

BIODIVERSITY NET GAIN (BNG) STATEMENT

Version 2

24 ST GEORGE CRESCENT, GRAVESEND, GRAVESHAM, DA12 4AR

1. Formal Compliance & Correction of Records

In response to the KCC Ecological Advice Service (EAS) consultation dated 01 April 2026, the applicant provides the following clarifications to rectify previous administrative discrepancies:

- **BNG Statutory Condition:** The applicant confirms the development is subject to the mandatory 10% BNG condition. The application form is amended and is attached with this statement.
- **Site Visit & Metric Timeline:** A comprehensive site walkover was conducted on **27/02/2026**. The Small Sites Metric (SSM) was subsequently completed on **28/02/2026**. This sequence ensures that the baseline data is grounded in a recent physical assessment. The mismatched date on the SSM is a clerical error, which has been corrected.
- **Relevant Date (Baseline):** To account for habitat degradation (82.0m² of hard surfacing installed in May 2025), the baseline habitat value has been backdated to **April 2024**. This results in a pre-development value of **0.06 Units**.

2. Proposed Habitat Specifications

A. Intensive Green Roof (28.4m²) – Extension Roof To mitigate the footprint of the rear extension, an **Intensive Green Roof** is specified for the 28.4m² flat roof area. Unlike standard sedum blankets, this system is designed for higher biodiversity "distinctiveness."

- **Utilization:** Provides a high-value "stepping stone" habitat for pollinators in an urban setting.
- **Substrate:** A 150mm–200mm deep engineered growing medium (lightweight crushed brick/compost mix) to support diverse wildflower species.
- **Planting:** Seeded with a native wildflower mix (e.g., *Emorsgate N6*) and plug-planted with hardy perennials.
- **Drainage:** Incorporates a dedicated drainage and storage layer to manage peak rainfall, contributing to the site's wider SuDS strategy.

Technical Build-Up (The Layers)

- . **Vegetation Layer:** A diverse mix of native wildflowers and small shrubs.
- . **Engineered Growing Medium (Substrate):** A specialized 150mm–200mm deep mix (e.g., **Bauder Intensive Substrate** or **Optigreen i-Type**). This is typically a blend of crushed brick, pumice, and organic compost designed for high water retention and structural stability.
- . **Filter Fleece:** A geotextile layer (e.g., **Polyfelt**) that prevents the substrate fines from washing into and clogging the drainage layer.
- . **Drainage & Storage Layer:** A "cupped" plastic board (e.g., **Bauder DSE 40** or **Optigreen FKD 25**). These cups catch and hold water for the plants during dry spells while allowing excess heavy rain to flow safely to the roof outlets.
- . **Protection Mat:** A thick recycled fiber mat to protect the waterproofing membrane from mechanical damage and provide extra water storage.
- . **Root Barrier/Waterproofing:** A specialized root-resistant membrane (e.g., **Bailey Atlantic TPO**) that ensures the building remains 100% watertight.

Recommended Species for 24 St George Crescent:

- . **Wildflowers (Nectar-rich):**

- *Galium verum* (Lady's Bedstraw) – Fragrant and excellent for moths.
- *Sanguisorba minor* (Salad Burnet) – Drought-tolerant and structural.
- *Centaurea nigra* (Common Knapweed) – A "superfood" for bees and butterflies.
- *Prunella vulgaris* (Selfheal) – Low-growing and spreads quickly to cover gaps.
- **Grasses (Structural):**
 - *Festuca ovina* (Sheep's Fescue) – A fine-leaved, non-aggressive grass that provides cover without smothering flowers.
- **Shrubs (For Intensive Depth):**
 - *Lavandula angustifolia* (Lavender) – Thrives in the sunny, exposed conditions of a roof and is highly attractive to pollinators.

The 28.4m² Intensive Green Roof is not a standard sedum blanket; it is a high-performance ecological asset. By utilizing a 150mm–200mm substrate depth, the roof supports a complex native wildflower community that provides significantly more biomass and nectar than extensive systems. Furthermore, its water-storage drainage layer acts as a primary SuDS component, attenuating up to 60-80% of annual rainfall at the source. This 'vertical stacking' of benefits allows the development to provide a high-value habitat on a footprint that would otherwise be ecologically inert, ensuring the 10% net gain is met entirely on-site."

B. Vegetated Grid System (19.4m²) – Sustainable Drainage System

In direct response to the KCC EAS recommendation to reclassify unvegetated porous paving, this 19.4m² L-shaped patio and passage at the rear garden is strictly specified as a **Vegetated Grid System** (Sustainable Drainage System)

- **Materials:** Vegetated grid system allows grass to grow through whilst providing hard standing.

- **Vegetation:** Joints are filled with a grit/soil medium and seeded with *Thymus serpyllum* (Creeping Thyme). This provides a vegetative cover, ensuring the area is classified as a "Sustainable Drainage System" habitat rather than a sealed surface.
- **Biodiversity Value:** By ensuring the use of vegetated grid system across the footprint, the feature provides active infiltration and ecological forage, satisfying the requirements for a vegetated habitat classification within the Small Sites Metric
- **"Justification for SuDS Infrastructure: Vegetated Grid System for Pedestrian Amenity"** "While traditionally utilized for reinforced driveways, the Pavestone GrassPark (or equivalent) system has been specifically selected for the 19.4m² L-shaped passage and patio to ensure maximum ecological 'porosity.'

pavestone.co.uk/driveway-landscaping/concrete-block-paving/grasspark/



GRASSPARK

GrassPark is a permeable paving grid which allows grass to grow through whilst providing hard standing suitable for parking cars and vans on. Ideal for creating discreet, extra parking spaces, yet at the same time keeping the area essentially grassland.

GrassPark facilitates natural drainage of rainwater into the subsoil and, as such, should negate the requirement for planning permission when used to pave front gardens for hard standing. As with every construction project, it is always advisable to check with the relevant local planning authority prior to starting your project.

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Coverage

600mm x 400mm x 100mm

27 units per pallet

4.2 units per m²

27 units (1 pallet) covers approximately 6.5m².

Available to order in exact quantities as required.

Example of the proposed open-cell grid system. Note that for this project, cells will be seeded with flowering Creeping Thyme rather than grass to maximize nectar production for BNG targets.

. **Status:** Unlike standard permeable block paving with 2–5mm grit-filled nibs, the GrassPark system features large-format open cells. These cells allow for a substantial growing medium depth, supporting a resilient carpet of *Thymus serpyllum* (Creeping Thyme). This ensures the area functions as a **High-Distinctiveness Sustainable Drainage System (SuDS)** rather than an inert 'Sealed Surface.'

. **User Safety & Accessibility:** The grid provides a rigid, 'no-sink' structural surface that is essential for a residential care home setting, ensuring stability for residents with mobility aids while simultaneously allowing 100% of surface water to reach the vegetative root zone.

. **Thermal Regulation:** By replacing solid paving with a vegetated surface, the system actively mitigates the 'Urban Heat Island' effect within the rear amenity space, providing a cooler and more comfortable microclimate for residents compared to standard concrete or stone patios

C. Rain Gardens (49.0m²) & Bioswale (5.0m²)

- **Frontage:** Two rain garden parcels (24.0m² and 25.0m²) are established at the front of the dwelling.
- **Rear:** A 5.0m² linear bioswale is integrated into the parking area to filter runoff.
- **Condition:** In direct alignment with KCC guidance, these are targeted at '**Moderate**' condition to ensure the management plan is realistic and achievable for a residential care home setting.

Detailed Botanical Specification for Rain Garden

1. Frontage Rain Gardens (49.0m² Total)

These gardens are designed to manage roof runoff. They require a "Zoned" planting approach to handle varying water levels: the "Basin" (wettest), the "Slope" (transitional), and the "Rim" (driest).

- **Basin Zone (The Center):** High-moisture plants that can tolerate temporary standing water.

- *Iris pseudacorus* (Yellow Flag Iris): Provides structural height and excellent filtration.
- *Lythrum salicaria* (Purple Loosestrife): Vital for pollinators and highly resilient.
- **Slope Zone (The Sides):** Plants that prefer damp soil but can tolerate dry spells.
 - *Caltha palustris* (Marsh Marigold): Early spring nectar source with bright yellow flowers.
 - *Juncus effusus* (Soft Rush): Provides year-round green structure and erosion control.
- **Rim Zone (The Edge):**
 - *Filipendula ulmaria* (Meadowsweet): Fragrant creamy-white flowers.
 - *Geranium pratense* (Meadow Cranesbill): Adds color and is very hardy.

Detailed Botanical Specification for Bioswale

The bioswale is a linear feature designed to filter hydrocarbons and silt from the parking area. It requires deep-rooted, "workhorse" plants that provide high-surface-area filtration.

- **Primary Filtration Layer:**
 - *Carex pendula* (Pendulous Sedge): Deep roots help with soil stabilization and water infiltration.
 - *Deschampsia cespitosa* (Tufted Hair-grass): A dense, tussock-forming grass that traps sediment effectively.
- **Pollinator Support:**
 - *Succisa pratensis* (Devil's-bit Scabious): Specifically chosen for its late-season flowering, supporting late-flying insects.
 - *Mentha aquatica* (Water Mint): Fast-growing and provides excellent ground cover to suppress weeds.

3. Strategic Significance & LNRS Alignment

In accordance with the publication timeline of the Kent and Medway Local Nature Recovery Strategy (LNRS), all proposed habitats are assigned the strategic

significance of **Area/compensation not in local strategy/ no local strategy'**. This ensures the metric calculation is conservative.

4. Technical Maintenance & Management

. **Year 1-2 (Establishment):** Monthly weeding and watering during dry spells to ensure 90% plant coverage.

. **Annual Maintenance:**

- **Autumn/Winter Cut-back:** Dead vegetation is cleared after the first frost to prevent "smothering" and to allow new growth.
- **Inlet Inspection:** Ensuring the curb cuts or pipes feeding the rain gardens/swale are free of debris and silt.
- **No Chemicals:** A strict "no-pesticide/herbicide" policy to protect the soil ecology.

5. Conclusion

By utilizing horizontal intensification (Intensive Green Roof and Rain Gardens) and functional green infrastructure (Vegetated SuDS), the development successfully overcomes the identified deficit. The revised strategy delivers a **net gain exceeding 10%**, fulfilling the requirements of the Environment Act 2021 and the Gravesham Local Plan. The **Rain Gardens, Bioswale and Intensive Green Roof** utilize a multi-layered native planting strategy consisting of *Iris pseudacorus*, *Carex pendula*, and *Lythrum salicaria*. This palette was selected not only for its high filtration capacity but for its resilience in an urban care home setting. By adhering to a prescriptive maintenance schedule—including annual sediment removal and a chemical-free weed management policy—the habitats will reach and maintain the '**Moderate**' **condition** used in the Small Sites Metric calculation