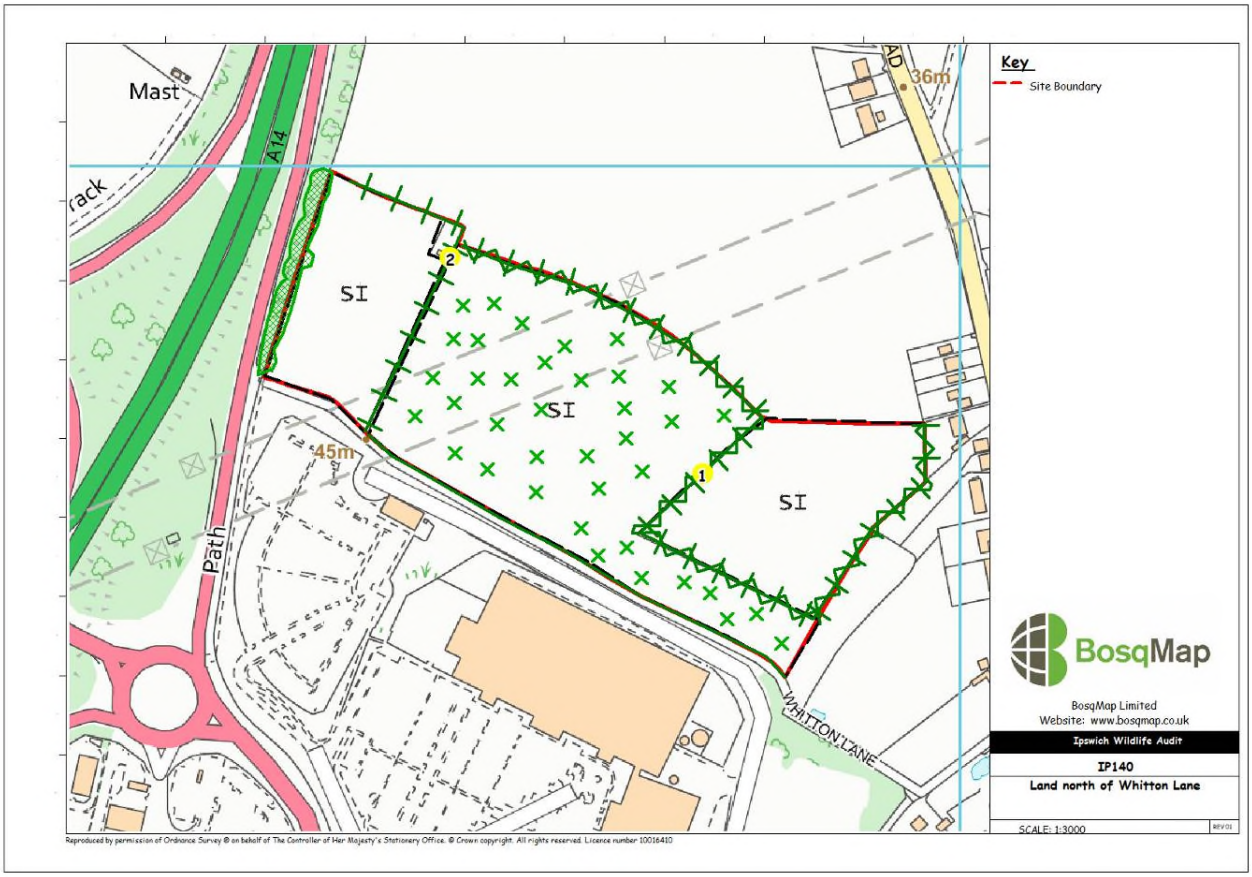
Site name: Land North of Whitton Lane

Site ref: IP140
Site status: No wildlife designation
Grid ref: TM 13747 47823
Area: 6.9 hectares
Date: 22nd July 2019
Recorder: A Looser
Weather conditions: Hot and sunny, 28°C
Ranking: 4
Biodiversity value: Medium

Map:



Photos:

View across eastern field

Scattered scrub developing on central field

Mature elm close to northern boundary (Target Note 2)

Habitat type(s):

Species-rich hedgerows, species-poor hedgerows, poor semi-improved grassland, dense scrub, scattered scrub

Subsidiary habitats:

Standing and fallen deadwood

Site description:

This site lies to the north of Whitton Lane and the industrial estate. The site comprises three fields separated by tall, thick hedgerows. Currently all the fields are grassland, with the central field developing a grassland scrub mosaic. The central and eastern field used to be in arable production, and the western field was formerly a horse grazed paddock. The central hedgerow which turns in a right angle to run parallel to the southern boundary is the most species rich. These hedges are likely to be classed as 'important' under the Hedgerow Regulations 1997. Elm is the dominant tree in this landscape and the hedge close to the mobile phone mast is unusual in having tall elm trees. The

wooded banks of the A14 slip road at Junction 53 forms the western boundary.

Protected species seen or known:
Species in the area include:
Badger
Brown long-eared bat
Common pipistrelle bat
Soprano pipistrelle bat
Natterer's bat
Noctule bat
Serotine bat
Grass snake
Slow worm
Great Crested Newt

Protected species potential:
Hazel dormouse
Common lizard

Priority habitats present:
Hedgerows

Priority species seen or known:
Hedgehog
Common toad
Stag beetle
BoCC Red List birds including herring gull, skylark, house sparrow, starling, song thrush and yellowhammer
BoCC Amber List birds including dunnock and swift (Suffolk Character Species)

Priority species potential:
Cinnabar moth
White-letter hairstreak butterfly.

Connectivity:
This site lies at the northern end of Ipswich and as such has countryside to the north. Old Whitton Lane and nearby Fiske's Lane are both ancient and are good wildlife corridors.

Structural diversity:
The site has good structural diversity with grassland, scattered scrub and hedgerows/mature trees.

Flora:
The grassland is currently poor semi-improved. Grasses include false oat, cock's-foot, barren brome, soft brome, rough meadow grass and Yorkshire fog. The herbs are typical of dry grassland including ragwort, bristly ox-tongue, dandelion, perforate st john's wort, ox-eye daisy, Canadian fleabane, mugwort, vipers bugloss, black medick, hop trefoil, dove's-foot cranesbill, ribwort plantain, greater

plantain, creeping thistle, spear thistle and curled dock.

The central field had similar species, but also included wall barley and common couch grass with hogweed, lesser burdock, poppy, prickly lettuce, violet spp, common cat's-ear and common cudweed which is declining nationally and classed as Near Threatened.

The hedgerows are dominated by elm with walnut, blackthorn, hawthorn, ash, oak, elder, dogwood and traveler's joy also recorded.

Avifauna:
The time of year and weather conditions were sub-optimal for recording this group. However common species including blackbird, green woodpecker, wood pigeon and magpie were recorded during the visit. The grassland provides good habitat for ground nesting birds such as skylark and meadow pipit and the hedgerows provide excellent habitat for roosting, nesting and foraging for a range of species including declining farmland bird species such as yellowhammer.

Invertebrates:
This site is currently very good for invertebrates. Numerous ant hills were noted, which suggests the grassland has been undisturbed for some time. There were plenty of grasshoppers and crickets and meadow brown and small skipper butterflies were observed during the visit along with common carder bees and a ruddy darter damselfly. Ragwort is present which is the food plant of cinnabar moth caterpillars (Priority species). The hedgerows provide good habitat for stag beetles (Priority species) whose larvae feed on subterranean deadwood. The presence of elm in the hedgerows provides good habitat for white-letter hairstreak butterflies (Priority species).

Herpetofauna:
The habitat has improved for this group since the last audit and is currently suitable for reptiles. All three common species could be present, but the habitat is particularly suited to slow worm. Toads could also be present as there are several ponds in the area. There are records of great crested newt in the area and the terrestrial habitat on site is excellent so their presence cannot be ruled out.

Mammals:
The hedgerows provide good commuting corridors for bats and some of the mature trees in the hedgerows have cracks and crevices with the potential to support a bat roost (Target Note 2). An outlier badger sett was noted during the visit (Target Note 1) and there are recent (2019) records of them very close to the site. The hedgerows provide suitable habitat for hazel dormice and they have been recorded on the northern edge of Ipswich. Hedgehog (Priority species) has been recorded from the site in 2012 and the mix of grassland and hedgerows is suitable for them. Common small mammal species such as mice, voles and shrews are likely to be present and other common mammals such as deer and fox are also likely to be present.

Comments and recommendations:
This site is proposed for an employment park. Due to the extent of semi-natural habitats, detailed and up-to-date surveys are required for flora, bats, hazel dormouse, reptiles and amphibians, breeding birds and Priority species.

New development should retain as much of the existing habitat as possible and integrate it within a landscaping scheme, particularly the hedgerow network. This will help retain the local biodiversity resource, with enhancement through additional habitat creation and long-term good habitat management practices. Greenspaces should be interlinked to provide functional ecological corridors for a range of species and as much as possible they should connect with wider off-site ecological networks. New planting should seek to use native species typical of the local area such as hawthorn, blackthorn, oak, dogwood, hazel and field maple.

Planning policy supports the mitigation hierarchy of avoid, minimise, remediate and only as a last resort, compensate. However, due to the nature of the existing habitats on this site, including Priority habitat (hedgerows) it is likely that future development will require compensation to avoid a biodiversity loss and to deliver net gain.

Compensation for habitat loss can be on-site and/or off-site and is delivered through the creation of new habitat, restoring or enhancing existing habitats or occasionally, by accelerating successional processes. Off-site compensation habitat should be located as close as possible to the site and should seek to replicate the characteristics of the habitat(s) to be lost, taking account of the structure and species composition to provide local distinctiveness. New or restored habitats should aim to achieve a higher distinctiveness and/or condition than habitats lost and wherever possible, should contribute to the wider ecological network.

Delivering net gain is independent of any wider requirements of planning policy or the need to comply with legislation relating to nature conservation or biodiversity.

Careful planning and design can integrate the requirement for sustainable drainage systems with the creation of new wildlife habitat. Such places can also create aesthetically pleasing features which can also be integrated into landscaping schemes.

Green Roofs can work as part of sustainable drainage options but also be designed to support wildflowers, grasses and sedums and in turn, these can benefit both foraging invertebrates and birds.

Living Walls can be created as part of schemes that harvest rainwater or can utilise grey water sources. Aspect is important as shaded walls usually establish quickest. Climbers, such as ivy, are trained on wires or trellis or adapted planters can be used for other species. Green walls provide cover for birds such as house sparrow and shelter and foraging habitat for invertebrates. They can provide important stepping stone habitat in urban areas.

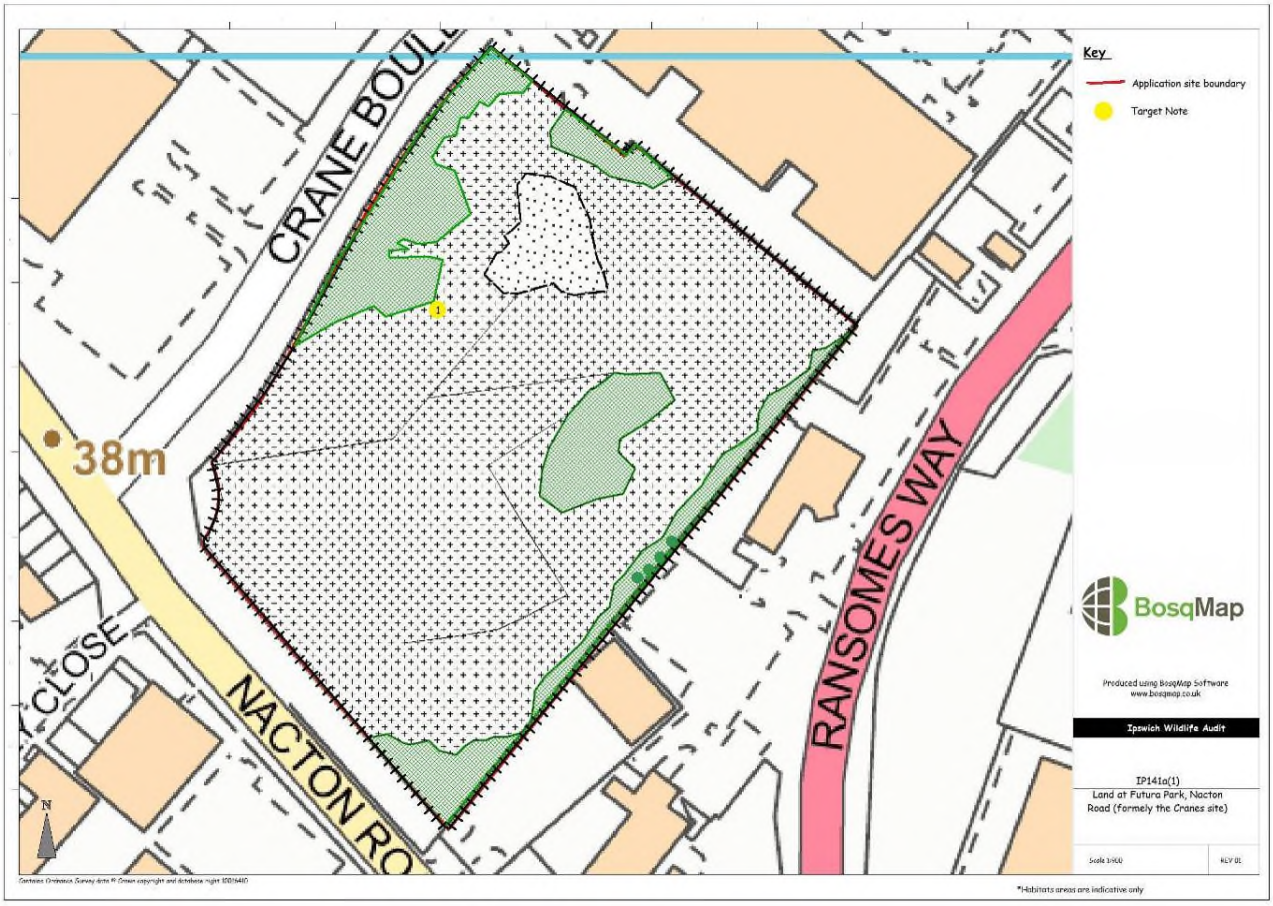
Rain gardens are most effective when larger in size and slow down run-off from downpiped or paved areas. They require free-draining soils in trenches and can be planted with nectar producing species, which can be non-native as long as they are not listed as invasive.

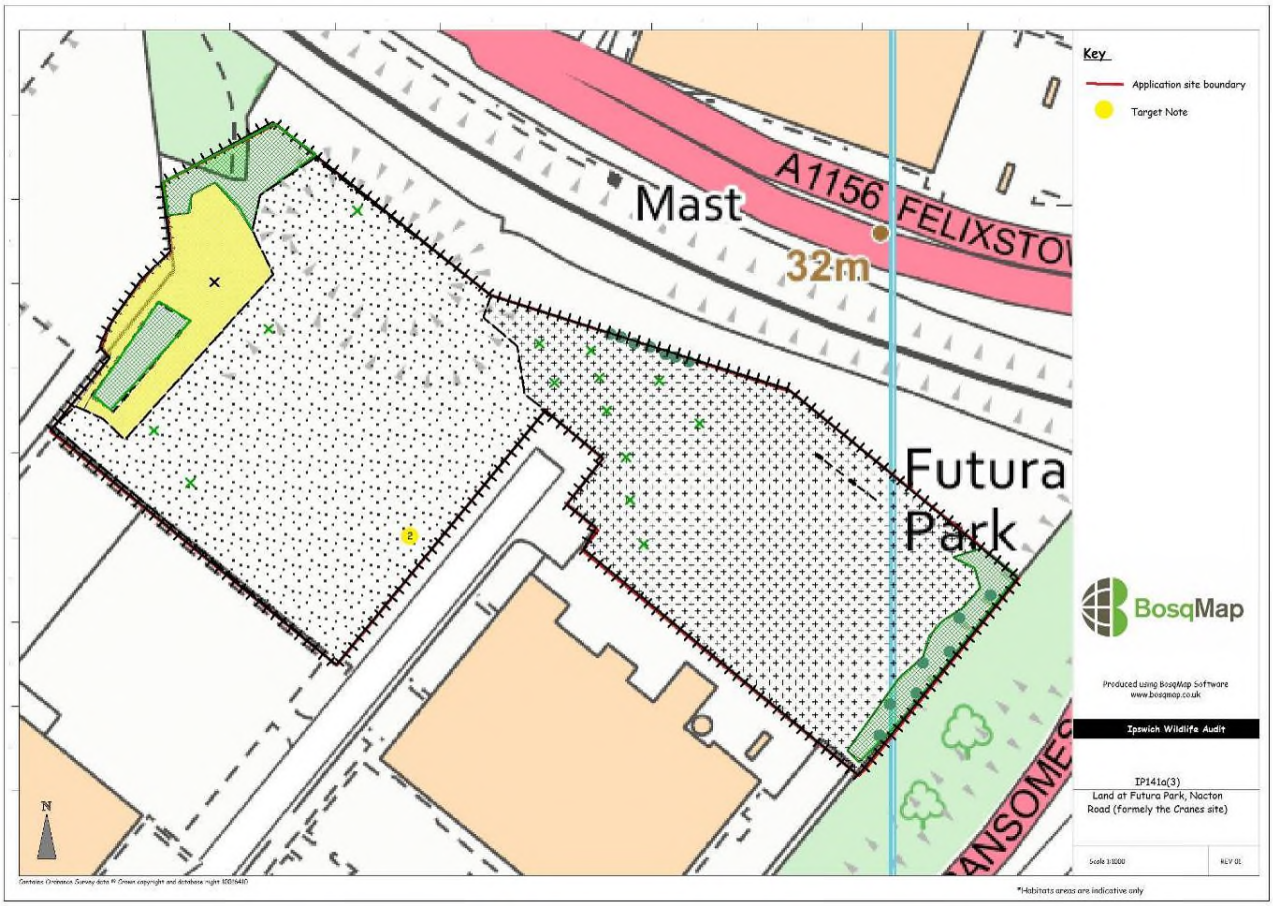
Swifts are a declining migratory species that are almost totally dependent on holes and crevices in buildings for nesting but leave no mess. Swift boxes should be integrated into taller new buildings using ‘swift bricks’ or ‘swift blocks’. Externally mounted boxes can also be used but have a shorter life span than integrated features. Both types are most effective at attracting swifts when used with a swift ‘call system’.

Site name: Land at Futura Park, Nacton Road (formerly the Cranes site)

Site ref: IP141a (1)/IP141a (3)
Site status: No wildlife designation
Grid ref: TM 19679 41889/TM 19805 42290
Area: 2.24 hectares/ 2.75 hectares
Date: 29th July 2019
Recorder: J Crighton
Weather conditions: Warm, clear skies with moderate breeze, *ca.* 24°C
Ranking: 3/4
Biodiversity value: Medium

Map:




Key
Application site boundary
Target Note
A1156
Mast
32m
Futura
Park
BosqMap
Produced using BosqMap Software
www.bosqmap.co.uk
Ipswich Wildlife Audit
IP141a(3)
Land at Futura Park, Nacton
Road (formerly the Cranes site)
N
*Habitats areas are indicative only

Photos:

IP141a (1) Looking east across the site

IP141a (1) Sparse sward on bare ground

IP141a (1) Example of general sward

IP141a (3) 1 South east section of site from middle

IP141a (3) Looking towards railway on south east section

IP141a (3) Target Note 2 Sparse sward on north west section

Habitat type(s):
Ephemeral short perennial, dense continuous and scattered scrub

Subsidiary habitats:
Bare ground, rubble piles

Site description:
These two sites lie within a largely built-up area in the south west of Ipswich called Futura Park. IP141a (1) is located north east of Nacton Road, with its north-western boundary adjacent to Crane Boulevard. It is surrounded by chestnut paling fencing, with a locked gate. However, could be viewed sufficiently from the perimeter and was found to contain a composition of species indicative of the Priority Habitat, Open Mosaic Habitats on Previously Developed Land (Brownfield) (Target Note 1). There is evidence of fly-tipping on this site. Some of the trees fronting Nacton Road are protected by TPOs.

IP141a (3) is located at the terminal end of Crane Boulevard and extends along the length of the park with its north-eastern boundary abutted by the railway line. It is currently surrounded by metal security paling and completely inaccessible. The majority of the site is sandy/gravelly substrate with scattered ephemeral short perennial vegetation, which is denser in the south eastern section. Some areas of the site could not be assessed from the perimeter but appeared fairly uniform with the rest of the sections. The site is currently undergoing development, particularly in the north western section where the ground has been recently disturbed.

Protected species seen or known:
Records in the surrounding area include:
Badger
Common lizard
Slow worm
Grass snake
Common pipistrelle bat
Soprano pipistrelle bat
Noctule bat
Brown long-eared bat

Protected species potential:
-

Priority habitats present:
Open Mosaic Habitats on Previously Developed Land (Brownfield)

Priority species seen or known:
Records in the surrounding area include:
Stag beetle
Hedgehog
House sparrow
Song thrush
Starling

Dunnock
Skylark
Herring gull
Swift (Suffolk Character Species)

Priority species potential:
Common toad

Connectivity:
The sites have varying connectivity. IP141a (1) is fairly isolated by the surrounding industrial estate and roads, whereas IP141a (3), with its position immediately adjacent to the railway, has excellent connectivity to the wider environment along this important wildlife corridor.

Structural diversity:
The structural diversity is also varied across the sites. IP141a (1) contains a diverse range of habitats with bare ground, ephemeral short perennial vegetation and patches of dense scrub, whereas IP141a (3) is much more sparsely vegetated with a higher degree of structural diversity on the boundaries.

Flora:
The majority of IP141a (1) is comprised of sparse vegetation typical of brownfield sites including smooth hawksbeard, Canadian fleabane, weld, rosebay willowherb and evening primrose with some scentless mayweed, St John's wort, ragwort, great willowherb and black nightshade with several tufts of red fescue. There is also quite a large number of flixweed plants, which are a declining species. Throughout the site there are patches of scrub mainly comprised of buddleia, which is a rapid colonizer of disturbed ground but also contains gorse and bramble with some poplar. Some semi-mature sycamores are present around the perimeter.

Of particular interest, and the reason for the suggested designation of Priority habitat, is an area in the south east of the site which is particularly parched and contains hare's foot clover, bird's foot trefoil, common centaury, common cudweed (Near Threatened), white melilot and common stork's bill (Target Note 1).

The south-eastern section of IP141a (3) is very similar in composition to IP141a (1) with the addition of common poppy, fat hen and redshank. There are several white poplars along the north eastern boundary, alongside the railway. As previously mentioned, the northwestern section contains more sparse vegetation (Target Note 2), but again contains similar species.

Avifauna:
It was a sub-optimal time of year for recording this group. However, the site offers potential nesting prospects within the areas of dense continuous scrub, and the habitat is likely to support a substantial invertebrate biomass which will offer foraging opportunities. House sparrow, linnet and great tit were seen or heard during the survey.

Invertebrates:
Brownfield sites are known to support rich invertebrate communities, often with interesting species assemblages. The patchy mosaic of vegetation and habitat types, structural diversity and tall

buffering patches of scrub adjacent to open habitat provides shelter, sunny hotspots and variable microclimates. These sites could offer potential habitat for stag beetles, if there is any subterranean deadwood on the boundaries suitable for supporting their larvae. IP141a (1) supports a large number of flixweed plants, which is the larval food plant for the grey carpet moth, a Priority species Listed under Section 41 of the NERC Act. This species is currently restricted to the dry, stony Breckland of East Anglia likely due to a lack of suitable habitat for its food plant elsewhere. Several butterflies were noted on site including common blue, large white, red admiral and peacock.

Herpetofauna:

The railway corridor is known to support slow worm and common lizard, and therefore they could also be present in the perimeter habitat of IP141a (3). This site could also support grass snake.

The perimeter habitat may also support toads, frogs and smooth newts, with a number of small ponds in the area and the connectivity offered by the railway corridor.

Mammals:

There is a record of badger from within site IP141a (3), which could have been commuting along the railway corridor and entered the site to forage.

Bats are likely to use the railway corridor for commuting and the invertebrate populations within these sites are likely to provide foraging opportunities. The mature trees on the railway could also contain features which may support a bat roost.

There are a number of hedgehog records in the immediate area and the combination of sparse vegetation and scrub provides good foraging and refuge opportunities for them.

The site is also likely to be frequented by common species such as fox, rabbit, grey squirrel and muntjac deer, and the perimeter scrubby habitat is likely to support mice, voles and shrews.

Comments and recommendations:

These sites have been allocated as B-class used (excluding office use) and appropriate employment-generating sui generis uses with an indicative capacity of 18,000 sq m.

Due to their likely presence, additional surveys for reptiles and bats are recommended. As this includes Open Mosaic Habitats on Previously Developed land (Priority habitat), then detailed terrestrial invertebrate surveys are also recommended.

Any clearance of woody vegetation should only take place outside the main bird nesting season (March - August inclusive) or immediately preceded by a nesting bird check.

As this site is located next to the railway corridor, the lighting scheme should be designed to prevent light spillage into this area. Bats are particularly sensitive to increased light levels, so it is important to maintain dark corridors to support local ecological networks.

Planning policy supports the mitigation hierarchy of avoid, minimise, remediate and only as a last resort, compensate. However, due to the nature of the existing habitats on this site, it is likely that

future development will require compensation to avoid a biodiversity loss and to deliver net gain.

Compensation for habitat loss can be on-site and/or off-site and is delivered through the creation of new habitat, restoring or enhancing existing habitats or occasionally, by accelerating successional processes. Off-site compensation habitat should be located as close as possible to the site and should seek to replicate the characteristics of the habitat(s) to be lost, taking account of the structure and species composition to provide local distinctiveness. New or restored habitats should aim to achieve a higher distinctiveness and/or condition than habitats lost and wherever possible, should contribute to the wider ecological network.

Delivering net gain is independent of any wider requirements of planning policy or the need to comply with legislation relating to nature conservation or biodiversity.

Careful planning and design can integrate the requirement for sustainable drainage systems with the creation of new wildlife habitat. Such places can also create aesthetically pleasing features which can also be integrated into landscaping schemes. There is the opportunity to channel and store run-off through surface features such as swales, retention basins and ponds, resulting either in temporary or permanent water features. The design should incorporate a variety of features to maximise potential habitats niches and any planting should utilise native species. Where possible, existing habitats should be retained and integrated into the system as this will result in greater species diversity. New habitats should be created taking into account local ecology and site conditions.

For this site in particular, the Priority habitat which would be lost should be replicated within the existing footprint through the provision of a green roof. Green roofs can work as part of sustainable drainage options but also be designed to support wildflowers, grasses and sedums and in turn, these can benefit both foraging invertebrates and birds. In addition to this, living walls can be created as part of schemes that harvest rainwater or can utilise grey water sources. Aspect is important as shaded walls usually establish quickest. Climbers, such as ivy, are trained on wires or trellis or adapted planters can be used for other species. Green walls provide cover for birds such as house sparrow and shelter and foraging habitat for invertebrates. These features can provide important stepping-stone habitat in urban areas.

In addition to this, action can be taken for individual species such as swifts, bats, reptiles, stag beetles and other invertebrates.

Swifts are a declining migratory species that are almost totally dependent on holes and crevices in buildings for nesting but leave no mess. Swift boxes should be integrated into taller new buildings using ‘swift bricks’ or ‘swift blocks’. Externally mounted boxes can also be used but have a shorter life span than integrated features. Both types are most effective at attracting swifts when used with a swift ‘call system’.

Bat boxes should also be integrated into new buildings, or durable boxes placed on trees where there is a low risk of public interference or light spillage.

As reptiles are highly likely to be present and thus require mitigation, a log pile for basking reptiles over the top of a below-ground hibernacula should be incorporated into an undisturbed area of

greenspace. Hibernacula can be created by filling holes (minimum 2m long by 1m wide, and up to 50cm deep) with log sections. This should be covered with topsoil and turf, allowing access opportunities so that reptiles can easily enter the hibernacula at the appropriate time.

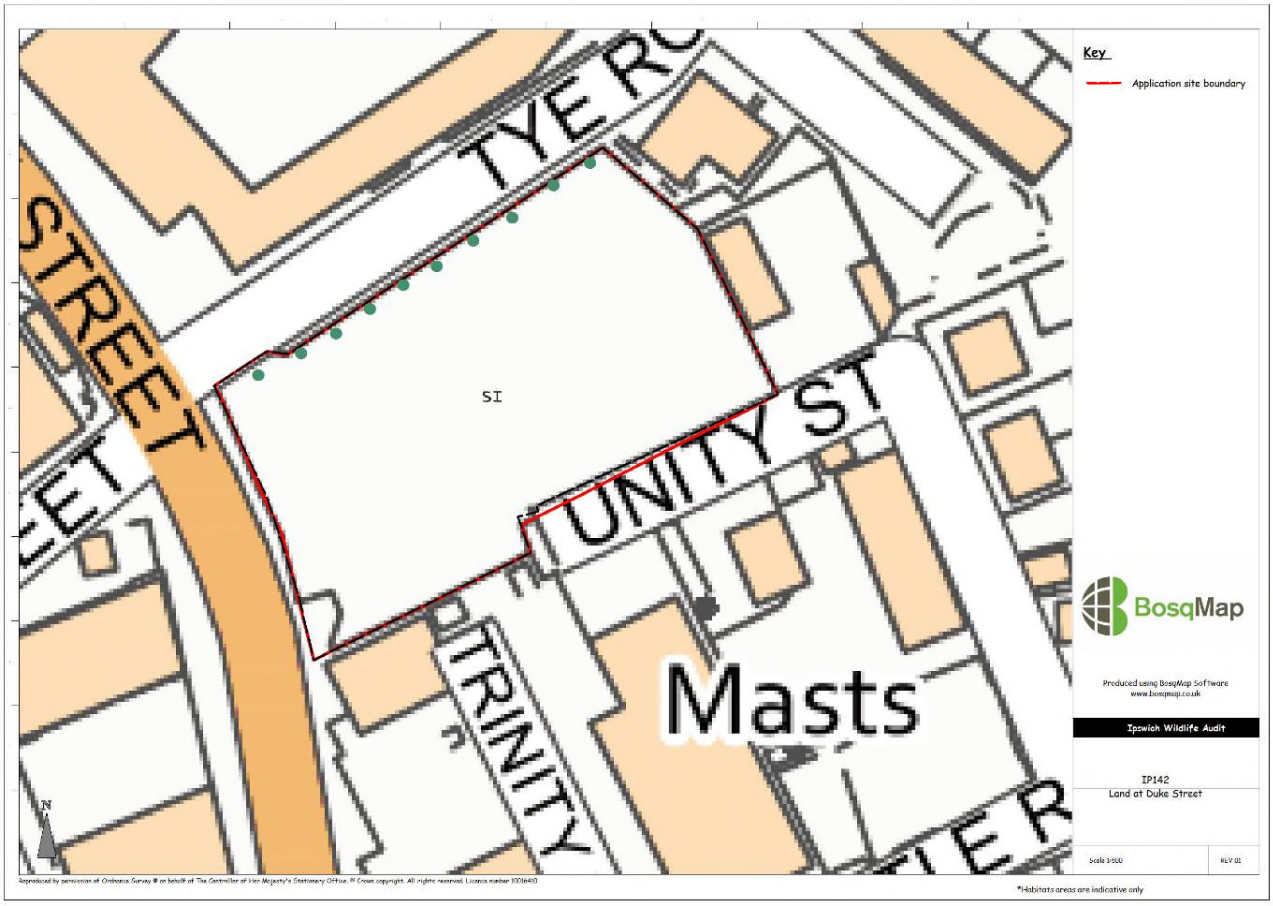
A stag beetle habitat pile, created by burying stumps in an upright position, rather like a cluster of organ-pipes, should be constructed on the perimeter of IP141a (3).

If there was a commitment to regular maintenance, then a wildflower area could be sown to benefit invertebrates. The mix should include species typical of the prevailing sandy and free draining soil conditions. Wildflower areas are left uncut until mid-July/August and then cut, with a second cut in September.

Site name: Land at Duke Street

Site ref: IP142
Site status: No wildlife designation
Grid ref: TM 17256 43771
Area: 0.38 hectares
Date: 28th July 2019
Recorder: A Looser
Weather conditions: Hot and sunny, 28°C
Ranking: 5
Biodiversity value: Low

Map:



Photos:

Looking east across site

Habitat type(s):

Poor semi-improved grassland, scattered trees

Subsidiary habitats:

-

Site description:

This site is located east of Duke Street, between Tye Road on the northern boundary and Unity Street on the southern boundary. It comprises a small rectangle of grassland which is fully fenced. The grassland was short at the time of survey but it is unknown how regularly it is managed. A line of young trees is present along the northern boundary. The site was viewed from the boundaries only.

Protected species seen or known:

Records in the area include:
Brown long-eared bat
Common pipistrelle bat
Soprano pipistrelle bat
Noctule bat
Serotine bat
Common lizard
Grass snake
Slow worm

Protected species potential:

-

Priority habitats present:

-

Priority species seen or known:
Species recorded in the area include:
Hedgehog
Common toad
Stag beetle

BoCC red list birds including house sparrow and starling

Priority species potential:
-

Connectivity:
This is a small, isolated site. Although it is less than 100m from Holywells Park CWS there is currently no direct connectivity between the two sites.

Structural diversity:
The structural diversity is poor as the sward appeared to be fairly uniform in height. The areas of bare ground provide some structural diversity.

Flora:
Although only viewed from the boundaries, there was a good diversity of plants noted which are typical of dry grasslands. Species recorded include wall barley, Yorkshire fog, barren brome and bent grasses with sand sedge, common cat's-ear, smooth hawk's-beard, autumn hawkbit, creeping cinquefoil, groundsel, perennial sow thistle, bristly ox-tongue, tansy, vipers bugloss, Canadian fleabane, mallow, poppy, violet spp, dove's-foot cranesbill, yarrow, fennel, mullein spp, red campion, speedwell spp, calamint spp, field pansy and hare's-foot clover. Bracken was noted along the southern edge.

The trees along the northern boundary were dominated by field maple.

Avifauna:
There is very limited nesting opportunities for this group although some common species will forage in the grassland. Carrion crow and feral pigeon were noted during the visit.

Invertebrates:
The diversity of plants provides good nectar sources for a range of common invertebrates. Small white, large white and peacock butterflies were seen. There are several areas of bare ground which could provide good habitat for ground nesting bees, wasps and ants.

Herpetofauna:
The site is sub-optimal for this group.

Mammals:
The habitat is sub-optimal for this group. The grassland does provide good foraging opportunities for hedgehogs, although the fencing will restrict their movement.

Comments and recommendations:

The site has planning permission for 44 dwellings (ref. 17/00570/FUL).

Japanese Knotweed has been recorded close to the site. This species is listed as invasive on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Although no evidence was found on site during the survey, this site assessment does not constitute an invasive species survey and further monitoring of this species is required to ensure it has not spread and colonised the site.

This site is very small and located in a built-up area of the Town, so the opportunities for enhancement are limited. However, any landscaping scheme should include low-maintenance nectar and berry producing shrubs and perennial plants to provide some benefit for birds and invertebrates.

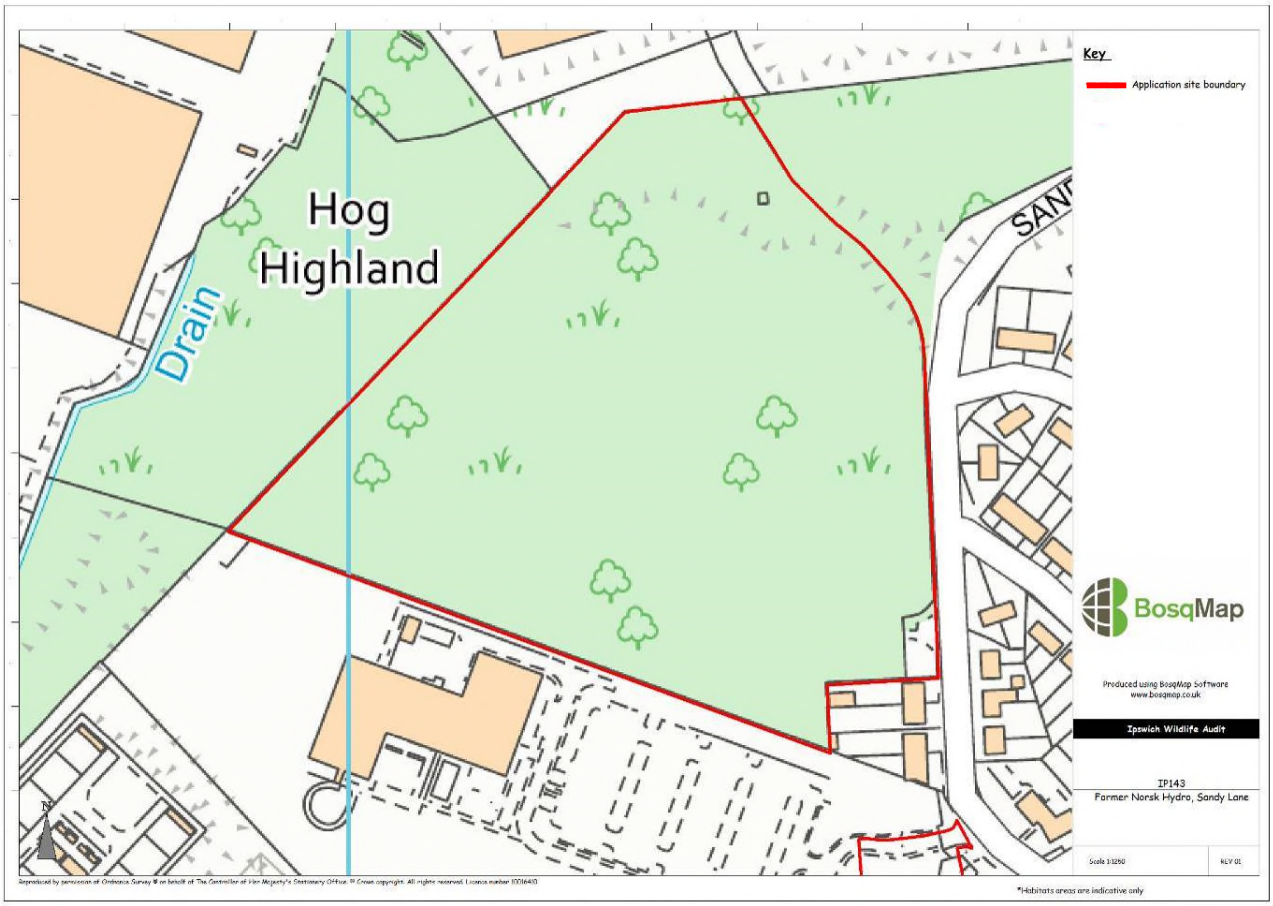
Holes in fences for hedgehog should be part of new housing proposals, to deliver landscape permeability for this wide-ranging, declining species.

Swifts are a declining migratory species that are almost totally dependent on holes and crevices in buildings for nesting but leave no mess. Swift boxes should be integrated into taller new buildings using 'swift bricks' or 'swift blocks'. Externally mounted boxes can also be used but have a shorter life span than integrated features. Both types are most effective at attracting swifts when used with a swift 'call system'.

Site name: Former Norsk Hydro, Sandy Lane

Site ref: IP143
Site status: No wildlife designation
Grid ref: TM 17095 42494
Area: 4.49 hectares
Written by: J Crighton
Date written: 30th August 2019
Recorder: Not surveyed
Weather conditions: N/A
Ranking: 4 (based on the available information)
Biodiversity value: Medium

Map:



Habitat type(s):
Woodland, rough grassland, scrub

Subsidiary habitats:
Bare ground

Site description:

Access was not possible to this site. However, a previous ecological assessment was undertaken by Adonis Ecology in April 2016, so information has been extracted from the report and noted from available imagery, as well as a previous SWT Trading Ltd Wildlife Audit undertaken in August 2012.

This site is roughly triangular in shape, with Sandy Hill Lane forming the eastern boundary, offices with associated car parks and amenity grassland to the south and a block of woodland separates the site from the Ipswich Grain Terminal on the eastern bank of the River Orwell. To the north is a further block of woodland.

In 2016 the site was largely open short grassland with patches of scrub, compared with 2012 when it was described as acid grassland with areas of bare ground with lichen and bryophyte cover. This earlier report advised that this site may meet the criteria for designation as a County Wildlife Site.

It is possible that the site has changed in nature over the years or has been affected by site vegetation removal works. The site will have continued to change since 2016.

Scrub and some woodland line the perimeter, with a steeply sloping area within the woodland. A chain-link fence runs along the boundary with Sandy Hill Lane.

Protected species seen or known:

Records in the surrounding area include:
Badger
Brown long-eared bat
Common pipistrelle bat
Soprano pipistrelle bat
Daubenton's bat
Natterer's bat
Noctule bat
Common lizard
Grass snake
Slow worm
Adder
Barn owl

Protected species potential:

-

Priority habitats present:

Open mosaic habitat on previously developed land

Priority species seen or known:

Records in the surrounding area include:
Hedgehog
Common toad
Stag beetle

Cinnabar moth
Butterflies inlcude grayling, silver-studded blue, wall, white admiral, white letter hairstreak and small heath
BoCC Red List birds include cuckoo, house sparrow, lapwing, lesser redpoll, linnet, skylark, song thrush, spotted flycatcher, starling and yellowhammer
BoCC Amber List birds include bullfinch, dunnock, reed bunting and swift (Suffolk Character Species)

Priority species potential:
-

Connectivity:
The site lies between Landseer Park County Wildlife Site to the north east and the River Orwell County Wildlife Site to the south west (also the Stour and Orwell Estuaries Ramsar site and Special Protection Area (SPA), and Orwell Estuary Site of Special Scientific Interest (SSSI)). Although Sandy Hill Lane bisects the continuous habitat between the site and the park, there is still a good degree of connectivity. Areas of woodland and scrub continue to the north and the south of the site providing an important wildlife corridor in the south-east of Ipswich.

Structural diversity:
This site appears to have excellent structural diversity with varying heights offering several habitat types including bare ground, short and tall grass, scrub and trees.

Flora:
From the 2016 report, the site was found to be predominantly short grassland with low soil mounds, containing sheep's sorrel, tansy and spotted and black medick, ragwort and yarrow amongst others. The vegetation on the mounds was generally longer than that of the surrounding ground with species such as cleavers, field forget-me-not, climbing corydalis and common mouse-ear. Conversely, in the 2012 report, the grassland was dominated by common bent and patches of bare soil with lichen cover, and there was a more diverse range of forbs present than in 2016.

Both of the surveys describe the scrub and woodland similarly as follows: The southern and eastern edges were lined with dense scrub dominated by gorse and broom, with occasional bramble and young silver birch trees. Along the eastern and northern edges of the site was a strip of woodland dominated by oak and silver birch.

Avifauna:
If the site remains similar to how it was described in 2016, it could good potential nesting sites for skylark and meadow pipit, with a large open expanse of grassland. The surrounding scrub and woodland offer additional nesting sites for common species and summer migrants. With such close proximity to the River Orwell the site may be visited by wildfowl and waders, such as lapwing.

Invertebrates:
The diversity of habitats on site, including a number of native trees and scrub, should provide a high invertebrate biomass and diversity. However, a detailed invertebrate survey was undertaken in 2016 but no protected or rare species were recorded. Stag beetle was not specifically included as a target

species in these surveys and they are highly likely to be present on site where there is subterranean deadwood suitable for their larvae.

Herpetofauna:

The long and short grass with scrub edging along with areas of bare ground offer suitable foraging, refuge, hibernation and basking opportunities for common reptiles such as grass snake, common lizard and slow worm. However, a detailed reptile survey during the summer and early autumn of 2016 did not record any evidence of this group. This is surprising as there are thought to be good populations in the adjacent Landseer Park.

The site may support common toad, with the woodland offering hibernation opportunities.

Mammals:

A badger sett entrance and hairs were located on the steep slope within the woodland in the 2016 survey. Whilst badgers were filmed on site during further surveys, no direct evidence of badgers entering these holes was recorded. However, three years have elapsed and it is possible that badger activity may have increased and further sett entrances have been created.

The previous surveys also noted that some of the mature trees within the wooded area contained features suitable for roosting bats. The entire site is likely to be used by foraging bats and the woodland continuing to the north and south offers a good commuting corridor.

The large expanse of short grassland provides good foraging habitat for hedgehogs, and the scrub and woodland provide nesting and hibernation prospects. There are a number of records of them from the surrounding area.

Common species of mammal such as fox, rabbit, muntjac deer are likely to forage on this site. Mice, voles and shrews are also likely to be present in the rough grassland areas and the woodland and scrub on the boundaries of the site.

Comments and recommendations:

This site has been allocated for residential development with an estimated yield of 85 dwellings and is available for immediate redevelopment subject to a previously submitted planning application approval.

Prior to any development, an updated preliminary ecological appraisal of the site, along with any required species-specific surveys will need to be undertaken.

New development should retain as much of the existing habitat as possible and integrate it within a landscaping scheme, to deliver locally accessible natural greenspace. In this instance, a habitat mosaic of grassland, scrub and woodland should be retained. All retained features should not be subjected to any light spillage so any lighting scheme should be designed to prevent this. Bats are particularly sensitive to increased light levels, so it is important to maintain dark corridors to support local ecological networks.

This will help retain the local biodiversity resource, with enhancement through additional habitat creation and long-term good habitat management practices. Greenspaces should be interlinked to provide functional ecological corridors for a range of species and as much as possible they should connect with wider off-site ecological networks. New planting should seek to use native species typical of the local area.

Planning policy supports the mitigation hierarchy of avoid, minimise, remediate and only as a last resort, compensate. However, due to the nature of the existing Priority habitat on this site, it is likely that future development will require compensation to avoid a biodiversity loss and to deliver net gain.

Compensation for habitat loss can be on-site and/or off-site and is delivered through the creation of new habitat, restoring or enhancing existing habitats or occasionally, by accelerating successional processes. Off-site compensation habitat should be located as close as possible to the site and should seek to replicate the characteristics of the habitat(s) to be lost, taking account of the structure and species composition to provide local distinctiveness. New or restored habitats should aim to achieve a higher distinctiveness and/or condition than habitats lost and wherever possible, should contribute to the wider ecological network.

Delivering net gain is independent of any wider requirements of planning policy or the need to comply with legislation relating to nature conservation or biodiversity.

Careful planning and design can integrate the requirement for sustainable drainage systems with the creation of new wildlife habitat. Such places can also create aesthetically pleasing features which can also be integrated into landscaping schemes.

There is the opportunity to channel and store run-off through surface features such as swales, retention basins and ponds, resulting either in temporary or permanent water features. The design should incorporate a variety of features to maximise potential habitats niches and any planting should utilise native species. Where possible, existing habitats should be retained and integrated into the system as this will result in greater species diversity. New habitats should be created taking into account local ecology and site conditions.

Holes in fences for hedgehog should be part of new housing proposals, to deliver landscape permeability for this wide-ranging, declining species. Toad, another UK Priority species, will also benefit from holes in garden fences.

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