

Appendix 9.1

Phase 1 Habitat Survey

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Drawings

Drawing 1: Phase 1 Habitat survey map

Executive Summary

Ove Arup and Partners Ltd. (Arup) were commissioned by Moda Living to undertake a Preliminary Ecological Appraisal (PEA) (Phase 1 Habitat survey and protected species scoping study) of a parcel of land named Princes Reach in Princes Dock, Liverpool. It is proposed that the site is developed into private residential housing.

The purpose of the PEA is to:

- assess the value of habitats on site and to determine their potential to support protected or notable species;
- identify further survey requirements; and
- propose mitigation and potential enhancement options, as appropriate.

The PEA identified that the development will not impact directly or indirectly on any statutory designated sites or non-statutory nature conservation designations due to the distance between the site and the designations and the urban setting in which the site is located.

The Phase 1 Habitat survey identified the site as having low botanical value as the site is dominated by hardstanding and ephemeral/short perennial vegetation with a small area of amenity improved grassland.

The Phase 1 Habitat survey did not record signs on site of the following protected species: bats, badgers, great crested newts and reptiles. The habitat was also considered sub-optimal for these species.

1 Introduction

Ove Arup and Partners Ltd. (Arup) were commissioned by Moda Living to undertake a Preliminary Ecological Appraisal (PEA) (Phase 1 Habitat survey and protected species scoping study) of a parcel of land which has been identified for the development of a private residential building.

1.1 Site and Scheme Description

The site covers an area of less than 0.5 ha and comprises brownfield land (Figure 1.1). The site is dominated by hardstanding and is surrounded by the docks, office buildings and roads.

It is proposed that the existing site is developed into a private rented sector residential building of up to 375 units.

Figure 1.1: Site location of Princes Reach, Liverpool. Site boundary denoted by red line.



1.2 Objective

The purpose of this report is to identify the habitats within the study area (Drawing 1) and to assess the potential for these habitats to support protected or notable species. This information has then been used to determine the need for further survey (e.g. protected species), the potential for ecological impacts and to outline mitigation and potential enhancement options, as appropriate.

1.3 Report Structure

The report includes:

- Section 2: Legal and Policy Context.

- Section 3: Methodology.
- Section 4: Results.
- Section 5: Evaluation and Recommendations.
- Section 6: Conclusions.

2 Legal and Policy Context

There is a comprehensive system of legislation, both domestic and international, which aims to protect biodiversity at the landscape, habitat and species level. Much of the legislation pertaining to biodiversity exists within, and also independently of, the planning process.

2.1 Wildlife and Countryside Act 1981 (WCA) (as amended)

This is the primary legislation covering endangered species in England and sets out the framework for the designation of Sites of Special Scientific Interest (SSSIs). It confers differing levels of protection on species themselves, their habitats, or both, depending on their conservation status. Species offered protection by the Act are listed in a series of schedules. These Schedules are subject to a rolling review on a five yearly basis. Protected species are listed under Section 1 (birds), Schedule 5 (animals other than birds and invertebrates) and Schedule 8 (plants).

2.2 Countryside and Rights of Way Act 2000

This Act affords a greater level of protection to Sites of Special Scientific Interest (SSSIs), provides enhanced management arrangements for Areas of Outstanding Natural Beauty (AONBs), and strengthens wildlife enforcement legislation. This Act has amended the Wildlife and Countryside Act by the addition of the term 'recklessly' to Section 1(5) and Section 9 (4) which has resulted in additional obligations with respect to protected species. As such, it is now an offence to intentionally or recklessly disturb protected species listed on the relevant Schedules of the WCA.

2.3 Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006, is designed to help achieve a rich and diverse natural environment and thriving rural communities. Under Section 40 there is a Duty to conserve biodiversity; specifically Subsection (1) states "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity."

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40.

2.4 The Protection of Badgers Act 1992

This Act brings together all the legislation that is specific to badgers, *Meles meles*, with the exception of their inclusion on Schedule 6 of the Wildlife and Countryside Act 1981, (which prohibits certain methods of taking or capture). The Act makes it an offence to intentionally kill or ill-treat a badger, and destroy, disturb or obstruct a sett. Specifically, it imposes restrictions on works carried out within certain distances of badger setts. Any works that will directly impact on an existing sett are only permitted subject to approval through the issue of a licence from Natural England.

2.5 EC Directive Conservation of Natural Habitats & Flora (92/43/EEC)

The Conservation of Habitats and Species Regulations 2010 (as amended) are the British response to the Habitats & Species Directive 1992 issued by the European Community (EC) (which is now the European Union (EU)). They offer protection to a number of plant and animal species throughout the EC via the designation of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). In the United Kingdom these regulations are implemented through the Wildlife and Countryside Act 1981 (as amended).

The Regulations for the protection of European Protected Species (EPS) have been amended and consolidated with key changes including the removal of most of the defences from regulation 40 and regulation 43 including the removal of the ‘incidental result of an otherwise lawful operation’ defence, and the increase in the threshold for the offence of deliberately disturbing an EPS. Proposals that will affect European protected species may require a licence from Natural England to allow an otherwise unlawful act. In 2009 a new offence of ‘breaching condition of an EPS licence’ was added to the regulations. The licensing process is separate from the planning process. European protected species include all species of bats, great crested newt *Triturus cristatus*, dormouse *Muscardinus avellanarius*, and European otter *Lutra lutra*, amongst others.

2.6 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was published in March 2012. The policies in the Framework took immediate effect and previous planning guidance in PPGs and PPSs has been revoked and replaced by NPPF. Therefore NPPF is a material consideration in all planning decisions from March 2012. NPPF refers the responsibilities of the local authorities to conserve the natural environment with respect to the use of the ‘Circular 6/2005: Biodiversity and Geological Conservation – Statutory Obligation and their Impact within the Planning System’ as guidance in this process. All public bodies including local planning authorities to consider habitats and species of Principal Importance listed in Section 41 of the NERC Act and Priority Species / Habitats within Biodiversity Action Plans when considering a planning application.

2.7 Non-Statutory Local Sites

Non-statutory local sites are referred to as Local Wildlife Sites within the region. These sites are of county importance for their wildlife value. They have no statutory protection but are recognised by Local Authorities and statutory agencies and their presence is fully considered when determining planning applications.

3 Methodology

3.1 Desk Study

Protected species records and non-statutory designated site information, within a 2km radius surrounding the site, were requested from Merseyside BioBank Local Environment Research Centre (LERC) and RECORD Local Record Centre (LRC).

The Multi-Agency Geographic Information for the Countryside (MAGIC) website www.magic.gov.uk was consulted to obtain information relating to the location of statutory designated sites within 10km of the site.

Ordnance Survey maps were also examined for the presence of mapped waterbodies within a 250m radius of the proposed site area.

The following historical reports for the area were also reviewed:

- Liverpool Waters (2011) *‘Liverpool Waters Habitats Regulations Assessment. Screening Report for Proposed Liverpool Waters Scheme’*.

3.2 Field Survey

3.2.1 Phase 1 Habitat Survey

A field survey of the site was carried out in January 2016. Habitats were identified using the standard Phase 1 Habitat survey methodology (JNCC, 2010¹). As part of the field survey, the potential for the site to support any legally protected or notable faunal species e.g. Section 41 priority species, were also assessed. Unless otherwise specified, detailed faunal surveys were not undertaken at this stage; rather the potential for the site to support each species or species group was assessed based on the known range of each species or species group, and the suitability of the habitats within the site. Field signs or sightings of such species were recorded as observed.

3.2.2 Bats

A bat roost potential survey of all suitable and accessible buildings within the site was undertaken to determine their suitability for supporting bat roosts. The survey was conducted externally from the ground. The survey followed the standard methodology detailed within the Bat Conservation Trust Good Practice Guidelines (BCT, 2012²). Where possible each building on site was inspected for signs of bat presence including:

¹ Joint Nature Conservation Committee (JNCC) (2010) *‘Handbook for Phase 1 Habitat Survey. A technique for environmental audit’*. Revised re-print. JNCC: Peterborough.

² Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). Bat Conservation Trust.
The Bat Conservation Trust, London..

- bat droppings,
- scratch and grease marks,
- live or dead bats, and
- noises of bats calling from within the roost.

In addition, features searched for on buildings included:

- cracked, missing or lifted roof tiles,
- missing mortar in walls,
- gaps in soffits, fascias or barge boards,
- presence of a cavity wall, and
- any cracks or gaps at least 10mm in size.

Each building was then awarded a level of potential to support roosting bats at different times of the year. The assessment categories used are explained in Table 3.1:

Table 3.1: Bat roost potential categories.

Roosting Habitat Value (Collins² Table 4.1 classification)	Roosting habitats	Commuting and foraging habitats
High potential	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions (temp, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat.	<p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, treelined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>
Moderate potential	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
Low potential	A structure with one or more potential roost sites that could be used by individual bats opportunistically.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, i.e. not very

Roosting Habitat Value (Collins ² Table 4.1 classification)	Roosting habitats	Commuting and foraging habitats
	However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

3.2.3 Invasive Species

The list of invasive plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats, including aquatic habitats. The survey checked, in particular, for the presence of Japanese knotweed *Fallopia japonica*, giant knotweed *Fallopia sachalinensis*, *Fallopia japonica* x *Fallopia sachalinensis* (a hybrid knotweed) giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*.

3.2.4 Survey Limitations

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. Therefore, the absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future. However, professional judgement allows for the likely presence of these species to be predicted with sufficient certainty so as to not significantly limit the validity of these findings.

The Phase 1 Habitat survey was undertaken in January 2016 which is considered sub-optimal for botanical surveys, as it is outside of the plant growing season. However, it was considered that an assessment could be made as to the value of the habitats on site based on the botanical species present at the time of the survey.

4 Results

4.1 Desk Study

A summary of the results of the data search provided by Merseyside BioBank LERC and RECORD LRC within 2km of the site is provided below. The full records search has not been included within this report due to its size but can be provided upon request.

4.1.1 Statutory Designations

No statutory designations were identified within the site boundary or adjacent to it.

One national statutory designation was identified within 2km of the site; Mersey Narrows Site of Special Scientific Interest (SSSI). Mersey Narrows SSSI is approximately 1km to the west of the site on the opposite bank of the River Mersey. It is notified as a SSSI for its large areas of intertidal sand and mudflats, which support internationally important populations of turnstone *Arenaria interpres*, redshank *Tringa tetanus* and nationally important populations of cormorant *Phalacrocorax carbo*.

There are also five international statutory designations within 10km of the site, summarised in Table 4.1.

Table 4.1: International statutory designated sites within 10km of Princes Reach.

Site	Designation			Approximate distance from site	Reason for designation
	Special Protected Area (SPA)	Special Area of Conservation (SAC)	Ramsar		
Mersey Narrows & North Wirral Foreshore	✓		✓	1km west	Regularly supports more than 1% of the GB populations of one species listed in Annex I of the EC Birds Directive: bar-tailed godwit <i>Limosa lapponica</i> and common tern <i>Sterna hirundo</i>
Liverpool Bay	✓		✓	4.7km north-west	Regularly supports more than 1% of the GB and biogeographical populations of one species listed in Annex I of the EC Birds Directive: red-throated diver <i>Gavia stellata</i> , common scoter <i>Melanitta nigra</i> and waterfowl assemblage
Mersey Estuary	✓		✓	4.7km south-east	Black tailed godwit <i>Limosa limosa islandica</i> , dunlin <i>Calidris alpina alpina</i> , golden plover <i>Pluvialis apricaria</i> , pintail <i>Anas</i>

Site	Designation			Approximate distance from site	Reason for designation
	Special Protected Area (SPA)	Special Area of Conservation (SAC)	Ramsar		
					<i>acuta</i> , redshank <i>Tingra totanus</i> , shelduck <i>Tadorna tadorna</i> , teal <i>Anas crecca</i> and waterbird assemblage
Ribble & Alt Estuaries	✓		✓	6.8km north-west	Bar-tailed godwit <i>Limosa lapponica</i> , bewick's swan <i>Cygnus columbianus bewickii</i> , black-tailed godwit <i>Limosa limosa islandica</i> , common tern <i>Sterna hirundo</i> , dunlin <i>Calidris alpina</i> , golden plover <i>Pluvialis apricaria</i> , grey plover <i>Pluvialis squatarola</i> , knot <i>Calidris canutus</i> , lesser black-backed gull <i>Larus fuscus</i> , oystercatcher <i>Haematopus ostralegus</i> , pink-footed goose <i>Anser brachyrhynchus</i> , pintail <i>Anas acuta</i> , redshank <i>Tringa totanus</i> , ringed plover <i>Charadrius hiaticula</i> , ruff <i>Calidris pugnax</i> , sanderling <i>Calidris alba</i> , shelduck <i>Tadorna tadorna</i> , teal <i>Anas crecca</i> , whooper swan <i>Cygnus cygnus</i> and wigeon <i>Anas penelope</i>
Sefton Coast		✓		6.8km north-west	The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I: Atlantic decalcified fixed dunes <i>Calluno-Ulicetea</i> , dunes with <i>Salix repens ssp. argentea</i> , embryonic shifting dunes, fixed dunes with herbaceous vegetation, humid dune slacks, shifting dunes along the shoreline with white dunes <i>Ammophila arenaria</i> . The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II: Great crested newt <i>Triturus cristatus</i> and petalwort <i>Petalophyllum ralfsii</i>

The website magic (www.magic.gov.uk), includes information detailing the SSSI Impact Risk Zones. These Risk Zones have been developed to guide planning on

whether a development would impact upon a SSSI/SAC/SPA/Ramsar site. An impact buffer does extend from the Mersey Narrows & North Wirral Foreshore SPA/Ramsar, Liverpool Bay SPA/Ramsar and Mersey Estuary SPA/Ramsar on to the site. However, on interrogation of the impact risk zone that extends across the site, the Local Planning Authority (LPA) need only consult with Natural England (NE) in relation to specific scenarios. This includes residential developments of 50 or more houses and large non-residential developments outside existing settlements/urban areas where footprint exceeds 1ha.

It was identified in the Liverpool Waters Habitats Regulations Assessment (HRA) (2011)³ that the development of the Liverpool Waters scheme, of which Princes Reach development forms a small part, was not considered to have direct or indirect impacts on the physical extent and distribution of the habitats within the statutory designated sites listed above (e.g. intertidal mudflats). Additionally, the development is not predicted to have an impact on the tidal flows, heights or channel morphology.

4.1.2 Non-Statutory Designations

There are no non-statutory nature conservation designations on site or adjacent to the site.

The nearest Local Wildlife Sites (LWS) are Leeds-Liverpool Canal which is approximately 1.1km north-east of the site and Everton Park Nature Garden which is approximately 1.9km north east of the site.

Leeds-Liverpool Canal (Eldonian village to Sefton boundary) has the following locally rare species; common mallow *Malva sylvestris*, hemp agrimony *Eupatorium cannabinum*, marsh woundwort *Stachys palustris*, reed sweet-grass *Glyceria maxima*, sheep's fescue *Festuca ovina*, wavy hair-grass *Deschampsia flexuosa*, wild carrot *Daucus carota*, wood sage *Teucrium scorodonia* and yellow water-lily *Nuphar lutea*. The site has not been surveyed for water voles, although similar brick-constructed walls on the canal's Sefton sections support thriving populations.

Everton Park Nature Garden is a 0.75 ha walled garden located within the park situated on a sandstone ridge. It is an established natural habitat including two small lakes, grassland meadows and woodland.

4.1.3 Protected Species Records

A summary table detailing protected species historically recorded (Biobank and RECORD) within 2km of the proposed development site are detailed in Table 4.2.

³ Liverpool Waters (2011) 'Liverpool Waters Habitats Regulations Assessment. Screening Report for proposed Liverpool Waters Scheme'.

Table 4.2: Protected species records within 2km of the site.

Group	Common name	Scientific name	Location	Number of records within 2km
Birds	Black redstart	<i>Phoenicurus ochruros</i>	SJ3489 Canning Dock	6
	Little ringed plover	<i>Charadrius dubius</i>	SJ334914 Central Docks	3
	Peregrine	<i>Falco peregrinus</i>	SJ337922 Stanley Dock	7
Flowering plant	Bluebell	<i>Hyacinthoides non-scripta</i>	SJ353898	2
	Water germander	<i>Teucrium scordium</i>	SJ342916	1
Marine mammal	Bottle-nosed dolphin	<i>Tursiops truncatus</i>	SJ3390	1
	Common porpoise	<i>Phocoena phocoena</i>	SJ3292 SJ33459032 SJ3388 SJ3389 SJ3390	10
	Grey seal	<i>Halichoerus grypus</i>	SJ335905	1
Reptile	Common lizard	<i>Zootoca vivipara</i>	SJ3591	2
Terrestrial mammal	Brown long-eared bat	<i>Plecotus auritus</i>	SJ346903 SJ3590	3
	Common pipistrelle	<i>Pipistrellus pipistrellus</i>	SJ350907 SJ351909 SJ351912	4
	Pipistrelle bat species	<i>Pipistrellus sp.</i>	SJ3489 SJ348903 SJ348905 SJ3490	7
	Bat species	Chiroptera	SJ321899	1
	Eurasian red squirrel	<i>Sciurus vulgaris</i>	SJ3590	1
	European water vole	<i>Arvicola amphibius</i>	SJ3492	1

The website Magic⁴, does not indicate that any European protected species licences have been granted for developments within 2km of the site.

⁴ www.magic.gov.uk [Accessed 20/01/16].

4.2 Field Surveys

The results of the field surveys undertaken within the site are described below.

4.2.1 Habitats

The Phase 1 Habitat survey map illustrates the habitats present within the application area (Drawing 1). The following habitat types were identified within the site:

- Hardstanding.
- Ephemeral/short perennial.
- Amenity improved grassland.

4.2.1.1 Hardstanding/Aggregate

The site is dominated by hardstanding and has previously been used as a car park. A red brick wall approximately 3.5m tall runs adjacent to the east of the site.

4.2.1.2 Ephemeral/Short Perennial

Ephemeral/short perennial vegetation is starting to colonise areas of aggregate. Species present include chickweed *Stellaria media*, dandelion *Taraxacum officinale* agg., Yorkshire fog *Holcus lanatus*, ragwort *Senecio jacobaea*, mouse ear *Cerastium fontanum*, creeping thistle *Cirsium arvense*, dove's-foot crane's bill *Geranium molle*, cow parsley *Anthriscus sylvestris*, creeping buttercup *Ranunculus repens* and mosses.

4.2.1.3 Amenity Grassland

Amenity grassland is present as a small strip running along the western boundary of the site. Species present include perennial ryegrass *Lolium perenne*, creeping buttercup and creeping thistle.

4.2.2 Fauna

During the Phase 1 Habitat survey signs of protected fauna were recorded if observed. In addition, the habitats were assessed as to their potential to support protected species. The protected species groups sought/assessed include:

- Mammals (terrestrial and riparian)
- Birds
- Herpetofauna (amphibians and reptiles)
- Invertebrates

4.2.2.1 Bats

There were no trees present on site. The red brick wall running adjacent to the site had mortar missing and some of the bricks had started to degrade creating holes. However, the holes were either too small, shallow or less than one brick deep which makes them unfavourable for bats to roost in. The wall was assessed as having **negligible bat roost potential**.

Attached to the wall, adjacent to site is a single storey old police station building, comprised of bricks with a slate roof (approximately 3m x 1m). This structure had been boarded up. There was a gap in the upper part of the building where the roof meets the walls, however there were wooden timbers and blocks preventing further access by bats. Therefore, this building was deemed to have **negligible bat roost potential**.

4.2.2.2 Birds

No bird species were observed on site during the survey, however there was evidence of wildfowl faeces on the amenity grassland indicating their historic presence on site. In the wider area starlings *Sturnus vulgaris* and gulls *Laridae* sp. were observed. The habitat on site is not favourable for foraging or breeding due to the dominance of hardstanding and the absence of shrubs or trees.

4.2.2.3 Other protected species

No signs or potential for other protected or notable species was identified within the site. The site is a highly disturbed urban location dominated by hardstanding.

Two watercourses/waterbodies were identified within 250m of site: the River Mersey is approximately 140m west of the site and Princes Dock is approximately 16m west of the site. Due to distance and site work being undertaken on hardstanding it is unlikely that any species including riparian mammals, white clawed crayfish and amphibians will be affected.

No suitable topography or foraging areas for badgers are present.

The habitats on site are sub-optimal for reptiles due to a lack of foraging opportunities and a lack of suitable shelter adjacent to basking habitat. There is also a lack of suitable vegetation surrounding the site to allow colonisation and movement of reptiles on site.

In addition, botanical diversity was observed to be low and therefore it is concluded that the invertebrate diversity will also be low.

5 Evaluation and Recommendations

5.1 Designations

There is one national statutory designated site within 2km of Princes Reach called Mersey Narrows which is approximately 1km west of the site on the opposite bank of the Mersey River. There are a further five internationally designated sites within 10km of the site. The sites are designated for their intertidal sand and mudflats which support populations of qualifying bird species which are listed under Annex I of the EC Birds Directive.

A review of Natural England SSSI Impact Risk Zones indicates that the site falls within the impact buffer for three internationally designated sites. However, it was noted that the development was not listed as a scheme for which consultation with Natural England is required.

The Liverpool Waters Habitat Regulations Assessment (HRA) (Liverpool Waters 2011)³ which included the proposed development site, identified that the site does not support any significant numbers of qualifying species, nor any dependent habitats or prey species for those species in question. This conclusion was supported by the field survey data collected during the PEA.

It is not anticipated that proposed works would have a direct or indirect impact on the Local Wildlife Sites, given their distance from the site and an absence of pollution pathways. Leeds-Liverpool is approximately 1.1km north-east and Everton Park Nature Garden is approximately 1.9km north east of the site.

5.2 Habitats

The habitats within the site are dominated by hardstanding with ephemeral/short perennial vegetation colonising areas of aggregate throughout the site. A narrow strip of amenity grassland is also present on site. Therefore, it is not anticipated that there would be loss to biodiversity.

The site is adjacent to the dock, therefore, to prevent aquatic pollution and to adhere to good practice, works should be undertaken in accordance with the appropriate pollution prevention guidelines produced by the Environment Agency (PPG5: works and maintenance in or near water).

5.3 Fauna

5.3.1 Bats

No suitable bat foraging habitats were identified on site, neither were there any buildings or trees identified as potentially being suitable for roosting bats. There are therefore no further recommendations related to bats.

5.3.2 Birds

There were no habitats on site that would provide suitable habitat for nesting birds. It was evident that wildfowl had occupied the amenity grassland on site. It is recommended that any new site planting should consider nesting and foraging birds. Planting should include trees/shrubs that form dense stands suitable for nesting and produce berries or nectar resources suitable for birds/invertebrates. Ideally the species used should be native species.

5.3.3 Other Protected Species

The site was not considered to support any other protected species as it is dominated by hardstanding. This includes badgers; great crested newts; riparian mammals; reptiles and white-clawed crayfish. There are therefore no further recommendations for these species.

6 Conclusion

The key conclusions and recommendations required are outlined below:

- **Designations:** The nearest statutory and internationally designated site is approximately 1km west and on the opposite bank of the River Mersey. The site is located within an urban environment which means it is frequently subjected to noise, light and human presence and is unlikely to provide suitable foraging or resting areas for qualifying bird species. Therefore it is not considered that the development would result in direct or indirect impacts upon designated sites or nature conservation interest.
- **Habitats:** The site is dominated by hardstanding with ephemeral/short perennial vegetation colonising areas of aggregate. A small strip of amenity grassland is present on site. The species diversity was deemed to be low and it is not anticipated that there would be loss of biodiversity following development of the site. The site is however, adjacent to a dock, therefore it is recommended that works are undertaken in accordance with the Environment Agency's pollution prevention guidelines.
- **Fauna:** Habitats on site were not considered to have the potential to support protected species including bats, badgers, birds, great crested newts and reptiles.

This report is the result of survey work undertaken in January 2016. This report refers, within the limitations stated, to the condition or proposed development of the site at the time of the inspections. Changes in legislation, guidance, best practice, etc. may necessitate a re-assessment/survey. It is also advised that if there is a delay of over a year in undertaking the works, a re-survey may be required. No warranty is given as to the possibility of future changes in the condition of the site.

This report is produced solely for the benefit of Moda Living and no liability is accepted for any reliance placed on it by any other party. This report is prepared for the proposed uses stated in the report and should not be used in a different context.

Drawings

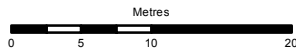


Legend

- Site boundary
- J1.2- Amenity grassland
- J1.3- Cultivated/disturbed land - ephemeral/short perennial
- J3.6- Buildings
- J2.5 - Wall
- Hardstanding

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P1	17-02-16	YL	LS	RC
Issue	Date	By	Chkd	Appd



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Client

Moda Living

Job Title

Princes Reach

Phase 1 Habitat survey map

Scale at A3

1:539

Job No 246318-00	Drawing Status Draft
Drawing No 1	Issue P1