

**Report of an ecology & protected species survey
of the site of a proposed extension to Woodlands
Caravans, 7 Lakes, Wharf Road, Ealand,
Crowle, North Lincolnshire**



**Tim Smith
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1 Introduction

Tim Smith, a freelance ecologist, has been commissioned by 7 Lakes Country Park, through Roger Harden, to undertake an ecology and protected species survey of the site of a proposed extension to the existing Woodland Caravans at 7 Lakes. This text and the accompanying photographs comprise the ecology and protected species report.

Tim Smith has a BSc (Hons) Ecology from Lancaster University and he has 30 years' experience of working in the ecology and nature conservation fields, with Local Authorities, Statutory Nature Conservation Bodies, Voluntary Nature Conservation Bodies and Ecological Consultancies. He is a freelance ecologist, based in Lincolnshire.

2 Survey methods

A walk-over survey of the site, and adjacent land where access was possible, was undertaken. Habitats were recorded and mapped; plants were recorded (including searching for invasive alien species); and use of the site by, or the potential for use by, protected species was searched for. Photographs were taken. The walk-over survey was undertaken by Tim Smith on 4 July 2019. There were no constraints to the efficiency of the survey.

A search for existing ecological and protected species records for the site and immediate environs was undertaken by reference to the MAGIC and National Biodiversity Network (NBN) websites. In addition, reference was made to a Biodiversity Management Plan for the 7 Lakes Country Park which was prepared by Tim Smith in July & August 2016 in order to discharge planning conditions which were imposed by North Lincolnshire Council when granting consent for additional caravans at that time.

3 Site description

3.1 Location and adjacent land

The site is located at the 7 Lakes Country Park, between Everglades Lake

and Duck Lake. The grid reference of the centre of the site is SE 774 113. A plan of the existing pre-development site is given in Appendix 1.

To the north there are existing caravans of Woodland Caravans and part of Duck Lake. To the south there is another part of Duck Lake, broad-leaved woodland, existing caravans of Willow Caravans and the site of a redundant engineering works.

To the west is Duck Lake. This is a large waterbody, which at the time of the Biodiversity Management Plan work had been recently worked on extensively to clear much dense vegetation in the centre and eastern side to improve the movement of water of the entire Country Park towards the outfall into the North Soak Drain. In 2016, the lake had some remaining mid-lake stands of common reed but marginal vegetation was sparse and patchy, and aquatic vegetation included much stonewort and also ivy-leaved duckweed, blanketweed algae, fringed water-lily, fennel pondweed, water crowfoot and fan-leaved water crowfoot. The banks Duck Lake were either largely bare earth which was becoming colonised or they supported a tall ruderal vegetation.

Also in 2016, around the re-worked lake the spoil from the works had largely been leveled and reseeded, and there were scattered trees and shrubs of oak, silver birch, grey willow, crack willow, elm, sycamore, dog rose, hawthorn and elder. Now, a few years after the works, Duck Lake is well on the way to recovery and aquatic vegetation is locally abundant and common reed margins are re-establishing.

To the east is Everglades Lake. This is a large waterbody, which at the time of the Biodiversity Management Plan work had some lakeside dense trees and shrubs; other parts of the lakeside were gardened; and yet other parts had dense tall herbs and common reed with scattered to dense scrub and trees. In 2016, Everglades Lake had locally extensive margins of common reed and also present were water figwort, great willowherb, bittersweet, wild angelica, water mint, hoary willowherb, hard rush, amphibious bistort, gipsywort, false fox-sedge, creeping bent, bulrush, cyperus sedge, yellow iris, marsh bedstraw, soft rush and clustered dock. Aquatic vegetation was of blanketweed algae, rigid hornwort, spiked water-milfoil, whorled water milfoil, mare's-tail, common duckweed, ivy-leaved duckweed, yellow water-lily, fringed water-lily and unbranched bur-reed. Everglades Lake is not significantly different now.

The site has no statutory nature conservation designation and no such site is adjacent. The nearest statutory nature conservation sites are Crowle

Borrow Pits Site of Special Scientific Interest (SSSI) of which the nearest part is located c1700m south-east across old pits, an active railway, roads, built land, farmland and large drains; and Hatfield Chase Ditches SSSI of which the nearest part is located c600m south across old pits, an active railway, built land, farmland and large drains. At c3km north-west across extensive farmland, old pits and built land is the nearest part of the very extensive Thorne Moors Special Area of Conservation.

3.2 Site habitats and plants

The site comprises a roughly rectangular area with a partly angled eastern side. The long axis of the site runs north-south and the short axis runs west-east. A site plan is given in Appendix 1, for the existing pre-development site.

Boundaries

The western boundary runs straight north-south and it follows the boundary of the extent of the lawful use certificate for the caravan site, and as such it is undefined and it cuts across parts of Duck Lake's open water and lake margin, and also across grassland and scrub. The southern boundary runs undefined in a straight line across part of Duck Lake's open water and also across grassland and through woodland. The northern boundary runs undefined in a straight line across part of Duck Lake's open water and also across grassland and a garden of a nearby caravan. The angled eastern boundary runs undefined through grassland and woodland, and also across open water of inlets of the western side of Everglades Lake.

The body of the site

The greater part of the site is either short mown open grassland or open weeds which are colonising leveled out dredging spoil, over which are scattered sub-mature trees and tall shrubs. Hard surfaced tracks run over the grassland. The manner in which the site boundary has been drawn means that the site also includes the following:

- A small part of open water of Duck Lake in the south-western corner
- A small part of open water of Duck Lake in the north-western corner
- Tall herb margins with scrub and trees at edges of lakes
- Part of a small broad-leaved woodland in the south-eastern corner
- Parts of three inlets of open water of the convoluted western shoreline of Everglades Lake along the site's eastern side
- Part of a garden of an adjacent caravan

The leveled out dredging spoil from Duck Lake which is gradually colonising with plants occupies roughly the southern third of the site. Plants which are colonising the hard baked silt are annual meadow-grass, scentless mayweed, greater plantain, knotgrass, creeping thistle, creeping bent, common bent, redshank, weld, broad-leaved dock, soft rush, red fescue, Yorkshire fog, perennial rye-grass, white clover, lesser swine-cress, creeping buttercup, spear thistle, common reed, ribwort plantain, halberd-leaved orache, common ragwort, bramble, common knapweed, toad rush, smooth sow-thistle, Canadian fleabane and black medick. In places the colonisation has been more advance and more or less complete vegetation cover occurs.



Colonising dredging spoil



More extensive colonisation of dredging spoil

Set in this area of the site is an isolated sub-mature oak tree near the south-eastern corner; an isolated multi-stemmed ash tree just to the north of the oak; and an ash tree growing next to an elm tree on a raised area close to the fork in the hard tracks. These two closely growing trees have rough grass surrounds of creeping thistle, red fescue, common ragwort, perennial rye-grass, Yorkshire fog, elm suckers, germander speedwell, male fern, creeping soft-grass, common bent, lesser burdock and long-headed poppy.



Sub-mature oak tree



Multi-stemmed ash tree



Ash tree growing next to an elm tree

Running east then north from the closely growing ash and elm trees is a low silty “cliff” of bare ground, probably left over from the dredging operations.



Low silty “cliff”

The short mown open grassland occupies roughly the northern two-thirds of the site. This is on leveled dredging spoil which has been sown with perennial rye-grass. The grassland which remains patchy in places supports perennial rye-grass, Yorkshire fog, common ragwort, broad-leaved dock, white clover, greater plantain, creeping buttercup, spear thistle, black medick, scentless mayweed and common bird’s-foot trefoil.

At the northern end of this habitat on either side of the track the grass is not mown and here there is a longer sward with Yorkshire fog, creeping bent, white clover, creeping thistle, bramble, elm suckers, common bent,

red fescue and spear thistle.



Mown grass habitat

Set in the mown grass area of the site are several sub-mature trees and tall shrubs, as follows: a sub-mature oak tree near the northern end on the western side of the track; a sub-mature oak tree also near the northern end and on the eastern side of the track; a clump of tall hawthorn and grey willow bushes in the south on the west side of the track close to the fork in the track (this has elm suckers at the base); a sub-mature oak tree on the western side of the track a short way north from the track fork; a mature crack willow on the eastern side of the track north of the fork in the track and opposite the above oak tree; and a sub-mature oak and sub-mature sycamore growing on a mound to the east of the track close to the edge of Everglades Lake. Growing with these two trees are Yorkshire fog, false oat-grass, bramble, field horsetail, male fern, common bent, rosebay willowherb and common bird's-foot trefoil.

Running across the grassland and the colonising spoil is a hard surfaced track which forks near the southern end. This is an all-weather path and is well used by people. There is no vegetation.



Sub-mature oak tree in the north



Mature crack willow tree



Tall hawthorn and grey willow scrub near the track fork



Sub-mature oak tree north of track fork



Sub-mature oak tree in the north



Oak and sycamore trees on mound



Hard surfaced track

The additional habitats which are included within the site due to the manner in which the site boundary has been drawn are described below.

- A small part of open water of Duck Lake in the south-western corner

This has marginal plants of soft rush, reedmace and common reed, and blanketweed occurs in the water.

- A small part of open water of Duck Lake in the north-western corner

This has marginal common reed and great willowherb with a small amount of fringed water-lily in the water.

- Tall herb margins with scrub and trees at edges of Duck Lake and Everglades Lake

These have tall common reed, creeping thistle, mugwort, coltsfoot, bramble, creeping bent, meadow vetchling, common ragwort, rosebay willowherb, field horsetail, wild angelica, tufted vetch, red fescue, common bird's-foot trefoil, black medick, Yorkshire fog, spear thistle, hemlock, cat's-ear, hogweed, soft rush, lesser burdock, common nettle, upright hedge-parsley, red campion, male fern and spear thistle. There is scattered to dense saplings, scrub and trees at the edges of grey willow, crack willow, live and dead elm, silver birch, hawthorn, oak and elder.



Tall herb margin to Duck Lake

- Part of a small broad-leaved woodland in the south-eastern corner

This woodland is dominated by silver birch and also present are grey willow, hawthorn, elder and elm. The ground flora has common nettle, hedge garlic, Yorkshire fog, cleavers, bramble, broad-leaved dock, ground ivy, lesser burdock, spear thistle, creeping thistle, male fern and rosebay willowherb.

- Parts of three inlets of open water of the convoluted western shoreline of Everglades Lake along the site's eastern side

Between them these have marginal vegetation of common reed, water mint, yellow iris, clustered dock, false fox-sedge, wild angelica, gipsywort, creeping bent, water figwort, water forget-me-not and reedmace. Blanketweed occurs in the water with some Canadian waterweed and whorled water-milfoil.

- Part of a garden of an adjacent caravan

This is in the very north-eastern corner and it comprises lawn with flowers and shrubs, and there are adjacent trees of oak and sycamore.



Broad-leaved woodland



Inlet of Everglades Lake at eastern side of site

No invasive alien plants, as defined by Schedule 9 of the Wildlife & Countryside Act, 1981 and as amended, were seen on the site. No Japanese knotweed or Himalayan balsam was found at the Country Park by the surveys undertaken to prepare the Biodiversity Management Plan in 2016.

3.3 Protected Species

Badgers

No badger sett and no signs of use by badgers were seen on or near the site. There are no records of badgers on NBN for the site. The Biodiversity Management Plan found no definitive evidence of badgers at the Country Park and the only potential evidence was a possible badger

path in the woodland in the north-western corner, which is well removed from the site.

Water voles, otters and freshwater crayfish

The way in which the site boundary has been drawn means that it includes small areas of open water of Duck Lake in the south-west and north-west, and of Everglades Lake along the eastern side. At these locations, no signs of use by water voles were seen and the silty nature of the water would preclude freshwater crayfish occurring. It is possible that otters may occur at the Country Park, since it is a large area of open water and woodland and scrub, and since otters are now widespread in historic Lincolnshire, but no signs were seen.

NBN had no records of water vole or freshwater crayfish for the site or immediate area. The nearest otter record on NBN was from a locality c2km south-east of the site. A water vole was reported to occur at one of the Park's waterbodies ("The River") but this is located some distance from Everglades Lake and Duck Lake.

Reptiles

No reptiles were seen on the site at the time of the survey, which was carried out at an appropriate time of day, year and weather conditions for reptiles to be active. However, it is considered that the site would not support common reptiles since it is small, isolated amongst woodland, lakes and caravans, and is regularly disturbed by people. The majority of the site has uniform habitat with little of the kind of variation required by reptiles.

NBN had no records of common reptiles (grass snake, slow worm, common lizard) for the site or immediate area. The nearest record of an adder on NBN was from a locality c2km north. There have been reports from caravan residents and fishermen of grass snakes and adders at the Country Park, from Tetley Lake and from the eastern side of the Park where there is a mosaic of open water, short grassland, long grassland, and trees and shrubs.

Barn owls and other birds

The site has no scope for supporting breeding or roosting barn owls since there are no suitable buildings or mature trees with large holes etc. The site is not likely to attract hunting barn owls coming from off-site roosts

since areas of long rough grass are very small and isolated amongst mown grass and trees and shrubs. NBN had no barn owl records for the site or immediate area.

The site has little habitat for use by breeding birds, just the scattered trees and tall shrubs, the woodland in the south-east and possibly the tall herb margins of the open water and the open water itself. The body of the site would not be used by ground nesting birds since it is small, enclosed and overlooked by trees and is regularly disturbed by people and dogs. Birds seen and heard at the time of the survey were restricted to the open water of Duck Lake and Everglades Lake and were mute swan, mallard and Canada goose.

Great crested newts

The site has very small areas of open water habitats by virtue of the manner in which the site boundary has been drawn, and these are small parts of Duck Lake and Everglades Lake. It is not likely that these would be used by breeding great crested newts since they are parts of much larger waterbodies in which there are significant populations of fish and waterfowl.

The site does have limited habitats which great crested newts could potentially use in the terrestrial phase of their life cycle for sheltering, in the form of the woodland and longer areas of grass, and the entire site has suitable habitat for newts to forage over.

Although the wider Country Park has many waterbodies, some are large and all have fish populations and so are not suitable for nests to breed in. Overall, it is considered that great crested newts would not occur at this site.

NBN had no records of great crested newt for the site or immediate area. "Crested newts" were reported to the survey by a caravan owner as sheltering under materials at his nearby plot, but this could mean an adult smooth newt as equally as a great crested newt, and the identity of this newt remains unknown.

Bats

The site has no buildings or built structures which could be used by bats for roosting. None of the trees are mature enough to have developed holes or cracks or other features which could be used by bats for roosting in.

Overall, it is considered that roosting bats do not occur at the site.

The site is likely to be used by foraging bats which are coming from off-site roosts; however such use is considered to be very limited, since the site is small and dominated by short open dry grassland, and is probably insignificant in the context of the wider Country Park, which is extensive and has much open water, woodland and trees and shrubs.

NBN had no records of bats for the site. The nearest record of bats (common pipistrelles) on NBN was from localities c2km east and north.

Other species

The site has very little habitat which could be used by hedgehogs for sheltering in, just the long grass, woodland and tall herbs, although hedgehogs could feed over the entire area. NBN had no records of hedgehogs for the site or immediate area and the nearest hedgehog records were from localities c1-1.5km north and south-east.

Dragonflies and damselflies were hawking over the site. Large white and painted lady butterflies were present, as were rabbits.

4 Assessment of nature conservation importance

4.1 Site habitats and plants

The site is not of significance for the sown grassland and colonising spoil habitats (including the track across them) since these are common and widespread habitat types. The broad-leaved woodland is not of significance since it is small, of limited diversity, it is not ancient woodland, and it is of relatively recent origin; more extensive woodlands occur on the wider Country Park. The trees and shrubs within the site are not of significant interest in habitat terms, since they are not notable species, they are not veteran trees, and trees and shrubs are common in the wider Country Park. The additional habitats within the development site of small areas of open water, lake margins and garden area are artefacts of the way in which the site boundary has been drawn, so they are peripheral to the assessment of the site; that said, they are common and widespread habitats at the wider Country Park and so are not of significant interest.

The site is not of significance for native plants, since those recorded are common and widespread species of woodlands, grasslands, wetlands and

disturbed ground in the British lowlands. The site is not of significance for invasive alien plants since none occur.

4.2 Protected species

The site is not of significance for badgers; water voles; otters; freshwater crayfish; reptiles; barn owls; breeding or sheltering great crested newts; or roosting or foraging bats.

The site is not likely to be of significance for breeding birds since the site is small; habitats which could be used by nesting birds are of very limited extent; the site has no habitats which could be used by specially protected birds; and the site habitats are found elsewhere on the Country Park and so the site habitats are not unique. The site is not likely to be of significance for hedgehogs.

5 Potential ecology constraints

5.1 The proposed development

The proposed development is for the re-routing of the existing hard surfaced track to the centre of the site (the current track is roughly west of centre), and the placing of a number of new caravans on either side of the re-routed track. A turning head for emergency vehicles would be created at the southern end of the track. The proposals are shown in Appendix 2.

The caravans would have a c6m spacing, as now, and the land between would be a combination of short mown grass and parking hardstandings, as seen elsewhere at the Country Park. Also as elsewhere it may be expected that land around the caravans would be gardened to some extent, and fishing pegs may be installed at the edge of the lakes.

The woodland in the south-eastern corner would be retained, as would the lake edge habitats. As far as possible, existing trees and large shrubs would also be retained amongst the new caravans.



Typical existing Woodlands Caravans

5.2 Constraints from habitats and plants

There are no constraints to the proposed development of this site from the habitats.

There are no constraints to proposed development from native plant species or invasive alien plants.

No statutory or non-statutory nature conservation site would be affected by the development of this site.

5.3 Constraints from protected species

There are no constraints from badgers; water voles; otters; freshwater crayfish; reptiles; barn owls; breeding or sheltering great crested newts; roosting or foraging bats; or hedgehogs.

Breeding birds would only be a constraint if any trees or shrubs were to be removed. The constraint posed by breeding birds however only applies during the bird nesting season, which is taken to be March to August inclusive. Nesting birds are not a constraint outside the breeding season ie September to February inclusive.

6 Mitigation and Enhancements

6.1 Site habitats and plants

No mitigation is needed for the loss of the sown grassland or the

colonising spoil habitats, which are the habitats which would be lost to this development. As far as possible, through a comparison of the pre-development site with the post development proposals, existing trees and large shrubs would be retained in the development, to provide landscaping, shade and habitat. No habitat enhancements are needed.

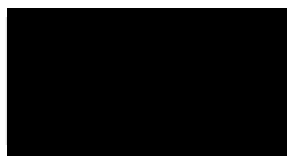
No mitigation is needed for native plants or invasive alien plants. No enhancements are needed for native plants.

6.2 Protected species

No mitigation is needed for badgers; water voles; otters; freshwater crayfish; reptiles; barn owls; breeding or sheltering great crested newts; roosting or foraging bats; or hedgehogs.

Standard mitigation for nesting birds would be appropriate if any potential nesting habitat is to be removed during the bird breeding season. If clearance works are proposed for during the nesting season, then prior inspections of the affected habitats should be undertaken to ensure that no active nests are present. If any are found, they would have to be marked and buffer zones established, and work would have to take place elsewhere or be temporarily suspended, until the young birds have fledged and left the nest, and after making sure that no other brood is established. No mitigation for nesting birds is needed outside the bird breeding season.

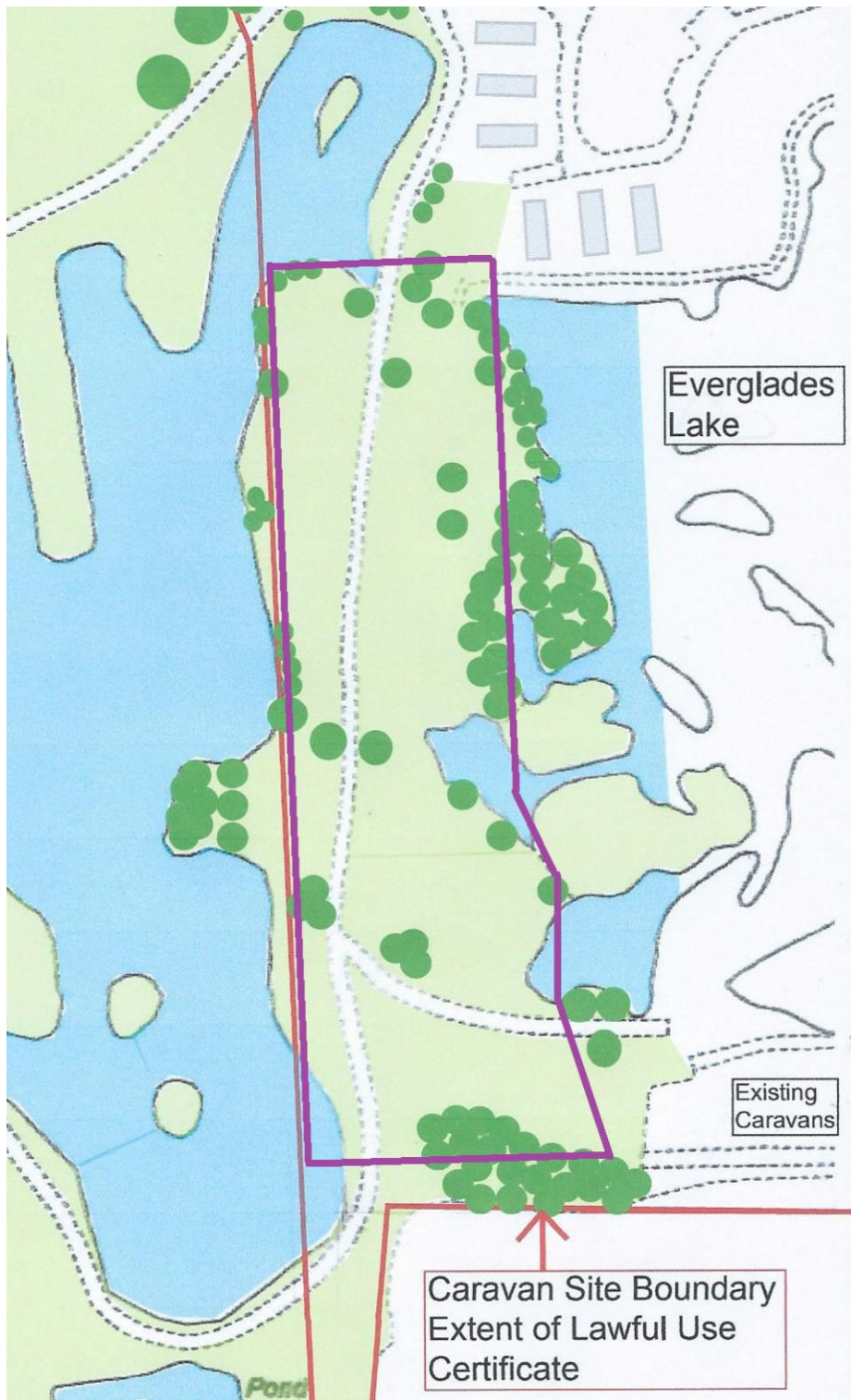
The only potential enhancement which is recommended for protected species is the provision of bat roosting boxes, as given in section 7.5 of the Biodiversity Management Plan.



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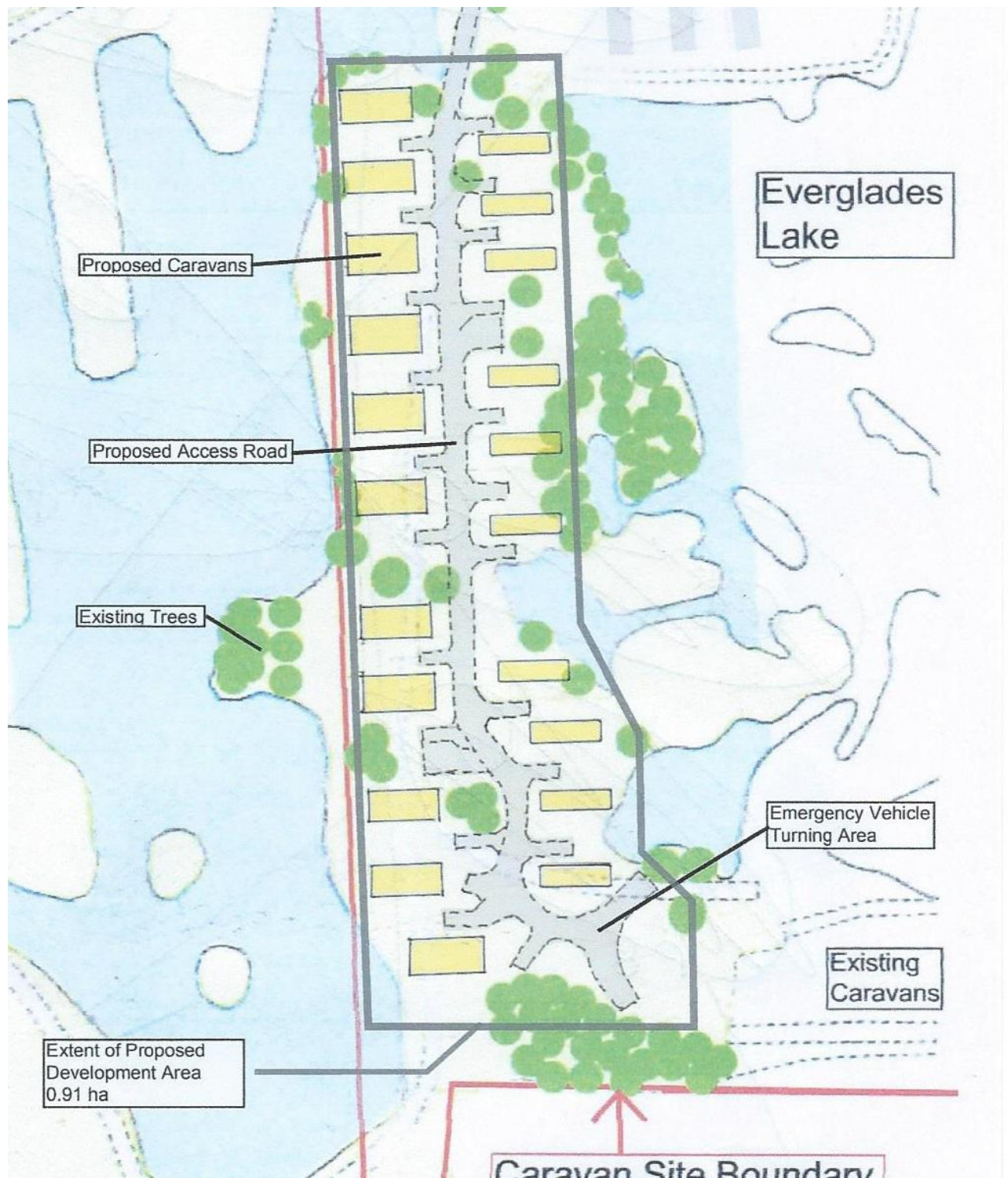
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Appendix 1: Site plan (existing)
Approximate development site boundary shown by purple line



Plan provided by Roger Harden

Appendix 2: Development proposals



Plan provided by Roger Harden