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ECOLOGY

Proof of Evidence note

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Project: MoJ NPP Garth Wymott 2

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1. Introduction

1.1. Experience

1.1.1. I am Dr Chris Gleed-Owen BSc (hons) PhD MCIEEM. I have a Bachelor of Science degree with honours in geography, obtained at Coventry University in 1992. I have a Doctorate of Philosophy in Quaternary palaeoecology and environmental reconstruction, from Coventry University in 1998. I have been a full member of the Chartered Institute of Ecology and Environmental Management since 2008 (14 years).

1.1.2. I have been Director and Principal Ecologist of CGO Ecology Ltd, an independent ecological consultancy since 2008 (14 years). I hold survey licences in England for great crested newt (GCN) (CL09), sand lizard, smooth snake, natterjack toad, and Roman snail. I also hold survey licences in Scotland and Wales for GCN and/or reptile species. I have held mitigation licences for smooth snake, sand lizard, and badger sett closure.

1.1.3. I am an experienced practitioner in Phase 1 habitats, the UK Habitat Classification, (UKHab) Defra Biodiversity Metric 2.0-3.1, Biodiversity Net Gain (BNG), BREEAM, Ecological Impact Assessment (EcIA), Environmental Impact Assessment (EIA) Ecology Chapters, National Vegetation Classification (NVC), plants (FISC level 4), mammals, birds, reptiles, amphibians, fish, and a range of invertebrates.

1.1.4. My previous career spans archaeology (English Heritage), geology (Natural England), palaeontology (University of Oxford), civil engineering (Exploration Associates), cartography (Ordnance Survey), teaching (Coventry University, Bournemouth University), and nature conservation (Amphibian and Reptile Conservation Trust).

1.1.5. In my ecological consultancy role, my clients are in central and local government, education, infrastructure, construction, transport, energy, renewables, leisure, research, and nature conservation.

1.2. Legislative and policy framework

1.2.1. The principal wildlife legislation in Britain of relevance are: the Wildlife and Countryside Act 1981 (as amended) (WCA), Protection of Badgers Act 1992, Habitats Regulations 2017 (as amended), Natural Environment and Rural Communities Act 2006 (NERC Act) (esp. Section 41), and Hedgerow Regulations 1997. Works that may harm or disturb protected species, or damage their habitats, must be impact-assessed by an ecologist, and mitigated or compensated, as necessary.

1.2.2. Ecology in planning usually involves PEA as the first stage, typically an Extended Phase 1 Habitat Survey to assess the site's ecological value and potential impacts of the proposed development on protected and notable species, habitats and protected sites. This may be followed by 'phase 2' species surveys and/or an Ecological Impact Assessment (EcIA) if required under The Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

1.2.3. Buildings, structures, and trees may require assessment for bats or breeding birds. Badgers can be found in many areas of human habitation, as can be other protected mammals, reptiles, and amphibians. This may result in the need for further surveys to satisfy planning.

1.2.4. Where a development may have an impact on an internationally-protected site, an Appropriate Assessment and/or Habitats Regulations Assessment may be necessary under the Habitats Regulations 2017 (as amended). The 'competent authority' responsible for this process is usually the Local Planning Authority (LPA), but an ecological consultancy can provide 'shadow HRA screening' and/or a shadow AA/HRA on its behalf.

1.2.5. LPAs also have a duty under the National Planning Policy Framework (NPPF) (MHCLG, 2019) to deliver measurable Biodiversity Net Gain (BNG), i.e. no net loss, plus enhancements, for all developments. BNG must be in addition to any mitigation or compensation provisions required to achieve no net loss. Defra's Biodiversity Metric has become widely adopted as the standard calculator, using a habitat list based on the new UKHab system rather than traditional Phase 1 habitat system. Its effective use requires proficiency in both UKHab and botanical identification. The Environment Act 2021 requires 10% BNG on all developments, but this is not yet a legal requirement.

1.2.6. The UK Biodiversity Action Plan (UKBAP) no longer exists as a formal policy instrument, but it continues in spirit. Its Priority Habitats continue to be used in the UKHab and BNG Metric systems, and 'BAP species' are given a degree of protection through Section 41 of the NERC Act 2006. These are also known as 'Habitats and Species of Principal Importance' or 'Priority Species'.

1.2.7. BREEAM is a sustainability scoring scheme adopted voluntarily by developers. It assesses projects against many factors, awarding credits against ecological categories such as early involvement of an ecologist, and compensation of lost habitats with species-rich landscaping. The key tool is the Change in Ecological Value Calculator. This and other ecological information must be input by a Suitably-Qualified Ecologist (SQE). The available ecological credits are as follows: LE02 (low ecological value site, protecting ecological features), LE03 (minimising impact on ecology), LE04 credits (enhancing site ecology), and LE05 credits (following SQE recommendations, habitat management plan in place).

1.2.8. The Ministry of Justice's New Prisons Programme aims to achieve at least 10% BNG and 'Outstanding' in BREEAM score for all new prisons.

1.2.9. In Lancashire, 'Lancashire Key Species' are a material consideration in planning. These are equivalent to the obsolete UKBAP system. A network of 'local site' also exists, which are non-statutory designated sites with a *de facto* protection through consideration in the planning system.

2. Ecological surveys, baseline conditions, mitigation/compensation

2.1. Preliminary Ecological Appraisal

2.1.1. A Preliminary Ecological Appraisal (PEA) was conducted by Ramboll Ltd in 2020 most of the application area (appended to document A9). Ramboll sought a 2km data search from Lancashire Environment Records Network (LERN) in 2020. Mace Ltd sought advice from Greater Manchester Ecology Unit (GMEU) to inform scope for further ('phase 2') ecology surveys in 2021.

2.1.2. I conducted a PEA of additional areas to the northeast of the site in 2021 (appended to document A9), following standard JNCC Phase 1 habitat guidelines, extended to include assessment of protected and notable species interests. The PEAs took the form of an Extended Phase 1 Habitat Survey, following standard JNCC guidance to map habitats, and assess protected and notable species.

2.1.3. I reviewed the LERN data as part of my PEA for the additional areas to the northeast of the site. I also accessed online resources, including Defra MAGIC website (https://magic.defra.gov.uk/MagicMap.aspx) for protected sites and species within a 5km radius, and for general habitat and landscape information.

2.1.4. In its pre-planning advice, GMEU scoped out the need for Winter Bird Surveys (WBS), Breeding Bird Surveys (BBS), hazel dormouse, badger, otter, and invertebrate surveys (document J6).

2.1.5. Based on the Ramboll PEA and GMEU scoping, Mace instructed CGO to conduct phase 2 ecology surveys in 2021 of the following potentially-impacted groups: bats, water vole, GCN, reptiles, Invasive Non-Native Species (INNS). Additional evidence from the CGO PEA led to survey for barn owl.

2.1.6. Phase 2 ecology surveys were conducted by CGO and subconsultant Haycock & Jay Associates (HJA) throughout 2021. A BBS has been conducted of the application area in 2022 by CGO subconsultant Knight Sky Ecology (KSE) (document E8).

2.1.7. Baseline and proposed habitats were converted to the UKHab system, and entered into the Defra Metric 2.0, with relevant metadata to calculate BNG for the proposed development.

2.1.8. The application red line boundary has an area of 43.53ha, of which the proposed development occupies 19.26ha, representing 19% of the 100.68ha MoJ estate at and around HMPs Garth and Wymott. The proposed designs were overlaid onto the Phase 1 mapping using GIS, to enable area/length measurement of habitat types subjected to each treatment: new prison, bowling club, boiler house, rest of red line boundary. The 'rest of red line boundary' habitats comprise 11.90ha that will be retained, and 12.37ha of habitat creation (ponds, woodland) and enhancement of existing modified grassland. The large area of woodland known as Stanning's Folly, southwest of HMP Garth, and the adjacent area of marshy grassland, are outside the red line boundary.

2.1.9. Belts of plantation broadleaved woodland are present in the new prison area, and in retained areas to the east of HMP Wymott and between the prison car parks. These are dominated by a mix of natives and non-natives: white poplar, aspen, ash, grey poplar, hybrid black poplar, grey willow, crack-willow, hawthorn, hazel, bird cherry, and elder. Around half of this habitat within the red line boundary will be lost to the new prison. Most trees appear to be less than 50 years old.

2.1.10. Most of the new prison area is agriculturally-improved grassland with poor species diversity, dominated by species such as perennial rye-grass, and with significant cover of undesirable 'weeds' such as thistles, docks, and white clover. These areas on site are grazed rotationally by livestock, thus producing a mixture of short and long swards.

2.1.11. The Defra MAGIC website shows only one protected site designation within 5km: Longton Brickcroft LNR (Local Nature Reserve) which lies 4.5km north. No other protected site lies within 5km.

2.1.12. The Ulnes Walton Biological Heritage Site (BHS) lies north and west of HMP Garth, comprising woodland and the Prince Albert Angling Society (PAAS) fishing lakes. This is a local site designation with no statutory protection, but it has *de facto* protection through the local planning process. There are three other 'local sites' lie within 2km.

2.1.13. The site is within a Nitrate Vulnerable Zone for surface water (S646 Lostock). This limits the volume of water discharge to drains or soakaways to 20m^3 per day.

Phase 1 habitat type	Total area (ha)
Amenity grassland	2.40
Bare ground	0.09
Broad-leaved plantation woodland	2.50
Broad-leaved semi-natural woodland	0.26
Building	0.64
Continuous scrub	0.05
Hardstanding	1.26
Improved grassland	10.97
Scattered trees	0.18
Standing water	0.05
Total	**18.40**

Table 1 – Phase 1 habitats in the proposed new prison area.

2.2. Bat roosts

2.2.1. All British bats and their roosts are strictly protected under the Habitats Regulations 2017 (as amended) and WCA Schedule 5.

2.2.2. CGO subconsultant HJA conducted a bat Preliminary Roost Assessment (PRA) of buildings and trees in February and June 2021. Nocturnal surveys (dusk emergence, dawn re-entry, totalling 50 surveyor sessions) of 11 buildings and one tree took place in May-June 2021. A PRA of a woodland block in the proposed prison area took place in July 2021, followed by nocturnal surveys and climbed assessment of trees with medium to high bat potential. (Documents A9, A12, A13).

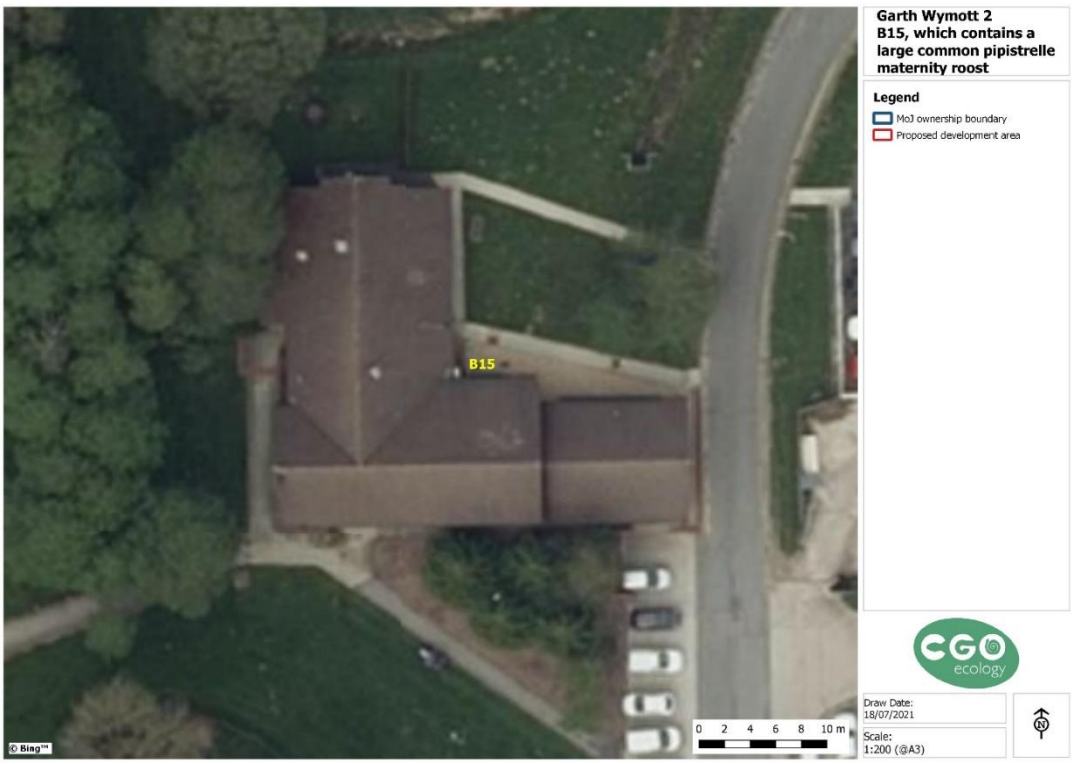

Figure 1 – Building 15 (common pipistrelle maternity roost, and minor hibernation roost). The new boiler house will be located to the east of B15.

2.2.3. All surveys followed standard guidance (Collins, 2016), with surveyors (led by a licensed surveyor) positioned to observe potential bat emergence and re-entry points on buildings and trees. One dusk survey took the form of a Vantage Point (VP) survey, with surveyors positioned near to building 'B15', to ascertain the direction that emerging bats commuted.

2.2.4. No bats were seen to emerge from or enter any buildings or trees to be lost to the development. However, a large common pipistrelle maternity roost is present in B15 (Probation Service offices/training centre). CGO/HJA surveys in May and June 2021 confirmed a maternity colony of at least 200 individuals in roosts around the soffits.

2.2.5. Given the importance of B15, hibernation surveys were conducted in January-February 2022. These identified at least one common pipistrelle hibernating in B15. (Document E7).

2.2.6. A single common pipistrelle roost was also detected in building B10, to be retained on the north edge of the new prison area.

2.3. Bat activity

2.3.1. CGO/HJA conducted monthly bat activity surveys from April to October 2021, using a single transect (two surveyors) and two static detectors deployed for one week each month. The methodology followed standard guidance, led by a licensed surveyor. (Documents A9, A11).

2.3.2. The surveys recorded moderate to high common pipistrelle activity, with occasional noctule and occasional unidentified *Myotis*. The focus of activity is along woodland edges as expected. Importantly, the emerging bats from B15 almost all fly southwest to the retained woodland of Stanning's Folly, and will be unaffected by the new prison.

2.3.3. Mitigation for potential impacts on the B15 maternity and hibernation roosts will include seasonal avoidance, noise-minimisation measures such as electric lorries, acoustic barriers, and shifting the haul road to be 30m from B15. Loss of bat foraging and commuting habitat will be offset by enhancements to the BNG area to the south.

2.3.4. External lighting must minimise light-spill onto dark areas used by bats. B15 must not receive significant net increase in lighting and noise that could affect the integrity of the roost.

2.3.5. Artificial bat roosts of a range of specifications (including additional maternity roost boxes) will be installed on trees, or suitable retained buildings and/or woodland, especially in the south, west, and northeast ends of the site where new woodland and enhanced grassland is being provided. At least 20 batboxes will be installed.

2.4. Other mammals

2.4.1. Water voles are protected under Schedules 5 and 9 of the Wildlife and Countryside Act 981 (as amended). I conducted water vole surveys in April 2021 and July 2021, examining all waterbodies, watercourses, and ditches. Methodology followed standards guidance to search for water voles, burrows, footprints, feeding stations, latrines, and other evidence. No evidence of water vole presence was found on MoJ land. Possible old burrows are present in the ditch beside the Ridley Lane track. (Document A1). I resurveyed the new prison area in May 2022, and again found no evidence of water vole presence in the new prison area.

2.4.2. A herd of unusually-pale fallow deer resides in the woodland and seminatural habitats around the site. They tend to avoid amenity areas with human activity, at least during the daytime. Any loss of woodland connectivity is likely to affect them. A large colony of brown rats is present within the former assault course at HMP Wymott.

2.4.3. Water shrew is present in at least two ponds, as it was caught in newt bottle-traps. This is a Lancashire Key Species.

2.4.4. Hedgehog was recorded between the prisons during a bat nocturnal survey, and is likely to occur across the site. Hedgehog is on Schedule 41 of the NERC Act 2006, and a Lancashire Key Species. Hedgehog checks will be conducted during site clearance when removing vegetation and debris in locations where they may shelter. 10 artificial hedgehog homes will be installed in undeveloped parts of the site, to offset the loss of current shelter habitat.

2.4.5. Notably, no evidence of badgers has been identified on any of the PEA or phase 2 surveys, and it can be concluded that badgers are absent from the site. Fox is also notably absent. Otter can be ruled out too, as it would have been detected during the water vole and GCN surveys if it were present. (Documents A8, A9).

2.5. Barn owl

2.5.1. Barn owls and their nests are protected under WCA Schedule 1. CGO/HJA conducted barn owl surveys throughout 2021, comprising daytime walkovers, internal (outside the breeding season) and external buildings inspections, dusk and dawn surveys. These followed standard guidance. Barn owls are present on site, nesting, breeding, roosting, and foraging on MoJ land affected by the new prison. A barn owl nestbox is present in building 'B11' which enabled successful breeding in 2021. Nearby building B10 is also used as an occasional roost.

2.5.2. I sought specialist advice from a barn owl licence-holder, Amy Trewick, to inform the mitigation response. To compensate the proposed loss of B11, a nestbox was installed in B10 in December 2021, and a second one in B21 in the BNG area to the south of the site. I am confident that this will be used if the B11 box is removed. The barn owls already roost in B10, and in my opinion are likely to readily nest in the new box. The new location will also have better access to retained agricultural grassland to the north. (Documents A9, A10).

2.6. Breeding and wintering birds

2.6.1. All nesting birds are protected under the WCA. Some species are also strictly protected under the Habitats Regulations 2017 (as amended).

2.6.2. Breeding birds (other than barn owl) were scoped out by GMEU, but a series of surveys following standard guidance were conducted on the proposed prison site in 2022 by CGO subconsultant KSE (Visit 1 – 24th May 2022, visit 2 – 1st June 2022, visit 3 – 9th June 2022). The BBS recorded 40 species on or adjacent to the proposed prison site, including five Birds of Conservation Concern (BoCC) Red List species, and 12 Amber List species. Seven species are on the NERC Act section 41 list, and 11 species are on the Lancashire Biodiversity Action Plan long list. (Document E8).

Conservation status category	Number of species
Green list (BoCC5)	22
Amber list (BoCC5)	12
Red list (BoCC5)	5
Unclassified	1
Lancashire BAP long list	11
Schedule 1 (WCA)	1
Annex I (Habs Regs)	0
Section 41 (NERC Act)	7
Total number of species	40

Table 2 – Summary of species and conservation status categories.

Species common name	BoCC5 status	V1 count	V2 count	V3 count	WCA Sch1	NERC s41	Lancs BAP	Breeding status	Pairs
Barn owl	Green			1	Yes			Confirmed	
Blackbird	Green	5	6	9				Probable	4
Blackcap	Green	1	1	2				Probable	2
Black-headed gull	Amber	4	1				Yes	Non-breeding	
Blue tit	Green	2	1	2				Confirmed	2
Buzzard	Green		1					Non-breeding	
Canada goose	n/a	5	2	9				Non-breeding	
Carrion crow	Green	3	2	3				Possible	2
Chaffinch	Green	3	4	3				Probable	3
Chiffchaff	Green	2	2	2				Probable	2
Dunnock	Amber	2	1			Yes	Yes	Probable	2
Feral pigeon	Green		6	1				Possible	4-5
Goldcrest	Green	1						Possible	1
Goldfinch	Green	3	4	8				Probable	4
Great spotted woodpecker	Green	1	2	2				Possible	2
Great tit	Green	4		6				Confirmed	3
Grey heron	Green		1				Yes	Non-breeding	
Herring gull	Red	2		1		Yes	Yes	Possible	2
House sparrow	Red	1	4	1		Yes	Yes	Probable	3-5
Jackdaw	Green		12					Non-breeding	
Jay	Green		1	2				Probable	1
Lapwing	Red	2	1	3		Yes	Yes	Probable	2+
Lesser black-backed gull	Amber	5	6	6			Yes	Probable	4-6
Long-tailed tit	Green		1					Possible	1
Magpie	Green	3	3	3				Probable	2
Mallard	Amber	5	2	3				Confirmed	3
Moorhen	Amber	1		1				Possible	1
Nuthatch	Green			1				Confirmed	1
Oystercatcher	Amber	8	5	2			Yes	Probable	4
Pied wagtail	Green	1	2	1				Probable	2
Robin	Green	3	4	1				Confirmed	3
Shelduck	Amber							Non-breeding	
Song thrush	Amber	1	2	2		Yes	Yes	Confirmed	2
Starling	Red	10	4	14		Yes	Yes	Probable	
Stock dove	Amber	1						Non-breeding	
Swallow	Green	3	2	2				Probable	2
Whitethroat	Amber	2	1	1				Probable	2
Woodpigeon	Amber	12	14	13				Probable	3-5
Wren	Amber	5	6	11				Probable	5
Yellowhammer	Red	1	1	1		Yes	Yes	Probable	1

Table 3 – Results from Breeding Bird Survey in May and June 2022.

2.6.3. Counts were generally low. BoCC Red List species starling was the most numerous, with 14 seen on visit 3, and on-site breeding probable. On the Amber List, wood pigeon (14) and wren (11) were most numerous, with both being probable breeders. Barn owl was the only WCA Schedule 1 species.

2.6.4. The BBS 2022 results and incidental data from other ecology surveys in 2021 show that Red List and Amber List birds breed in the existing prisons, including oystercatcher on the roof of HMP Garth, and gulls on the roof of HMP Wymott. This is an important observation, as it shows that the prisons have inadvertently provided breeding habitat to threatened bird species.

2.6.5. The BBS raised no concerns regarding Red List or Amber List species on the application area. All impacts will be adequately mitigated and/or compensated by the proposed mitigation, particularly the woodland and hedgerow planting and other enhancements proposed in the BNG area to the south.

2.6.6. Wintering birds were also scoped out by GMEU (documents J6, B13), and there are no plans for a WBS to be conducted.

2.6.7. Incidental data from my PEA walkover on 24th February 2021 are useful though, and include a flock of c.20 herring gull, c.20 oystercatcher, and c.30 wood pigeon circling noisily above HMP Wymott. Given the human disturbance in this location, and the intensive land use of the MoJ farmland, overwintering on site by significant numbers is unlikely in my opinion. The large un-grazed fields on third-party land off-site to the north sees less human activity, and is more likely to attract overwintering birds.

2.6.8. A hobby was recorded at the Ulnes Walton BHS north of HMP Garth in 2021 during CGO/HJA surveys. This species is protected on WCA Schedule 1. It is not likely to breed in the new prison area.

2.6.9. Other BoCC Red List species that are absent from the new prison area, but were recorded incidentally elsewhere on the MoJ estate are cuckoo, linnet, and tree sparrow.

2.6.10. Amber List tawny owl was recorded incidentally in 2021 within the new prison area, and it is possible that a breeding pair exists on site. No little owls have been recorded.

2.6.11. Construction will cause permanent loss of nesting and foraging habitat for a range of birds, including relatively-low numbers of Red List and Amber List species. It would also cause destruction of nests, and killing and injury of chicks in the absence of mitigation.

2.6.12. For some Red List and Amber List species which nest on roofs, such as herring gull, great black-backed gull, and oystercatcher, the construction of new prison buildings will be a positive impact.

2.6.13. Possible effects on overwintering birds are unknown at present, but are not expected to be significant. The site is largely composed of heavily-grazed pasture with significant human disturbance. Neighbouring third-party farmland in all directions provides a much more attractive resource for wintering birds.

2.6.14. Demolition, tree felling, hedge removal, shrub/scrub removal, and commencement of other enabling works, such as cutting or driving over long grass, infilling ponds, or clearing debris, will avoid the March-August nesting season. If any work must commence within the nesting season, it will be preceded by an ecologist nest check prior to issue of the all-clear to proceed. Any active nests will be safeguarded with a 5m stand-off using road pins and hazard tape or fencing.

2.6.15. Breeding habitat compensation by installation of suitable nestboxes in other areas of the site (to provide alternatives in the short term). The number and types will reflect the species and estimated numbers of territories affected. Also, habitat creation (woodland, shrubs, hedgerows, ponds) and enhancements (pasture seeding/reversion) within and outside the development.

2.7. Great crested newt

2.7.1. GCN and its breeding places and resting places are protected under WCA Schedule 5 and strictly protected under the Habitats Regulations 2017 (as amended).

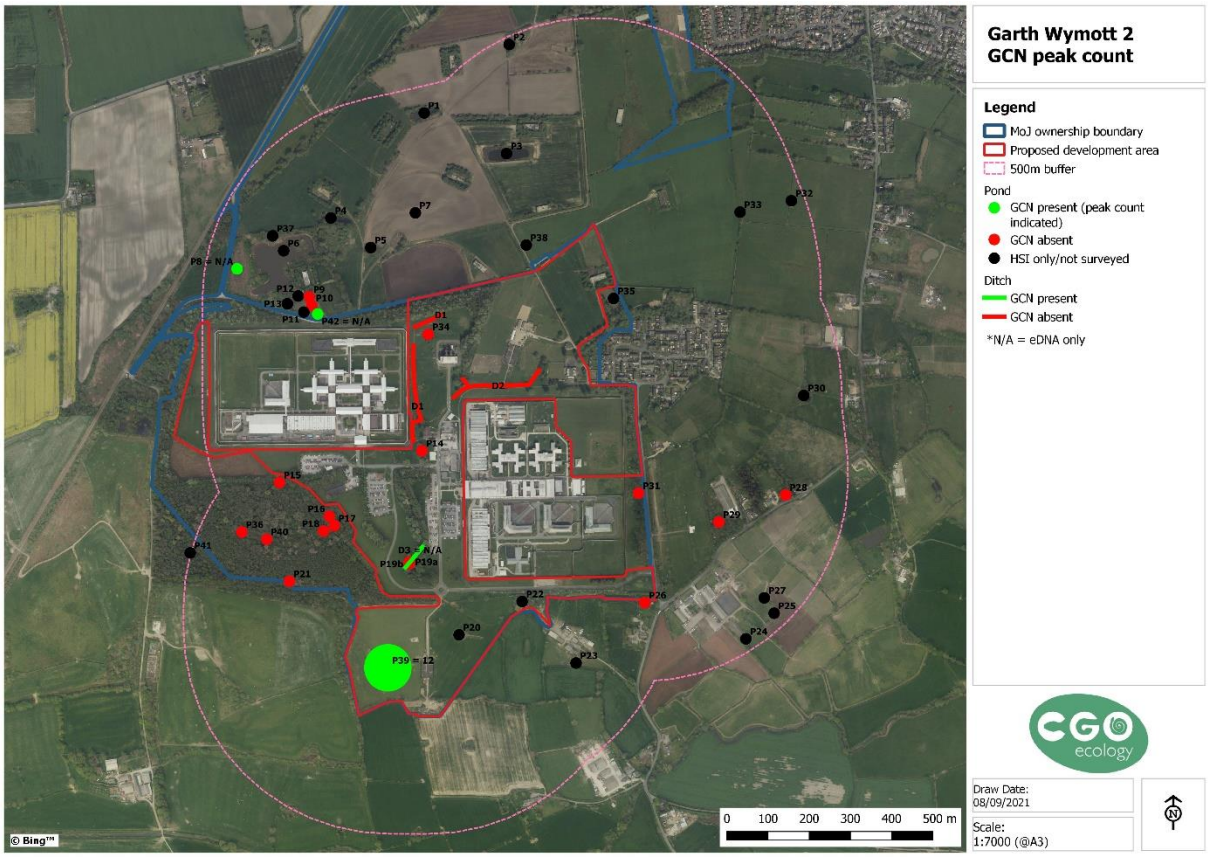

Figure 2 – GCN presence-absence and peak counts derived from nocturnal surveys and eDNA in 2021.

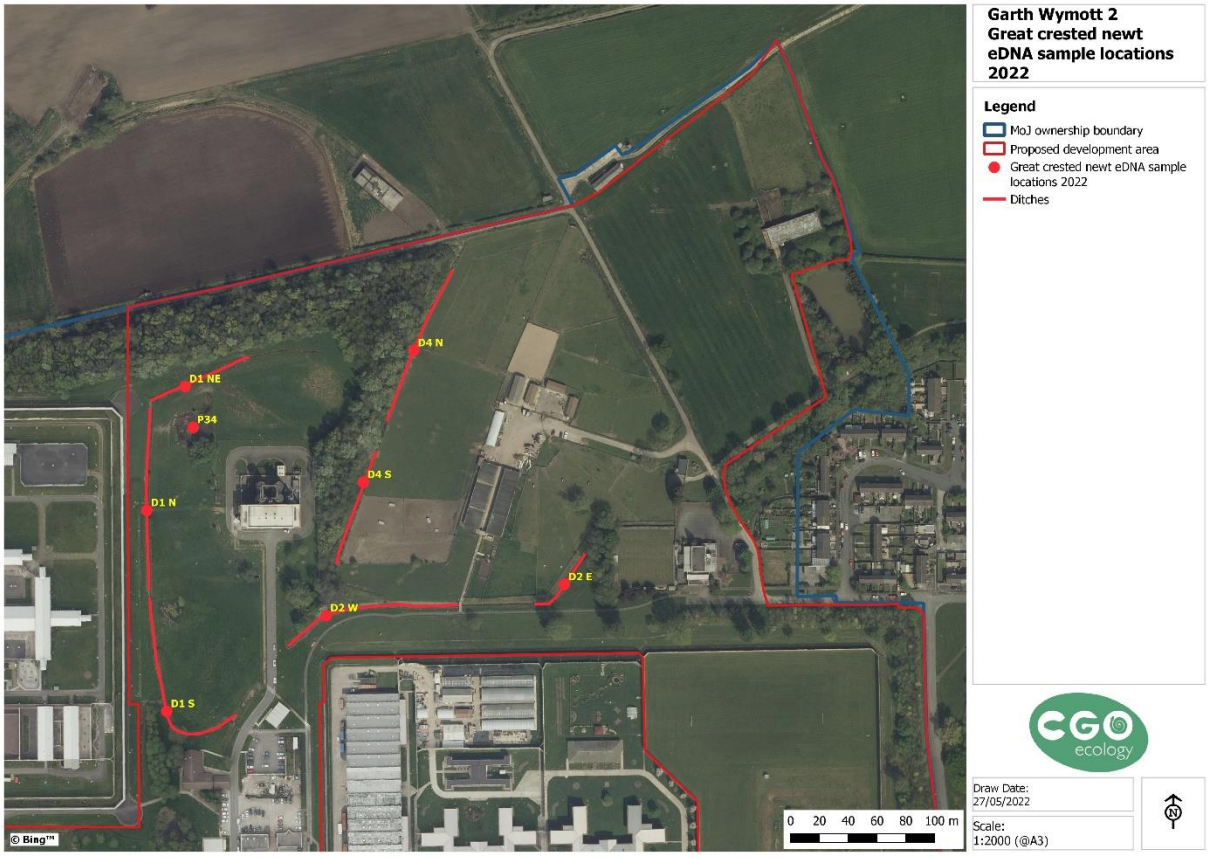

Figure 3 – GCN eDNA survey results in 2022. All eight locations were negative (GCN absent)

2.7.2. CGO/HJA conducted Habitat Suitability Index (HSI) surveys in February-March 2021, following standard guidance. MoJ sought third-party permissions for off-site land access, but these were largely not forthcoming. HSI assessment was therefore only possible on a few off-site ponds to the southeast of HMP Wymott and the north of HMP Garth (PAAS fishing lakes), and nocturnal surveys on the PAAS lakes were not permitted.

2.7.3. GCN presence-absence surveys were conducted on all accessible ponds with average-or-above HSI scores. Following standard guidance, four to six nocturnal visits using three techniques (typically torch, bottle-trap, egg-search) were conducted at 16 ponds. GCN presence was found in one pond 'P39', in the BNG area to the south of the site (maximum count 12), and in retained 'ditch 3' between the prisons. (Documents A9, A14).

2.7.4. GCN eDNA sampling took place at one on-site pond, four off-site ponds at Prince Albert Angling Society fishing lakes (Ulnes Walton BHS), and three on-site ditches. Resurvey of the MoJ ditches and ponds in the new prison area (eight locations) was conducted in May 2022, and all are eDNA-negative. (Document E9).

2.7.5. Lack of landowner permission for most of the 51 ponds originally identified within 500m of the development was potentially a significant constraint. However, the results obtained show that GCN is not significantly impacted by the development, and that any impacts can be prevented by Reasonable Avoidance Measures (RAMs). Should an unavoidable impact be predicted, the District Level Licensing (DLL) scheme for Lancashire, administered by Natural England, will be entered into.

2.7.6. Common toad, common frog, and smooth newt were regularly encountered during the GCN nocturnal surveys, and are widespread throughout the site. Common toad and common frog were also encountered during the reptile surveys and other daytime walkovers. Common toad is listed on NERC Act Schedule 41. All the widespread amphibians are Lancashire Key Species. The proposed creation of six new ponds in the BNG area to the south, and in existing pasture to the west of HMP Garth, will fully compensate any losses, and lead to net enhancement for these species.

2.8. Reptiles

2.8.1. The 'common' reptile species (common lizard, slow-worm, grass snake, adder) are protected by the WCA.

2.8.2. CGO/HJA conducted a reptile survey following standard methodology, combining artificial refugia and visual search over seven survey visits between 13th April and 18th May 2021, in suitable conditions. No reptiles were found, and it is concluded that reptiles are absent from the site. This is consistent with the historically flood-prone nature of the Lancashire Coastal Plain. No mitigation is required. (Appended to document A9).

2.9. Fish

2.9.1. Fish surveys were scoped out by GMEU, and none were conducted. Anecdotally, European eel is sometimes caught in the Wymott Angling Club pond (P35), and is presumably naturally occurring there, having traversed ditch networks. European eel is Listed as Critically Endangered on the International Union for Conservation of Nature (IUCN) Red List. It is also a Lancashire Key Species. (Document A9).

2.10. Invertebrates

2.10.2. A range of common insects and invertebrates is present. Given the preponderance of heavily-modified habitats, GMEU scoped invertebrates out, and a targeted survey has not been conducted. Generic mitigation is proposed, mostly via planting and habitat enhancements which will have knock-on benefits for a wide range of invertebrates. (Document A9).

2.11. Invasive Non-Native Species

2.11.1. I conducted walkovers of the whole site in April 2021 and July 2021, searching for INNS plants, especially those on WCA Schedule 9, i.e. species that are illegal to plant or allow to spread in the wild. Focus was given to ponds and ditches, where the most prevalent INNS plants are normally found. The April visit enabled a detailed inspection of all habitats prior to the spring surge in vegetation. The July visit enabled identification of annuals such as Himalayan balsam at their peak. (Appended to document A9).

2.11.2. This found a localised presence of Himalayan balsam on the north edge of the application area, along the Ridley Lane track between MoJ and Forrester land. Eradication work began in autumn 2021, and will continue in summers 2022-2024. Localised stands of ornamental INNS plants were recorded in the gardens near the Bowling Club (montbretia, giant rhubarb), and in a hedgerow to the south of HMP Wymott (Japanese rose). Grey squirrel and Canada goose are also present. (Document A9).

2.11.3. Resurvey in May 2022 (as part of a barn owl scoping survey) did not find any new infestations of INNS plants on MoJ land, but an additional infestation of Himalayan balsam was identified on third-party land to the north.

2.11.4. A Biosecurity Plan will be in place for the duration of the development, to ensure that all contractors, suppliers, vehicles, boots, clothing, and other potential INNS vectors are INNS-free. A check-clean-dry policy will be enforced for any work affecting any wet habitats, in line with Defra's Non-Native Species Secretariat advice. Identification posters for key INNS plants will be prominently posted, and toolbox talks will be given to all site visitors.

2.12. Biodiversity Net Gain

2.12.1. BNG calculations were made by CGO in June 2021, in close liaison with Mace and Pick Everard (PEV) landscape and design outputs, using Defra Biodiversity Metric 2.0. The Phase 1 habitat data from the Ramboll and CGO PEAs (appended to document A9) were combined by CGO using QGIS to extract area and length figures. The post-development area and length figures, and treatments were provided by PEV. (Documents A16, A17).

2.12.2. Biodiversity Metric 3.0 and 3.1 have since been released, but GMEU confirmed that Metric 2.0 would be acceptable in this case (document B13).

2.12.3. The project development process has incorporated ecologist expertise throughout the scheme design. The mitigation response has followed the 'mitigation hierarchy', i.e. avoid, minimise, mitigate, compensate, and enhance. Alongside the latter, the principle of BNG has been built into the landscaping design, with the goal of achieving at least 10% BNG, as per MoJ policy for its new prisons.

2.12.4. The proposed scheme will provide 20.08% net gain in habitat units, and 11.25% net gain in hedgerow units. There are no running waterways on site.

2.12.5. The main baseline habitat loss will be 10.84ha of UKHab classification 'modified grassland' in 'poor' condition, translated from Phase 1 habitat type 'improved grassland' following the HLS FEP grassland guidance. Also lost will be 2.50ha of plantation woodland, 2.40ha of amenity grassland, and small areas of seminatural woodland, a pond, species-poor hedgerow, and wet and dry ditch. Most of the existing woodland belt surrounding the two existing prisons will be retained.

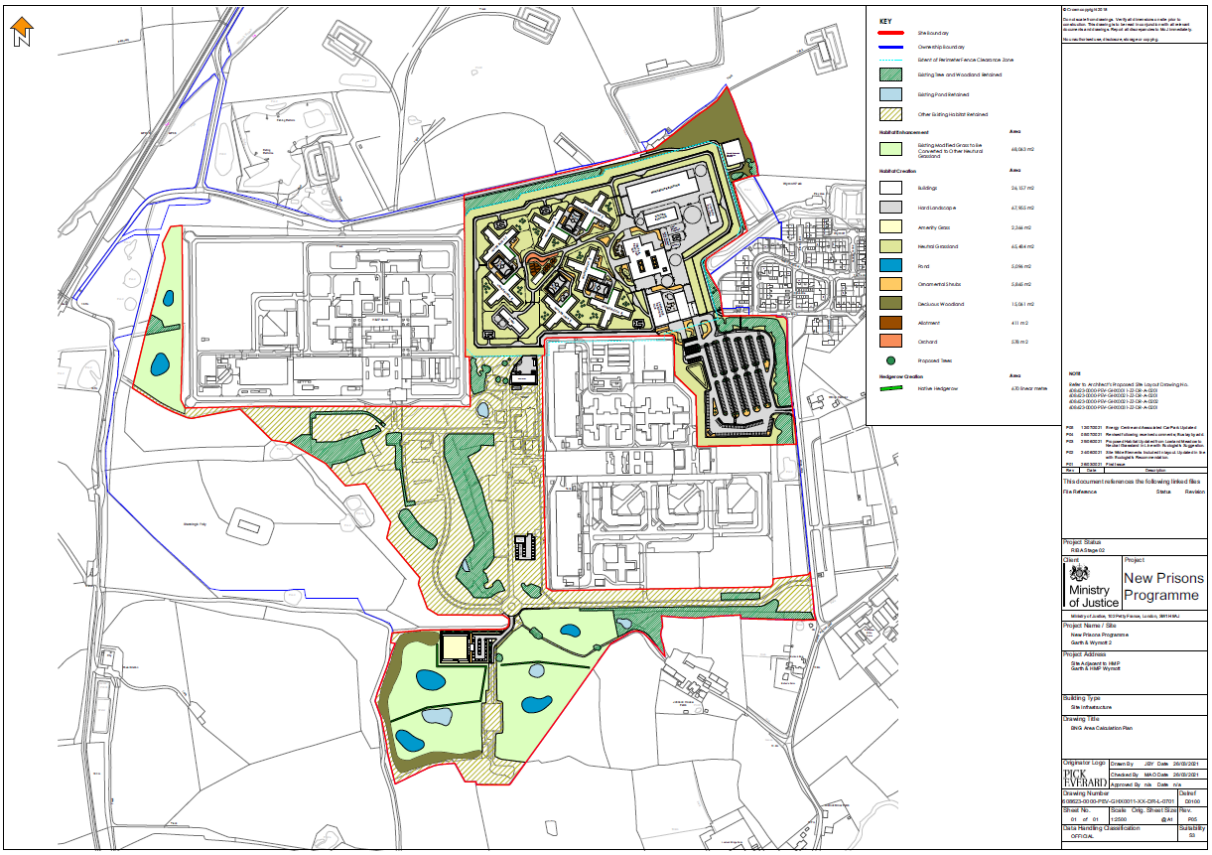

Figure 4 – Proposed development and landscaping plan, produced by Pick Everard. The majority of the BNG gains will be in the land to the south and to the west, including new ponds and reversion of improved grassland to a more biodiverse community.

2.12.6. Habitat creation will be primarily within the new prison, dictated by design and security considerations. Native planting and seed mixes will be used as far as possible. Areas of native broadleaved woodland will be planted at the northeast perimeter of the new prison and the southwest enhancement area (1.51ha) which will significantly increase woodland connectivity around the whole site. Together with 0.93km of new hedgerow to replace 0.42km lost, this presents a significant gain in habitat connectivity. Six news ponds will be created, four to the south and two to the west of the site, representing a significant expansion of wetland habitat connectivity.

2.12.7. Habitat enhancement will be conducted on 6.78ha of improved grassland, which will be cut hard, scarified, and seeded with a biodiverse, native, location-appropriate mix to achieve 'other neutral grassland'.

2.12.8. The Metric's habitat trading rules are satisfied. The trading of plantation woodland for newly-planted woodland which takes over 30 years to mature is incorporated into the BNG calculation process in the Metric.

2.13. Ecological Impact Assessment

2.13.1. All ecological features (sites, habitats, species) within the Zone of Influence (ZoI) of the development were categorised according to the geographical scale of their importance (international, national, regional, county, local, site-level).

2.13.2. This allowed impact assessment on all 'ecological receptors' (potentially-impacted features) using a combination of baseline data from desk study, phase 1 and phase 2 surveys, published guidance, other literature, and personal expertise.

2.13.3. Potential effects were then described qualitatively and quantitatively in terms of their: magnitude, extent, timing, duration, reversibility, frequency, distance (direct or indirect), and nature (positive or negative). (Document A9).

2.13.4. The project development process has incorporated ecologist expertise throughout the scheme design. The mitigation response has followed the 'mitigation hierarchy', i.e. avoid, minimise, mitigate, compensate, and enhance. Alongside the latter, the principle of BNG has been built into the landscaping design, with the goal of achieving at least 10% BNG, as per MoJ policy for its new prisons.

3. Chorley Borough Council position

3.1. The Local Planning Authority (LPA) Officer's report (document A97, paras 274-337) shows that the LPA is satisfied with the ecological evidence and mitigation proposals submitted with the application. The overall ecological summary and conclusions (A97, paras 333-337) states that the submission has "sufficient information and survey effort", and that "outline mitigation measures provided within the associated reports are sufficient at this stage to demonstrate that risks can be managed and mitigation can be provided". It states that the scheme demonstrates that BNG can be achieved, and that it follows the mitigation hierarchy in line with policies BNE9 and BNE11 of the Chorley Local Plan 2012-2026.

3.2. The Addendum to the Officer's Report (document A98) raises one minor issue: that the affected woodland should be referred to as "Priority Habitat". (It follows that this also applies to woodland created as part of the scheme's BNG offsetting).

3.3. The LPA's SoC (document C4) does not raise ecology as an issue.

3.4. The LPA's position of acceptance of the ecology evidence and proposal was reiterated in the Case Management Conference (CMC) between the Inspector, the MoJ, Chorley Borough Council, and the Ulnes Walton Action Group (UWAG) on 18th May 2022.

3.5. The Statement of Common Ground (SoCG) between the LPA and MoJ (document C7, paras 7.46-7.52) restates the LPA's satisfaction with the ecology evidence and mitigation proposals.

4. Ulnes Walton Action Group Statement of Case and Statement of Common Ground

4.1. The UWAG Statement of Case (SoC) (document C5) raises its objections under 12 headings, of which "Section 5 : Bio-diversity Net Gain and Ecological Assessment" is the only one relevant to ecology.

4.2. Section 5.1 introduces in generic terms the "diverse and balanced" ecological quality of the site.

4.3. Section 5.2 raises the lack of WBS thus far, and introduced Chorley and District Natural History Society (CDNHS) as a gatherer and holder of relevant information in this regard. UWAG considers the lack of wintering bird data to be an oversight.

4.4. Section 5.3 refers to the removal of woodland and individual tree specimens that it considers to be important. UWAG calculates that there will be a net loss of 30% tree cover by area, and notes that Chorley Borough Council's Tree Officer recommended no net loss of woodland cover, achieved via condition.

4.5. Section 5.4 simply notes the method of BNG calculation (Biodiversity Metric 2.0).

4.6. Section 5.5 refers, in generic terms, to impacts on protected species, and questions the likelihood of successful mitigation. This presumably refers to the loss and replacement of the barn owl roost in building B11. UWAG also mentions protected species placing seasonal constraints on construction works. This presumably refers to the bat maternity roost in B15.

4.7. Section 5.6 asserts UWAG's belief that insufficient ecological assessment has taken place.

4.8. Section 5.7 simply reasserts 5.1 and 5.6, and questions the likelihood of success in achieving 20% BNG.

4.9. In Section 11.14, UWAG refers to a document entitled "Bird data from Chorley and District Natural History Society for Ulnes Walton area" which I have not seen. Presumably this data has not been shared with LERN, otherwise it would have appeared in the local biological data search. GMEU has pointed this out previously (document B13).

4.10. None of the conditions or limitations in Section 12 are of ecological relevance.

4.11. The subsequent SoCG between MoJ and UWAG shows that UWAG now shares common ground on all ecological issues (document C8, paras 5.37-5.43). The SoCG has therefore superseded the SoC (document C5).

5. Response to UWAG SoC and SoCG

5.1. For completeness, my responses to the SoC (document C5) are set out below, followed by relevant excerpts from the SoCG (document C8).

5.2. The UWAG SoC (document C5) raises its ecological objections in generic terms, and will require clarification on whether its section 5.5 refers to barn owl and bat roosts respectively.

5.3. I believe that our assessments and proposed mitigation response thus far for barn owl and bats are robust, and I am confident that they will prove successful. Our mitigation response will continue to evolve in light of new evidence and planning considerations.

5.4. In relation to UWAG's objection in section 5.3 to the net loss of tree cover, it would be possible to redesign the landscaping to achieve no net loss of tree cover. More woodland planting could be accommodated in the BNG areas to the south and west of the existing prisons if necessary. I expect that a BNG figure of at least 10% would still be achievable.

5.5. It must be noted, however, that if BNG were recalculated using a newer version of the Metric (presumably 3.1), even the existing proposals would probably result in BNG score variation.

5.6. Also, the recent ruling by The Planning Inspectorate (Appeal A: APP/Y3940/W/21/3278256 - Land at Filands Road/Jenner Lane, Malmesbury SN16 9HZ) is relevant. It must be accepted that a BNG requirement of at least 10% as required by the Environment Act 2021 will not be law until the relevant statutory instrument is in place. This is shown by the following excerpt: "Therefore, the 10% biodiversity net gain requirement set out in the Act is not yet law and is not applicable to these appeals. Policy CP50 of the CS, and Paragraph 174 of the Framework, both seek a net gain in biodiversity without identifying a specific percentage. A net gain of just 1% would be policy compliant."

5.7. UWAG's concern that newly-planted woodland will not mature for many years is understandable, but the ecological mismatch caused by this lag effect is already built into the Metric's calculation methods. Given that the use of BNG as a concept, and the Biodiversity Metric as the standard tool of calculation, are accepted policy, there are no grounds for UWAG or the LPA to object to their use.

5.8. It appears that UWAG's concern that insufficient ecological assessment has taken place refers to the lack of bird surveys. To some degree this has been answered by the BBS recently conducted currently by CGO/KSE (document E8). However, the lack of WBS data would not be rectifiable until winter 2022/2023 if deemed necessary.

5.9. To explain the absence of WBS data now, we I reiterate that we have followed the counsel of the LPA's ecological adviser. GMEU stated in email correspondence that targeted bird surveys would not be necessary for this development, most recently in November 2021. (Document B13).

5.10. The UWAG SoCG (document C8, paras 5.37-5.43) effectively removes the need to answer the SoC. Relevant excerpts are as follows.

5.11. Paragraph 5.37 states: "It is agreed that the ecology surveys undertaken are comprehensive and suitably identify all protected species present at the site."

5.12. Paragraph 5.38 states: "It is agreed that it is appropriate for the proposal to use Biodiversity Metric 2.0 rather than Biodiversity Metric 3.0 due to the stage of the project at the time when the latter was published."

5.13. Paragraph 5.39 states: "It is agreed that the proposed landscaping scheme will result in 20.08% net gain in habitat units and 11.25% net gain in hedgerow units. There are no running waterways on the site and so no net gain is required in this typology."

5.14. Paragraph 5.40 states: "It is agreed that a programme of management and maintenance (secured via condition and a s106 obligation) will ensure this net gain is maintained for at least 30 years."

5.15. Paragraph 5.41 states: "It is agreed that the approach to mitigation for the identified impacts to protected species is broadly acceptable, and the detailed mitigation is capable of being secured via a suitably worded condition."

5.16. Paragraph 5.42 states: "No trees will be impacted by the bowling green or boiler house elements, whilst the new prison element will result in the loss of low and moderate value trees and hedgerows as well as an area of early mature woodland."

5.17. Paragraph 5.43 states: "It is agreed there will be a degree of harm from the development to biodiversity in the short to medium term. However, the information on mitigation, avoidance and enhancement, including extent of planting and the variety of tree species means in the long term (and based on strict enforcement of conditions) the proposed development is compliant with policies BNE9, BNE10 and B NE11 of the Chorley Local Plan 2012-2026."

6. Submissions from other parties

6.1. The following submissions objected in relation to wildlife concerns: Documents D1, D4, D5, D9, D11, D13, D17, D21, D22, D30, D32, D33, D37, D40, D47, D49. D51, D52, D53, D54, D55, D56, D58, D59, D60, D61, D64, D67, D68, D70, D75, D76, D77, D78, D79, D80, D86, D88, D89, D90, D91, D92, D93, D95, D98, D99, D100, D101, D102, D103, D104, D105, D106, D107, D109, D112, D116, D117, D120, D122, D129, D130.

6.2. Documents D22, D54, D56, D80, D90, D91, D92, D95, D99, D112, D117, D120 raised the possibility of impacts on the local deer population. D22 claims that the deer have already been impacted by Leyland former test track development. Document D120 claims that there is a risk of deer being forced toward roads, thereby causing traffic collisions.

6.3. Some submissions (documents D54, D58, D89, D90, D91, D98, D103, D104, D106, D112) specifically raised barn owl.

6.4. Many submissions D1, D11, D40, D47, D52, D54, D55, D56, D59, D64, D65, D66, D67, D70, D80, D86, D88, D93, D99, D101, D105, D108, D110, D111, D112, D116, D120, D122 object to the loss of trees, woodland and hedgerows to the development.

6.5. Document D11 claims that it is illegal to cut down oak trees.

6.6. Document D33 claims that there will be unacceptable impacts on otters.

6.7. Document D54 notes the presence of brown hare, barn owl, little owl, buzzard, sparrowhawk, kestrel, jay, yellowhammer, chiffchaff, and fallow deer.

6.8. Document D58 notes the presence of a "substantial" number of bats in the area.

6.9. Document D68 claims that red-listed wildlife is present within the proposed construction area.

6.10. Document D76 claims that the ecological reports have not surveyed a full year of species behaviour and movements, and therefore are incomplete.

6.11. Document D78 mentions the presence of red-listed birds and other species, including breeding barn owl, little owl, tawny owl, lapwing, corn bunting, yellowhammer, and skylark. It also reports that upland birds are present during passage, including curlew and whimbrel.

6.12. Document D98 claims that red-listed migrants are present that are not noted in the ecological reports. It states that the adjacent farmland is home to a "rare" group of three owl species (little owl, tawny owl, barn owl) of which the latter is legally protected, and that little owl and tawny owl have not been noted in the ecological surveys. The proposed new barn owl mitigation site [B10] is adjacent to the proposed re-routing of a well-used public footpath. The submission claims that barn owls suffer from human disturbance, and the new footpath route may prevent barn owls from using the new roost/nest site. It also claims that the BNG calculations are inaccurate, and trees will take too long to mature.

6.13. Document D106 claims that there are no details on whether a third-party (off-site) barn owl nest site has been found/agreed with a local landowner. Also, the new bowling club will be situated close to B21 where a second new barn owl nest box has been placed. This will expose barn owls to noise and other disturbance from human activity. The submission claims there is a high probability barn owls will not successfully breed or use the new B21 nestbox. The objector claims that in over 20 years of observing the areas close to the application site, they have never observed barn owls near the B21 building (in the southern BNG area of the site).

6.14. Document D120 notes that it will take at least 15 years until new trees shown on landscaping plans will mature.

7. Response to submissions from other parties

7.1. As a generic response to documents D1, D4, D5, D9, D11, D13, D17, D21, D30, D32, D33, D37, D40, D47, D49. D51, D52, D53, D54, D55, D56, D58, D59, D60, D61, D64, D67, D68, D70, D75, D76, D77, D78, D79, D80, D86, D88, D89, D90, D91, D93, D98, D99, D100, D101, D102, D103, D104, D105, D106, D107, D109, D112, D116, D117, D120, D122, D129, D130, we have followed due process in all our ecological surveys. We have adhered to the relevant guidance for habitats and each of the taxonomic groups, and we have followed standard seasonal timings and effort levels. We have followed the advice of the LPA's ecology advisers, GMEU, in deciding which surveys to conduct, and which to omit from our impact-assessment exercise.

7.2. In response to documents D1, D11, D40, D47, D52, D54, D55, D56, D59, D64, D65, D66, D67, D70, D80, D86, D88, D93, D99, D101, D105, D108, D110, D111, D112, D116, D120, D122 on the loss of trees, woodland and hedgerows, we have used Biodiversity Metric 2.0 to calculate the necessary offsets. The proposed development and landscaping achieves over 10% BNG with no breaches of habitat trading rules. Note also that there is no legal obligation yet to achieve more than 1% BNG.

7.3. In response to document D11, it is not illegal to fell oak trees unless they are protected by a Tree Preservation Order or Conservation Area designation.

7.4. In response to documents D22, D54, D56, D80, D90, D91, D92, D95, D99, D112, D117, D120, we will have Reasonable Avoidance Measures in place for deer and any other protected or notable wildlife that may be impacted. Note, however, that fallow deer are not protected.

7.5. In response to document D33, we have found no evidence of otter on site (despite conducting targeted surveys for water vole which included otter searches). We therefore conclude that otter is absent, or it exists at an undetectably-low density on the development site. In either case, the impacts are likely to be very low and/or insignificant.

7.6. In response to document D54, GMEU scoped out the need for formal bird surveys (document B13), but nevertheless we conducted BBS in 2022 (document E8), and I have provided the results above.

7.7. In response to document D58, we have conducted comprehensive bat surveys, and whilst the number of common pipistrelles using B15 as a maternity roost is exceptionally-high, the large majority of these commute south to woodland, rather than north to the new prison site. We have designed our mitigation to avoid or minimise any impacts on B15, and we anticipate no residual effects. The numbers and species of bats in the development area are normal for the types of habitat present, and notably we detected no bat roosts in the woodland area to be lost. The range of species is quite low for a rural setting.

7.8. In response to document D68, we are aware that protected, threatened and otherwise notable wildlife is present within the proposed construction area, and we have proposed appropriate mitigation to keep within the law and best practice.

7.9. In response to document D76 on surveying for a full year, I reiterate that we have followed standard guidance in selecting our survey methods, timings, and effort levels. If any seasonal surveys have been omitted (e.g. breeding and wintering birds), it is because they have been scoped out by GMEU (documents J6, B13).

7.10. In response to document D78, GMEU advice was that no BBS is required (document B13). Nevertheless, our recent BBS (document E8) has yielded the data required to make a robust appraisal of the species present, the impacts on them, and the appropriate mitigation response. No appraisal of wintering birds will be conducted, in line with GMEU's advice (document B13).

7.11. In response to document D98 on red-listed migrants and the "rare" group of owl species, we have complied with GMEU's advice on the surveys needed. The new barn owl nestbox B10 being adjacent to the proposed re-routing of a well-used public footpath is not a significant concern. Public footpaths are not well used at dusk and dawn when most barn owl hunting takes place, and low numbers of pedestrians do not affect barn owl behaviour. We acknowledge the presence of tawny owl, likely breeding on site, upon which the impacts will be appropriately mitigated/offset. We have not recorded little owl, and do not offer any specific mitigation for it. (I refer again to document B13 which concluded that some bird species mentioned by UWAG are likely to be recorded on habitat types that are not present on site).

7.12. Regarding document D98's reference to BNG calculations, these have been made using Biodiversity Metric 2.0, the accepted tool at the time of submission (document B13). The maturation time for trees is factored into the calculations. The LPA has confirmed its satisfaction with this process.

7.13. In response to document D106, the proposed new barn owl nestbox site in B10, which was submitted to planning, is the primary mitigation response for barn owls affected by the new prison. Consideration of additional sites on third-party land would only be necessary if B10 proved unsuccessful or otherwise unsuitable. The additional new barn owl nestbox in B21 in the southern BNG area is an enhancement, not mitigation for the development. Nevertheless, I do not believe that the proximity of the new bowling club will cause significant disturbance.

7.14. In response to the D106 objector's claim that they have never seen barn owls in this part of the site is irrelevant, the placing of the nestbox in B21 is aimed at attracting barn owls to this area. Given the proposed reversion of the BNG area from intensive grazing to seminatural grassland, its small mammal population will increase and provide a significant potential food resource for barn owls.

7.15. In response to document D120 regarding the time taken for trees to mature, this is factored into BNG calculations. Also, there is no legal obligation yet to achieve more than 1% BNG.

8. Summary and conclusions

8.1. The Appellant, via the ecological experts commissioned on its behalf, has exercised due process in conducting a suite of ecological surveys and assessments. All surveys advised by the LPA's ecological adviser GMEU have been conducted. If any surveys have been omitted, it is because they were scoped out by GMEU.

8.2. Surveys were conducted for habitats, bat roosts, bat activity, and presence-absence (with population assessment where relevant) of water vole, barn owl, breeding birds, GCN, reptiles, and INNS.

8.3. BNG calculations have been made using Defra's Biodiversity Metric 2.0, as agreed with the LPA and its adviser GMEU. The development commits to over 10% BNG, although there is no current legal requirement to exceed 1% BNG.

8.4. All surveys have followed standard accepted guidance for the respective taxonomic groups. This includes seasonal considerations, effort levels, methods used, policy considerations, analysis, and reporting.

8.5. The proposal will not affect any protected sites.

8.6. Appropriate mitigation has been proposed for all impacted receptors.

8.7. The LPA is satisfied with the submitted ecology evidence and effort levels, and the proposed mitigation and enhancements.

8.8. UWAG's SoC contained objections on ecological grounds, but the SoCG shows that it now shares common ground with the MoJ on all the ecology evidence and proposals.

8.9. Other third-party submissions made a range of claims; some specific, others generic. This Proof of Evidence note fully answers these claims and objections.