Building with Nature

Vaux, Riverside Sunderland

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FULL

Development Name: Vaux, Riverside Sunderland
Location: Sunderland
Type of Project: Residential
Applicants: igloo Regeneration on behalf of Siglion Developments
BwN Assessor: Carol Somper, SoSustainable
BwN Award: Full, subject to post-construction sign off
Key Stakeholders: Sunderland City Council, Proctor & Matthews Architects, Mawson Kerr, Camlins

'Vaux, Riverside Sunderland' demonstrates how better outcomes for people and nature can be achieved, even in the context of urban, high-density housing development, when a developer is committed to responding to the climate and ecological emergencies.

The Vaux site, part of Riverside Sunderland, a neighbourhood scale area of regeneration, is located on the Vaux peninsula, close to Sunderland city centre. Previously the site was occupied by a grid of streets and a mix of small-scale commercial and industrial premises, with an enclave of housing to the west. The site is bounded to the north and west by steep cliffs above Riverside Park, to the east by a commercial building, and to the south by several commercial plots. igloo Regeneration's proposals for Vaux, Riverside Sunderland include the construction of 132 new high-quality homes with a mix of types including terraced houses, stacked maisonettes and apartments, some small commercial units at key locations, and high-quality green infrastructure and public realm, with several key pedestrian routes being retained and improved through the development proposals.

igloo Regeneration used the Building with Nature Standards to guide the design process and ensure that the site's green infrastructure will deliver enhanced community wellbeing, climate resilience and benefits to wildlife.

A Building with Nature Full Award externally certifies that a scheme meets the BwN Standards and delivers high-quality green infrastructure, at both pre- and post-construction stages.

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Introducing Building with Nature

At Building with Nature our mission is to put high-quality green infrastructure at the heart of placemaking in the UK, maximising benefits for people and wildlife. By bringing people closer to nature and building great places for us to live, work and play, development can make a major contribution towards better health and wellbeing in our communities and tackling the climate and ecological emergencies.

Building with Nature is the first evidence-based benchmark for high-quality green infrastructure in the UK. The BwN Standards Framework has been created in partnership with planners, developers, and other key stakeholders, providing a shared understanding of 'what good looks like' throughout the whole lifecycle of green infrastructure – from the policy framework and early-stage design, through to implementation, and long-term management and maintenance. The BwN Standards are free to use and can be downloaded from the BwN website. Building with Nature also provide a voluntary accreditation process, helping developers and other stakeholders move through the planning process more effectively, and providing an independent verification of quality when it comes to green infrastructure assets.

This case study demonstrates how this scheme's green infrastructure meets the BwN Standards, illustrated through the BwN themes of Core, Wellbeing, Water and Wildlife.

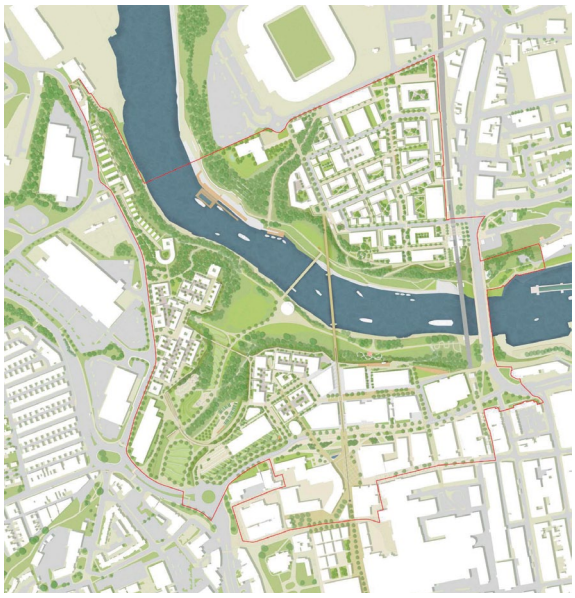

Figure 1: Snapshot from SCC Riverside Sunderland Masterplan showing location of Vaux site alongside the Wear Basin

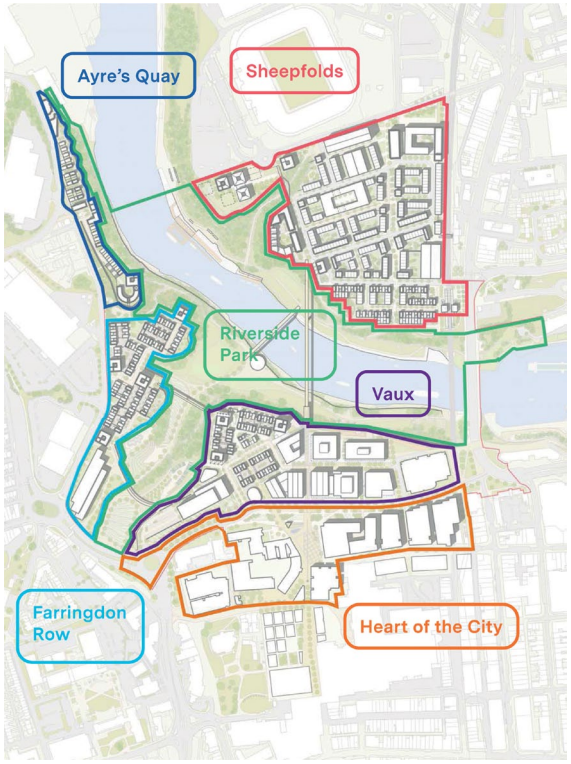

Figure 2: Snapshot from SCC Riverside Sunderland Masterplan showing location of Vaux site in context of wider plan area

Scheme Green Infrastructure Objectives

The vision for the green infrastructure, including the layout and location, and design approach for the landscape and ecology, is set out in the Vaux Housing Design Access Statement and associate technical reports. The scheme has been designed to meet the ambition set out by the Sunderland City Council (SCC) in their masterplan for 'Riverside Sunderland', whilst addressing the specific needs and strengths of the Vaux site. The proposed network of green infrastructure features aims to restore locally valued greenspace, as well as creating new high-quality public greenspace and a landscape-led public realm that responds to local needs. The green infrastructure has been designed to support sustainable placemaking and community building by creating new spaces which meet the needs of existing and new communities. For example, the proposals enhance the existing local character by creating a new urban edge and by introducing five distinctive 'character areas', each integrating new high-quality green infrastructure for the benefit of people and wildlife, now and long into the future. The existing site has low ecological value, so the scheme is set to demonstrate the potential of high-density development to contribute positively to biodiversity and nature's recovery, whilst delivering a high-quality, high-value scheme in an urban context.

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CORE Standards

Standard 1 Optimises Multifunctionality and Connectivity
Standard 2 Positively responds to the Climate Emergency
Standard 3 Maximises Environmental Net Gains
Standard 4 Champions a Context Driven Approach
Standard 5 Creates Distinctive Places
Standard 6 Secures Effective Place-keeping

The development of the green infrastructure plans was scoped via extensive community outreach and engagement to fully identify multi-functional opportunities and benefits that successfully meet the identified needs, priorities, and strengths of the local area. The proposals reflect the policy requirements as detailed in the SCC Masterplan, and Sunderland City Vision for 2033. The design proposals include high-quality green infrastructure that contributes positively to several local needs and priorities set out in this vision, for example, the delivery of new accessible and usable open space, creation of a high-quality nature environment that is resilient to climate change, and the delivery of a green infrastructure network which secures outcomes for people and wildlife.

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Figure 3: Snapshot of proposed greenspaces for the Riverside Sunderland Masterplan area

Image 2: Image showing the location of the Vaux site on a plateau, overlooking the Wear Basin

The plans demonstrate a climate resilient design approach, including details relating to Sustainable Drainage Systems" (SuDS), planting selection for particulate interception and removal, and biodiversity gains. The selected design and layout also provides shade in the public open space and protects against the effects of wind to provide comfortable micro-climates. Low carbon behaviour is encouraged through provision for green, convenient, and safe active travel routes.

A Landscape Management Plan with an integral management schedule sets out the detail of management agreements for post construction establishment, and a Section 106 Agreement has been finalised. A Property Management Company will be legally responsible in perpetuity for realising the full potential of the landscape design scheme, biodiversity targets for net gain and for achieving community-friendly, managed green infrastructure.

WELLBEING Standards

Standard 7 Brings Nature Closer to People
Standard 8 Supports Equitable and Inclusive Places

Vaux, Riverside Sunderland will optimise use and enjoyment of new green infrastructure delivered as part of the development, encouraging physical access, visual access, and auditory access. This recognises the different needs of different users, for example proposals integrate 'cultural sensitivities' with a recognition that there will be potential barriers to use and enjoyment for some groups if dog walkers are not restricted from certain areas. Green infrastructure has been designed in response to the scheme's Health Impact Assessment, highlighting positive impacts that will be expected as a result of the development across a range of health impact areas including 'access to open space and nature', 'social cohesion and lifetime neighbourhoods', and 'air quality, noise and neighbourhood amenity'. The layout and orientation of green infrastructure features optimise natural surveillance, use and enjoyment at all times of year and in all weathers, and create opportunities for socialising in semi-private and public open spaces across the development, with Kingsley Gardens offering a focal point for both existing residents from the local area as well as new residents moving into the development. There is a range of different types and scales of green infrastructure that aim to create "people-centred spaces", including a landscaped play space, pedestrian walkways, seating areas, orchard areas. The Public Realm Access and Movement strategy also illustrated design thinking about prioritising use and enjoyment of pedestrians across the site, which can often be a barrier for use and enjoyment.

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Image 3: Snapshot taken from SCC Masterplan depicting the proposals for Riverside Park, in adjacency to the development site, offering new functionality within this high-quality public park setting

WATER Standards

Standard 9 Delivers Climate Resilient Water Management
Standard 10 Brings Water Closer to People

The design of the scheme's approach to water management enhances the site's location and context within the regeneration of the riverside area. In line with the layout proposals and planting plans, surface water attenuation will be directed to Galley's Gill so that the Riverside Park area then forms the catchment for the development site.

The site has a low to medium flood risk, including tidal, fluvial, existing drainage, proposed drainage, infrastructure failure, overland/surface water flooding, and ground water. The scheme proposes to manage water quality and quantity through a combination of features including integral green infrastructure elements e.g. planted swales and rain gardens.These surface water management features will be managed by the developer during the post construction establishment phase and handed over to a Property Management Company in perpetuity as agreed in the S106 agreement.

Image 4: Photo showing Riverside Park area which forms the catchment area for the development

Image 5: Photo showing Riverside Park which provides a strong landscape context for the development

By including provision for a high proportion of soft landscape and permeable surfaces to optimise climate resilience, the SuDS manage both flood risk and drought tolerance of the landscape overall, whilst introducing potential benefits for people and wildlife by creating new habitats, and opportunities for interaction with the landscape.

WILDLIFE Standards

Standard 11 Delivers Wildlife Enhancement
Standard 12 Underpins Nature's Recovery

Although the existing site has limited and low-quality green infrastructure in terms of biodiversity value, the scheme's green infrastructure avoids, mitigates, and compensates for impacts on existing biodiversity, and restores, creates, and enhances biodiversity, within and beyond the boundary of the scheme.

The Vaux West Ecological Impact Assessment (EIA) shows that existing habitats have 'within-site importance' only, with the absence of populations of protected or priority species. As such, the wildlife enhancements integrated in the green infrastructure proposals support local biodiversity targets and landscape-scale conservation priorities, by introducing new habitats within the site boundary, and creating new linkages to habitat beyond the site boundary, increasing the wildlife enhancement potential of the scheme.

The results of the Biodiversity Metric 2.0 calculations carried out for the scheme anticipate a net percentage change of 11.62%, including all on-site and off-site habitat creation and retained habitats. This biodiversity gain will be achieved by creating a range of habitats including large and connected areas of habitat in and around buildings, including species rich grassland, meadow habitat/'biodiverse lawn', a mix of native and naturalised tree species, flowering perennials, grasses, ferns, and pollinator-friendly planting. In addition, integral green infrastructure features are illustrated in the proposals, including bird and bat boxes, set out in the ecology section of the Landscape Management Plan.

Image 6: Photo showing Riverside Park area, beyond the site boundary, which will be enhanced by the development, introducing benefits for people and wildlife

Policy Applications

Vaux, Riverside Sunderland successfully meets the policy vision set out in the Sunderland City Council masterplan. The proposals demonstrate a holistic approach to placemaking, referencing the site's context and history, to create a modern green infrastructure network aligned with national and local planning policy good practice. The network restores locally valued greenspace by creating new public greenspace and public realm that fully responds to local needs. The development of the green infrastructure network was scoped via extensive community outreach and engagement to fully identify multi-functional opportunities and benefits.

Image 7: Photo showing street trees as part of new green infrastructure coming forward within the Riverside Sunderland Masterplan area

Summary

Although Vaux, Riverside Sunderland is in an urban edge location and comprises high-density housing clusters, adjacent to commercial buildings, the approach to landscaping complements and softens the impact of the development and makes the most of the boundary with the Riverside Park. The green infrastructure proposals demonstrate a clear commitment to positively respond to the climate and ecological emergencies, with integral SuDS features, climate resilient planting and biodiversity gains. Further, the approach to the design of the public realm demonstrates a strong commitment to delivering outcomes for the health and wellbeing of residents, visitors, and the wider community. Vaux, Riverside Sunderland, is set to be an exemplar development, setting a benchmark in the wider Sunderland City Council masterplan area, and the region as a whole.

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Image 8: Snapshot taken from SCC Masterplan depicting the proposals for Vaux

"Vaux, Riverside Sunderland is the first phase in a major urban regeneration project creating a new 21st century city-centre neighbourhood. The scheme is bringing to life Sunderland's vision to create a new urban quarter that redefines the city as a beacon for change, with sustainability, and green and waterside landscapes built into a new kind of city-living. Applying Building with Nature to the Vaux scheme helped igloo to effectively integrate multi-functional green infrastructure across the site, which will mitigate the impacts of climate change, support greater biodiversity, and create opportunities for residents and visitors to live active lives and enjoy abundant natural spaces. Building with Nature's Standards align with igloo's approach to supporting People, Place and Planet, and we are delighted to have achieved a Building with Nature Full Award for Vaux Riverside, affirming that the scheme really is delivering a great place for people and for nature."

Gary Watt, Development Manager with igloo Regeneration

Useful Links

Building with Nature: www.buildingwithnature.org.uk

Applicant: www.igllooregeneration.co.uk

BwN Assessor: www.sosustainable.co.uk

Download the BwN Standards: www.buildingwithnature.org.uk/standards-form

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