



Newt Conservation Partnership

Pond designs document

for Planning Application reference: **PP-12767845**

Land at Rowley Green Meadow, Stoke Park Farm

Proposed new pond complex of up to seven new clean water wildlife ponds at Stoke Park Farm, Eastleigh

Report prepared by Anna-Marie Dennis (Newt Conservation Partnership South Hampshire Project Officer) January 2024.

Reviewed by Dr Pascale Nicolet (CEO Newt Conservation Partnership and Technical Director of the Freshwater Habitats Trust) January 2024.

1. Pond complex

1.1 The pond complex has been designed and will be created following best practice as described in the Million Ponds Project Toolkit (<http://freshwaterhabitats.org.uk/projects/million-ponds/pond-creation-toolkit>) and specifically referring to Factsheet 4 at <https://freshwaterhabitats.org.uk/wp-content/uploads/2013/09/pond-design.pdf>, the species dossier for Water voles at [Layout 2 \(b-cdn.net\)](https://freshwaterhabitats.org.uk/wp-content/uploads/2013/09/layout-2-b-cdn.net) and the factsheet on avoiding raising the risk of birdstrike at <https://freshwaterhabitats.b-cdn.net/app/uploads/2022/11/BIRDSTRIKE.pdf>.

1.2 Best Practice principles from the Great Crested Newt (GCN) Conservation Handbook [Great Crested Newt Conservation Handbook \(froglife.org\)](https://www.froglife.org/great-crested-newt-conservation-handbook) and the Amphibian Habitat Management Handbook [Habitat Management Handbooks | Amphibian and Reptile Conservation \(arc-trust.org\)](https://www.arc-trust.org/habitat-management-handbooks-amphibian-and-reptile-conservation) are also followed.

1.3 The pond complex is designed to provide a range of conditions within the ponds, to maximise habitat diversity and benefit a wide range of species. Detailed designs and profiles are in this document. The key principles are as follows:

- Size – There will be range of pond surface areas, from 250 m² to just over 1000 m² (at maximum water level).
- Water source - The ponds will be fed by surface water and rainwater and are designed to retain water throughout the GCN breeding season (April-September).
- Profile – the ponds are designed with shallow slopes and long drawdown zones to provide the extensive shallows that are so important for many freshwater plants and animals. The two ponds nearest the Bow Lake stream are designed with one steep bank above the water's edge to allow water vole to create burrows. They are designed to be suitable for both GCN and water vole.
- Depth – The ponds will have varying depths; the deepest will be 1.2 m to 1.5 m at the deepest point with the smaller ponds being no deeper than 0.8 m. In exceptionally dry years, the smaller ponds may dry which can be favourable for GCN in the long term because aquatic predators are reduced.
- Substrate – The clay substrate will hold water without the need for any liner. The base of the ponds will be rough and undulating creating a varying microtopography, important for the development of diverse wetland plant and invertebrate communities.
- Vegetation - will be left to establish naturally. No additional planting will take place. Generally, ponds colonise with plants very quickly. Planting will be considered 2-4 years after creation if needed, depending on monitoring results.

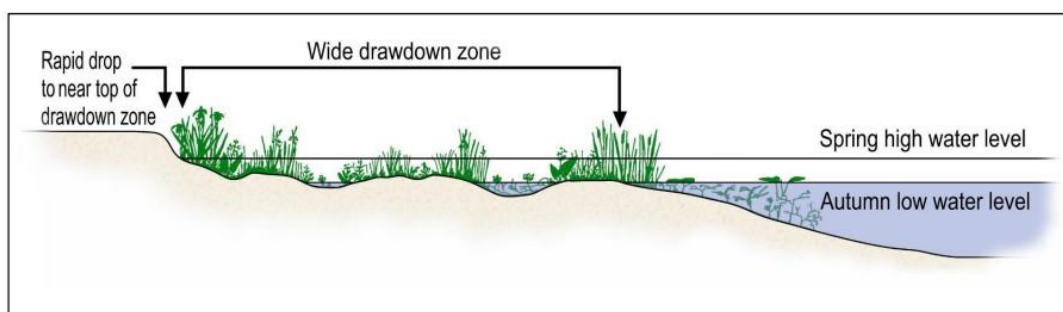
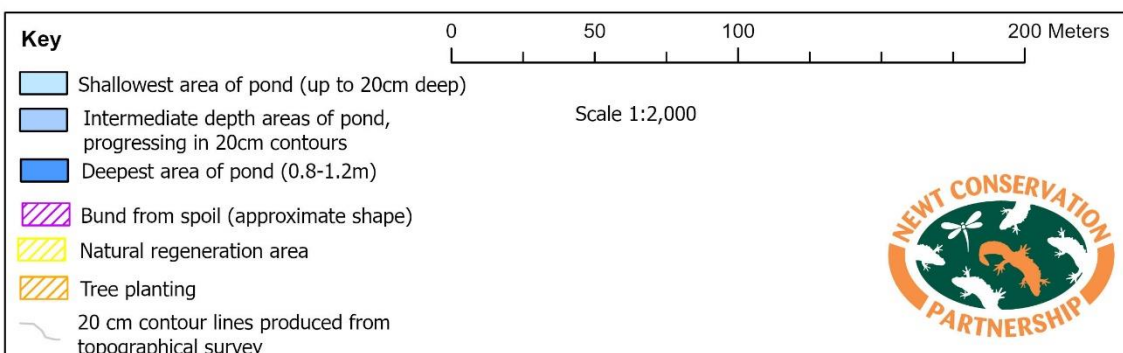
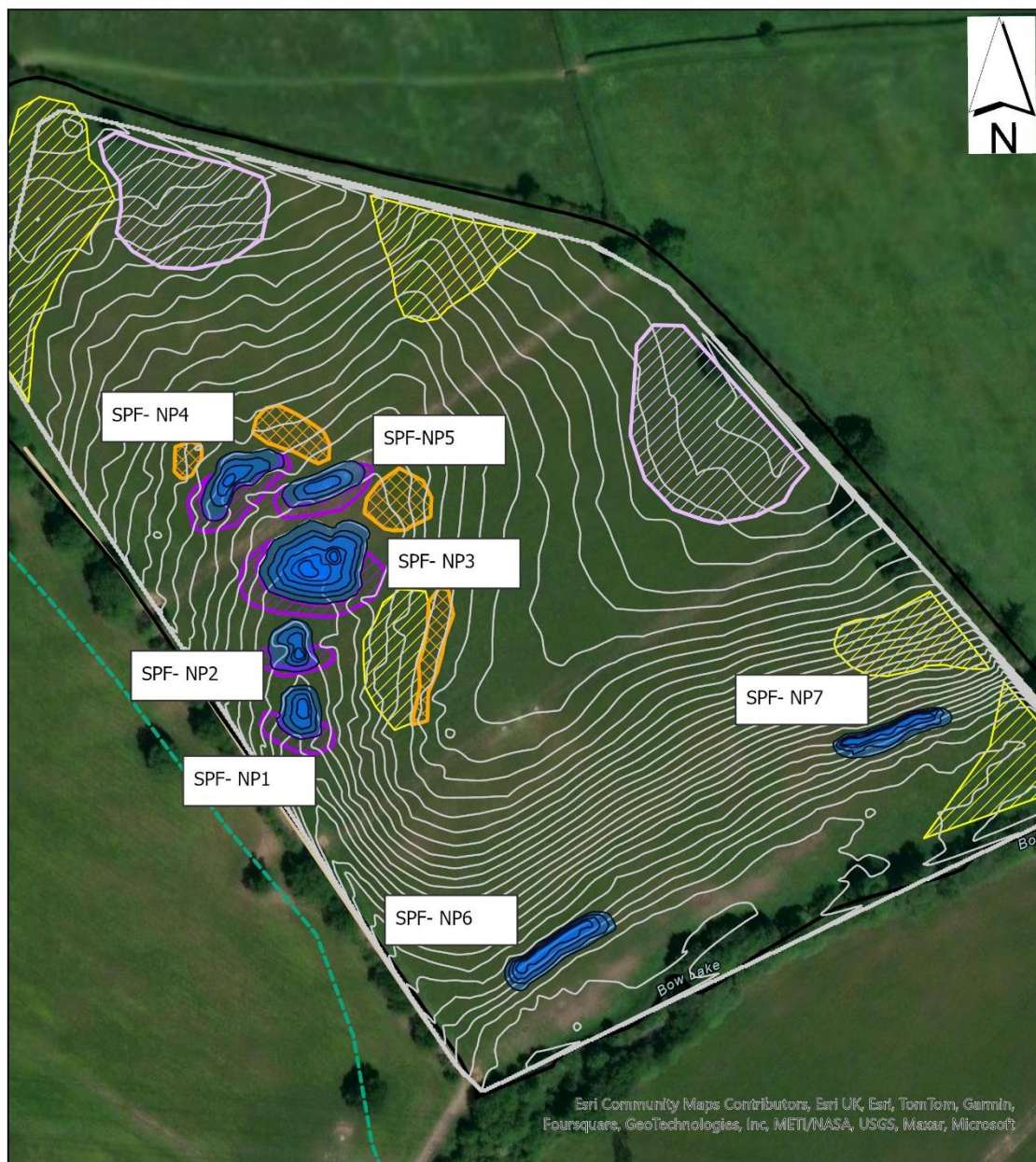
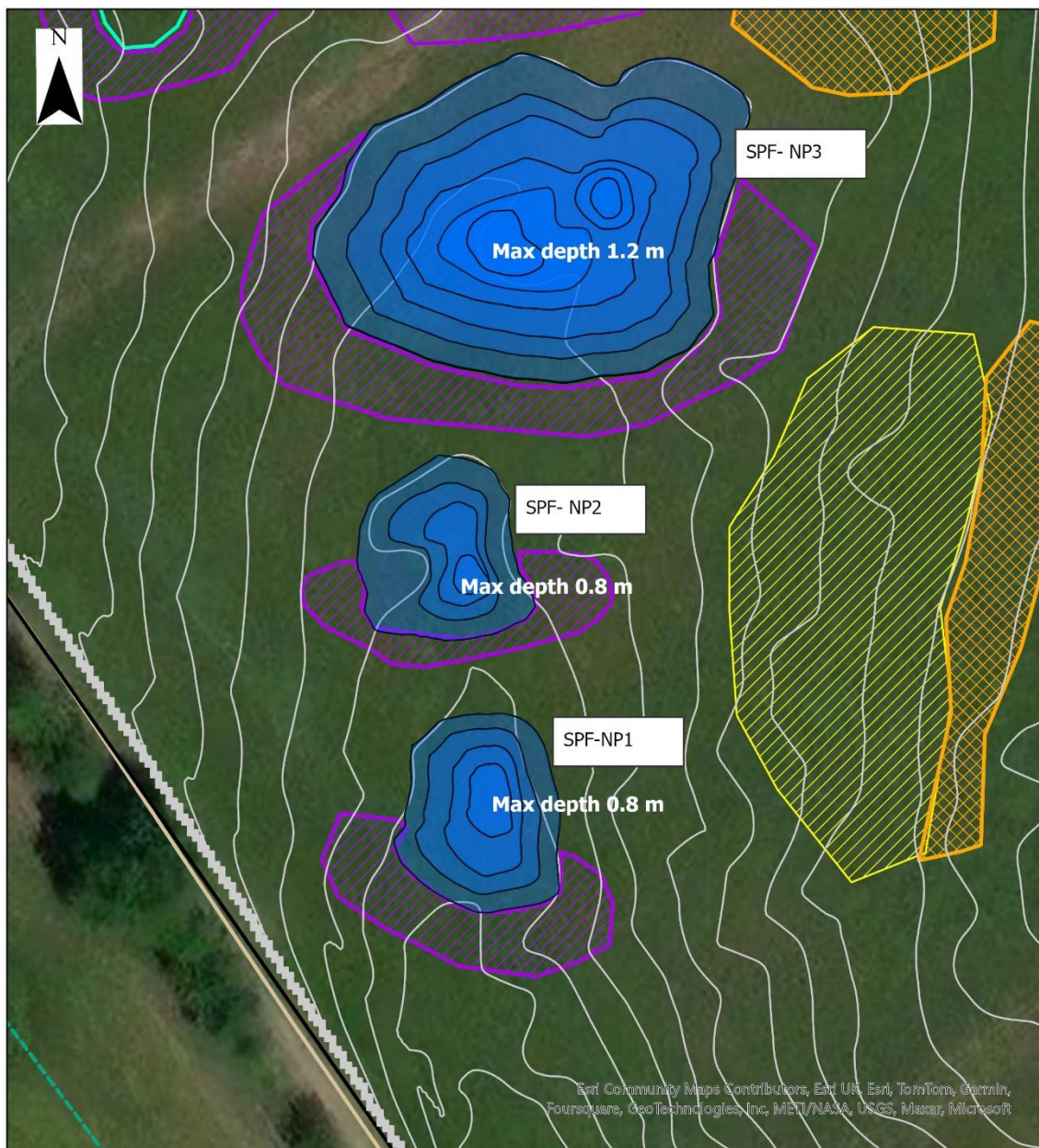


Figure 1: Illustration of ideal wildlife pond profiles from Freshwater Habitats Trust's Pond creation toolkit



Overview plan of ponds NP1 - NP7 at Stoke Park Farm



Key

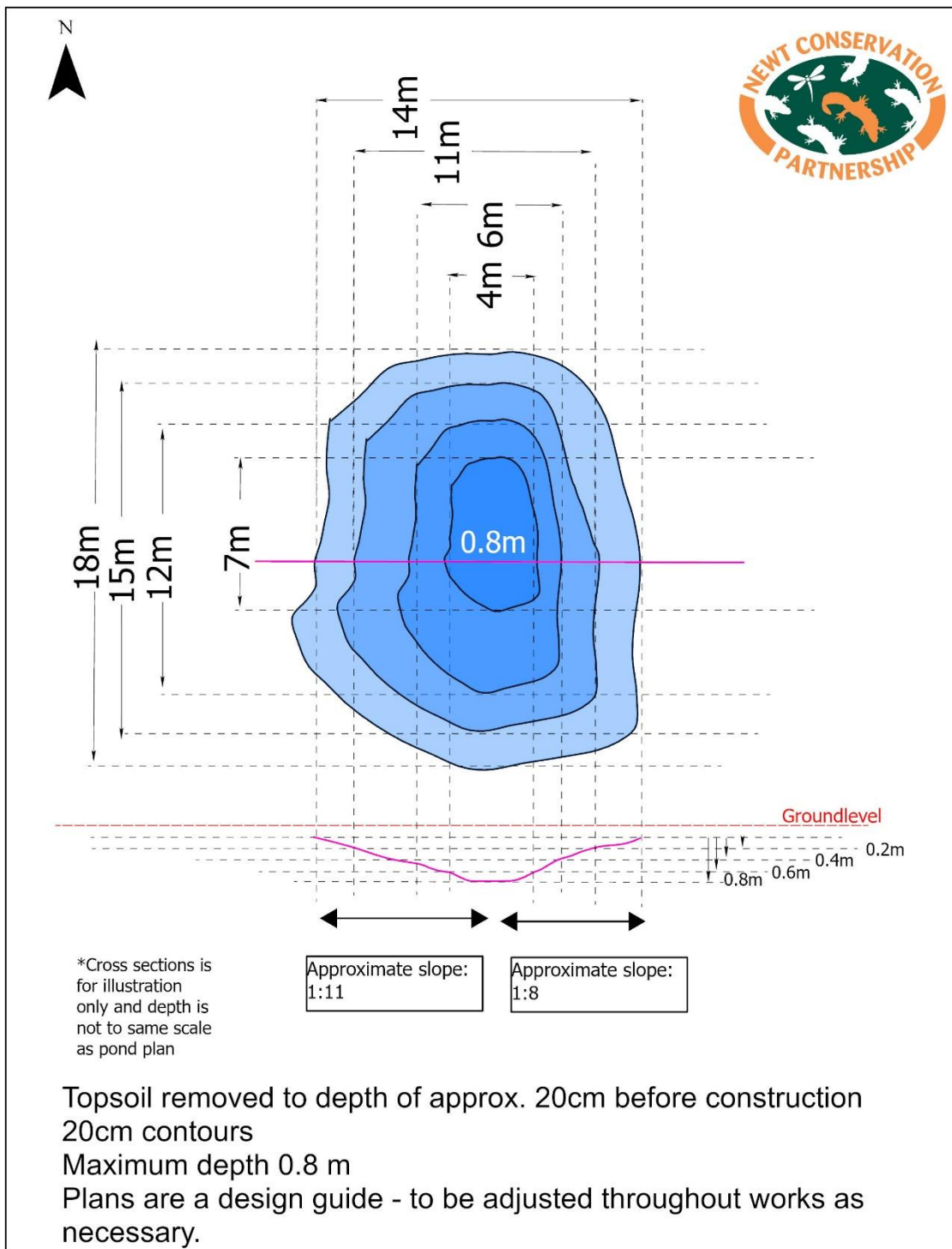
- Shallowest area of pond (up to 20cm deep)
- Intermediate depth areas of pond, progressing in 20cm contours
- Deepest area of pond (0.8-1.2m)
- Bund from spoil (approximate shape)
- Natural regeneration area
- Tree planting
- 20 cm contour lines produced from topographical survey

0 2.5 5 10 15 20 25 30 35 40 Meters

Scale 1:500

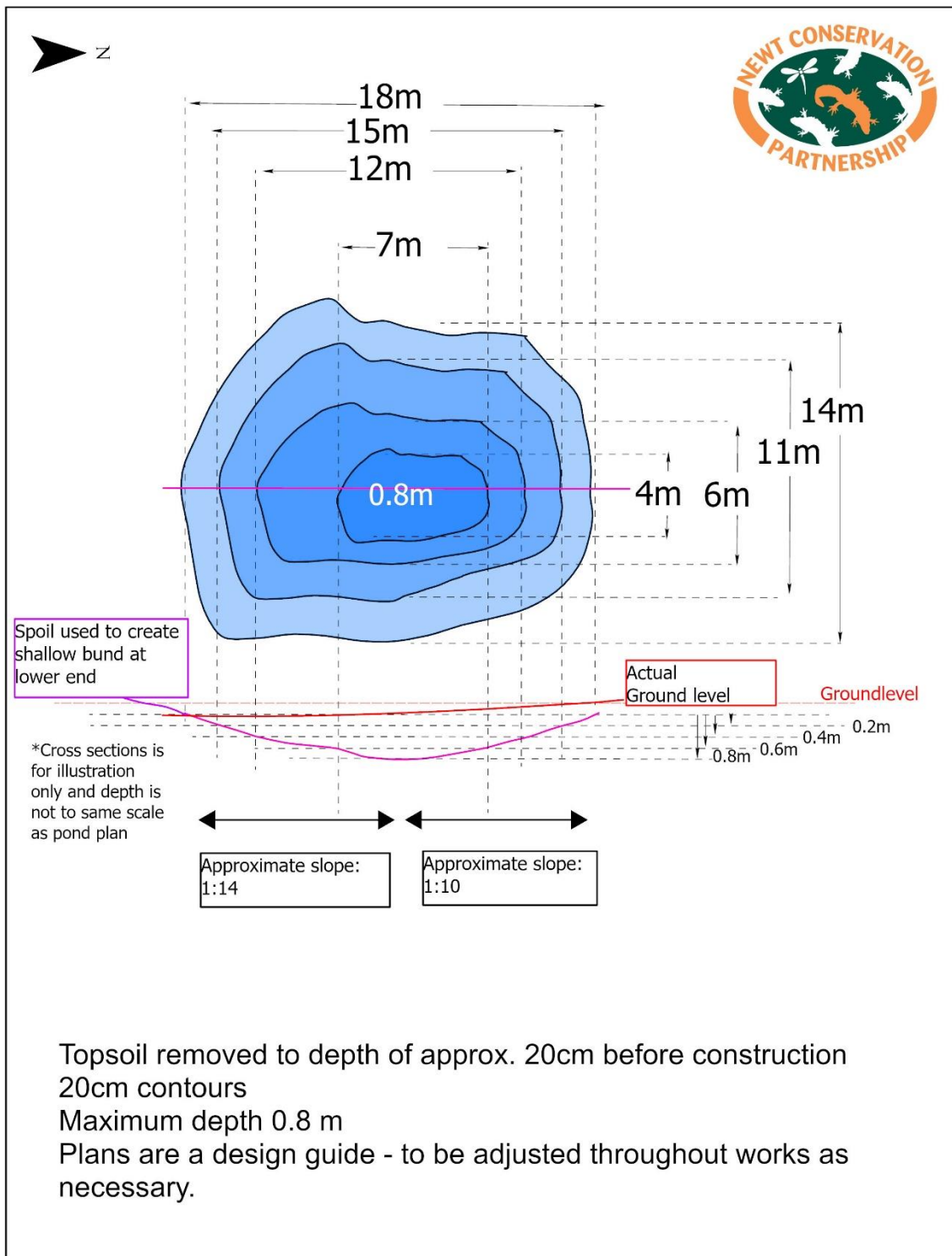


Plan of NP1, NP2 and NP3 at Stoke Park Farm

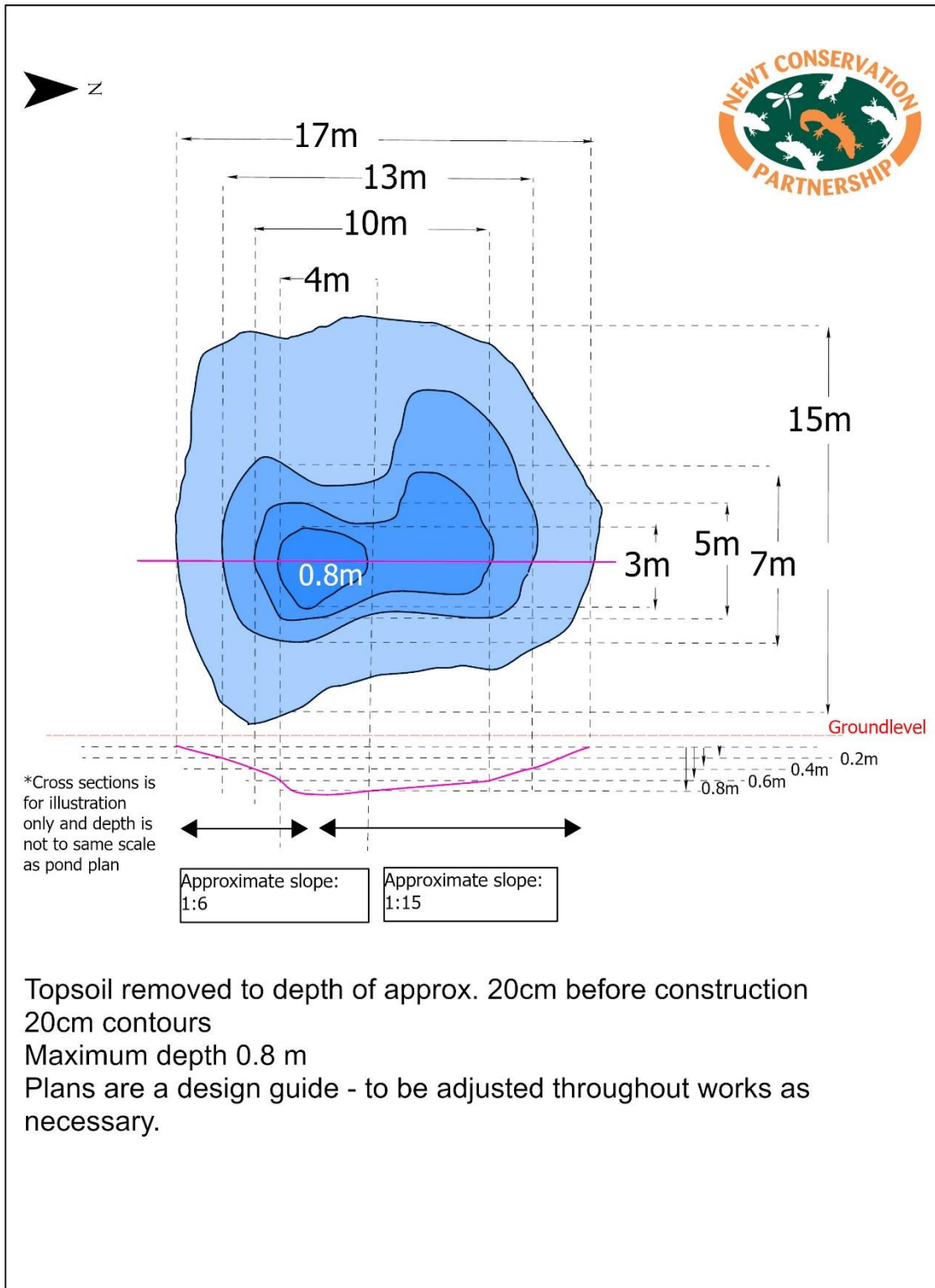


Pond Design for NP1 at Stoke Park Farm

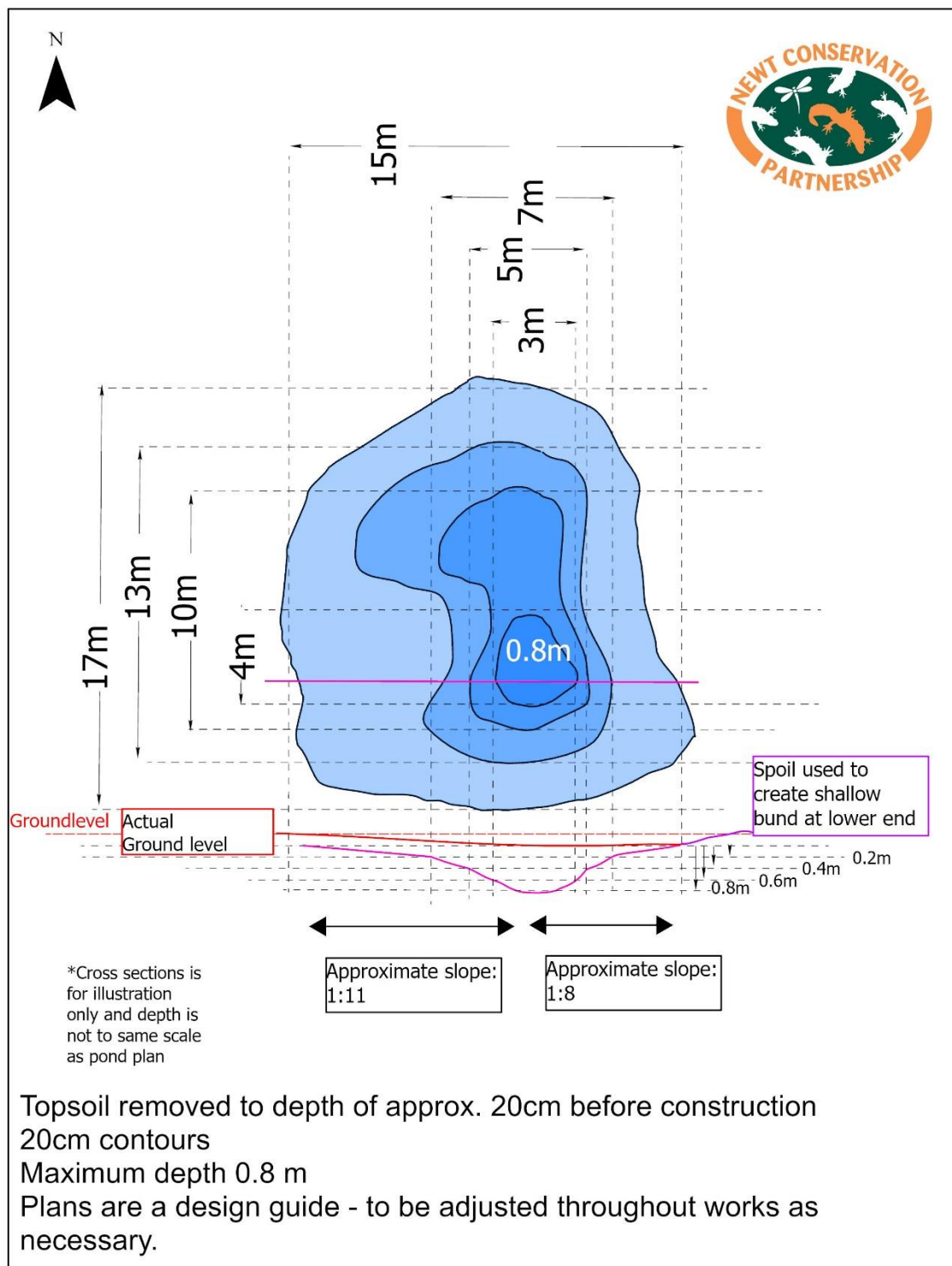
Cross section of width



Pond Design for NP1 at Stoke Park Farm
Cross section of length

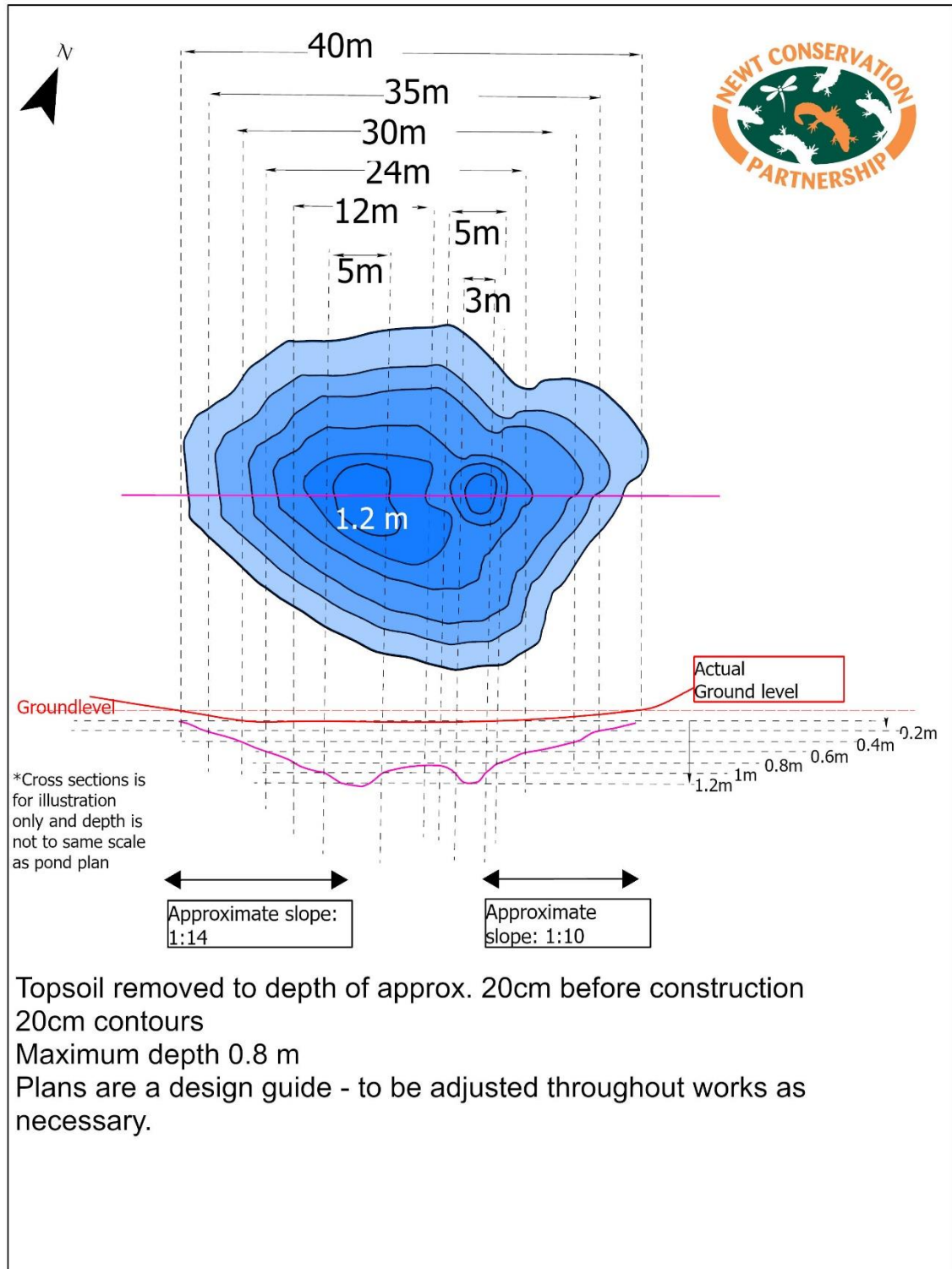


Pond Design for NP2 at Stoke Park Farm
Cross section of length

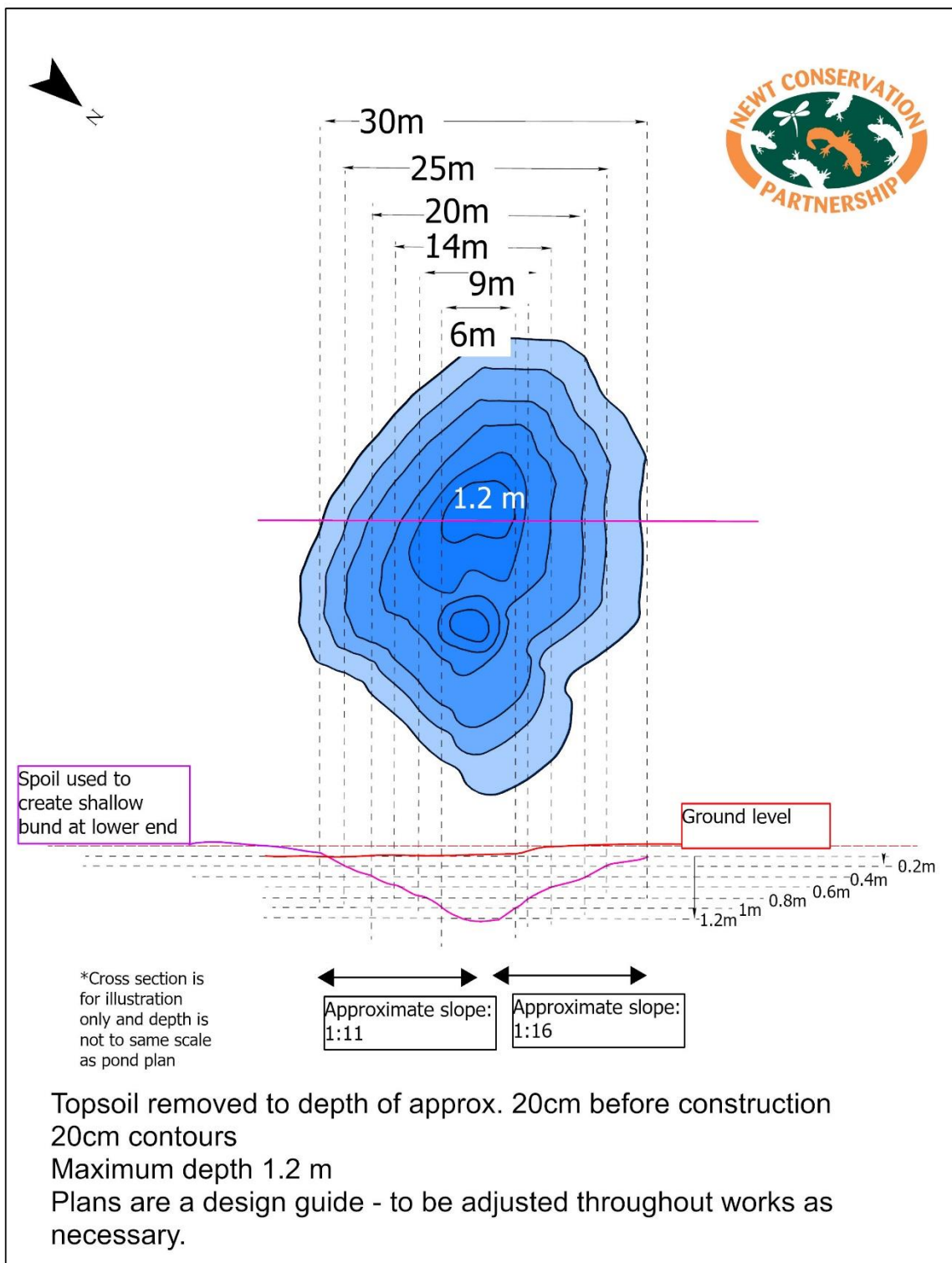


Pond Design for NP2 at Stoke Park Farm

Cross section of width

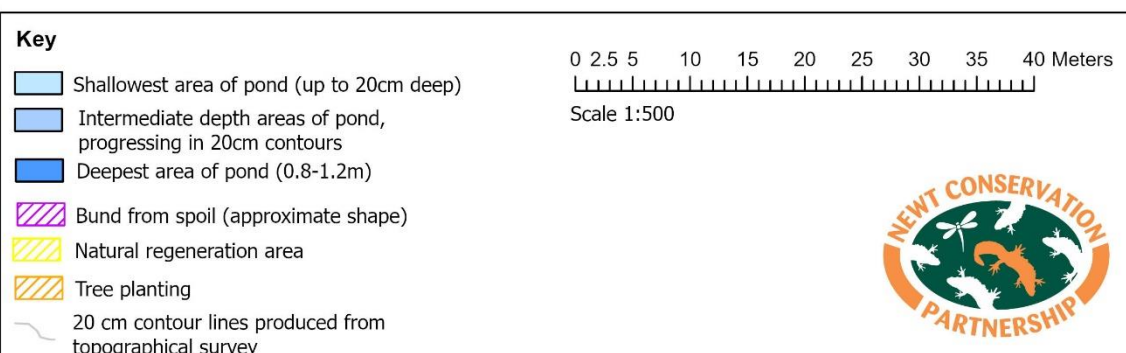
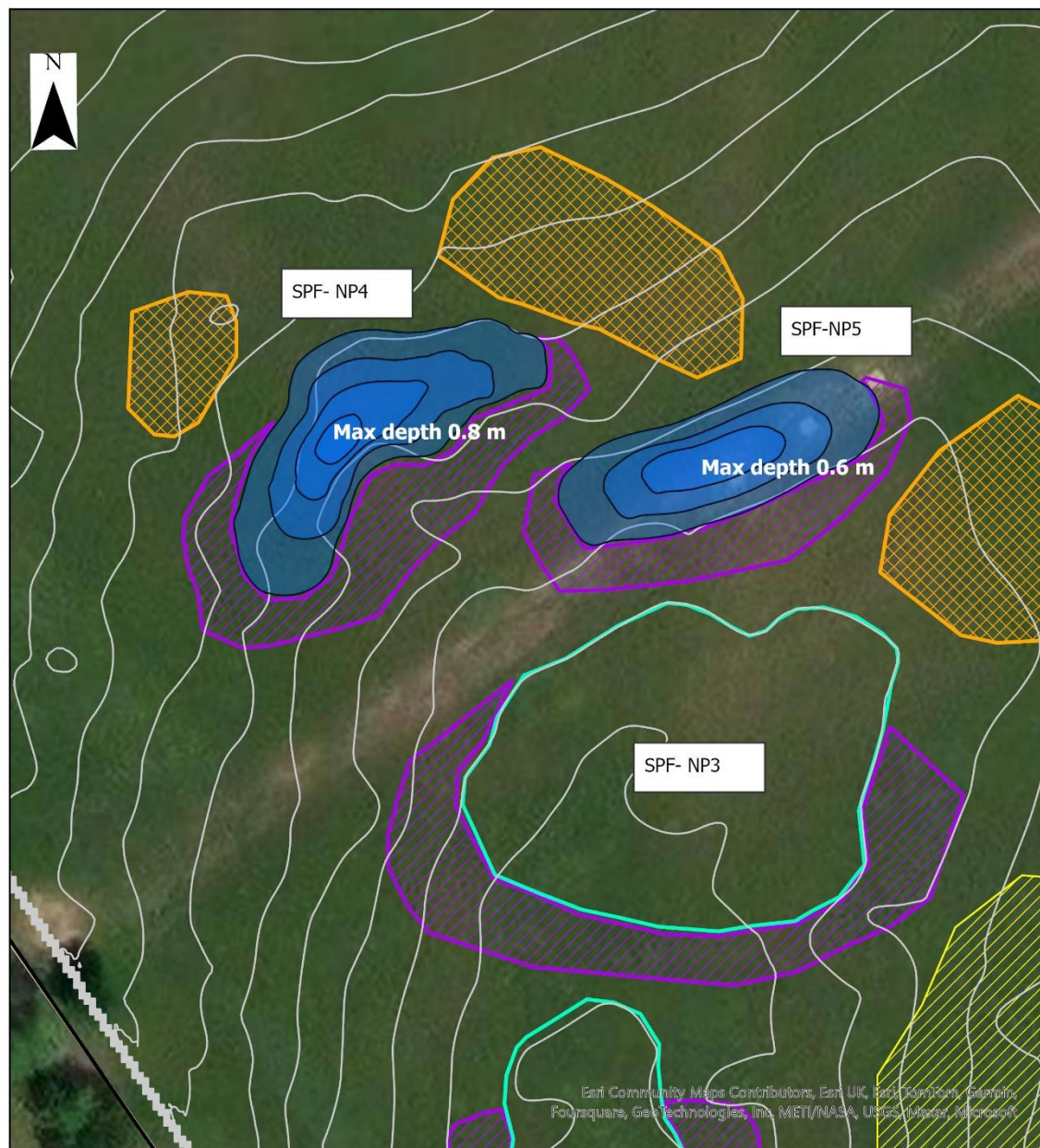


Pond Design for NP3 at Stoke Park Farm
Cross section of length

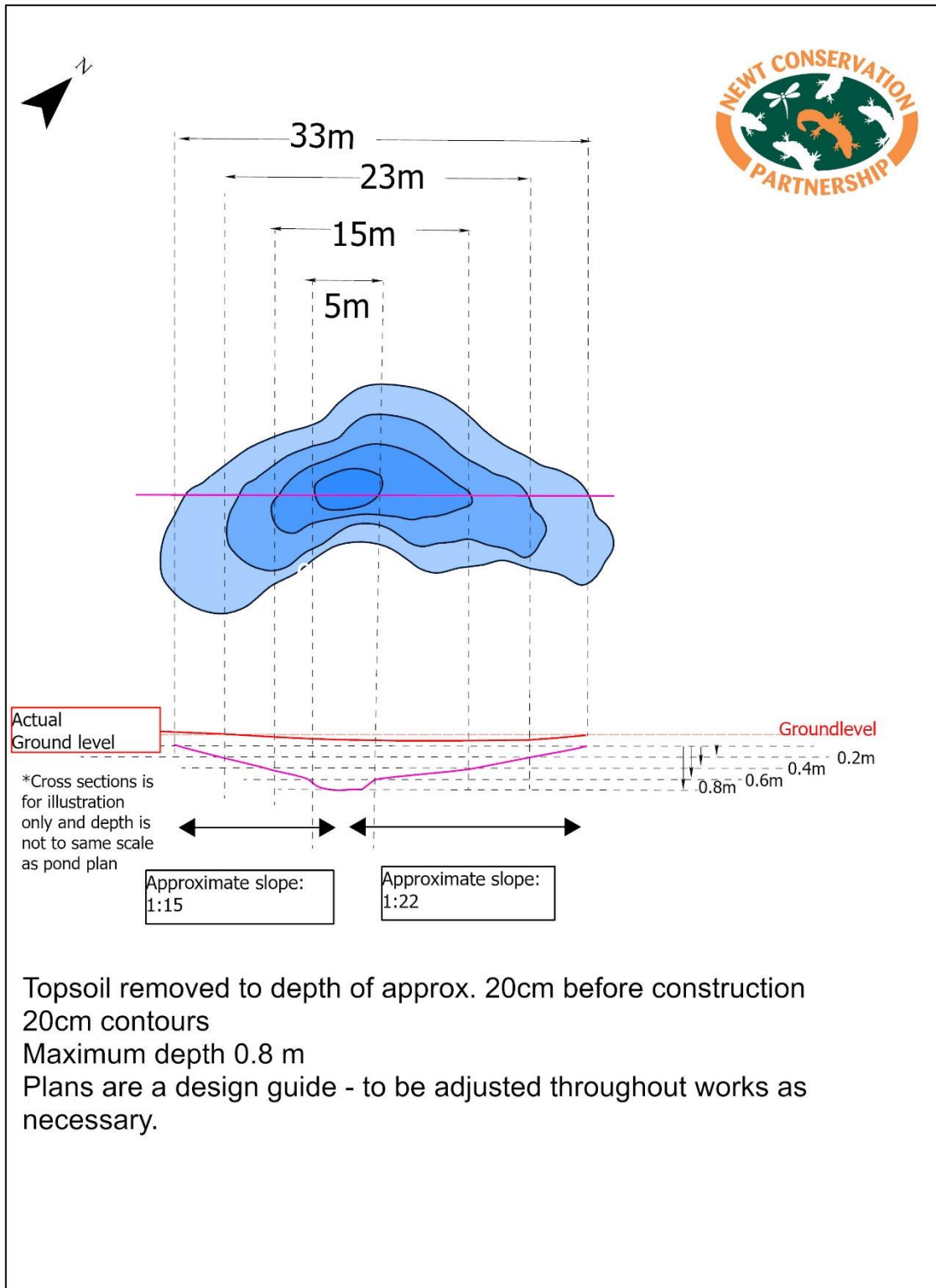


Pond Design for NP3 at Stoke Park Farm

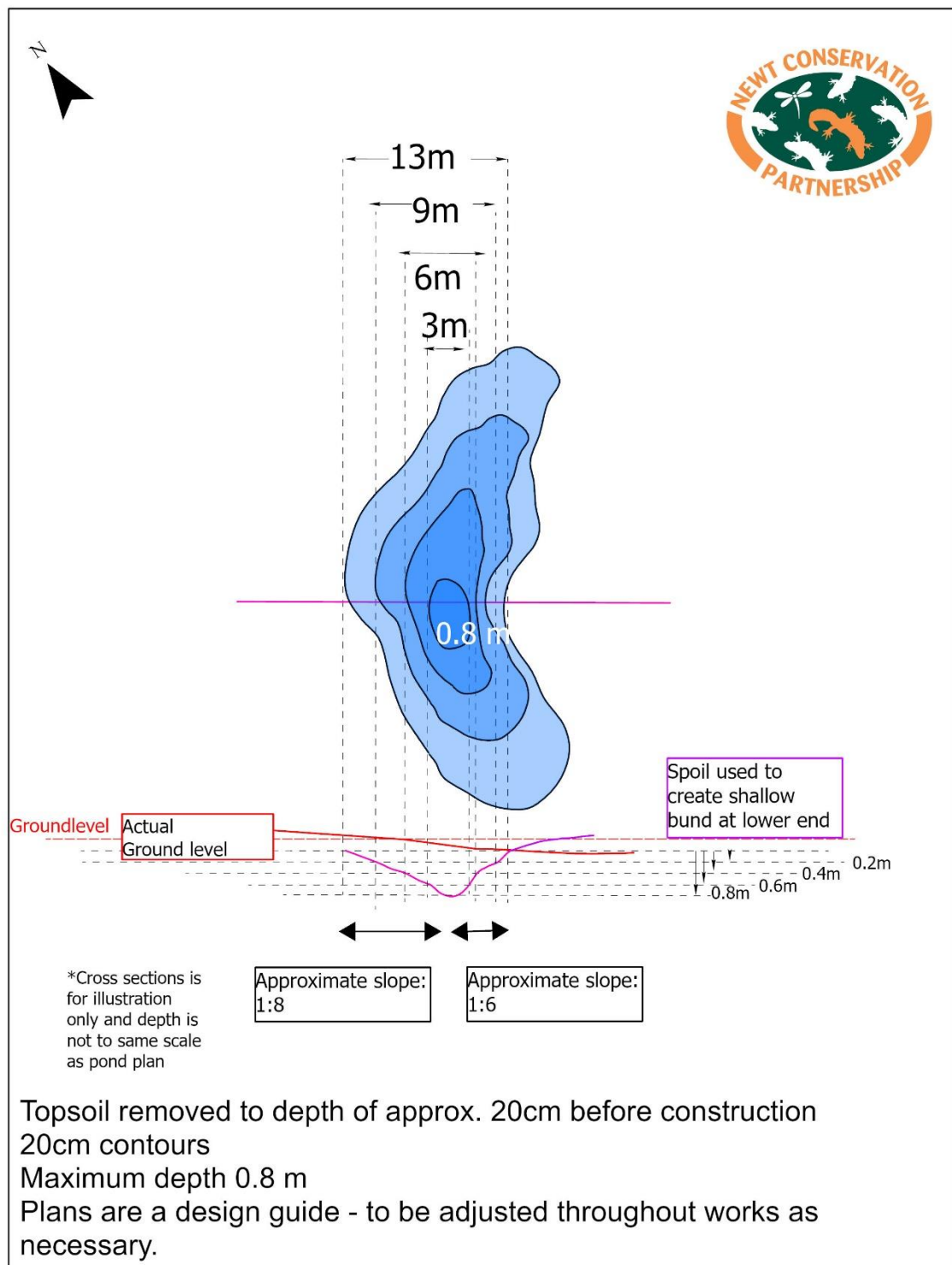
Cross section of width



Plan of NP4 and NP5 at Stoke Park Farm

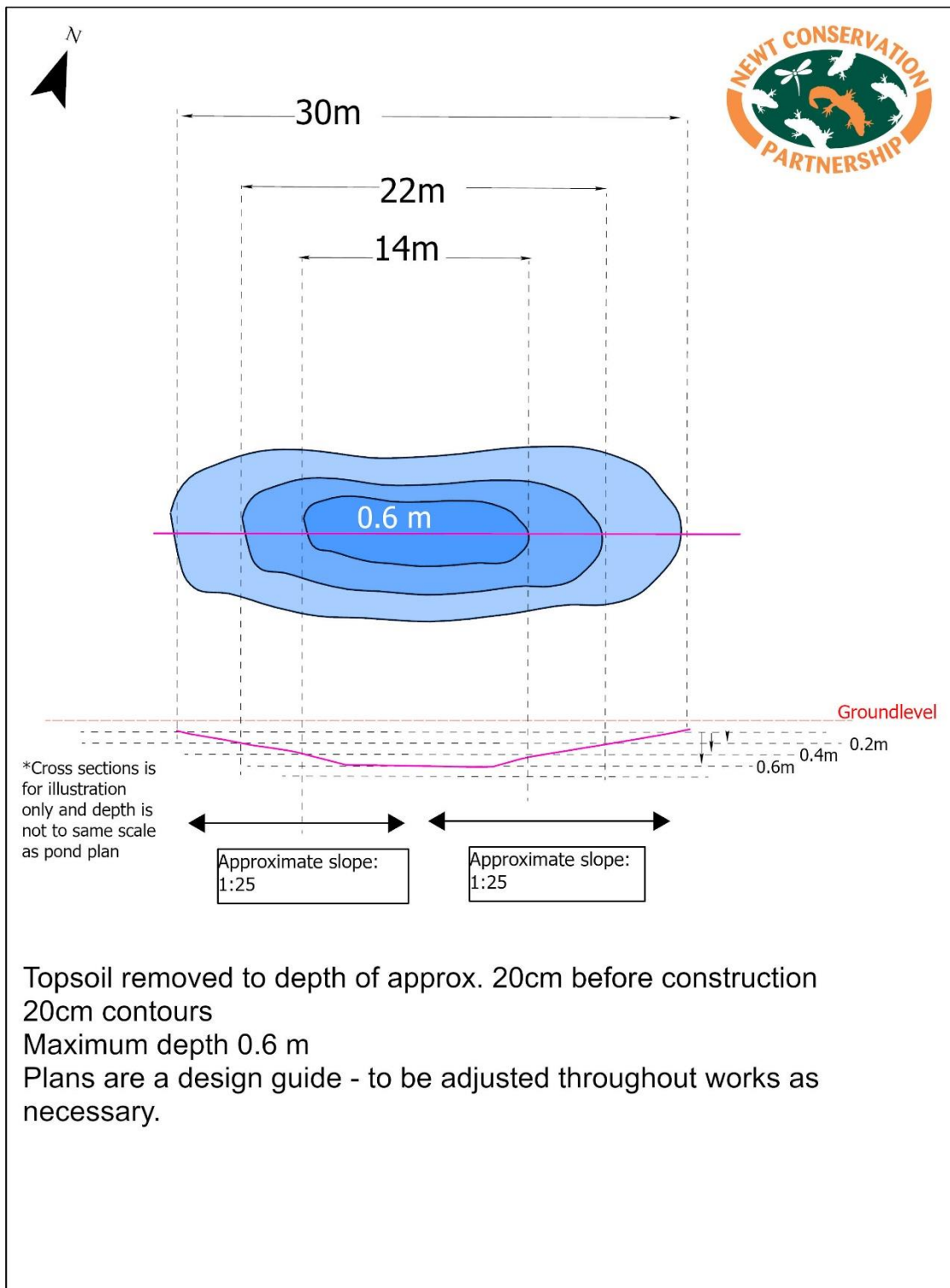


Pond Design for NP4 at Stoke Park Farm
Cross section of length

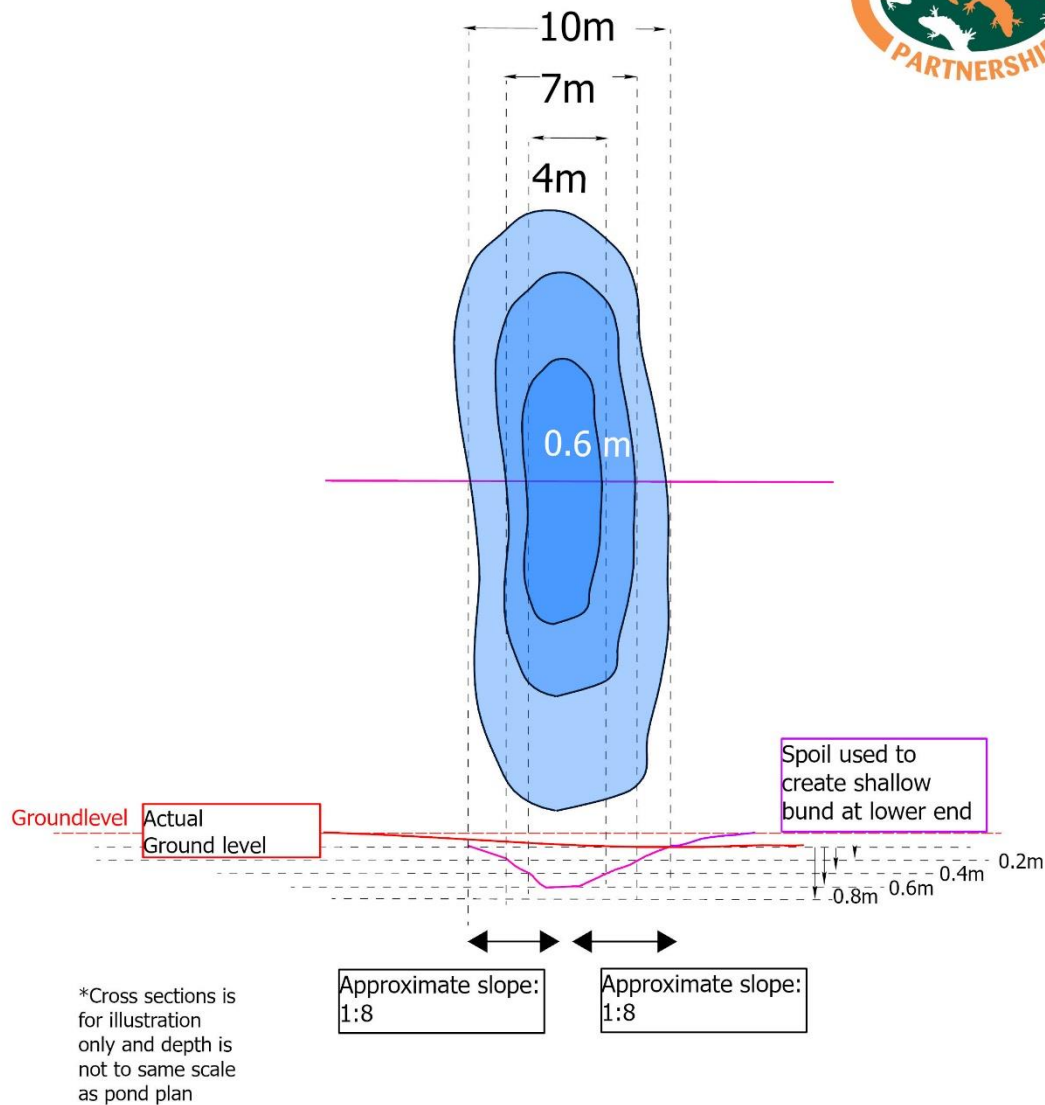


Pond Design for NP4 at Stoke Park Farm

Cross section of width

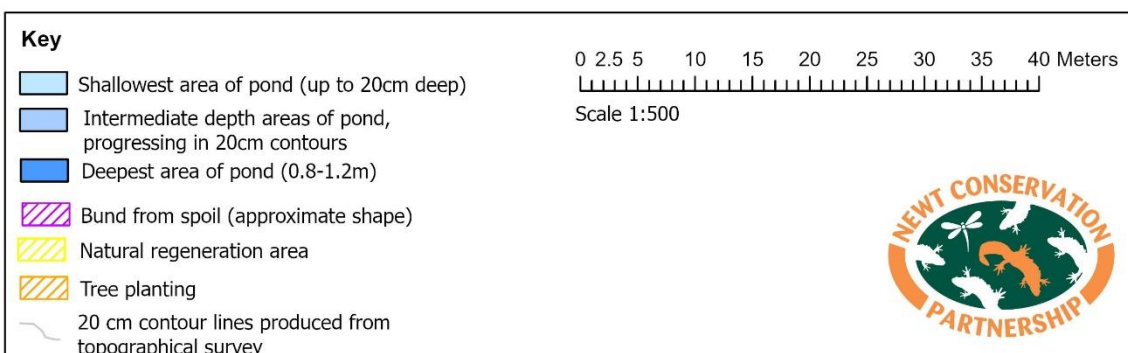


Pond Design for NP5 at Stoke Park Farm
Cross section of length

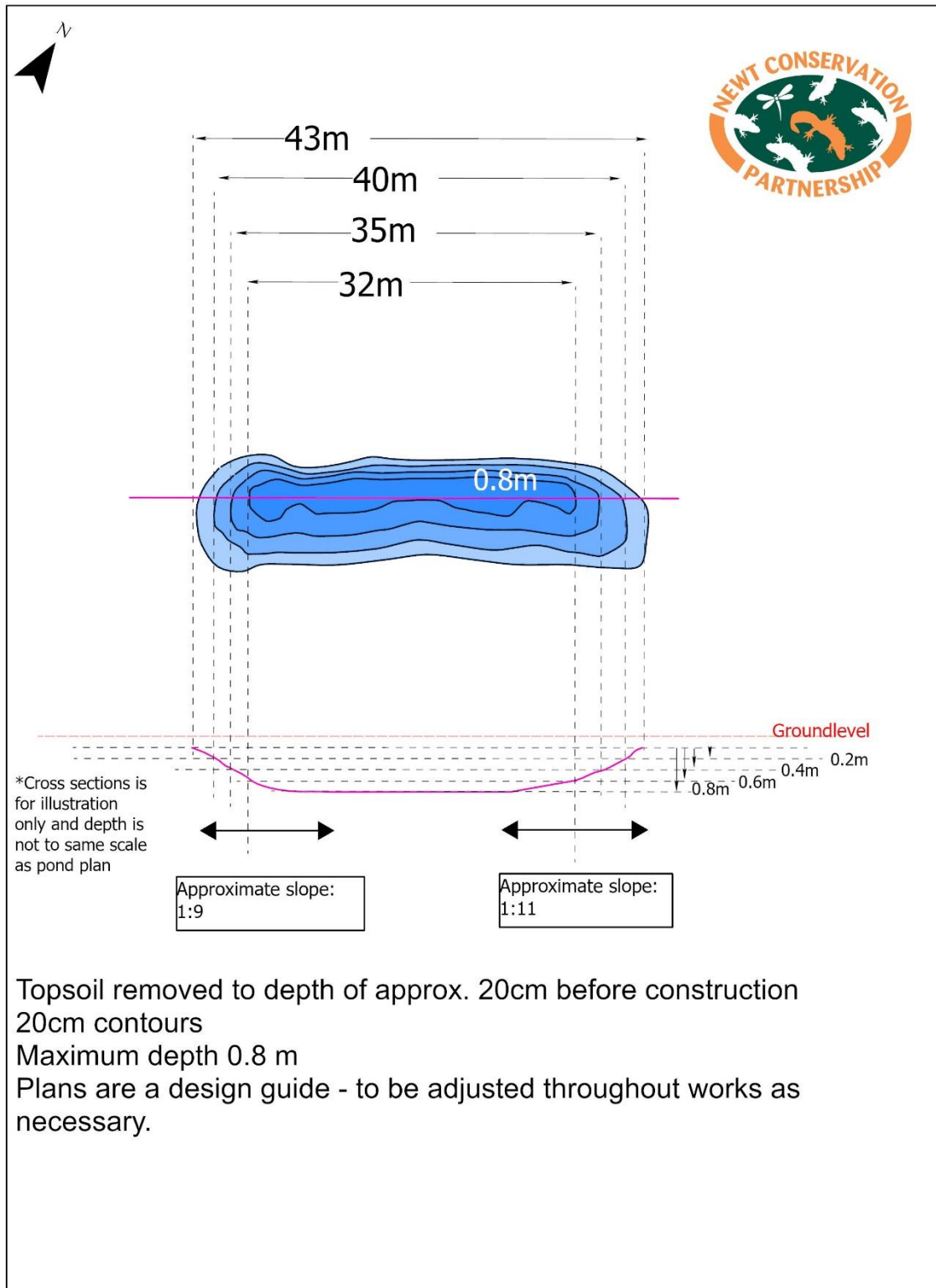


Topsoil removed to depth of approx. 20cm before construction
20cm contours
Maximum depth 0.6 m
Plans are a design guide - to be adjusted throughout works as necessary.

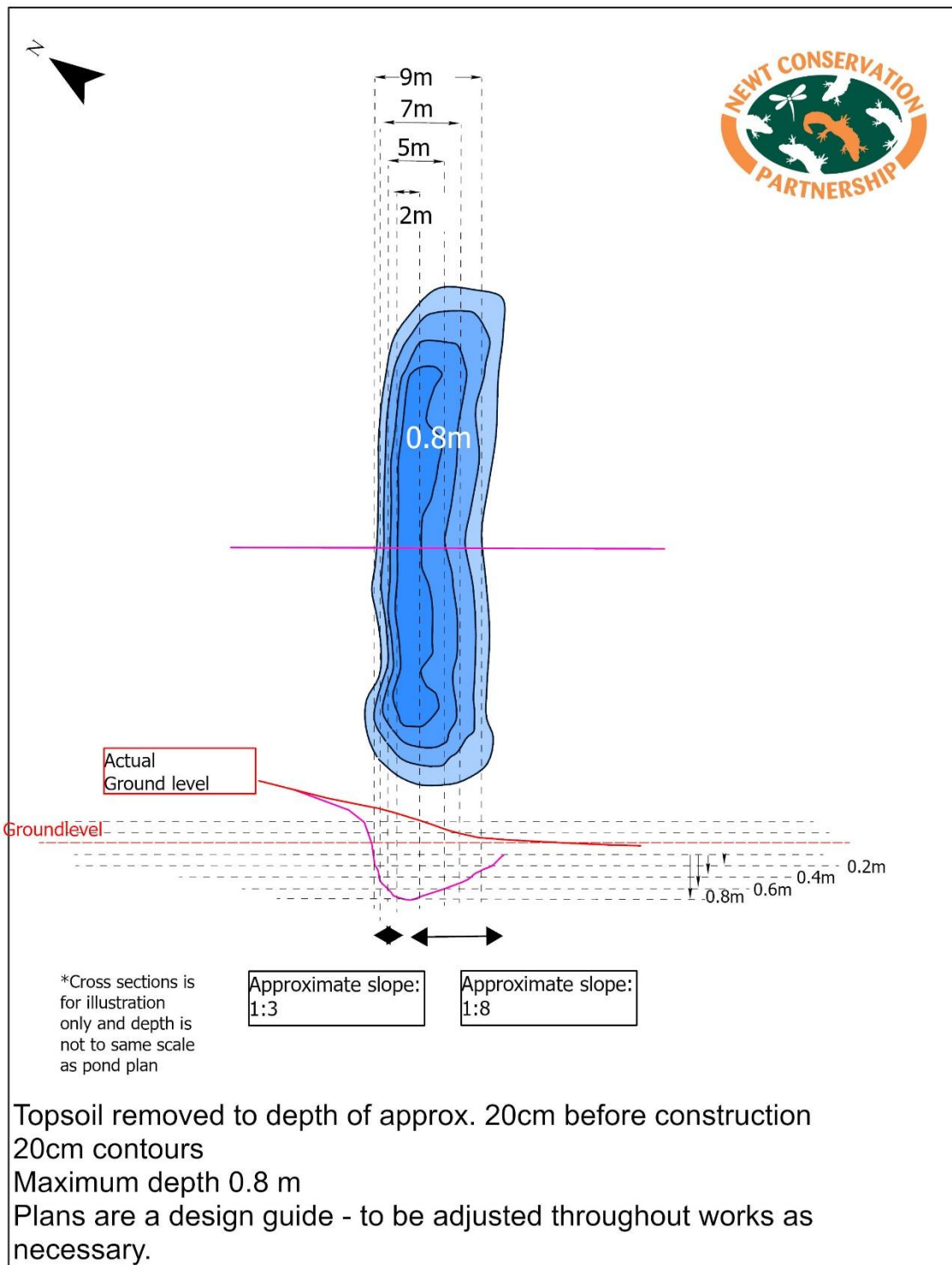
Pond Design for NP5 at Stoke Park Farm Cross section of width



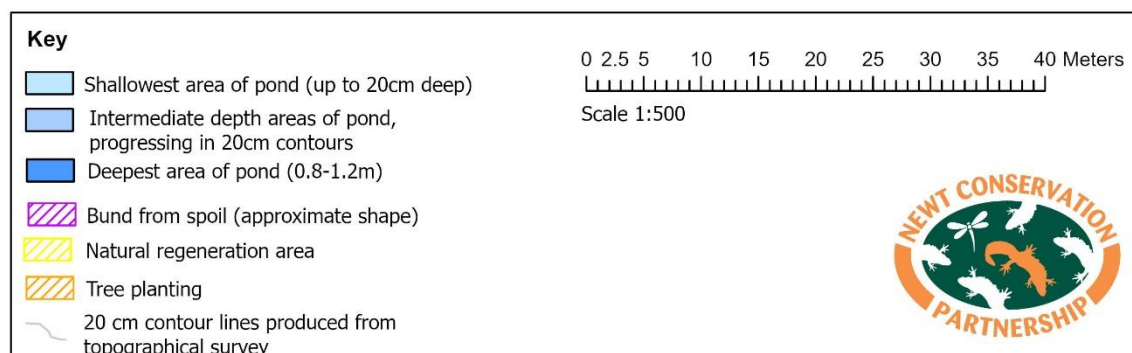
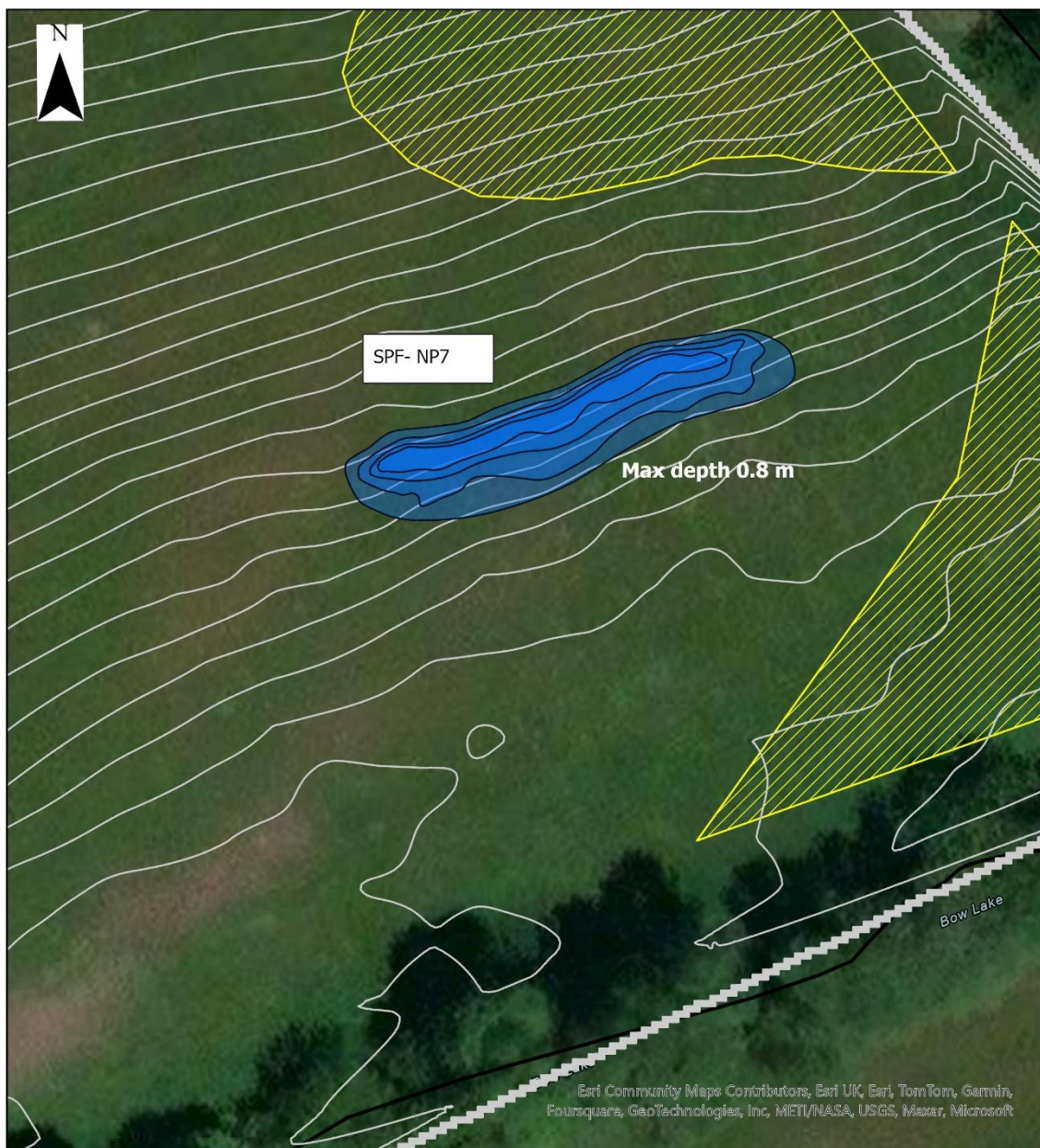
Plan of NP6 at Stoke Park Farm



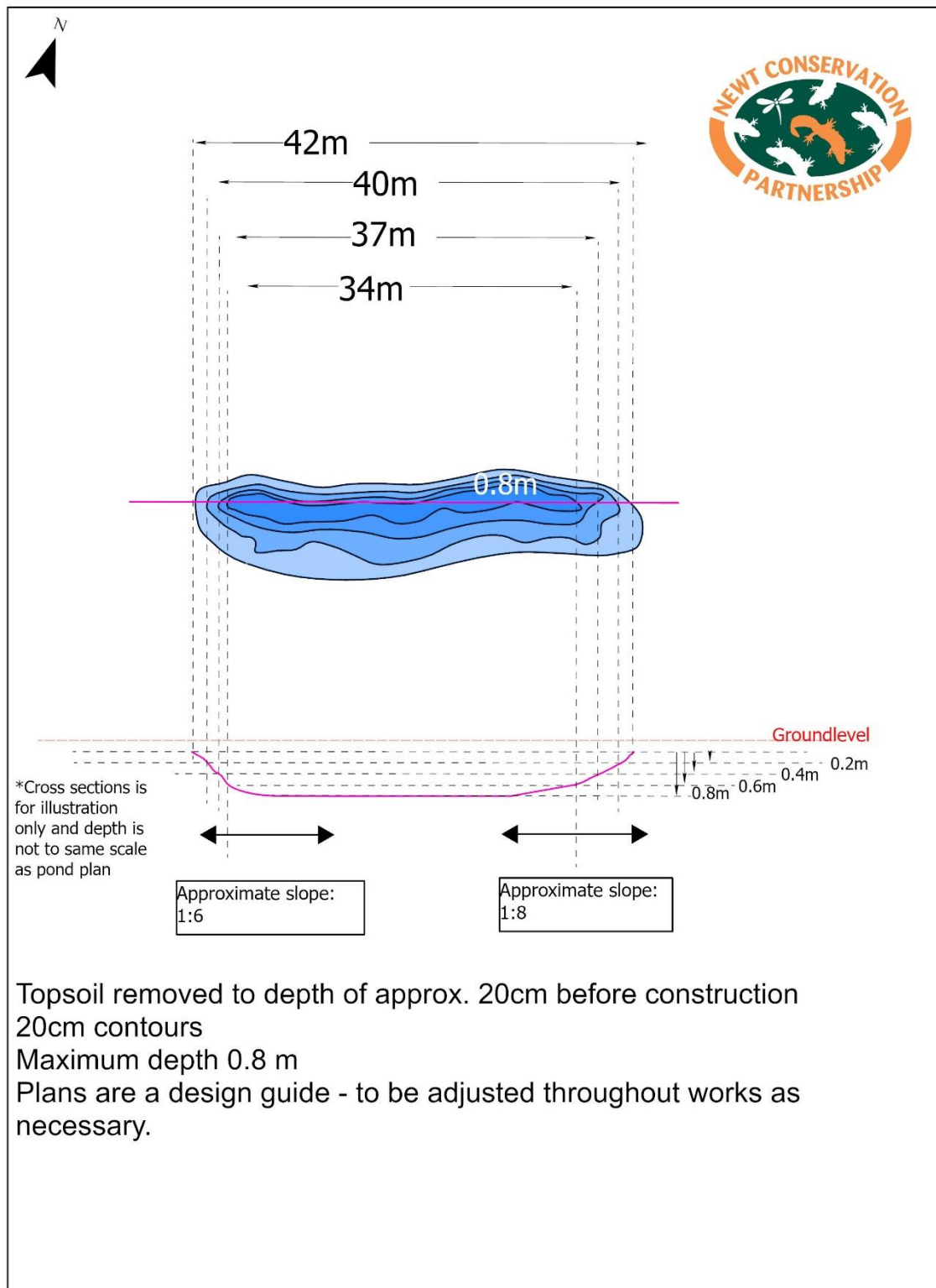
Pond Design for NP6 at Stoke Park Farm
Cross section of length



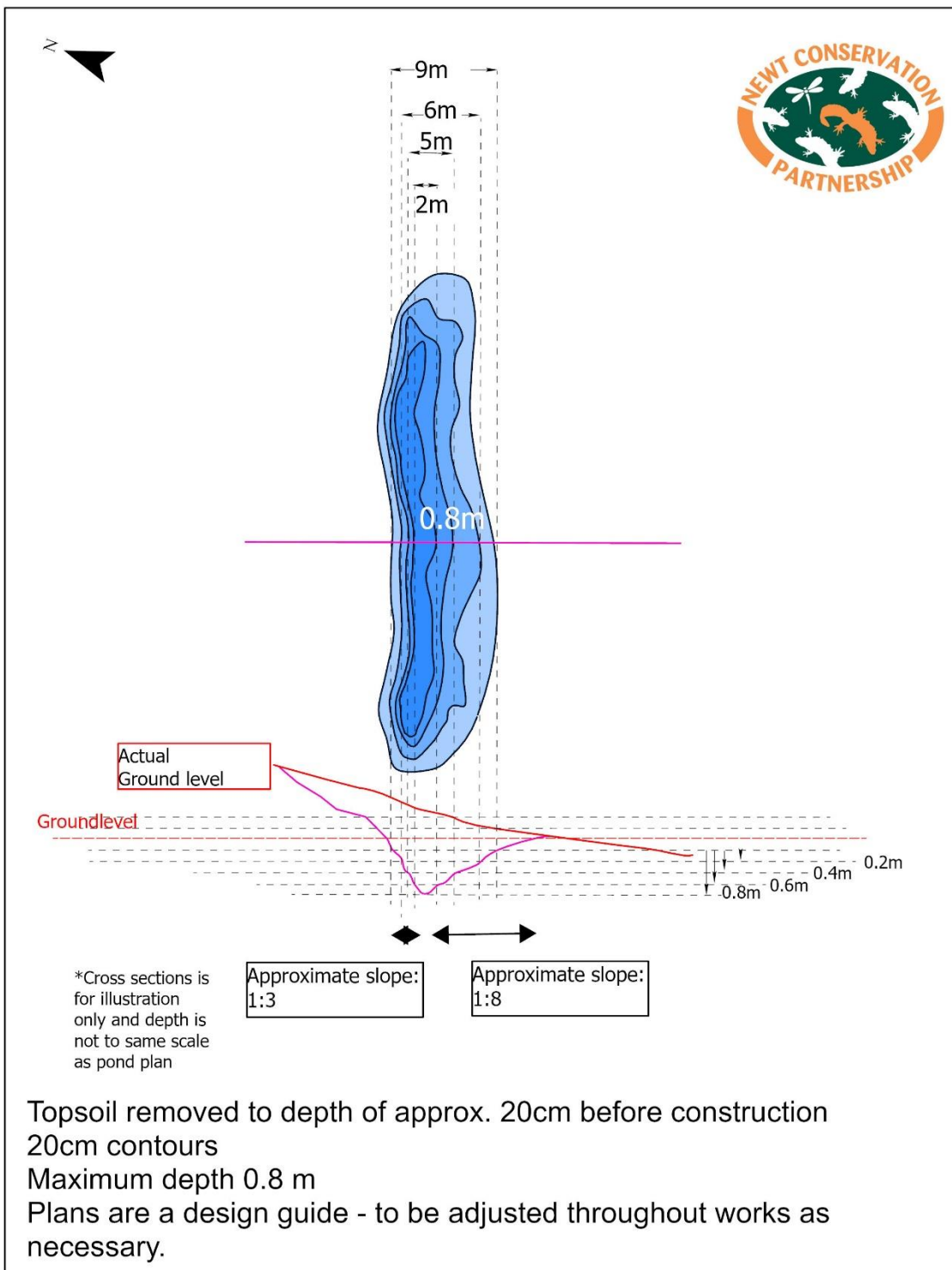
Pond Design for NP6 at Stoke Park Farm
Cross section of width



Plan of NP7 at Stoke Park Farm



Pond Design for NP7 at Stoke Park Farm
Cross section of length



Pond Design for NP7 at Stoke Park Farm

Cross section of width