offices, overlooking a residential area to the South and one of Britain's busiest harbours to the North.

Inverdee House was built to reflect this maxim, incorporating holistic design and complex technical controls to create an environmentally frugal building in terms of use of materials. As well as being conscious of the need to conserve resources, the building was designed to demonstrate that sustainability can become mainstream, whilst not sacrificing the comfort of occupants or its operational efficiency.

A key element of achieving this requirement externally was designing the car parking area using an innovative sustainable urban drainage system (SUDS).

Solution

Such a significant building in terms of environmental best practice, Inverdee House features a careful selection of landscaping materials from Marshalls.

Working in partnership with main contractor Robertson Construction, the consulting engineer URS and subcontractor Beacon Plant, Marshalls



Marshalls

Transforming Britain's Landscapes



La Linia and Priora, Natural

produced a range of paving solutions that met the design brief and sustainability requirements set by Keppe Design, the landscape architects. An important part of this was the incorporation of a SUDS system for the car park area. To ensure correct specification of SUDS, Marshalls offers a Water Management Design Service, including hydraulic calculation, site plans, component layout and a schedule of components.

Car parks

Marshalls' design team created the SUDS specification for Inverdee House using the Priora permeable paving system. This removes possible contaminants, such as petrol deposits from cars, which break down naturally within the sub-base, whilst heavy metals remain trapped at low concentrations. The system also ensures that major spillages on the paving remained controlled within a small area and do not get channelled into local river ecosystems.

The unique shape of the Priora block used on this project creates voids, which allows surface water to pass through to the sub-base. This ensures that the car park drains naturally at source, eliminating surface ponding and substantially reducing the risk of pollution and flooding in the sewer systems.

Priora permeable block paving from Marshalls was specified in Natural (grey) and Charcoal. The

patented interlocking of the Priora blocks means that it can be used for car park loading applications and is suitable for use in any scheme where standard concrete block paving is considered.

A key factor in the decision to specify Marshalls Priora permeable block paving range was the fact that it meets the requirements of Scotland's GBR10 (General Binding Rules) of the Controlled Activities Regulations (CARs). Within England and Wales, the Priora range from Marshalls helps meet the requirements of Part H Building Regulations, which requires specifiers to consider SUDS above traditional drainage solutions.

"We liked the fact that the Priora range could help us meet GBR 10 requirements in relation to surface water run-off, which made the decision to specify the range very easy," said Ben Ranger of Keppe Design. "The SUDS system will ensure that any contaminated run-off water from the car park area is now dealt with environmentally. The permeable paving system provides a demonstration of good practice in dealing with surface run-off and due to the heavy rainfall in this area, is a really important environmental initiative."

Entrance area

Light and dark shades of grey paving from Marshall's La Linia range were specified for the landscaped areas and the steps leading up to the

main entrance of Inverdee House. The architect required a distinctive pattern, with the lighter Grey Granite colour blending into the darker Anthracite Basalt in linear configurations. Grey Granite was used on the steps leading to the main entrance. Marshalls' technical team assisted the contractor by recommending exact quantities for specific shades of the La Linia range to meet the architect's brief.

Titan Drop Kerb and High Containment Kerb were specified for the front of the building to meet the needs of heavy duty vehicles, such as delivery trucks that use the area.

La Linia is a combination of high quality concrete block and flag-textured paving. It is available in seven colours, all of which have a subtle textured surface that can be used to create striking visual effects through both colour and form, as was the case at Inverdee House. It is suitable for any loading application, making it ideal for civil, retail and commercial applications. La Linia plan sizes can be combined to create limitless design possibilities - from simple to complex and traditional to contemporary.

Euan Mackinnon, Regional Drainage Engineer at Marshalls, explains: "Our team worked closely with the contractor to create an environmentally sound paving solution that provides a hallmark for sustainable landscape design in the future. In

addition, the effect that has been created with the use of La Linia paving around the entrance area is stunning, as it creates real impact, whilst remaining in keeping with the local area.”

Benefits

The paving played an important part in enhancing the sustainability and environmental credentials of this building.

Careful and accurate planning was important to ensure that exactly the right amount of material was specified in the right quantities, avoiding unnecessary waste. This was all part of the value engineering requirements as well as achieving environmental best practice by minimising the number of deliveries to site as part of offsite requirements.

A close working partnership between Marshalls and the contractors was important to ensure that the architect’s brief was met, in terms of design and the delivery of environmental initiatives.

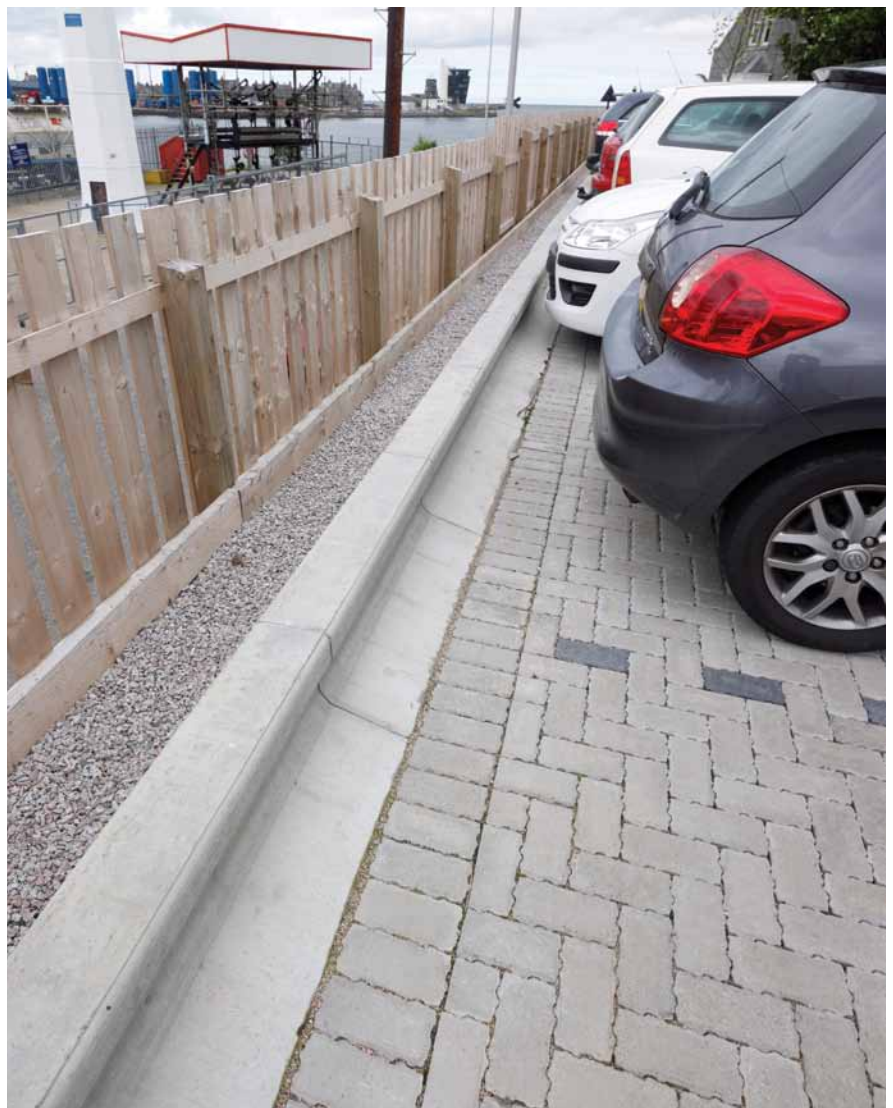
Ian Miskelly, Managing Director of Beacon Plant, said: We have a really good working relationship with Marshalls and found that their service on this project, including scheduled deliveries and quick response rates, was second to none in being able to meet all the project requirements.”

Central to this project was the need to demonstrate good environmental practice at all times to deliver a flagship building that used the very best and most up-to-date sustainable techniques. The SUDS system, along with sustainable technology within the building, is an integral element of making the development work with nature, rather than against it.

Inverdee House is now seen as an exemplar of good building design and landscaping. It certainly, without doubt, sets a standard for buildings across Scotland and indeed the whole of the UK, demonstrating the importance of landscaped areas in minimising our impact on the environment.



La Linia, Grey Granite



Titan High Containment Drop Kerb with Priora, Natural



Client:

Scottish Environmental Protection Agency (SEPA)

Architect:

Keppie Design – Edinburgh

Contractor:

Robertson Construction

Sub-Contractor:

Beacon Plant

Sub-Contractor:

URS - Glasgow

Marshalls Product Used:

- Piora permeable block paving in Charcoal and Natural
- La Linia block paving in Anthracite Basalt and Grey Granite
- Titan High Containment Drop Kerb

