

Penistone Grammar School, Phase 2
Discharge of Pre-Commencement Planning
Condition No. 14

1080

25/02/2019

10architect



Rev 1

Rev	Date	Comments	Prep.by	Appr. by
1	25/2/2019	Issue 126 – Discharge of condition 14 first submission	MJM	ADS

Introduction

This short report brings together a number of different elements that provide information for the biodiversity officer in order that he is able to discharge condition 14 of the planning application at Penistone Grammar School.

This report splits into three sections which consider:

1. The ecological mitigation measures that are proposed (such as the locations of bird boxes),
2. the design and performance requirements for the external lighting,
3. a commentary on the positive aspects of the sedum roof for the biodiversity of the area.

We trust this report identifies in adequate detail the measures we are taking, thus demonstrating the importance which we place on sustainability and biodiversity issues.

Should the local authority require any further information, we would be delighted to provide, but we believe that the measures described and outlined in this short report provide adequate information for the discharge of the condition when read in conjunction with ecological report.

Ecological Mitigation Measures

In accordance with the ecology report recommendations, we have updated our drawings to show the location of the House Martin boxes under the eaves of the building. These have been carefully sited to make best use of the prevailing conditions and place them in areas where they are likely to remain relatively undisturbed.

There have been no requests or recommendations for bat boxes therefore they have not been proposed within the design.

The Arboricultural impact assessment refers to planting of at least 10nr trees to mitigate the loss of trees as a result of the development. We confirm our planting plan has sufficient number trees in accordance with the recommendation, I have enclosed drawings that highlight the various species to show a broad and diverse range of suitable trees are planted within the site.

During the pre-commencement discussions, it was agreed that the relatively new hedge planting would not need replacing, and the cluster of new trees would more than make up for the loss of existing trees and bushes.

The following drawing indicate the trees and bird boxes:

- 0519-PLI-Z1-ZZ-DR-L-0004

Lighting

Due to the fact that the contract has been procured on a design and build basis, the specification and indicative drawings have been provided so that the Contractor will develop the detailed lighting scheme as part of the detailed design. Therefore, final details will need to be provided by the Contractor when they have completed their design.

However, we would provide the following comments to demonstrate that a suitable performance level will be achieved:

- The spread of light should be at, or near horizontal level. The lighting design will include fittings mounted on the horizontal i.e. with no upward tilt.
- The times that lights are used should be limited to provide some dark periods. To achieve this, the performance specification includes for the external lighting to be controlled via a timeclock. The relevant clause states 'All external lighting (except for safety and security lighting) can be automatically switched off between 2300hrs and 0700hrs. This can be achieved by providing a timer for all external lighting set to the appropriate hours'
- LED fittings have been specified which do not emit ultra-violet light
- We understand that white and blue wavelengths of the spectrum should be avoided, and lights should peak higher than 660nm. For this reason, fittings have been selected that are available in a range of colour temperature including 4000k and 3000k. Final selection will be by the Contractor as part of their detailed design within these criteria. We shall make the contractor aware of the 600nm requirement and ensure that the design works to achieve this wavelength.

Sedum Roof

The design features a full lightweight sedum roof. This is located across the entirety of the roof providing both ecological and discharge of water benefits.

Helping out the environment

The release of carbon dioxide is one of the key contributing factors to global warming and as such, the government has been charged with meeting stringent EU targets by 2020. Green roofs are ideal for doing exactly this. According to the UKQBC, 44% of total CO₂ emissions are released from buildings.

In a similar vein to the point above, green roofs reduce the need for air conditioning, whilst also ensuring less heat is required for the winter. Both air con and the generation of heat create CO₂.

Supporting wildlife habitats

Green roofs also help support wildlife and in turn, can create a healthy habitat. Whilst they won't directly replace ground environments, they're perfect for attracting birds and other wildlife to create a thriving eco-friendly habitat.

Each green roof will support varying habitats, dependent largely on the type of vegetation included. According to a survey in Switzerland, the study of 11 green rooftops found there to be an incredible 172 separate species. Studies in the UK are more limited but point to a wide range of benefits to a wide range of small insects and invertebrates.

Aiding air quality

Air pollution remains an important issue in the UK and staggeringly there are some 24,000 who die from this every year. As you would expect, air pollution is a greater problem in urban areas, especially the larger cities such as London and Birmingham.

A green roof helps to improve the overall air quality. According to a study, green roofs help reduce up to:

37% of sulphur dioxide

21% of nitrous acid

0.2 kg of dust particles / square metre each year

Improve the drainage system

Sustainable drainage is an important component of any building, as a way to counter flooding in the event of excess rainfall. Traditionally, a network of pipes connected to the sewage system has helped control water. However, as a result of increasing urban development, as much as 75% of water is running off into urban areas.

Global warming isn't helping the cause either and the risk of flooding is heightened throughout the UK. To counter this threat, green roofs are a terrific option. Water is stored in plants and substrate, before being released back into the environment naturally.

Increase the lifespan of the roof

A rooftop is continually under attack from the elements and has plenty to cope with throughout the year. Not only will a roof need to sufficiently deal with wind and rain, but ultraviolet light and fluctuating temperatures too. As such, it's common for both homeowners and businesses to consider an alternative option for the roof.

Green roofs offer this opportunity and have proved to double or even triple the life expectancy of your rooftop. The barrier of greenery helps protect the waterproof membrane underneath and ensure your rooftop's life expectancy lasts well for decades.

Boosting thermal performance

Without doubt, one of a green roof's most beneficial advantages is thermal performance and it's staggering just how much of a difference this can make. One of the biggest problems facing a typical roof is poor insulation, leading to substantial heat loss in winter and sweltering conditions over the summer months.

This all changes with the aid of a green roof. By implementing a green roof, you can ensure to improve energy efficiency and limit the usage of air conditioning too. Plants absorb the sun's energy and therefore reduce the temperature of the roof in summer, whilst aiding thermal efficiency in the colder winter by locking heat inside.



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LANDSCAPE STRATEGY

The landscape proposal is designed with a mixture of deciduous and evergreen species to soften the school surroundings giving a year round warm feeling, strengthened further by the flowering species which attract wildlife.

AMENITY GRASS

SOW AT 50G/M2
LOW MAINTENANCE, HARD WEARING
AMENITY SEED MIX TO CONTAIN
PERENNIAL RYEGRASS CULTIVATORS
TOGETHER WITH SLENDER CREEPING
RED FESCUE AND BROWNTOP BENT
E.G;
-TUFFGRASS FROM JOHNSONS SEED,
-BAR 11 FROM BARENBRUG UK LTD
-A22 MIX FROM GERMINAL GB LTD.



PLANTING ON

SLOPE
2L/3L CONTAINERS
PLANTED AT 3-4 PLANTS PER M2
-MIXTURE OF GROUND COVER AND
FEATURE PLANTS



Vinca minor alba



Euonymus fortunei 'Emerald Gaiety'



Hedera colchica 'Dentata Variegata'



Jasminum nudiflorum



Hebe albcians 'Red Edge'



Olearia x haastii

BIRD BOXES
No. 13 SCHWEGLER MODULAR
HOUSE MARTIN NEST



MULTI-STEM TREES

250CM-300CM
ROOT BALL
DOUBLE STAGGERED



Betula pendula



Prunus maackii 'Amber Beauty'



Acer campestre

HERBACEOUS/SHRUB

GROUND COVER
2L/3L CONTAINERS
PLANTED AT 5-6 PLANTS PER M2

MIXTURE OF GROUND COVER AND
HERBACEOUS PLANTS



Stachys byzantina



Viburnum davidii



Tellima grandifolia



Geranium macrorrhizum

HEAVY STANDARD TREES

12-14CM
BARE ROOT
DOUBLE STAGGERED



Carpinus betulus



Quercus petraea



Sorbus torminalis



Ginkgo biloba



Prunus avium

MIXED NATIVE
HEDGE PLANTING

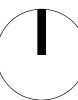
5 PER METRE;
DOUBLE STAGGERED



Crataegus monogyna;
Corylus avellana

GENERAL NOTES:
1. DO NOT SCALE FROM THIS DRAWING. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
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A1 Original
Sheet
Size



CDM

IN ADDITION TO THE HAZARDS / RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

ITEM NO. RISK REGISTER DETAILS

KEY

P03	AMENDED TREE SPECIES AND BIRDBOX TYPE: BIRDBOX LOCATIONS ADDED	19/02/19	SS	AA
P02	PLANNING ISSUE - RED LINE REMOVED; ROAD ADDED	11/10/18	TM	AA
P01	PLANNING ISSUE	21/09/18	TM	AA
REV.	REV. DESCRIPTION	DATE	DWN	CHK

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Project
PENISTONE GRAMMAR SCHOOL
EXTENSION

Drawing
SOFT LANDSCAPE STRATEGY

Date 21/09/18	Scale 1:250
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Status PLANNING	Dwn: SS	Chk AA
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Drawing 0519-PLI-Z1-ZZ-DR-L-0004	Suitability INFO	Rev P02
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NB: Typical species shown for each