PRELIMINARY ECOLOGICAL APPRAISAL

PIONEER HOUSE HIGH SCHOOL, WYTHENSHAWE, GREATER MANCHESTER

OCTOBER 2022

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- PIONEER HOUSE HIGH SCHOOL, WYTHENSHAWE, GREATER MANCHESTER -

A report for

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1. INTRODUCTION

1.1 REASON FOR SURVEY

PENNINE Ecological were commissioned in September 2022 by AA Projects to undertake a Preliminary Ecological Appraisal (PEA) of Pioneer House High School, Wythenshawe, Greater Manchester (hereafter referred to as 'the site'). The survey and report ('the study') are required to support a planning application to develop the school that will include a new classroom and sports pitch.

A site visit was undertaken on the Monday 26th September 2022.

The study includes the following elements:

- A desk-based search of freely available online ecological information (e.g., Defra's MAGIC mapping tool, Google Earth, Ordnance Survey mapping etc.).
- A UK Habitat Classification field survey.
- A field survey and evaluation of the site to support protected and/or notable species including but not limited to:
    - Badger.
    - Birds, including Schedule 1 listed species of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981) (e.g., barn owl, hobby, kingfisher, etc.).
    - European Protected Species (EPS) (i.e., bats, great crested newt (GCN), otter etc.).
    - Other protected species (e.g., brown hare, hedgehog, other amphibian species other than GCN, reptiles, etc.).

The report provides an evaluation of the ecological significance of the field survey results. If required, it also includes recommendations for further survey and/or precautions when and where appropriate.

1.2 SITE LOCATION

The high school is located in an urban area on Yewtree Lane, Wythenshawe. It is surrounded by residential housing, a restaurant, a nursery and a small shopping area. The M60 motorway is approximately 190m north of the school and Wythenshawe Park is 520m south. There are 'green spaces' within the vicinity of the school namely in the form of residential gardens and amenity grasslands incorporated within the housing estates. An area of deciduous woodland which borders an allotment is 120m north east. The woodland extends along the southern edge of the M60 motorway towards junction 5 and Princess Parkway, the latter being 680m east of the site.

Refer to Figure 1 for the red line boundary of the area surveyed as part of this study and Figure 2 for development proposals. An accompanying UK Habitat Classification survey habitat map of the site is provided in Appendix A, with photographs provided in Appendix B.

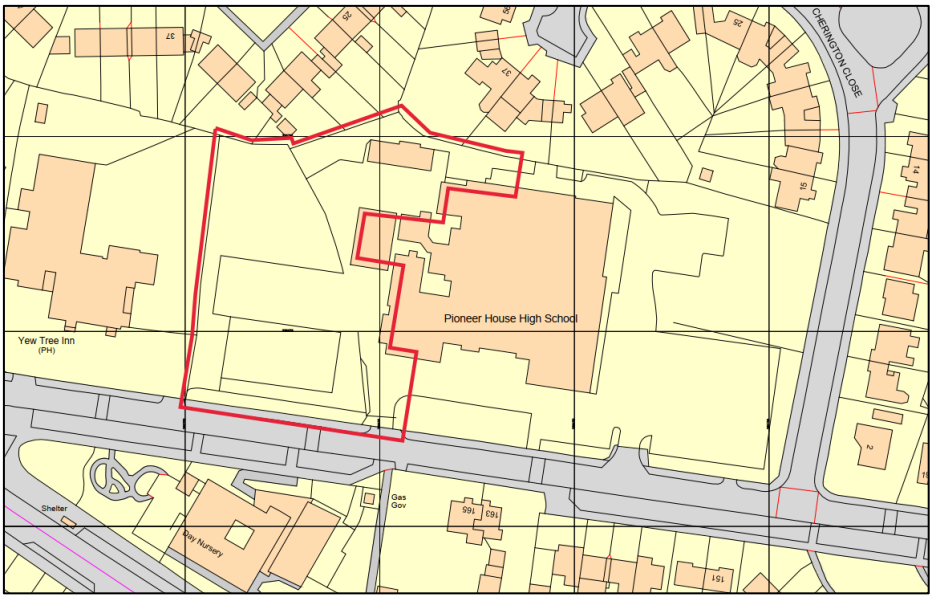


Figure 1: Site location and the area subject to survey is within the red line boundary (red line boundary provided by AA Projects, September 2022).

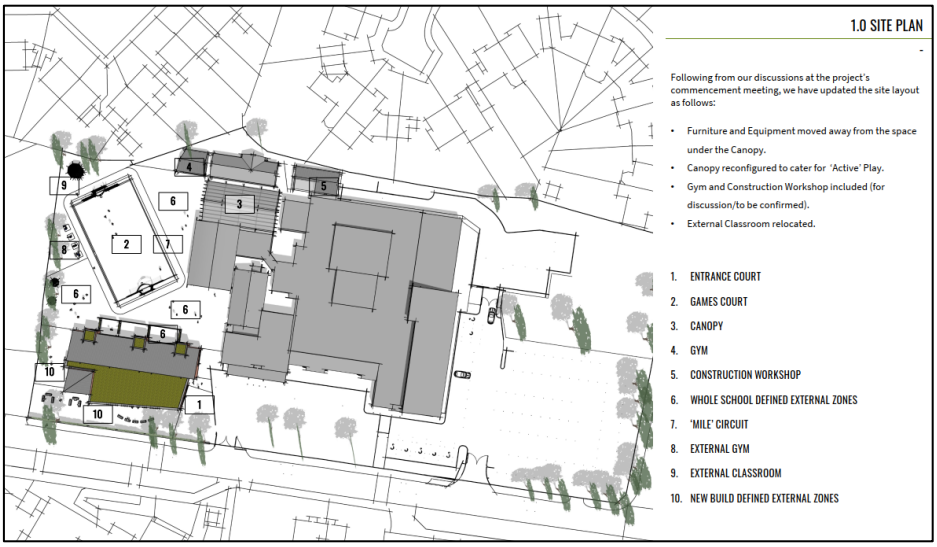


Figure 2 - Development proposals marked by the numbered rectangles (image taken from document supplied by AA Projects dated 25th August 2022).

2. METHODOLOGY

The methodologies relating to the desk-based searches and field surveys undertaken in September 2022 respectively are outlined below.

2.1 DESK-BASED STUDY

2.1.1 Defra's MAGIC Mapping Tool

Defra's Multi Agency Geographical Information Centre (MAGIC) (www.magic.gov.uk) was used to identify the following features of ecological interest (MAGIC was last accessed on the 27th of September 2022).

- Statutory designated sites (e.g., Special Protection Areas (SPA), Sites of Special Scientific Interest (SSSI)), Local Nature Reserves (LNRs) within 2km of the site (and associated SSSI Impact Risk Zones).
- Granted EPS Mitigation Licences (EPSML) applications within 1km.
- GCN Class Survey Licence Returns within 500m.

2.1.2 Local Records Centre Data Request

Due to the relatively small, localised scale of the proposals, the site's location and habitats being only of site value, it was decided in advance that a request for ecological data from the local records centre, the Greater Manchester Ecology Unit, was not required.

2.2 UK HABITAT CLASSIFICATION SYSTEM SURVEY

A UK Habitat Classification Survey (UKHab, 2020) of the site was undertaken on 26th of September 2022. The survey was conducted by Stuart Macpherson who is an ecologist with 13 years' experience in the land management and ecology sectors. He has undertaken a wide range of ecological surveys and holds survey licences for bats, barn owl and great crested newt.

Weather conditions during the survey were cool (11°C), dry with part-cloud.

The site's habitats were fully mapped with reference to Stace (1997), and higher vascular plant species (where present) were recorded and given abundance values according to the standard DAFOR scale where: D is dominant, A is abundant, F is frequent, O is occasional, and R is rare. Where appropriate the abundance values can be prefixed by the letter L (locally) or V (very), to provide more subtle biogeographical data.

2.3 BADGER SURVEY

Where access permitted a badger survey was undertaken to identify evidence of badger (e.g., setts, pathways, footprints, latrines etc.) utilising the site. Surveys were undertaken in accordance with *Surveying Badgers* (Harris *et al.,* 1989) and *Badger* (Roper, 2010).

2.4 PRELIMINARY ROOST ASSESSMENT FOR BATS

A preliminary bat roost assessment survey was undertaken following the methodology outlined in the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn) Collins

(2016). The survey was undertaken by Stuart Macpherson who is a Class 2 bat licensed ecologist (licence number 2021-10079-CL18-BAT).

The survey included a survey for potential roost features (PRFs) within buildings, trees or any other structures which may support a bat roost (e.g., culverts, bridges, walls etc.) within the site boundary which may be directly impacted on by the proposals.

The site was also assessed for its suitability to support foraging and commuting bats.

2.5 BREEDING BIRD HABITAT ASSESSMENT

The potential for the site to support breeding birds was evaluated by an assessment of the site's habitats and any evidence of current or historic nesting. Habitats suitable for breeding birds could include but are not limited to buildings, scrub, hedgerows, and trees.

2.6 LIMITATIONS

There were no constraints to the survey undertaken.

3. RESULTS

The results of the desk-based searches, the UK Habitat Classification survey and the species-specific surveys are outlined below.

3.1 DESK-BASED STUDY

3.1.1 Statutory Designated Sites

There are two statutory designated sites identified within 2km of the site. These are:

- Wythenshawe Park LNR; 520m south; and
- Chorlton Water Park LNR; 1050m north.

The SSSI Impact Risk Zones (IRZs) have been reviewed and consultation with Natural England is not required.

3.1.2 Protected and/or Notable Species

(a) Granted European Protected Species Licence Applications

There are no granted EPS license applications within 1km of the site.

(b) Great Crested Newt Class Survey Licence Returns

No Great Crested Newt Class Survey Licence Returns were identified within 1km of the site.

3.2 UK HABITAT CLASSIFICATION SURVEY

3.2.1 General Description

The site is dominated by hard standing and amenity grassland, both of which are used for recreational purposes by the school's pupils. A portion of the hardstanding is a fenced off sports pitch. On the southern and western boundaries, mature trees and ruderal habitat was recorded. Adjacent to the red line boundary are existing school buildings.

Immediately surrounding the site are urban habitats in roads, residential housing/gardens and a large restaurant.

Habitat types recorded within the red line boundary are listed below, the UK habitat Classification code precedes the broad habitat type.

- g4 - Modified grassland
- u1b - Developed land; sealed surface
- u15b – Buildings
- 17 – Ruderal/ephemeral
- w1g6NE2 - Line of trees
- Large tree

- Fence

Target notes identified on site are listed and described in further detail below.

- Target Note 1 – School buildings – Negligible bat roost suitability
- Target Note 2 – Mature trees
- Target Note 3 – Amenity grassland
- Target Note 4 – Hard standing

(a) Target Note 1 – School buildings – Negligible bat roost suitability

All existing buildings within or immediately adjacent to the red line boundary of the site were inspected for their potential to support roosting bats. All buildings were in excellent condition being constructed of red brick whose mortar was in-situ with no potential roost features identified. A brief summary of each building is provided below.

The most southerly of the buildings inspected (blue building at grid reference SJ 81604 90652) was a single storey building that comprised a mortared wall and flat roof. All mortar was in-situ and was in excellent condition. The flat roof, constructed of a composite material was also in excellent condition and was tightly fitted to the building's walls. No potential roost features were recorded thus the building was of negligible suitability to support a bat roost.

A single storey, wooden panelled building which was connected the blue building comprised UPVC guttering and a roof with a slope of approx. 30° with skylight windows built within it (SJ 81603 90662). The wooden panelling was in excellent condition with no gaps or overlaps between the panels recorded. The roof and skylights were also in excellent condition. No potential roost features were recorded thus the building was of negligible suitability to support a bat roost.

A large building (approx. 10m high) presumed to be a sports hall/gym comprised a barrel roof constructed of glass, plastic and metal panelling (SJ 81598 90676). Where the panelling joined with the brick was in excellent condition with no potential roost features being recorded. The building was of negligible suitability to support a bat roost.

As for the first building described here a second, single storey building comprised mortared walls and a flat roof (SJ 81615 90686). The building was in excellent condition no potential roost features recorded thus it was of negligible suitability to support a bat roost.

A single storey, stand-alone building on the northern extent of the site was constructed of red brick and corrugated, concrete tiles (SJ 81606 90697). Both the walls and roof were in excellent condition with no potential roost features identified thus the building was of negligible suitability to support a bat roost.

(b) Target Note 2 – Mature trees

Along the southern and western boundary of the site immature and semi-mature deciduous trees were recorded within the red line boundary. Species recorded included large-leaved lime, silver birch and pedunculate oak. These trees provide suitable nesting bird habitat. Whilst in full leaf, the trees did not look to comprise any features suitable for roosting bats.

Other trees were recorded on the boundary of the site but outside of the red line boundary and ownership of the school.

(c) Target Note 3 – Amenity grassland

An area of amenity grassland was recorded. Species recorded in perennial rye grass, dandelion and clover. It was assumed the grassland was used as an area for recreation.

(d) Target Note 4 – Hard standing

Hard standing dominated the land within the red line boundary, being used as an amenity and sports area.

3.3 PROTECTED SPECIES SURVEY RESULTS

3.3.1 Badger Survey

Setts

The survey found no setts on site.

Other Field Signs

No sign of badger activity was recorded. All of the boundaries of the site were walked and examined for potential runs, pathways, and latrines. The search found no evidence to suggest badger activity along any of the site boundaries. The absence of any activity signs or latrines within the site indicates that badgers are not entering the site and that there is a lack of territorial activity in the near vicinity of the site.

3.3.2 Preliminary Roost Assessment for Bats

As described in Target Note 1 and 2, no trees or buildings comprised any features that were suitable enough to support a bat roost.

3.3.3 Breeding Bird Habitat Assessment

The mature trees on the northern and western boundaries of the site were of sufficient size to support nesting birds.

3.4 OTHER PROTECTED SPECIES

Issues in relation to other potential protected species where no specific survey was undertaken are assessed in the following section.

4. ECOLOGICAL EVALUATION & RECOMMENDATIONS

Where relevant, this section evaluates the site in relation to statutory sites, and protected habitats/species listed in national and local legislation and policy.

Additionally, following the approval of the planning application in March 2023, the section below includes *Biodiversity Enhancement Measures* as requested by the Local Planning Authority to discharge Condition 8 of the planning application.

4.1 STATUTORY DESIGNATED SITES

(i) Evaluation

There are two statutory designated sites identified within 2km of the site. These are: Wythenshawe Park LNR; 520m south; and Chorlton Water Park LNR; 1050m north.

(ii) Recommendations

No further consideration is required. The SSSI Impact Risk Zones (IRZs) have been reviewed and consultation with Natural England is not required.

4.2 HABITATS AND HIGHER PLANT SPECIES

(i) Evaluation

No nationally scarce or red data listed plant species were recorded on site. The remaining habitats within the red line boundary are of ecological value and are considered to be of 'site' value.

(ii) Recommendations

There are no requirements for further surveys.

In order to enhance the site's planting proposals, the following measures are recommended.

<u>Tree Planting</u>

The management of trees needs to be planned in order to maintain the multiple values of trees and their health. The rooting environment of the trees need to be such that it will allow growth and prevent dieback or even tree death. Soils must be maintained that they do not suffer from compaction and/or waterlogging that may lead to the poor health of newly planted trees. It is unlikely the trees will require any cutting or pruning in the tree's early years of growth. However, should this be required then it should ideally be undertaken in the winter months when the tree is dormant and/or in accordance with the tree's specific requirements. It is recommended an arboriculturist provides advice on such matters when required. All trees which do not establish should be replaced as required. Examples of tree species to be planted include the following; pedunculate oak, silver birch, bird cherry, rowan, hornbeam, field maple etc.

The existing trees within the site boundary, should be subject to inspection with the relevant management dictated by the survey findings. It is likely, as part of the Health and Safety (H&S)

Management Plan for the site these trees will be surveyed and any issues from a H&S perspective will be relevant to the tree's health e.g., dieback, broken, torn or diseased limbs which are likely to fall as part of the tree's natural cycle. However, it is recommended, for the existing, mature trees on site that the tree inspections are undertaken by a suitably qualified arboriculturist who will be able to prescribe appropriate management of the trees e.g., pruning, removal of deadwood, felling etc.

Proposed Hedgerows

Native hedgerows should be planted between the end of October and the end of March although planting earlier in the season, before January is recommended. Plants should never be planted during freezing weather or if the ground is waterlogged. Hedge plants should be planted in to bare soil with as little competition from other vegetation as possible. They should be planted in a double staggered row of 1m to 2m centres as preferred. On this site tree guards aren't recommended but can be included as a precaution if preferred. Once established, light, regular trimming in the hedgerows early years is recommended as it will encourage dense, bushy growth which is more likely to support other species such as nesting birds etc. Any trimming undertaken during the nesting bird season should only be done if nesting birds aren't confirmed to be breeding, this would require a check of the hedgerow by a suitably experienced ecologist. A mulch beneath the hedgerow can be spread at the hedgerows base. This will suppress weed growth and retain moisture and should be applied immediately after planting. Any fast-growing species such as nettle and bramble should be managed so not to out compete the planted hedgerow plants. All failed plants must be replanted in order to maintain the integrity of the hedgerows. After approximately 15 years it is recommended to maintain the hedgerows structure that they are laid by a suitably experienced person.

The following percentages mixes of hedge plants are recommended:

Species:	Approximate percentage of total planting area:
Hawthorn (Crataegus monogyna)	20%
Holly (Ilex aquifolium)	20%
Gorse (Ulex europaeus)	20%
Hazel (Corylus avellana)	15%
Guelder-rose (Viburnum opulus)	10%
Dog-rose (Rosa canina)	10%
Rowan (Sorbus aucuparia)	5%

Proposed native shrub / shrub mix / shrub bed

The native shrub, shrub mix and shrub beds which are to be planted throughout the site are likely to require little management. As was recommended for new hedgerow planting shrubs should be planted in ground with bare soil with little competition from grass species. A mulch is also recommended to suppress weed growth and retain soil moisture. To retain structure pruning should occur as and when required so to reduce any shrub species out competing any other shrubs.

4.3 BADGER

(i) Evaluation

Badgers are protected under Schedule 6 of the Wildlife and Countryside Act 1981, and under the Protection of Badgers Act 1992, which prohibits deliberate interference with the animal or its sett.

The survey found no evidence of historic, recent, or current use of the site by badgers and therefore the species is considered to be absent from the site.

(ii) Recommendations

There are no recommendations.

4.4 BATS

(i) Evaluation

Bats are comprehensively protected by the Wildlife and Countryside Act (1981) (as amended) and Conservation of Habitats and Species Regulations (2017) (as amended).
Following the ground level inspection of the school buildings, all buildings and trees were found to be of negligible bat roost potential.

(ii) Recommendations

No further surveys are required. In accordance with the National Planning Policy Framework (2019) the following recommendations should be considered within the proposals.

The following principles should be implemented.

- In all cases the illumination of boundaries, particularly the woodland boundaries must be avoided.

- Lighting should be directed internally within the site avoiding spillage towards boundary habitats and woodland.

- The use of low powered sodium lights or similar will be used and these will be fitted with cowls/covers that prevent lateral light spillage towards boundary habitats.

Lighting requirements will follow guidance provided by the Bat Conservation Trust; links are provided below.

- Bat Conservation Trust's Acritical Lighting Guidance. Webpage link https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting
- Bat Conservation Trust and Institute of Lighting Professionals Guidance Note 08/18: Bats and Artificial Lighting in the UK. Webpage link https://cdn.bats.org.uk/uploads/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf?v=1542109349

Externally fitted boxes

A large number of externally fitted box models for bats exist for buildings and trees. Suitable models for both buildings and trees may include the Schwegler 2F Bat Box (Figure 3) or a Vincent Pro Bat Box (Figure 4). Ideally, several boxes should be put up facing in different directions on sunny aspects to provide a range of warm conditions. Boxes should be put as high as possible to try and avoid predation from cats

on the ground or nearby structures. On buildings, boxes should be placed as close to the eaves as possible. In summary, locate boxes: where bats are known to feed and navigate (close to hedges and tree lines); ideally at least 4m above the ground (where safe installation is possible); away from artificial light sources (to protect them from predation); and sheltered from strong winds and exposed to the sun for part of the day (usually south, south-east or south-west).

Figure 3 – Eco Kent Bat Box

Figure 4 – Vincent Pro Bat Box

4.5 BIRDS

(i) Evaluation

All birds are offered various levels of protection under the Wildlife and Countryside Act (1981) as amended.

The trees within the red line boundary do provide suitable habitat for nesting birds.

(ii) Recommendations

No strategic bird surveys are required.

Any removal of vegetation should take place outside of the breeding season, i.e., between September 1st and February 28th. Following the removal, any piles of brash should be removed from the site, failure to do so could provide potential nest sites if left in situ until the following breeding season. If vegetation removal is envisaged during the breeding season, prior to removal checks should be made immediately prior to any clearance by a suitably experienced ecologist to establish any nesting or breeding activity. Should it be identified that birds are nesting or breeding then works should be paused until the young have naturally fledged the nest.

Bird boxes can be erected on existing trees and/or buildings to provide additional nesting sites. Examples of those which should be considered are included below. Figure 5 shows the Vivara Pro Seville 28mm Wood Stone Nest Box, manufactured from Wood Stone (a mix of concrete and FSC certified wood fibres) and unlike some traditional wooden nest box, these boxes will not rot or deteriorate. Figure 6 shows the

Vivara Pro WoodStone House Sparrow Nest Box which can be integrated into the masonry of a building or fixed onto an external wall using strong screws and wall plugs. If possible, it should be positioned near to vegetation and at a minimum of 2m above ground.

Figure 5 - Vivara Pro Seville 28mm Wood Stone Nest Box

Figure 6 - Vivara Pro WoodStone House Sparrow Nest Box

4.6 OTHER PROTECTED SPECIES

(i) Evaluation

No evidence of any other protected species was recorded on site.

(ii) Recommendations

No further surveys are required.

However, in order to enhance the site for other protected species the following measures are recommended.

Hedgehogs

The planting of shrubs and hedgerows as well as the addition of hedgehog boxes (Figure 7), should enhance the habitat within the site for the species. Additionally log piles can be implemented within shrub beds to provide additional habitat. Where possible small gaps in walls and fences should be implemented to allow hedgehogs to commute between the site and surrounding gardens and other green spaces. Cold wind and damp can have a serious impact on hedgehogs. Therefore, hedgehog boxes should be located in a sheltered space and ideally oriented at an east or south facing to shield the entrance from bad weather. They can be left as is, partially buried, incorporated into a log pile or compost heap or covered in leaf litter as desired. If buried, it is recommended that some roofing felt or a plastic sheet is placed beneath the runners to create a cavity beneath the box and reduce the humidity in the interior.

Figure 7 – Hedgehog box

Invertebrates

A multitude of relatively inexpensive tubes and boxes (Figures 8 and 9) can be purchased and erected on existing trees and/or buildings. Ideally, they should be positioned in a sunny, sheltered location near vegetation and no higher than 2m.

Figure 8 – Insect house

Figure 9 – Solitary bee box

REFERENCES

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). *The UK Habitat Classification User Manual Version 1.1* at http://www.ukhab.org/

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn) Bat Conservation Trust.

DEFRA 2006. *Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and Species of Principal Importance in England*. DEFRA/Natural England.

Harris, S., Creswell, P. & Jefferies, D. (1989) *Surveying Badgers.* The Mammal Society

Roper, T. J, 2010. *Badger*. New Naturalist Library – Collins.

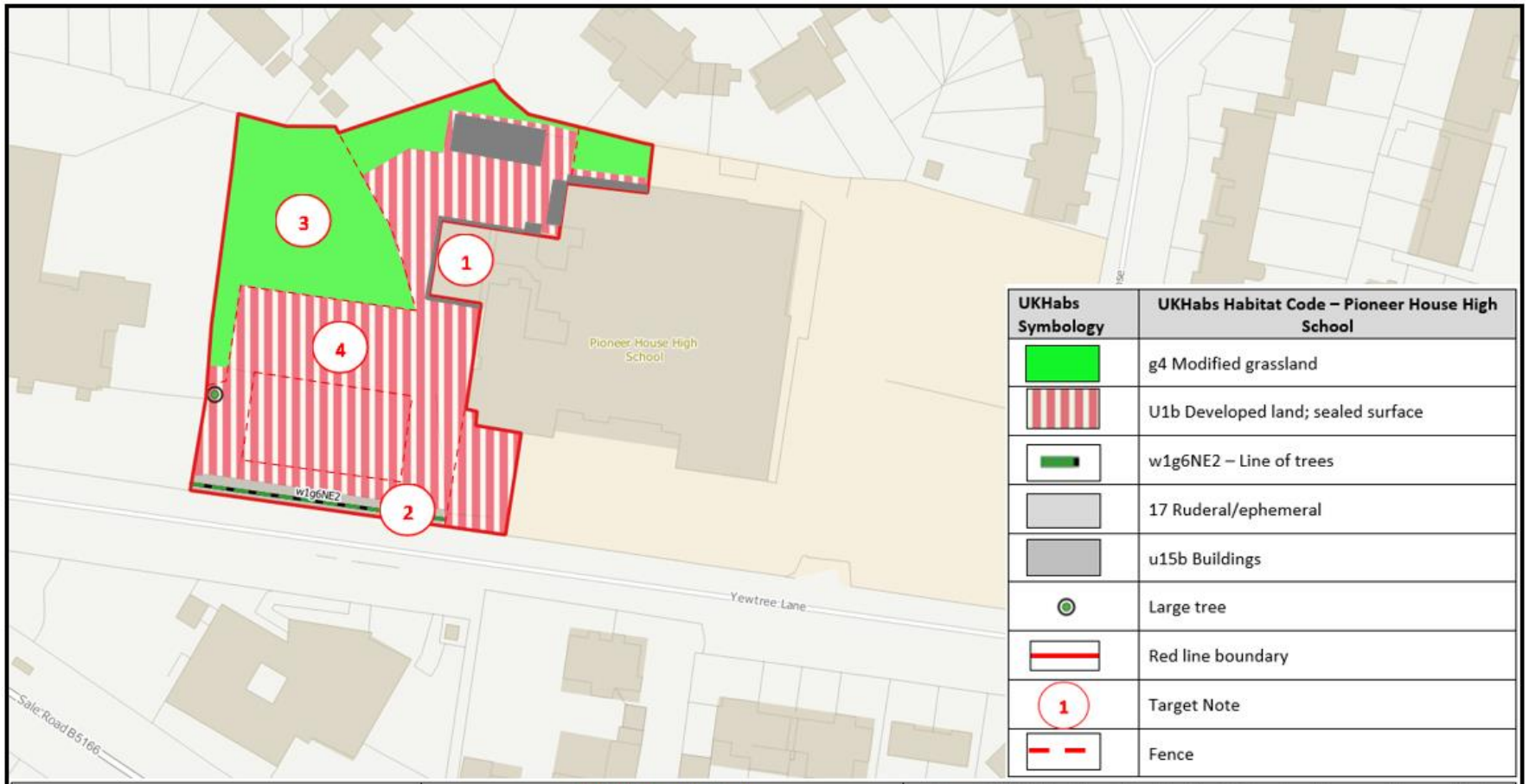
Stace, C., 1997. *New Flora of the British Isles (Second edition)*. Cambridge University Press.

Online References

Natural England – MAGIC. Accessed various dates. Latest access 27/09/2022 http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx

Google Earth. Accessed various dates. Latest access 27/09/2022.

Appendix A: Map 1 - UK Habitat Classification Survey Plan



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Map 1: UKHabs Baseline Habitat Map for Pioneer House High School, Wythenshawe, Greater Manchester.

Client: AA Projects
Date 28.09.2022

Appendix B - Site Photographs 26th September 2022

Photograph 1: Yew Tree Lane to the south of the school, the school is on the left of the photograph.

Photograph 2: Pioneer House High School southern boundary fence.

Photograph 3: Photograph taken in the approximate centre and on the western boundary of the site. Note the hard standing, amenity grassland, fence and existing school buildings.

Photograph 4: Negligible suitability building at SJ 81604 90652.

Photograph 5: Negligible suitability building at SJ 81603 90662.

Photograph 6: Large gym building at SJ 81598 90676. Negligible suitability.

Photograph 7: Large gym building roof.

Photograph 8: Negligible suitability building at SJ 81615 90686.

Photograph 9: Negligible suitability building at SJ 81606 90697

Photograph 10: Hard standing / sports pitch which dominated the area within the red line boundary.

Photograph 11: Amenity grassland.

Photograph 12: Hard standing and the large gym/sports hall building on the left of the photograph.