ALTEMAR

Marine & Environmental Consultancy

Ecological Assessment of Kaleidoscope Festival, Russborough, House, Co. Wicklow.

27th June 2025

Submitted by: Altemar Ltd.
Submitted to: Event Fuel

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Introduction

The Kaleidoscope Festival is a three-day family event that is due to take place on July 4th to July 6th 2025 at Russborough House in Blessington, Co. Wicklow.

Following discussion with Wicklow County Council it was stated by Wicklow County Council that "*A qualified and experienced ecology consultant shall be appointed to prepare an ecological report, including walkover survey of the event site, prior to the event to include details of habitats (mapped) and species on site and an impact assessment of the festival supported by mitigation measures. The report shall be submitted to and agreed by the Local Authority and the agreed mitigation measures shall be included in the Final Event Management Plan*."

Altemar have been requested to undertake a site appraisal and outline the details above. The following report provides an ecological assessment for the site and of the potential impacts of the Kaleidoscope Festival.

A site assessment was carried out by Bryan Deegan (MCIEEM) on the 11th June 2019, 4th June 2022, 21st June 2023, 14th June 2024 and 20th June 2025 and a walkover assessment carried out comparing the proposed programme and the habitats on site. Discussions took place prior to and during and post the site visit to glean information on each activity and the potential impacts of the activity. It is important to note that during the assessment that as Altemar has been on site since 2019 evidence of changes on site were also noted.

Mitigation measures were discussed with EventFuel and festival elements of altered where potential conflicts with biodiversity were foreseen. It should be noted that no permanent construction, including the placing of permanent roads will be carried out. The proposed works are all temporary with the aim of being easily removable and a "leave no trace" methodology. All of the proposed events, car parking and camping will be carried out on existing agricultural land that is managed. It is not proposed to remove hedgerows, trees or remove soil from any part of the festival. Protective matting will be placed in high traffic areas.

As seen in figures 1 and 2, the festival footprint is primarily restricted to key agricultural grassland areas and existing footpaths and roads on site. There will be no removal of trees or permanent construction on site. All works are of a temporary nature will be removed immediately after the event. It should also be noted that all pond areas are restricted and fencing was in place to restrict access.

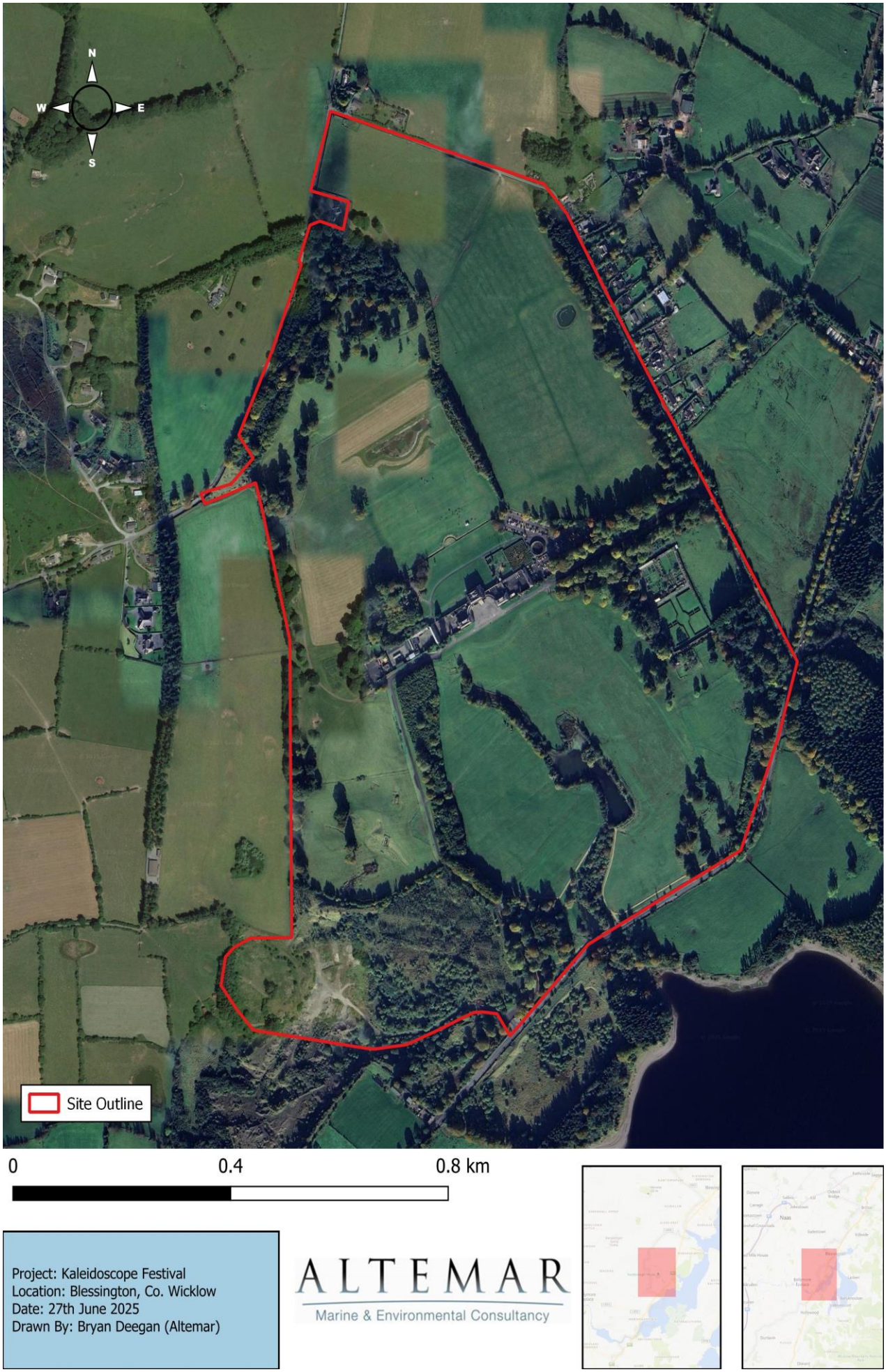
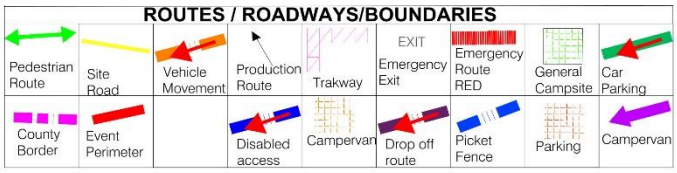
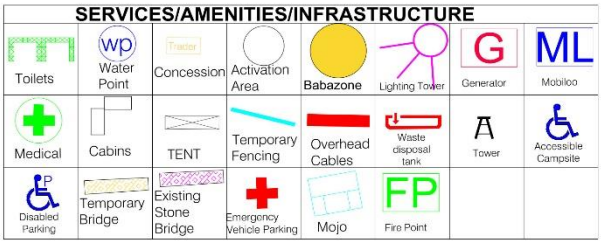


Figure 1. Russborough House and Grounds





Event	Kaleidoscope 2025
Location	Russborough House
Drawing	Site
Scale	1:2500
Date	June 27, 2025
Drawn By	Fiona McGinn

Drawn for Event Fuel t/a FUEL
11 Camden St Lower, Dublin 2
Enquiries to brian@fuelhq.ie

DRAFT
Gridlines 50x50m

Figure 2. Proposed festival layout.

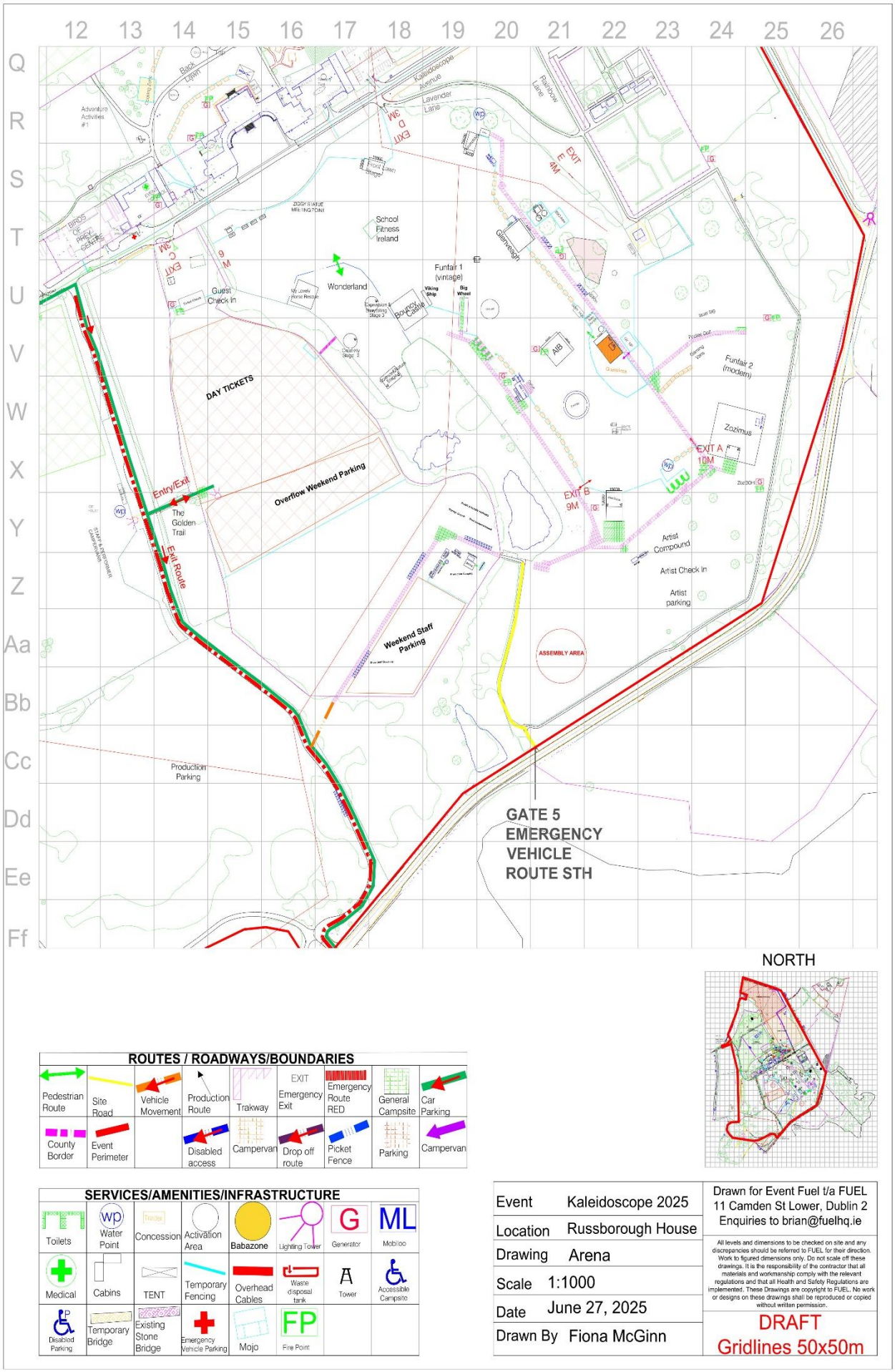


Figure 3. Proposed Arena layout.

Pre-survey Data Search and consultation

A pre survey data search was carried out. This included examining records and data from the National Parks and Wildlife Service, National Biological Records Centre, in addition to aerial, 6 inch and satellite imagery.
No protected species have been noted by NPWS within the proposed festival area. However, a Badger (*Meles meles*) was noted immediately to the south west outside of the festival area on the far side of the road between towards Blessington Lake. Species recorded in the National Biodiversity Data Centre were Barn Swallow (*Hirundo rustica*), Black-billed Magpie (Pic*a pica*), Black-headed Gull (*Larus ridibundus*), Common Coot (*Fulica atra*), Common Moorhen (*Gallinula chloropus*), Common Raven (*Corvus corax*), Eurasian Teal (*Anas crecca*), Eurasian Wigeon (*Anas penelope*), Greater Scaup (*Aythya marila*), Grey Heron (*Ardea cinerea*), House Martin (*Delichon urbicum*), Little Grebe (*Tachybaptus ruficollis*), Mallard (*Anas platyrhynchos*), Mute Swan (*Cygnus olor*), Stock Pigeon (*Columba oenas*), Tufted Duck (*Aythya fuligula*), Water Rail (*Rallus aquaticus*), Comma (Polygonia c-album), Red Admiral (*Vanessa atalanta*), Small Tortoiseshell (*Aglais urticae*), Speckled Wood (*Pararge aegeria)*, Blue-tailed Damselfly (*Ischnura elegans*), Common Blue Damselfly (*Enallagma cyathigerum*) and Four-spotted Chaser (*Libellula quadrimaculata*).

The festival location is not in a designated conservation site. However, it is close to the Pollaphouca Reservoir SPA and the Pollaphouca Reservoir pNHA. Features of interest of the SPA are Greylag Goose (*Anser anser*) [A043] and Lesser Black-backed Gull (*Larus fuscus*) [A183]. As outlined in the Site Synopsis in Appendix I "Poulaphouca Reservoir is of national importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site.". Grelag Goose is a winter migrant. In addition, "The site is also notable as a winter roost for gulls, especially Lesser Black-backed Gull." It should be noted that the festival is not being carried out during the over wintering season and it would not be expected that the overwintering bird population would be present.

A site assessment was carried out by Bryan Deegan (MCIEEM) on the 11th June 2019, 4th June 2022, 20th June 2023, 14th June 2024 and 20th June 2025. A walkover assessment carried out comparing the proposed programme and the habitats on site visit to glean information on each activity and the potential impacts of the activity. Impacts on biodiversity and Mitigation measures were also discussed with Event Fuel.

Surveyor Information

The field survey was carried out by Bryan Deegan (MCIEEM.) and Gayle O'Farrell. Bryan holds a MSc in Environmental Science, BSc in Applied Marine Biology, Diploma in Applied Aquatic Science and has over 30 years practical fieldwork experience in terrestrial and aquatic habitats. Bryan founded Altemar in 2001 as an environmental consultancy working for State, Semi-State and private sector clients in the areas of environmental and aquatic consultancy. Gayle O'Farrell (BSc (Hons.) Agri-Environmental Sciences) is skilled in bat detection through static detector surveys, dusk emergence, and down re-entry surveys. She is also skilled in habitat assessment and has undertaken flora/invasive species surveys, breeding/wintering bird surveys and terrestrial mammal surveys to produce numerous ecological assessments on a range of residential, industrial and commercial projects.

Field Study

A walkover assessment was carried out on the 11th June 2019, 4th June 2022, 20th June 2023, 14th June 2024 and 20th June 2025. The following Fossitt (2000) habitat assessment (Figure 5) is based on the 2025 site visit. No events are proposed within the fenced area of the ponds and additional measures have been placed around the ponds to prevent access. No events are proposed in the woodland areas and existing paths will be used.

Figure 3. SPA boundary in the vicinity of the proposed development (NPWS badger location-outside festival).

Figure 4. pNHA boundary in the vicinity of the proposed development (NPWS badger location-outside festival).

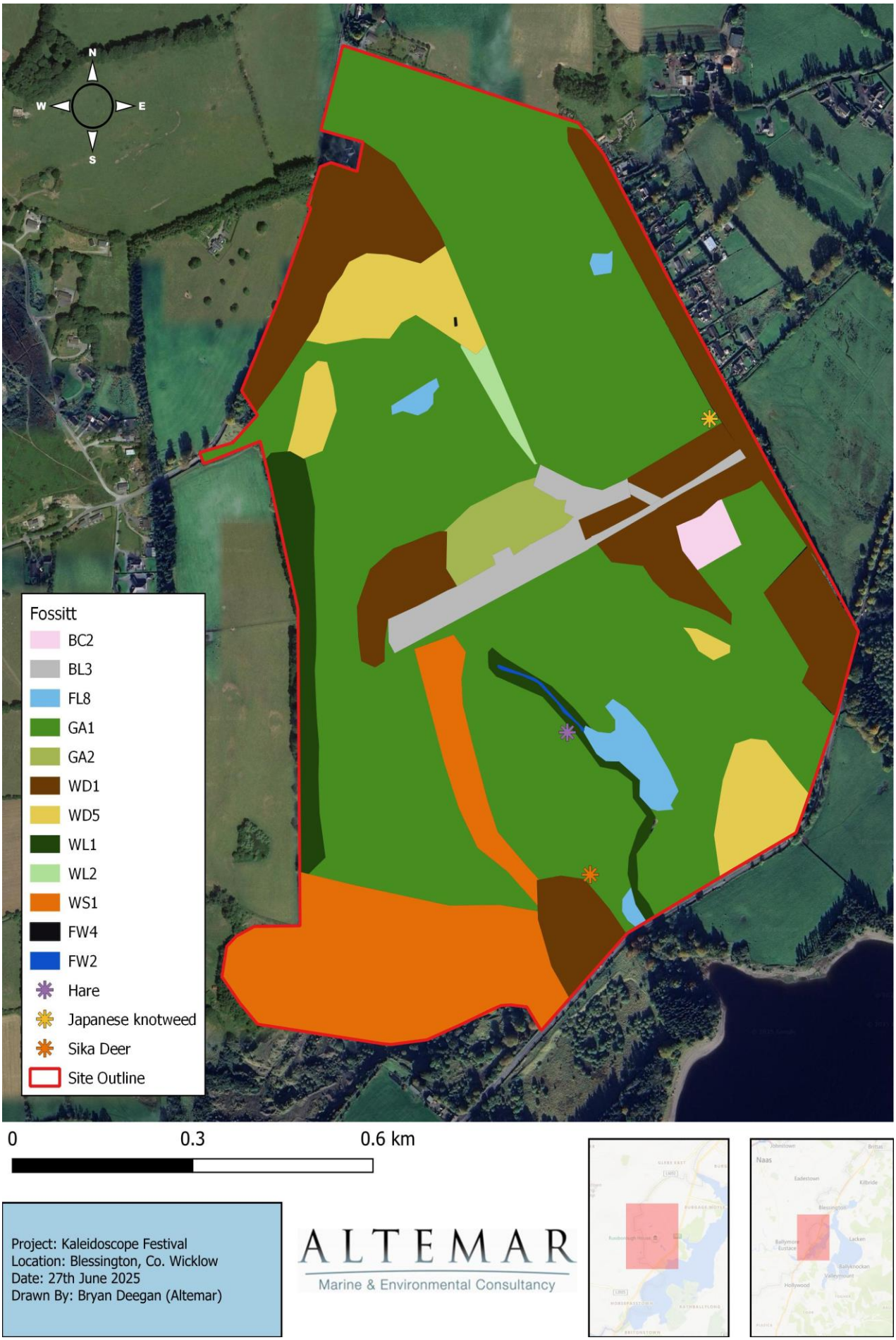


Figure 5. Fossitt (2000) habitat map and locations of items of biodiversity importance.

The following habitats were noted in the vicinity of the festival area where works are proposed:

GA1-Agricultural Grassland

When Figure 2 is compared to Figure 5 and as observed in Plates A and B the vast majority of the festival area consists of agricultural grassland. As seen in plate A and plate B these areas have been cut to accommodate the festival. On previous visits this was cut for silage use which would be seen as a standard agricultural practice on these fields. The main areas where flora were noted were at the fringes of these habitats or where they were yet to be cut. Species biodiversity was poor and included creeping buttercup (*Ranunculus repens*), white clover (*Trifolium repens*), red clover (*Trifolium pratense*), dandelion (*Taraxacum spp*.), thistles (*Cirsium vulgare*), docks (*Rumex spp*.) and nettle (*Urtica dioica*). These species were also noted in the Scattered trees and parkland habitat which appears to have a similar agricultural regime. No species of conservation importance were noted in this area.

It is important to note that in the vicinity of the pond land drains have been put in 2023 prior to the 2023 site visit. These drains which are approximately 750mm wide and 500mm-750mm deep with approximately 50mm round stone pebbles. These 5 land drains lead directly into the main ponds. In discussion with Event Fuel these drainge works were carried out by Russborough House. These drains now form a direct pathway to the pond and form an increased pollution risk to the aquatic environment from the event paticularly as a result of petrochemicals from vehicles and generators that will be in the vicinity of the pond.

Plate A. GA1-Improved Agricultural grassland

FL8 Other artificial lakes and ponds

There are four ponds within the wider festival area. These are within the agricultrial grassland areas. The larger pond in the southern field has a post and wire fence and is corderened off, while the other ponds has harras fencing. All of these areas are out of bounds and are fenced off to the public.

During the 2024 survey, a large infestation of water fern was recorded in the southern central pond. However, this was subsequently treated, and no visible mats of water fern were observed in the pond during the 2025 survey. Swans and moorhens were recorded in the pond in 2025. A stream **(FW2-Depositing/Lowland rivers)** flows through the southern central portion of the site which connects to the main southern pond. This areas is also out of bounds and fenced off to the public.

Plate B. Southern main pond

ate C. North easter n Pond

Plate D. Northern Pond

Plate E. FW2 Depositing/Lowland rivers

Plate F. Drains leading to pond

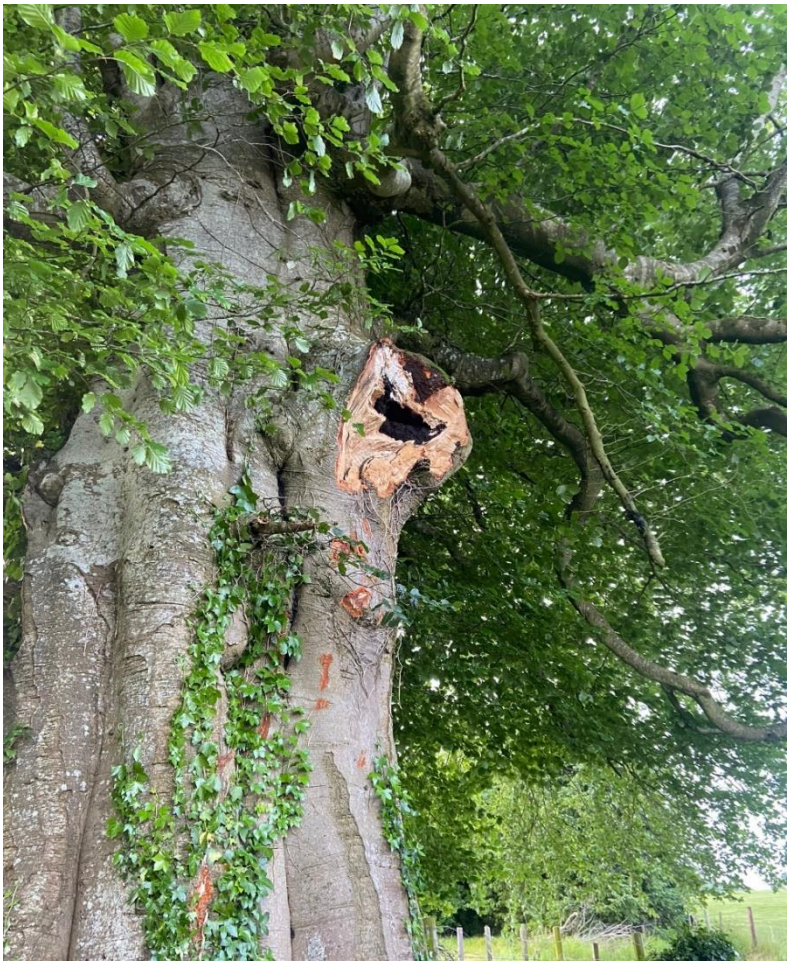


Plate G: Trees of bat roosting potential on site with cracks and cavities (Beech within the WD5 habitat).

Plate H. Japanese Knotweed located to the east of the site behind fencing.

Plate I. Temporary pedestrian/vehicle trackway laid to minimise impact on grassland

Impact assessment and mitigation

Designated sites

Impacts

The site is proximate to the Pollaphuca Reservoir SPA and pNHA. The features of interest of the SPA are the overwintering population of Greylag Goose and Black Headed Gull. The overwintering population will not be present at the time of the festival and a “leave no trace” mentality will be in place. Kayaking is proposed on the lake outside the wintering bird season. No impact on the designated sites is foreseen.

Mitigation for designated sites

None required for the festival.

Habitats

Impacts

The entire area that will be impacted by temporary structures, car parks and camping is primarily agricultural land. No permanent structures or alterations to the site will be carried out. Access through the site will involve an increase in footfall on existing paths, including those in forests and across agricultural land. Potential impacts would include the following:

Mammals

Irish hare (*Lepus timidus hibernicus*) and sika deer (*Cervus nippon)* were noted on site and it would be expected that these would be displaced during the event due to disturbance. No badger setts were observed in the event area. No detailed survey of the bat fauna for the site has been carried out. However, it is expected that given the nature of the site and surrounding buildings and mature trees that bats would be present. Direct lighting of treelines, ponds and buildings may deter bats from foraging or may impact on bat roosts if present. Mitigation is required.

Birds

Birds on site in the vicinity of the ponds and woodland would be sensitive to disturbance. Direct lighting may impact on nesting birds if present. It would be expected that the human disturbance will gradually build over several weeks on site and the numbers of people on site increase and works commence, which would allow time for birds to become accustomed to the increased disturbance. However, mitigation is required in relation to sensitive areas on site including the ponds and treelines and hedgerows. on site.

Trees

The mature trees on site would be considered to be of local, if not county, importance. It is considered that there will be an increase in footfall would not be significant as existing path will be used. However, where cars access fields through existing gates or where parking is proposed in the parkland areas there is potential for impact on tree roots. However, as the is a working agricultural area all access would be regularly used by tractors. Mitigation needs to be in place in sensitive locations to protect trees. All Impacts would be deemed to be temporary, short term and not significant and for the duration of the build up, the event and the demobilisation.

Mitigation

Altemar discussed the impacts of the festival with Event Fuel and many items have been addressed through initial design and consultation.

However, the following will be implemented:

1) Lighting is necessary on site primarily in the car park, the perimeter of the camping areas and at the toilet blocks. Lighting will be also near the main event area but these will be turned off and will not remain over-night. As this event is for three days no significant impact would be predicted on bats in the long term. However, mitigation would involve ensuring that lighting will not be directed towards treelines, ponds or onsite buildings but will be directed towards open areas. In addition, lighting should be turned off as soon as practical to ensure that bats if deterred at dust, do emerge pre-dawn to forage.
2) Ponds will be fenced off to not allow human or vehicular access to areas with long grass surrounding the ponds (This was carried out prior to the site visit). These fences in the northern ponds should allow sufficient space for hares to move between in or out of the area.
3) Cars will not be parked under tree canopies in the car parling areas to protect tree roots.
4) The area of Japanese knotweed will be cordoned off to the public/cars. It is important to note that the Japanese knotweed has undergone treatment however signs of new growth were noted during surveying.
5) All generators are internally bunded. Generators that have been indicated to be present in the vicinity of the drains between the metal trackways and the pond will be moved to the far side of the metal trackway at least 10m from drains on site. Spill kits or absorbent material are on site to immediately clean up oil spills from traffic. A spill kit will be present at each generator within 50m of the pond.
6) As the drains on site form a pathway to the pond, as part of an immediate pollution control response in the event of fuel spill, soil and machinery will be on site and will place a soil bund on the pond edge any drain in the vicinity of the spill. This soil will be battered back to form an impermeable layer to prevent water entering the pond from the drain. The content of the drain will be cleaned by a pollution control company to ensure fuel does not enter the pond.
7) The site will be restored in full to pre-festival condition.
8) It is recommended that additional signage is placed on the main pond to restrict access.

Conclusions

1) Habitats and species of conservation importance are not located within the direct festival area.
2) Designated sites are proximal to the site but, the features of interest are overwintering bird populations and will not be impacted.
3) No records of species of conservation importance were recorded by NPWS within the festival area.
4) Mitigation measures are only required to ensure that birds and bats are not impacted by light spill, that water features on site are protected from traffic and that the site is restored to pre-festival condition.

Appendix 1. Site Synopsis Pollaphouca Reservoir SPA

Poulaphouca Reservoir SPA, located in the western foothills of the Wicklow Mountains, was created in 1944 by damming of the River Liffey for the purpose of generating electricity from hydropower. The reservoir covers an area of approximately 20 square kilometres and is the largest inland water body in the mid-east and south-east regions. The reservoir receives water from two main sources, the River Liffey at the northern end, and the Kings River at the southern end. The exit is into the River Liffey gorge at the western end. Underlying the reservoir are sands and gravels deposited during the last glaciation. The shores of the lake are mostly sandy. When water levels are low the exposed lake muds are colonised by an ephemeral flora of annual plant species. Wet grassland areas occur in sheltered bays around the lake but especially in the northern part. Reed Canary-grass (Phalarisarundinacea) is the main grass species present, but other plant species characteristic of wet grasslands occur, including Creeping Bent (Agrostisstolonifera), Meadowsweet (Filipendulaulmaria), Yellow Iris (Irispseudacorus) and Water Mint (Menthaaquatica). Sedges (Carex spp.) are locally common, while Rusty Willow (Salixcinerea subsp. oleifolia) scrub is often found associated with the wet grassland. In some places the water washes against grassy banks which are generally less than a metre high, and in a few places there are steep sand and clay cliffs, up to 15 m high - these are remnants of the old River Liffey channel. In many places the banks are actively eroding, and a strip of conifers has been planted around much of the perimeter of the reservoir in an attempt to stabilize the banks. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Greylag Goose and Lesser Black-backed Gull. Poulaphouca Reservoir is of national importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. A mean peak of 701 individuals occurred during the five seasons 1995/96 to 1999/2000. Other waterfowl species occur in relatively low numbers, including Whooper Swan (22), Wigeon (180), Teal (107), Mallard (186), Goldeneye (22), Cormorant (11), Great Crested Grebe (8), Curlew (86) and Mute Swan (11). The site is also used by Grey Heron (6). The reservoir attracts roosting gulls during winter, most notably a large population of Lesser Black-backed Gull (651), which in Ireland is rare in winter away from the south coast. Black-headed Gull (915) and Common Gull (183) also occur. Breeding birds at the site include Great Crested Grebe (several pairs), which is localised in its distribution in eastern Ireland, as well as Snipe and Lapwing.

The principal interest of the site is the Greylag Goose population, which is of national importance. A range of other wildfowl species also occurs, including Whooper Swan, a species that is listed on Annex I of the E.U. Birds Directive. The site is also notable as a winter roost for gulls, especially Lesser Black-backed Gull. Part of Poulaphouca Reservoir SPA is a Wildfowl Sanctuary.