

Channel View

Ecological Appraisal

December 2020

Cardiff Council

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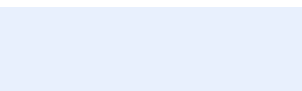
Channel View

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December 2020

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Executive Summary

Contents	Summary
Site Location	<p>The site is located south of Grangetown in Cardiff and is centred at Ordnance Survey National Grid Reference ST178741.</p> <p>The site covers circa 5.1 hectares and comprises public open space areas, residential properties, a 14 storey block of flats, and access roads.</p>
Proposals	<p>Hybrid planning application for mixed-use development. Outline planning permission is sought for: The redevelopment and extension of part of the existing Channel View Estate to provide up to 321 residential apartments and houses (Use Class C3), up to 285 sq.m of retail floorspace (Use Class A1), communal gardens incorporating allotments and picnic areas, formal and informal children's play space, landscaping, cyclepaths/footpaths, drainage infrastructure, roads and parking; The regeneration of the Marl public open space to include new/improved sports pitches, children's play space, a new 'beach', water features, landscaping, and cyclepaths/footpaths; The provision of a new bus/cycle/pedestrian link between Channel View Road and South Clive Street and a new cycle/pedestrian link between South Clive Street and Ferry Road; The provision of a new parking area; Together with associated works (all matters reserved for future consideration). Full planning permission is sought for a first phase of development comprising of a tower block (8-12 storeys) providing 79 elderly-persons (over 55s) accommodation units, a 115sq.m community cafe, communal gardens incorporating allotments and picnic areas, landscaping, drainage infrastructure, footpaths, roads, parking and associated works.</p>
Existing Site Information	<p>There is no known existing ecological information available for the site.</p>
Scope of this Survey(s)	<p>The scope of the survey was to conduct an Ecological Appraisal including a desk-based study and an extended Phase 1 habitat survey of the site. The desk-based study used online resources and information sourced from the LERC.</p>
Results	<p style="text-align: center;">Designated sites</p> <ul style="list-style-type: none"> • One Natura 2000 sites within 5km search radius; • One nationally designated sites within 2km; and • Nine locally designated sites (one LNR and eight SINC's) including River Taff SINC immediately adjacent. <p style="text-align: center;">Habitats & species</p> <p>Habitats on site are dominated by residential buildings/ gardens and amenity grassland forming The Marl. Additional habitats include semi-natural broad-leaved woodland, planted woodland, dense scrub and scattered trees.</p>

	<p>Potential for the following protected species:</p> <ul style="list-style-type: none"> • Reptiles: suitable foraging and breeding habitat is present on site, • Bats (roosting): Properties on site offer negligible to high suitability for roosting bats during the summer months. • Breeding birds: likely to be present on site (including buildings); • Badgers: no signs of badger noted but potential for sett development, commuting and foraging; • Otter: likely to be commuting adjacent to site in River Taff; • Invertebrates: habitats have potential for common and widespread species; • Invasive Flora: Japanese knotweed and montbretia are present along the bank of the River Taff.
<p>Recommendations</p>	<ul style="list-style-type: none"> • Designated sites: production of a Construction Environmental Management Plan detailing site specific mitigation to reduce potential for pollution and disturbance impacts (including lighting); • Habitats: production of a site specific Habitat Management Plan for all retained and created habitat; • Reptiles: production of a Reptile Mitigation Strategy including sensitive clearance of suitable habitats; • Bats: further surveys including external bat roost assessment of all buildings, emergence/ re-entry surveys of buildings with potential (May – August) and a bat roost assessment of trees to be impacted. Also a sensitive lighting scheme; • Breeding Birds - vegetation clearance/ building demolition outside of breeding bird season is recommended (considered to be March to August inclusive) and where habitats cannot be cleared/ demolished outside of the breeding season a suitably qualified ECoW will inspect suitable habitats within 48hours of clearance works; • Badgers: pre-commencement badger survey • Invasive plants: control strategy for invasive plants to be sought from a specialist invasive weed contractor.

Glossary

Badger Act	Protection of Badgers Act 1992
BCT	Bat Conservation Trust
BTO	British Trust for Ornithology
CEnv	Chartered Environmentalist
CEMP	Construction and Environmental Management Plan
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
DEFRA	Department for Environment, Food and Rural Affairs
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
Env (Wales) Act	Environment (Wales) Act
EPS	European Protected Species
EPSL	European Protected Species Licence
GCN	Great Crested Newt
Habitat Regulations	Conservation of Habitats and Species Regulations 2017
HAP	Habitat Action Plan
HPI	Habitat(s) of Principal Importance
JNCC	Join Nature Conservation Committee
LERC	Local Ecological Record Centre
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
LPA	Local Planning Authority
MAGIC	Multi-Agency Geographic Information for the Countryside
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
Natura 2000 site	A European site designated for its nature conservation value
NRW	Natural Resources Wales
NERC Act	Natural Environment and Rural Communities Act 2006
NNR	National Nature Reserve
OS	Ordnance Survey
PEA	Preliminary Ecological Appraisal
PPW	Planning Policy Wales
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAP	Species Action Plan
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site(s) of Special Scientific Interest
SEWBREC	South East Wales Biodiversity Records Centre
TAN	Technical Advice Note
W&CA	Wildlife & Countryside Act 1981 (as amended)

1.0 Introduction

1.1 Background

- 1.1.1 Tetra Tech (formerly WYG) was commissioned by Cardiff Council on 18th December 2019 to undertake an Ecological Appraisal of the site known as Channel View Road, Grangetown, Cardiff. The survey was required to support the planning application for the redevelopment of the site.
- 1.1.2 This report has been prepared by Tetra Tech Principal Ecologist Tim Rich BSc, PhD, MCIEEM. The report conditions are given in Appendix A.

1.2 Site Location

- 1.2.1 The site is located south of Grangetown in Cardiff and is centred at Ordnance Survey National Grid Reference ST178741. The survey area, hereafter referred to as the 'site', is shown on Figure 1.
- 1.2.2 The site is located between Cardiff City centre and Cardiff Bay at Channel View Park and The Marl public open space, adjacent to the banks of the River Taff. The site covers circa 5.1 hectares and comprises public open space areas, residential properties, a 14 storey block of flats, and access roads.

1.3 Development Proposals

- 1.3.1 Hybrid planning application for mixed-use development. Outline planning permission is sought for: The redevelopment and extension of part of the existing Channel View Estate to provide up to 321 residential apartments and houses (Use Class C3), up to 285 sq.m of retail floorspace (Use Class A1), communal gardens incorporating allotments and picnic areas, formal and informal children's play space, landscaping, cyclepaths/footpaths, drainage infrastructure, roads and parking; The regeneration of the Marl public open space to include new/improved sports pitches, children's play space, a new 'beach', water features, landscaping, and cyclepaths/footpaths; The provision of a new bus/cycle/pedestrian link between Channel View Road and South Clive Street and a new cycle/pedestrian link between South Clive Street and Ferry Road; The provision of a new parking area; Together with associated works (all matters reserved for future consideration). Full planning permission is sought for a first phase of development comprising of a tower block (8-12 storeys) providing 79 elderly-persons (over 55s) accommodation units, a 115sq.m community cafe, communal gardens incorporating allotments and picnic areas, landscaping, drainage infrastructure, footpaths, roads, parking and associated works."

Refer to drawing 100 Rev. G for Masterplan.

1.4 Purpose of the Report

1.4.1 The objective of this report is to complete:

- A desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected/ notable species within the site and its zone of influence;
- A preliminary ecological appraisal involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and a reconnaissance survey for evidence of protected fauna or habitats capable of supporting such species;
- An assessment of the potential ecological receptors present on site, identify any constraints they pose to future development and also any recommendations for any further surveys, avoidance, mitigation or enhancement measures that are needed (as appropriate).

1.4.2 Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

2.0 Method

2.1 Desk Study

Previous Reports

2.1.2 There are no known previous reports for this site.

Local Ecological Records Centre

2.1.3 Information was requested from the South East Wales Biodiversity Records Centre (SEWBREC) for information on any nature conservation designations and protected or notable species records within 2km of the site. Records made within the last 10 years were analysed (SEWBReC, 2020).

2.1.4 The data search covered:

- Statutory designated sites for nature conservation, namely SACs, SPAs, Ramsar sites, SSSIs, NNRs and LNRs;
- Non-statutory designated sites for nature conservation, namely LWS;
- Legally protected species, such as great crested newts, bats and badger; and
- Notable habitats and species, such as those listed as Habitats or Species of Principal Importance.

2.1.5 The data search did not cover:

- Tree Preservation Orders (TPOs); or
- Conservation Areas designated for their special architectural and historic interest.

Online Resources

2.1.6 A search for relevant information was also made on the following websites:

- MAGIC www.magic.gov.uk - DEFRA's interactive, web-based database for statutory designations
- NBN Atlas <https://nbnatlas.org/> - for records of protected and notable species.

2.1.7 Note that the use of some NBN Atlas data is limited (e.g. commercial use of data provided under a CC BY-NC licence is not possible) therefore we may not be able to report full details of those records in such cases.

2.2 Field Surveys

2.2.1 The following methods have been used to identify the ecological receptors present on or near the site, which are relevant to the proposed development.

Habitats

- 2.2.2 An extended Phase 1 habitat survey was undertaken on the site on 13th March 2020 by Tetra Tech Principal Ecologist Dr Tim Rich BSc, PhD, MCIEEM. The weather conditions were dry, sunny and cool.
- 2.2.3 The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Habitat Survey (Joint Nature Conservation Committee, 2010). Dominant plant species were recorded for each habitat present using nomenclature according to Stace (2019). The site was also appraised for its suitability to support notable flora, with regard to the CIEEM Guidelines for Preliminary Ecological Appraisal (2nd ed, 2017).

Protected & Notable Species

- 2.2.4 The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations, Schedule 5 of the W&CA, the CRoW Act, those given extra protection under the Environment (Wales) Act, and species included in the Cardiff LBAP.

Great Crested Newt

- 2.2.5 The site was appraised for its suitability to support great crested newt *Triturus cristatus* (GCN). The assessment was based on Guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Becket & Foster, 2001).

Bats

Roosting bats – Buildings/structures/trees

- 2.2.6 Any suitable buildings, structures or trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd ed, 2016) – hereafter referred to as the 'BCT Guidelines'.
- 2.2.7 Due to the high number of buildings on site each building type was described and assessed based on the following system to categorise the bat roost suitability of any features found (Table 1). However any major potential roosting feature on individual buildings were noted and the building suitability amended accordingly.

Table 1 Categories of Bat Roost Suitability (BCT Guidelines)

Suitability	Typical Roosting Features
Negligible	Negligible habitat feature on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or

Suitability	Typical Roosting Features
	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 potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	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).
High	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 & potentially for longer periods of time due to their size, shelter, protection, conditions & surrounding habitat.

Foraging/commuting bats

- 2.2.8 The BCT Guidelines use the following criteria to categorise the potential value of habitats and features for use by foraging and commuting bats and these have been used to characterise the value of this site (Table 2):

Table 2 Categories of Habitat Suitability (BCT Guidelines)

Suitability	Typical Foraging & Commuting Features
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very 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.
Moderate	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. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	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. 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, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Reptiles

- 2.2.9 The site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the Joint Nature Conservation Committees' published *Herpetofauna Workers' Manual* (Gent & Gibson, 2003).

Badgers

- 2.2.10 The site was surveyed for evidence of badger *Meles meles* setts or other badger activity such as paths, latrines or signs of foraging. Methods used and any setts recorded were classified according to published criteria (Harris, Cresswell & Jefferies, 1989).

Hazel Dormice

- 2.2.11 The site was surveyed for its suitability to support hazel dormice *Muscardinus avellanarius*. The assessment was based on guidance outlined in Bright *et al.* (2006).

Other Species

- 2.2.12 The site was also appraised for its suitability to support other protected or notable fauna including mammals, amphibians, birds and invertebrates with regard to CIEEM's *Guidelines for Preliminary Ecological Appraisal* (2nd ed, 2017) and *BS42020:2013 Biodiversity – Code of Practice for Planning and Development*. Evidence of any current or historical presence of such species was recorded.

Invasive Species

- 2.2.13 The site was searched for evidence of invasive plant species, such as Japanese knotweed *Reynoutria (Fallopia) japonica*, Indian (Himalayan) balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum*, wall cotoneaster *Cotoneaster horizontalis* and rhododendron *Rhododendron ponticum* – however see Appendix B for a full list.

2.3 Limitations

- 2.3.1 The optimal period to undertake an extended Phase 1 habitat survey is April-September. The survey was completed in March 2020 which is outside the optimal survey window, however given the nature of the highly modified urban habitats this is a minor limitation to the accurate assessment of the habitats as most of the dominant species of the respective vegetation types were visible and identifiable (though occasionally only to genus). Furthermore, numerous subsequent site visits have been made to the site whilst undertaking protected species surveys and as such this is not considered to be a limitation. No access was available to the private gardens for the survey.
- 2.3.2 To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, this survey focuses on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation. This report cannot therefore be considered a

comprehensive assessment of the ecological interest of the site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended.

- 2.3.3 The details of this report will remain valid for a period of **two years** from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on

3.0 Baseline Conditions

3.1 Designated Sites

3.1.1 The following designated sites of ecological importance have been identified within 2km of the site (Figure 2; Table 3).

Table 3 Designated Sites within 2km

Designation	Site Name	Distance & Direction	Summary of features
SPA/ Ramsar/ SAC/ SSSI	Severn Estuary (Wales)	1.7 km SE	Internationally important site designated for a wide range of features: Estuary, Subtidal sandbanks, Intertidal Mud and Sand, Atlantic salt meadow/salt marshes, Reefs, Migratory fish (river & sea lamprey & twaite shad, salmon, eel, sea trout and Allis Shad), Assemblage of fish species (>100 species), Internationally important populations of migratory bird species, waterfowl and wintering bird species, Assemblage of nationally important populations of waterfowl, Hard substrate habitats (Rocky shores).
SSSI	Cwm Cydfin, Leckwith	0.97 km W	A mixed deciduous woodland overlying Triassic Marls and Rhaetic rocks. The main trees are pedunculate oak, ash, elm, maple with hazel, dogwood and spindle. The ground flora is varied and especially rich alongside the streams.
LNR/SINC	Cardiff Bay Wetlands and Hamadryad Park	0.14 km SE	A former salt marsh and a complex of grassland and shallow lagoons which provides feeding and nesting opportunities for many birds (e.g. heron, bearded tit, Cetti's warbler, little egret), important populations of wintering birds (eg snipe, teal), pipistrelle and noctule bats, common frogs, common toads and otters. It is also an important spawning area for coarse fish in Cardiff Bay.
SINC	River Taff	0 km, adjacent on east side	One of the three main rivers within Cardiff important for migratory fish, otters, wildfowl and bankside vegetation and acts as a major wildlife corridor. Bats, otters, Atlantic salmon, trout, grass

Designation	Site Name	Distance & Direction	Summary of features
			snake and kingfisher are amongst the diverse species recorded.
SINC	Grangemoor Park	0.1 km W	A former landfill site now covered by rough unimproved grassland, scrub, plantations, two ponds and damp ditches. It supports a wide range of plants and animals including common frog, smooth newt, palmate newt, narrow-leaved everlasting pea, bee orchid, skylark and slow-worm.
SINC	River Ely	0.4 km W	One of the three main rivers within Cardiff, important for migratory fish, otters, wildfowl and bankside vegetation (including monk's-hood) and acts as a major wildlife corridor.
SINC	Cogan Spur	1 km SW	Lesser Horseshoe Bat roost in the hollow structure of the A4055 bridge across the Ely
SINC	SINC no. 188 Factory Wood	1.1 km W	Broad-leaved deciduous woodland
SINC	Leckwith pond and marsh	1.1 km W	A former saline pond dug as a storm water facility now dominated by reeds.
SINC	SINC no. 189 Reservoir Wood	1.4 km SW	Broad-leaved deciduous woodland
SINC	Canton Common Ditch	1.9 km NW	A small remnant of Canton Common marshlands that supports a varied emergent and bankside vegetation including flowering rush and purple loosestrife together with associated fauna including common frog, smooth newt and water-shrew

3.1.2 No additional Natura 2000 sites are located within 5km of the site. In addition, no SAC designated for bats is located within 10km of the site.

3.2 Habitats

3.2.1 The following habitats have been identified through our assessment, with detailed Target Notes included in Appendix C, as appropriate:

Broad-leaved Semi-natural Woodland

- 3.2.2 Ferry Road Park has a small area of secondary semi-natural broad-leaved woodland mainly dominated by goat willow *Salix caprea* (Figure 3; Target Note 12), though within the wood a few trees such as wild cherry *Prunus avium* are clearly planted in lines. The woodland includes a circular path and large amounts of dumped rubbish were noted.

Broad-leaved Plantation Woodland

- 3.2.3 The Marl has several plantations with poplars *Populus* sp. and other planted trees (birch *Betula* sp., black pine *Pinus nigra* etc.; Figure 3; Target Note 3).

Dense Scrub

- 3.2.4 There are areas of scrub with bramble *Rubus fruticosus* agg. and young trees along the River Taff edge (Figure 3; Target Note 6), the western side of Ferry Road Park where it grades into the woodland (Figure 3) and in several blocks in the fenced areas of The Marl (Figure 3; Target Note 3).

Parkland scattered trees

- 3.2.5 The Marl has a range of planted trees including lime hybrid *Tilia x vulgaris*, poplars, pears and cherries (Figure 3; Target Notes 9 and 10). There are also many planted mature trees along the urban streets most notably South Clive Street (Figure 3; Target Note 14).

Unimproved Neutral Grassland

- 3.2.6 There are two small areas of unimproved neutral grassland, one in a fenced area within The Marl which is clearly reverting from the amenity grassland due to the fencing resulting in no mowing (Figure 3; Target Note 4). A second area includes a small area on the west side of Ferry Road Park along the bank and adjacent flatter area (Figure 3; Target Notes 11 and 13); this has been sown originally.

Amenity Grassland

- 3.2.7 The Marl is dominated by species-poor, regularly mown amenity grassland used as sport pitches (Figure 3; Target Note 2). There are several pockets of amenity grassland within the Channel View estate and associated roads (Figure 3; Target Note 1).

Swamp

- 3.2.8 There are several narrow (to 2m wide) patches of reed *Phragmites australis* along the shallow edge of the River Taff adjacent to The Marl (Figure 3; Target Note 6).

Running water

- 3.2.9 The River Taff marks the eastern edge of the site (Figure 3; Target Note 6). The Taff is deep and wide at this point where it enters Cardiff Bay.

Hard standing

- 3.2.10 There are many paths and roads throughout the area, and one area of hard playing surface in The Marl.

Buildings and gardens

- 3.2.11 Gardens and buildings are mapped together as curtilage; the private gardens were not accessed as part of the survey however where they could be viewed they ranged from completely paved areas, to mown lawns with no flower beds to mixed flowerbeds/ trees and grass, and they vary in which species they may support.
- 3.2.12 A range of building types are present within the site, see Section 3.3.3 for additional information.

3.3 Protected & Notable Species

Great Crested Newt

- 3.3.2 The SEWBRc data search returned no records of GCN within 2km of the site, however 3 records of common frog *Rana temporaria* and 30 records of common toad *Bufo bufo* were provided within 2km of the site.
- 3.3.3 During the Tetra Tech survey no ponds were recorded within the site however OS mapping recorded one pond located within 500m of the site as detailed below:
- ST 176 737 pond within Grangemoor Park SINC c.300m west of the site, isolated from site by Cardiff Bay Retail Park and residential housing and road infrastructure.
- 3.3.4 No assessment of the pond was completed as there was no access permission.
- 3.3.5 The site provides suitable terrestrial habitat for great crested newt, and other amphibians, including both foraging habitat and hibernation habitat within the woodland and scrub habitats.

Reptiles

- 3.3.6 The SEWBRc data search returned four records of slow-worm *Anguis fragilis* within 2km, the closest record was for a total count of 450 slow worm translocated from a site at Clive Lane, Cardiff c.0.6km north of the site. The River Taff SINC located directly to the east of the site, states grass snake *Natrix natrix* are present within this area within the citation albeit SEWBRc returned no records.
- 3.3.7 During the Tetra Tech survey no reptiles were noted however the site contained suitable habitat to support common reptiles, notably slow worm and grass snake, within areas of scrub (foraging) and woodland (hibernation) habitats located to the west of the site and adjacent to the River Taff. The main areas of highly managed amenity grassland associated with The Marl are unlikely to offer significant reptile potential due to their highly managed nature and limited cover, however, the areas of unmanaged amenity grassland could support low numbers of common reptile species as could the residential gardens, most notably on South Clive Street.

Bats

- 3.3.8 The SEWBREC data search returned 214 records of bats, totalling a minimum of 6 species, within 2km of the site, these are provided in Table 4 below including the number of records and the year of the most recent record. The closest record to the site from SEWBREC was for common pipistrelle recorded in 2010 close to the south eastern boundary of the site.

Table 4 Bat records in data search within 2 km

Species	Latin name	Most recent record	No. records
Brown long-eared	<i>Plecotus auritus</i>	2016	1
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	2018	95
Lesser horseshoe	<i>Rhinolophus hipposideros</i>	2018	11
Nathusius's pipistrelle	<i>Pipistrellus nathusii</i>	2015	6
Noctule	<i>Nyctalus noctula</i>	2018	23
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	2019	263

- 3.3.9 The data search also identified 18 bat roost(s) (for common, soprano, Nathusius' pipistrelle, long-eared bat roosts and lesser horseshoe) and three possible roosts for common and soprano pipistrelle within 2km of the site. Three of these confirmed roosts (long-eared bat and common pipistrelle bat roosts) have since been demolished under licence. The closest roosts to the site is directly to the north east of the red line boundary which was for a common pipistrelle found hanging in a room of a building in 2011 and subsequently released and 0.1km south of the site for three common pipistrelle recorded in a block of flats in 2012 and 2013 directly to the south of South Clive Road.

Roosting Bats – Buildings / Structures / Trees

- 3.3.10 Within the site, houses along South Clive Street and Channel View are considered to range from Low to High suitability for roosting bats and given the number of buildings present the results are provided in the *Channel View Bat Survey Report* (Tetra Tech, 2020).
- 3.3.11 In general, the trees are in good condition with few opportunities for roosting, though a few split limbs and knot holes were noted on poplars in The Marl (Target Note 9) which could offer sites for small temporary roosts, these trees were mostly in good condition with few broken limbs and knotholes. They have been assessed as having Low suitability to roosting.

Foraging/commuting Bats

- 3.3.12 The habitats on site provide a Moderate suitability foraging and commuting resource (Collins 2016) being dominated by residential houses and gardens (and associated streets) and The Marl open space. Additional linear features (including the River Taff),

deciduous woodland are present within the site and good connectivity to similar off site habitats.

- 3.3.13 The River Taff lies directly to the east of the site, which is recognised as a major wildlife corridor in the SINC designation including for bats. The river provides a valuable resource to bats to forage and commute both along the water itself and the continuous and dense scrub boundary which forms the eastern boundary of the site. The Marl recreation area comprises numerous scattered parkland trees along with small stands of both broadleaf and mixed woodland, which offers potentially suitable foraging habitat to bats, however Channel View Road adjacent to The Marl has artificial lighting which limits the potential for light sensitive species.
- 3.3.14 Ferry Road Park woodland lies in the west of the site and Ferry Road Park has a small area of secondary semi-natural broad-leaved woodland mainly dominated by goat willow and likely to support a relatively abundant invertebrate assemblage for bats to forage.

Birds

- 3.3.15 The SEWBReC data search returned 1398 records for birds within 2km over the last 10 years that covered 121 species of which 97 are of at least some conservation concern. Of these SEWBReC have provided records within the site using The Marl including song thrush *Turdus philomelos*, mistle thrush *Turdus viscivorus*, fieldfare *Turdus pilaris* (W&CA Sch1), redwing *Turdus iliacus* (W&CA Sch1) and Iceland Gull *Larus glaucoides*.
- 3.3.16 Of the bird species recorded 52 (from the past 10 years) are for the River Taff (varying from adjacent to the site or 2km north). There are two records for Cetti's warbler *Cettia cetti* (2015) and one record of little gull *Hydrocoloeus minutus* (2015) along the south eastern boundary of the site adjacent to the River Taff. Many of the remaining records are wetland species associated with Cardiff Bay, LNR & SINC and the Severn Estuary SPA/ Ramsar. A range of typical urban and opportunist birds were noted during the survey, mainly using The Marl; lesser black-backed gull, starling *Sturnus vulgaris*, long-tailed tit *Aegithalos caudatus*, great tit *Parus major*, chaffinch *Fringilla coelebs*, wren *Troglodytes troglodytes*, robin *Erithacus rubecula*, carrion crow *Corvus corone* and one pair of nesting magpies *Pica pica*. One dunnock *Prunella modularis* was seen in Ferry Road Park and mute swan were noted in the adjacent River Taff. The habitats within the site are likely to support a range of nesting birds within the scrub and woodland vegetation.
- 3.3.17 The site is located within 2km of the Severn Estuary SPA/ Ramsar (1.7km SE) and Cardiff Bay LNR/ SINC which both support populations of wintering birds. However, The Marl is the only potential area of suitable habitat on site for wintering birds, but due to the high recreational use associated with the sports pitches and the Taff trail (pedestrian and cycle trail) the site is considered to be of negligible value for notable wintering bird species associated with these designated sites.

Badger

- 3.3.18 The SEWBReC data search returned one record of badger within the last 10 years which lies 1.9km from the site.

3.3.19 The residential gardens were enclosed and typical of city gardens and as such offer little opportunities for badgers to create setts or to commute and forage. Within The Marl, the amenity grassland has various pockets of dense scrub, including along the eastern boundary forming the bank to the River Taff. The scrub in these areas was dense, limiting the ability to inspect these areas however no obvious signs of badger such as setts, latrines, snuffle holes or mammal paths were noted. Ferry Park woodland also included no obvious signs of badger with no setts or latrines recorded within this area and no obvious mammal paths were recorded on site.

Hazel Dormice

3.3.20 The SEWBReC data search returned no records of hazel dormice within 2km of the site.

3.3.21 Ferry Road Park woodland to the west of the site supports vegetation that offers potential arboreal habitat and a suitable food source to hazel dormice, including both seed and berry producing species, however the woodland is only 1.3ha in area and isolated with no habitat connectivity to offsite suitable habitat.

Otter & Water Vole

3.3.22 The SEWBReC data search returned three records for otter *Lutra lutra* within 2km of the site, the records were for Cardiff Bay, downstream of the River Taff approx. 1km south and the River Ely. The SEWBReC data search provided no records for water vole *Arvicola amphibius* within 2 km of the site.

3.3.23 The western bank of the River Taff adjacent to the site was inspected for signs of otters during the field survey. No evidence of otters was found, though following the floods of February 2020 there was a lot of plant debris and rubbish washed up along the bank about 1m above the current water levels, which covered any potential bare ground where otter footprints could have been seen. There was only one obvious small rock which could have been used for spraint marking however no evidence was noted. Otters are likely to use the River Taff to commute, and SEWBReC have records of otters from Cardiff Bay which the River Taff flows into. However, The Marl recreational space within the site, which is heavily used by residents, lies directly adjacent to the River Taff and as such is considered that the river alongside the site is unsuitable for otters to lay up/ for holt creation.

3.3.24 No signs of water voles were noted during the survey, albeit access to the western bank of the River Taff was limited given it is heavily overgrown with scrub. The river banks where accessible were made ground with large blocks of concrete with scrub which provides unsuitable burrowing habitat to water voles. Furthermore, the banks of the river are heavily overgrown with scrub and lacked suitable food source for water voles through aquatic vegetation such as grasses and reeds, however it is possible that water voles will use the river to commute.

3.3.25 The city centre location and adjacent Taff Trail with associated high levels of disturbance means that it is considered unlikely that otter or water vole are present except for commuting.

Invertebrates

3.3.26 SEWBRc returned 411 records of terrestrial invertebrates and 11 records of freshwater and marine invertebrates. An abundance of records are from Cardiff Bay Wetlands Reserve, Grangemoor Park, Leckwith Moors and River Ely with occasional records from gardens. The shrill carder and brown-banded bumblebees, cinnabar, grayling, small heath, small blue and wall are Section 7 species (and consequently also Cardiff BAP species). These invertebrates are mainly moths, butterflies and bees and whilst plant species associated with these species were recorded on site, they were not widespread. These species could use garden vegetation to some extent for feeding or breeding but it is considered that the surrounding area such as Grangemoor Park is of greater value with the presence of rough unimproved grassland, scrub, plantations, ponds and wet ditches.

Table 5 Protected and notable invertebrate records in data search within 2 km

Species	Latin name	Most recent record	No. records
Brown-banded Carder-bee	<i>Bombus humilis</i>	2015	4
Buff Ermine	<i>Spilosoma lutea</i>	2016	4
Centre-barred Sallow	<i>Atethmia centrigo</i>	2018	2
Cinnabar	<i>Tyria jacobaeae</i>	2018	24
Crescent	<i>Helotropha leucostigma</i>	2015	6
Dusky Thorn	<i>Ennomos fuscantaria</i>	2017	11
Garden Tiger	<i>Arctia caja</i>	2016	2
Grayling	<i>Hipparchia semele</i>	2014	1
Knot Grass	<i>Acrionicta rumicis</i>	2016	2
Lackey	<i>Malacosoma neustria</i>	2016	1
Latticed Heath	<i>Chiasmia clathrata</i>	2019	5
Pretty Chalk Carpet	<i>Melanthia procellata</i>	2016	1
Rosy Rustic	<i>Hydraecia micacea</i>	2018	2
Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	2019	23
Shrill Carder Bee	<i>Bombus sylvarum</i>	2012	1
Small Blue	<i>Cupido minimus</i>	2016	3
Small Heath	<i>Coenonympha pamphilus</i>	2012	1
Small Square-spot	<i>Diarsia rubi</i>	2015	2
Wall	<i>Lasiommata megera</i>	2011	2
White Ermine	<i>Spilosoma lubricipeda</i>	2017	1

- 3.3.27 The habitats on site could provide suitable habitat for a range of common invertebrates however they are not likely to support any significant populations of invertebrate species of conservation value.

Fish

- 3.3.28 The SEWBRc data search provided 13 records of fish including sea lamprey *Petromyzon marinus*, eel *Anguilla anguilla* and smelt *Osmerus eperlanus* within 2km of the site (all records were from Cardiff Bay except one record of sea lamprey from the River Ely). The citation for the River Taff SINC which is directly to the east of the site states that it is one of the three main rivers within Cardiff important for migratory fish with reference to salmon *Salmo salar* and sea/ brown trout *Salmo trutta*.
- 3.3.29 No waterbodies are present on site, and it is assumed given the SINC citation for the River Taff that migratory fish use the stretch of the river directly to the east of the site.

Hedgehog

- 3.3.30 The SEWBRc data search provided 28 records for hedgehog including one from South Clive Street within the site from 2008.
- 3.3.31 The habitats on site are considered optimal (the gardens and The Marl) for hedgehogs and given the record of hedgehog along South Clive Street, it is assumed that hedgehogs are present in the area.

Notable flowering plants

- 3.3.32 There is one notable plant record for cornflower *Centaurea cyanus* from Grangemoor Park within 2km of the site; this was noted as likely to have been planted as part of a wildflower seed mix and is not of conservation significance.
- 3.3.33 No statutorily protected plants, nationally rare or nationally scarce species were recorded

Schedule 9 Invasive plants and animals

- 3.3.34 Japanese knotweed was present in 2 places along the River Taff banks in small quantity (Target Notes 5 and 8). One small clump of Montbretia *Crocsmia crocosmiiflora* was also noted (Target Note 7). Both these species are listed on W&CA Schedule 9 and should not be allowed to spread.

3.4 Importance of Ecological Features

- 3.4.1 In line with the CIEEM PEA Guidelines, and based on the above baseline information, each ecological feature recorded within the site is considered to have the following importance, using the Method defined in Section 4 of the CIEEM EcIA Guidelines (2016) (Table 6):

Table 6 Importance of Ecological Features

Feature	Importance	Rationale
Severn Estuary (Wales) SPA/SAC/Ramsar/SSSI	International	Internationally important estuary with broad range of associated habitats and species.
Cwm Cydfin, Leckwith SSSI	National	Nationally designated broad-leaved deciduous woodland.
Cardiff Bay Wetlands and Hamadryad Park SINC/LNR	County	Locally designated local nature reserve and site of importance for nature conservation with wetland habitats on edge of Cardiff Bay.
SINCS: Canton Common Ditch, Cogan Spur, Grangemoor Park, Leckwith pond and marsh, River Ely, River Taff, SINC no. 188 Factory Wood, SINC no. 189 Reservoir Wood	County	Locally designated sites of importance for nature conservation.
Broad-leaved semi-natural woodland	Local	Small area of secondary woodland at Ferry Road Park, mainly dominated by willow, providing feeding and potential nesting/ breeding sites for range of birds, bats and invertebrates and hibernation sites to reptiles and hedgehog.
Broad-leaved plantation	Local	Small areas of plantation in The Marl, providing feeding and potential nesting/ breeding sites for range of birds, bats and invertebrates.
Dense scrub	Local	Small isolated areas in The Marl and along the River Taff, secondary, mainly species-poor with brambles and/or hawthorn, providing feeding and/ or potential nesting/ breeding sites for range of birds, bats and invertebrates.
Parkland scattered trees	Local	Limited range of trees providing some feeding and potential nesting/ breeding sites for range of bats, birds and invertebrates.
Unimproved Neutral Grassland	Negligible	Unimproved neutral grasslands are a UK BAP and Cardiff LBAP habitat but the two tiny examples result either from lack of management of amenity grass and are very species-poor, or were sown. The habitat itself is not of botanical value but offer potentially suitable habitat for foraging and commuting bats and badgers.

Feature	Importance	Rationale
Amenity grasslands	Negligible	Large areas of species-poor, routinely mown grassland.
Swamp	Negligible	Small areas on edge of River Taff dominated by reed. Reed beds are a UK BAP and Cardiff LBAP habitat but these stands are too small to be of value to characteristic specialist reedbed species.
Running water	County	River Taff SINC, provides potential habit for commuting otter, water voles, breeding birds and migrating fish
Hard standing	Negligible	Only supports a few ephemeral plants and mosses and no potential for protected species
Buildings and gardens	Local	No full assessment undertaken due to no access; a Cardiff LBAP habitat
Amphibians	Negligible	No breeding habitat on site, and Ferry Road (which is lined with commercial businesses) is considered to be a barrier to any potentially suitable breeding ponds
Reptiles	Local	Habitats on site have the potential to support a low number of common reptile species
Bats	Unknown	Surveys to be undertaken.
Birds – breeding	Local	Breeding opportunities for common species (woodland and buildings). Suitable habitats common in local area.
Birds - wintering	Negligible	No suitable habitat on or adjacent to the site for wintering birds associated with the Severn Estuary SPA & Ramsar
Badgers	Negligible	No signs of badgers noted but update survey to be undertaken so value may change
Hazel dormice	Negligible	Habitat on site isolated and not connected to any suitable habitat. Too small to maintain a viable population of dormice.
Otters & Water vole	Local	The site and banks of the River Taff are unsuitable for these species, but the river itself is likely to be used by these species to commute through particularly otter.

Feature	Importance	Rationale
Invertebrates	Negligible	Gardens may provide a range of feeding and potential breeding sites for range of common and widespread species.
Fish	County	SINC citation states that the River Taff is one of the three main rivers within Cardiff important for migratory fish with reference to salmon and trout. No impact considered likely if piling is not required.
Hedgehog	Local	Known records of hedgehog on site and gardens and the Marl provide suitable habitat.
Plants	Negligible	No notable species recorded on site.
Either: International (incl. European) / National / Regional / County / Local / Negligible Or: Unknown (i.e. further surveys/information needed)		

3.4.2 The potential for the proposals to have adverse or beneficial impacts on these features, along with the need for any mitigation or enhancement measures are discussed in detail below.

4.0 Relevant Planning Policy & Legislation

4.1 National Planning Policy

- 4.1.1 The national planning policy guidance is found principally in Planning Policy Wales Edition 11 (PPW) dated February 2021 (Welsh Government, 2021). The document is supported by a series of Technical Advice Notes (TANs) with the most relevant for ecology being TAN 5: Nature Conservation and Planning (Welsh Government, 2009), which provides advice on how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. A summary of the main points relevant to the ecological assessment of the development is provided below.
- 4.1.2 Paragraph 6.4.2 states that local planning authorities, along with other public bodies, as part of the Environment (Wales) Act 2016 have a duty to take reasonable steps, consistent with the proper exercise of their functions, to further the conservation and enhancement of biodiversity and help maximise contributions to achieve well-being goals.
- 4.1.3 Paragraph 6.4.3 states that the planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement. Addressing the consequences of climate change should be a central part of any measures to conserve biodiversity and the resilience of ecosystems. Development plan strategies, policies and development proposals must consider the need to:
- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
 - ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
 - ensure statutorily and non-statutorily designated sites are properly protected and managed;
 - safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
 - secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.
- 4.1.4 Paragraph 6.4.4 states that biodiversity and resilience considerations should be taken into account at an early stage in development planning. All reasonable steps must be taken to maintain and enhance biodiversity and promote the resilience of ecosystems which should be balanced with the wider economic and social needs of business and local communities.
- 4.1.5 Paragraph 6.4.5 states that planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions, and that development should not cause any

significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity. The diversity of, connections between, the scale, the condition and the adaptability of ecosystems must be taken into account.

- 4.1.6 Paragraphs 6.4.11, 6.4.14 and 6.4.22 state that planning authorities must have regard to the relative significance of international, national and local designations in considering the weight to be attached to nature conservation interests, and that the international and national responsibilities and obligations for conservation should be fully met. Statutorily designated sites must be protected from damage and deterioration, with their important features conserved and enhanced by appropriate management. Statutorily protected species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 are material considerations if a development would result in disturbance or harm to the species or its habitat, and the range and population of the species should be sustained
- 4.1.7 Paragraph 6.4.21 states 'Planning authorities must follow a step-wise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort compensated for; enhancement must be secured wherever possible'.
- 4.1.8 Paragraphs 6.4.24-26 also gives emphasis to the importance of trees, hedgerows and woodlands (especially ancient woodland) and states 'Ancient woodland and semi-natural woodlands and individual ancient, veteran and heritage trees are irreplaceable natural resources, and have significant landscape, biodiversity and cultural value. Such trees and woodlands should be afforded protection from development which would result in their loss or deterioration unless there are significant and clearly defined public benefits; this protection should prevent potentially damaging operations and their unnecessary loss. In the case of a site recorded on the Ancient Woodland Inventory, authorities should consider the advice of NRW.'
- 4.1.9 Related to these Biodiversity and Ecological Network policies, Section 6.2 gives weight to the protection and enhancement of multi-functional green infrastructure, which is important for sustainable management of natural resources. Green infrastructure should be incorporated into development through appropriate site selection and use of creative design.
- 4.1.10 Circular Letter CL-05-04 reaffirmed the Welsh Government's commitment to ensuring that designated sites and species of nature conservation importance are protected from damage and deterioration, with their important features conserved by appropriate management. The letter advised that under specific circumstances a pre-commencement condition should be attached to planning consents requiring the applicant to provide the LPA with a copy of their European Protected Species (EPS) Licence (once issued by NRW). The Circular Letter was withdrawn in March 2018 in an attempt to reduce the number of pre-commencement conditions, with LPA's advised to instead use a replacement informative (to be attached to all relevant consent notices) to avoid unnecessary duplication controls of other legislation.

4.2 Environment (Wales) Act

- 4.2.1 As part of the Welsh Government's commitment to reversing the decline in biodiversity in Wales and increasing the resilience of its ecosystems, the Env (Wales) Act 2016 aims to build greater resilience into our ecosystems. Biodiversity and well-functioning ecosystems provide natural solutions that build resilience, which in turn help society create jobs, support livelihoods and human well-being, adapt to the adverse impacts of climate change and contribute to sustainable development.
- 4.2.2 Part 1 of the Environment Act sets out Wales' approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory 'principles of sustainable management of natural resources' defined within the Act.
- 4.2.3 Section 6 under Part 1 of the Act places an enhanced duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. This duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.
- 4.2.4 Section 7 replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales. The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps. Certain public authorities will also be required to consider the section 7 list, in complying with the new biodiversity duty under section 6 of the Act. The list is important in assisting public bodies to identify potential issues that they may wish to address in meeting their well-being objectives, in addition to contributing to the well-being goal 'a resilient Wales' (Goal 2). The current Section 7 lists are interim lists which are exactly the same as the previous list under Section 42 of the NERC Act, and is under review in consultation with NRW.
- 4.2.5 Part 1 of the Act, including Sections 6 and 7, came into force on 21st May 2016.

4.3 Local Biodiversity Action Plan

- 4.3.1 Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although they are no-longer managed at a national level many are still reviewed and updated at a local level.
- 4.3.2 The Cardiff LBAP (Cardiff County Council, 2008) is the relevant document for this site and it contains the following relevant Habitat & Species Action Plans:

Table 7 LBAP SAPs

Species Action Plans	
Bats	Pied Flycatcher
Hawfinch	Reptiles
Otter	

Table 8 LBAP HAPs

Habitats Action Plans	
Gardens and allotments	Reedbed
Neutral grassland	Woodland

- 4.3.3 It should be noted that the existence of a SAP or HAP does not always infer an elevated level importance for those features. These plans may be designed to encourage an increase in these habitats/species, rather than to protect a county-scarce feature (for example).

4.4 Local Plan

- 4.4.1 The site lies within the jurisdiction of Cardiff Council. The Cardiff Local Development Plan 2006-2026 (Cardiff County Council, 2016), constitutes the development plan for the area. Specific environmental policies included within the LDP that are of relevance to the ecology of the site are detailed below

EN5: Designated Sites

- 4.4.2 Development will not be permitted that would cause unacceptable harm to sites of international or national nature conservation importance. Development proposals that would affect locally designated sites of nature conservation and geological importance should maintain or enhance the nature conservation and/or geological importance of the designation. Where this is not the case and the need for the development outweighs the conservation importance of the site, it should be demonstrated that there is no satisfactory alternative location for the development which avoids nature conservation impacts, and compensation measures designed to ensure that there is no reduction in the overall nature conservation value of the area or feature.

EN6: Ecological Networks and Features of Importance for Biodiversity

- 4.4.3 Development will only be permitted if it does not cause unacceptable harm to:
- i. Landscape features of importance for wild flora and fauna, including wildlife corridors and 'stepping stones' which enable the dispersal and functioning of protected and priority species;
 - ii. Networks of importance for landscape or nature conservation.
- 4.4.4 Particular priority will be given to the protection, enlargement, connectivity and management of the overall nature of semi-natural habitats. Where this is not the case and

the need for the development outweighs the nature conservation importance of the site, it should be demonstrated that there is no satisfactory alternative location for the development and compensatory provision will be made of comparable ecological value to that lost as a result of the development.

EN7: Priority Habitats and Species

- 4.4.5 Development proposals that would have a significant adverse effect on the continued viability of habitats and species which are legally protected or which are identified as priorities in the UK or Local Biodiversity Action Plan will only be permitted where:
- i. The need for development outweighs the nature conservation importance of the site;
 - ii. The developer demonstrates that there is no satisfactory alternative location for the development which avoids nature conservation impacts; and
 - iii. Effective mitigation measures are provided by the developer.
- 4.4.6 Where harm is unavoidable it should be minimised by effective mitigation to ensure that there is no reduction in the overall nature conservation value of the area. Where this is not possible compensation measures designed to conserve, enhance, manage and, where appropriate, restore natural habitats and species should be provided.

EN8: Trees, Woodlands and Hedgerows

- 4.4.7 Development will not be permitted that would cause unacceptable harm to trees, woodlands and hedgerows of significant public amenity, natural or cultural heritage value, or that contribute significantly to mitigating the effects of climate change.
- 4.4.8 In addition the Cardiff Green Infrastructure Supplementary Planning Guidance document is considered of relevance to the project.

4.5 Legislation

- 4.5.1 Full details of the UK legislation and offences which are relevant to the ecological receptors identified are included in Appendix B. However, based on the findings of our assessment, it is considered that the proposals will need to consider the following legal provisions:
- Harm to a Natura 2000 site
 - Disturbance or killing of an EPS
 - Disturbance of nesting wild birds
 - Cause of permit the spread of an invasive species into the wild

5.0 Discussion

5.1 Designated Sites

Natura 2000 Sites

- 5.1.2 No Natura 2000 sites will be directly impacted by the proposed development.
- 5.1.3 The Severn Estuary SPA, SAC and Ramsar lies 1.7km to the south east of the site. This comprises an internationally important site, designated for a series of estuaries, sandbanks with extensive mud-flats and intertidal sand. The site is also of international importance for birds and migratory fish. The River Taff, that lies directly to the east of the site, flows into this designated site and as such there is potential for the development to have indirect impacts on this designated site as detailed below.
- 5.1.4 The construction of the development at this site is not considered likely to impact the Severn Estuary SPA, SAC and Ramsar through air quality or noise impacts given the distance to the designated areas and urban location. However, the following potential impacts at should be considered:

Water quality

- 5.1.5 The River Taff lies directly to the east of the site and ultimately feeds into the SPA, SAC and Ramsar Site. Therefore if there is a pollution incident on the site and polluting substances from the development enter the watercourses, an impact on these designated sites could occur. This is considered unlikely due to the size of the river at this point and the dilution associated with the mixing within Cardiff Bay (where the River Ely also flows) prior to flowing through Cardiff Bay Barrage into the Severn Estuary.
- 5.1.6 To reduce the potential for impacts a Construction Environmental Management Plan (CEMP) should be produced prior to construction commencing that sets-out the framework and requirements for the management of environmental impacts associated with the construction phase of the project. The CEMP should include general best practice construction methods, timing of works to reduce potential impacts and site specific measures with reference to the Guidelines for Pollution Prevention Works and maintenance in or near water: GPP05 where appropriate to reduce for pollution prevention including water, vibration, dust and litter.

Qualifying Birds

- 5.1.7 The site itself is considered unsuitable to wintering birds associated with the Severn Estuary SPA/ Ramsar, the adjacent River Taff provides limited suitable habitat in the form of mudflats for wintering birds however the site is located in an urban area with current high disturbance levels at the site through the recreational use of The Marl and the Taff Trail (cycle and pedestrian route which is used heavily). It is considered unlikely that any of the qualifying species associated with the Severn Estuary SPA/ Ramsar will be using the habitats on or directly adjacent to the site.

5.1.8 Indirect disturbance impacts on the qualifying birds interest during the construction is considered unlikely as there is no direct line of sight from the SPA/ Ramsar to the site due to the A4232 bridge, which crosses the River Taff to the south of the site combined with the Cardiff Bay Barrage. In addition, the site is already subject to high levels of disturbance due to its location within Cardiff urban area combined with the Taff Trail and recreational use of The Marl. However, as a precautionary approach, it is recommended that hoarding is erected around the construction area to reduce any potential lines of sight and disturbance to these species. It is recommended that any hoarding is erected over the winter months between November and February.

Increase in visitor pressure

5.1.9 The masterplan retains the majority of The Marl, to encourage future residents to make use of the green space within the development site, rather than increasing visitor pressure on the surrounding designated sites. Given the high population levels in Cardiff, and the high visitor numbers from elsewhere in the region, it is considered extremely unlikely that the minor increase in population resulting from this development would significantly impact the designated sites or their qualifying features.

5.1.10 Further general mitigation measures should be included within the CEMP as below:

- Provision of Toolbox Talk to Site Personnel - Prior to any works being undertaken, a suitably qualified ecologist will provide a toolbox talk to communicate the potential for protected and notable species in the site and precautionary measures to be employed. The toolbox talk will include contingency measures if protected species are recorded on site at any stage of construction;
- Emergency Procedure - An emergency procedure will be communicated to site personnel via the toolbox talk emphasising that should any signs of protected species be encountered or suspected, all works in the area will cease and the suitably qualified ecologist informed immediately.
- Working Hours - Works will be restricted to daylight hours wherever possible to minimise disturbance.
- Artificial Lighting Controls - Some additional lighting may be required during the construction phase of the development. If any additional lighting is required the sighting of this and use of directional lights will be discussed with the ecologist to minimise any risk of disturbance on any fauna that may potentially be present in the working area.
- During construction, site speed limits of 15mph will be enforced to reduce the likelihood of accidental injury/ killing of wildlife by construction traffic;
- Any temporarily exposed excavation will have sloped edges to reduce the potential for animals to become trapped in excavations. If this is not possible a mammal exit ramp (i.e. plank) or sloped exit route in the soil/ ground will be provided before site personnel leave site (i.e. at night time).

5.1.11 Based on designations for the Severn Estuary and the potential indirect impacts of the proposed development, as the competent authority Cardiff Council will need to determine whether there would be a likely significant effect of the development on the Internationally designated sites, either alone or in-combination with other existing and proposed

developments in the wider area. Consequently it is recommended that a screening letter is sent to NRW to confirm whether, in their view, an Appropriate Assessment is required under the Habitats Regulations.

Sites of Special Scientific Interest

- 5.1.12 Cwm Cydfin, Leckwith SSSI is 1.9km from the site and designated for its broadleaved woodland and as such, given there are no links or hydrological links with this site, it will not be directly affected by the proposals.
- 5.1.13 The Severn Estuary SSSI has been discussed under the Severn Estuary SPA, SAC and Ramsar (as above).

Local Wildlife Sites

- 5.1.14 The River Taff SINC site lies directly to the east of the site, and whilst the development proposals will not directly impact the river, there is potential for indirect impacts including the following:
- Water Quality – this is covered under the Severn Estuary SPA, SPA and Ramsar above and the same recommendations should be followed;
 - Visitor pressure – a small area of The Marl will be developed in the south of the site, but the majority of the open space will be retained and continued to be used for recreation. In addition the Taff trail runs along the eastern boundary of the site, and again this is heavily used and the small increase in residential numbers are not considered likely to significantly impact the SINC site.
 - Lighting – there is potential that the new development will result in light spill onto the River Taff and therefore it is recommended a sensitive lighting scheme is included within the development proposals to reduce, or at least maintain, light spill at the current levels. See the *Channel View Bat Survey Report* (Tetra Tech, 2020) for further information.
 - The remaining SINCS are either not hydrologically linked to the site or of a distance where no impacts are considered from the development and hence are not discussed any further.

5.2 Habitats

- 5.2.1 The habitats present are primarily urban with little or no natural habitat and are relatively species-poor and are likely to support only a limited range of plants and animals.
- 5.2.2 The most natural habitats are the edge of the River Taff (though even the banks themselves are made ground), and the small broad-leaved woodland at Ferry Road Park. The broad-leaved plantation woodland (which are stands of broadleaf trees with amenity grassland as a ground layer and hence this habitat does not qualify as LBAP), scrub and parkland and street trees are at most of Local importance. At the eastern edge of the site, the running water of the River Taff adjacent to the site, is assessed as of County importance as it is designated as a SINC and provides potential habitat for breeding birds, commuting & foraging bats, migratory fish, commuting otter and water vole and aquatic invertebrates.

- 5.2.3 Gardens are a Cardiff LBAP habitat and collectively the gardens provide suitable habitat for wide range of common breeding birds, foraging bats, common and widespread invertebrates and hedgehogs.
- 5.2.4 The remaining habitats including amenity grassland, unimproved neutral grassland, swamp and hardstanding are of negligible importance, either being present as only very small areas or being very species-poor.

Ecosystem Resilience

- 5.2.5 The Environment (Wales) Act focuses on the sustainable management of natural resources. It has the core objective of maintenance and enhancement of ecosystems and the benefits that they provide for people. The Act sets a duty on public authorities to take account of the resilience of ecosystems. Ecosystem resilience relates to the capacity of ecosystems to deal with disturbances, either by resisting them, recovering from them, or adapting to them, whilst retaining their ability to deliver services and benefits now and in the future. The Environment (Wales) Act takes an approach and brings in the idea of building resilience. This recognises five attributes as building blocks of resilience which can be summarised as:
- Diversity;
 - Extent;
 - Condition;
 - Connectivity; and
 - Adaptability.
- 5.2.6 The main habitats present onsite are dominated by urban environments (including green infrastructure such as The Marl and amenity trees) with additional habitats include semi-natural broad-leaved woodland, planted woodland, dense scrub and scattered trees. The site can be considered a typical urban ecosystem with a range of green infrastructure. The green infrastructure has an important function in climate regulation as well as a role in managing air pollution, noise alleviation, surface water regulation and providing connectivity for plants and animal species. In addition, due to the location, these habitats have an important role in providing outdoor space to the surrounding urban area.
- 5.2.7 There is no clear guidance on how ecosystems should be considered as part of development proposals and the quantification of resilience is difficult. The proposed development will impact the ecosystems through the small loss of the extent of habitats currently present within The Marl however the overall diversity and condition of the habitat and species components will be maintained and enhanced through habitat creation with suitable native species and incorporation of new features within the development. The Concept Landscape Strategy (Tetra Tech drawing A115866-1 201 Landscape Masterplan) includes a range of mitigation to maintain these ecosystem functions including SuDS, tree and shrub planting and species rich grassland. All retained and created habitats should be subject to a site specific Habitat Management Plan (HMP) which seeks to enhance their biodiversity value in the long term.

- 5.2.8 Based on the proposals the development is considered likely to enhance the site at an ecosystem level.

5.3 Protected & Notable Species

Great Crested Newts

- 5.3.2 GCN are fully protected under Schedule 5 of the W&CA and Habitats Regulations, which protects both the newts and their habitats.
- 5.3.3 The SEWBReC data search provided no for GCN within 2km and an assessment of OS mapping identified one pond within 500m located within Grangemoor Park SINC c.300m west of the site, which appears to be surrounding by high quality terrestrial habitat. Grangemoor Park SINC is isolated from site by Cardiff Bay Retail Park, residential housing and Ferry Road and these are considered to be a barrier to dispersal.
- 5.3.4 Based on the lack of connectivity to aquatic habitat it is considered highly unlikely GCN will be present on site.

Reptiles

- 5.3.5 Reptiles are protected from intentional or reckless killing or injury under the W&CA.
- 5.3.6 The SEWBReC data search provided records of slow worm within 2km of the site and the River Taff SINC citation refers to the presence of grass snake. The habitats on site could support low numbers of common reptile species. Due to the potential presence of low numbers of common reptiles it is considered a translocation would not be reasonable and therefore clearance works should follow the below 'sensitive clearance' methodology:
- Clearance works should be completed during the season when reptiles are active (March to October) and within suitable weather conditions (dry, light winds and temperatures between 10°C and 19°C);
 - All clearance works should be supervised by an Ecological Clerk of Works (ECoW);
 - Prior to works commencing, the ECoW will give a 'Tool Box Talk' to all site contractors, explaining
 - Which habitats have the potential for presence of reptiles and other protected species;
 - How to avoid harming them; and
 - What to do in the event they are found.
 - The habitat clearance will be carried out in two stages. Firstly, the vegetation will be strimmed by hand to a height of 300mm. The clearance will be completed towards suitable retained habitat to encourage any reptiles present to move to adjacent vegetation. All areas of vegetation will be checked prior to cutting by the ECoW;
 - Whilst the vegetation is being strimmed, any log/ brash piles or other potential reptile refugia sites (such as piles of rubber tyres and rubble piles), will be dismantled by the ECoW by hand. The refugia piles will be immediately removed or

located outside the proposed works area. All trimmed vegetation will be removed off-site or used to create habitat piles in retained vegetation;

- A second cut will be made 24 hours later to ground level.

5.3.7 Prior to the works commencing a suitable receptor site for any reptiles found will be agreed with Cardiff Council. The receptor site will ideally have the following features:

- Be as close to the donor site as possible (within the same county/ administrative area/ geology and habitat type);
- Currently does not support a population of the species to be translocated, or holds a low population and/ or has the capacity to support more reptiles because of the complexity of the habitat, and/or a suboptimal habitat that can be enhanced to increase its capacity to support a larger population, if necessary;
- Not be subject to planning or other threats in the foreseeable future.

5.3.8 Full details of the measures to protect reptiles for each phase of the development should be detailed within a Reptile Mitigation Strategy which will be agreed with Cardiff Council prior to the commencement of each phase of the development.

Bats

5.3.9 All bats and their roosts receive full protection both under Habitat Regulations and the W&CA which makes it an offence to:

- Intentionally kill, injure or take a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; or
- Disturb a bat while it is occupying a structure or place which it uses for that purpose.

5.3.10 The SEWBReC data search provided records of six bat species within 2km.

Roosting Bats

5.3.11 There are 188 buildings proposed to be demolished on site, and whilst a full BRA was not completed as part of this assessment, suitable bat roosting features were noted during the survey with buildings ranging from negligible to high suitability for roosting bats.

5.3.12 Therefore, the proposed development, if bats are present, in the absence of mitigation, would potentially result in the killing/ injury of bats and loss of roosts. In order to determine presence/ likely absence of bats on site and inform an appropriate mitigation strategy it is recommended further surveys are completed, in line with the BCT Guidelines, including a detailed external inspection of the buildings combined with further dusk emergence and/ or dawn re-entry surveys. All surveys will be conducted following best practice guidance (Collins 2016) and during suitable weather conditions.

5.3.13 Please note, should a bat roost be found, a detailed mitigation/ compensation approach will be required and an EPSL application to NRW may also be required following receipt of planning permission. A licence from NRW normally requires a 30 working day

determination period from receipt of the application. However, this period has been known to extend during busy periods. The time of year that the works can be undertaken depends on the number of bats and type of roost.

- 5.3.14 The details of the additional BRA, bat emergence/ re-entry surveys and mitigation strategy are provided in a separate report *Channel View Bat Survey Report* (Tetra Tech, 2020).

Commuting and Foraging

- 5.3.15 The site is located within the Cardiff urban area, consisting of residential housing and gardens, tree lined streets and The Marl open space with the adjacent River Taff. Parts of the site includes relatively high levels of artificial lighting which limits its suitability for light intolerant bat species however the habitats are likely to be used by commoner light tolerant bats such as pipistrelles. Overall the site is assessed of Moderate suitability for commuting and foraging bats.
- 5.3.16 The details of the additional bat surveys and mitigation strategy are provided in a separate report *Channel View Bat Survey Report* (Tetra Tech, 2020).

Birds

- 5.3.17 All bird's eggs and active nests are protected from damage and destruction under the W&CA.
- 5.3.18 The SEWBRc data search provided 1398 records for birds within 2km over the last 10 years that covered 121 species of which 97 are of at least some conservation concern. Of these SEWBRc have provided records within the site using The Marl including song thrush, mistle thrush, fieldfare (WCA Schedule 1), redwing (WCA Schedule 1) and Iceland Gull. SEWBRc returned records for the River Taff with a record of Cetti's warbler (WCA Schedule 1) from 2015 directly to the east of the site. There are also many records of bird species from Severn Estuary SPA/ Ramsar and Cardiff Bay LNR/ SINC.
- 5.3.19 In order to avoid impacts it is recommended that vegetation clearance/ building demolition is conducted outside of the breeding bird season (March to August inclusive). Where habitats cannot be cleared/ demolished outside of the breeding season a suitably qualified ECoW will inspect suitable habitats within 48hours of clearance works. If a nesting bird is identified, the ECoW will advise on suitable working methods and exclusion zones to restrict works on site. Measures recommended will depend on the nature of the works in that area and, the species of bird identified to be nesting. Note that suitable working methods may result in delay(s) to undertaking site works within specific areas of site until the ECoW has advised that all the chicks have fledged. The potential impacts on wintering birds and precautionary recommendations are detailed in Section 5.1.
- 5.3.20 To provide mitigation for loss of habitat for breeding birds a range of bird boxes are recommended to be provided. Bird boxes are an established technique for increasing the value of new landscapes to hole-nesting bird species and may contribute to LBAP targets. The size of the entrance hole influences the species of bird that will occupy it and

so a variety of sizes should be used to encourage a range of species. The following bird boxes are recommended (or suitable alternatives):

- 5 x 26mm hole Schwegler 1B Nest Box (suitable for pied flycatcher (LBAP));
- 5 x 32mm hole Schwegler 1B Nest Box (suitable for pied flycatcher (LBAP));
- 5 x Schwegler 1 SP Sparrow Terrace;
- 5 x Schwegler No.16 Swift Box.

5.3.21 Nest boxes can be installed on retained/ new buildings or retained mature trees.

Badgers

5.3.22 Badgers and their setts are protected under the Badger Act from killing/ injury and disturbance.

5.3.23 The SEWBRc data search provided one record for badger within 1.9km within the last 10 years although no signs of badgers was recorded on site. Due to the high mobility of badgers and the suitable habitat on site, namely Ferry Road Park woodland and dense scrub, it is recommended a pre-commencement badger surveys is undertaken on site at least three months prior to the development commencing.

5.3.24 If an 'active' sett is present (Natural England, 2009) and will be impacted by the development, a licence to disturb any badger setts will be required from NRW, and setts may only be disturbed or destroyed under licence from July to November (inclusive), when adults do not have dependant young.

Hazel Dormouse

5.3.25 Hazel dormouse and their habitats are fully protected under the W&CA and Habitats Regulations.

5.3.26 SEWBREC returned no records of hazel dormice within 2km of the site. Whilst the Ferry Road Woodland in the west of the site and dense scrub on site supports species which are a suitable food source to hazel dormice, the habitats are isolated and small in area. Ferry Road Park woodland is only 1.3ha in area with no habitat connectivity to offsite suitable habitat. PTES (2014) states that if a woodland is isolated, it needs to be approx. 20ha in area to maintain a viable population of dormice as such the habitats on site are considered unsuitable for dormice and no further recommendations or mitigation are required.

Otters & Water voles

5.3.27 Otters and their habitats are fully protected under the W&CA and Habitats Regulations and also a Cardiff LBAP species. Water voles and their habitats are fully protected under the W&CA.

5.3.28 The SEWBRc data search provided three records for otter within 2km of the site, the records were for Cardiff Bay, downstream of the River Taff approx. 1km south and the River Ely. The SEWBRc data search provided no records for water vole within 2km of the site.

5.3.29 The bank of the River Taff adjacent to the site is considered unsuitable for layup/ holt creation for otters or burrowing water voles as the banks are made ground. Otters and possibly water voles are assumed to use the River Taff for commuting, the proposed development is not considered to impact these species as there will be no lighting along the eastern boundary during or post construction.

Hedgehog

5.3.30 Hedgehogs are likely to use the garden and scrub habitats on site. The mitigation works for breeding birds and reptile displacement will allow for an ECoW to check for hedgehogs also. For any vegetation removal outside of the breeding bird season which will not require an ECOW, all site contractors will be given a toolbox talk which will include advice with what to do if a hedgehog is disturbed during the works. Any disturbed during hibernation will be taken to a hedgehog rescue centre.

Schedule 9 Invasive Plants

5.3.31 Two Schedule 9 plants are present on site; Japanese knotweed and Montbretia. These were recorded along the banks of the River Taff and are not likely to be directly impacted by the proposed development. However, as best practice it is recommended an invasive plant control strategy is implemented. Advice should be sought from an invasive weed specialist on appropriate, site specific methods (particularly due to the proximity of flowing water). Removal and treatment may take several months, therefore it is recommended advice is sought at the earliest opportunity.

6.0 Summary

6.1 Designated Sites

- 6.1.1 Severn Estuary SPA/ SAC/ Ramsar has the potential to be indirectly impacted through habitat degradation from pollution/ run-off from site works and albeit unlikely, lines of sight between the site and the Severn Estuary. In addition the River Taff SINC site has the potential to be indirectly impacted through habitat degradation from pollution and run-off and potential to disturb nesting birds. Assuming there is no piling, migratory fish are not anticipated to be impacted but if piling is required the impacts will need to be revisited.
- 6.1.2 To minimise any potential impacts, works should be in accordance with PPG 5 and it is recommended that hoarding is erected around The Marl prior to any works commencing between November and February, outside of the bird breeding season.

6.2 Habitats

- 6.2.1 The habitats present are primarily urban with little or no natural habitat. The River Taff is assessed as of County importance. The small woodland at Ferry Road Park, plantations, scrub and parkland and street trees are of Local importance. Collectively the gardens are assessed as of Local importance and are a Cardiff LBAP habitat. The amenity grassland, unimproved neutral grassland, swamp and hardstanding are of negligible importance.

6.3 Protected & Notable Species

- **Reptiles:** Suitable foraging and breeding habitat is present on site, displacement measures are recommended;
- **Bats (roosting):** Properties on site offer negligible to high suitability for roosting bats during the summer months. Recommendations include external BRA of all buildings, emergence/ re-entry surveys of buildings with potential (May to August) and a bat roost assessment of trees to be impacted.
- **Badgers:** potential for sett development, commuting and foraging; avoid impacts through a pre-commencement check and sensitive working practices during works.
- **Breeding birds:** likely to be present on site (including buildings); vegetation clearance/ building demolition outside of breeding bird season is recommended (March to August inclusive) and where habitats cannot be cleared/ demolished outside of the breeding season a suitably qualified ECoW will inspect suitable habitats within 48hours of clearance works.
- **Wintering birds:** No suitable habitat on or adjacent to the site for wintering birds associated with the and Severn Estuary SPA and Ramsar. Cardiff Bay LNR/ SINC and Severn Estuary SPA and Ramsar support important populations of wintering birds. It is recommended that hoarding is erected around The Marl outside of the breeding bird season, between November and February to reduce line of sight.
- **Fish:** the River Taff adjacent to the eastern boundary of the site is used by migratory fish. The development is not considered to impact these species as no piling will be

undertaken, however if plans change and piling is required then further recommendations will be required.

- **Invasive Flora:** Japanese knotweed and Montbretia are present along the bank of the River Taff, treatment or removal to be sought from a specialist invasive weed contractor.

7.0 References

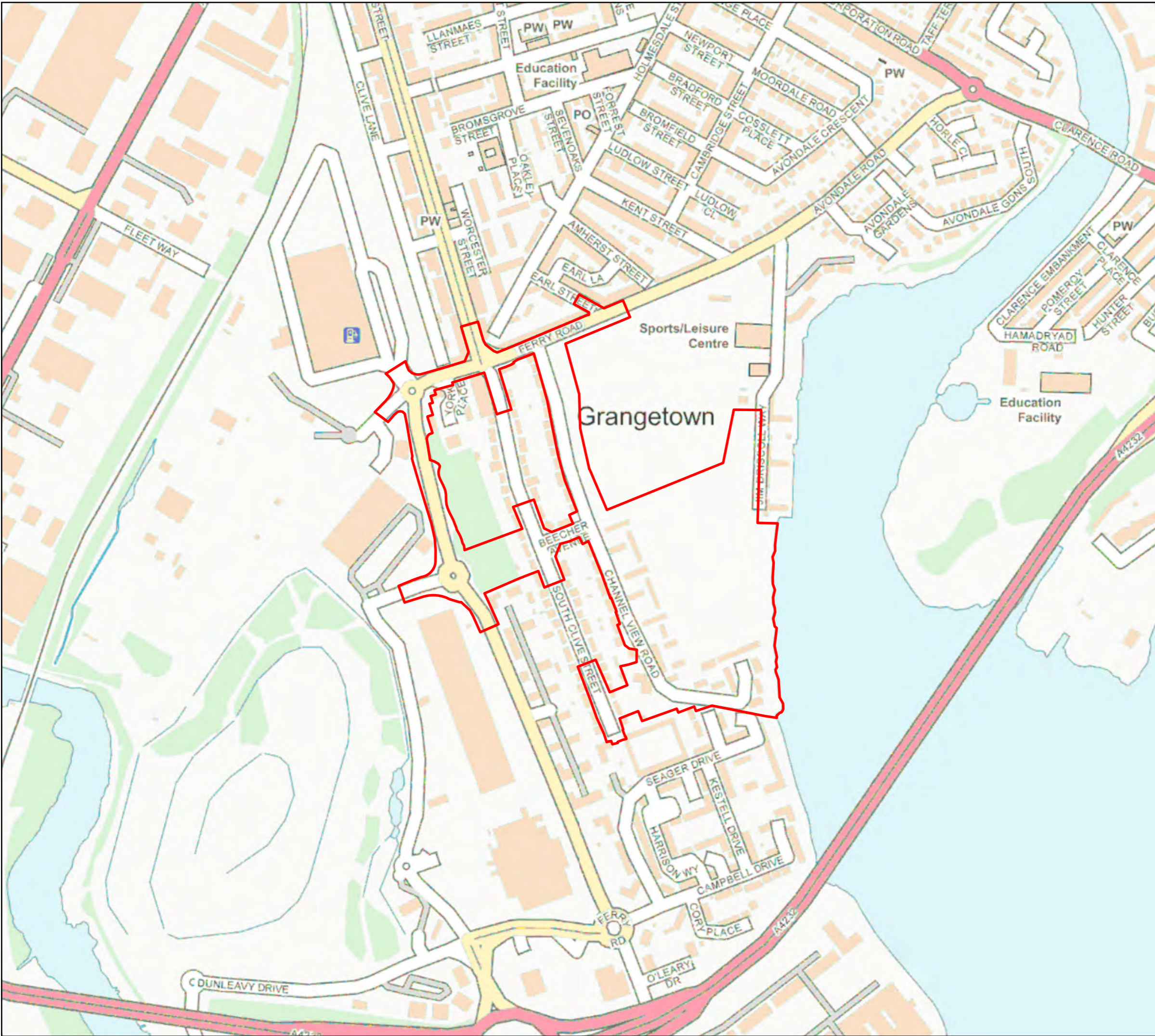
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FIGURES

Figure 1 – Site Location

Figure 2 – Phase 1 Habitat Plan

Master Plan



Rev	Date	Notes
A	11/12/20	Initial map production

Legend

Site boundary



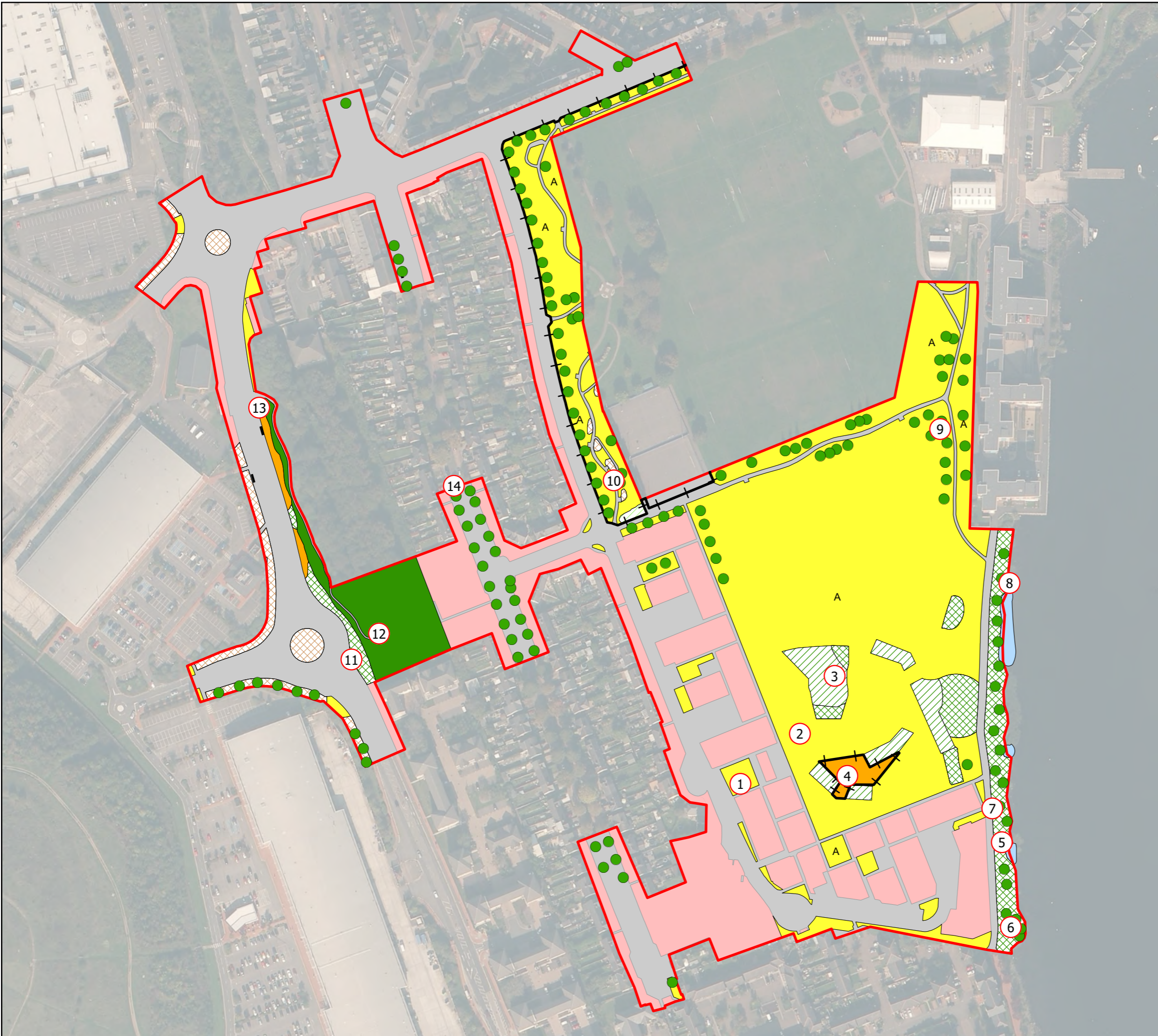
Site Location Plan

**Channel View
Cardiff Council**

Scale at A3: 1:5,000	Project No: A115866-1	Drawing No: Figure 1	Revision: A
Drawn by: Maddie Errington	Drawn date: 11/12/2020	Approved by: Daniel Flew	

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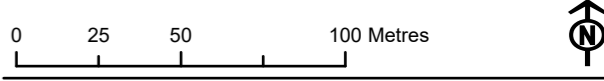
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Rev	Date	Notes
A	11/12/20	Initial map production

Legend

- Site boundary
- Broadleaved woodland - semi-natural
- Broadleaved woodland - plantation
- Conifer hedge
- Scrub - dense/continuous
- Neutral grassland - unimproved
- Swamp
- A Amenity grassland
- Introduced shrub
- Buildings
- Hardstanding
- Curtilage and buildings
- Fence
- Scattered tree
- Target note



Phase 1 Habitat Plan

**Channel View
Cardiff Council**

Scale at A3: 1:2,300	Project No: A115866-1	Drawing No: Figure 3	Revision: A
Drawn by: Maddie Errington	Drawn date: 11/12/2020	Approved by: Daniel Flew	

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Channel View Road Visitor Parking
(See extract below)

Channel View Road Visitor Parking

Phase 1 Boundary

This drawing must not be scaled. Figured dimensions and levels to be used. Any inaccuracies must be notified to the architect. Detail drawings and large scale drawings take precedence over smaller drawings.

Rev:	Chk'd:	Rev:	Chk'd:	Rev:	Chk'd:	Rev:	Chk'd:
A	AF	Splay added to central square. RF	25.04.20				
B	AF	Communal rear gardens redesigned. 1B triplex HT added. Amends to shared surface. Minor amends to layout. AF	07.05.20				
C	AF	Phase 1 over 50's blocks amended. AF	29.05.20				
D	AF	Drawing changed to A0. Bridge added. Parking amended. Connection from South Clive Street to pocket park revised. Flat block J revised and bus route tracking incorporated. Amendments following changes to Block B main entrance and bin store. AJ/AF	N.Y.J				
E	AF	Phase 1 detail updated. Southern Link to South Clive Street amended. AF	01.02.21				
F	AF	Red line amended. northern parking omitted. Phase 1 detail updated. AF	31.03.21				
G	AF	Red line amended. Parking added to the northern access. Landscape updated. RF	16.04.21				

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PRELIMINARY	✓
PLANNING	
DESIGN	
TENDER	
CONSTRUCTION	

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Contract: Channel View, Cardiff
For: Cardiff Council
Title: Site Development Layout

Drawing No. 20004(05) 100
Rev. G

Scale: 1:500 @ A0
Date: March 2020
Drawn: AF
Checked: BK

APPENDICES

Appendix A – Report Conditions

This Report has been prepared using reasonable skill and care for the sole benefit of [Cardiff Council] (“the Client”) for the proposed uses stated in the report by [WYG Environment Planning Transport Limited] (“WYG”). WYG exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder’s permission.

No liability is accepted or warranty given for; unconfirmed data, third party documents and information supplied to WYG or for the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report. WYG does not purport to provide specialist legal, tax or accounting advice.

The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections’. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The “shelf life” of the Report will be determined by a number of factors including; its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.

Appendix B – Wildlife Legislation

Bern Convention
<p>The <i>Convention on the Conservation of European Wildlife and Natural Habitats</i> (the <i>Bern Convention</i>) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals.</p> <p>To meet its obligations imposed by the Convention, the European Community adopted the <i>EC Birds Directive</i> (1979) and the <i>EC Habitats Directive</i> (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.</p>
Bonn Convention
<p>The Convention on the Conservation of Migratory Species of Wild Animals or ‘Bonn Convention’ was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.</p> <p>In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985 (as amended), Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW).</p>
Habitats Directive
<p>The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the ‘Habitats Directive’, is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.</p> <p>In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.</p>
Birds Directive
<p>The EC Directive on the Conservation of Wild Birds (79/409/EEC) or ‘Birds Directive’ was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.</p>

Conservation of Habitats and Species Regulations 2017

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. Public bodies must also help preserve, maintain and re-establish habitats for wild birds.

The Regulations also make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 - see below:

Schedule 2 – European Protected Species of Animals	Schedule 5 – European Protected Species of Plants
Horseshoe bats <i>Rhinolophidae</i> - all species	Shore dock <i>Rumex rupestris</i>
Common bats <i>Vespertilionidae</i> - all species	Killarney fern <i>Trichomanes speciosum</i>
Large Blue Butterfly <i>Maculinea arion</i>	Early gentian <i>Gentianella anglica</i>
Wild cat <i>Felis sylvestris</i>	Lady's-slipper <i>Cypripedium calceolus</i>
Dolphins, porpoises and whales <i>Cetacea</i> – all sp.	Creeping marsh-wort <i>Apium repens</i>
Dormouse <i>Muscardinus avellanarius</i>	Slender naiad <i>Najas flexilis</i>
Pool frog <i>Rana lessonae</i>	Fen orchid <i>Liparis loeselii</i>
Sand lizard <i>Lacerta agilis</i>	Floating-leaved water plantain <i>Luronium natans</i>
Fisher's estuarine moth <i>Gortyna borelii lunata</i>	Yellow marsh saxifrage <i>Saxifraga hirculus</i>
Great crested newt <i>Triturus cristatus</i>	
Otter <i>Lutra lutra</i>	
Lesser whirlpool ram's-horn snail <i>Anisus vorticulus</i>	
Smooth snake <i>Coronella austriaca</i>	
Sturgeon <i>Acipenser sturio</i>	
Natterjack toad <i>Epidalea calamita</i>	
Marine turtles <i>Caretta caretta</i> , <i>Chelonia mydas</i> , <i>Lepidochelys kempii</i> , <i>Eretmochelys imbricata</i> , <i>Dermochelys coriacea</i>	

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant;
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9.

It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Schedule 1 - Birds which are protected by special penalties

Avocet	<i>Recurvirostra avosetta</i>	Osprey	<i>Pandion haliaetus</i>
Bee-eater	<i>Merops apiaster</i>	Owl, Barn	<i>Tyto alba</i>
Bittern	<i>Botaurus stellaris</i>	Owl, Snowy	<i>Nyctea scandiaca</i>
Bittern, Little	<i>Ixobrychus minutus</i>	Peregrine	<i>Falco peregrinus</i>
Bluethroat	<i>Luscinia svecica</i>	Petrel, Leach's	<i>Oceanodroma leucorhoa</i>
Brambling	<i>Fringilla montifringilla</i>	Phalarope, Red-necked	<i>Phalaropus lobatus</i>
Bunting, Cirl	<i>Emberiza cirlus</i>	Plover, Kentish	<i>Charadrius alexandrinus</i>
Bunting, Lapland	<i>Calcarius lapponicus</i>	Plover, Little Ringed	<i>Charadrius dubius</i>
Bunting, Snow	<i>Plectrophenax nivalis</i>	Quail, Common	<i>Coturnix coturnix</i>
Buzzard, Honey	<i>Pernis apivorus</i>	Redstart, Black	<i>Phoenicurus ochruros</i>
Capercaillie	<i>Tetrao urogallus</i>	Redwing	<i>Turdus iliacus</i>
Chough	<i>Pyrrhocorax pyrrhocorax</i>	Rosefinch, Scarlet	<i>Carpodacus erythrinus</i>
Corncrake	<i>Crex crex</i>	Ruff	<i>Philomachus pugnax</i>
Crake, Spotted	<i>Porzana porzana</i>	Sandpiper, Green	<i>Tringa ochropus</i>
Crossbills (all species)	<i>Loxia</i>	Sandpiper, Purple	<i>Calidris maritima</i>
Curlew, Stone	<i>Burhinus oediconemus</i>	Sandpiper, Wood	<i>Tringa glareola</i>
Divers (all species)	<i>Gavia</i>	Scaup	<i>Aythya marila</i>
Dotterel	<i>Charadrius morinellus</i>	Scoter, Common	<i>Melanitta nigra</i>
Duck, Long-tailed	<i>Clangula hyemalis</i>	Scoter, Velvet	<i>Melanitta fusca</i>
Eagle, Golden	<i>Aquila chrysaetos</i>	Serin	<i>Serinus serinus</i>

Eagle, White-tailed	<i>Haliaeetus albicilla</i>	Shorelark	<i>Eremophila alpestris</i>
Falcon, Gyr	<i>Falco rusticolus</i>	Shrike, Red-backed	<i>Lanius collurio</i>
Fieldfare	<i>Turdus pilaris</i>	Spoonbill	<i>Platalea leucorodia</i>
Firecrest	<i>Regulus ignicapillus</i>	Stilt, Black-winged	<i>Himantopus himantopus</i>
Garganey	<i>Anas querquedula</i>	Stint, Temminck's	<i>Calidris temminckii</i>
Godwit, Black-tailed	<i>Limosa limosa</i>	Swan, Bewick's	<i>Cygnus bewickii</i>
Goshawk	<i>Accipiter gentilis</i>	Swan, Whooper	<i>Cygnus cygnus</i>
Grebe, Black-necked	<i>Podiceps nigricollis</i>	Tern, Black	<i>Chlidonias niger</i>
Grebe, Slavonian	<i>Podiceps auritus</i>	Tern, Little	<i>Sterna albifrons</i>
Greenshank	<i>Tringa nebularia</i>	Tern, Roseate	<i>Sterna dougallii</i>
Gull, Little	<i>Larus minutus</i>	Tit, Bearded	<i>Panurus biarmicus</i>
Gull, Mediterranean	<i>Larus melanocephalus</i>	Tit, Crested	<i>Parus cristatus</i>
Harriers (all species)	<i>Circus</i>	Tree-creeper, Short-toed	<i>Certhia brachydactyla</i>
Heron, Purple	<i>Ardea purpurea</i>	Warbler, Cetti's	<i>Cettia cetti</i>
Hobby	<i>Falco subbuteo</i>	Warbler, Dartford	<i>Sylvia undata</i>
Hoopoe	<i>Upupa epops</i>	Warbler, Marsh	<i>Acrocephalus palustris</i>
Kingfisher	<i>Alcedo atthis</i>	Warbler, Savi's	<i>Locustella luscinioides</i>
Kite, Red	<i>Milvus milvus</i>	Whimbrel	<i>Numenius phaeopus</i>
Merlin	<i>Falco columbarius</i>	Woodlark	<i>Lullula arborea</i>
Oriole, Golden	<i>Oriolus oriolus</i>	Wryneck	<i>Jynx torquilla</i>
Animal (Vertebrate) Species Listed in Schedule 5 (full legal protection at all times)			
Horseshoe Bats (all species)	<i>Rhinolophidae</i>	Newt – Great Crested	<i>Triturus cristatus</i>
Typical Bats (all species)	<i>Vespertilionidae</i>	Snake – Smooth	<i>Coronella austriaca</i>
Dolphin – Bottle-nosed	<i>Tursiops truncatus (tursio)</i>	Toad, Natterjack	<i>Epidalea calamita</i>
Dolphin – Common	<i>Delphinus delphis</i>	Turtles – All Species	<i>Cheloniidae & Dermochelyidae</i>
Dormouse – Hazel	<i>Muscardinus avellanarius</i>	Basking Shark	<i>Cetorhinus maximus</i>
Pine Marten	<i>Martes martes</i>	Burbot	<i>Lota lota</i>
Porpoise – Harbour	<i>Phocaena phocaena</i>	Goby – Giant	<i>Gobius cobitis</i>
Otter – Eurasian	<i>Lutra lutra</i>	Goby – Couch's	<i>Gobius couchii</i>
Squirrel – Red	<i>Sciurus vulgaris</i>	Seahorse – Short-snouted ¹	<i>Hippocampus hippocampus</i>
Walrus	<i>Odobenus rosmarus</i>	Seahorse – Spiny	<i>Hippocampus guttulatus</i>
Water Vole	<i>Arvicola amphibia</i>	Sturgeon	<i>Acipenser sturio</i>
Whales – All Species	<i>Cetacea</i>	Vendace	<i>Coregonus albula</i>
Wildcat	<i>Felis sylvestris</i>	Whitefish	<i>Coregonus lavaretus</i>
Lizard – Sand	<i>Lacerta agilis</i>		
Animal (Vertebrate) Species Protected under Section 9 (1) part: Killing and Injuring & Section 9 (5) Sale			
Adder	<i>Vipera berus</i>	Slow-worm	<i>Anguis fragilis</i>
Lizard – Viviparous	<i>Zootoca vivipara</i>	Snake – Grass	<i>Natrix helvetica (natrix)</i>
Animals (Vertebrate) Species Protected under Section 9 (5) Sale only			
Frog – common	<i>Rana temporaria</i>	Newt – Smooth	<i>Lissotriton vulgaris</i>
Newt – Palmate	<i>Lissotriton helvetica</i>	Toad – Common	<i>Bufo bufo</i>

¹ Both sea horse species are protected in England only.

Animals (Vertebrate) Species Protected under Section 9 (1) (4)(a): Killing, Injuring & Taking and Damage / Destruction of place of shelter / protection only			
Allis Shad	<i>Alosa alosa</i>	Shark – Angel	<i>Squatina squatina</i>
Twaite Shad	<i>Alosa fallax</i>		
Butterflies & Moths – Full Protection under Schedule 52 at all times			
High brown fritillary	<i>Argynnis adippe</i>	Fisher's Estuarine Moth	<i>Gortyna borelii</i>
Large Blue	<i>Maculinea arion</i>	Barberry Carpet	<i>Pareulype berberata</i>
Heath Fritillary	<i>Mellicta athalea</i>	Black-veined Moth	<i>Siona lineata</i>
Marsh Fritillary	<i>Eurodryas aurinia</i>	Sussex Emerald	<i>Thalera fimbrialis</i>
Swallowtail	<i>Papilio machaon britannicus</i>	Essex Emerald	<i>Thetidia smaragdaris</i>
Large Copper	<i>Lycaena dispar</i>	Fiery Clearwing	<i>Bembecia chrysidiformis</i>
Reddish-buff Moth	<i>Acosmetia caliginosa</i>	New-Forest Burnet	<i>Zygaena viciae</i>
Butterflies – Protected under Section 9 (5) Sale Only			
Purple Emperor	<i>Apatura iris</i>	Adonis Blue	<i>Lysandra bellargus</i>
Northern Brown Argus	<i>Aricia artaxerxes</i>	Chalkhill Blue	<i>Lysandra coridon</i>
Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Glanville Fritillary	<i>Melitaea cinxia</i>
Chequered Skipper	<i>Carterocephalus palaemon</i>	Large Tortoiseshell	<i>Nymphalis polychloros</i>
Large Heath	<i>Coenonympha tullia</i>	Silver-studded Blue	<i>Plebejus argus</i>
Small Blue	<i>Cupido minimus</i>	Black Hairstreak	<i>Strymonidia pruni</i>
Mountain Ringlet	<i>Erebia epiphron</i>	White-letter Hairstreak	<i>Strymonidia w-album</i>
Duke of Burgundy	<i>Hamearis lucina</i>	Brown Hairstreak	<i>Thecla betulae</i>
Silver-spotted Skipper	<i>Hesperia comma</i>	Lulworth Skipper	<i>Thymelicus acteon</i>
Wood White	<i>Leptidea sinapis</i>		
Other Invertebrates – Full Protection under Schedule 5 at all times			
Rainbow Leaf-beetle	<i>Chrysolina cerealis</i>	Tadpole Shrimp	<i>Triops cancriformis</i>
Spangled Diving-beetle	<i>Graphopterus zonatus</i>	Trembling Sea-mat	<i>Victorella pavidia</i>
Lesser Silver Water-beetle	<i>Hydrochara caraboides</i>	De Folin's Lagoon Snail	<i>Caecum armoricum</i>
Moccas Beetle	<i>Hypebaeus flavipes</i>	Sandbowl Snail	<i>Catinella arenaria</i>
Violet Click-beetle	<i>Limoniscus violaceus</i>	Freshwater Pearl Mussel	<i>Margaritifera margaritifera</i>
Bembridge Beetle	<i>Parcymus aeneus</i>	Glutinous Snail	<i>Myxas glutinosa</i>
New Forest Cicada	<i>Cicadetta montana</i>	Lagoon Snail	<i>Paludinella littorina</i>
Wart-Biter	<i>Decticus verrucivorus</i>	Lagoon Sea Slug	<i>Tenellia adspersa</i>
Mole-Cricket	<i>Gryllotalpa gryllotalpa</i>	Northern Hatchet-shell	<i>Thyasira gouldi</i>
Field-Cricket	<i>Gryllus campestris</i>	Tentacled Lagoon-worm	<i>Alkmaria romijni</i>
Norfolk Hawker Dragonfly	<i>Aeshna isosceles</i>	Lagoon Sand-worm	<i>Armandia cirrhosa</i>
Southern Damselfly	<i>Coenagrion mercuriale</i>	Medicinal Leech	<i>Hirudo medicinalis</i>
Fen Raft Spider	<i>Dolomedes fimbriatus</i>	Marine Hydroid	<i>Clavopsella navis</i>
Ladybird Spider	<i>Eresus niger (cinaberinus)</i>	Ivell's Sea Anemone	<i>Edwardsia ivelli</i>
Fairy Shrimp	<i>Chirocephalus diaphanus</i>	Starlet Sea Anemone	<i>Nematosella vectensis</i>
Lagoon Sand Shrimp	<i>Gammarus insensibilis</i>	Atlantic Stream (White-clawed) Crayfish	<i>Austropotamobius pallipes</i>

² Viper's Bugloss Moth *Hadena irregularis* was removed from Schedule 5 in 1996 as it is believed to be extinct.

Other Invertebrates Protected under Section 9 (1) Possession & 9 (2) (5) Sale only			
Stag Beetle	<i>Lucanus cervus</i>	Roman Snail ³	<i>Helix pomatia</i>
Fan Mussel	<i>Atrina fragilis</i>	Pink Sea-fan	<i>Eunicella verrucosa</i>
Other Invertebrates Protected under Section 9 (4) (a) Damage / Destruction of Place of Shelter / Protection only			
Mire Pill Beetle	<i>Curimopsis nigrita</i>		
Vascular Plant Species - Full Protection under Schedule 8 at all times (previous Scientific name in brackets)			
Adder's-tongue Least	<i>Ophioglossum lusitanicum</i>	Lily – Snowdon	<i>Lloydia serotina</i>
Alison- Small	<i>Alyssum alyssoides</i>	Marsh-mallow – Rough	<i>Allthaea hirsuta</i>
Broomrape – Bedstraw	<i>Orobanche caryophyllacea</i>	Milk-parsley – Cambridge	<i>Selinum carvifolium</i>
Broomrape – Oxtongue	<i>Orobanche loricata (picridis)</i>	Mudwort – Welsh	<i>Limosella aquatica</i>
Broomrape – Thistle	<i>Orobanche reticulata</i> ⁴	Naiad – Holly-leaved	<i>Najas marina</i>
Cabbage – Lundy	<i>Rhynchosynapis wrightii</i>	Orache – Stalked	<i>Halimione pedunculata</i>
Calamint – Wood	<i>Calamintha sylvatica</i>	Orchid – Early Spider	<i>Ophrys sphegodes</i>
Catchfly – Alpine	<i>Lychnis alpina</i>	Orchid – Ghost	<i>Epipogium aphyllum</i>
Centaury – Slender	<i>Centaurium tenuiflorum</i>	Orchid – Lapland Marsh	<i>Dactylorhiza lapponica</i>
Cinquefoil – Rock	<i>Potentilla rupestris</i>	Orchid – Late Spider	<i>Ophrys fuciflora</i>
Clary – Meadow	<i>Salvia pratensis</i>	Orchid – Lizard	<i>Himantoglossum hircinum</i>
Club-rush – Triangular	<i>Scirpus triquetrus</i>	Orchid – Military	<i>Orchis militaris</i>
Colt's-foot – Purple	<i>Homogyne alpina</i>	Orchid – Monkey	<i>Orchis simia</i>
Cotoneaster – Wild	<i>Cotoneaster integerrimus</i>	Pear – Plymouth	<i>Pyrus cordata</i>
Cotton-grass – Slender	<i>Eriophorum gracile</i>	Pennycress – Perfoliate	<i>Thlaspi perfoliata</i>
Cow-wheat – Field	<i>Melampyrum arvense</i>	Pennyroyal	<i>Mentha pulegium</i>
Crocus – Sand	<i>Romulus columnae</i>	Pigmyweed	<i>Crassula aquatica</i>
Cudweed – Broad-leaved	<i>Filago pyramidata</i>	Pine - Ground	<i>Ajuga chamaepitys</i>
Cudweed – Jersey	<i>Gnaphalium luteo-album</i>	Pink – Cheddar	<i>Dianthus gratianopolitanus</i>
Cudweed – Red-tipped	<i>Filago lutescens</i>	Pink – Childing	<i>Petrorhagia nanteuillii</i>
Cut-grass	<i>Leersia oryzoides</i>	Ragwort – Fen	<i>Senecio paludosus</i>
Deptford Pink	<i>Dianthus armeria</i>	Ramping-fumitory – Martin's	<i>Fumaria martinii</i>
Diapensia	<i>Diapensia lapponica</i>	Rampion – Spiked	<i>Phyteuma spicata</i>
Eryngo – Field	<i>Eryngium campestre</i>	Restharrow – Small	<i>Ononis reclinata</i>
Fern – Dickie's-bladder	<i>Cystopteris dickieana</i>	Rock-cress – Alpine	<i>Arabis alpina</i>
Fleabane – Alpine	<i>Erigeron borealis</i>	Rock-cress – Bristol	<i>Arabis scabra</i>
Fleabane – Small	<i>Pulicaria vulgaris</i>	Sandwort – Norwegian	<i>Arenaria norvegica</i> ⁵
Galingale – Brown	<i>Cyperus fuscus</i>	Sandwort – Teesdale	<i>Minuartia stricta</i>
Gentian – Alpine	<i>Gentiana nivalis</i>	Saxifrage – Drooping	<i>Saxifraga cernua</i>
Gentian - Dune	<i>Gentianella uliginosa</i>	Saxifrage – Tufted	<i>Saxifraga cespitosa</i>
Gentian – Fringed	<i>Gentianella ciliata</i>	Solomon's-seal – Whorled	<i>Polygonatum verticillatum</i>

³ England only

⁴ The Weeds Act 1959 does not apply to thistles *Cirsium* & *Carduus* species supporting this broomrape.

⁵ All subspecies occurring in the UK

Gentian - Spring	<i>Gentiana verna</i>	Sow-thistle – Alpine	<i>Cicerbita alpina</i>
Germander – Cut-leaved	<i>Teucrium botrys</i>	Spearwort – Adder's-tongue	<i>Ranunculus ophioglossifolius</i>
Germander – Water	<i>Teucrium scordium</i>	Speedwell – Fingered	<i>Veronica triphyllos</i>
Gladiolus – Wild	<i>Gladiolus illyricus</i>	Speedwell – Spiked	<i>Veronica spicata</i> ⁶
Goosefoot – Stinking	<i>Chenopodium vulvaria</i>	Spike-rush – Dwarf	<i>Eleocharis parvula</i>
Grass-poly	<i>Lythrum hyssopifolia</i>	South-stack Fleawort	<i>Tephrosieris integrifolia</i> <i>ssp. maritima</i>
Hare's-ear – Sick-leaved	<i>Bupleurum falcatum</i>	Star-of-Bethlehem – Early	<i>Gagea bohemica</i>
Hare's-ear – Small	<i>Bupleurum baldense</i>	Starfruit	<i>Damasonium allisma</i>
Hawk's-beard – Stinking	<i>Crepis foetida</i>	Strapwort	<i>Corrigiola littoralis</i>
Hawkweed – Northroe	<i>Hieracium northroense</i>	Violet – Fen	<i>Viola persicifolia</i>
Hawkweed – Shetland	<i>Hieracium zetlandicum</i>	Viper's-grass	<i>Scorzonera humilis</i>
Hawkweed – Weak-leaved	<i>Hieracium attenuatifolium</i>	Water-plantain – Ribbon-leaved	<i>Alisma gramineum</i>
Heath – Blue	<i>Phyllodoce caerulea</i>	Wood-sedge – Starved	<i>Carex depauperata</i>
Helleborine – Red	<i>Cephalanthera rubra</i>	Woodsia – Alpine	<i>Woodsia alpina</i>
Horsetail – Branched	<i>Equisetum ramossissimum</i>	Woodsia – Oblong	<i>Woodsia ilvensis</i>
Hound's-tongue – Green	<i>Cynoglossum germanicum</i>	Wormwood – Field	<i>Artemisia campestris</i>
Knawel – Perennial	<i>Scleranthus perennis</i> ⁷	Woundwort - Downy	<i>Stachys germanica</i>
Knot-grass – Sea	<i>Polygonum maritimum</i>	Woundwort – Limestone	<i>Stachys alpina</i>
Leek – Round-headed	<i>Allium sphaerocephalum</i>	Yellow-rattle – Greater	<i>Rhinanthus angustifolius</i>
Lettuce – Least	<i>Lactuca salina</i>		
Vascular Plant Species – Partial Protection under Section 13 (2) Protection from commercial exploitation and sale			
Bluebell	<i>Hyacinthoides non-scriptus</i>		
Bryophytes – Full Protection under Schedule 8 at all times			
Anamodon – Long-leaved	<i>Anomodon langifolius</i>	Flamingo Moss	<i>Desmatodon cernuus</i>
Blackwort	<i>Southbya nigrella</i>	Frostwort	<i>Gymnomitrium apiculatum</i>
Crystalwort – Lizard	<i>Riccia bifurca</i>	Glaucous Beard Moss	<i>Barbula glauca</i>
Earwort – Marsh	<i>Jamesoniella undulifolia</i>	Green Shield Moss	<i>Buxbaumia viridis</i>
Feathermoss – Polar	<i>Hygrohypnum polare</i>	Hair Silk Moss	<i>Plagiothecium piliferum</i>
Flapwort – Norfolk	<i>Leiocolea rutheana</i>	Knothole Moss	<i>Zygodon forsteri</i>
Grimmia – Blunt-leaved	<i>Grimmia unicolor</i>	Large Yellow Feather Moss	<i>Scorpidium turgescens</i>
Petalwort	<i>Petalophyllum ralfsii</i>	Millimetre Moss	<i>Micromitrium tenerum</i>
Lindenberg's Leafy-Liverwort	<i>Adelanthus lindenbergianus</i>	Multi-fruited River Moss	<i>Cryphaea lamyana</i>
Feather-moss Slender Green	<i>Drepanocladus vernicosus</i>	Nowell's Limestone Moss	<i>Zygodon gracilis</i>
Alpine Copper-Moss	<i>Mielichoferia melicoferia</i>	Rigid Apple Moss	<i>Bartramia stricta</i>

⁶ Both subspecies: *spicata* & *hybrida*

⁷ Includes both subspecies: *perennis* & *prostratus*

Baltic Bog-Moss	<i>Sphagnum balticum</i>	Round-leaved feather Moss	<i>Rhynchostegium rotundifolium</i>
Blue Dew-Moss	<i>Saellania glaucescens</i>	Schleicher's Thread Moss	<i>Bryum schleicheri</i>
Blunt-leaved bristle-Moss	<i>Orthotrichum obtusifolium</i>	Triangular Pygmy Moss	<i>Acaulon triquetrum</i>
Bright-Green Cave-Moss	<i>Cyclodictyon laetevirens</i>	Turpswort	<i>Geocalyx graveolens</i>
Cordate Beard Moss	<i>Barbula cordata</i>	Vaucher's Feather Moss	<i>Hypnum vaucheri</i>
Cornish Path Moss	<i>Ditrichum cornubicum</i>	Western Rustwort	<i>Marsupella profunda</i>
Derbyshire Feather Moss	<i>Thamnobryum angustifolium</i>		
Stoneworts – Full Protection under Schedule 8 at all times			
Bearded Stonewort	<i>Chara canescens</i>	Foxtail Stonewort	<i>Lamprothamnium papullosum</i>
Lichens – Full Protection under Schedule 8 at all times			
New Forest Beech Lichen	<i>Enterographa elaborata</i>	Forked Hair Lichen	<i>Bryoria furcellata</i>
Snow Caloplaca	<i>Caloplaca nivalis</i>	Golden Hair Lichen	<i>Teloschistes flavicans</i>
Tree Catapyrenium	<i>Catapyrenium psoromoides</i>	Orange-fruited Elm Lichen	<i>Caloplaca luteoalba</i>
Laurer's Catillaria	<i>Catillaria laurei</i>	River Jelly Lichen	<i>Collema dichotomum</i>
Convolutated Cladonia	<i>Cladonia convoluta</i>	Starry Breck Lichen	<i>Buellia asterella</i>
Upright Mountain Cladonia	<i>Cladonia stricta</i>	Caledonia Pannaria	<i>Pannaria ignobilis</i>
Goblin Lights	<i>Catolechia wahlenbergii</i>	New Forest Parmelia	<i>Parmelia minarum</i>
Elm Gyalecta	<i>Gyalecta ulmi</i>	Oil Stain Parmentaria	<i>Parmentaria chilensis</i>
Tarn Lecanora	<i>Lecanora archariana</i>	Southern Grey Physcia	<i>Physcia tribacioides</i>
Copper Lecidea	<i>Lecidea inops</i>	Ragged Pseudo-cyphellaria	<i>Pseudocyphellaria lacerata</i>
Arctic Kidney Lichen	<i>Nephroma arcticum</i>	Rusty Alpine Psora	<i>Psora rubiformis</i>
Ciliate Strap Lichen	<i>Heterodermia leucomelos</i>	Rock Nail	<i>Calicium corynellum</i>
Coralloid Rosette Lichen	<i>Heterodermia propagulifera</i>	Serpentine Selanopsora	<i>Selanopsora liparina</i>
Ear-lobed Dog Lichen	<i>Peltigera lepidophora</i>	Sulphur Tresses	<i>Alectoria ochroleuca</i>
Lichens – Partial Protection under Section 13 (2) Commercial Exploitation and Sale Only			
Tree Lungwort	<i>Lobaria pulmonaria</i>		
Fungi – Full Protection under Schedule 8 at all times			
Royal Bolete	<i>Boletus regius</i>	Oak Polypore	<i>Buglossosporus pulvinus</i>
Hedgehog Fungus	<i>Hericiium erinaceum</i>	Sandy Stilt Ball	<i>Battaria phalloides</i>
Invasive plant species listed in Schedule 9			
Australian swamp stonecrop or New Zealand pygmyweed	<i>Crassula helmsii</i>	Japanese rose	<i>Rosa rugosa</i>
Californian red seaweed	<i>Pikea californica</i>	Japanese seaweed	<i>Sargassum muticum</i>

Curly waterweed	<i>Lagarosiphon major</i>	Laver seaweeds (except native species)	<i>Porphyra</i> spp
Duck potato	<i>Sagittaria latifolia</i>	Parrot's-feather	<i>Myriophyllum aquaticum</i>
Entire-leaved cotoneaster	<i>Cotoneaster integrifolius</i>	Perfoliate alexanders	<i>Smyrniium perfoliatum</i>
False Virginia creeper	<i>Parthenocissus inserta</i>	Pontic rhododendron	<i>Rhododendron ponticum</i>
Fanwort or Carolina water-shield	<i>Cabomba caroliniana</i>	Purple dewplant	<i>Disphyma crassifolium</i>
Few-flowered garlic	<i>Allium paradoxum</i>	Red algae	<i>Grateloupia luxurians</i>
Floating pennywort	<i>Hydrocotyle ranunculoides</i>	Rhododendron	<i>Rhododendron ponticum</i> × <i>Rhododendron maximum</i>
Floating water primrose	<i>Ludwigia peploides</i>	Small-leaved cotoneaster	<i>Cotoneaster microphyllus</i>
Giant hogweed	<i>Heracleum mantegazzianum</i>	Three-cornered garlic	<i>Allium triquetrum</i>
Giant kelp	<i>Macrocystis</i> spp.	Variiegated yellow archangel	<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>
Giant knotweed	<i>Fallopia sachalinensis</i>	Virginia creeper	<i>Parthenocissus quinquefolia</i>
Giant rhubarb	<i>Gunnera tinctoria</i>	Wakame	<i>Undaria pinnatifida</i>
Giant salvinia	<i>Salvinia molesta</i>	Wall cotoneaster	<i>Cotoneaster horizontalis</i>
Green seafingers	<i>Codium fragile</i>	Water fern	<i>Azolla filiculoides</i>
Himalayan cotoneaster	<i>Cotoneaster simonsii</i>	Water hyacinth	<i>Eichhornia crassipes</i>
Hollyberry cotoneaster	<i>Cotoneaster bullatus</i>	Water lettuce	<i>Pistia stratiotes</i>
Hooked asparagus seaweed	<i>Asparagopsis armata</i>	Water primrose	<i>Ludwigia grandiflora</i>
Hottentot fig	<i>Carpobrotus edulis</i>	Water primrose	<i>Ludwigia uruguayensis</i>
Hybrid knotweed	<i>Fallopia japonica</i> × <i>Fallopia sachalinensis</i>	Waterweeds	<i>Elodea</i> spp.
Indian (Himalayan) balsam	<i>Impatiens glandulifera</i>	Yellow azalea	<i>Rhododendron luteum</i>
Japanese knotweed	<i>Fallopia japonica</i>		

Protection of Badgers Act 1992

The main legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger"

Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2015 (Eaton *et al*, 2015) and identified 67 red list species, 96 amber species, and 81 green species. The criteria are complex, but generally:

- **Red list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- **Amber list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.
- **Green list** species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.


Wild Mammals (Protection) Act 1996



This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.


Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.



It's application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.

Appendix C – Target Notes



Target Note	Description	Photograph
1	<p>ST1795873971</p> <p>Amenity grassland in Channel View housing estate, routinely mown to 5-10cm, dense cover 99% with occasional patches with annuals around the edge.</p> <p>Perennial rye-grass <i>Lolium perenne</i> Dominant</p> <p>Daisy <i>Bellis perennis</i> Abundant</p> <p>Ribwort plantain <i>Plantago lanceolata</i> Frequent</p> <p>Dandelion <i>Taraxacum</i> agg. Frequent</p> <p>White clover <i>Trifolium repens</i> Frequent</p> <p>Bent <i>Agrostis</i> sp. Occasional</p> <p>Yorkshire-fog <i>Holcus lanatus</i> Occasional</p> <p>Annual meadow-grass <i>Poa annua</i> Occasional</p> <p>Wild radish <i>Raphanus raphanistrum</i> Occasional</p> <p>Yarrow <i>Achillea millefolium</i> Rare</p> <p>Hairy bittercress <i>Cardamine hirsuta</i> Rare</p> <p>Cock's-foot <i>Dactylis glomerata</i> Rare</p> <p>Red dead-nettle <i>Lamium purpureum</i> Rare</p> <p>Creeping buttercup <i>Ranunculus repens</i> Rare</p> <p>Broad-leaved Dock <i>Rumex obtusifolius</i> Rare</p> <p>Groundsel <i>Senecio vulgaris</i> Rare</p> <p>Chickweed <i>Stellaria media</i> Rare</p>	




Target Note	Description	Photograph
2	<p>ST1799674002</p> <p>The Marl. Amenity grass in parkland, very similar composition to that in housing (see Target note 1) with a few extra species such as</p> <p>Daisy <i>Bellis perennis</i> Abundant</p> <p>Shepherd's-purse <i>Capsella bursa-pastoris</i> Occasional</p> <p>Daffodil <i>Narcissus sp.</i> Planted</p> <p>Cow parsley <i>Anthriscus sylvestris</i> Rare</p> <p>Common mallow <i>Malva sylvestris</i> Rare</p> <p>Greater plantain <i>Plantago major</i> Rare</p>	
3	<p>ST1801874039</p> <p>Series of small plantations with fences and bramble scrub, some dumped rubbish and use by children.</p> <p>Largest plantation on NW side:</p> <p>Canopy to 12m, 80% cover</p> <p>Poplar <i>Populus sp.</i> Abundant</p> <p>Wild cherry <i>Prunus avium</i> Abundant</p> <p>Alder <i>Alnus sp.</i> Rare</p> <p>Hazel <i>Corylus avellana</i> Rare</p> <p>Pedunculate oak <i>Quercus robur</i> Rare</p> <p>Elder <i>Sambucus nigra</i> Rare</p> <p>Scrub and ground flora to 1.5m, 100 % cover:</p> <p>Bramble <i>Rubus fruticosus</i> agg. Dominant</p> <p>Butterfly-bush <i>Buddleja davidii</i> Occasional</p> <p>Dogwood <i>Cornus sp.</i> Occasional</p> <p>Cleavers <i>Galium aparine</i> Occasional</p> <p>Creeping bent <i>Agrostis stolonifera</i> Rare</p> <p>Wild radish <i>Raphanus raphanistrum</i> Rare</p> <p>Rose <i>Rosa sp.</i> Rare</p> <p>Common nettle <i>Urtica dioica</i> Rare</p> <p>Other small plantations adjacent have other woody species including birch <i>Betula sp.</i>, black pine <i>Pinus nigra</i>, willow</p>	


Target Note	Description	Photograph
	<p><i>Salix</i> sp. and ash <i>Fraxinus excelsior</i>, and some patches of brambles. One block has hawthorn scrub <i>Crataegus monogyna</i>.</p>	
4	<p>ST1802673976</p> <p>Small area of unimproved neutral grassland in fenced area adjacent to plantations</p> <p>False oat-grass <i>Arrhenatherum elatius</i> Abundant</p> <p>Bramble <i>Rubus fruticosus</i> agg. Occasional</p> <p>Cleavers <i>Galium aparine</i> Frequent</p> <p>Creeping bent <i>Agrostis stolonifera</i> Frequent</p> <p>Wild radish <i>Raphanus raphanistrum</i> Frequent</p> <p>Cock's-foot <i>Dactylis glomerata</i> Frequent</p> <p>Ribwort plantain <i>Plantago lanceolata</i> Frequent</p> <p>Bush vetch <i>Vicia sepium</i> Rare</p>	 <p>The photograph shows a grassy field with a fence line. In the background, there is a large brick building, possibly a school or industrial structure. The vegetation appears to be a mix of grasses and some shrubs, consistent with the description of unimproved neutral grassland.</p>

Target Note	Description	Photograph
5	<p>ST1812373934</p> <p>about 10 clumps of Japanese knotweed <i>Reynoutria japonica</i> (Schedule 9) spread over c. 5 x 10 m, from path down to edge of Taf.</p>	
6	<p>ST1812973880</p> <p>Narrow c. 5- 10m wide strip between path and River Taff, dominated by scrub with some trees and reeds scattered along the Taff margins. Made ground with many large concrete blocks/ 'boulders'.</p> <p>'Path' along lower edge cleared for rat control allows access along most of length.</p> <p>Scrub/ trees c. 60% cover, to 5(-8) m tall, bramble cover to 1m tall 95%</p> <p>Bramble <i>Rubus fruticosus</i> agg. Frequent</p> <p>Alder <i>Alnus glutinosa</i> Frequent</p> <p>Elder <i>Sambucus nigra</i> Occasional</p> <p>Sycamore <i>Acer pseudoplatanus</i> Occasional</p> <p>Butterfly-bush <i>Buddleja davidii</i> Occasional</p> <p>Ash <i>Fraxinus excelsior</i> Occasional</p> <p>Willow <i>Salix sp.</i> Occasional</p> <p>Scattered plants under scrub:</p> <p>Cleavers <i>Galium aparine</i> Occasional</p> <p>Yorkshire-fog <i>Holcus lanatus</i> Occasional</p>	


Target Note	Description	Photograph
	<p>Herb Robert <i>Geranium robertianum</i> Occasional</p> <p>Rose <i>Rosa sp.</i> Rare</p> <p>Hart's-tongue <i>Asplenium scolopendrium</i> Rare</p> <p>Pendulous sedge <i>Carex pendula</i> Rare</p> <p>Remote sedge <i>Carex remota</i> Rare</p> <p>Purple toadflax <i>Linaria purpurea</i> Rare</p> <p>Dandelion <i>Taraxacum</i> agg. Rare</p> <p>Ivy-leaved speedwell <i>Veronica hederifolia</i> Locally frequent</p> <p>Creeping bent <i>Agrostis stolonifera</i> Rare</p> <p>Hemlock water-dropwort <i>Oenanthe crocata</i> Rare</p> <p>Common nettle <i>Urtica dioica</i> Rare</p> <p>Great willowherb <i>Epilobium hirsutum</i> Rare</p> <p>Lesser celandine <i>Ficaria verna</i> Rare</p> <p>Honeysuckle <i>Lonicera sp.</i> Rare</p> <p>Polypody <i>Polypodium sp.</i> Rare</p> <p>Creeping cinquefoil <i>Potentilla reptans</i> Rare</p> <p>Smooth sowthistle <i>Sonchus oleraceus</i> Rare</p> <p>Wood sage <i>Teucrium scorodonia</i> Rare</p> <p>Swamp - Edge of River Taff with much debris (from recent floods) to c. 1m above current water level, few marginal plants apart from occasional patches of reeds in water. No water vole habitat.</p> <p>Reed <i>Phragmites australis</i> Occasional</p> <p>Fool's water-cress <i>Helosciadium nodiflorum</i> Rare</p> <p>Yellow iris <i>Iris pseudacorus</i> Rare</p> <p>Water mint <i>Mentha aquatica</i> Rare</p> <p>Hemlock water-dropwort <i>Oenanthe crocata</i> Rare</p>	

Target Note	Description	Photograph
	River Taff comprises slow flowing, running water, adjacent to the large area of Cardiff Bay.	
7	ST1811773955 One small clump of montbretia <i>Crocsmia x crocosmiiflora</i> present on bank of Taff (Schedule 9).	
8	ST1812874097 One small clump of Japanese knotweed present on bank of Taff (Schedule 9).	

Target Note	Description	Photograph
9	<p>ST1808474194</p> <p>Scattered trees planted along paths in park, mainly poplars (both columnar Lombardy poplar group and hybrid black-poplar <i>Populus x canadensis</i> group with spreading crowns), mostly in good condition with few broken limbs or knotholes</p>	
10	<p>ST1787874162</p> <p>Formal park with introduced shrub beds (rose, hebe, etc).</p> <p>Many planted trees especially along fenced edge by road, including sycamore <i>Acer pseudoplatanus</i>, pear <i>Pyrus</i> sp., holm oak <i>Quercus ilex</i>, hawthorn <i>Crataegus</i> sp., lime <i>Tilia x vulgaris</i>, cherry plum <i>Prunus cerasifera</i> var. <i>pissardii</i>, beech <i>Fagus sylvatica</i>, birch <i>Betula</i> sp. etc., mostly in very good condition</p> <p>Line of conifers to 15m tall forming 'hedge' at southern end</p>	
11	<p>ST1771374049</p> <p>Man-made bank c. 1m high along the side of pavement/ woodland, planted with wild flower seed mix (now also with weeds), over textile mat. Grades into grassland (see TN13) or scrub on east side</p> <p>Fodder burnet <i>Poterium sanguisorba</i> ssp. <i>balearicum</i> Abundant</p> <p>Cock's-foot <i>Dactylis glomerata</i> Frequent</p>	

Target Note	Description	Photograph
	<p>Ribwort plantain <i>Plantago lanceolata</i> Frequent</p> <p>Dandelion <i>Taraxacum</i> agg. Frequent</p> <p>Bent <i>Agrostis</i> sp. Frequent</p> <p>Yarrow <i>Achillea millefolium</i> Frequent</p> <p>Common knapweed <i>Centaurea nigra</i> Frequent</p> <p>Beaked hawk's-beard <i>Crepis vesicaria</i> Frequent</p> <p>Hedge bedstraw <i>Galium album</i> Frequent</p> <p>Oxeye daisy <i>Leucanthemum vulgare</i> Frequent</p> <p>False oat-grass <i>Arrhenatherum elatius</i> Occasional</p> <p>Red fescue <i>Festuca rubra</i> Occasional</p> <p>Black medick <i>Medicago lupulina</i> Occasional</p> <p>Wild marjoram <i>Origanum vulgare</i> Occasional</p> <p>Annual meadow-grass <i>Poa annua</i> Occasional</p> <p>Groundsel <i>Senecio vulgaris</i> Occasional</p> <p>Herb Robert <i>Geranium robertianum</i> Rare</p> <p>Bush vetch <i>Vicia sepium</i> Rare</p> <p>Dove's-foot crane's-bill <i>Geranium molle</i> Rare</p> <p>St John's-wort <i>Hypericum</i> sp. Rare</p> <p>Red bartsia <i>Odontites vernus</i> Rare</p> <p>Reflexed stonecrop <i>Petrosedum rupestre</i> Rare</p>	
12	<p>ST1773174065</p> <p>Broad-leaved semi-natural woodland (parts with trees planted in lines, but mostly not). Well-used path through wood. Unofficial name on Googlemaps 'Ferry Road Park'.</p> <p>Canopy 15m, 95% cover</p> <p>Goat willow <i>Salix caprea</i> Dominant</p> <p>Birch <i>Betula</i> sp. Frequent</p>	

Target Note	Description	Photograph
	<p>Sycamore <i>Acer pseudoplatanus</i> Occasional</p> <p>Oak <i>Quercus</i> sp. Rare</p> <p>Alder <i>Alnus</i> sp. Occasional</p> <p>Wild cherry <i>Prunus avium</i> Occasional</p> <p>Ash <i>Fraxinus excelsior</i> Rare</p> <p>Black pine <i>Pinus nigra</i> Rare</p> <p>Sowthistle <i>Sonchus</i> sp. Rare</p> <p>Shrub layer sparse to 15%, 3-5m</p> <p>Bramble <i>Rubus fruticosus</i> agg. Dominant</p> <p>Hawthorn <i>Crataegus monogyna</i> Frequent</p> <p>Butterfly-bush <i>Buddleja davidii</i> Occasional</p> <p>Dogwood <i>Cornus</i> sp. Occasional</p> <p>Holly <i>Ilex aquifolium</i> Occasional</p> <p>Evergreen oak Holm oak <i>Quercus ilex</i> Occasional</p> <p>Hazel <i>Corylus avellana</i> Rare</p> <p>Highclere holly <i>Ilex x altaclerensis</i> Rare</p> <p>Garden privet <i>Ligustrum ovalifolium</i> Rare</p> <p>Dog-rose <i>Rosa canina</i> Rare</p> <p>Gorse <i>Ulex europaeus</i> Rare</p> <p>Ground layer c. 5-20 cm, 30% cover under bramble</p> <p>Wood avens <i>Geum urbanum</i> Locally frequent</p> <p>Cow parsley <i>Anthriscus sylvestris</i> Occasional</p> <p>Cock's-foot <i>Dactylis glomerata</i> Occasional</p> <p>Tufted hair-grass <i>Deschampsia cespitosa</i> Occasional</p> <p>Rough meadow-grass <i>Poa trivialis</i> Occasional</p> <p>Dandelion <i>Taraxacum</i> agg. Occasional</p> <p>Glaucous sedge <i>Carex flacca</i> Rare</p> <p>Pendulous sedge <i>Carex pendula</i> Rare</p> <p>Wild strawberry <i>Fragaria vesca</i> Rare</p>	

Target Note	Description	Photograph
	<p>Garden bluebell <i>Hyacinthoides x massartiana</i> Rare</p> <p>Field scabious <i>Knautia arvensis</i> Rare</p> <p>Hedge woundwort <i>Stachys sylvatica</i> Rare</p> <p>Common nettle <i>Urtica dioica</i> Rare</p> <p>Bindweed <i>Calystegia sp.</i> Rare</p>	
13	<p>ST1765574208</p> <p>Unimproved neutral grass edge for Ferry Road Park between wood and bank by pavement, rank, to 1m tall, probably sown originally, grades into bank (see TN11)</p> <p>Cock's-foot <i>Dactylis glomerata</i> Frequent</p> <p>False oat-grass <i>Arrhenatherum elatius</i> Frequent</p> <p>Common knapweed <i>Centaurea nigra</i> Frequent</p> <p>Hard rush <i>Juncus inflexus</i> Frequent</p> <p>Dandelion <i>Taraxacum</i> agg. Occasional</p> <p>Beaked hawk's-beard <i>Crepis vesicaria</i> Occasional</p> <p>Hedge bedstraw <i>Galium album</i> Occasional</p> <p>Broad-leaved Dock <i>Rumex obtusifolius</i> Occasional</p> <p>Creeping bent <i>Agrostis stolonifera</i> Rare</p> <p>Hairy sedge <i>Carex hirta</i> Rare</p> <p>Wild carrot <i>Daucus carota</i> ssp. <i>carota</i> Rare</p> <p>Wild teasel <i>Dipsacus fullonum</i> Rare</p> <p>Common couch <i>Elymus repens</i> Rare</p> <p>Cut-leaved crane's-bill <i>Geranium dissectum</i> Rare</p> <p>Ragwort <i>Jacobaea vulgaris</i> Rare</p> <p>Daffodil <i>Narcissus sp.</i> Rare</p> <p>Cowslip <i>Primula veris</i> Rare</p> <p>Meadow buttercup <i>Ranunculus acris</i> Rare</p> <p>Creeping buttercup <i>Ranunculus repens</i> Rare</p> <p>Curled dock <i>Rumex crispus</i> Rare</p>	

Target Note	Description	Photograph
14	<p>ST1777874158</p> <p>South Clive Street</p> <p>Street trees include lime <i>Tilia x vulgaris</i> and sycamore <i>Acer pseudoplatanus</i> mostly in very good condition, and street weeds include whitlow-grass <i>Erophila verna</i> sensu stricto, hairy bittercress <i>Cardamine hirsuta</i>, thale cress <i>Arabidopsis thaliana</i> and dandelion <i>Taraxacum</i> sp., ragwort <i>Jacobaea vulgaris</i> and smooth sowthistle <i>Sonchus oleraceus</i>.</p>	

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