Proposed Re-development of 12 Wren Street

Application Number: 2019/62/91637/W

Ecological and Landscape Design Strategy

Prepared on Behalf of Petrina Higgins

21st March 2023

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Landscape Concept For Planning

Introduction

The purpose of this strategy is to set out a framework for protecting where possible and enhancing the ecological value of the site, improving biodiversity through a clearly defined landscape plan in accordance with LP30 of the Kirklees Local Plan. This report aims to satisfy the pre-commencement requirements for full planning permission given by Kirklees Council.

"5. No development shall take place until an ecological design strategy (EDS) addressing ecological enhancement has been submitted to and approved in writing by the local planning authority.

The EDS shall include the following:
a. Purpose and conservation objectives for the proposed ecological works.
b. Location (shown on appropriate scale plans) of specific make and model, or design, of habitat boxes, such as bat boxes and bird boxes. Habitat boxes to be integral to new structures.
c. Planting schedule and planting plan showing the inclusion of native species of tree to be included within the application area, and how this achieves the stated purpose.
d. Details of suitable underground infrastructure to support the long term viability of the trees.
e. The EDS shall be implemented in accordance with the approved details and all features shall be retained in that manner thereafter.
Reason: To ensure the development hereby permitted provides ecological enhancement measures in accordance with Policy LP30 of the Kirklees Local Plan. This is pre-commencement to ensure detailed designs are available to enable implementation as part of the construction program"

Aim
The aim of the Ecological and Landscape Strategy is to focus attention on sustainable ecological management, maintenance and enhancement of the wildlife value of the site, incorporating appropriate planting and interventions to ensure the future viability of the landscape scheme.

Existing
The proposed development site comprises an area that is enclosed by a traditional high dry stone wall. The garden has fallen into a state of poor condition with a mosaic of concrete hard standing, groundcover of weeds and lawn turf. The walls are covered in mixed scrub and there are a number of self seeded saplings and small trees. Overgrown budlijah, brambles, common ivy are underming the structural integrity of areas of the wall. The main area is formed of overgrown and unkempt lawn turf and patches of concrete. The main species expected to be impacted by the proposed development are bats in the form or foraging habitat, and birds in the form of although the latter would be minimal, due to the very limited tree cover and low lying nature of much of the scrub. Although there will be some ecological benefit from the unkempt nature of the site, it is very limited and the new scheme would look to enhance the ecological values and biodiversity of the site. Whilst critically removing much of the hard standing that is in poor condition and making safe the garden walls with the removal of the ingrwowing scrub that is undermining the structural integrity of the walls. The introduction of plants, mixed native hedging and some small trees will counter any loss that currently exists.

In addition to this Strategy there is a desire to promote an understanding and appreciation of biodiversity based upon a clearly defined landscape design that recognises as well the potential diversity and abilities of the new owners of the homes in maintaining the scheme. The aims of this strategy are to maintain and enhance the nature conservation value of the site and to ensure that specific targets are set in terms of improvements with particular reference to the following objectives:

-: To enhance the area within the curtilage of the new development relevant to the local environment;

:- To enhance the biodiversity value of habitats on-site by creating and maintaining new habitats;

:- To improve the biodiversity value of the site by introduction of a variety of wildlife refugia and nesting boxes;

:- To improve the quality and diversity of habitats by new planting aimed towards invertebrates, birds and bats;

Limitations and constraints comprise of the relative lack of current ecological features. Ecological enhancements are limited by the current low ecological value of the site and limited features. Creation of new habitats are limited due to the small scale of the site, the need to protect the integrity of the walls the mass of hard standing and remaing poor ground conditions. Consequently ecological enhancements are based on species of plants and tree type which can best cope with conditions and are easily accessible and known to be attractive to bats, birds and invertebrates.

Summary of Works

Prior to Commencement of Works
1) All retained trees to be protected to BS.5837 (2012), Trees in relation to Design, Demolition & Construction. Note, because of the location of the existing trees and their undermining of the garden wall, it is unlikely any will be able to be retained as the structural integrity of the wall is critical for safety. If this is the case new tres will be planted to replace any net loss in ecological value.
2) No tree works are to be undertaken until the bird nesting season is completed, (March -September inclusive). If this is not possible, then all areas of vegetation to be removed are to be inspected for active nests by as suitably qualified ecologist immediately prior to removal.
3) Due to the sites position immediately addressing neighbouring properties , all precautionary measures should be taken during the demolition and construction phase of the development.

Prior to completion of construction works
1) Landscape planting as per approved Landscaping drawings to be completed prior to completion of the Project.
2) Upon completion of building works artificial refugia will be installed according to the Ecological Design Strategy Plan including:
4 x Bat boxes, Schwegler 1FN or similar (building integrated or wall mounted)
2 x Bird Nesting Boxes Schwegler 1B (tree mounted)
2x Invertebrate boxes
The above shows minimum numbers to be installed as detailed in the plan All ecological refugia should be installed on completion of building works. Locations are shown on the Landscape Plan.
3) As this will be a private residential development there will be no ongoing Ecological Monitoring of the birds and bats using the boxes on the site.
4) At all times during construction: Mammal ladders to be placed in all open trenches that cannot be covered at night by plywood sheeting to allow mammals to exit trenches. (Planks of wood are usually sufficient such as scaffolding planks laid at no more than 30°).
5) New shrub planting to replace trees scheduled for removal.
6) Finalise a lighting scheme, which minimises the impact of external lighting upon bats using the site.

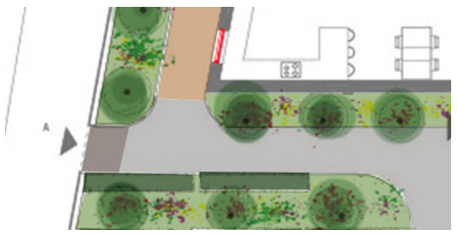
Habitat Management and Biodiversity Strategy

The strategy is broken down into 3 sections which address the following:

1. Ecological Refugia Actions.
2. Habitat Management,
3. Proposed Landscaping Works.

Artificial Ecological Refugia	Target Note See Plan LA	Description	Notes for Site	Date for Implementation
4 Bat Boxes	1	Bat boxes will be installed on site mounted on the proposed buildings Boxes are suitable for use by all local bat species.	Located in the building an inaccessible height beyond reach of predators (away from ledges etc).	To be installed on completion of building works
4 Invertebrate Boxes	2	2 Invertebrate boxes to provide over wintering sites for specific species such as lacewings, ladybirds, solitary wasps, bumblebees and red mason bees, which are essential in pollination and pest control roles within many ecosystems. In addition invertebrate populations provide a food source for LBAP bird and bat species.	Invertebrate boxes to be hung from trees or hidden in hedges and shrubs throughout the landscaped areas.	To be installed on completion of building works
2 Bird nesting boxes	3	2 Bird nesting boxes are too be erected on the New Standard trees on site - Schwegler Nest Boxes Type 1B suitable for use by a range of small passerine species including LBAP and UK BAP priority species. - Boxes should be sited facing any direction except due south at a height of between 3m and 6m in a sheltered area with clear access to the entrances.	Locate in inaccessible areas at height beyond reach.	To be installed on completion of building works
Bats, Bat Boxes and Lighting		Note, These are recommendations. All external lighting should be controlled with photocell and timer combination to adjust the 'lit time'. 1. Areas of the site which have bat and bird boxes installed must avoid direct illumination. Wherever possible lighting will be kept at low levels and landscape features used to provide indirect lighting. 2. Light sources will be selected from these which emit small or moderate amount of ultra violet. Where this is not possible additional filters and/ or accessories will be used to minimise the impact. 3. The luminaries with adequately controlled beam distribution will be selected to eliminate or reduce light spillage. 4. We suggest the use of Narrow Spectrum Lights with no UV content, Low pressure sodium and warm white LED and Directional downlights - illuminating below the horizontal plane which avoids light trespass into the environment. The lighting should be limited to the circulation areas and car park and should include directional lighting onto these areas to prevent light spill. Using Variable Lighting Regimes (VLR) to suit both human and wildlife use of the site, involves switching off or dimming lights for periods of the night, e.g. 12.30 – 5.30am to prevent light spill onto the road		

Landscape Design



Our aim is to create wonderful private and shared garden spaces, informed by the enclosed nature of the space and urban setting, existing materials and key features, such as the tall dry stone walling system the wraps around the garden. much of the trees and planting is overgrown and unkempt and the close proximity of the trees to the wall, undermine the walls integrity. The ground cover of weed and lawn turf has enveloped much of the concrete hard standing and therefore removed much of the original qualities of a walled garden. Integrating thoughtful, colourful planting to soften the massing of the buildings, creating a garden bthat reflects the joys of the past but links the needs and functions for the families that will live here in the future.

Sympathetic to the site, enhancing the special features such as the enclosing garden wall to create an exciting sense of privacy and seclusion. Utilising more porous materials within the car parking and path ways will help with the drainage and management of rainwater runoff. The enclosed nature of the site lends itself nicely to a walled garden theme, and a perfect frame for both planting and trees which will enhance the experiential quality of the scheme, and help reduce the sense of massing from the buildings.

Planting around the building and the wall as well as the carpark will help soften the space and provide a valuable green structural element that will improve the biodiversity and ecological values. Mixing both porous gravels and hard standing paths to allow for access by all abilities of resident is key. A mixture of native hedging such as hazel, hawthorn, and gelder rose, as well as some native and none native trees, will provide good nesting spots for the birds and help reduce the visual impact of the scheme on the neighbours and wider surrounds.

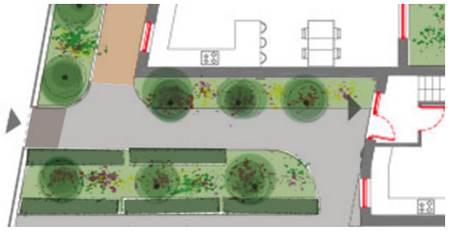
The scheme is intended to be functional, yet an enjoyable private place to live. Green space both communal and private are designed to be low maintenance (as we do not know the skills or interests of the new residents) and provide seasonal variation and structure. The planting provides a positive step in improving the biodiversity and ecological value of the site, its sustainability, and reducing its impact on the local area services.

Sustainable garden design is a key component of any urban design and it is important that rain water management can be effectively managed in situ. A combination of multifunction soft and hard landscaping designs, porous hard surface paving and path material, so that flow can be transferred to the green areas for further filtration and absorption, before any excess is then passed to the mains.

Benefits of Sustainable design

- creating attractive places where people want to live, and play through the integration of multi-functional and diverse green spaces within the built environment
- supporting the creation of developments that are more able to cope with changes in climate
- delivering cost-effective infrastructure that uses fewer natural resources and has a smaller whole-life carbon footprint than conventional reliance on our existing systems

Types of Soft Landscape Planting



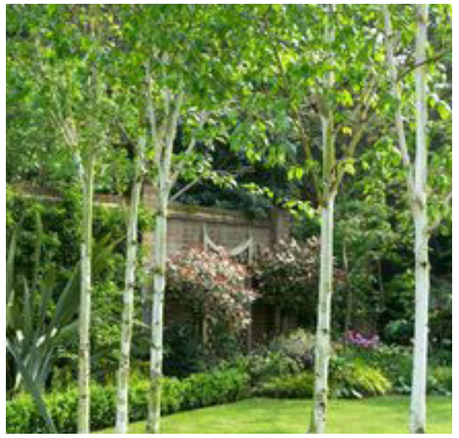
Jacque montii Attractive bright white bark, dark green leaves, which turn yellow in autumn, and yellowy brown catkins in spring. An elegant tree that is perfect for all gardens, large or small. It can be grown as a specimen in the lawn, in a group in a woodland or just planted as a feature in the garden border. These trees are sought after for their white bark, the colour of which develops fully when the tree is around 8 years old.

Prunus cerasifera 'Nigra' is a small to medium sized deciduous tree popular both in the garden as well as often being utilised within urban planting. It starts in early spring with deep pink buds from which emerge pretty single pink flowers which gently fade to white as its dark foliage appears. The deep blackish-purple leaves remain on the tree until autumn when they turn a brighter red before falling. Traditionally a fruiting variety it often produces small juicy dark red plums around 2 to 3cm across but this should not be relied upon. Extremely tough it is tolerant to a wide range of conditions and soils but will thrive in full sun and in soils that are well drained.
Growing around 20-30cm a year it develops from a conical shape turning in maturity into a rounded crown with a fully mature height of around 5 to 7m with a 3 to 6m spread.

Nyssa Sylvatica A beautiful ornamental tree with glossy, mid-green foliage that turns striking shades of orange, red and yellow in the autumn. Nyssa sylvatica grows in a symmetrical, conical shape spreading to 5 x 4 metres in 20 years so it never gets too big for most situations. This attractive tree will grow in most well-drained soils in a sheltered position in full or partial sun**.** The black gum tree is good in partial shade as well as open situations. It is largely pest and disease free and is low maintenance with little pruning needed on this relatively slow growing tree.

Prunus Amanogawa' awa is a beautiful flowering cherry tree that produces soft pink fragrant flowers that smother the branches in a column-like format. A stunning Japanese cherry, it is one of the best ornamental trees perfect for those that love cherry blossom but don't have the space for a normal size tree. It is a small, narrowly fastigiate deciduous tree with slightly fragrant, semi-double, pale pink flowers in late spring; in autumn, the leaves turn orange and red. Ideal for City & Courtyard Gardens.

Sorbus aucuparia attractive, deciduous, trees, suitable for small to average-sized gardens. They look fabulous in spring, covered in their flowers, and again in autumn when their fruit and autumn foliage provide more interest and colour.

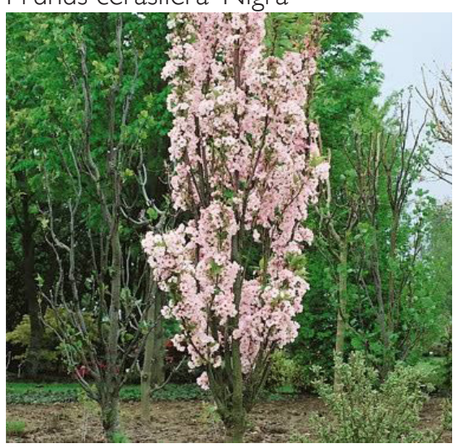


Jaque Montii

Nyssa Sylvatica

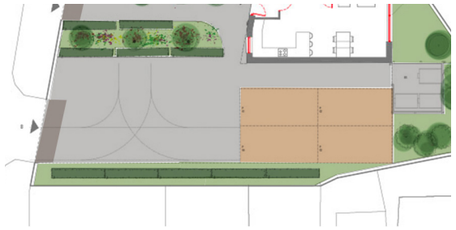
Prunus cerasifera 'Nigra'

Sorbus acuparia



Prunus Amanogawa

Herbaceous planting, Hedges & Wildflower



It is important that the hedging chosen provides not only a rich mixture of structure and seasonal interest, but also a rich living wall for birds and insects to thrive.

Fagus Sylvatica Purperea Fagus sylvatica 'Purpurea' is often referred to as Copper Beech. This is the colourful purple leaved variety of Beech with rich purple colouration in the Summer months and coppery brown Winter foliage that is retained. Purple Beech hedge plants give year round interest. Best Features: Year-round interest, colourful foliage, Ideal For Hedges 1m-5m high Growth Rate: Average to Fast | 30-60cm a year, Position: Any normal soil, sun or partial shade.

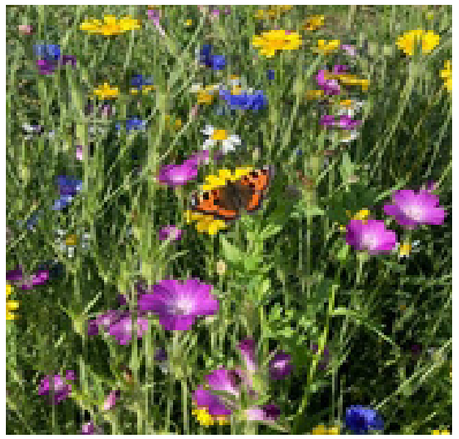
Mixed Native Hedge Large, downy leaves of **hazel** (Corylus avellana) support a range of moth caterpillars, while the flowers (male flowers form catkins) attract many bee species. **Guelder rose** (Viburnum opulus) produces lacecap cream flowers in summer, good for pollinating insects such as hoverflies. These are followed by translucent red berries, eaten by blackbirds, thrushes and finches. **Holly (Ilex aquifolium)** is a slow but steady grower in a hedge, valued for its evergreen element. Its prickly habit is a good security feature for a boundary hedge. Male and female plants are required for berrying. Ivy is an alternative way to provide evergreen cover and can be allowed to creep into an established hedge. **Blackthorn (Prunus spinosa)** is also a common component of native hedges though its vigour lends it to longer boundaries and large gardens. Long spikes makes a good deterrent to unwanted intruders while wildlife benefits from white spring flowers and fruit known as sloes. **Hawthorn (Crataegus monogyna)** is a native hedging staple, often making up the bulk (50% or more) of a mixed hedge. Its dense habit and thorny growth give it excellent stock-proofing properties and a good site for birds looking for somewhere discreet to nest or roost. Creamy-coloured flowers are followed by red berries.

Lavender, an herb with many culinary uses, also makes a stunning addition to borders and perennial gardens, providing sweeping drifts of colour from early summer into fall. With its silvery-green foliage, upright flower spikes and compact shrub-like form, lavender is ideal for creating informal hedges

Wildflower BSBP 100% Bees & Butterfly Wildflower Seed mix is designed to provide maximum pollen and nectar. Creates a beautiful meadow and wildlife habitat.

Fagus Sylvatica Purperea

Mixed native Hedging



Wild Flower BSBP

Lavender

Summary

The landscape design aims to provide a functional, green and thoughtful scheme to the area, that will enhance the ecological value of the site, improve biodiversity and improve the overall value of the setting

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