dendra

Dendra Consulting Ltd
41a Front Street
Sacriston
Durham
DH7 6JS

Tel: 0191 371 9636
Email: info@dendra.co.uk
Website: www.dendra.co.uk

Registered in England & Wales: 06680374
9 Bishops Way, Pity Me, Durham, DH1 5DB

Ecological Mitigation Management Plan:
Land to the south of St. Peter's
Main Road
Gainford
Darlington

Prepared for:
ELG Planning
Gateway House
55 Coniscliffe Road
Darlington
Co. Durham
DL3 7EH

On behalf of:
Kebbell Development Limited
Kebbell House
21 London End
Beaconsfield
HP9 2HN

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Report prepared by	**Position**	**Date**
Shaun Morrison	Ecologist	02/12/2021
Report verified by	**Position**	**Date**
Barry Anderson MCIEEM MArborA	Director	02/12/2021

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1.0 INTRODUCTION

1.1 Background & Scope

1.1.1 Dendra Consulting Ltd was commissioned by ELG Planning on behalf of Kebbell Development Ltd, to prepare an Ecological Mitigation Management Plan for a proposed development on land to the south of the former St. Peter's School in Gainford, Darlington. The document was prepared to comply with conditions for the approved planning application DM/18/01980/FPA, for the redevelopment of the site for residential use. This report should be read in conjunction with the Ecological Appraisal report for the site, submitted in November 2018 (ELG_StPeters_Eco1.2, Dendra Consulting Ltd, 2018).

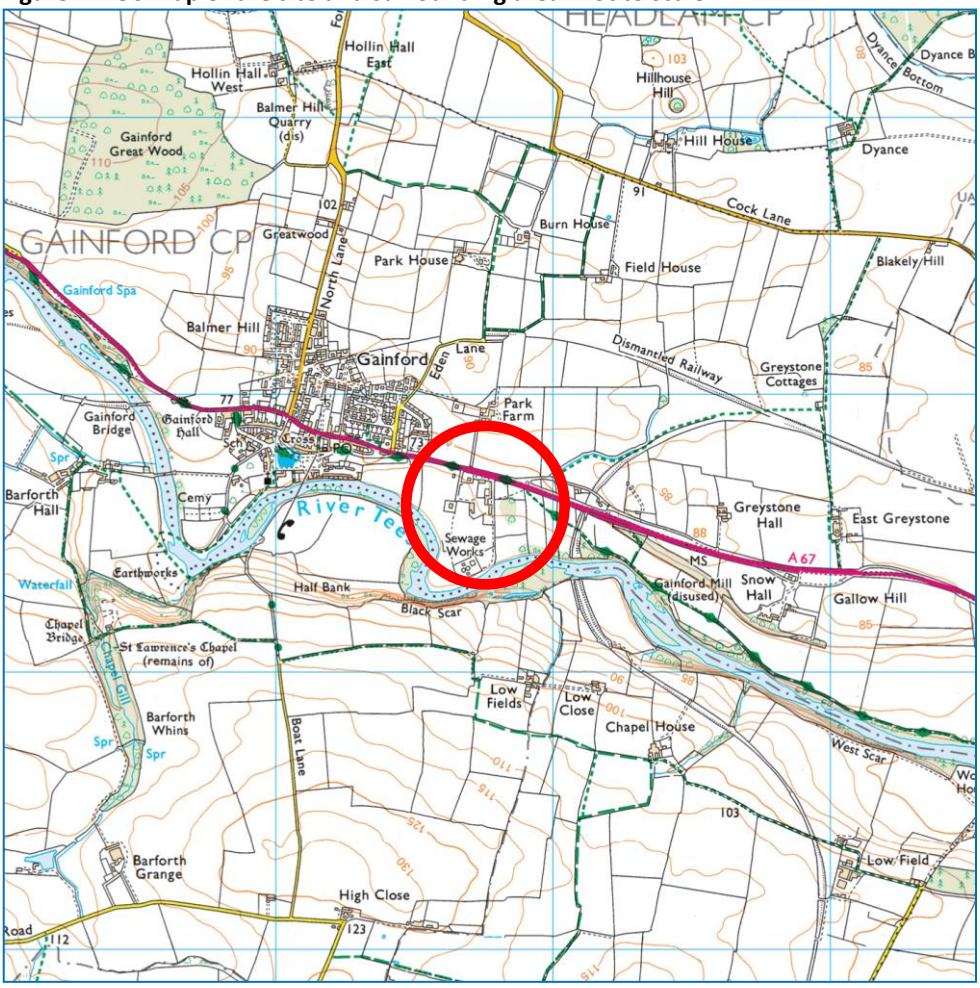
1.2 Details of Proposals

1.2.1 The proposals involve the redevelopment of the site for residential use with the construction of 48 dwellings, conversion of the school building to 9 flats, associated demolition and landscaping and provision of open space.

1.3 Site Location and Setting

1.3.1 The site is located immediately south of the A67 Main Road, approximately 200m to the east of Gainford, in County Durham. The OS National Grid reference for the site is NZ177166. The approximate altitude is 71m AOD. The site itself consists of areas of grassland, buildings and hard standing with areas of scrub, mature trees, hedgerows and woodland. To the north is the A67, beyond which is a large agricultural field. Bowser's Island LWS is situated 110m to the south and consists of an area of deciduous woodland. The River Tees, with its wooded banks flows 50m to the west and south of the site at its nearest point. The River Tees corridor provides habitat along which wildlife can move and disperse. Land use within the wider environment is largely agricultural, with substantial areas of arable and pasture land, interspersed with hedgerows and occasional hedgerow trees. Figure 1 shows the site location and surrounding area.

Figure 1 – OS map of the site and surrounding area. Not to scale.



2.0 PROTECTED AND PRIORITY SPECIES

2.1 **Bats** *Chiroptera spp.*

2.1.1 Dendra Consulting Ltd conducted a series of bat surveys on the site as recommend in the initial walkover survey conducted in 2017. Two transect surveys undertaken on the 22nd August and 4th September 2017, and remote monitoring by a static detector between the 5th September and the 19th September 2017, revealed low levels of bat activity at the northern and eastern parts of site, with much higher levels on the western and southern site boundaries. Common pipistrelle *Pipistrellus pipistrellus* and Soprano pipistrelle *Pipistrellus pygmaeus* were recorded foraging continuously. Low numbers of *Myotis sp.*, Brown long-eared *Plecotus auritus* and Noctule *Nyctalus noctula* were also recorded. In addition two bat activity surveys were conducted on 22nd August 2017 and 10th August 2018, concentrating on the former St. Peter's School main building, with only low levels of commuting bat activity recorded.

2.1.2 The nocturnal activity surveys did not record any bat roosts in any of the buildings or trees within the site boundary. No impacts on roosting bats are predicted. Post development disturbance impacts significant at a site level are predicted on commuting and foraging bats (ELG_StPeters_Bat1.2, Dendra Consulting Ltd, 2018).

2.1.3 Mitigation is recommended in the form of a sensitive lighting scheme for the development and the installation of bat boxes into 3 of the properties at the southern end of site. Further details are listed below.

2.1.4 <u>Sensitive Lighting Scheme</u>

The lighting scheme for the site should be designed to avoid unnecessary light spillage, particularly along the southern boundary the following advice should be followed when designing the lighting scheme;

- Lights should be spaced in order to require the minimum amount of units necessary
- Lights should be installed as low as possible to the ground to further reduce spill
- The lowest light intensity, suitable for the intended use of the site, should be used. Note that this could vary across the site
- Lights should only be illuminated when the area is in use. Light sensors can be used to trigger lights for walkways to reduce light pollution when not in use
- Light should be directed to the ground below the horizontal and away from surrounding vegetation. LEDs and new directional, full cut off lights are preferred

2.1.5 Roost Creation

As compensation for the site level disturbance impacts it is recommend that 3 integrated bat boxes are installed into 3 of the properties on the southern site boundary. The boxes should be positioned high within the walls facing south or west, near the eaves. A minimum drop of at least 2 metres should be allowed beneath a box to allow access and egress by bats from the gap at the base of the box, for example if the box were to be placed above a porch, attached garage or similar. The boxes should not be placed directly above doors or windows.

2.2 Otter *Lutra lutra*

2.2.1 Dendra Consulting Ltd conducted an otter survey of the stretch of the River Tees in close proximity to the site on 4th April 2018 (ELG_StPeters_Otter1.1, Dendra Consulting Ltd, 2018). The accessible areas of the northern edge of the watercourse were surveyed for 150m upstream of the western site boundary to 150m downstream of the eastern site boundary. This equates to a stretch of river approximately 750m in length.

2.2.2 During the survey no otter activity or field signs such as tracks, runs, slides, spraints or feeding remains were noted and no holts or laying up areas were positively identified. As no evidence of otter activity was noted during the survey, it is likely this stretch of the River Tees is used only intermittently and infrequently by individual otter commuting through the area.

2.2.3 There are only very limited places of shelter for otter within 150m upstream or 150m downstream of the proposed site and therefore it is considered highly unlikely the proposed development will directly impact upon the place of shelter of a European Protected Species. Otters are nocturnal animals and therefore the construction phase of the project should have little impact on the commuting and foraging activities of this species, provided the works are carried out during daylight hours.

2.2.4 The disturbance of otter along the stretch of the river adjacent to the proposed development has the potential to disrupt commuting routes for individuals through the local landscape, and therefore impacts would be of a local level, and would be unlikely to impair the ability of an otter to survive, breed, reproduce or nurture young, and is unlikely to affect the local distribution or abundance of the species at a significant level. However, any loss of biodiversity would contravene current planning policy and therefore recommendations for mitigation are provided below.

2.2.5 To mitigate impacts on otter during the construction phase of the project, the following working methods should be adhered to:

- As otters are largely nocturnal, all works should be conducted exclusively within daylight hours.
- Any temporarily exposed trenches or ditches should be capped at the end of each working day in such a way as to prevent otters gaining access, in the unlikely event of otters passing through the site when contractors are off-site, or the site secured with 2m high fencing to prevent access.

2.3 Nesting Birds *Aves spp*.

2.3.1 During the initial site walkover surveys no active nesting behaviour was noted. A total of 12 bird species were seen to utilise the habitats within or immediately adjacent to the site, or commuting within the vicinity. The habitats present within the site boundary provide potential nesting and roosting opportunities for locally common nesting birds and the removal of these features could result in the loss of active nests, eggs or chicks and this constitutes an offence under the Wildlife and Countryside Act 1981 (as amended).

2.3.2 If it is considered necessary to undertake the vegetation clearance works during the period of March to August (inclusive), the site will require an inspection by a suitably qualified ecologist immediately prior to commencement. **NOTE:** if active nests are found the works will not be allowed to proceed in that area. This could impose a significant constraint on the project timetable, and therefore the primary recommendation is that any vegetation clearance works are undertaken outside of the main bird breeding season of March to August.

3.0 HABITAT MANAGEMENT PLAN

3.1 Habitat Retention

3.1.1 To avoid detrimental impacts to the adjacent habitats and to maintain habitat connectivity, it is recommended that where possible, all of the existing mature scattered trees and existing hedgerow on the eastern and southern boundaries are retained.

3.2 Wildflower Establishment

3.2.1 Ground preparation will consist of soil sampling and testing in the establishment areas to determine nutrient levels to aid in the selection of the appropriate wildflower mix. In areas of nigh nutrient levels it may be necessary to strip the top 15cm of soil. The remaining grassland will be removed by rotovating the ground, waiting for regrowth then applying a biodegradable herbicide to eliminate any grow back.

3.2.2 The bare ground should be scarified then sown with a perennial wildflower mix of local provenance. The mix should include Yellow rattle *Rhinanthus minor*, to weaken any regrowth of unwanted grass species. The ground should be lightly rolled to ensure good seed contact with the soil.

3.2.3 Once established, the wildflower areas should be cut in late summer after flowering, during dry periods. The cuttings should be left on the ground for several days for seed drop to occur, and then removed from the site to reduce soil fertility. Strips around the perimeter can be left unmown to provide a food source for insects, with these marginal areas rotated each year. Any bare areas can be replanted with plug plants or re-sown with the wildflower mix. If vigorous competitive grasses are evident, the areas can be mown in the spring to reduce the grass growth.

3.2.4 This cutting/raking regime should be conducted annually for the lifetime of the project/in perpetuity.

3.3 Hedgerow and Woodland Habitats

3.2.1 The hedgerow and woodland planting mixes should contain native shrub and tree species of local provenance. Suitable species include, but are not restricted to, Hawthorn, Hazel, Holly, Rowan, Downy birch, Silver birch and Dog rose. Larger tree species such as Oak should only be planted where a suitable stand-off distance (minimum 15m) can be applied to prevent tree/building conflicts in the future. Ivy can be of particular benefit to wildlife as the late flowering season of this species makes it a valuable source of nectar for many insects prior to hibernation, particularly bees and butterflies.

3.2.2 To reduce completion for nutrients, the ground should be cleared of vegetation prior to planting, with the new shrubs/trees support by stakes and protected with guards until established.

3.2.3 New hedgerow should be planted in a double row, with a density of 6 plants per metre. Monitoring to check for plant failures and to restock where necessary should take place after the 1st year, and then every 2 years until the planting is established. Once established the hedgerow should be trimmed on a 3 year rotational basis, ideally in late winter to avoid the bird nesting season and maintain a food source over the winter months

3.2.4 An initial 5 year work programme has been recommended in Figure 2 below. The programme should be reviewed at 5 year intervals for the lifetime of the project/in perpetuity.

Figure 2 – 5 year Work Programme.

Land to the south of St. Peter's – Hedgerow and Woodland works programme																
Description of works	**Month**												**Years 1 - 5**			
	J	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**	**1**	**2**	**3**	**4**	**5**
Remove ground vegetation prior to planting native stock.		√	√										√				
Planting of native Broadleaf trees and shrubs of local provenance. New planting protected with stakes and tree guards.		√	√										√				
Monitor replacement planting at 2 year intervals.	√	√	√											√		√	
Replace plant failures.	√	√	√								√	√		√	√	√	√
Monitor hedgerow and woodland extent and structural development at 5 year intervals.						√											√
Review plan and produce next 5 year programme to include woodland thinning to create desired tree spacing.							√										√

4.0 REFERENCES

Dendra Consulting Ltd (2018) ***Ecology Report for: Land to the south of St Peters*** Prepared for ELG Planning.

Dendra Consulting Ltd (2018) ***Bat Survey: Land to the south of St Peter's*** Prepared for ELG Planning.

Dendra Consulting Ltd (2018) ***Otter Survey: Land to the south of St Peter's*** Prepared for ELG Planning.