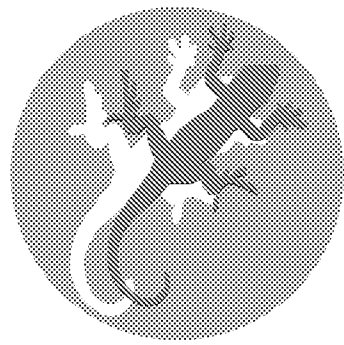




LIZARD

Landscape Design and Ecology

STILES HAROLD WILLIAMS PARTNERSHIP LLP

LAND ADJACENT TO WILLOWS CARAVAN PARK

Lidsey Road, Woodgate, West Sussex

LLD1198-LAN-REP-001

Landscape Design Strategy

Planning Issue

Project Reference	LLD1198
Prepared by:	MZ
Checked By:	KM
Revision	02
Date:	23.02.2018

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1.0 INTRODUCTION

General

- 1.1 Lizard Landscape Design and Ecology has been commissioned by Stiles Harold Williams Partnership LLP to develop a Landscape Design Strategy for a green field site adjacent to Willows Caravan Park, Lidsey Road, Woodgate, West Sussex.
- 1.2 The design strategy was informed by desk study and a site visit undertaken on 16th March 2017 to appraise existing features on Site and the surrounding area.
- 1.3 The Landscape Design Strategy for this development site has been prepared by Michal Zarzecki (Landscape Architecture BSc, Biology MSc, CMLI); Landscape Architect at Lizard Landscape Design and Ecology, Worthing.

2.0 EXISTING SITE INFORMATION

The Site

- 2.1 The proposed development site (The Site) of some 1.5 hectares is in Woodgate, Aldingbourne, West Sussex, to the south of the railway between Chichester and Barnham (*Grid Reference: SU938040*). (See **Figure 2.1**).
- 2.2 Woodgate is located within the London clay geology. Soil type across this area comprises loamy soils with naturally high groundwater.
- 2.3 The main access to the Site is through a pair of metal farm gates from Lidsay Road in the north-western corner, where an access road to the adjacent caravan park joins the highway (See **Photograph A**).
- 2.4 The Site is relatively flat ranging from some 7.6 m above Ordnance Datum (aOD) in the south-east to some 9.0 m aOD in the south-west and about 8.5 m aOD along the northern edge.
- 2.5 The land is an undeveloped greenfield in pasture. The northern part of the Site is kept uncut which promotes establishment of scrub and tall ruderal vegetation (See **Photograph B**). In the north-eastern corner of the Site, an area has been enclosed with some 1.5 m high coniferous hedgerows to provide a space for holiday caravanning by the land owners (See **Photograph C**).

Existing Vegetation

- 2.6 The Site consists of a field of improved grassland surrounded by mixed treelines and hedgerows. The field margins are dominated by tall ruderal vegetation. To the north of the Site there is a small allotment area surrounded by tall ruderal and dense scrub vegetation (See **Photograph D**). A solitary pine tree (*Pinus sylvestris*) grows at the edge of the cultivated area (See **Photograph E**).
- 2.7 The Site is bounded by coniferous hedgerows and treelines to the north and south (See **Photograph F-H**). The treelines are composed of Leyland cypress (*Cupressus x leylandii*) which provide screening, but offer little wildlife habitat potential. To the east the Site is bounded by a mixed treeline of crack willow (*Salix fragilis*), bay willow (*Salix pentandra*) and white poplar (*Populus alba*). To the west there is a short coniferous hedgerow, behind which is a patchy, unmanaged deciduous hedgerow, composed of hazel (*Corylus avellana*); field maple (*Acer campestre*); and English elm (*Ulmus minor*).

Surrounding Landscape

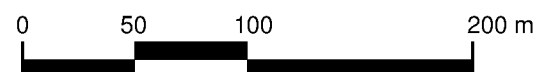
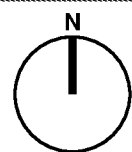
- 2.8 The Site is within a well enclosed and urbanised setting, with the Willows Caravan Park (See **Photograph I**) located to the east and a commercial trading yard with single storey, pitch-roofed buildings to the south (See **Photograph J**). A group of detached, two-storey-high dwelling houses with pitched roofs are located to the west of the Site across the highway (See **Photograph K**) as well as to the north, within the cul-de-sac at Woodgate Road and Woodgate Close (See **Photograph L**).
- 2.9 There are a number of listed buildings within the area. These are located some 1.3 km to the north about Manor Farm including the Grade II* Parish Church of St George, some 1.6 km to the east around Barnham Court including the Grade 1 Parish Church of St Mary and some 1.8 km to the south about Shripney Manor.
- 2.10 The South Downs National Park is located some 3.5km to the north of the Site.
- 2.11 The nearest Rights of Way include Footpath No. 291-2 running further west across the Lidsay Landfill Site and Public Footpaths No. 200/1-1 and 200-6 in the south.



Legend

-  Development Site Boundary
-  Railway

Figure 2.1. Development Site Location





Photograph A. Gated Site access in north-west corner



Photograph B. Tall scrub/ ruderal vegetation along northern boundary



Photograph C. Hedged caravan parking area in north-eastern corner



Photograph D. Informal allotment area



Photograph E. Solitary pine in northern part of Site



Photograph F. Leyland cypress hedgerow and tree lines forming boundary treatment to Site entrance



Photograph G. Western boundary with coniferous hedgerow to inside and deciduous on roadside



Photograph H. Mixed-species tree lines along eastern and southern boundary



Photograph I. Entrance to Willows Caravan Park adjacent to north-eastern corner of Site



Photograph J. Lee's Yard to south of Site



Photograph K. Residential properties along Lidsey Road, opposite Site to west



Photograph L. Detached houses at cul-de-sac to north of Site

3.0 DEVELOPMENT PROPOSAL

- 3.1 The development proposals (*The Scheme*) includes residential accommodation with an associated access road off the A29 Lidsey Road, emergency and maintenance access road, parking provisions, a communal Shared Space Work Hub and a landscape scheme.
- 3.2 The proposed architectural proposal envisages creation of mixed housing opportunities encompassing 14 houses (3 & 4-bedrooms) and 16 flats (4 x 1-bed / 8 x 2-bed / 4 x 3-bed), 30% of which would be affordable in line with Local Authorities' requirements. (*For details refer to Architect's proposals*).
- 3.3 The proposed scheme is focused on delivering a vibrant and inclusive space to live in, where residents would find numerous opportunities for socialising and interaction. Much attention has been paid to sustainability and respect for local character and natural context. The Scheme is aimed at achieving the standard of 'Passive House' for the residential units, which comprises integration of built form into the environment to maximise primary energy gain and conservation. Local flooding issues would be addressed through the implementation of a comprehensive surface water management scheme.
- 3.4 Details of the proposed landscape scheme are provided within the subsequent sections.

4.0 PROPOSED LANDSCAPE SCHEME

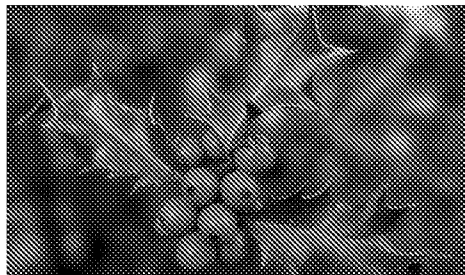
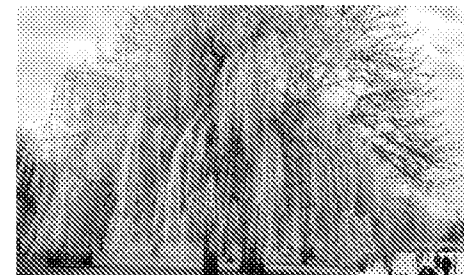
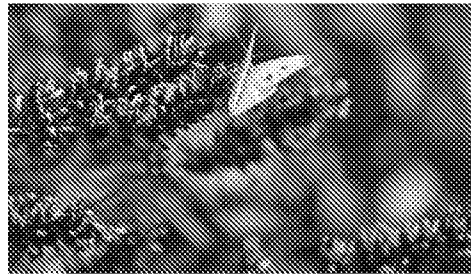
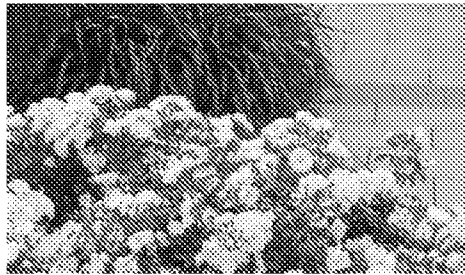
Strategic Objectives

- 4.1 The proposed Landscape Design Strategy has been informed by a desk study as well as by the Site visit carried out in March 2017.
- 4.2 Strategic objectives of the proposed Landscape Design Strategy include:
- Retention, protection and reinforcement of the existing boundary landscape features to provide a strong landscape framework for the new development and reinforce existing green infrastructure;
 - Reinforcement of the area of more mature tree planting around the gateway entrance to the Site;
 - Integration and definition of a hierarchy of communal open spaces and enclosed private domestic spaces;
 - Reinforcement of the western and southern boundaries with native shrub and evergreen tree planting to filter views and soften visibility of built mass and rooflines;
 - Integration of Sustainable Urban Drainage System (SuDS) across the Site to manage and control water runoff from the development site and to provide both ecological and landscape value;
 - Prioritising pedestrian circulation and enhancing the walkable landscape experience through a shared surface circulation scheme;
 - Creating inspiring and inclusive spaces encouraging outdoor activity for different age groups;
 - Integration of creative play features based on natural materials within the open spaces;
 - Promoting sustainable food production and offering gardening opportunities through introduction of community gardens with edible fruit plants;
 - Supporting local wildlife and connectivity by planting of native and ornamental species offering opportunities for foraging, shelter and habitat creation.

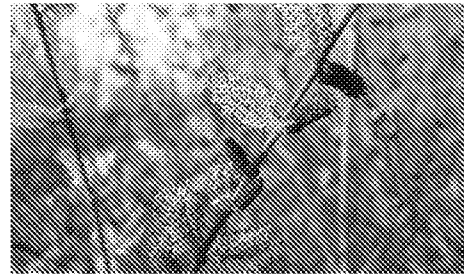
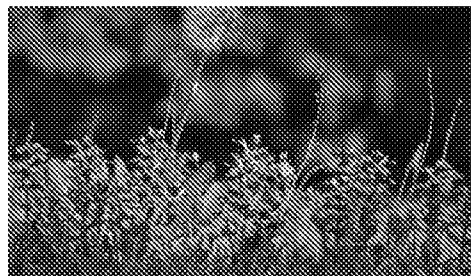
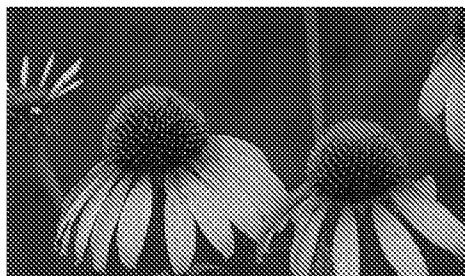
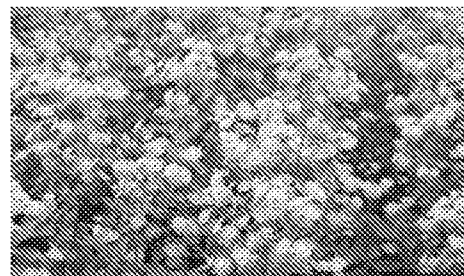
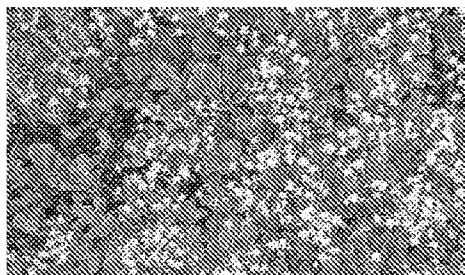
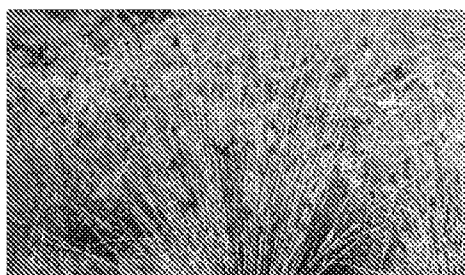
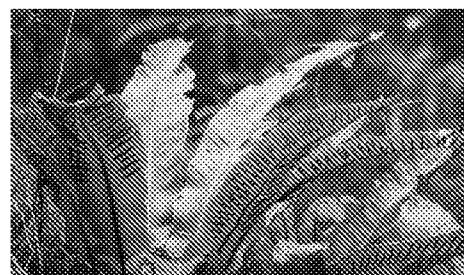
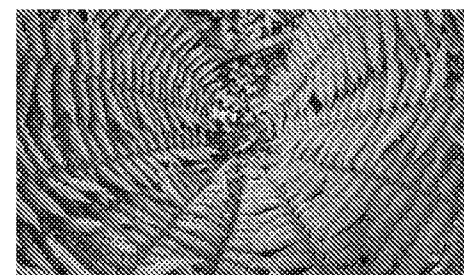
Layout

- 4.3 The proposed development with its associated landscape scheme would be confined to within the existing Site, enclosed by hedgerows and tree lines.
- 4.4 Means of access to the Site would be at its original location, at the north-western corner of the Site, however would be subject to adjustments to accommodate regular vehicular access. The Arrival Area would be enhanced by proposed tree planting with native understorey and field layer species. The vehicular circulation scheme would encompass two peripheral access roads providing access to dwellings in the north and car parks associated with apartment blocks in the south. An emergency access route would link the vehicular access roads and would be paved with permeable and grass seeded units appropriate for occasional traffic. Car parking provisions would be available for residents in front of individual houses in the northern part of the Site while on-street car park spaces would serve dwellings and apartment blocks along the access road in the south. Visitor car parking spaces would be available along the access road.
- 4.5 Landscape proposals include a network of pedestrian footpaths connecting proposed housing units with open spaces and the Site entrance.
- 4.6 The proposed residential buildings with associated external areas would be arranged distributed around the central open space including a Community Green, Residents' Gardens and Play Areas.
- 4.7 The lowest area within the Site, in the east of the Site, would be developed as an Ecology Park accommodating a substantial attenuation basin and wildlife habitat areas.



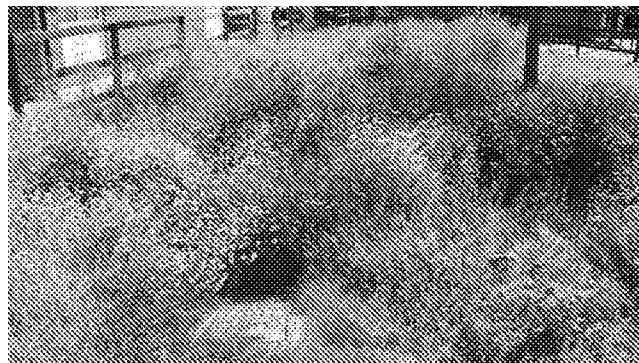
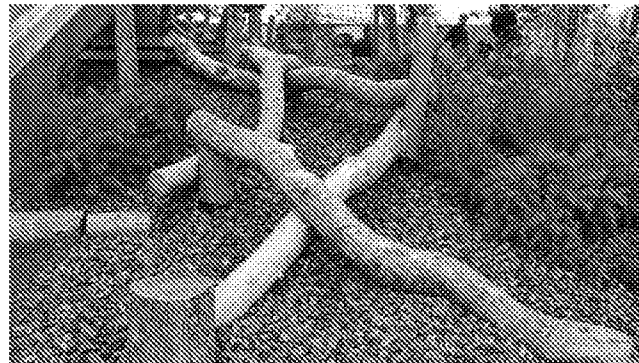
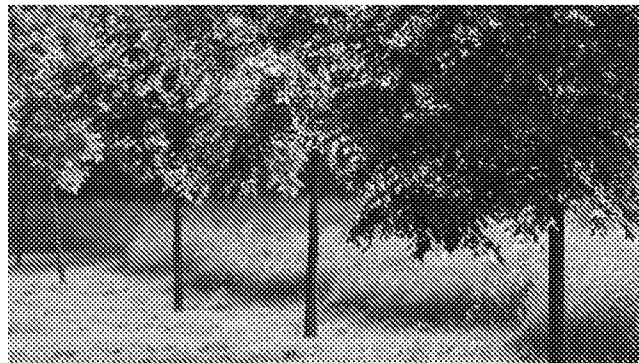
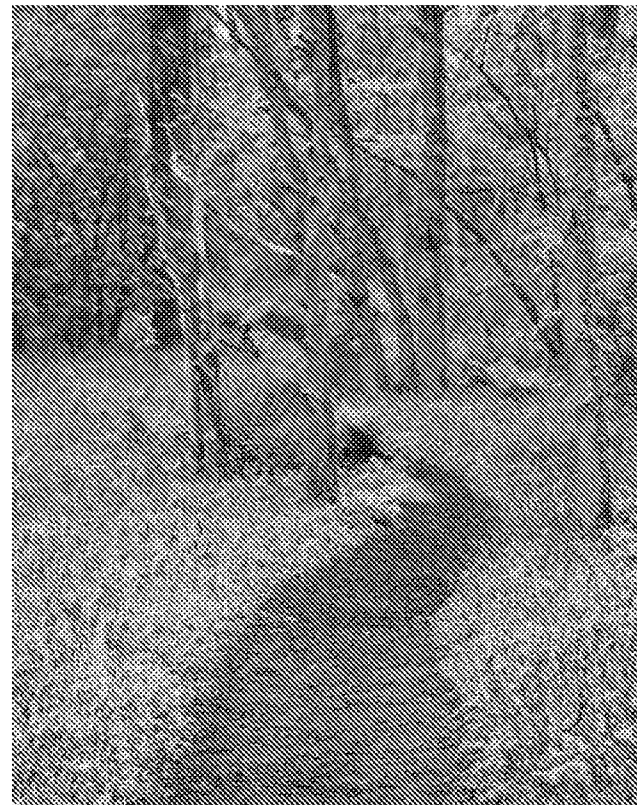
*Crataegus monogyna**Ilex aquifolium**Prunus avium 'Plena'**Salix x sepulcralis 'Chrysocoma'**Lavandula angustifolia*

Roses

*Salix purpurea 'Nana'**Viburnum opulus**Ajuga reptans**Echinacea purpurea**Euphorbia amygdaloides**Helleborus niger**Rudbeckia fulgida**Saxifraga x urbium**Salvia sp.**Sedum spectabile**Deschampsia cespitosa**Juncus effusus**Asplenium scolopendrium**Polystichum setiferum*

Soft Landscape

- 4.8 The emerging soft landscape scheme aims at integrating the proposed built form with existing landscape setting. The objectives of the soft landscape design include:
- Promotion of opportunities for wildlife within the development and linking the scheme with existing habitats;
 - Integration of built and natural environment;
 - Development of sense of place and community through sympathetic design and creation of communal orchards and food gardens;
 - Maximising potential of planting areas for rain water management;
 - Enhancement of security through careful planting design.
- 4.9 Areas of soft landscape at Site entrance would incorporate native tree planting with associated multi-layered planting structure to enhance experience of arrival, soften the perception of the Site and create opportunities for wildlife. Unplanted corridors would provide opportunities for walking among vegetation for relaxation and observation of wildlife.
- 4.10 The soft landscape to the Site's peripheries would incorporate native wildflower seeded areas with groups of shrubs and native trees to enhance the role of existing hedgerows as habitats for wildlife.
- 4.11 The vision of planting for communal open spaces is focused on creation of lively spaces for residents with their families and friends. The central green space would comprise substantial recreation ground with play areas and community gardens providing opportunities for growing food. The proposed Community Work Hub would provide convenient space for working from home (*for details refer to Architect's Proposals*).
- 4.12 Planting areas abutting the dwellings would deliver all-year-round interest through incorporation of evergreen species, flowering perennials and grass species providing a mix of textures.



- 4.13 The ecological connectivity within the Site would be maintained and enhanced through a coordinated scheme of hedgerows bordering private gardens and car parking areas.
- 4.14 The soft landscape areas adjoining the buildings would largely be designed as rain gardens to intercept surface rain water from hard landscape areas and roofs. Incorporation of SuDS would relieve pressures on local drainage system and deliver sustainable solution with numerous benefits for amenity and wildlife.
- 4.15 The surfaces of emergency route, linking the access roads in the north and south, would be paved with grass seeded pavers to encourage permeability and soften the hard landscape scheme.
- 4.16 A number of trees would be planted to introduce a vertical aspect and help blend the built form with the existing landscape and tree-lined boundary.
- 4.17 The area in the eastern part of the Site would include a detention basin to attenuate rain water runoff from the development and control discharge rate and volume to the existing water course. The space surrounding the pond would deliver multiple functions benefitting the scheme and the community of residents. The area would comprise an Ecology Garden with a mosaic of habitats and recreational open spaces. Amenity and benefits for the residents could be bolstered further by a boardwalk across the attenuation pond to provide access to open water for observation of aquatic wildlife. The pond would also create biodiverse ecotones associated with transition from aquatic to terrestrial habitats.

Group	Species Name	Origins	Ecology	Amenity	Container	Density	Specification
Trees	<i>Alnus glutinosa</i>	N			RB	Specimens	10-12 cm girth; 3.0-3.5 m
	<i>Crataegus monogyna</i>	N	 	 	RB		10-12 cm girth; 3.0-3.5 m
	<i>Crataegus monogyna</i>	N	 	 	C175		Multi-stem; 3.0 - 3.5 m height
	<i>Ilex aquifolium</i>	N		 	C45		10-12 cm girth; 3.0-3.5 m
	<i>Quercus robur</i>	N	 		C85		14-16 cm girth; 4.0-4.5 m
	<i>Salix caprea</i>	N			C45		10-12 cm girth; 3.0-3.5 m
	<i>Salix x sepulcralis</i> 'Chrysocoma'				C85		14-16 cm girth; 4.0-4.5 m
	<i>Sorbus aucuparia</i>		 	 	RB		10-12 cm girth; 3.0-3.5 m
Hedgerows	<i>Crataegus monogyna</i>	N	  	     	BR	Double staggered rows, 0.4 m apart; 0.4 m c/c	60 - 80 cm
	<i>Cornus sanguinea</i>	N	  	   			
	<i>Ligustrum vulgare</i>	N	 	 			
	<i>Rosa canina</i>	N	  	 			
Native Shrubs	<i>Cornus sanguinea</i>	N			BR	1/m ²	60 - 80 cm
	<i>Corylus avellana</i>	N	 		BR	1/m ²	60 - 90 cm
	<i>Daphne laureola</i>	N		   	C3	1/m ²	30 - 40 cm
	<i>Hypericum androsaemum</i>	N			C3	1/m ²	30 - 40 cm
	<i>Rhamnus cathartica</i>	N			BR	1/m ²	60 - 80 cm
	<i>Sambucus nigra</i>	N	  	  	BR	1/m ²	60 - 80 cm
	<i>Salix purpurea</i> 'Nana'	N		  	C3	1/m ²	60 - 80 cm
	<i>Viburnum lantana</i> , <i>V. opulus</i>	N			BR	1/m ²	60 - 80 cm
Shrubs	<i>Cornus alba</i> - cultivars		 	  	C5	3/m ²	60 - 80 cm
	<i>Daphne odora</i> 'Aureomarginata'			   	C2	Specimen	30 - 40 cm
	<i>Hydrangea arborescens</i> 'Annabelle'			   	C3	Specimen	40 - 60 cm
	<i>Lavandula angustifolia</i>			   	C2	3/m ² and as specimen	20 - 30 cm
	<i>Rosa</i> - various groups and species			       	BR	3/m ² and as specimen	Varies
	<i>Rosmarinus officinalis</i>			   	C2	3/m ²	60 - 80 cm
	<i>Viburnum farreri</i> , <i>V. x burkwoodii</i>		 	     	C5	Specimen	60 - 80 cm

Outline Plant Schedule and Specification

- 4.18 The Planting Palette has been composed to contribute to the local environment and landscape context. The aesthetic aspect has also been considered significant in bolstering the visual amenity for the benefit of the future residents.
- 4.19 The soft landscape design proposals have also been informed by *Preliminary Ecological Appraisal* by Lizard Landscape Design and Ecology and includes species recommended in RHS '*Perfect for Pollinators*'.

KEY:

- BR Bare Rooted Stock
- C2/3/5 2/3/5 ltr Container Grown Stock
- RB Root Balled Nursery Stock
-  Valuable for insects
-  Valuable honey plant
-  Attractive to birds
-  Wildlife shelter
-   Interesting flowers (colourful/ white)
-   Interesting fruits (colourful/ white)
-   Evergreen/ marcescent (retaining spent foliage)
-  Coniferous
-  Interesting shoots (twigs, bark)
-  Interesting foliage
-  Seasonal colouration (indicative colour)
-  Olfactory sensations
-  Interesting to touch and feel
-  Visual sensations
-  Edible
-  Hearing sensations

Continued on next page

Group	Species Name	Origins	Ecology	Amenity	Container	Density	Specification
Herbaceous Perennials	<i>Ajuga reptans</i>	N		 	P9	7/m ²	Full pot, fully rooted, healthy
	<i>Anemone nemorosa</i>	N		 	Rhizomes or seeded	9/m ²	
	<i>Bergenia</i> 'Purpurea'			  	C2	7/m ²	
	<i>Echinacea purpurea</i>			 	C2	7/m ²	
	<i>Euphorbia amygdaloides</i>	N		  	C2	7/m ²	
	<i>Helleborus niger</i>			  	C2	7/m ²	
	<i>Myosotis sylvatica</i>	N			P9 or seeded	7/m ²	
	<i>Polygonatum odoratum</i>	N		 	P9	7/m ²	
	<i>Rudbeckia fulgida</i>			   	C2	5/m ²	
	<i>Saxifraga x urbium</i>			   	P9	7/m ²	
	<i>Salvia</i> 'Amistad'			   	C3	3/m ²	
	<i>Sedum telephium</i> , <i>S. spectabile</i>			  	C2	9/m ²	
Bulbous Perennials	<i>Allium</i> - ornamental varieties			  	Bulb - 4/5	7/m ²	Healthy bulbs
	<i>Hyacinthoides non-scripta</i>	N			Bulb - 6/7	7/m ²	
Ornamental Grasses	<i>Carex comans</i>			  	C2	7/m ²	Full pot, fully rooted, healthy
	<i>Carex pendula</i>	N		  	C2	Specimen	
	<i>Deschampsia cespitosa</i>	N		   	C2	7/m ²	
	<i>Luzula sylvatica</i>	N		  	C2	7/m ²	
Ferns	<i>Asplenium (Phyllitis) scolopendrium</i>	N		 	C2		Full pot, fully rooted, healthy
	<i>Polystichum setiferum</i>	N			C2		
Climbers	<i>Clematis vitalba</i>	N			C2	1/lm	60-80 cm height; caned
	<i>Humulus lupulus</i>	N			C2		
	<i>Hydrangea petiolata</i>				C2		
	<i>Lonicera periclymenum</i>	N	 		C2		
SUDS Planting	<i>Caltha palustris</i>	N			P9	7/m ²	Full pot, fully rooted, healthy
	<i>Carex pendula</i>	N		 	C2	7/m ²	
	<i>Eupatorium cannabinum</i>	N			C2	7/m ²	
	<i>Iris pseudacorus</i>	N			Rhizome	7/m ²	
	<i>Juncus effusus</i>	N			C2	7/m ²	
	<i>Ligularia dentata</i> 'Desdemona'				C2	7/m ²	
	<i>Lysimachia nummularia</i>	N			P9	7/m ²	
	<i>Lythrum salicaria</i>	N			P9	7/m ²	
	<i>Mentha aquatica</i>	N		 	P9 or seeded	7/m ²	
	<i>Persicaria bistorta</i> , <i>P. affinis</i>			 	P9	7/m ²	
	<i>Sanguisorba officinalis</i>	N			P9	7/m ²	
	<i>Schoenoplectus lacustris</i>	N			P9	7/m ²	
Wildflower Mix	EM4 – Meadow Mixture for Clay Soils	N	      	   	N/A	4 g/ m ²	N/A

KEY:

BR

Bare Rooted Stock

C2/3/5

2/3/5 ltr Container Grown Stock

P9

9 cm Square Pot Grown Stock



Valuable for insects



Valuable honey plant



Attractive to birds



Wildlife shelter

Interesting flowers (colourful/ white)

Interesting fruits (colourful/ white)

Evergreen/ marcescent (retaining spent foliage)



Coniferous



Interesting shoots (twigs, bark)



Interesting foliage



Seasonal colouration (indicative colour)



Olfactory sensations



Interesting to touch and feel



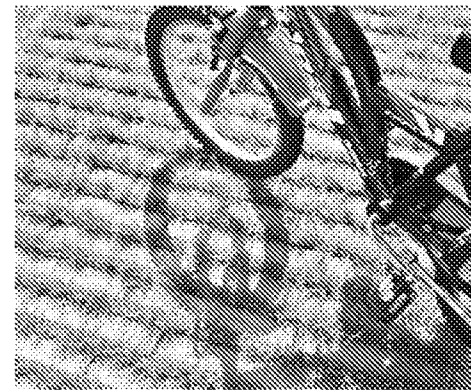
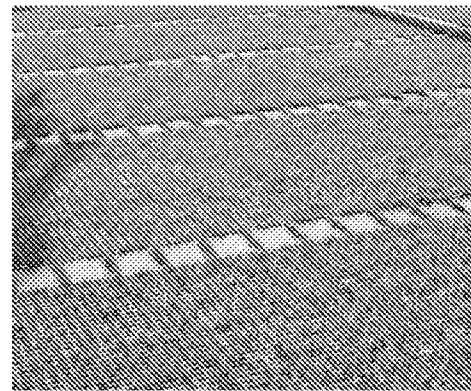
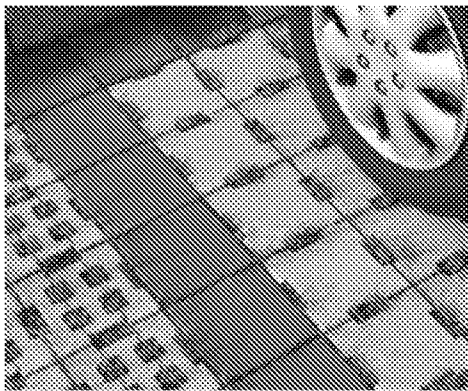
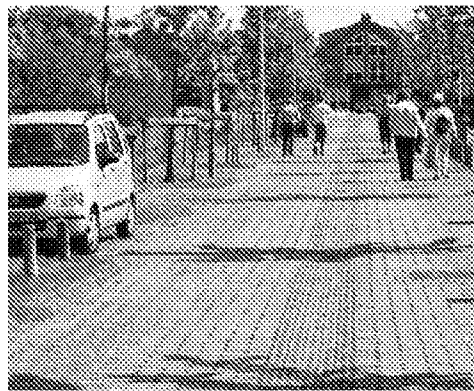
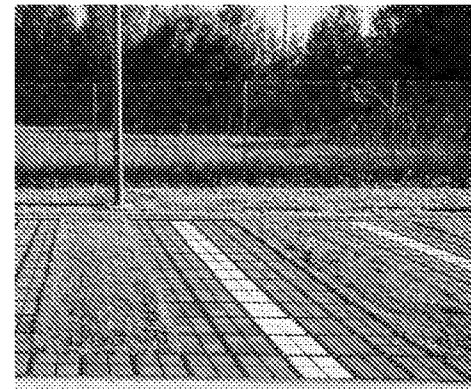
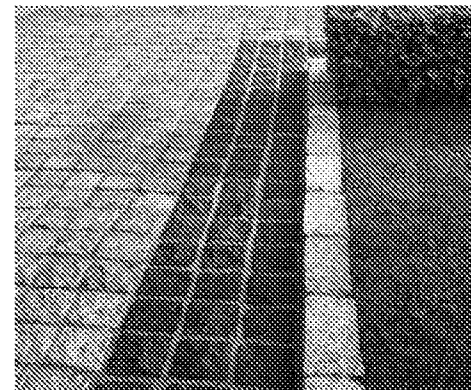
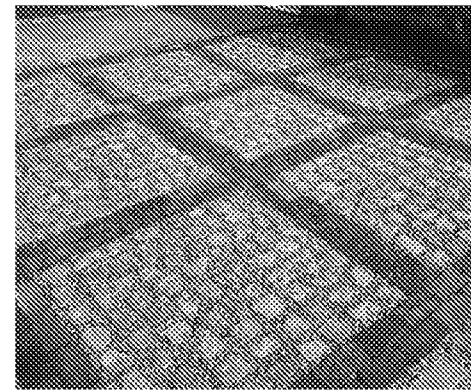
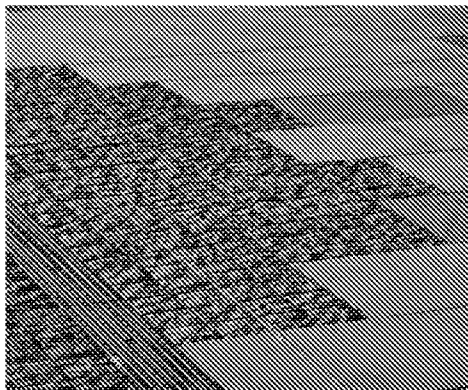
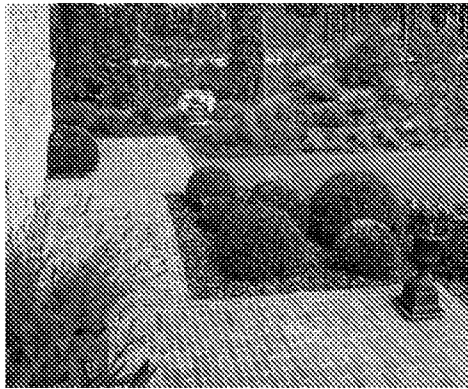
Visual sensations



Edible

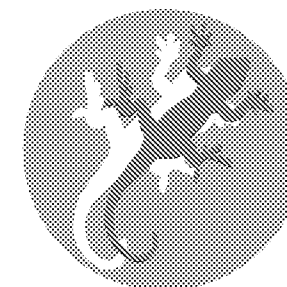


Hearing sensations



Hard Landscape

- 4.20 The proposed hard landscape areas encompass the communal pedestrian and vehicular circulation scheme as well as footpaths and drives within individual private plots. The objectives of the proposed scheme include:
- Good connectivity within the Site and with the public realm of Woodgate;
 - Comfort and accessibility through careful selection of surfacing materials and finishes;
 - Inclusive design taking into consideration users with impaired mobility;
 - Inspiration of a sense of place and neighbourhood pride;
 - Limitation of areas of hard landscape within areas of infrequent vehicular traffic through implementation of grass-seeded paving;
 - Selection of materials based on local character and traditions as well as modern materials where specific quality or function can be delivered;
 - Implementation of furniture and features made of natural materials to facilitate blending with existing and emerging landscape;
 - Surface water management through incorporation of permeable paving areas and directing surface runoff to bioretention areas along footpaths.
- 4.21 The connectivity and walkability would be delivered through the shared surface approach to the circulation scheme. Main access roads would be paved with permeable blockwork materials. The service access road would be surfaced with grass-seeded paving. Visitor car parking spaces would be available on the access road and where this is proposed in proximity to existing trees the parking areas would be surfaced with interlocking natural aggregate.
- 4.22 Pedestrian routes around the Site would be dressed with resin-bound gravel to provide a smooth and comfortable surface. Private drives and footpaths leading to dwellings and apartment blocks would be emphasised with feature blockwork paving finishes.



L I Z A R D

Landscape Design and Ecology

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