



**ROSEBANK, KINGSMILL ROAD, WREXHAM
BIOSECURITY RISK ASSESSMENT**

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EXECUTIVE SUMMARY

Cheshire Ecology Ltd. was commissioned by Mrs Susan Hill on 4th April 2023 to prepare a Biosecurity Risk Assessment for a proposed development site at 'Rosebank', 173, Kingsmill Road, Wrexham LL13 0NS.

The site was originally part of the rear garden of 'Rosebank'. The site is approximately rectangular and includes the new access track from Kingsmill Road.

The site is approximately 3m higher than the original house and was originally a domestic lawn, surrounded by hawthorn *Crataegus monogyna* and stag's horn sumach trees *Rhus typhina*. Part of the site was cleared last year, but we would still expect there to be some evidence of invasive plants if they were present.

The survey was carried out by Dr Martin Page MCIEEM on 5th April 2023. Martin is an experienced botanist, with a Bachelor's degree in botany and a PhD in plant ecology.

The site was thoroughly search for evidence of invasive plants. There were two locations where *Crocosmia x crocosmiiflora* was growing. This is not surprising because montbretia is a common garden plant. It was added to Schedule 9 of the Wildlife and Countryside Act 1981 in 2014 and it is illegal to introduce it into the wild.

The main problem with montbretia is that it produces numerous corms, which are easily spread with soil. The corms can be extremely small, but still retain the ability to produce aerial shoots if they are exposed to light.

Ground elder *Aegopodium podagraria* was also present in several places. This is also an aggressive coloniser of bare ground but is not included on Schedule 9.

There was no evidence of Japanese knotweed *Fallopia japonica*.

A new herbaceous border should be planted with Shasta daisy *Leucanthemum x superbum*, night-flowering stocks *Matthiola longipetala*, red campion *Silene dioica*, ice plant *Sedum spectabile*, Michaelmas daisy *Aster novi-belgii*, dame's violet *Hesperis matronalis*, evening primrose *Oenothera biennis* and jasmine *Jasminum officinale*. The flower bed should be regularly maintained and replanted annually if necessary.

We recommend that a species-rich hedgerow should be planted on the top of the earth bund, that marks the eastern boundary of the new drive. This should include hawthorn, sloe *Prunus spinosa*, guelder rose *Viburnum opulus*, holly *Ilex aquifolium*, wild privet *Ligustrum vulgare*, dog rose *Rosa canina* and field maple *Acer campestre*.

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1 INTRODUCTION

- 1.1.1 Cheshire Ecology Ltd. was commissioned by Mrs Susan Hill on 4th April 2023 to prepare a Biosecurity Risk Assessment for a proposed development site at ‘Rosebank’, 173, Kingsmill Road, Wrexham LL13 0NS.
- 1.1.2 The centre of the site is located at OS Grid Reference SJ34670 49258 (see Figure 1), at a height of approximately 55m AOD. The site is bounded to the west by ‘The Orchards’, to the north by ‘River Close’, to the east by the River Gwenfro/Afon Gwenfro and to the south Kingsmill Road. The proposed development site is in the rear garden of ‘Rosebank’.



Figure 1: Site Location

1.2 Context

- 1.2.1 The site was originally part of the rear garden of ‘Rosebank’. The site is approximately rectangular and includes the new access track from Kingsmill Road. The site is approximately 3m higher than the original house and was formerly a lawn, surrounded by hawthorn trees *Crataegus monogyna* and several stag’s horn sumach *Rhus typhina*.

1.3 Previous surveys

- 1.3.1 Abor Vitae carried out a Preliminary Ecological Appraisal (PEA) of the site on 24th July 2019. The survey found no evidence of badgers. It recommended that one bat box and an integrated bat brick should be installed. It also recommended that one sparrow terrace should be installed. There was no mention of any invasive plants.

2 METHODS

2.1 Survey

- 2.1.1 The survey was carried out by Dr Martin Page MCIEEM on 5th April 2023. Martin is an experienced botanist, with a Batchelor's degree in botany and a PhD in plant ecology. He has written four books about garden plants and gardening and is a consultant editor for the RHS A-Z *Encyclopaedia of Garden Plants*. He was formerly the Deputy Editor of *Water Gardening Magazine* and News Editor of the RHS journal *The Garden*. He has a broad knowledge of garden plants and has worked as an ecological consultant for fifteen years.
- 2.1.2 Plant names follow the Fourth Edition of the *New Flora of the British Isles* (Stace, 2021). The common name of the plant is stated first and is followed by the Latin name, on the first occasion that it is used. Only the common name is used subsequently.
- 2.1.3 The surveyor is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and adheres to that organisation's Code of Professional Conduct.
- 2.1.4 The survey area was searched for evidence of any invasive plants or animals.

2.2 National and Local Planning Policy

- 2.2.1 Local authorities (and other public bodies) have a duty to conserve biodiversity under the Natural Environment and Rural Communities Act 2006. The local authority must take the protection of priority habitats into consideration when it is making a planning decision.
- 2.2.2 The National Planning Policy Framework (Department for Communities and Local Government, 2012) states that local planning authorities should "promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan."

2.3 Biodiversity Nett Gain

- 2.3.1 Biodiversity Nett Gain (BNG) is one of the most significant changes to occur to the planning process since the Town and Country Planning Act was introduced in 1947. However, planning permission for this development was granted before the 2022 Environment Act became law.

2.4 Limitations

- 2.4.1 Most herbaceous plants could be identified with certainty and bluebell *Hyacinthoides non-scripta* leaves were already visible in suitable habitats. Some of the plants may have been hybrid bluebell *H. x massartiana*, but there were no flowers available to confirm their identity.
- 2.4.2 Part of the site was cleared last year, but we would still expect there to be some evidence of invasive plants if they were present.

3 RESULTS

3.1 Invasive plants

- 3.1.1 The site was thoroughly search for evidence of invasive plants. There were two locations where *Crocosmia x crocosmiiflora* was growing. This is not surprising because montbretia is a common garden plant. It was added to Schedule 9 of the Wildlife and Countryside Act 1981 in 2014 and it is illegal to introduce it into the wild.
- 3.1.2 The main problem with montbretia is that it produces numerous corms, which are easily spread with soil. The corms can be extremely small, but still retain the ability to produce aerial shoots if they are exposed to light.
- 3.1.3 Ground elder *Aegopodium podagraria* was also present in several places. It colonises bare ground but is not included on Schedule 9.
- 3.1.4 There was no evidence of Japanese knotweed *Fallopia japonica*.

4 CONCLUSIONS

4.1 Invasive plants

- 4.1.1 The montbretia won't present a problem if it can be kept on site. Some of the plants are growing in the area where the new house will be built. The turf has been removed in this area, but there is no indication that the corms have been disturbed. It should be possible to confine the plant to a small area of the garden.

4.2 Enhancing the biodiversity of the site

- 4.2.1 This is quite a small site and there aren't many opportunities to plant wild species near the house. We therefore recommend planting wild species along either side of the access drive. The new house will be built in the existing garden, while the drive is bare soil and rubble.

5 RECOMMENDATIONS

5.1 Invasive plants

- 5.1.1 We recommend that all of the montbretia plants and the dormant corms are moved to another part of the garden, where they won't be disturbed. All of the soil within 100cm of the growing plants and dormant corms will be removed and placed in the same area. The patches of montbretia and the transplanted corms will be marked with red boundary tape, so that there is no risk that they will be moved elsewhere by mistake. This will be known as 'the exclusion area' and should be left un-disturbed until the building work has been completed.
- 5.1.2 Any tools that are required to move the montbretia will be carefully washed in the exclusion area. No soil or rubble will be taken off site and any machinery that is used will be jet washed before it is taken off site.
- 5.1.3 The site manager will be made aware of the risk and the legal consequences of allowing the plant to be spread.
- 5.1.4 The montbretia plants and their corms will need to be removed under the supervision of an experienced botanist.
- 5.1.5 Ground elder is very invasive, even though it isn't included on Schedule of the Wildlife and Countryside Act 1981. Any visible plants should be spot treated with Roundup, or another glyphosate-based herbicide.

5.2 Bats

- 5.2.1 At least one bat box will be installed on the house. The most suitable external box for a building is the Schwegler Flat Bat Box 1FF. These are open at the bottom and are maintenance free. It should be installed so that it is at least 4m from the ground.
- 5.2.2 The most suitable internal box is the Schwegler Bat Tube 1FR. These can be purchased singly or in a group and can be painted so that they blend in with the rest of the building. Schwegler boxes are made from a material called wood-concrete and are more durable than the cheaper wooden commercial designs. This design is also maintenance-free.
- 5.2.3 The mature ash tree *Fraxinus excelsior* is unfortunately unsuitable for the installation of a bat or bird box. Ash trees are very vulnerable to the recently introduced ash dieback disease. A small number of ash trees will probably survive, but the great majority will succumb.

5.1 Birds

- 5.1.1 Birds and their nests are protected from disturbance during the breeding season. Trees and scrub should preferably be removed outside the breeding season, which extends from the beginning of March to the end of August. If this is not possible the trees or shrubs will be removed under the supervision of a suitably qualified ecologist.
- 5.1.2 The completed development should, where possible, be planted with native species, or those that have an ecological value. Ecologically valuable plants include those that produce nectar, fruit (such as guelder rose) or provide cover from predators, such as domestic cats. The average domestic cat has been calculated to kill approximately fourteen birds or small mammals per year (Churcher and Lawton, 1987) and 30% of house sparrow deaths are due to predation by this domestic animal. Shrubs such as *Pyracantha* 'Orange Glow' are armed with thorns and will provide a certain amount of cover for garden birds such as the blackbird. Sloe and hawthorn are also useful because they bear thorns and are less likely to be accessible to cats.
- 5.1.3 House sparrows have experienced a dramatic decline in numbers due to the loss of habitat, predation by cats, and a lack of suitable nesting sites. Sparrow terraces are one of the best ways to provide nesting opportunities for the birds because cats can't reach them. The term 'terrace' comes from the fact that the boxes are provided with a series of holes for access.
- 5.1.4 The 1SP Sparrow Terrace can be built into the wall or attached to the surface of clad, steel-frame structures. The majority of Schwegler bird boxes are made from a wood-concrete mixture ('Woodcrete'). This is rot proof and can last for a considerable length of time. The boxes are available in a stone colour or brown. Alternatively, they can be painted to match the colour of the masonry. Two sparrow terraces will be attached or otherwise incorporated into the house.

5.2 Enhancing the biodiversity of the site

- 5.2.1 We visited the site in early April 2023, when several of the herbaceous plants would have been inconspicuous. The current landscaping proposal should be retained, but we recommend that some night flowering plants should be incorporated in the planting scheme to attract moths.
- 5.2.2 Moths are one of the main prey species for bats. The site should be planted with Shasta daisy *Leucanthemum x superbum*, night-flowering stocks *Matthiola longipetala*, red campion *Silene dioica*,

ice plant *Sedum spectabile*, Michaelmas daisy *Aster novi-belgii*, dame's violet *Hesperis matronalis*, evening primrose *Oenothera biennis* and jasmine *Jasminum officinale*. The flower beds should be regularly maintained and replanted annually with these species if necessary.

- 5.2.3 A species-rich hedgerow will be planted on the top of the earth bund, that marks the eastern boundary of the new drive. This should include hawthorn, sloe *Prunus spinosa*, guelder rose *Viburnum opulus*, holly *Ilex aquifolium*, wild privet *Ligustrum vulgare*, dog rose *Rosa canina* and field maple *Acer campestre*. Annual trimming should be avoided because it removes the fruit that birds and other animals rely upon.
- 5.2.4 If new trees are planted on the site, they should be native species. Suitable plants would include silver birch *Betula pendula*, field maple and mountain ash *Sorbus aucuparia*. All of these species are suitable for a small garden.
- 5.2.5 We do **not** recommend planting Leyland cypress *Cupressus leylandii*. It has negligible ecological value and is too large for most gardens. It draws large amounts of water from the soil and the resulting shade prevents many more desirable plants from growing.

6 REFERENCES

Alexander, Keith & Butler, J. & Green, T. (2006). The value of different tree and shrub species to wildlife. *British Wildlife*. 18. 18-28.

Arbor Vitae (2019). *Preliminary Ecological Appraisal*. Rosebank, Kingsmill Road, LL13 ONS.

British Standards Institution (2013). BS42020:2013. *Biodiversity – Code of Practice for Planning and Development*.

Churcher and Lawton (1987). Predation by domestic cats in an English village. *Journal of Zoology*, London, 212, pp 439-455.

Collins, J. (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. Third Edition. Bat Conservation Trust.

Dorling Kindersley (2016). RHS A-Z *Encyclopaedia of Garden Plants*. Fourth Edition.

Edgar, P., Foster, J. and Baker, J. (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation. Bournemouth.

JNCC (2010). *Handbook for Phase 1 habitat survey – A technique for environmental audit*. Peterborough.

Royal Society for the Protection of Birds (2021). *Birds of Conservation Concern* (4).

Stace, C. (2021). *New Flora of the British Isles*. Fourth Edition. Cambridge University Press.

APPENDIX A: PHOTOGRAPHS



Photograph 1: The site is dominated by a large ash tree.



Photograph 2: There are limited opportunities for planting native species in the garden.



Photograph 3: We recommend planting a new species-rich hedgerow along the top of the earth bund.



Photograph 4: Montbretia is a Schedule 9 invasive plant species. It produces large numbers of corms, which are easily spread in soil.