POND SURVEY CHECKLIST

PART A: DESK-TOP SURVEY

Region	North Lincolnshire	
Reference No.	NL-55	
Site Name and Address	Andrew Jackson The Pink Pig Farm Holme Lane Pinewood Farm Messingham North Lincolnshire DN16 3RE	
Landowner Name (and address if different from site)		
[redacted]	[redacted]	
No. of ponds	2	
Creation or Restoration	Creation	
Pond(s) Grid Reference gridreferencefinder.com	Pond 1 - SE 90078 06412 Pond 2 - SE 90068 06423	
Core or Fringe SOAs	Core	
Nearest pond (+ distance from pond) Google maps/gridreferencefinder.com	TA 06228 20411 - Nearest Pond (200m from proposed site)	
GCN Records (+ distance from pond) magic.defra.gov.uk/SOAs/Paul Liptrot	Great Crested Newt Pond Surveys 2017 - 2019 - Present result located 4.8km from proposed site. Great Crested Newt Class Survey Licence Returns - 2.7km from proposed site.	
On or near a Designated Site? Is the site located outside of or greater than 100m from a SAC or RAMSCAR site or 500m away from an SPA? magic.defra.gov.uk	**SSSI: No** **SPA: No** **SAC: No** **RAMSAR: No** **AONB: No** **LNR: No**	**Details:** Proposed site is located in NVZ. will need to assess the area during site visit. 2km from LNR. 2.7km from nearest SSSI. Proposed site located within SSSI impact risk zone.
If yes, has a HRA and AA, taking into account the generic mitigation principles been undertaken?	N/A	
Is the geology/soil type likely to hold water/suitable for pond creation? www.landis.org.uk/soilscapes	Freely draining lime-rich loamy soils, with a loamy texture and appears to be freely draining across the area.	
Can the works be undertaken without impacting Priority Habitat or Species? magic.defra.gov.uk/local BAPs	**Yes** A desktop survey shows no records of protected species of note across the site. The area is listed as an area for as Priority Species for CS Targeting - Lapwing. During the site visit, signs of any protected species within the surrounding area of each pond will be subject to a walkover survey. If the proposed works are to proceed further a LERC records check will be	

	carried out to complement landowner knowledge of the site to gain knowledge of the presence of any protected species that may be affected by the works proceeding. If works do go ahead, we will schedule in for winter only work to avoid bird breeding season.
Archaeology present? https://archaeologydataservice.ac.uk/	Building debris, tile fragments and Romano-British pottery have been found on the line of the M180. Cropmarks of faint linear features were also noted. 250m from the proposed site. Cropmarks of linear features and enclosures 300m from the proposed site. If proposed works proceed to the next stage a HER check with North Lincolnshire Council will take place.
Underground Utilities? Line Search or Cornerstone (free/paid)	Cadent gas supply within vicinity when carrying out utilities check with Linesearch. If works are to proceed further a full cornerstone utilities check will be carried out on site before works can proceed.
Flood Zone? flood-map-for-planning.service.gov.uk	Proposed site is bordering (approx. 20m away) onto flood zone 3 which follows the small brook leading into Bottesford beck.
SITE VISIT RECOMMENDED	**Yes**

PART B: FIELD SURVEY

Date	07/06/22			
Surveyor	Jordan Porter			
Agreed number of ponds	2			
GPS locations(s) of pond(s)	Pond 1 - SE 90078 06412 Pond 2 - SE 90068 06423			
Size of ponds (sq. meterage x depth)	Pond 1 - 160m2 Pond 2 - 150m2			
Fencing required? (approx. length)	**No** as of present adjacent field is arable. This may change in the future, so contact is needed to be upheld with the landowner through the management period of the project to see if future fencing work may be needed to ensure pond health is maintained.			
Habitat within 50m suitable for GCN? (Briefly describe)	**YES** The site is located on a large arable field margin bordering onto a small beck on the western side of the site with a large mature mixed hedgerow that leads to Bottesford Beck. A small *phragmites* reedbed covers the wettest area of the site. Willow scrub is encroaching on the site from the South East and an encroaching hedgerow from the west are resulting in an increased tree cover of the site restricting sunlight to the proposed site area. Beyond the proposed site, arable fields further border all habitats listed above.			
Habitat type within 50m? (Select up to three or two and a free text option)	Broadleaved Woodland	X	Bog	
	Coniferous Woodland		Inland Rock	
	Arable & Horticulture	X	Saltwater	
	Improved Grassland		Freshwater	

	Neutral Grassland		Supra-littoral Rock	
	Calcareous Grassland		Supra-Littoral Sediment	
	Acid Grassland		Littoral Rock	
	Fen, Marsh & Swampland	X	Saltmarsh	
	Heather		Urban	
	Heather Grassland		Suburban	
	[Free text option]			
Good connectivity between pond and surrounding habitat?	**YES** Small freshwater brook running past the western edge of the site to Bottesford beck. This Stream is bordered by a large mature hedgerow and field margin borders providing an ecotone from the arable land bordering on each side of the stream. The farm also has large mature hedgerows and land drainage channels with macrophyte presence bordering the surrounding arable fields leading to other suitable habitats i.e.,			
Located in 'Wider Green Space'?	**NO**			
GCN likely to be present on site?	**NO**			
Any consents required?	North Lincolnshire County Council (Planning permission) & Landowner consent.			
Buffer zone requirements/size Nutrient runoff, additional habitat	3-5m on the eastern side of the site (side linking to arable field). Some spoil from the excavation process can be used to create a small bund (30-40cm in height) along the border of the field where planned pond creations will take place to stop potentially nutrient rich surface run off from affecting the pond water quality.			
Is the pond likely to suffer from the following?	**INVASIVE SPECIES:** **No**	**FISH:** **No**	**WILDFOWL:** **No**	
Is water quality likely to be good?	**YES** The ponds will be ground water fed. No land drains are noted by the landowner from farm maps leading into the proposed site from the arable field on the eastern side of the site. This along with the proposed bund creation to reduce potentially nutrient rich surface water run-off from the same field should ensure good water quality.			
Can works avoid run-off/silting local waterbodies?	**YES** A 3-5m boundary will be kept between the freshwater brook running adjacent to the site, with all spoil to be removed to the east and northern side of the site.			
Is the pond at least 30m from a badger sett or road?	**YES** LERC records check shows no nearby badger records or protected species records and a walkover survey during the site visit showed no signs of protected species within the immediate area of each pond site. The area seems suitable for ground nesting birds although no evidence was found during the walkover survey. Either way any potential works will take place during the winter months to avoid bird breeding season.			

Is the geology/soil type likely to hold water? (Clay depth)	**YES** Soil core sampling that took place during the site visit showed saturated subsoil, and the presence of *phragmites* indicates a high-water table within the pond creation areas.
Are any historical/archaeological features visible?	**NO** None according to Landowner and none visible on site. A full HER check has subsequently been carried out with North Lincs Council HER officer (Matthew Allcock) Who noted that the proposed ponds do not have potential for any impact of note on any known sites within the surrounding area.
Overhead services	**NO** **None present/visible within**
Underground services **CATSCAN**	Full Cornerstone utilities search carried out, showing no underground utilities present within 200m of the proposed site (IP gas mains noted crossing northern field to proposed site, machinery will need to cross this pipeline to access site. Cadent have been notified and no issues have been raised). Each pond site will be marked out and scanned on site with Cat & Genny prior to any works commencing by a qualified project staff member.
Timing of works	December 2022 – February 2023. This is to time in with the ideal pond restoration work period and to avoid bird breeding season.
Site requirements **Access, spoil, machinery**	Access - Track access most of the way down across the Pink Pig Farm property. Machinery to be unloaded within the overflow carpark at Pink Pig Farm and tracked down the remainder of the tracked farm lane, then alongside the adjacent field hedgerow until the site is reached. There is a locked property gate, which will be accessed and unlocked by Wildscapes project staff members. Spoil – – For each of the creations the spoil will be graded in around the initial "Work Footprint" surrounding area of the pond, with the remainder used to create 2 hibernacula per pond, create a small bunding as noted above and to grade in the boundary with the adjacent field (north of proposed site) to allow future machinery access for landowner and in case future maintenance works are needed for the ponds. Machinery - 8 tonne 360˚ excavator and a 5-6 tonne forward tipping dumper would be the ideal size machinery to use on site due to access and pond size creation.
Photos taken of pond locations? **Upload at the office**	**YES** Uploaded to google drive in the relevant folder.

Method Statement

Access & Route to Site

1. Project staff members to meet with the landowner/manager (Andrew Jackson) at Point K shown below.
2. The above-mentioned machinery (see desktop/field survey) will be offloaded here (this is the previously agreed upon drop off location) under project staff supervision.
3. The machinery to be used for the pond construction process across all three pond sites will then be tracked from point K along the highlighted route (established farm tracks) to the pond creation sites at point L (see Fig.1 below).

Fig.1

Task Sequencing for Pond Creation

1. Arrive at the proposed pond site via the agreed upon access route with the landowner. The site supervisor will then carry out the tool box talk with all active site members to complement the RAMS documentation and ensure that all required paper work is signed.
2. Measure & mark out the dimensions of the pond surface area centred on the pond specific grid references to match with the planning permission application using marking posts & spray.
3. Certified project staff member will then proceed to Catscan the outlined area (+ 3m perimeter to account for the "work footprint") to determine presence/absence of services to complement the previously carried out Cornerstone utilities search survey.
4. Depending on the visibility of the work site (which may change due to the time of year and vegetation sward height) a walkover/fingertip survey of the work area may be carried out by project staff.
5. Marked small willow trees present in the pond outline area will be felled along with hedge branches pruned that are within the work footprint area by land management team chainsaw

operators. The felled/pruned materials will then be cross cut and piled for hibernaculum creation (see step 11).

6. Once Steps 1-4 have been completed, then construction of the ponds to the Natural England specification may begin. The ponds will be created/restored as follows to achieve the below characteristics:

    - Surface area between 100m^2 and 1000m^2;
    - Maximum central depth of 1m to 3.5m;
    - Variable bank gradients of 1:10, or ideally 1:20;
    - A range of depths across the pond;
    - Occasional drying out is not a problem, however the pond must hold water throughout at least one summer in every three years;
    - Substantial cover of submerged and marginal vegetation (about 66% submerged plant cover and 25% to 50% emergent/floating vegetation cover);
    - Areas of open water to facilitate courtship behaviour;
    - Located in areas of good quality terrestrial habitat;
    - Terrestrial buffer zone of *at least* 3m around each pond (see below);
    - Abundance of invertebrate prey;
    - Ponds in clusters (within 250m generally), rather than in isolation;
    - Absence of shading on the south side;
    - Absence of fish;
    - Absence or low density of waterfowl;
    - Good water quality, with negligible run-off from agriculture and roads.

7. The excavator (under the site supervisors' direction) will strip off the vegetation, then top soil within the marked-out area to expose the subsoil (the vegetation and top soil layers will be piled separately).
8. Then under the site supervisor's instruction subsoil excavation works will begin in order to shape and form the pond to achieve the above-mentioned characteristics. The specific methodology of this may change depending on the subsoil structure as excavation works proceed (i.e., a Key & Trench method may be more suitable for use depending on subsoil profile).
9. Once the desired shape and size of the pond is formed, then tracking and layering in of some excavated subsoil will take place to increase water im-permeability of the pond if it's needed. Further excavated material will be used to add to the bunding to be created on the eastern side of the ponds and for the grading with the field boundary to the north of the site.
10. Excavated top soil and vegetation will be reapplied around the work footprint area by the excavator and top soil will also be added to the first 30cm of exposed clay on the pond edges at a depth of 30-50mm to cover any exposed clay edges.
11. Remaining top soil will then be used to create hibernaculum piles (2 per pond) alongside materials brought to site with project staff i.e., logs & brash (in line with the Natural England specification). The final location of the hibernaculum will be agreed with the landowner
12. Once construction is completed to the above-mentioned specification, the excavator will be tracked to the next pond site and the process from step 2 will be repeated. This sequencing will be followed until both ponds are created on this site.
13. Creation Project duration approx. 5 working days (@2.5 days per pond).
14. After all pond creation works are completed, the above-mentioned access route will then be used to track the machinery off site to the previously agreed upon pick up point.