



L I Z A R D

Landscape Design and Ecology

DENVER COMMERCIAL LLP

DENVER POULTRY FARM

Okehurst Lane, Billingshurst

Landscape Design Strategy

Prepared by:	ML
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1.0 INTRODUCTION

General

- 1.1 Lizard Landscape Design and Ecology (LLD) has been commissioned by the Denver Commercial LLP to develop a Landscape Design Strategy for Denver Poultry Farm at Okehurst Lane, Billingshurst.
- 1.2 The Landscape Design Strategy aims at explaining the design intent and objectives of the proposed landscape scheme as well as provides the outline planting palette and nursery stock specification considered appropriate and beneficial for the proposed scheme.
- 1.3 The Landscape Design Strategy for the development at the Land at Denver has been prepared by Mary Lannia (Landscape Architecture MLA, Architecture B.Arch); Landscape Architect at Lizard Landscape Design and Ecology, Worthing and reviewed by Keith Miller (Landscape Architecture BA (Hons) MALA CMLI); Technical Director at Lizard Landscape Design and Ecology, Worthing.

Site Visits and Supporting Documentation

- 1.4 The design strategy was informed by desk study and a site visit undertaken on the 20 April 2021 to appraise existing features on Site and the surrounding area. The document is informed by and shall be read alongside the following documentation (produced by LLD);
- LLD2288-ECO-REP-001 - Preliminary Ecological Appraisal;
 - LLD2288-ECO-REP-002 - Ecological Impact Assessment;
 - LLD2288-ARB-DWG-001 - Tree Constraints Plan;
 - LLD2288-ARB-SCH-001 - Existing Tree Schedule;
 - LLD2288-ARB-DWG-002 - Tree Retention and Protection Plan;
 - LLD2288-ARB-REP-001 - Arboricultural Impact Assessment;
 - LLD2288-LPL-REP-001 - Landscape and Visual Appraisal;
 - LLD2288-LAN-DWG-001 - Landscape Masterplan Strategy.

2.0 EXISTING SITE INFORMATION

The site

- 2.1 The development site (referred to as the Site) encompasses the land at Denver Poultry Farm located on Okehurst Lane, Billingshurst (Grid Reference: TQ 09069 27452).
- 2.2 The Site is an irregularly shaped area of some 0.7 hectares, (1.8 acres) of land, which includes a long agricultural building in fair condition, in prior use as a chicken shed serving Denver Poultry Farm. The foundation of a parallel building is offset to the west of that remaining, which would also have functioned as a chicken shed. A storage container is located in the north eastern corner of the Site.
- 2.1 The Site is accessed off Okehurst Lane, through a double gateway. The northern boundary is otherwise defined by a close boarded fence with a Leyland cypress tree belt. A thin, mixed species native hedgeline is located to the north of this along Okehurst Lane, with outgrown species of hawthorn and field maple, beyond a lower 1.2m close boarded fence. A close boarded fence and chainlink fence defines the curtilage with Little Wynstrode Farm along the northern edge of the eastern boundary.
- 2.2 The remainder of the eastern and the southern boundaries are defined by a chain link fence, which is located along the inner edge of a 1m deep ditch, which functions as a field drain. Outside of the Site, along the outer edge of the ditch is a native hedgeline, which is gappy in places, with regularly spaced mature oak trees.
- 2.3 Along the western edge of the Site is a close boarded fence, inside of which a permissive optional route to Public Bridleway no. 1333-4 extends, with its eastern edge defined with a chain link fence.
- 2.4 The alignment of Bridleway No. 1333-4 extends at an offset from the western edge of the fence along the gravelled driveway of Aspen Place, with the two meeting at an offset to the south western corner of the Site. There are a number of oak trees just outside of the northern edge of the western boundary which are in poor condition, with further oak trees dispersed within the garden of Aspen Place to the west of the southern part of the Site.

- 2.5 Public Bridleway No.1333-4 veers westwards inside of the field boundary, whilst Public Footpath No.1331-1 extends southwards across an open field in arable use to the hedgerow field boundary and then eastwards towards the A29, (*Stane Street*) to the east.
- 2.6 Beyond the built form of Aspen Place, some 80m west of the Site is the (*Grade II Listed*) Wynstrode Farmhouse enclosed by dense intervening vegetation. The (*Grade II Listed*) Summers Place is located some 450m to the south east, beyond the A29, (*Stane Street*).
- 2.7 Aspen Place, Little Wynstrode Farm and Chalk Farm are single storey dwellings, whilst to the north of Aspen Place, The Barn is a small two storey dwelling.

Existing Soil and Topography

- 2.1 Soil type across the Study Area is understood through reference to the Soils Map (produced by Cranfield University, with support from Defra) to comprise: Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils with impeded drainage.
- 2.2 The topography within the Site lies at an aOD of approximately 51m to the east sloping down to 50m to the north western and south western corners.

Existing Vegetation

- 2.8 With reference to the Tree Constraints Plan *LLD2288-ARB-DWG-001* carried out by LLD, the following observations can be made.
- 2.9 A treeline of semi-mature C category *Cupressus x leylandii* (Leyland Cypress) is located outwith the northern boundary of the site along the roadside at c. 1m centres and heavy pruning along the southern aspect facing the site.
- 2.10 A semi-mature C category hedge consisting of hawthorn and blackthorn is located along just outside the eastern and south-eastern boundaries, separating site from an adjacent arable field. The hedge is associated with an old bank and ditch, but is very narrow, sparse and gappy in places.

- 2.11 Several regularly spaced mature and semi-mature oaks of A and B category are located between the site boundary and the mixed-species native hedge to the east and south east of the site with a singular oak to the north east of the hedge. The oaks are interrupted by a U category ash tree to the south eastern corner of the site.
- 2.12 Just outside the western site boundary are A and B category oaks interspersed with some C and U category oaks to the central section south of Aspen place.
- 2.13 With reference to the Preliminary Ecological Appraisal LLD2288-ECO-REP-001, the area of the site beyond the second gate to the west of the existing dwelling to be predominantly formed of poor semi-improved grassland.
- 2.14 The area of hardstanding between the two gates to the north of the site extends south-westward in the form of a wide concrete strip along the orientation of the site going southwards with two piles of old rubble and construction debris. A smaller area of hard / bare ground to the north western corner of the existing building.
- 2.15 Areas of tall ruderal vegetation is found to the eastern portion of the site. The habitat has been mown but is regrowing and was c.20cm high at time of survey.
- 2.16 A ditch runs beneath the hedge and treeline along the eastern and southern boundaries. The ditch contained c.15cm of water when the PEA was carried out on the 25th March 2021. The water appeared stagnant with algae and biofilm present. The banks of the ditch contain some species indicative of hedge banks such as bluebell (*Hyacinthoides non-scripta*) but is dominated by ruderal and scrub vegetation.

Surveys

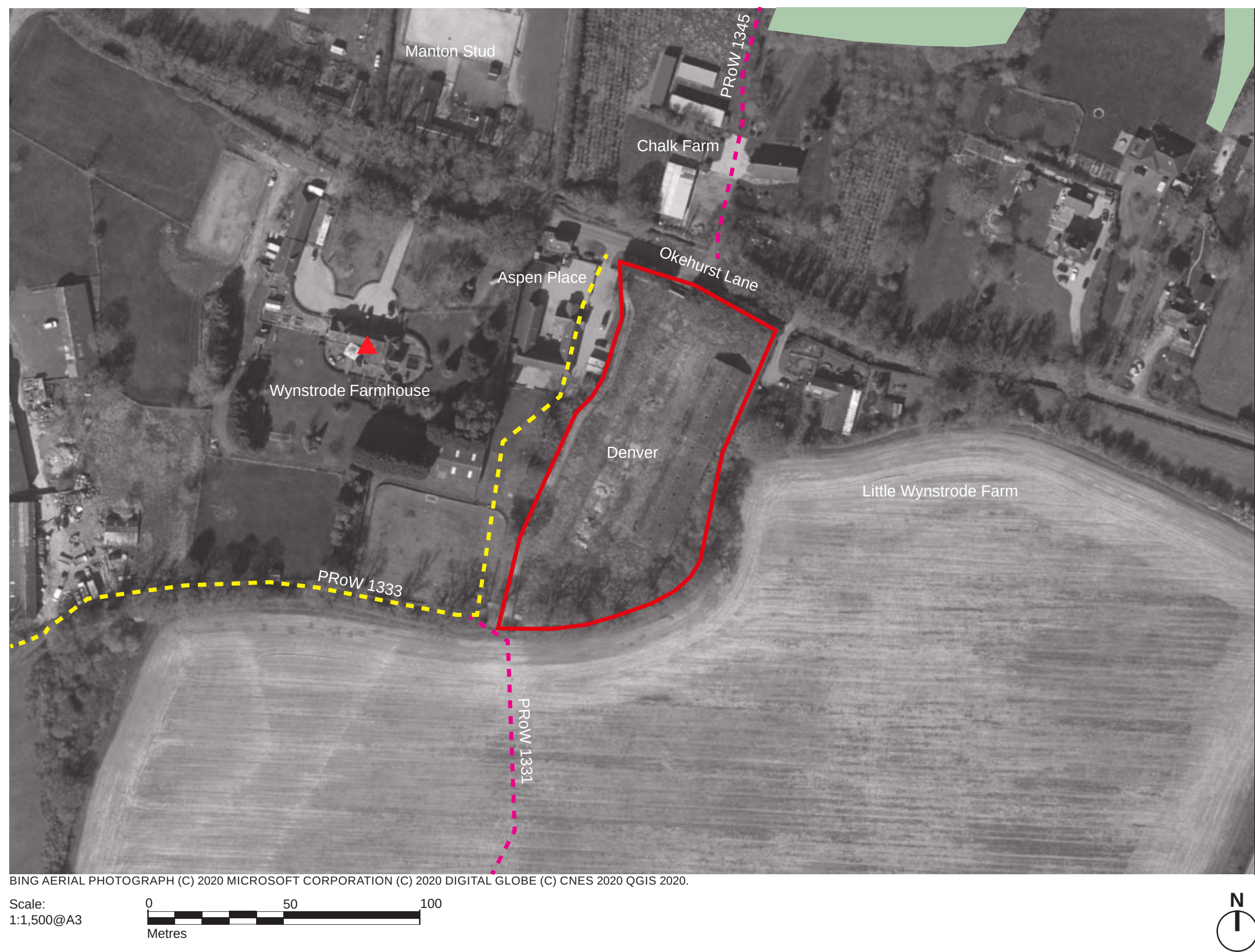
- 2.1 With reference to the Preliminary Ecological Appraisal LLD2288-ECO-REP-001 carried out by LLD on 25th March 2021, no evidence was recorded on site which would suggest that the development proposals are likely to have a major adverse effect upon biodiversity. The main body of the site is formed of common habitats of limited ecological value.

- 2.2 The PEA also concludes that further survey work is required to rule out the presence of protected species of GCN, reptiles and bats (subject to design), which may have an impact upon the ultimate scheme design but are unlikely to affect the feasibility of the project overall.
- 2.3 With reference to the Ecological Impact Assessment Report LLD2288-ECO-REP-002, the Phase 2 habitat surveys comprised Bat emergence / re-entry surveys of trees, Great Crested Newts eDNA surveys of surrounding waterbodies and Reptile presence / absence surveys.
- 2.4 The results of the bat survey emergence surveys suggest the surrounding trees are of local value, which contain three day-roosts of pipistrelle bats. The trees are largely retained apart from one which must be removed on safety grounds. One of these contains a bat roost and must therefore be removed under Natural England licence. The surveys revealed relatively high levels of bat activity along the southern and western boundaries, by mainly common and light-tolerant species.
- 2.5 The eDNA surveys revealed the likely absence of GCN in surrounding ponds, while reptile surveys concluded the likely absence of reptiles on site.

Surrounding Landscape

- 2.17 The site is located in a rural surrounding with several residential and commercial properties located to its surrounds, some 1km north of the northern edge of Billingshurst. The site is located within a wider landscape formed of arable land interspersed by strips and patches of wooded areas dotted with small-scale settlements.
- 2.18 The site falls within the jurisdiction of the West Sussex County Council, Horsham District Council and Billingshurst Civil Parish.
- 2.19 The site is located just over a km from the northern edge of the Billingshurst Conservation Area located to the northern part of Billingshurst.

- 2.20 There are limited number of Listed Buildings within a 1km radius of the site. The nearest Grade II Listed Building, located beyond the built form of Aspen Place, some 80m west of the Site is Wynstrode Farmhouse. The (*Grade II Listed*) Summers Place is located some 450m to the south east, beyond the A29, (Stane Street). The (*Grade I Listed*) Parish Church of St Mary is located over 1.5km to the south, outside of the 1 km Study Area within the centre of Billingshurst Conservation Area.
- 2.21 There are pockets of Ancient Woodland within a 1km radius of the site, with the nearest block some 300m south east of the Site, east of the A29, (*Stane Street*) at Church Wood.



Legend

- Development Site Boundary.
- UK Priority Habitat Deciduous Woodland
- Grade II Listed Building
- Public Bridleway
- Public Footpath

Figure 2.1. Development Site Boundary

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3.0 DEVELOPMENT PROPOSAL

- 3.1 Through reference to the Folkes Architects produced Proposed Master Plan, the Scheme comprises the redevelopment of the Site area for 2 no. steel framed storage sheds for B8 Storage use and associated parking. Access into the Scheme is proposed from the north, through the existing gateway into the Site.
- 3.2 The route of Public Bridleway no. 1333-4 along the driveway of Aspen Place would be closed, with the optional route along the western edge of the Site as present forming the permanent diversion, albeit that the existing kink to the northern end of the route would be straightened. A mixed species native hedgeline would be proposed to the east of the proposed permanent diversion, with a chainlink fence to the outer edges of this.
- 3.3 The site would be proposed with landscape and ecological enhancements to promote biodiversity across the development. Oak and field maple trees would be planted to replace the few oak trees along the western boundary, which are recommended for felling.

4.0 PROPOSED LANDSCAPE SCHEME

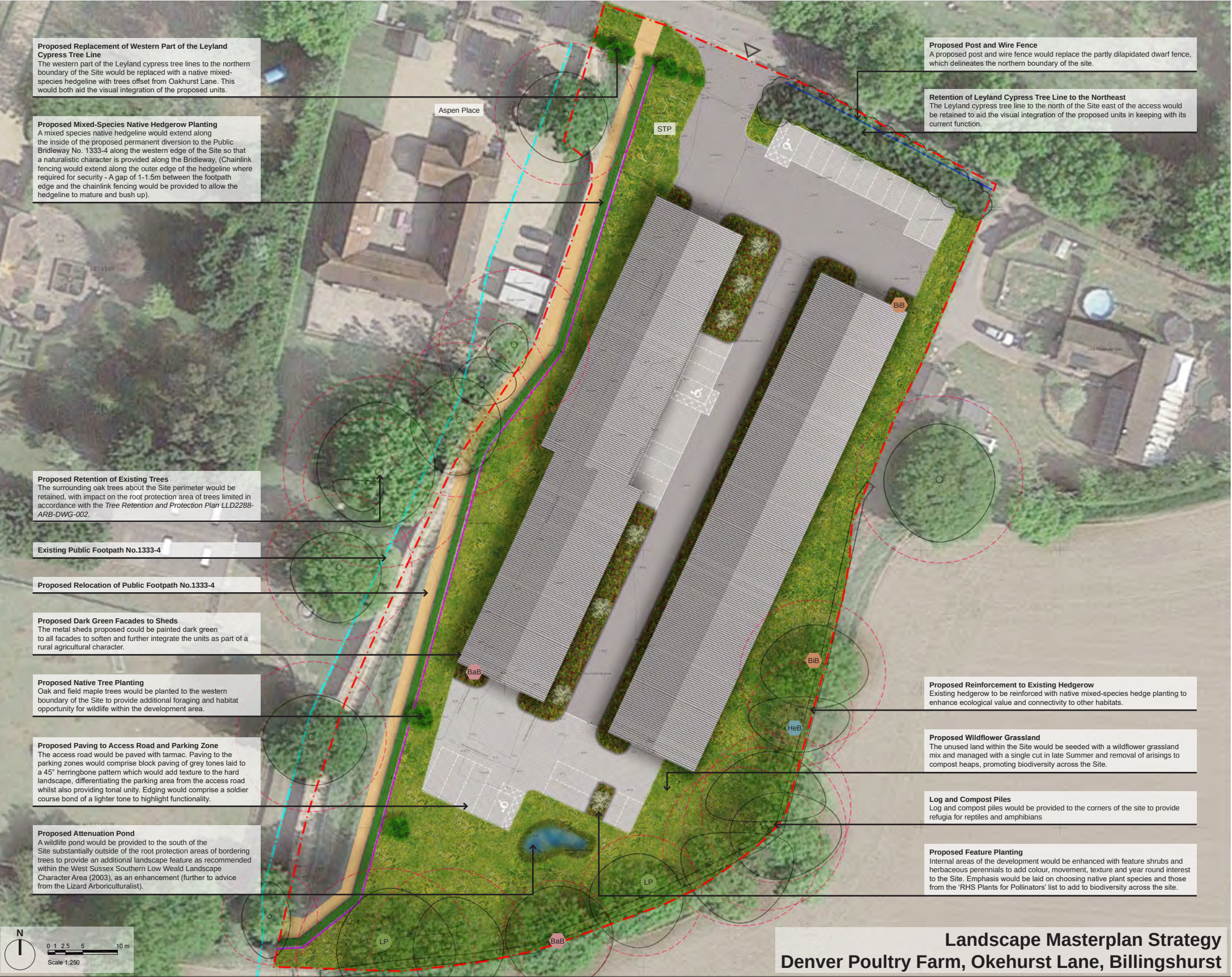
Proposed Objectives

- 4.1 The proposed Landscape Design Strategy has been informed by a desk study encompassing planning policy context and specialist reports informing the development proposals as well as by the Site visit carried out in Month 2021 and the ecological landscape baseline.
- 4.2 Proposed objectives of the Landscape Design Strategy include:
- *Retention and protection of the existing trees that are located outside the boundaries of the site in accordance with BS 5837:2012.*
 - *Softening and integrating the proposed building into the rural character of the surrounds by proposing colours to the facade to further integrate the units as part of a rural agricultural character;*
 - *Providing a naturalistic character to the relocated public footpath No. 1333-4 along the western boundary of the site by proposing a mixed-species native hedgerow to extend along the east of the pathway;*
 - *Further assimilating and reinforcing the contribution to the local landscape by proposing native tree planting;*
 - *Further contribution to biodiversity by implementation and management of areas of unused land surrounding the new-builds by converting them into species-rich swathes of wildflower grassland which would be managed with a single cut in late Summer and removal of arisings to compost heaps;*
 - *Enhancing the quality and improving the sustainability of the development, whilst also contributing biodiversity by incorporating SuDS features in the form of a surface water attenuation to the south of the Site, thereby also providing opportunities for a wetland wildlife habitat as recommended within the West Sussex Southern Low Weald Landscape Character Area (2003);*

- *Enhancing the quality of the development by proposing a soft landscape scheme that would respond to the layout of the development and add to it a dynamic character through introduction of a variety of plants that provide year round interest to the site.*
- *Further enhancing biodiversity across site by proposing plant species from the RHS 'Plants for Pollinators' list along with the wildflower meadows to the area surrounding the paving and new builds along the boundary of the site;*
- *Proposing additional ecological enhancements in the form of log piles, bird boxes, bat boxes and hedgehog boxes in suitable locations across the site;*
- *Enhancing the development by proposing aesthetic and sympathetic hard landscape materials.*

Layout

- 4.3 The development proposal (*The Scheme*) as illustrated on the *Landscape Masterplan LLD2288-LAN-DWG-001*, would comprise the redevelopment of the Site area for 2 no. steel framed storage sheds for B8 Storage use and associated parking. The proposals are understood by Lizard Landscape Design and Ecology through reference to the '*Proposed Master Plan*' drawing provided by *Folkes Architects, Sussex*.
- 4.4 Means of access to the site would be retained at its original location, along the northern boundary of the site through the existing gateway from Okehurst Lane.
- 4.5 The existing Public Right of Way to the west of the site would be proposed for relocation along the site's western edge and delineated with a native hedgerow to its east to create a naturalistic setting for users of the path. The existing coniferous vegetation to the northern entry point of the PRow from Okehurst Lane would be replaced with a native deciduous treeline to aid visually integration of the frontage of the site. The entry to the PRow would be pronounced with the implementation of two native trees to either side of the entry.
- 4.6 The access road would encompass a tarmac path leading to the industrial units and the parking zone. The parking zones would be differentiated with block paving adding a tonal variation and texture to the development scheme proposals.
- 4.7 The vehicular and pedestrian access areas together with the proposed industrial units would be softened and enhanced with feature planting areas and swathes of windflower grassland surrounding the built form, contributing to biodiversity and the landscape character of the surrounds.
- 4.8 Existing trees of good condition, located offset to the exterior of the site boundary would be retained and protected. Native trees would be planted to the eastern boundary of the site. Beneath the canopy of the regularly spaced trees to the south-east of the site is a gappy hedgerow which would be reinforced with native hedge planting, thereby improving the ecological resilience of the surrounding vegetation.
- 4.9 A post and wire fence would be proposed to replaced the delapidated dwarf fence which delineates the northern boundary.
- 4.10 An attenuation basin would be proposed to the south of the site forming part of the Sustainable Drainage System (SuDS) whilst also creating additional wetland habitat for wildlife.
- 4.11 Faunal enhancements comprising bat boxes, bird boxes, hedgehog boxes, and log and brash piles encouraging wildlife to the site would be proposed to appropriate locations.



Legend

- Site Boundary
- Existing Treeline
- Existing Hedgerow
- Existing Trees (with associated Root Protection Areas)
- SOFT LANDSCAPE**
 - Proposed Native Tree Planting
 - Proposed Mixed-Species Native Hedgerow
 - Proposed Mixed-Species Native Hedgerow
 - Proposed Feature Planting
 - Proposed Wildflower Grassland
 - Proposed Attenuation Pond
- HARD LANDSCAPE**
 - Proposed Tarmac Paving
 - Proposed Block Paving
 - Proposed Chainlink Fence
 - Proposed Post and Wire Fence
- PUBLIC RIGHTS OF WAY**
 - Existing Public Footpath No.1333-4
 - Proposed Relocation of Public Footpath No.1333-4
- ENHANCEMENTS**
 - Bird boxes would be proposed to the northern aspect of mature trees and proposed buildings.
 - Bat Box would be proposed to the southern aspect of mature trees and proposed buildings.
 - Hedgehog Box
 - Log and Compost Piles

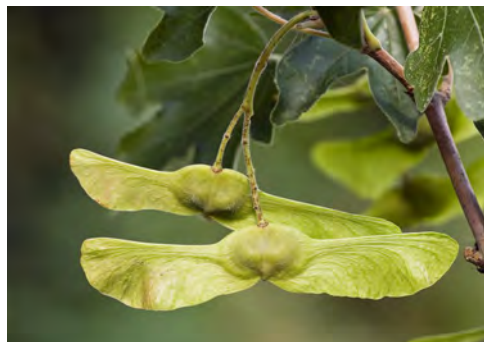
Figure 4.1. Landscape Masterplan Strategy



The proposed mixed-species native hedgeline to the western frontage of the site would comprise native species such as Field Maple (*Acer campestre*), Hornbeam (*Carpinus betulus*) and Hawthorn (*Crataegus monogyna*) implemented as feathered stock 1.5 - 1.75 m high.



The mixed-species native hedgerow proposed along the eastern side of the PRow would comprise native species such as Field Maple (*Acer campestre*), Hornbeam (*Carpinus betulus*) and Hawthorn (*Crataegus monogyna*) implemented as whips 100-125 cm high.



Proposed native tree planting to comprise Field Maple (*Acer campestre*) to the western boundary of the site. Stock would comprise Extra Heavy Standard (14-16 cm girth).



The existing hedgerow to the south east of the site under the canopy of mature trees would be reinforced with native mixed-species native whips.



Soft Landscape

- 4.12 The soft landscape scheme enhances the landscape layout and integrate the proposed development into the surrounding context. The objectives of the soft landscape design have been incorporated into the design layout.
- 4.13 Along the frontage of the site facing onto Okehurst Lane, the eastern part of the Leyland Cypress treeline would be retained while the western part of the treeline would be replaced with a native mixed-species hedgeline of feathered stock (1.5 - 1.75 m high) with trees of Extra Heavy Standard (14-16 cm girth) offset from Okehurst Lane, on an alignment with that to the north of Aspen Place, which forms the neighbouring property across the PRow to the western boundary of the site. This would both aid the visual integration of the proposed units.
- 4.14 A mixed-species native hedgerow would be proposed to the eastern side of the proposed permanent diversion to the Public Bridleway No. 1333-4 along the western edge of the Site; where chainlink fencing is required, this would extend along the outer edge of the hedgerow, so that a naturalistic character is provided along the Bridleway. A gap of 1-1.5m between the footpath edge and the chainlink fencing would be provided to allow the hedgerow to mature. The hedgerow planting would be sourced and implemented as whips.
- 4.15 There are a number of Oak and Ash trees of good condition offset to the exterior of the boundary of the site. These would be retained and protected in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'. Native trees of Extra Heavy Standard (14-16 cm girth) would be proposed along the western boundary of the site to reinforce the landscape structure and enhance the local landscape character associated with the Site.
- 4.16 The existing gappy hedgerow to the south east of the site under the canopy of the existing trees would be reinforced with native mixed-species hedge planting implemented as whips to enhance ecological value and connectivity to other habitats.



Feature planting to the internal areas of the site would comprise shrubs, herbaceous perennials and grasses with an emphasis on native species to add colour, movement and texture to the scheme.

- 4.17 Internal areas of the development would be enhanced with feature shrubs and herbaceous perennials to add colour, movement, texture and year round interest to the Site. Emphasis would be laid on choosing native plant species and those from the 'RHS Plants for Pollinators' list to add to biodiversity across the site.
- 4.18 The areas of the Site comprising unused land would be seeded with a wildflower grassland mix and managed with a single cut in late Summer and removal of arisings to compost heaps, thereby increasing the Biodiversity Net Gain across the Site.
- 4.19 Log and compost piles would be provided to the corners of the site to provide refugia for reptiles and amphibians.
- 4.20 An attenuation pond with the potential to develop into a wildlife pond would be located to the proposed wildflower grassland area proposed to the southern section of the site, outside of the root protection areas of bordering trees to provide an additional landscape feature as recommended within the West Sussex Southern Low Weald Landscape Character Area (2003), as an enhancement subject to advice from the Lizard Arboriculturalist.



Swathes of wildflower grassland would reinforce the existing vegetation and provide shelter and foraging opportunities for wildlife. Wildflower grassland would be planted to the surrounds of the units, along hedgerows and to the attenuation basin. Log and brash piles would be created to these habitat areas to provide additional shelter opportunities for wildlife.

Group	Species Name	Origins	Container	Density	Size
Native Tree	<i>Acer campestre</i>	N	RB/ CG	Specimen	14-16 cm girth; 4.0-4.5 m height; Min. 2.0 m clear stem height.
Mixed-Species Native Hedgerow	<i>Acer campestre</i>	N	BR / C5	3 no. staggered rows @ 400mm apart and 400mm centres	100 - 120 cm height
	<i>Carpinus betulus</i>	N			
	<i>Crataegus monogyna</i>	N			
	<i>Fagus sylvatica</i>	N			
	<i>Malus sylvestris</i>	N			
Mixed-Species Native Hedgeline	<i>Acer campestre</i>	N	BR / C10	As specified	Feathered; 1.5 - 1.75 m height.
	<i>Carpinus betulus</i>	N			
	<i>Crataegus monogyna</i>	N			
	<i>Fagus sylvatica</i>	N			
	<i>Malus sylvestris</i>	N			
Feature Shrubs	<i>Cornus sanguinea</i>	N	BR	Specimen	60 - 90 cm
	<i>Cornus sericea</i> 'Flaviramea'		C10	Specimen	80 - 100 cm
	<i>Euonymus europaeus</i>	N	C20	Specimen	150 - 200 cm
	<i>Salix purpurea</i>	N	BR	Specimen	100 - 125 cm
	<i>Viburnum opulus</i>	N	C10	Specimen	125 - 150 cm
Herbaceous Perennials	<i>Campanula glomerata</i> 'Caroline'	N	C2	As specified	Full pot, fully rooted, healthy
	<i>Filipendula ulmaria</i>	N	C3	As specified	
	<i>Galium odoratum</i>	N	C3	As specified	
	<i>Helleborus foetidus</i>	N	C3	As specified	
	<i>Persicaria bistorta</i>	N	C3	As specified	
	<i>Veronica spicata</i>	N	C3	As specified	
Grasses	<i>Hakonechloa macra</i> 'Alboaura'		C3	As specified	Full pot, fully rooted, healthy
	<i>Miscanthus sinensis</i> 'Kleine Silberspinne'		C3	As specified	
	<i>Stipa tenuissima</i>		C3	As specified	
Wildflower Meadow	<i>EM4 – Meadow Mixture for Clay Soils by Emorsgate Seeds</i>	-	-	-	Seeded 4g/m²
Wildflower Meadow	<i>EH1 – Hedgerow Mixture by Emorsgate Seeds</i>	-	-	-	Seeded 4g/m²
Wildflower Meadow	<i>EM8 – Meadow Mixture for Wetlands by Emorsgate Seeds</i>	-	-	-	Seeded 4g/m²

KEY: N Native
 RB Root Balled
 CG Container Grown Stock
 BR Bare Rooted Stock
 C2/3/5/10 2/3/5/10 L Container Grown Stock

- Outline Plant Schedule and Specification
- 4.21

The soft landscape design proposals have been informed by widely available guidance and recommendations including *RHS 'Perfect for Pollinators'*.
- 4.22

The Outline Plant Schedule and Specification presented here is by no means exhaustive and provides indicative selection of species and cultivars considered suitable for delivering the Landscape Design Objectives.

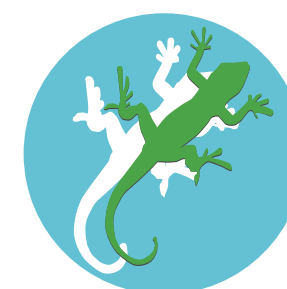


Hard Landscape

- 4.23 The proposed landscape scheme includes the creation of paved areas.
- 4.24 The access road, paved with tarmac would lead to the parking zones which would comprise block paving of grey tones laid to a 45° herringbone pattern adding texture to the hard landscape and differentiating the parking area from the access road whilst also providing tonal unity. Edging to the access road and parking areas would comprise a soldier course of a lighter tone to highlight functionality.
- 4.25 The partly dilapidated dwarf fence which delineates the northern boundary of the site would be replaced with a post and wire fence.
- 4.26 The relocated PRow No. 1333-4 would be paved with a hoggin surface to complement the naturalistic setting of the pathway. A chainlink fence would be proposed to the east of the hedge along the PRow.
- 4.27 For details of the proposed hard landscape layout refer to *Landscape Masterplan LLD2288-LAN-DWG-001*.

Enhancements

- 4.28 The ecological enhancements would include the provision of bat, bird and hedgehog boxes.
- 4.29 Bat boxes would be proposed to the southern aspect of mature trees and proposed buildings to encourage bat roosting.
- 4.30 Bird boxes would be proposed to the northern aspect of mature trees and proposed buildings to provide additional bird nesting opportunities.
- 4.31 Hedgehog boxes would be provided in proximity to the boundary vegetation to provide refuge for hedgehogs.
- 4.32 For locations of the proposed enhancements refer to *Landscape Masterplan LLD2288-LAN-DWG-001*.



LIZARD

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