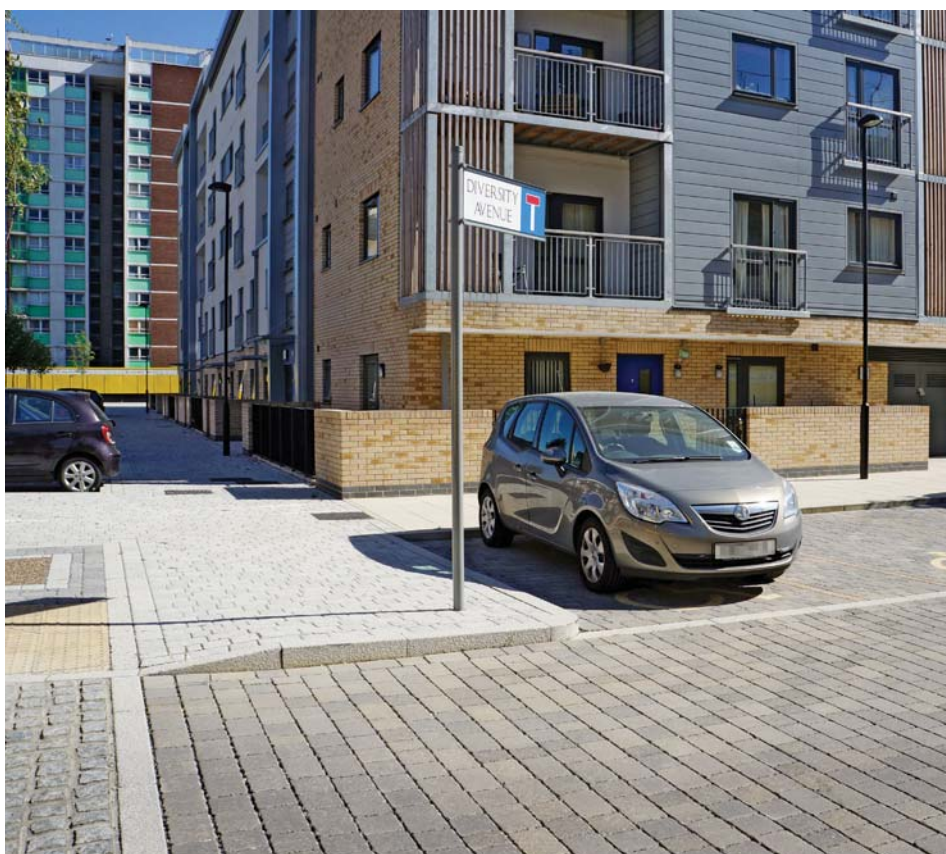


- Regeneration of the 1960s Mardyke Estate
- Phased development with overarching master-plan
- A restrained palette of precast concrete hard landscape products including permeable paving
- Project re-visits over 6 years

ORCHARD VILLAGE LONDON EDITION 2



Location

Orchard Village is somewhat isolated just to the north of New Road – a dual carriageway which runs parallel with the A13 between central London and the M25. The original estate was based on a cul-de-sac layout with large parking courts – generally unused by residents – and other 'dead' areas not overlooked by dwellings. The isolation from the surrounding area is exacerbated by poor public transport links.

Sensitive Situation

The Beam River runs along the western boundary of the site, bounding a multi-award-winning wetland park, Beam Parklands (shown below) – home to a variety of wildlife including Great Crested Newts.



The Master-plan

The brief for the scheme was developed in conjunction with the residents, the borough and Old Ford Housing Association to create a sustainable community. Comprehensive and effective consultation proved critical in the process of exploring options and developing a master-plan for the area with the residents having a key role in the regeneration process. The master-plan and later designs are clearly influenced by current guidance such as the *Urban Design Compendium* and *the Manual for Streets*.

The master-plan consisted of:

- Demolition of the original Mardyke Estate buildings
- Provision of up to 555 new dwellings
- Open space improvements
- A new Local Square with new local shopping facilities and office accommodation.



Developing the Design

Four key elements of the development concept sought to address the issues identified and achieve the master-plan's aims:

- The Mixed-Use Street establishes key connections between the development and the surrounding neighbourhoods, and enables a choice of transport modes. It overcomes existing constraints on bus operations, ensures ease of access and use for pedestrians and cyclists, and allows other traffic to pass through the area safely.
- A new Local Square anchors community services, public transport and open space. It creates a vibrant, mixed-use zone that acts as a focus within the neighbourhood.
- Distinctive Neighbourhoods, defined by higher density development around the Local Square and in the north of the site, decreasing towards the south along the links to New Road.
- A Green Network of streets and spaces throughout the new development provides visual focus and amenity between the existing parks and open spaces within the surrounding area.



The Local Square.



The External Environment

An important element of the overall design is the creation of a clear and legible hierarchy of roads, streets, paths and cycle-ways permeating throughout the site. This includes a main vehicular and bus route through the site, secondary roads and shared surfaces.

Hard paving materials, street furniture and planting vary with each different road type, ranging from formal and structured along the main route, to informal materials and planting along the shared surfaces. The provision of tactile surfacing, dropped kerbs and smooth, even paving throughout the estate – to encourage inclusivity for all and ease of movement by disabled people and pushchair users – was particularly important.



Hard Landscape Materials

A simple palette of hard landscape materials defines the road hierarchy and creates a language that unifies the whole site. Simple and 'clean' materials predominate, so that an open feel to the site is maintained. The precast concrete block paving was carefully selected to complement the buildings, with a silver grey granite finish. Concrete kerb units are also used extensively – both raised and flush with the paving – as well as concrete flag paving, granite setts and buff bound gravel.

Concrete Block Permeable Paving

As part of a general approach towards improving ecology and biodiversity on the site – bearing in mind its proximity to the Beam River and wetland park – water management using SuDS techniques was considered important. Extensive areas of concrete block permeable paving are used throughout.

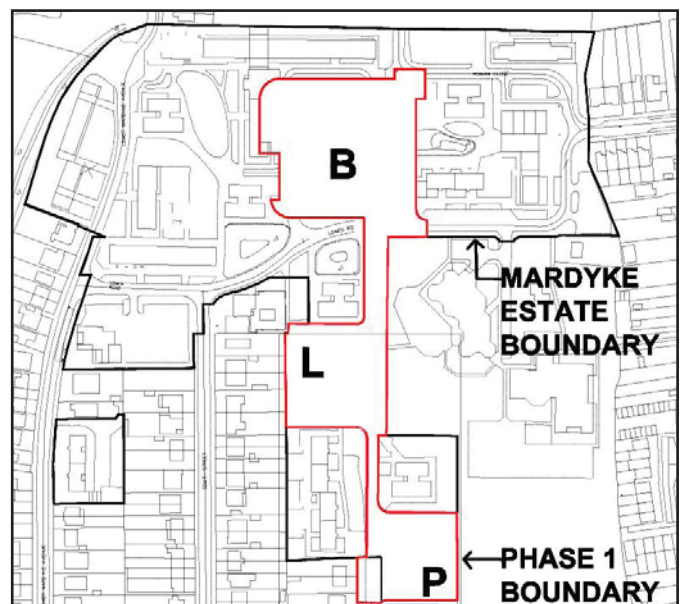


A Phased Approach

The phasing framework for Orchard Village links together demolition and new build proposals in a step-by-step approach, ensuring that traditional streets remain connected and that properties are secure, with minimum disruption to existing residents throughout the regeneration process.

Phase 1

The following pages show hard landscape design drawings for the now-completed Phase 1: firstly the southern half leading in along Walden Avenue from New Road (photos on this page), then moving north to the first of the higher density urban courtyard buildings, Block B. The drawing Key and descriptions of hard landscape and other surfaces for Phase 1 can be found on page 8.



Phase 1 – Southern Half










Phase 1 – Key

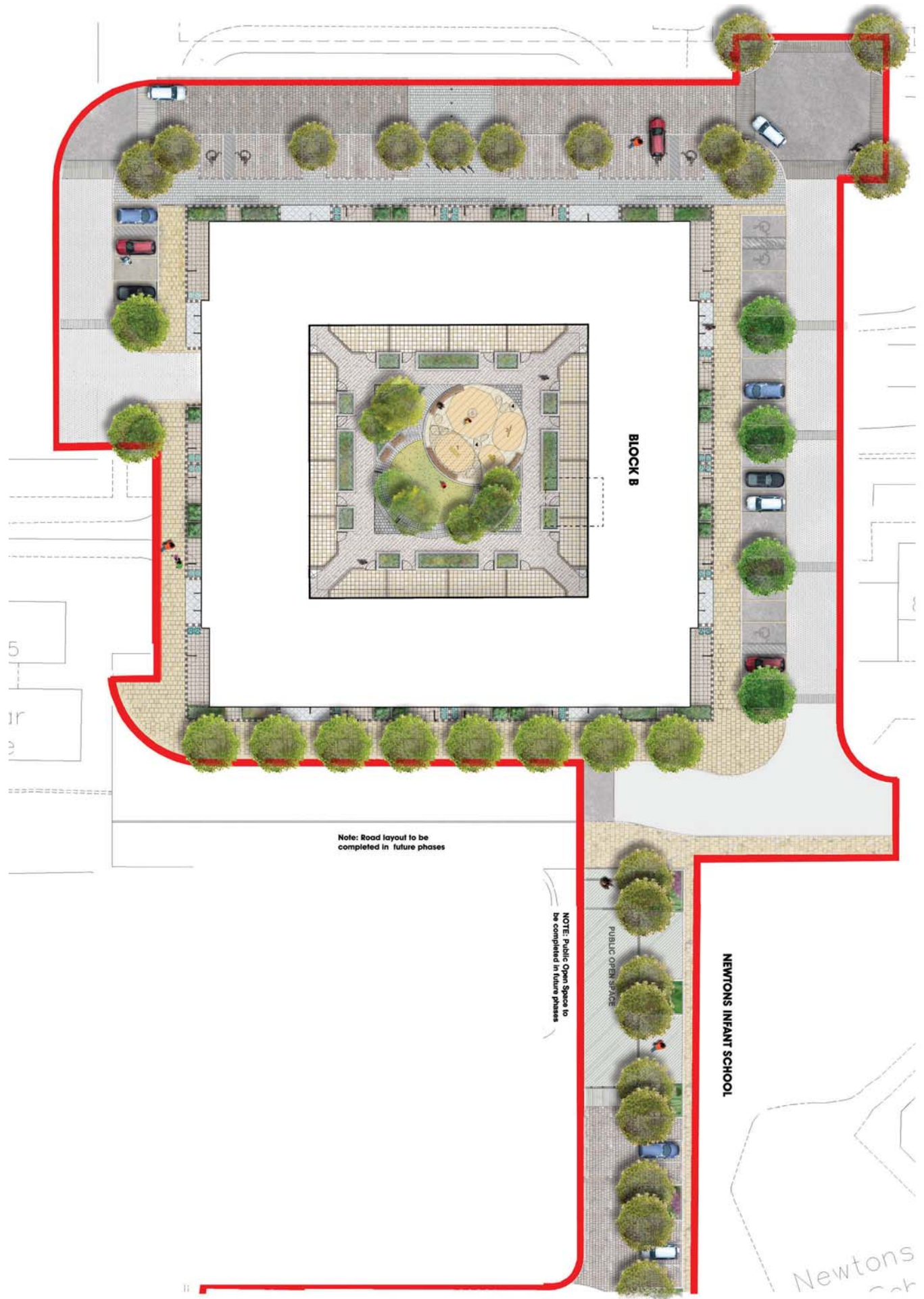
Identification and descriptions of hard landscape and other surfaces for Phase 1, shown in drawings on pages 7 and 9.

	PHASE 1 BOUNDARY		BOLLARDS Square profile hardwood timber bollards Height: 1000mm above ground level. Plan size: 200x200mm With stainless steel sockets for removable bollards
	FOOTPATH 450x450mm textured concrete paving units Col: Natural		SHRUB PLANTING Refer to Planting Plan for specification for more information
	PARKING BAYS Permeable paving setts Size: 160mm gauge, Col: Dark Grey		TREE PLANTING Refer to Planting Plan for specification for more information
	PARKING DEMARCATION Permeable paving setts Size: 120x160mm, Col: Buff		CYCLE PARKING Stainless steel cycle stands
	TREE GRILLS 1200x1200mm square cast iron tree grill		KERBS TO ADOPTED ROADS Standard concrete kerb Size: 125x255mm
	TREE PITS - WITHIN SHARED SURFACES 1200x1200mm Resin bound gravel. Col: Beach /Gold (or similar) Surface course: 6mm resin bound gravel to 18mm depth. 50mm clearance loose gravel around trunk.		REFUSE / RECYCLING Bin storage area to fit 2no. 240 litre wheelie bins
	KERBS TO PRIVATE ROADS Concrete kerb. Col: Natural. Size: 145x255mm		RAISED TABLE - ADOPTED ROADS 100x200mm concrete block paving. Col: Mid grey
	EDGING Concrete edging. Col: Natural. Size: 63x150mm		KERBS 25mm high upstand kerb
	RUMBLE STRIP 1000mm wide strip of 100x100x100mm Reclaimed Granite Setts Colour: Charcoal		VEHICULAR AREAS INCLUDING PARKING BAYS Permeable textured granite aggregate setts. Col: Charcoal. Size: 160mm gauge. Parking demarcation Col: Silver Grey, Size: 160x120mm
	ENTRANCES TO BUILDINGS Textured concrete paving units 300x300mm. Col: Silver Grey		
	ROAD Tarmac in accordance with engineers specification		
	POROUS ROAD SURFACE Porous asphalt system in accordance with engineer specification		
	RAISED TABLE ON PRIVATE ROADS Permeable paving setts. Size: 160mm gauge. Colour: Dark Grey		
	SHARED SURFACE - VEHICULAR AREAS INCLUDING PARKING BAYS Permeable textured granite aggregate setts. Col: Charcoal. Size: 160mm gauge. Parking demarcation Col: Silver Grey, Size: 160x120mm		
	SHARED SURFACE - PEDESTRIAN AREAS Permeable textured granite aggregate setts. Col: Silver Grey Size: 160mm gauge.		
	SHARED SURFACE - PUBLIC OPEN SPACE Textured concrete block paving Size: 600x300mm. Colour: Light Grey. Bond Pattern: Stretcher bond Herringbone pattern if required in areas of vehicular access		
	FEATURE PAVING STRIPS - PUBLIC OPEN SPACE 2 rows of textured concrete block paving units. Size: 100x100mm Col: Charcoal		
			LAWN

Communal Areas (within Blocks)

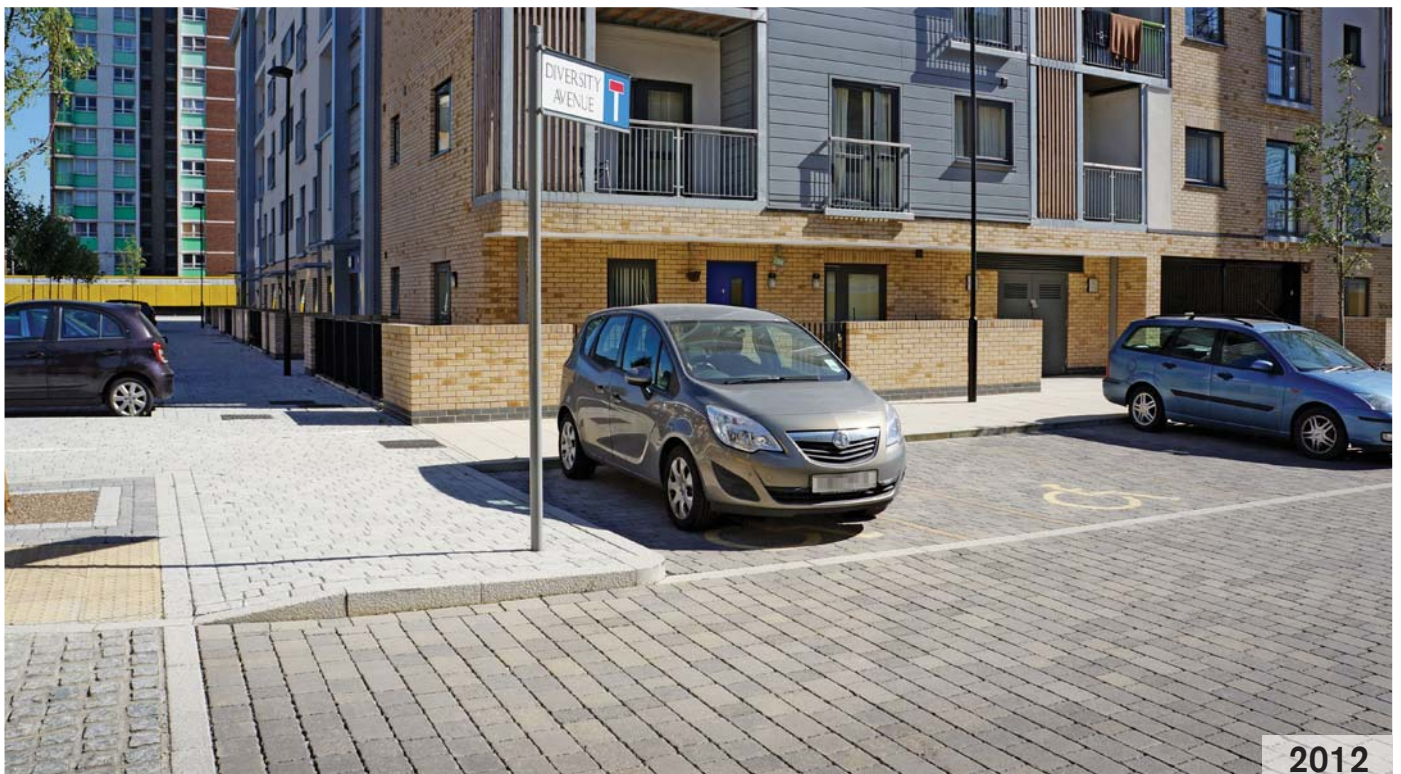
	PAVING - PRIVATE PATIOS Textured concrete paving units. Size: 450x450x50mm. Col: Natural
	PAVING - MAINTENANCE PATH Standard concrete paving units. Size: 450x450x50mm. Col: Natural
	PAVING Textured concrete block paving units. Size: 100x200x80mm, 200x200x80mm, 300x200x80mm. Colour: Light Granite. Stretcher bond.
	PAVING Textured concrete block paving units. Size: 300x200x80mm Colour: Dark Granite. Stretcher bond.
	PAVING - STEPS Textured concrete block paving units. Colour: Light Granite Size: 300x200x80mm, 200x100x80mm. Bond pattern: radial pattern Conservation Kerbs to be used as risers. Size: 145x255mm, 450mm length straights, chamfered around curve.
	RAISED PLANTERS Planter walls to be 500mm high concrete upstand with 200mm thick RC Type 1 Class B fair face concrete wall.
	EDGING Edging to turf and resin bound gravel paths: Concrete Edging 63x150mm

Phase 1 – Northern Half



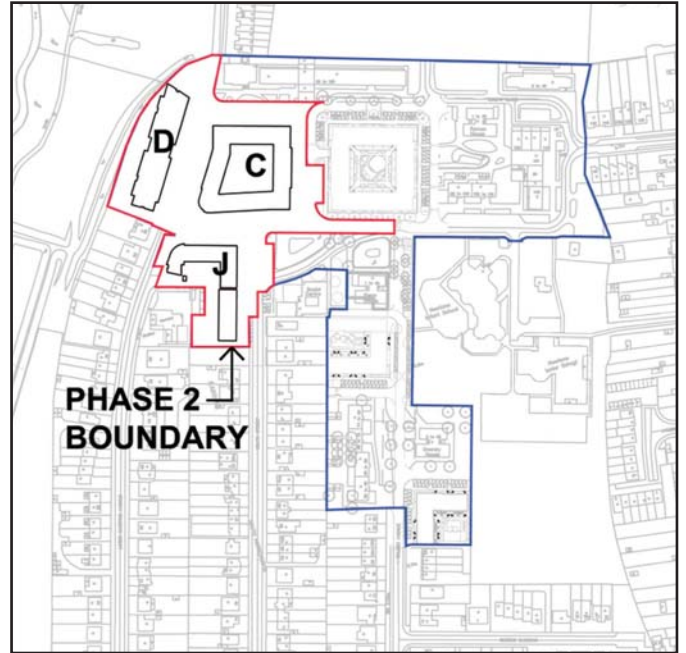
Phase 1 - Distinctive Neighbourhoods

The northern half of Phase 1 (see plan on the previous page) is characterised by a higher density urban courtyard building, Block B, surrounded by hard landscaped areas (shown in the photos on this page) and incorporating a landscaped courtyard utilising precast concrete paving. The southern façade of the block faces onto the Mixed-Use Street, with its more formal concrete flag footway and kerbs, and conventional block paving signalling the bus route (middle photos). This side of the block also overlooks the Local Square. The other three sides are less formal and include extensive concrete block permeable paving (top and bottom photos).



Phase 2

Phase 2 in the north west of the site includes another large courtyard block with an inner landscaped area, linked to two other blocks by the more formal streetscape, including the Mixed-Use Street bus route. Other sides of all three blocks have a less formal hard landscape design.



Phase 2

Phase 2

Various forms of precast concrete paving and kerbs – including extensive concrete block permeable paving roads – are used throughout. To the north, a green landscaped transitional entrance and buffer zone abut the Beam River corridor and wetland park.



2013

Phase 2 Block D overlooks the Beam River, with its new pedestrian bridge, and wetland park.



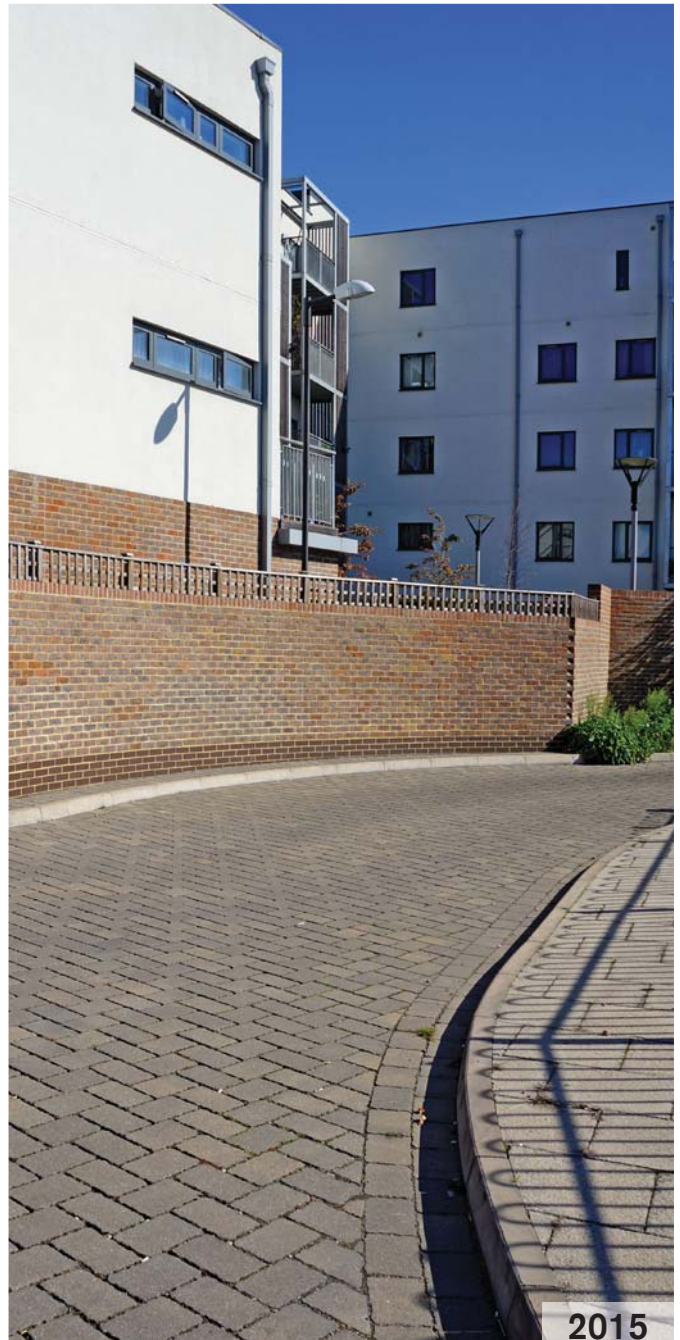
2013

The Phase 2 Courtyard Block with concrete block permeable paving to the north.



2013

The Phase 2 Courtyard Block fronting the black, conventional concrete block paved Mixed Use Street and bus route.



2015

Concrete block permeable paving serving Phase 2 Block J.

Phases 3 and 4

The now-completed Phase 3 comprises three distinct, separated areas running north-south. Therefore, much of the precast concrete paving serving Phase 3 was already in-place, having been installed with earlier phases of the development. Phase 4 remains under construction during 2018.



Phase 3 additions along the northern boundary, beyond Phases 1 and 2 concrete block permeable paving.



Local Square characterised by larger-format concrete block paving.



Community facilities overlooking the Local Square.

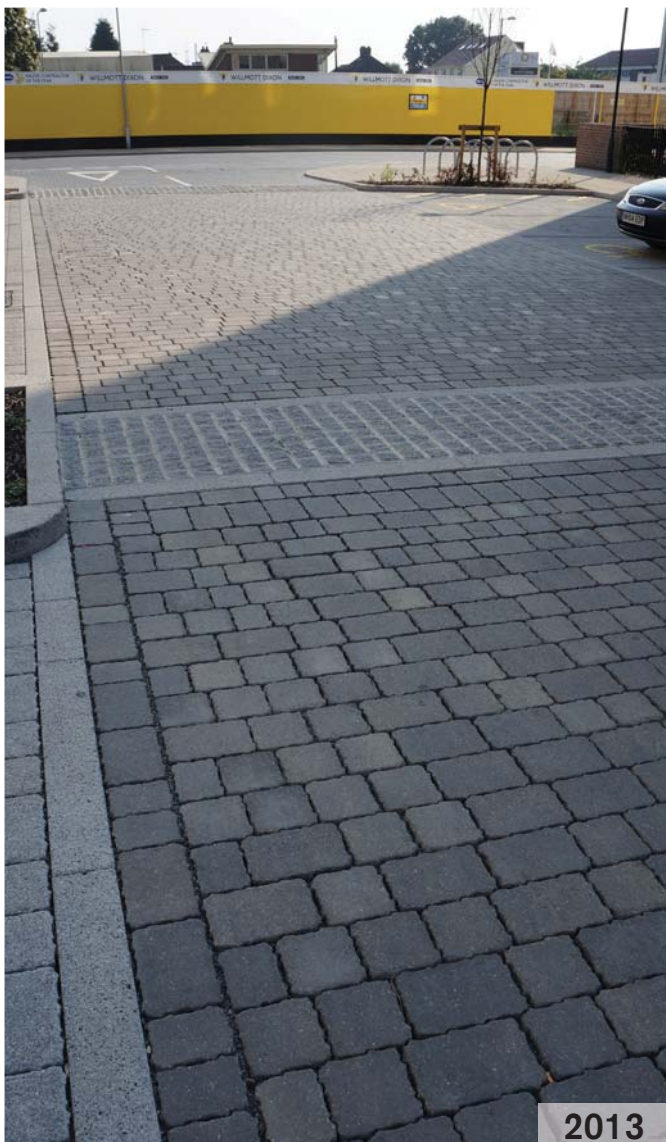
Long-term Precast Paving

A substantial amount of the precast concrete paving was installed with the first phases of the project, although also serving more recent phases, and has now been in use for over 6 years. Interpave has regularly visited and photographed the project (most recently in June 2018) and observed the longer-term robust performance of the paving.

Phased projects such as Orchard Village present particular challenges for hard landscape design, particularly with paving serving various phases. Here, master-planning needs to consider traffic usage during the construction phases, not just after final completion. For example, structural design of the paving may need to cater for construction vehicles or temporarily high volumes of diverted traffic. Similarly, concrete block permeable paving must be protected against silt run-off from construction works and vehicles. Interpave provides guidance on these issues, available at www.paving.org.uk



Grey concrete flags, combined with buff tactile paving to indicate crossing points, characterise footways.



Concrete block permeable paving originally serving Phases 1 and 2, then Phase 3, with Phase 4 under construction beyond.



Phase 1 paving in 2018, as also shown on Page 5 some 6-years earlier.

Precast Paving and Interpave

Interpave is the Precast Concrete Paving and Kerb Association, promoting and developing concrete products – ranging from domestic uses to the most taxing heavy industrial applications. The Interpave website www.paving.org.uk provides the definitive source of background and technical information with project case studies celebrating the transformative power of inspired hard landscape in our cities.

Precast Concrete Paving

- Visually attractive and able to deliver distinctive local character
- Helping to deliver 'Manual for Streets' and other guidance
- Capability for clear differentiation between distinct areas
- Accessible to all with consistent slip and skid resistance
- Durable and maintainable with reliable product supply
- Sustainable – in every sense.

a diversity of shapes, styles, finishes and colours for contemporary design

Concrete Block Permeable Paving

- Reducing, attenuating and treating rainwater near the surface
- Direct infiltration to the ground or conveyance to SuDS or sewers
- Multi-functional SuDS meeting current requirements
- Low cost storage using flow controls without additional land-take
- Established technology with decades of proven performance
- Safe, level, puddle-free, shared surfaces for all.

A gradual supply of clean water for landscape, biodiversity and harvesting

Acknowledgements

Interpave acknowledges with thanks the contributions from PRP Landscape, including project drawings and illustrations. www.prparchitects.co.uk

Photos and case study by Hodsons. www.hodsons.com



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