



Newt Conservation Partnership

Flood Risk Assessment

for Planning Application reference: PP-12767845

Lana 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

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Stoke Park Farm – Rowley Green Meadow

Flood Risk Assessment

1. Location

1.1 Stoke Park Farm, Stoke Common Road, Bishopstoke, Eastleigh SO50 6DW is a former dairy farm now owned and managed by Eastleigh Borough Council. It lies within EBC and Bishopstoke Parish Council's administrative areas. Stoke Park Farm is approximately 1km east of Eastleigh and is on the northeastern border of Bishopstoke.

1.2 Rowley Green Meadow is an approximately 8 hectare field in the north-eastern corner of Stoke Park Farm. It comprises former arable and intensively managed pasture land. It is bordered by hedgerows to the north and east, the Bow Lake (stream) to the south, and a bridleway to the west.

1.3 The application site is within RGM and measures 1.62 hectares.

1.4 The central grid reference for the application site is SU 47776 20921.

1.5 Figure 1 shows the location of the application site.

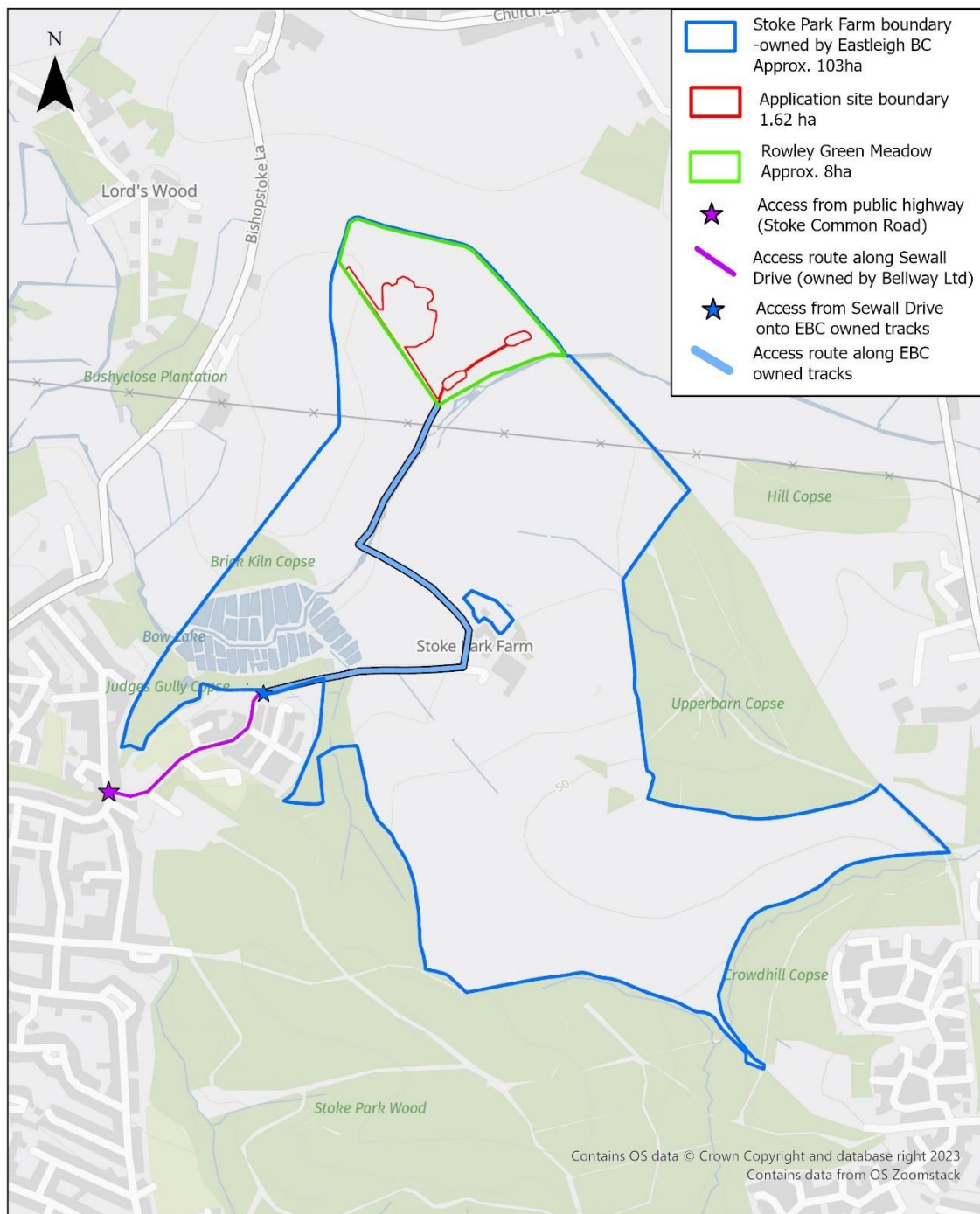


Figure 2 - location and access points

Date created: November 2023

Scale: 1:10,000

Scaled to A4

0 50 100 200 300 400 500 Meters

Created by: Anna-Marie Dennis



Figure 1: Location of application site

2. Current use of site

2.1 The application site is currently managed with an annual grass cut. See below for details of the application site and surroundings.

- Modified grassland heavily dominated by Rye grass *Lolium perenne*.
- Bow Lake (a stream which is a tributary of the River Itchen) runs along the southern boundary of Rowley Green Meadow.
- Grown out hedgerows / tree lines to northern and eastern boundaries.
- No statutory designations but is within the SSSI / SAC Impact Risk Zone for The River Itchen SSSI and SAC (750m away).
- No local or non-statutory designations.
- No Habitat of Principle importance.
- There is a bridleway to the western boundary of Rowley Green Meadow but there is no public access to the field.

3. Flood Risk zones

3.1 The application site is fully within Zone 1 (Land having a less than 0.1% annual probability of river or sea flooding).

3.2 The long-term flood risk for the area has been checked using the tool here: [Check the long term flood risk for an area in England – GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/check-the-long-term-flood-risk-for-an-area-in-england) and is low risk from all sources of flooding.

3.3 The application site is, however, larger than 1 hectare, which triggers the requirement for a Flood Risk Assessment to take place under the National Planning Policy Framework.

3.4 The Local Flood and Water Management Strategy [local-flood-water-management-strategy.pdf \(hants.gov.uk\)](https://hants.gov.uk/media/1000000/local-flood-water-management-strategy.pdf) shows that the application site is within the South East River Basin District, and the Itchen catchment.

3.5 Site-specific flood risk assessment must be:

- proportionate to the anticipated degree of flood risk.
- make optimum use of information already available.
- appropriate to the scale, nature and location of the development.

4. Development proposals

4.1 The proposal is to create of a mosaic of seven clean water wildlife ponds with associated hedge and tree planting in Rowley Green Meadow to increase the biodiversity value of the site and provide suitable breeding habitat for great crested newt (GCN).

4.2 Figure 2 shows the proposed plan for the whole of Rowley Green Meadow, with the application site encompassing the new ponds, spoil disposal and access route for machinery shown in red – see also the Location, Site, and Landscape plans submitted with the application.

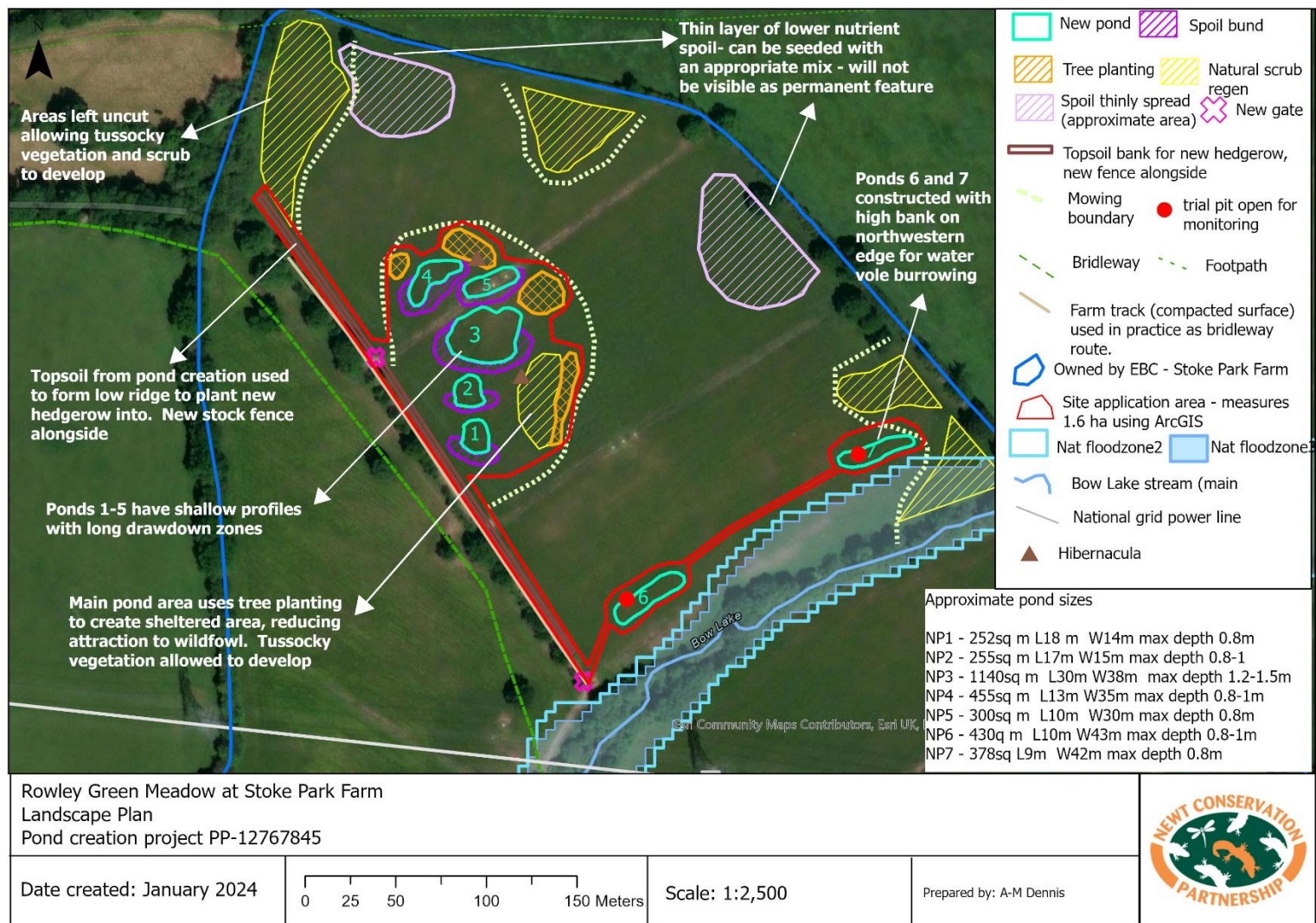


Figure 2: Proposed nature conservation and biodiversity project

5. Vulnerability classification

5.1 Nature conservation and biodiversity schemes are considered to be **Water-compatible development** which are acceptable in all flood zones. [National Planning Policy Framework Annex 3](#) explains the vulnerability classifications.

6. Expected lifetime of proposed development

6.1 Funding for managing and monitoring the ponds will be secured for 25 years under a legal agreement between EBC and Newt Conservation Partnership under Organisational Licence WML-OR112 (District Licence for great crested newts).

6.2 EBC have a long-term intention to manage the site for nature conservation.

7. Sequential test

7.1 The sequential test is not required because the development is not in a flood risk area.

8. Climate Change

8.1 The site is within the Test and Itchen Management Catchment. The management catchment climate change allowances from the peak river flow map [Climate change allowances for peak river flow in England \(data.gov.uk\)](#) are in the table below.

	Central	Higher	Upper
2020's	16%	24%	45%
2050s	17%	28%	61%
2080s	35%	56%	127%

Table 1: Climate change allowances for peak river flows in the Test and Itchen Management Catchment.

8.2 Because the proposed development is in Zone 1 and is a water-compatible development, the central figures are used when considering the impact of climate change. Thus, peak flow may increase by 16% in the 2020s, 17% in 2050s and 35% in the 2080s.

8.3 This will not change the risk of flooding from the proposed nature conservation and biodiversity development. It may mean that in the future ponds 6 and 7 risk being affected by flood water from the main river (Bow Lake).

9. Site specific flood risk

9.1 Topographical survey and flood maps

9.1.1 A topographical survey was carried out in October 2023. Contour lines at 20 centimetres and a 'heat map' were produced from this date and are shown in Figure 3.

9.1.2 The flood risk areas are shown in Figure 4.

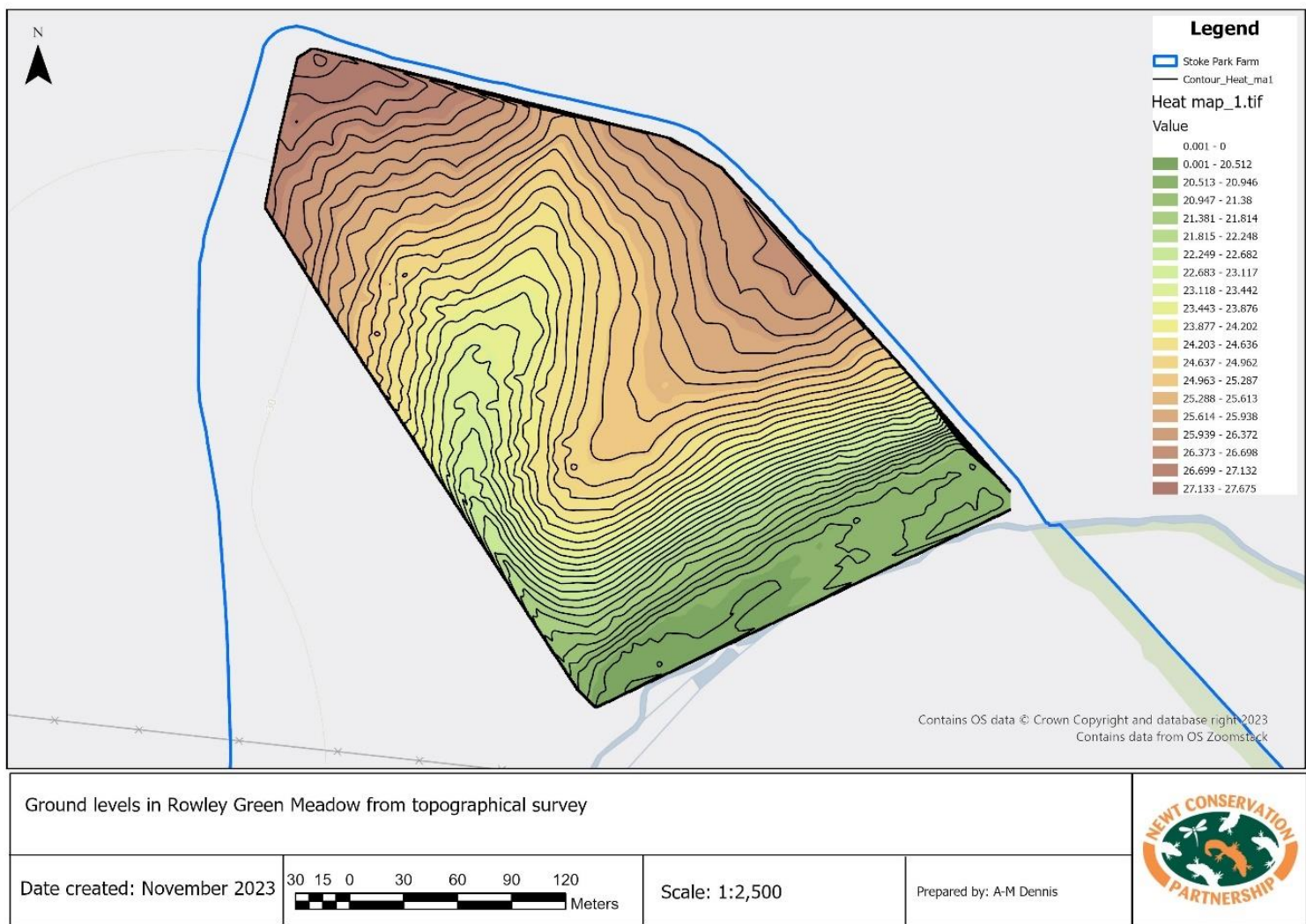


Figure 3: Ground elevations in Rowley Green Meadow from topographical survey

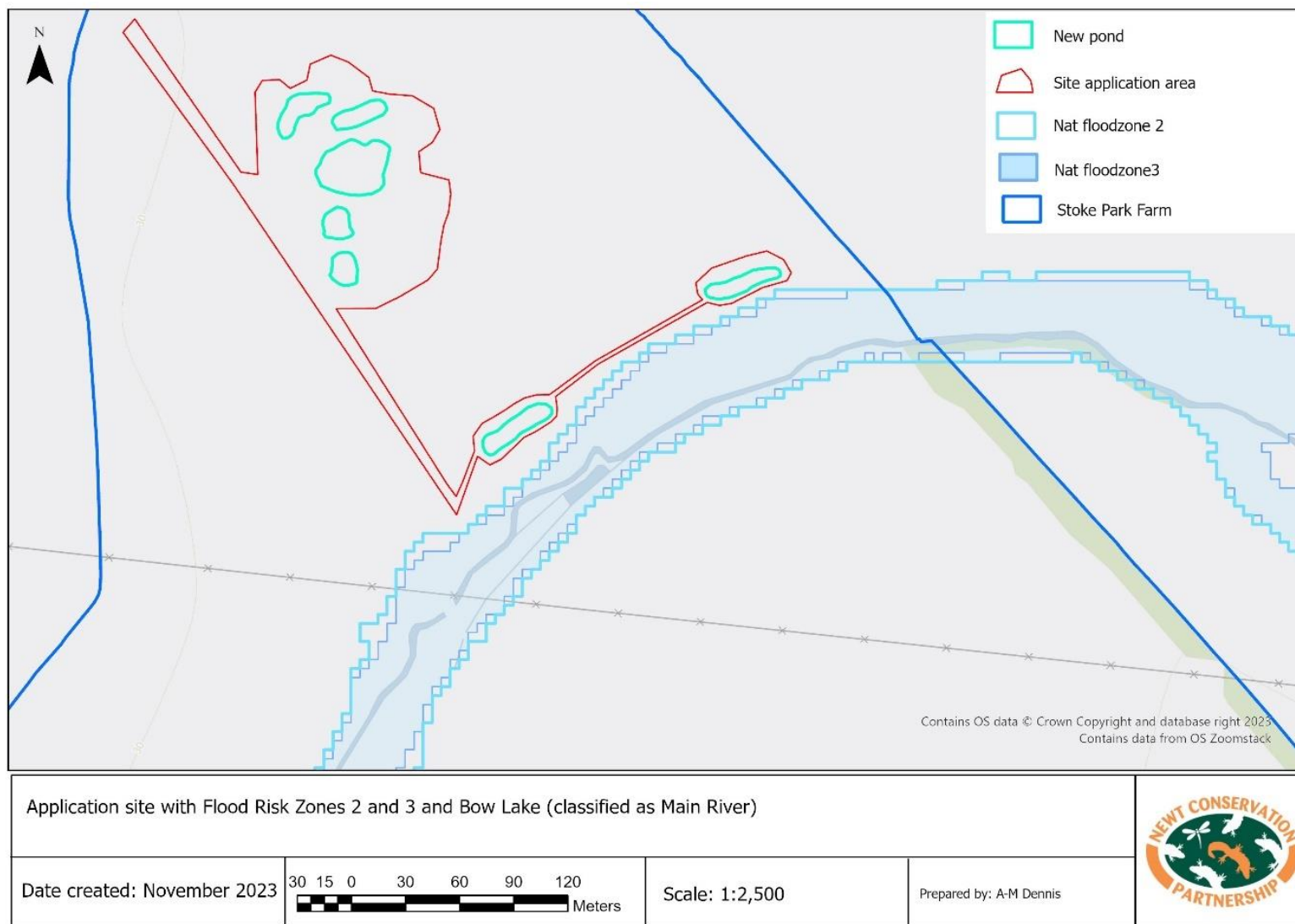


Figure 4: Flood risk areas in relation to application site

9.2 Design

9.2.1 The design for the scheme locates the ponds in lower lying areas to collect surface water - see Figure 5. Low bunds will be created using excavated spoil to ensure that the required water levels are held – see also Pond designs document submitted as part of the planning application.

9.2.2 There are land drains throughout the field. Figure 5 shows the approximate location of the current main drain, which drain directly into Bow Lake. This is currently fed by a grid network of land drains. During test pit excavation we found perforated plastic pipe surrounded by gravel at approximately 50cm below the surface in test pit 7, and we would expect the remaining drains to be similar.

9.2.3 As part of the pond creation, the drains will be broken up or removed in the vicinity of the ponds. This will ensure that the ponds hold water and slow the flow of water that currently enters the Bow Lake from the main drain. This moves the surface water discharge up the hierarchy from 3 - to a surface water sewer, highway drain, or another drainage system to 2 - to a surface water body.

9.2.4 Figure 6 shows the estimated surface water flows within Rowley Green Meadow.

9.2.5 The ponds are designed using best practice principles for wildlife ponds, as described in the pond designs document submitted as part of the planning application.

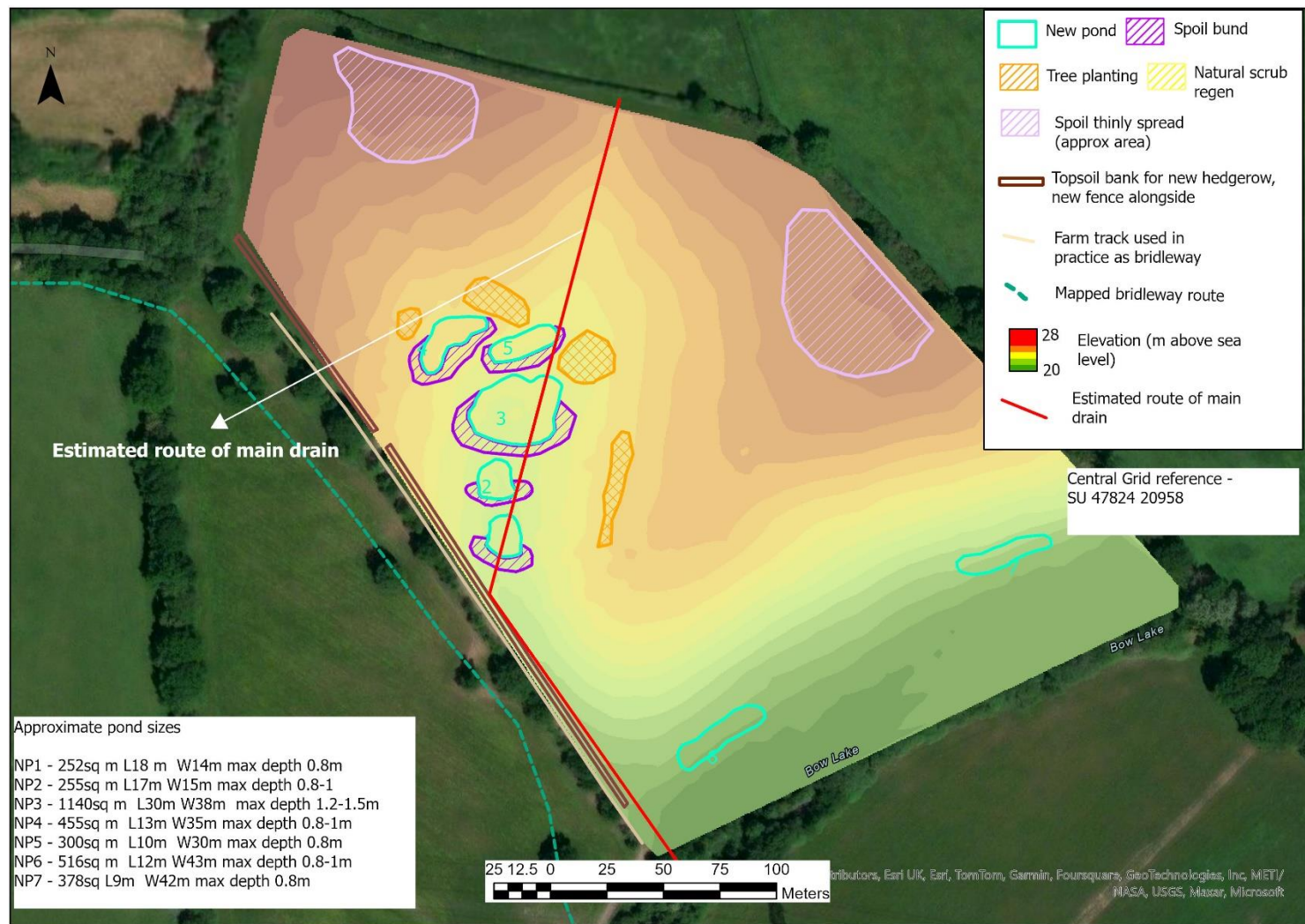


Figure 5: Elevations and main drain in relation to pond locations

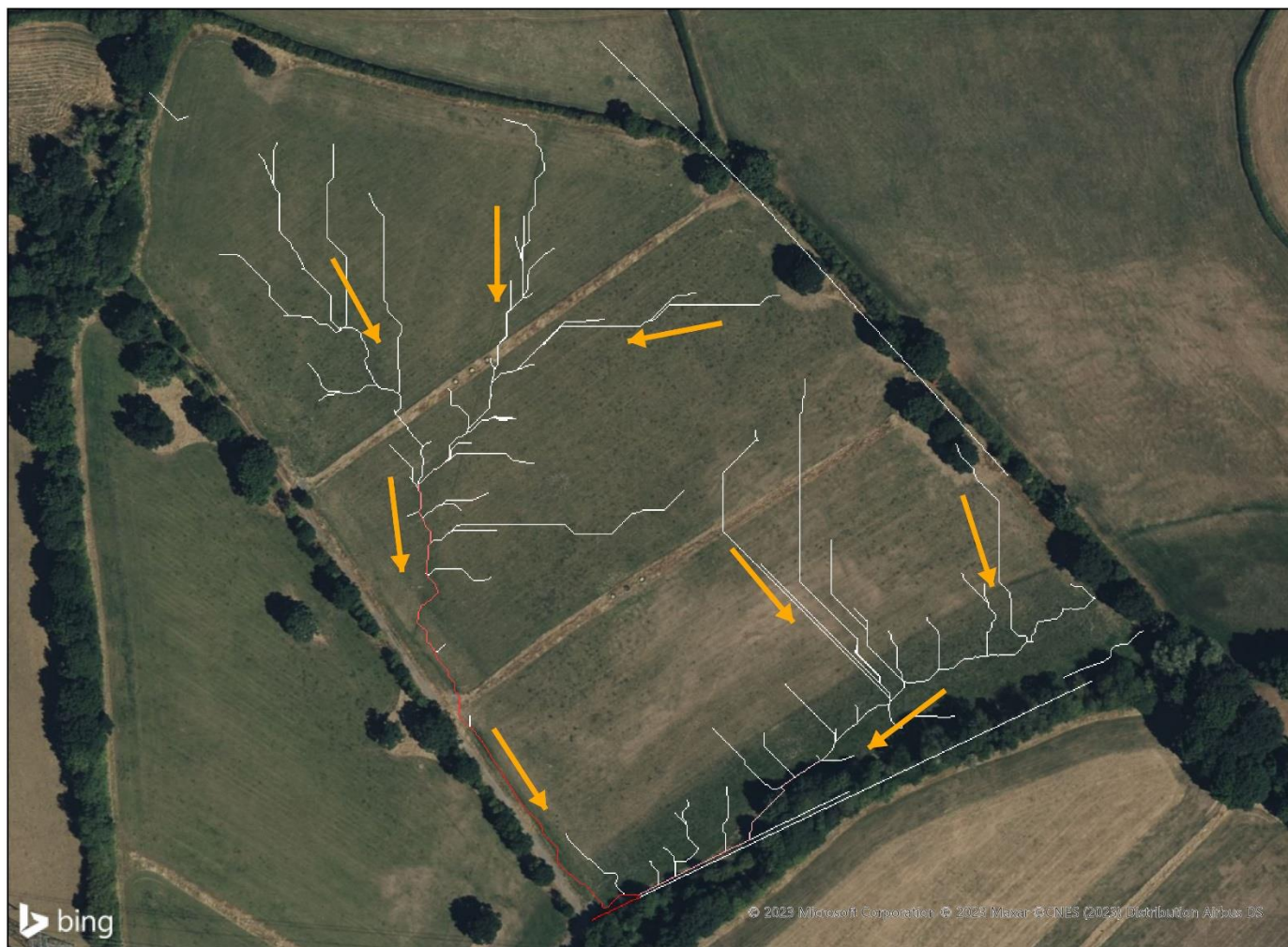


Figure 6: Estimated surface water flow directions in Rowley Green Meadow

9.3 Risk of flooding to the application site

9.3.1 There is a low risk of flooding to the application site due to the location in Zone 1 and the nature of the development. The ponds are designed to receive and retain surface water from the immediate catchment.

9.4 Risk of increased flooding to surrounding land from the development

9.4.1 We have considered how the ponds may increase the risk of flooding to the track to the west of Rowley Green Meadow, to Bow Lake, to Hampshire Carp Hatcheries, and to neighbouring farmland to the north and east.

9.4.2 The levels of the ponds are below that of the track and bridleway to the west. The track is raised above the ground level within the field by 40-50cm from the first gate access in the southern corner for the full length which runs parallel to the application site. The bunds will be lower than the track, allowing any excess water not held by the ponds to drain towards the lower ground and the Bow Lake in the direction it currently does. The hedge will be planted into a low topsoil bank, which will also direct water away from the track.

9.4.3 The ponds will retain surface water that currently drains or runs on the surface into the Bow Lake. The flow of water will be slowed except when the ponds are already full. The scale and nature of the ponds and surrounding area are such that in the unlikely event of a bund failing, water would flow downhill in the same direction that it currently does.

9.4.4 The native planting and scrub development will also slow the flow of surface water towards the Bow Lake.

9.4.5 Hampshire Carp Hatcheries are downstream of the application site.

9.4.5 Overall the flood risk to these adjacent areas is likely to be lowered by the proposed nature conservation and biodiversity scheme. The ponds, scrub and trees will provide ecosystem services of flood alleviation and improvement of runoff water quality.

9.4.6 The neighbouring farmland is at a higher elevation than Rowley Green Meadow. The main drain will be left unaltered to the north of the proposed pond areas. There is no increased risk of flooding to the neighbouring farmland.

10. Surface water management

10.1 The ponds are designed to collect and retain surface water from the immediate catchment. The native tree planting and scrub management proposals will also slow and reduce surface water flows. Surface water discharge from the application area will move up the hierarchy from 3 - to a surface water sewer, highway drain, or another drainage system to 2 - to a surface water body.

11. Occupants and users of the development

11.1 The proposal will not increase the overall number of people using the land – there is currently no public access and that will not change.

11.2 The site was formerly used for farming operations and is currently managed with annual grass cutting and hedge trimming. After the construction phase, the site management will require similar numbers of people using the land.

12. Exception test

12.1 Not required for this nature conservation development.

13. Residual risk

13.1 No residual risk has been identified.

14. Credentials

14.1 This flood risk assessment was undertaken by Anna-Marie Dennis, Newt Conservation Partnership South Hampshire Project Officer in January 2024. It was reviewed by Dr Pascale Nicolet (CEO Newt Conservation Partnership and Technical Director of the Freshwater Habitats Trust) in January 2024.

14.2 Site-specific flood risk assessment must be:

- proportionate to the anticipated degree of flood risk.
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