

TODHURST RIFE WILDLIFE CORRIDOR LANDSCAPE & ECOLOGICAL MANAGEMENT PLAN (BIODIVERSITY ENHANCEMENT LAYOUT), FOR FLEURIE NURSERY

LAND AT FLEURIE NURSERY, LAKE LANE, BARNHAM, WEST SUSSEX

Client: Fleurie Nursery

Our reference: FLEURIE NURSERY, LAKE LANE, BARNHAM, WEST SUSSEX, PO20 0AL

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1.0 SUMMARY

- 1.1 Fleurie Nursery is proposing the ‘*permanent siting of 8 workers caravans, 1 utility caravan with the creation of associated access paths drainage & sewage utilities and associated infrastructure and landscaping*’, on just under 0.2ha area (currently supporting scattered ephemeral vegetation) off Lake Lane, Barnham, West Sussex (SU 9728 0473). Fleurie Nursery is 8.93ha in area, dominated by polytunnels, with Todhurst Rife running on the west side of this new caravan application site.
- 1.2 This report relates to Application Reference: Y/26/24/PL. Arun District Council (ADC) permitted full planning permission on 10th July 2024, which includes condition 10 that refer to a Biodiversity Enhancement Layout as referred to hereafter as an updated Landscape and Environmental Management Plan (LEMP) for the site:
- 10 *Within 6 months of the date of this permission, a Biodiversity Enhancement Layout, providing the finalised details and locations of the enhancement measures contained within the Preliminary Ecological Appraisal (27/324) which includes meadow creation, fencing and lighting, shall be submitted to and approved in writing by the Local Planning Authority. The enhancement measures shall be implemented in accordance with the approved details prior to the next growing season following the date of the permission and all features shall be retained in that manner thereafter.*
- Reason: To enhance protected and Priority species & habitats in accordance with Arun Local Plan policies: ENV SP1 and ENV DM5 and allow the Local Planning Authority to discharge its duties under the NPPF 2023 and s40 of the Natural Environment and Rural Communities Act 2006 (Priority habitats & species).*
- 1.3 On 24th September 2024 Fleurie Nursery, requested that GPM Ecology assist with discharging this Condition. This Biodiversity Enhancement Layout, hereafter referred to as a Landscape and Ecological Management Plan (LEMP) has been updated, following an initial LEMP produced in February 2021 by GPM Ecology (2021¹) and developed on behalf of Fleurie Nursery to demonstrate biodiversity gain as required by Arun District Council (ADC) and as detailed within the National Planning Policy Framework 2019².
- 1.4 The majority of the recommendations from the original Landscape and Ecological Management Plan (LEMP) have been implemented, as detailed in the report below. Additional measures agreed by the Nursery include maintenance to Pond 1 and deployment of mink traps as necessary.

2.0 BACKGROUND INFORMATION AND ECOLOGICAL FEATURES ON SITE

- 2.1 The upper reaches of Todhurst Rife (SU 9763 0455) crosses the eastern side of the Nursery site, issuing from an historic pond (Pond 3, see **Cover Photo**) and running 525m, where it runs parallel with Lake Lane. Evidence of water vole *Arvicola amphibius* was recorded on site in 2019, 2020 and 2024 with most activity previously focused around the main reservoir on site, Pond 2, but since the implementation of the LEMP (GPM Ecology 2021¹), activity appears to have spread along the Rife, south and north of the reservoir. Grass snake *Natrix helvetica* was also observed in May 2019 along the rife in the central part of the site. Great crested newt *Tristurus cristatus* has been recorded just over 0.5km north of the site. Priority BAP species observed in the vicinity of the site include three stag beetles *Lucanus cervus* recorded nearby, the closest being 100m north of the site in 2007.

¹ GPM Ecology 2021, Todhurst Rife Wildlife Corridor, LANDSCAPE & ECOLOGICAL MANAGEMENT

PLAN, Fleurie Nursery. Land at Fleurie Nursery, Lake Lane, Barnham, West Sussex, GPM Ecology 24th Feb 2021

² National Planning Policy Framework, Feb 2019, Ministry of Housing, Communities and Local Government

- 2.2 The application site consisted of open fields up until 1980s when a nursery was first developed on the site. Early 1st Edition OS Map dating from 1875 indicate that the ditch across the centre of the site appears to have remained more or less in the same location over the last 150 years. A number of noteworthy arable plant species have been recorded around the site including corn parsley *Petroselinum segetum*, blue pimpernel *Anagallis foemina* and broad-fruited corn salad *Valerianella rimosa*. The remaining field may have had a seed-bank of vegetation dating from when the site was open farmland.
- 2.3 A walk-over assessment update of the site took place on 27th November 2024, with the following ecological features noted after assessments by GPM Ecology (October 2020³ and March 2024⁴):
1. Evidence of water vole was observed along a 300m length of the Todhurst Rife, with an expanded water vole population estimated between LEMP visits (from 2021 to 2024), with water vole activity now along the Rife where non-native evergreen hedging had been removed.
 2. The site supports three ponds, not impacted by development, with Pond 3 enhanced for water voles (**Cover Photo**) and with water vole activity observed in 2024.
 3. Non-native laurel hedgerow removed (100m stretch, see **Photo 1**), with water vole activity now evident (**Photo 2**), following tree removal.
 4. Water vole activity observed and grass verge (**Photo 3**) maintenance conducted next to proposed 0.2ha eight caravan site and no change to Ponds 1 (**Photo 4**) and 2.
 5. A small Eucalyptus-wood (0.45ha, **Photo 5**) located in the south-east corner of the site had been removed and was reverting to grassland (**Photo 6**) by March 2024.
 7. Hedge planting parallel to Lake Lane (**Photo 7**) had been completed.
- 2.4 It was recommended within the reports that the following mitigation and enhancements are implemented as detailed below:
- 1. Water-voles and current application** - Todhurst Rife requires sensitive maintenance for water-voles, which remains a significant aim of this LEMP. Sections of ditch within 25m of construction will be protected with fencing and a tool box talk provided for site workers. This was conducted as part of the wider site development in 2021 and it is recommended that a Tool-Box Talk is conducted prior to the Caravan site development. A post and rail fence (marking a 5m+ way-leave has been agreed to be constructed between the Caravan site and Todhurst Rife, with signage instructing residents not to access the grass bank way-leave adjacent the rife.
 - 2. Breeding Birds** - Tree-works (e.g. around Pond 1) recommended for removal should be cleared outside of the bird breeding season (September to February).
 - 3. Todhurst Rife Wildlife Corridor** - The Nursery has agreed to manage the rife as a wildlife corridor along the eastern spine of the site, with the vast majority of the maintenance practises agreed within the 2021 LEMP having already been completed. Only a small area of native copse planting parallel to Lake Lane is not yet completed and is awaiting sign-off, regarding a drainage enquiry raised by ADC.
 - 4. Mitigating Impact of Waste upon Aquatic Environments** - The Nursery also agree to adopt a site-based 'Litter Strategy', to minimise the diffuse and indirect impact of litter and pollution entering the Rife.

³ GPM Ecology (11th October 2020), Polytunnel and Glasshouse Development, Fleurie Nursery, Lake Lane, Barnham, W. Sussex, Preliminary Ecological Appraisal

⁴ GPM Ecology (27th March 2024), Caravan Development, Fleurie Nursery, Lake Lane, Barnham, W. Sussex, Preliminary Ecological Appraisal

3.0 DESIGN AND MAINTENANCE OF BIODIVERSITY IN THE LANDSCAPE PLAN

Aims and Objectives

3.1 The principle aim of this Landscape Ecological Management Plan is to maintain and continue to enhance the biodiversity of Todhurst Rife Wildlife Corridor at Fleurie Nursery, which will be achieved with the following management prescriptions:

1. Sensitive Rife and bankside maintenance for water voles, as per LEAF Marque Scheme (2017).
2. Continued sensitive maintenance of Pond 3 and maintenance of the southern side of Pond 1
3. The Eucalyptus-copse is to be removed and reverted to grassland.
4. Continued establishment of native hedgerows parallel to Lake Lane and around the site.
5. Site based Waste Strategy, with focus upon Todhurst Rife
6. Water vole and Landscape Maintenance Plan monitoring and to join with wider Arun valley catchment water-vole maintenance (e.g. control of mink as necessary, see **Photo 8**)

1. Todhurst Rife Sensitive Maintenance for Water Voles (Figures 1 to 3)

Based on LEAF Marque Scheme (member since 2017) survey guidance by CJH (2019⁵) recommended the following maintenance regimes to be implemented to enhance this 525m stretch of the Todhurst Rife:

- a) Width of the area of unmown bankside vegetation will be 2 to 5m, mown as per d) below.
- b) The ditch section in south-east corner of site to be cleared of bramble-scrub and Eucalyptus-woodland to be reverted to open grassland.
- c) Remove laurels adjacent to Rife, so that stream and bank vegetation can flourish, unshaded.
- d) All vegetation stream clearance and bankside works to take place October to late January.
- e) When working on banks in any area, work on one side at a time.
- f) Pond 2 (active reservoir) to be maintained to support minimum 25% plant-cover.

2. Part-restoration of Pond 3 (Source of Todhurst Rife - Figure 1) and Pond 1 (Fig. 2)

Part-restoration of Pond 3 completed (**Figure 1**, see **Cover Photo**), with the removal of wood-chip from the bankside, as well as tree stumps along the southern margins of the pond. The ash, alder, hazel and oak around the southern and bank-side edges of Pond 1 are to be coppiced, with diseased ash stumps to cut and sensitively treated (**Figure 2**, **Photo 4**).

The southern margin of both ponds will be maintained as grass margins (not re-planted with shrubs and trees) and the banks will be covered with topsoil from the central grassland area requiring removal to accommodate a glass-house. Open maintained grass-banks will allow the pond to have easier access for desilting in the future, as well as minimising shading and leaf litter inputs. With the removal of shade and nutrient input the biodiversity of the pond will increase, with the open aspect encouraging aquatic species such as water vole, dragonflies, and grass snake.

3. The south-east corner of site to be managed as grassland verge (Figure 3)

A Eucalyptus-copse (**Photo 5**) was removed and reverted to grassland (**Photo 6**), with a 2 to 5m wayleave along the Rife to be maintained as long-grass for water voles. The cleared area was levelled and is now managed as grassland. The eucalyptus-copse now forms a grass-plateau with root-bowls covered and overtime could be utilised by saproxylic invertebrates, such as stag beetle. The Rife's 2 to 5m width of banks and margins will be maintained for water voles as per the maintenance schedule as described above.

⁵ CJH Agri-Environment Consultants Ltd (August 2019), Biodiversity Action Plan for The Fleurie Nursery Ltd, Prepared for: Fleurie Nursery Ltd, Eastergate Nursery, Church Lane, Eastergate, West Sussex, PO20 3XD, By C J Hedley, 21 Lower Grove Road, Havant, Hants, PO9 1AS cjhedley@btinternet.com. August 2019

4. Hedge and Lowland Wood priority BAP Habitat Establishment (Figures 3 and 4)

Over-time non-native poplars and alders within existing hedgerows parallel to Lake Lane will be replaced with native hedgerow shrubs (Figures 3 and 4) about 120m in total length and a small copse. In addition, a length of new native hedgerow was planted along the southern side of the newly created grassland (Photo 7). This will overtime create a native priority Biodiversity Action Plan hedge running parallel between Lake Lane and the sites southern boundary, totalling about 180m in length. Hedgerows on site will be maintained as tall 2 to 3m high hedges, cut annually outside of the bird-breeding season, between October and February. New areas of hedge and copse will be planted with the species as listed below.

Table 1: hedge and woodland species to be planted on site

Native Hedgerow Planting		Native Copse Woodland Planting	
Hawthorn	<i>Crataegus monogyna</i>	Hazel	<i>Corylus avellana</i>
Blackthorn	<i>Prunus spinosa</i>	Field Maple	<i>Acer campestre</i>
Hazel	<i>Corylus avellana</i>	Oak	<i>Quercus robur</i>
Field Maple	<i>Acer campestre</i>	Birch	<i>Betula pendula</i>
Holly	<i>Ilex aquifolium</i>	Aspen	<i>Populus tremula</i>
Dogwood	<i>Cornus sanguinea</i>		
Spindle	<i>Euonymus europeaus</i>		
Guelder-rose	<i>Viburnum opulus</i>		
Dog rose	<i>Rosa canina</i>		

Gapping-up hedgerows: The main lengths of existing hedge along Lake Lane, as shown in Figures 3 and 4, currently support non-native alder, will be strengthened and gapped-up over time as the diseased alders are removed, with hedge species listed above. This will gradually revert a non-native hedge to a native species hedgerow overtime.

Copse Planting: The south-west boundary of the site (see Figure 4), will have a copse about 0.1ha planted north of the existing hedge (see above listed native woody species), to be maintained as non-intervention woodland with vegetation cut as required for health and safety and ditch maintenance works. The planting has commenced, but the final planting is to be completed upon approval by ADC regarding some exceedance works, following issues relating to drainage.

5. Litter Strategy - Mitigating Impacts of Waste upon Aquatic Environments

As part of rife and water body maintenance a site-based 'Litter Strategy' will be adopted from the commencement of development, to minimise the diffuse impact of litter-pollution entering the rife. It should be noted that litter was not observed as a current issue on the site, however it can present as an issue during development and on labour intensive sites when site operations increase and where a rife is maintained. The strategy will include the following elements:

- Sighting waste bins and toilets a minimum distance from water-ways (e.g. over 10m), to minimise litter and incidental pollutants from entering water courses.
- Daily inspection schedule - to ensure all waste bins have lids present and litter is picked out of ditches, hedges and verges as necessary.
- Storage of nursery-related materials will be avoided along the rife-verge, to minimise litter and impacting potential ecological services and sites for wildlife to utilise.

6. Water-vole and LEMP Monitoring (Whole site)

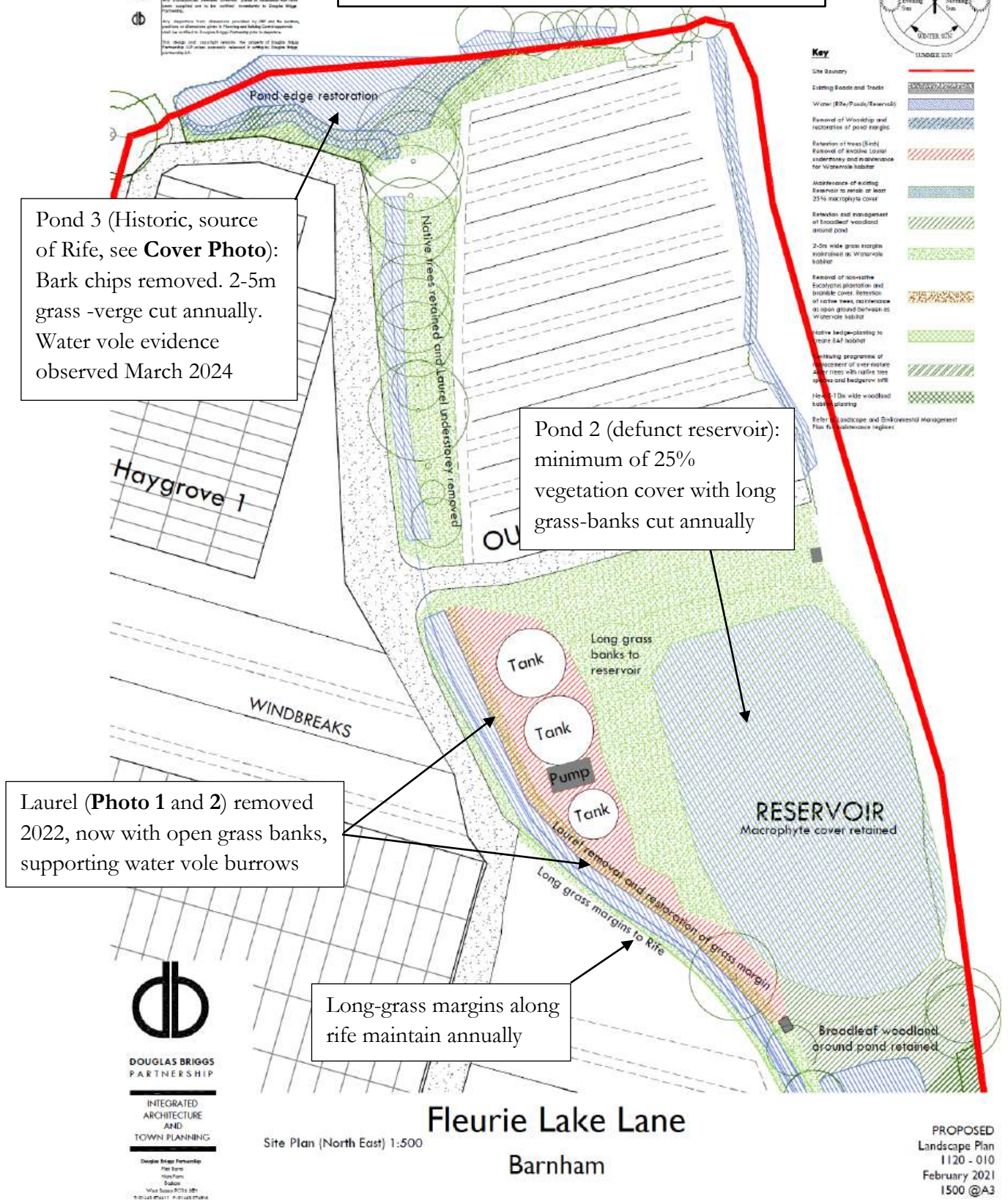
Once works are complete monitoring visits will take place during spring-summer 2025/2026 to assess establishment of the enhancements listed. In addition, Fleurie Nursery will be invited to assist Arun River water-vole restoration and American mink eradication projects (see Photo 8) currently taking place, following the development of new technologies (remoti), making mink control feasible.

Figure 1: LEMP Todhurst Rife (North)

Fleurie Nursery, Lake Lane, Barnham

GPM Ecology

14th January 2025



GPM Ecology 14th January 2025



Figure 3: LEMP Todhurst Rife (South East)
 Fleurie Nursery, Lake Lane, Barnham
 GPM Ecology 14th January 2021

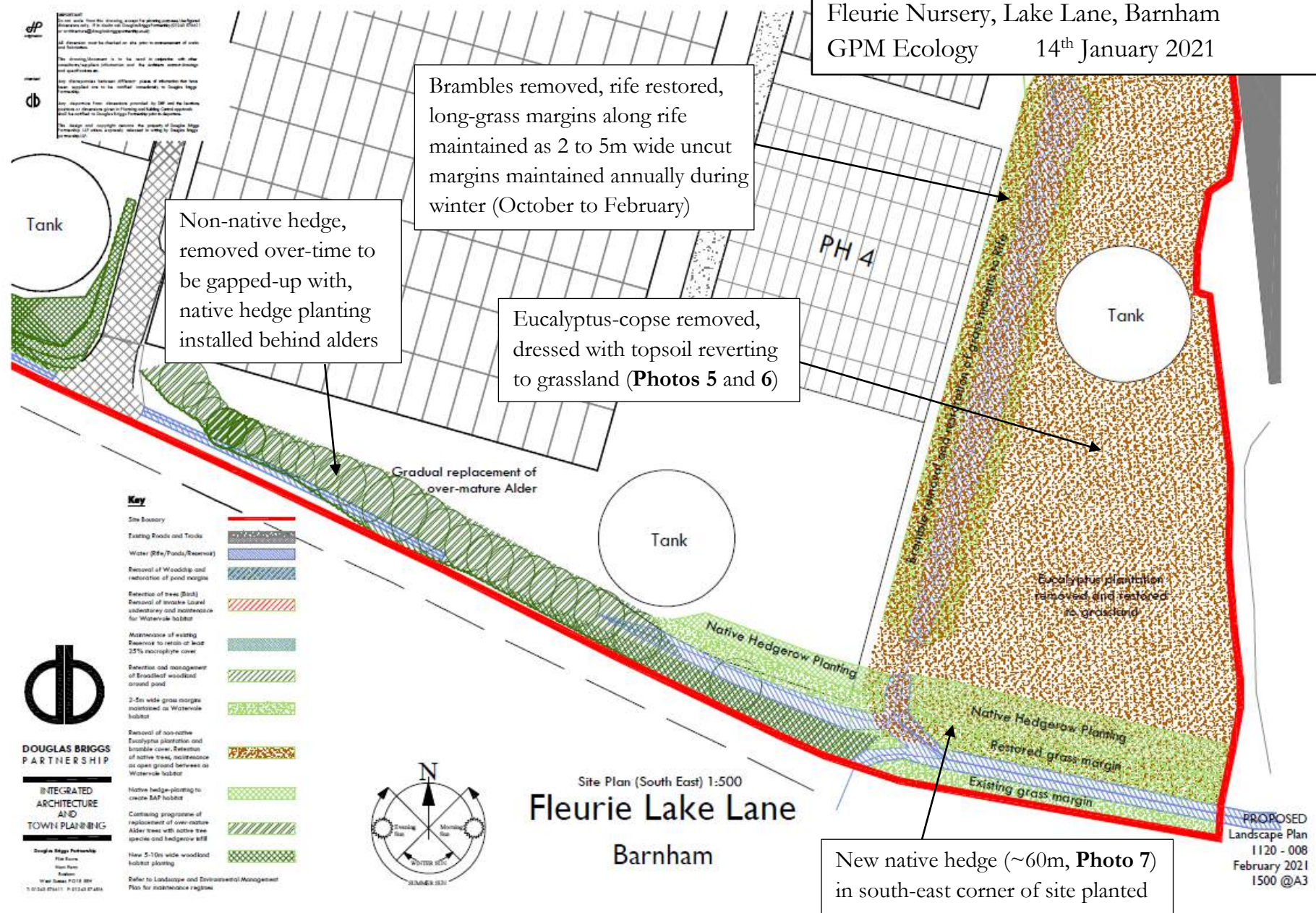
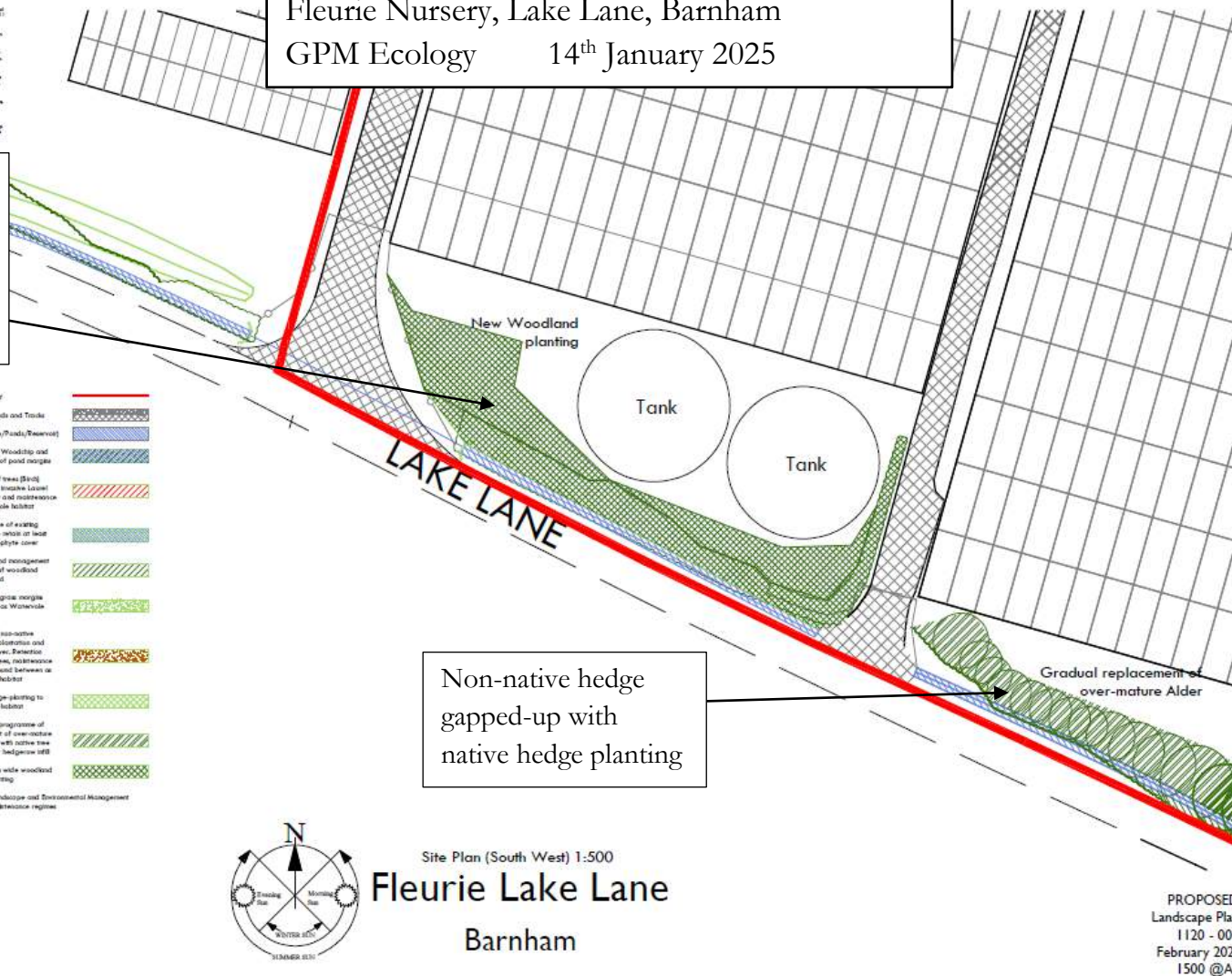


Figure 4: LEMP Todhurst Rife (South West)

Fleurie Nursery, Lake Lane, Barnham

GPM Ecology 14th January 2025

Small native species copse (~0.1ha) to be planted within south-west corner of site, parallel to Lake Lane



Non-native hedge gapped-up with native hedge planting

Gradual replacement of over-mature Alder

Photographs of Ecological Features along Todhurst Rife Wildlife Corridor, Fleurie Nursery



Photo 1: Laurel removal at the northern end rife



Photo 2: Water evidence in 2024 (**Figure 1**)



Photo 3: Grass-cut by rife (**Figure 2**, Nov 2024)



Photo 4: Pond 2, coppicing and ash removal (Mar 2024)



Photo 5: Eucalyptus-woodland 2021 (**Figure 3**)



Photo 6: Removed, grassing over in November 2024



Photo 7: Area of native hedge planting (**Figure 3**)



Photo 8: Modern mink-trapping kit (with remoti)