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# Landscape Proposals

Job Description:  
**Lyndhurst Gardens**

Client:  
**VABEL**

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## Introduction

The following document has been produced to provide the landscape design proposals for 16a Lyndhurst Gardens.

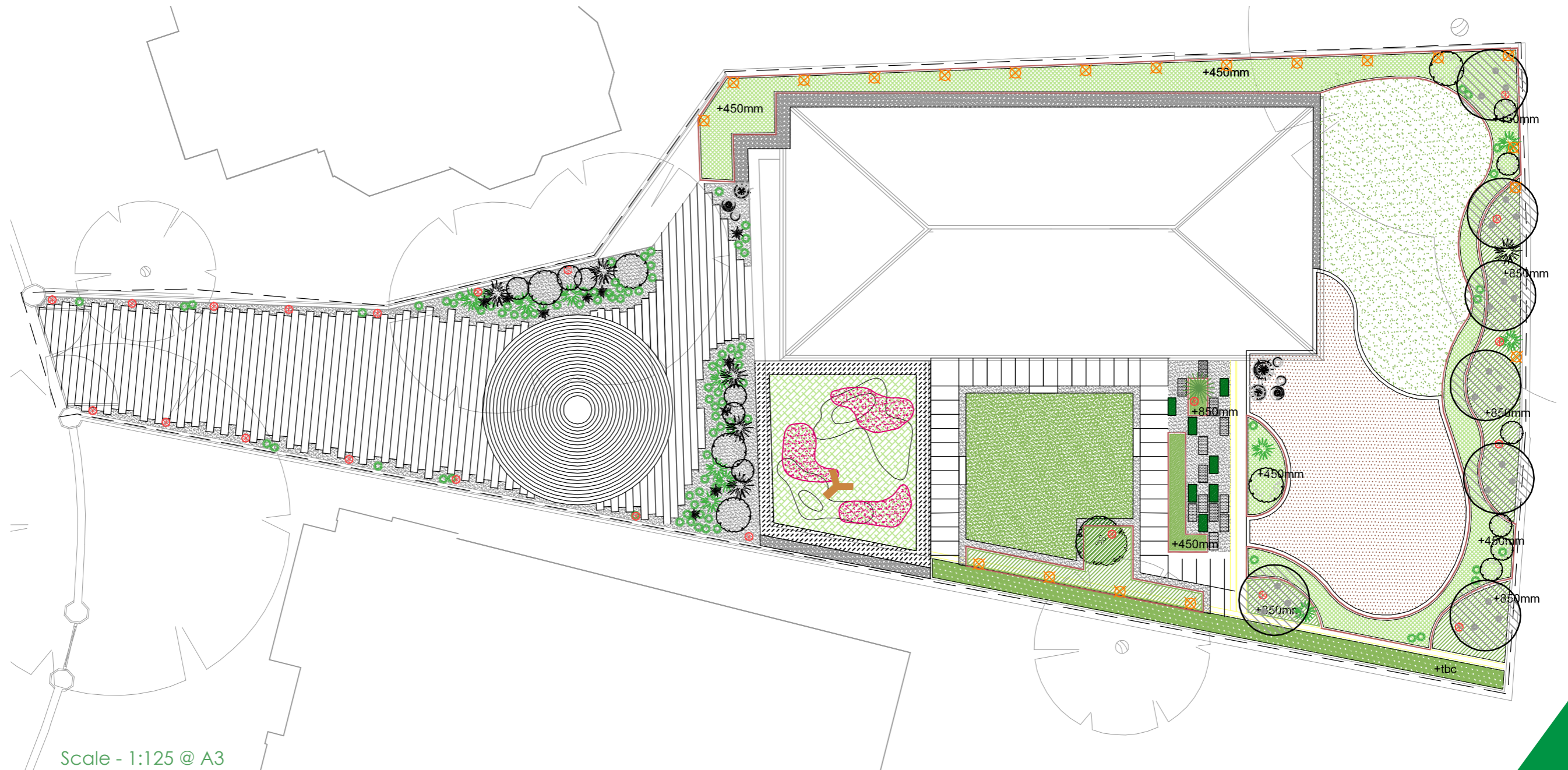
For further details regarding planting proposals, refer to drawings:

ALD639_PL401	First Floor Living Roof, Planting Plan Layout
ALD639_PL402	Ground Floor - Back Garden Planting Plan Layout
ALD639_PL403	Ground Floor - Front Garden Planting Plan Layout
ALD639_PL404	Lower Ground Courtyard Planting Plan Layout
ALD639_PL405	Basement Courtyard Planting Plan Layout

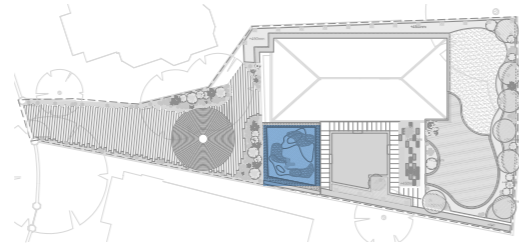
# Landscape Proposals - Overall Layout

## Plan Layout

The overall landscape proposals aim to create a green outlook to the property, enclosed from it's surroundings







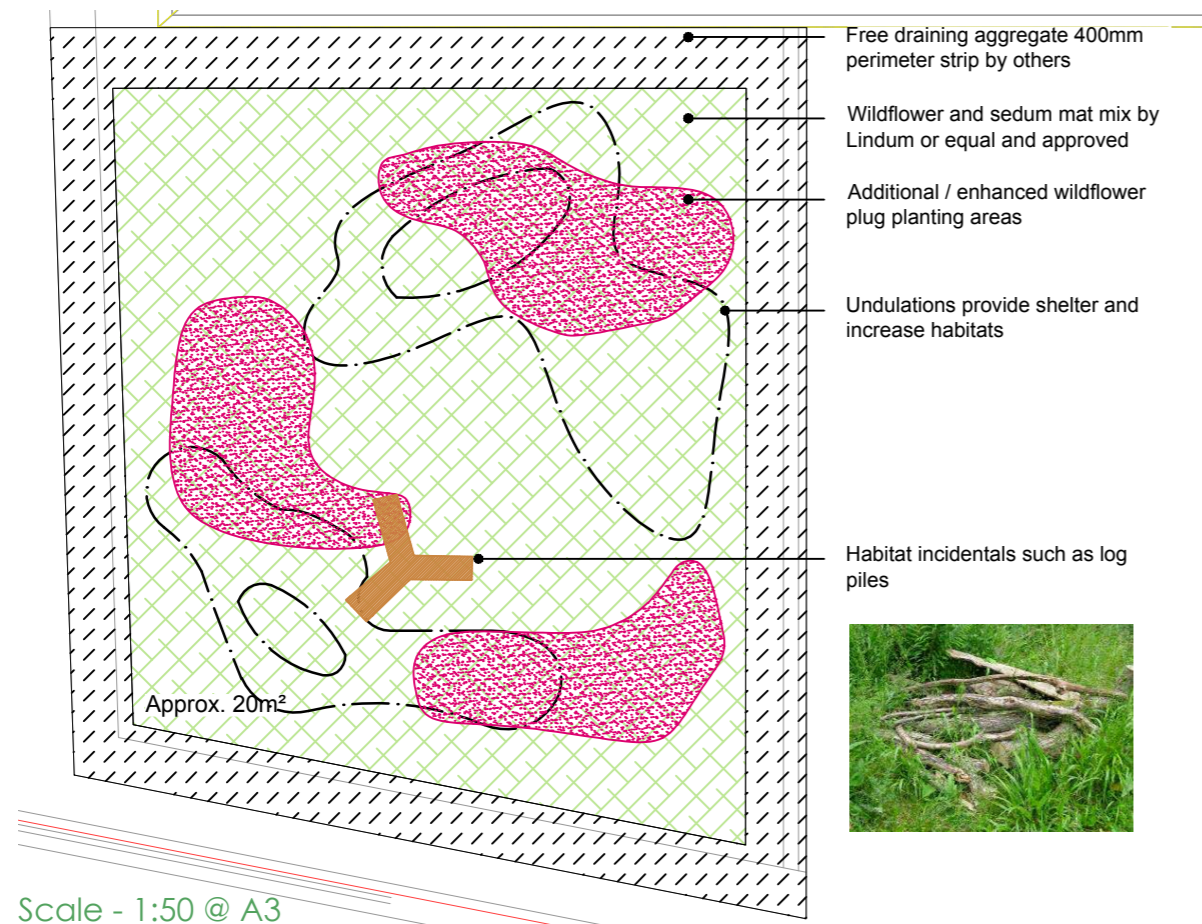
# 1. First Floor Living Roof

## Plan Layout

Given the nature and size of this residential roof it is recommended that a pre-grown 'mat' is utilised to create an instant greening with a manageable mix of species that fulfils aspirations for a 'biodiverse 'extensive roof' habitat. There are a number of suppliers now preparing species diverse mats (albeit there is now a significant move from the likes of the University of Sheffield that now argues that sedum roofs are very diverse as a result of the insects and birds they encourage). Specification, as detailed here in, of a biodiverse mat has evolved in response to the Planning Authorities recommendations – to accord with the Camden Biodiversity Advice Note - Living Roofs and Walls.

The proposal now focus's on the use of either Naturemat (by Blackdown Horticulture) or Lindum Turf's wildflower turf. The later, as described and illustrated here in, is underlain with sedum for year round coverage and restricts the influx of 'weed seed' which can occur where natural colonisation is encouraged. The sedum is complimented with a tested mix of wildflowers sown in for seasonal, visual and species biodiversity. In addition the specification illustrated allows for the over planting – on site – of further wildflower plug plants to create an additional layer of biodiversity. Refer to ALD639\_PL401.

For further technical information regarding the living roof, refer to Appendix One.



## Wildflower and Sedum Mat



Wildflower and sedum mat by Lindum or equal and approved (refer to appendix one for a full technical information sheet). Major species include:



## Additional Wildflower Plug Planting:

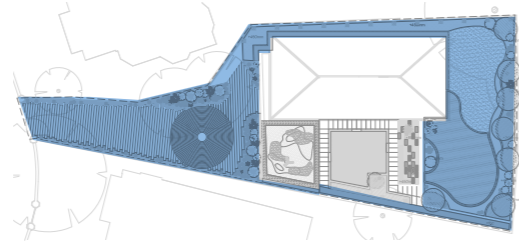
Random distribution planted in species groups of 3 to 7 plug plants, utilising areas of sedum mat which are less well established.











## 2. Ground Level Gardens

### Front Garden Precedent Images



Potential to create pockets for alpine / rock planting within reclaimed brick wall



Contemporary paving with no (/ permeable) mortar joints offers a sleek drainage solution



Gravel edgings allows an opportunity for gravel / alpine planting with taller shrub / perennial planting towards the rear of the beds.

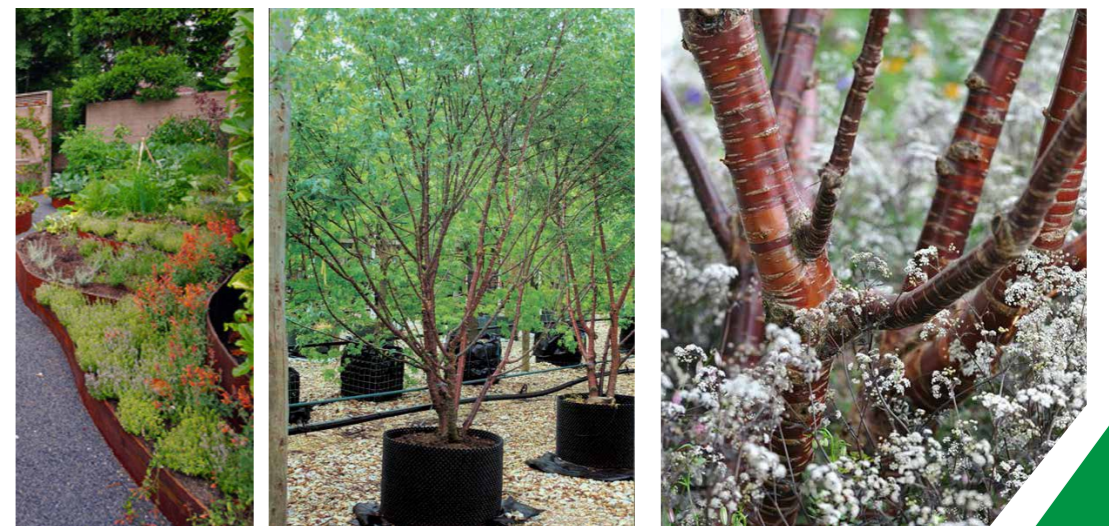
### Back Garden Precedent Images



Tiered planters offer adequate soil depth for multistemmed trees, with naturalistic planting adding movement to the scheme.

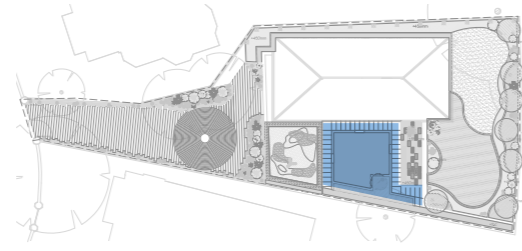


Pots will be used throughout for flexibility in hard landscaped areas



Colourful bark of Prunus serrula offers winter interest



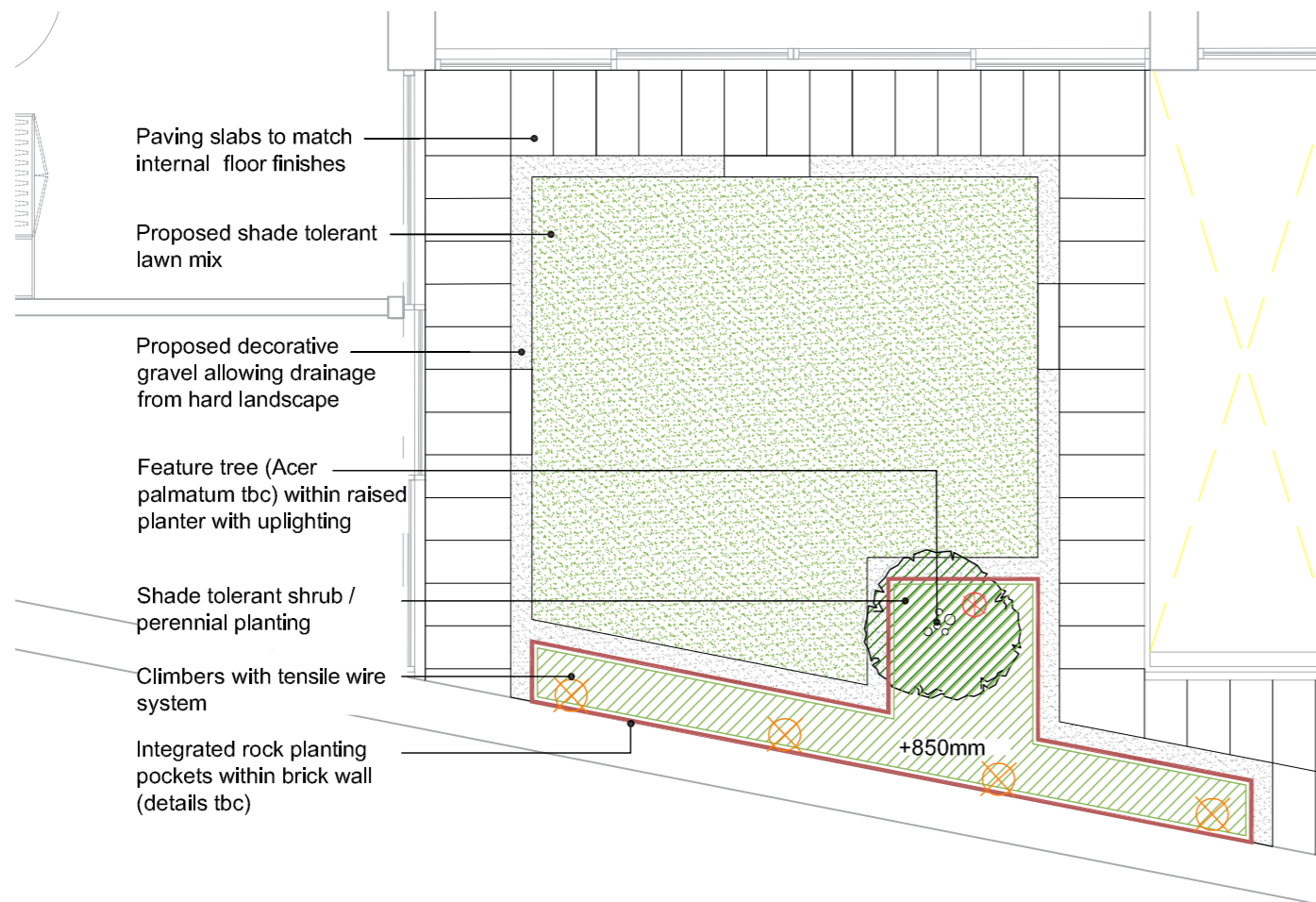


# 3. Lower Ground Courtyard Gardens

## Plan Layout

The Lower Ground Courtyard focuses on a simplistic minimalist design, with large paving slabs offering a border around the crisp shade tolerant lawn. A delineation strip / rill of gravel provides both a visual edge, as well as offering a drainage solution from the adjacent hard landscape, leading water away from the building facade.

A feature tree such as Japanese Maple creates a key focal point to the design, located in a raised planter it adds bold vertical interest to the scheme. This raised planter stretches across the bounding brick wall, allowing for climber plants to trail up simple tensile wire structures and soften the hard background to the courtyard.



Scale - 1:50 @ A3

## Precedent Images



Simple bold colours and a feature tree attract the eye



Acer palmatum

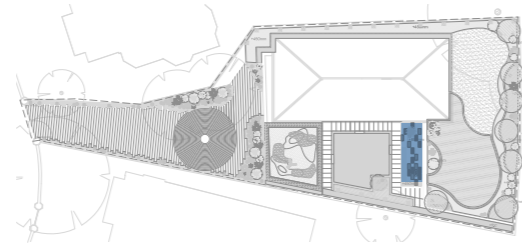


A gravel border allows for drainage



Climbers soften the brick wall





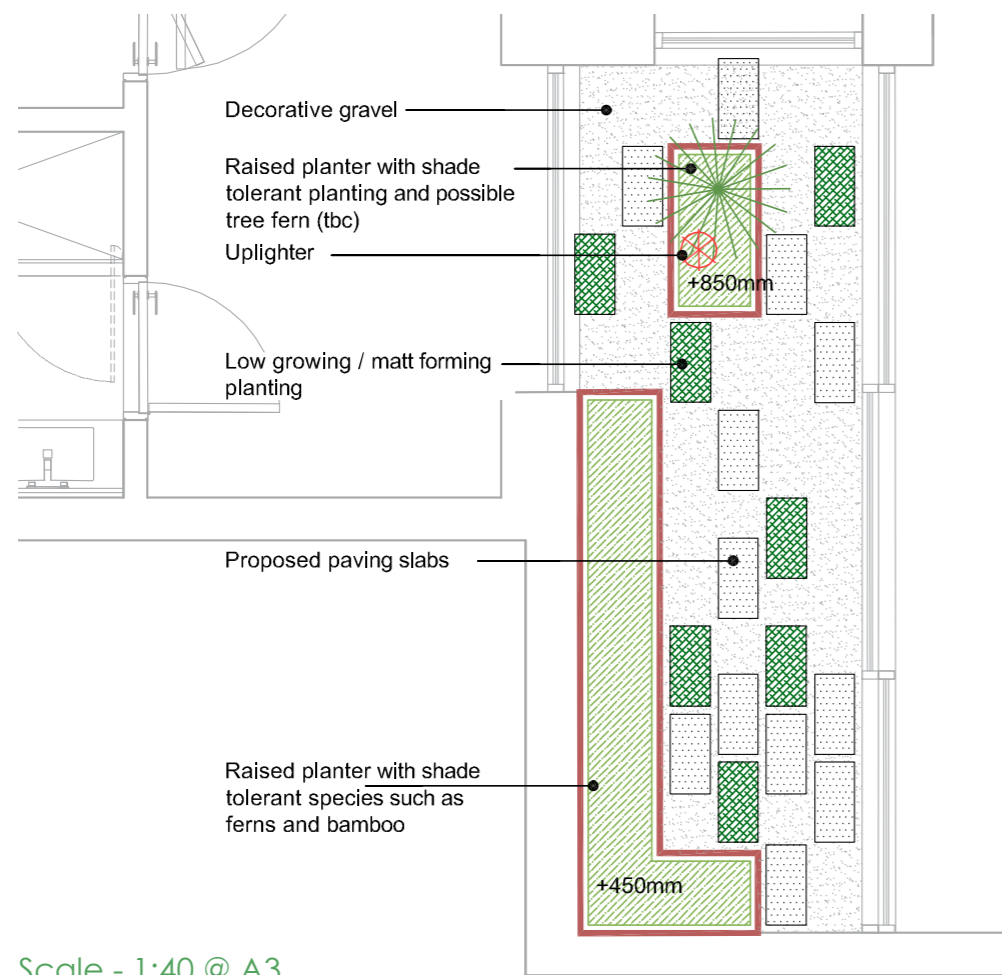
# 4. Basement Courtyard

## Plan Layout

The Basement Courtyard has been designed to look visually appealing from adjacent rooms as well as from above. Strong bold shapes emulate that of the architecture, with the use of contrasting colours and materials creating strong visual patterns when viewed from above. Low growing matt forming plants will create strong blocks of green, whilst the edges soften against decorative gravel.

Raised planters allow for the use of shade tolerant shrubs and taller species, such as bamboos which offer vertical interest and illusion of greenery, these will also aid in screening the solid walls.

A feature tree fern offers a point of interest from the lower ground floors.



Scale - 1:40 @ A3

## Precedent Images

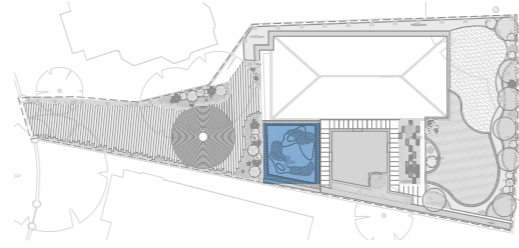


Bold contrast between materials and textures offer a visually pleasing design from above



Shade tolerant planting creates lush greenery to the courtyard Tree Fern





# APPENDIX ONE:

## 1.1 Living Roof Technical Information

### Living Roof Technical Information:

#### Type of substrate:

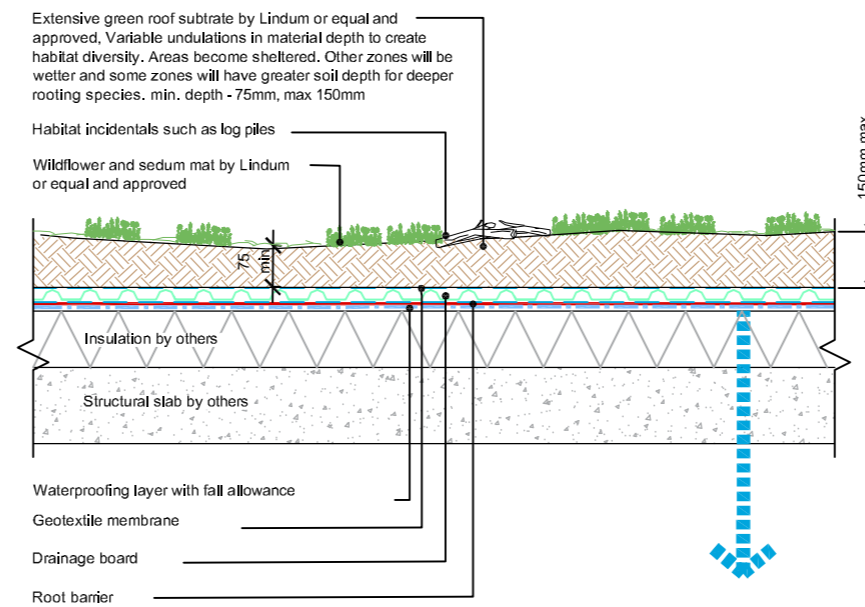
Free draining soils which reflect the soil conditions upon which the base layer naturemat / Lindum sedum wildflower turf has been grown. The soil (often described as substrate) is typically 80 to 150mm deep and is considered to be 'poor nutrient' to encourage the wildflower content and minimise the development of a grass dominated mix. The depth is designed to be over and above the 75mm provided for a traditional sedum mat composition and allows for localised undulations comprising + / - 30mm in level, these undulations providing micro environmental changes which support changes in plants and insects.

#### Drainage:

A drainage / reservoir mat such as Alumasc Flordrain FD25 (or similar) is to be incorporated over the insulation. This product, often described as the 'egg crate' layer, allows excess water to pass below the drainage layer towards the drainage outlets through the roof, whilst retaining percentage of water in the up facing 'egg cups' which renders the water available to the overlying soil and planting.

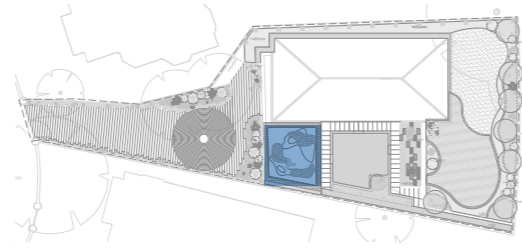
#### Waterproofing and insulation:

To architects details as required to fulfil specification and standards associated with the residential living space – comprising a typical build up as found below living roofs and roof gardens.



01 Typical Detail showing soil depths for sedum / wildflower greenroof planting  
LD701





# APPENDIX ONE:

## 1.2 Living Roof Maintenance Information

### Typical maintenance activities associated with establishing and managing a biodiverse green roof:

The following considerations are a robust list of items that need to be carried out in order to achieve successful establishment and ongoing maintenance of a sedum / wildflower living roof.

#### 1.0 During establishment

During the establishment phase even the lowest maintenance living roofs may require additional visits – particularly during drier conditions when manual watering might be necessary. Some die back is inevitable in green/brown roof installations – the degree to which this is replenished or allowed to recolonized naturally will impact how much replacement planting is required.

#### 2.0 Annual activities

General maintenance is normally carried out annually during the spring and early autumn – it is noted that low maintenance does not mean NO maintenance.

1. Application of water in particularly dry phases (subject to how much substrate is installed for water retention and how much die back is visually permissible)
2. Checking conditions post 'unusual weather conditions' – i.e. particular high winds, snow or prolonged rainfall to ensure all materials are secured, that rain water outlets are fully functioning and that excessive compaction hasn't occurred to prevent filtration of water.
3. Removal of unwanted plant material, ie grasses, self set buddleia, tree saplings etc.
4. Correction of any localised plant system problems that may have occurred post installation – bare patch repair typically occurs March/April of late August to end of September (Note: opportunity to enhance wildflower plug additions in pockets).

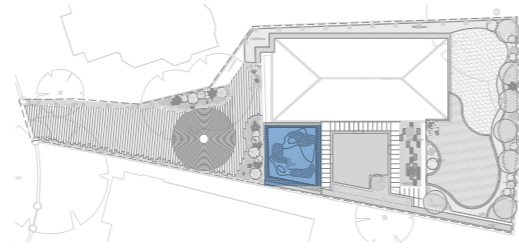
5. Replacement of any naturally failed plants. This can be approx 5-10% of total plants installed subject to methodology for installation – ie. Seed, vs, plug plants, vs pregrown wildflower mat, vs pregrown sedum mat
6. Application of nutrient source if species mix requires.
7. Removal of dead flower heads (if required).
8. Inspection of rainwater outlet chambers and surrounding vegetation breaks.
9. Check edgings are secure and that sedum mat is fully rooting.
10. Replenishment of any areas of settled substrate
11. General 'pruning' and cutting back and removal of arisings (bagged waste)
12. Provide maintenance visit record document confirming condition of the roof planting, the works carried out, the weather / date / timing, and outline any remedial works required within the immediate future.

#### 3.0 Access requirements

Safe access on to the biodiverse green roof is to be gained by way of ladder access, up on to the architectural designed and specified roof structure.

As with many extensive green roofs - including as schools, public facilities and residential developments, the use of a wildflower / sedum mat based product to achieve the green roofs – is often achieved with minimal access requirements, and with little or no parapet protection.



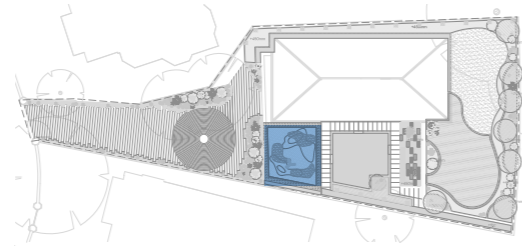


# APPENDIX ONE:

## 1.2 Living Roof Maintenance Schedule

Maintenance Operations for the Biodiverse Green Roof at Lyndhurst Gardens														
Action	No of ops/yr	Timin												Notes
		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	
<b>Site Inspection</b>														
Carry out an initial site inspection to verify works within 1 month post- completion and submit written report detailing any specific maintenance works required. To include recommendations for correction of any localised plant system problems that may have occurred post installation.	1	*	*	*	*	*	*	*	*	*	*	*	*	*
Twice yearly inspections to roof area using the decked area, accessed via ladder through the building. During the first 12 months. This should be timed with potential bare patch repair typically occurs March/April (starting TBC), late August to end of September (starting TBC).	2			*	*				*	*				
Checking conditions post 'unusual weather conditions' – i.e. particular high winds, snow or prolonged rainfall to ensure all materials are secured, that rain water outlets are fully functioning and that excessive compaction hasn't occurred to prevent filtration of water.	NA	*	*	*	*	*	*	*	*	*	*	*	*	
<b>Cleansing and Weeding</b>														
Remove litter, rubble and undesirable weed species	2				1				1					
Removal of unwanted plant material, ie grasses, self set buddleia, tree saplings etc	2				1				1					
<b>Irrigation and Drainage</b>														
Permanent irrigation system is not specified. Irrigation is only required during establishment and during prolonged periods of drought. Irrigation must be viewed in line with any local water restrictions during such times.	NA				*	*	*	*	*	*				Extent of watering once established is subject to the look and performance required - if naturalistic / environmentally defined then sedum will die back and when the rain comes back some species will return - this has a visual and a diversity impact)





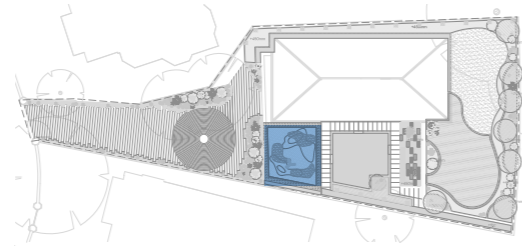
# APPENDIX ONE:

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Action	No of ops/yr	Timing												Notes
		Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	
Inspection of rainwater outlet chambers and surrounding vegetation breaks. All drainage points must be checked every year and cleared out if necessary to ensure optimum performance. Excess water must be able to leave the roof, to avoid ponding and overloading.	2				1				1					
<b>Fertiliser</b>														
Assume an application of Osmocote Pro 8-9 months fertiliser with a coverage of 25 gm/m2 or as recommended by supplier.	1						1							Only apply on suppliers recommendations.
<b>Sedum Mat &amp; Wildflower Plug Plants</b>														
Replacement of any naturally failed plants within enhanced naturemat with core and additional species of Sedum & Wild Flower Plug Plants. This can be approx 5-10% of total plants.	NA			*	*									Replacements may not be required
Check edgings are secure and that sedum mat is fully rooting.	NA			*	*			*	*					Only use specified materials
Replenishment of any areas of settled substrate	NA			*	*			*	*					
Removal of any material arisings following weeding, dead flower head removal and dead plants (bagged waste)	2				1			1						
<b>Monitor and Review</b>														
Monitor and review progress for first 12 months and organise team meeting to discuss future maintenance requirements. Landscape Architect to attend. This will include a review of site visit record documents confirming condition of the roof planting, the works carried out, the weather / date / timing, and outline any remedial works required within the immediate future.	NA				*	*								

\* Operation to be undertaken as required during specified period- ie not every month but the month that it becomes relevant relative to weather, installation date etc.





# APPENDIX ONE:

## 1.3 Lindum Wildflower & Sedum Mat Technical Information



### lindum wildflower & sedum mat

A mixture of wildflowers, sedums, herbs and flowering perennials, specifically designed for green roofs and sustainably grown in the UK.

Working closely with the University of Sheffield's Professor Nigel Dunnnett and the Green Roof Centre, Lindum has developed the Wildflower & Sedum Mat. Attractive to pollinators, it provides a biodiverse, colourful and drought tolerant range of wildflowers, sedums, herbs and flowering perennials that will flourish in the conditions created on many types of green roof.



#### Why choose Lindum Wildflower & Sedum Mat?

**Features:** An attractive mixture of drought tolerant wildflowers, sedum and herbs to produce a biodiverse and colourful alternative to traditional sedum, with a prolonged flowering period, from April to September. Flowering height is 20-30cm.

**Benefits and uses:** As an alternative to pure sedum it combines the drought tolerant aspects of sedums with the colour and ecological benefits of wildflowers and other species, attracting a wider range of birds, bees, butterflies and invertebrates.

**Mixture:** The mixture is designed to have a range of plants that flower from April to September, which have visual appeal and provide an excellent habitat for wildlife.

As well as a range of wildflowers including Oxeye Daisy, Lady's Bedstraw, Cat's Ear and Yellow Chamomile, three sedum varieties are included, and herbs such as Wild Marjoram and Thyme, and pink flowering perennials like Dianthus are part of the colourful mix.

**Maintenance:** One light cut in late autumn removing all cuttings.



#### Lindum Green Roof Mats

Supplied ready-to-roll-out as an instant vegetation layer, with the plants established and growing in a strong felt mat made from recycled British textiles. The Lindum Wildflower & Sedum Mat is lightweight, easy to install and low maintenance, available in varying roll sizes to suit site requirements and suitable for use with a lightweight green roof substrate.

Lindum can offer a complete green roof package, including lightweight substrate and drainage layer.



See [www.lindumgreenroofs.co.uk](http://www.lindumgreenroofs.co.uk)

technical information sheet  
LINDUM WILDFLOWER & SEDUM MAT

#### Mixture

There is a planting mixture of wildflowers, sedum and herbs in the Lindum Wildflower & Sedum Mat. Major species include:

**Oxeye Daisy**  
*Leucanthemum vulgare*  
Member of Daisy family and looks like a large daisy. Flowers May to September.

**Lady's Bedstraw**  
*Galium verum*  
Tiny yellow flowers smelling of honey on tall thin stems. Attracts wide variety of butterflies and moths. Flowers June to August.

**Cat's Ear**  
*Hypochaeris radicata*  
Dandelion like yellow flower. Flowers May to August.

**Yellow Chamomile**  
*Anthemis tinctoria*  
Yellow daisy like flowers with aromatic feathery foliage.

**Sedum Acre**  
*Yellow*  
6cm, yellow, mat-forming

**Sedum Spurium**  
*Pink*  
15cm, dark pink flowers

**Sedum Album**  
*White*  
10cm, white umbel panicles

#### Bumblebees

Research has shown that wildflower green roofs attract twice as many bee species and five times as many blossom visits compared to pure sedum roofs.



### Technical specification

#### VEGETATION MAT

PRODUCT REFERENCE	Lindum Wildflower & Sedum Mat
PLANTING MIX	Lindum biodiverse green roof mix
MATERIAL	450gsm felt with scrim
THICKNESS	25mm
VEGETATION COVERAGE	75% (minimum)
ROLL SIZE	1.2m <sup>2</sup> (0.6m x 2.0m) or 2.4m <sup>2</sup> (1.2m x 2.0m)
SATURATED WEIGHT	25kg per square metre
MAXIMUM M <sup>2</sup> PER PALLET	48 square metres
DELIVERY OPTIONS	Pallet delivery service for small orders Flat-bed artic wagon Rigid with tail-lift offload facilities for crane uplift Rigid with Hiab offload Artic with mounted forklift

#### EXTENSIVE GROWING MEDIUM

PRODUCT REFERENCE	Lindum Extensive Green Roof Substrate
MATERIAL	100% recycled crushed brick and green waste compost UK sourced and manufactured
DEPTH	75mm (minimum) – 100mm (preferable)
SATURATED WEIGHT	At 75mm settled depth = 75kg per square metre At 100mm settled depth = 100kg per square metre
BAG SIZES	1m <sup>3</sup> tote bags 20 litre heat sealed bags Bulk loose
MAXIMUM VOLUME PER PALLET	1m <sup>3</sup> as 1 x 1m <sup>3</sup> tote bag 1m <sup>3</sup> as 50 x 20 litre bags
DELIVERY OPTIONS	Pallet delivery service for small orders Flat-bed artic wagon for crane uplift Rigid with tail-lift offload facilities Rigid with Hiab offload Artic with mounted forklift Bulk tipper or Bulk blower

AREA COVERED	Bag size	Depth(settled)	m <sup>2</sup> covered*
	1m <sup>3</sup> tote	75mm	12.50m <sup>2</sup>
	1m <sup>3</sup> tote	100mm	9.50m <sup>2</sup>
	20 litre	75mm	0.25m <sup>2</sup>
	20 litre	100mm	0.19m <sup>2</sup>

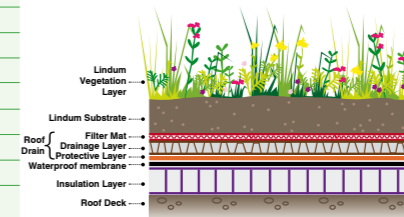
\*Please allow for 5% settlement when ordering

ALSO AVAILABLE  
Lindum Brown Roof Substrate  
Lindum Extra Lightweight Green Roof Substrate

#### DRAINAGE LAYER

PRODUCT REFERENCE	Lindum Roofdrain 20
MATERIAL	Recycled High Density Polyethylene water reservoir core with moisture retentive protective fleece to underside and geotextile filter mat to upperside
THICKNESS	22mm
INFILL	Not required
ROLL SIZE	920mm x 50m (46 square metres per roll)
WATER STORAGE CAPACITY	6.5 litres per square metre
SATURATED WEIGHT	7.5kg per square metre
MAXIMUM M <sup>2</sup> PER PALLET	92 square metres (2 rolls)
DELIVERY OPTIONS	Pallet delivery service for small orders Flat-bed artic wagon for crane uplift Rigid with tail-lift offload facilities Rigid with Hiab offload Artic with mounted forklift
ALSO AVAILABLE	Product Water storage Weight Lindum Roofdrain 40 13.0l/m <sup>2</sup> 15kg/m <sup>2</sup>

#### PROFILE OF A LINDUM GREEN ROOF



#### Other products available from Lindum:

##### Lindum SedumPlus™

Sixteen colourful varieties for extended flowering colour and interest throughout the growing season. For more information see: Lindum SedumPlus Mat technical sheet.

##### Lindum Green Roof Package

Lindum can supply a complete Green Roof Package. See our Lindum Green Roof technical sheet for more information.



#### Contact

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