

Condition 7 2022/62/92271/E: Ecological Design Strategy and Landscaping Plan:Cleckheaton

Introduction and Background

A new petrol filling station with a drive through lane is proposed at Centurian House, Cleackheaton, West Yorkshire (SE 18428 26651).

An Extended Phase 1 Survey was previously completed by Rachel Hacking Ecology in 2022. The site lies approximately 300m east of the M62, and currently comprises a large area of hardstanding with pockets of introduced shrub and amenity grassland with scattered trees. A detached three storey commercial building is also present. The site is deemed to have limited ecological value, primarily due to the heavily managed nature of the habitats on site, and limited structural heterogeneity. The report suggested that a suitable landscaping plan should be created for the site as part of its re-development (Rachel Hacking Ecology, 2022).

Planning consent (2022/62/92271/E) has been granted for development of the site. Condition 7 of the planning permission requires the following:

Condition 7-Prior to any works commencing other than the demolition of centurion house, an Ecological Design Strategy and Landscaping Plan shall be submitted to and approved in writing by the Local Planning Authority. The Ecological Design Strategy and landscaping plan shall:

- ***Set out what habitats / biodiversity related works are to be delivered;***
- ***A timeline for the implementation of the works; and,***
- ***Outline how the habitats will be managed for a period of 10 years***

This report provides an Ecological Design Strategy and Landscaping Plan allowing the discharge of Condition 7, based on the three bullet points above.

Delivery of Habitats/Biodiversity within the site

The landscaping plan in Appendix A provides the locations of ecologically valuable habitats which will be provided as part of the new development. Table 1 below provides a summary of these habitats, and further recommendations on how to increase their biodiversity value. Table 2 provides timelines of implementation and appropriate management regimes associated with these habitats/biodiversity features.

Table 1-Description of Habitats/Biodiversity features to be delivered throughout the site

Habitat	Proposed Location within the site	Recommended Further Biodiversity Enhancements/Features
Proposed Standard Trees	8 along north-western site boundary, 5 along western site boundary and 4 along southern site boundary	<ul style="list-style-type: none"> Native tree species will be planted where possible. For urban areas, with high levels of air pollution from roads such as the M62 in this case, silver birch (<i>Betula pendula</i>) and elder (<i>Sambucus nigra</i>) are suitable choices. This is due to their efficiency as a biological filter, as they capture particulate matter and improve air quality (Dzierzanowski and Gawronski, 2011). It has been shown that planting silver birch and elder along roadside verges contributed to the reduction of particles from diesel engines in the air by 79% and 71% respectively (Wang et al, 2011). Additionally, appropriate root protection zones should be provided around each new tree to accommodate root growth. These root protection zones should be set up in line with best practice guidance provided by BS 5837.
Existing Trees to be retained	7 along north-eastern site boundary	<ul style="list-style-type: none"> The trees to be retained are located within 100m of extensive wooded areas to the north of the site, which may provide suitable bat foraging/commuting habitat. Placing bat boxes on trees to be retained will increase the biodiversity value of the site with respect to bats, by providing roosting habitat. 3 Schwegler IFF bat boxes will be placed on the southern aspects of three trees to be retained on site (to ensure maximum sunlight is received during the summer months when bats are rearing their young (suggested locations shown in Appendix B). The boxes will be left open at the bottom to allow droppings to fall out, and located on a tree trunk at least 3m from the ground with an unobstructed approach. 3 Schwegler 1B bird boxes will be placed on trees to be retained. They will be situated between 1.5 and 3m from the ground, evenly distributed on the trunks of trees to be retained (suggested locations shown in Appendix B). It is recommended that 3 Schwegler 1SP Sparrow Terraces are installed on trees to be retained. These will be sited 2m above

		ground (suggested locations shown in Appendix B).
Proposed Ornamental Hedge	Along northern, western and southern site boundaries	<ul style="list-style-type: none"> Native, berry bearing species will be planted to form the hedgerow, such as hawthorn (<i>Crataegus monogyna</i>), and blackthorn (<i>Prunus spinosa</i>). These species will provide foraging/nesting habitat for birds and a pollen and nectar source for invertebrates. Any fencing which is erected to provide a boundary before the hedge is mature, will be ecologically permeable. This will allow mammals (such as hedgehog-SPI), to pass through the site and ensure their movement is not restricted. Suggested fencing is Lattice Trellis Panels Jacksons Fencing (jacksons-fencing.co.uk).
Proposed shrub beds with feature specimens	4 along southern site boundary	<ul style="list-style-type: none"> Native shrubs will be planted within these shrub beds. Dogwood (<i>Cornus sanguinea</i>) is highly suitable as it provides bird species with a food source (berries) during August and September. Guelder rose (<i>Viburnum opulus</i>) also provides a nectar and pollen source for invertebrates, and berries as a food source for birds.
Proposed Species Rich Grass Areas (WGF 20 by Germinal)	In eastern corner of the site, and along the northern, western and southern site boundary	<ul style="list-style-type: none"> The WGF 20 grass mix shall be managed as a meadow, to provide a heterogeneous habitat for species such as birds, invertebrates and small mammals which may utilise the site.

Timeline for Implementation of the Works and Suggested Management Regime for a period of 10 years.

Table 2 below provides a timeline/description for the implementation/management of the habitats and biodiversity features described in Table 1.

Table 2- Implementation of the Works and Suggested Management Regimes for 10 years

Habitat/Feature	Timing of Habitat/Feature Creation/placement	Years 1-10 Management
Planting of Proposed Standard Trees.	Plant trees between October and February, following development of the site. Root protection zones will be incorporated into design plans prior to commencement of development.	Herbivore protection and weed control will be in place for 5 years following tree planting.
Provision of Bat Boxes-on trees to be retained	Bat boxes will be placed on trees to be retained prior to the removal of any other trees on site.	Annual monitoring of boxes in Autumn for a period of 5 years. If not in use after 2 years, boxes will be moved to an alternative suitable location. During each annual monitoring visit, boxes will be assessed for damage and replaced as appropriate, and any debris/droppings will be removed.
Provision of Bat Boxes-on trees to be retained	Bird boxes will be placed on trees to be retained prior to the removal of any other trees on site.	Annual monitoring of boxes in Autumn for a period of 5 years. If not in use after 2 years, boxes should be moved to an alternative suitable location. During each annual monitoring visit, boxes will be assessed for damage and replaced as appropriate, and any debris/droppings will be removed.
Ornamental Hedgerow	Plant hedgerow between	Replace any failed hedgerow seedlings for a period of 5 years following planting.

	October and February.	<p>Leave wide margins at base of hedgerow. Trim hedgerow every 2 or 3 years or trim 1/3rd of hedgerows each year for lifetime of the hedgerow (outside of nesting bird season which runs from March-September).</p> <p>If hedge becomes gappy at base, implement annual hedge laying for the lifetime of the hedgerow.</p>
Proposed shrub beds with feature specimens	Plant shrubs at any time of year.	Pruning as appropriate outside of nesting bird season (March-September).
Proposed Species Rich Grass Areas (WGF 20 by Germinal)	Sow seed mix in late winter/early spring following site development.	<p>Sow at a rate of 10g/m² at a depth of 10mm. Create a fine friable seedbed down to 150mm in depth. Carry out two equal sowings at right angles to each other.</p> <p>If meadow fails to establish, use plug plants in spring.</p> <p>The meadow will be cut annually through strimming between August-early October. Grassland should be cut to a height of 70-100mm and all arisings should be collected. To increase habitat heterogeneity, it is recommended that the meadow is cut in sections, leaving a week to a fortnight between cuts during the August-October period. During the winter months, lightly mow the sward down to 70-100mm until the following growing season (March).</p> <p>Further information on the WGF 20 by Germinal seed mix can be found here: WFG20 Eco Species Rich Lawn (germinalamenity.com)</p>

References

Rachel Hacking Ecology (2002). Extended Phase 1 Habitat Survey and Daytime Bat Survey:Centurian House Cleckheaton West Yorkshire

Woodland Trust (2019), Residential Developments and Trees: A guide for planners and developers

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Dzierżanowski, K. and Gawroński, S.W., 2011. Use of trees for reducing particulate matter pollution in air. *Challenges of Modern Technology*, 2(1), pp.69-73.

Wang, H., Maher, B.A., Ahmed, I.A. and Davison, B., 2019. Efficient removal of ultrafine particles from diesel exhaust by selected tree species: implications for roadside planting for improving the quality of urban air. *Environmental science & technology*, 53(12), pp.6906-6916.

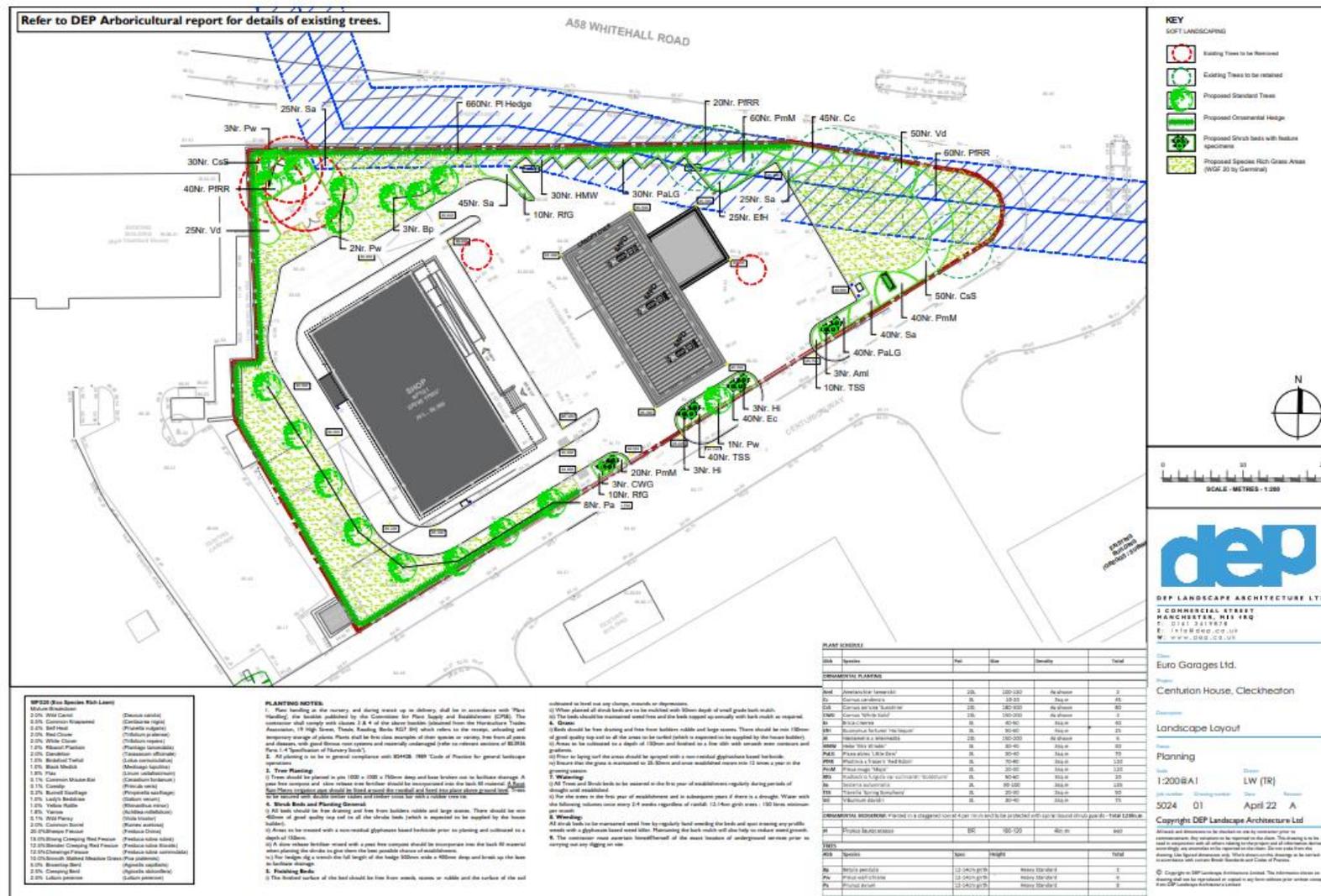
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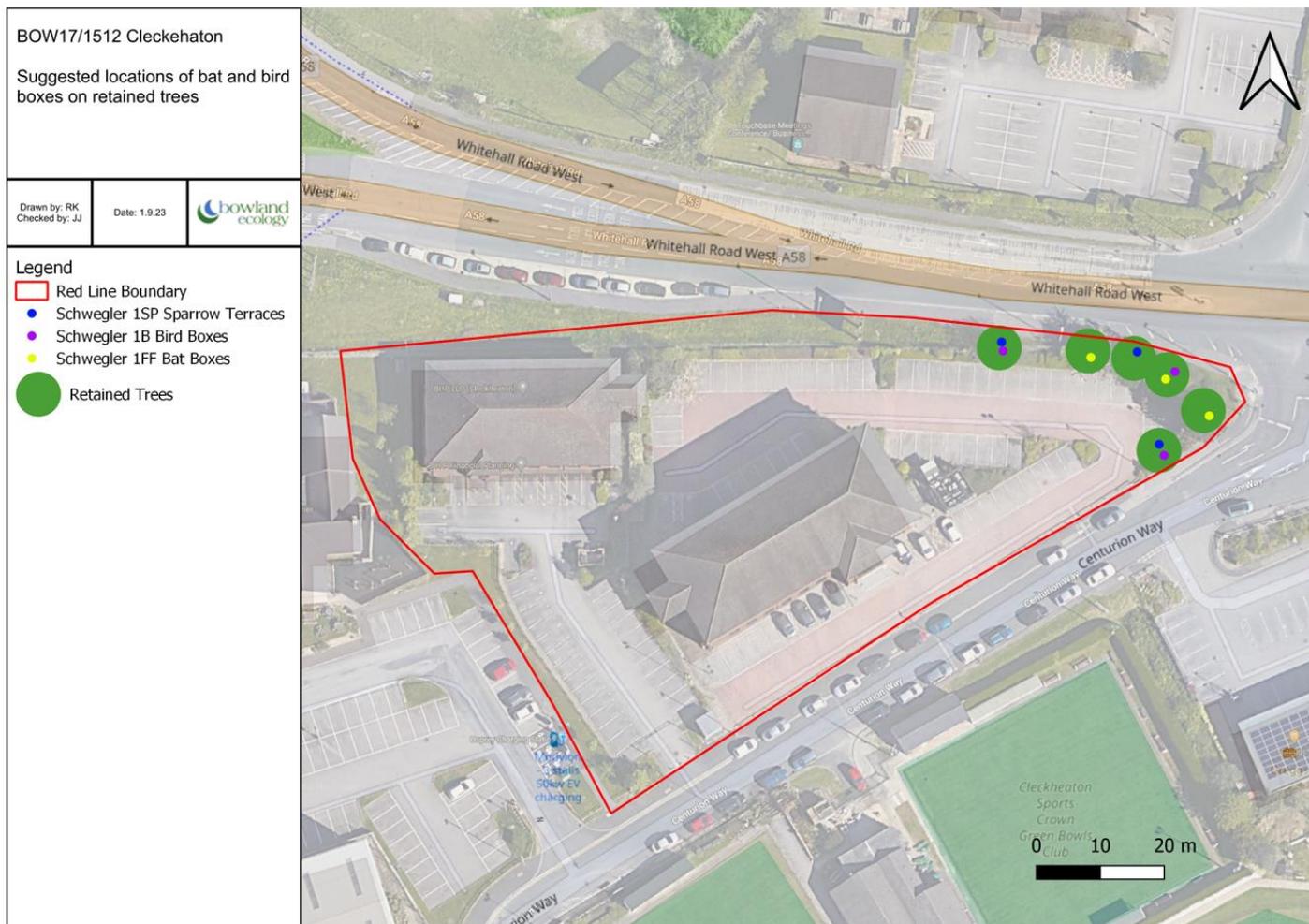
Date:4.9.23

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Appendix A-Landscaping Plan showing habitats to be created



Appendix B- Suggested locations of bat and bird boxes to be incorporated into the development



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