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South Shields Transport Interchange Development

Phase 1 Ecological Assessment

Prepared for Muse Developments Limited, South Tyneside Council and Nexus

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Notes:	**This report contains sensitive information concerning protected species and caution should be exercised when copying and distributing to third parties.**	

Report Status	Authorised for Release	Date	Position
Final Draft	Rob Frith 	24 June 2015	Principal Ecologist
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1. INTRODUCTION

1.1. Project Background

1.1.1. Muse Developments are working in partnership with South Tyneside Council on a long term plan for the redevelopment of South Shields Town Centre. The project has a number of development strands including the construction of a new Central Library & Digital Media Centre, a new Transport Interchange and wider proposals for the redevelopment of the remaining Town Centre. Muse Developments, along with South Tyneside Council and Nexus are currently submitting a full planning application for the development of a new Transport Interchange and in conjunction with South Tyneside Council an outline planning application for the masterplan for the wider re-development of the town centre.

1.1.2. This ecological assessment considers the proposal for the new Transport Interchange development located south of Keppel Street, South Shields (hereafter referred to as 'the Site') whose location and extent is shown in Figure 1.

1.2. Ecological Background

1.2.1. There have been no previous ecological surveys of the Site.

1.3. Project Brief and Objectives

1.3.1. ***RDF*** Ecology was initially appointed by Muse Developments Ltd to undertake the following:

- A desktop study and consultation with South Tyneside Council
- An extended phase 1 habitat and protected species walkover surveys
- Prepare a phase I habitat and protected species assessment report

1.3.2. However after completion of the first two items it was clear that there was a requirement for some limited bat activity surveys to be undertaken and therefore the following surveys were completed

- Bat activity surveys to look for commuting and/or foraging bats within the Site

1.3.3. This report describes the findings of the desktop study and field survey work, evaluates the ecological interest of the Site, considers the potential impacts arising from the proposed development and makes recommendations for any further ecological survey work required along with preliminary outline mitigation measures.

2. THE DEVELOPMENT PROPOSALS

2.1. The development proposals considered by this assessment are those associated with the new Transport Interchange and these are shown on the Harris Partnership proposed site plan drawing number 12569B_045 Rev AB.

2.2. The proposals include the demolition of a number of existing buildings including the Metro Station on King Street, Keppel Street Post Office, 3, 5 and 7 Keppel Street and properties on William Street, Burrow Street and Albermarle Street to accommodate the new Transport Interchange and new retail/office units along with the creation and improvement of small areas of new public realm planting.

3. PLANNING POLICY CONTEXT

3.1. National Planning Policy

3.1.1. National Planning Policy Framework 2012

3.1.1.1. The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied replaced. NPPF sets out the Government's national principles and policies for England on the protection of biodiversity and geological conservation through the planning system.

3.1.1.2. At the heart of the NPPF is a clear *"**presumption in favour of sustainable development**, which should be seen as a golden thread running through both plan-making and decision-making"* (Para 14).

3.1.1.3. The UK's Sustainable Development Strategy "Securing the Future" sets out 5 guiding principles of sustainable development:

- living within the planet's environmental limits;
- ensuring a strong, healthy and just society;
- achieving a sustainable economy;
- promoting good governance; and
- using sound science responsibly.

3.1.1.4. Section 11 of the NPPF sets out how the planning system should contribute to sustainable development by conserving and enhancing the natural environment through:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

3.1.1.5. Paragraph 118 states that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites:
  - » potential Special Protection Areas and possible Special Areas of
  - » Conservation;
  - » listed or proposed Ramsar sites; and
  - » sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites

3.1.1.6. Additionally paragraph 119 notes that the "*presumption in favour of sustainable development (paragraph 14) does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined"*.

3.1.1.7. Annex 1 of the NPPF sets out the implementation and notes the following:

- The policies in the NPPF apply from the day of publication, i.e. 27 March 2012 (Para 208).
- The policies in Local Plans (and the London Plan) should not be considered out-of-date simply because they were adopted prior to the publication of the NPPF (Para 211). However, the NPPF policies are material considerations which local planning authorities should take into account from the day of its publication. The NPPF must also be taken into account in the preparation of plans (Para 212), which may need to be revised and which should be done as quickly as possible (Para 213).

3.1.1.8. *ODPM Circular 06/2005* (Government Circular: Biodiversity and Geological Conservation—Statutory Obligations and their Impact within the Planning System) continues to provide administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements and supports the expression of national planning guidance set out in NPPF.

4. SURVEY METHODOLOGY

4.1. Desktop Study and Consultations

4.1.1. A range of data sources were consulted to obtain ecological information about the study area and its immediate surroundings and included the following:

- Environmental Records Information Centre for the North East of England (ERIC).
- Multi Agency Geographic Information for the Countryside (MAGIC) website
- Natural England web site and online SSSI database
- The National Biodiversity Network on-line Biological Records Database.

4.1.2. Informal discussions were held with South Tyneside Council's Countryside Officer regarding the project in order to identify any areas of potential ecological concern to be addressed in this assessment.

4.2. Field Survey

4.2.1. Extended Phase I Habitat Survey Methodology

4.2.1.1. A preliminary extended phase 1 habitat survey of the Site was completed on 18 February and a further visit made on 7 May 2015 to review the habitat categorisation and to provide additional plant species records. All habitats within the Site were surveyed.

4.2.1.2. Habitats present on the Site were classified and mapped according to the Joint Nature Conservation Committee (JNCC) Phase 1 Habitat survey methodology (JNCC, 2010).

4.2.1.3. A phase 1 habitat survey provides sufficient information on the composition of the vegetation present to enable it to be characterised and assessed.

4.2.1.4. Fauna and flora present at the time of survey were recorded and the Site was assessed for its potential to support notable and/or protected species that could be impacted by development following CIEEM guidance (CIEEM, 2013). Target notes were made for any features of ecological interest (See Figure 3). Plant species were recorded following the nomenclature in Stace (1997) and lists of species are included in Appendix 1.

4.3. Protected Species

4.3.1. Bats

4.3.1.1. Whilst completing the extended phase I habitat survey a preliminary bat roost assessment was undertaken in accordance with best practice guidelines (Hundt, 2012).

Tree Assessment—bats

4.3.1.2. Trees on and adjacent to the Site were assessed for their potential to support roosting bats in accordance with best practice guidelines (Hundt, 2012). The trees were examined from the ground using direct observation, binoculars and a high powered torch where appropriate. The trees were classified according to the criteria detailed below in Table 1, based upon the visible features of the tree. These features include natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, behind dense, thick stemmed ivy, hollows/cavities and within dense epicormic growths. For extensive areas of woodland, where all trees could not be fully checked the woodland as a whole, this was assessed for its potential for roosting bats based upon the overall age and character of the trees present.

Table 1—Criteria for bat roost potential assessment of trees (based on interpretation of Hundt, 2012)

Tree Category	Description
Confirmed	Tree with features confirmed to be used by roosting bats either by historic records (verified appropriately), or evidence recorded during survey.
High	Tree with highly suitable features capable of supporting larger roosts. The habitat is connected to wider landscape by strong linear features that may be used by commuting bats e.g. river valley, streams and hedgerows.
Moderate	Tree with definite bat roost potential but with only one or two suitable features, or multiple features with the potential to be used by individual/small numbers of bats. Surrounding area includes good quality foraging habitat for bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland; or tree with highly suitable features though its context is less optimal.
Low	Tree with less suitable features capable of supporting individual/small numbers of bats within a suboptimal location; tree in suitable habitat and of a size and age that elevated surveys are considered likely to result in cracks or crevices being found; or tree with definite bat roost potential which is isolated and within low quality foraging habitat meaning that the presence of a roost is considered less likely.
Negligible	Tree with no potential opportunities for roosting bats, or very few or minor features in an isolated/unsuitable location such that the presence of a roost is considered highly improbable e.g. isolated from suitable foraging or commuting habitats.

Buildings Assessment

4.3.1.3. The buildings on and adjacent to the Site were visually assessed for potential access points and evidence of bat activity using binoculars to view upper floor areas and roofs along with a one million candlepower torch to aid visibility.

4.3.1.4. The survey sought to identify features such as small gaps in the pointing and brickwork, or in or around barge/soffit/fascia boards, raised or missing ridge tiles and gaps at gable ends, all of which provide potential access points for bats. Evidence to indicate that potential access points were actively used by bats included looking for staining within gaps and bat droppings or urine staining under gaps; any marks such as these were recorded. Indicators that potential access points were likely to be inactive included the presence of cobwebs and general detritus within the access.

4.3.1.5. Where safe access was possible, buildings were thoroughly examined for any evidence of bat activity including looking for live or dead bats, droppings, feeding remains or staining. Specifically, the visual survey involved:

- Assessment for droppings on walls, windowsills and in roof spaces
- Scratch marks and staining on beams, other internal structures and potential entrance and exit holes
- Wing fragments of butterfly and moth species underneath beams and other internal structures
- The presence of dense spider webs at a potential roost can often indicate absence of bats
- Assessment of crevices and cracks in the buildings to assess their importance for roosting bats

4.3.1.6. Evidence of a roost was determined by the presence of a live or dead bat, concentrated piles or scattered droppings, food remains such as insect wing fragments as well as scratch marks and/or staining.

4.3.1.7. When a roost is positively identified during an internal and external visual inspection the buildings within which the roost is located is classified within the category roost present. Other buildings are classified as at high, medium or low risk of containing bat roosts based upon the number and quality of features present, and the building position in relation to the surrounding environment. Table 2 below shows the features considered when attributing a risk classification to a building.

4.3.1.8. A high risk building would typically be an older building situated close to high quality bat foraging habitats such as woodland, water features or substantial hedgerows. Buildings falling within this class will usually offer a variety of roosting opportunities suitable for use by a range of bat species.

4.3.1.9. Conversely a low risk building will typically be well sealed and of modern construction, offering no or few clear access points or roosting opportunities. The risk of a building housing a bat roost is further reduced if located within an area of poor quality habitat such as hard standing or amenity grassland.

Table 2—Criteria for bat roost potential assessment of buildings (based on interpretation of Hundt, 2012)

Low Risk	Medium Risk	High Risk
No easily identifiable access points such as gaps within stonework or between tiles.	Some access points. Typically obscured by cobwebs or detritus.	Several possible access points. Some clean showing potential use.
No roof void	Small or cluttered roof void	Large roof void with unobstructed flying spaces
No external cavities such as crevices within wall or behind fascia boards	Few external cavities with cavities present of low suitability	A variety of external features offering a range of roosting locations
Located within areas of poor quality habitat, away from bat foraging or commuting routes	Area offering some habitat features likely to be used by bats	Good connectivity to high quality habitats
Not part of a group of buildings	Part of a group of buildings, all offering similar roosting opportunities	Part of a group of buildings offering a range of different conditions and potential roost locations
Heavily disturbed	Potential roosting locations suffering little disturbance	Building disused or little used, largely undisturbed

Bat Activity Survey

4.3.1.10. After discussions with the South Tyneside Countryside Officer it was determined to undertake a single evening's bat activity survey to look for any evidence of commuting and/or foraging bats around the scrub vegetation on the existing railway embankments because none of the buildings were assessed to contain no features of potential value to roosting bats.

4.3.1.11. A single transect survey was undertaken on the evening of 12 May 2015 in suitable weather and comprised a circular transect route which included the existing railway embankments Keppel Street, Albemarle Street and William Street. The survey commenced at 21.00 and was completed by 22.15. In addition to the transect survey an Anabat SD1 bat detector was left to remotely record any bat activity along the railway embankments for

the duration of the transect survey and for a further period of almost 2 hours being recovered from site at midnight.

4.3.2. Wild Birds

4.3.2.1. Habitat within and adjacent to the Site boundary was assessed for its suitability for nesting birds, in particular to look for any evidence of roof nesting gulls. Bird species seen or heard during the survey were recorded.

4.4. Limitation of Field Survey

4.4.1. The initial extended phase 1 habitat survey was undertaken in February outside the optimal vegetation survey period (April to September) However, in acknowledgement of this limitation a further visit was made on 7 May 2015 specifically to record plant species within the optimal vegetation survey period. Given the timings of the survey and the nature of the habitats recorded on Site it is considered that no limitations are present in the assessment of the Site for protected/notable species and habitats. However, an extended phase 1 habitat survey does not comprise a full botanical assessment of all species present within a Site; therefore species lists are indicative only.

4.4.2. The baseline conditions described in this report are accurate at the time at which the survey was undertaken. Should considerable time pass (e.g. more than 2 years) and/or conditions/land-use on the Site change prior to the commencement of works, it is recommended that an up-date survey is undertaken.

5. DESKTOP STUDY RESULTS

5.1. Statutory Designated Sites

5.1.1. The Site is not covered by any statutory nature conservation designations. No sites covered by a statutory nature conservation designation are located within 1km of the Site. The nearest statutorily designated sites are Northumberland Shore Site of Special Scientific Interest (SSSI) which lies approximately 1.2km to the north east on the north bank of the Tyne Estuary and the Northumbria Coast Special Protection Area (SPA) and Ramsar site which lies approximately 1km east of the development site.

5.1.2. A number of other sites covered by statutory nature conservation designations are located between 1-2km away from the Site boundary along the coast to the east of the Site and includes The Durham Coast Special Area of Conservation (SAC) and SSSI and The Northumbria Coast SPA and Ramsar site.

5.1.3. The locations of these designated sites are shown in Figure 2.

5.2. Non-Statutory Designated Sites

5.2.1. Sites of Nature Conservation Importance and Magnesian Limestone Grassland designations previously set out in the South Tyneside Unitary Development Plan, along with new designations in South Tyneside are now designated as Local Wildlife Sites (LWS). LWS are selected by South Tyneside Council in partnership with Durham Wildlife Trust in accordance with the guidance in the document "Designation and Management of Local Wildlife Sites in South Tyneside"

5.2.2. The Site is not designated as a LWS and only a single designated LWS is located within 1km of the Site south of the River Tyne. The nearest LWS sites are shown in table 1 below:

Table 3—Local Wildlife Sites within 2km of the Site

Site Name	Designation	Distance from Planning Application sites
The Leas	LWS (South Tyneside)	1.7km SE at nearest point
South Marine Park Lake	LWS (South Tyneside)	860m E at nearest point
South shields Dunes	LWS (South Tyneside)	1.1km E at nearest point
River Tyne – Tidal Extent	LWS (Northumberland)	650m W at nearest point
Tyne Entrance	LWS (Northumberland)	1.5km N at nearest point
Northumberland Park	LWS (Northumberland)	1.8km N at nearest point

5.2.3. A single large LWS is located along the north bank of the River Tyne, and is recorded as the River Tyne Tidal Extents LWS and lies within 650m of the Site at its nearest location.

5.2.4. The locations of these designated sites are shown in Figure 2.

5.2.1. Protected Species

5.2.1.1. The desktop study did not identify any protected species records relating to the Site or in such proximity to the Site that they needed to be included in this assessment.

5.2.1.2. Data from ERIC indicated that there were small number of Bat records (6 in total) within 2km of the Site and Five of the six records are from locations to the north or the River Tyne. None of these records were within 1km of the Site and they include 3 records for Common Pipistrelle *(Pipistrellus pipistrellus)*, 2 records for Nathusius's Pipistrelle *(Pipistrellus nathusii)* and a single record of an unidentified Myotis bat considered to be Whiskered *(Myotis mystacinus)* or Brandt's *(Myotis brandtii)*.

6. EXTENDED PHASE 1 HABITAT AND BAT SURVEY RESULTS

6.1. Introduction

6.1.1. The results of the extended phase 1 habitat survey are presented below. An extended phase 1 habitat survey map is shown in Figure 3 and illustrates the location and extent of all habitat types recorded on Site.

6.2. Habitat Descriptions

6.2.1. The Site comprised largely of existing buildings and hard surfaces with only one area of semi-natural vegetation established on the existing railway embankments. Elsewhere the vegetation was limited to urban street trees and patches of ornamental landscape amenity planting.

6.2.2. The following phase 1 habitat types (JNCC codes in parenthesis) were recorded on Site during the field survey:

- Dense/Continuous Scrub (A2.1);
- Introduced Shrub (J1.4)

6.2.1. Dense/Continuous Scrub (A2.1)

6.2.1.1. The steep banks of the existing railway line that runs along the western site boundary are covered with open scrub habitat along with some small sapling trees and larger trees that have been recently managed and reduced in height.

6.2.1.2. The main species were hawthorn *(Crataegus monogyna)* and elder *(Sambucus nigra)* along with some saplings/young trees of sycamore *(Acer pseudoplatanus)*, ash *(Fraxinus excelsior)* and rowan *(Sorbus aucuparia)*.

Photograph 1—Scrub on steep railway embankments

6.2.1.3. The ground vegetation was open and sparse comprising areas of bramble *(Rubus fruticosus agg)* underscrub with some stands of common nettle *(Urtica dioica)* through which clambered stands of cleavers *(Galium aparine)*. Other species included cow parsley *(Anthriscus sylvestris)*, creeping thistle *(Cirsium arvense)*, mugwort *(Artemisia vulgaris)* and hogweed *(Heracleum sphondylium)* with a limited range of coarse grasses including common couch *(Elytrigia repens)*, Yorkshire fog *(Holcus lanatus)*, cock's-foot *(Dactylis glomerata)* and false oat-grass *(Arrhenatherum elatius)*.

6.2.2. Introduced Shrub (J1.4)

6.2.2.1. Along the northern Site boundary, but outside of the Site was a narrow strip of neglected ornamental planting along the central reservation of Keppel Street and this included a limited number of ornamental ground cover shrubs and plants including cotoneaster *(Cotoneaster spp)*, shrubby cinquefoil *(Potentilla fruticosa agg.)* and ice plant *(Sedum spectabile)* with occasional street trees including silver birch *(Betula pendula)* and Norway maple *(Acer platanoides)*. The beds were quite neglected in areas and here coarse grasses including Yorkshire fog, common couch and cock's-foot were established along with occasional creeping thistle, broad-leaved dock *(Rumex obtusifolius*) and cleavers.

6.2.2.2. Other small areas of ornamental planting occurred adjacent to railway bridge abutments and included cherry laurel *(Prunus laurocerasus)*.

6.3. Protected Species

6.3.1. Bats

Tree Assessment

6.3.1.1. The Site and immediately adjacent areas do not contain any large trees which have features of potential value to roosting bats.

Building Assessment

6.3.1.2. The buildings marked for demolition in order to accommodate the new Transport Interchange development were assessed to have negligible value for roosting bats. These were all modern flat roofed buildings comprising brick and rendered brick construction with no obvious gaps in mortar joints or around the roof edges with modern tight fitting uPVC windows providing no obvious access points for bats.

6.3.1.3. No evidence of roosting bats was recorded during the external examination of the buildings.

6.3.1.4. The streets around the Site are all well lit at night by street lights, in particular the car park areas to the south of the Site.

Photograph 2—Builings on William Street to be demolished showing modern brick construction

Photograph 3—Keppel Street Post Office to be demolished showing modern brick construction

Activity Survey

6.3.1.5. No bat activity was recorded within the Site during the transect survey and the Anabat remote recording equipment did not detect any bat activity during the three hours recording period along the railway embankments.

6.3.2. Wild Birds

6.3.2.1. No evidence of roof nesting gulls was recorded during the field survey although a number of herring gulls *(Larus argentatus)* were recorded flying over the Site and one bird was seen to land on the roof of the buildings at 3-7 Kepple Street for a short while before leaving to the north. Despite continued observation for a further period of 30 minutes no further gulls were noted to return to this location.

6.3.2.2. The only other birds recorded were from the scrub vegetation on the railway embankments and included robin *(Erithacus rubecula)*, blackbird *(Turdus merula)* and a singing wren *(Troglodytes troglodytes)*.

7. EVALUATION AND RECOMMENDATIONS

7.1. Overall Approach to Assessment

7.1.1. The overall approach to assessment adopted by the study team is based upon the guidelines for Ecological Impact published by the Institute of Ecological and Environmental Management Assessment (Terrestrial and Freshwater and Coastal (CIEEM 2006) and Marine, Coastal and Estuarine (CIEEM 2010) and can be summarised as below:

1. To identify the likely zone of influence (study area) arising from the whole lifespan of the project;
2. To identify and value the features of nature conservation interest within the ecological study area in a systematic way by establishing levels of interest for ecological features measured against definable criteria. The term Valued Ecological Receptor (VER) is used to describe the species, communities, habitats or sites selected for detailed study during the process of ecological impact assessment.
3. To identify the biophysical changes attributable to the project that are likely to affect valued ecological features and resources;
4. To assess whether these biophysical changes are likely to give rise to a significant ecological impact, defined as an impact on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area, including cumulative and in-combination impacts;
5. To consider appropriate refinement of the project to avoid or reduce identified negative impacts and incorporate mitigation measures and/or compensation measures for any residual significant negative impacts and ecological enhancement measures to improve the wider environment;
6. To undertake an assessment of the ecological impacts of the refined project and definition of the significance of these impacts, including cumulative and in-combination impacts;
7. To provide advice on the consequences for decision making of the significant ecological impacts, based on the value of the resource, feature or function; and

8. Where appropriate to make recommendations for monitoring the implementation and success of mitigation and compensation measures and ecological outcomes, including feedback in relation to predicted outcomes.

7.2. Determining Value

7.2.1. The CIEEM guidelines advocates an approach to the valuation of ecological features using a geographical framework (full details in Appendix 3) based upon the following:

- International;
- National; (i.e. England/Northern Ireland/Scotland/Wales)
- Regional;
- County/Metropolitan
- District/Unitary Authority/City or Borough
- Local/Parish
- Within zone of influence only

7.2.2. The thorough evaluation of the ecological importance of the features of a site is essential in order to assess the significance of the ecological effects of the development proposals.

7.2.3. The evaluation criteria are given in detail in Appendix 2. Their aim is to consider the habitats, communities and species present on site in relation to the following:

1. The legislative framework (e.g. the Wildlife and Countryside Act 1981 and the EC Directive on the Conservation of Habitats and Wild Fauna and Flora (92/43/EEC) for the presence of protected species and habitats).
2. Nature conservation designations, including national site designations (Sites of Special Scientific Interest, National Nature Reserves etc), local designations (Sites of Importance for Nature Conservation, Local Nature Reserves, County Wildlife Sites etc).
3. Accepted criteria for species rarity and declining populations, and rarity of habitat types or communities, including species and habitats identified in the British Red Data Books, national biodiversity action plan, and species and habitats identified in regional or local biodiversity action plans where available.
4. Accepted criteria for overall site evaluation (including rarity, diversity, naturalness, historical factors and issues relating to landscape ecology).

7.3. Evaluation of Survey Results and Recommendations

7.3.1. Nature conservation Designations

7.3.1.1. The Site is not covered by any statutory or non-statutory nature conservation designations.

7.3.1.2. The nearest sites covered by statutory nature conservation designations are approximately 1km away and whilst these are important sites of National and International importance neither the sites, nor their special interest features, would be directly or indirectly impacted by the proposed developments.

7.3.1.3. The River Tyne—Tidal Extent LWS is the closest LWS to the Site and is located approximately 650m to the west. South of the River Tyne there is only South Marine Park Lake LWS which is located within 1km of the development site boundary. None of the LWS within 2km of the Site would be directly or indirectly affected by the proposed development and are separated from the site by extensive areas of urban development.

7.3.1.4. Consequently, **no** further survey or assessment work to consider impacts upon sites covered statutory or non-statutory nature conservation designations or the species that they support is recommended.

7.3.2. Habitats

7.3.2.1. The only area of semi-natural vegetation within the Site is the scrub habitat that has developed naturally along the steep embankments of the railway line along the western site boundary. This scrub vegetation supports a very limited range of common and widespread urban species and is subject to regular management to prevent the trees and scrub from developing into larger specimens that may ultimate undermine the stability of the embankment.

7.3.2.2. The habitats present within the Site are not protected or of notable intrinsic ecological value, and support a very limited range of common and widespread native species, however the scrub habitats on the railway embankments may be of local value to nesting birds.

7.3.2.3. Whilst some of the areas of urban amenity planting will be lost or replaced with new amenity planting as part of the wider landscaping schemes these are of negligible ecological value and the more important scrub habitat on the railway embankments would be retained and protected during the development. Consequently, **no** mitigation/replacement/compensation measures are recommended in relation to habitats and **no** further survey work is recommended.

7.3.3. Protected Species

Bats

7.3.3.1. The tree assessment indicates that there are no large trees present within or adjacent to the site that contain any features of known potential value to roosting bats such as rot holes, cracks, fissure etc and that the buildings are of negligible value to roosting bats due to their modern construction, flat roofs and lack of access points for roosting bats. Furthermore, the buildings are all located in a heavily built up and well lit urban location with very little associated foraging habitat for bats and this further reduces their potential to support roosting bats.

7.3.3.2. Consequently, it is assessed that the development **will not** have any direct negative impacts upon bats or bat roosts and therefore a licence for the demolition works **will not** be required and no further survey work is currently recommended.

7.3.3.3. However, if the demolition works are not completed within 12 months of this assessment it is recommended that the site is re-assessed for its potential to support roosting bats prior to demolition commencing.

Wild Birds

7.3.3.4. The survey did not record any roof nesting gulls within the Site although a single herring gull was seen to briefly land on a building roof at 3-7 Keppel Street. Given that this species is known to nest on flat roofs elsewhere within South Shields it is recommended that demotion works be completed outside of the bird nesting season (March to September) or where this is not practical that all flat roof areas be checked by a suitably qualified ecologist to ensure that no nesting gulls are present prior to demolition and to advise on suitable mitigation measures where nesting gulls are found.

7.3.3.5. The area of scrub habitat along the steep railway embankments provides locally important habitat for nesting birds given its urban location and low levels of human disturbance due to the steep banks which restrict access to the area. A small number of common urban birds were recorded there and are likely to breed at this location.

7.3.3.6. This area of scrub habitat would not be directly affected by the proposed development and the only potential effects would be limited to temporary disturbance during periods of construction works. However the area is already subject to disturbance from traffic noise and train traffic.

7.3.3.7. Consequently, it is assessed that the development **will not** have any direct negative impacts upon breeding birds resulting from habitat losses and no further survey is recommended unless demolition works have to be completed during the bird breeding season.

7.4. Evaluation and Recommendation Summary

7.4.1. Table 4 below summarises the value of the ecological resource of the Site and notes any appropriate recommendations for further survey work

Table 4—Evaluation and Recommendation Summary Table

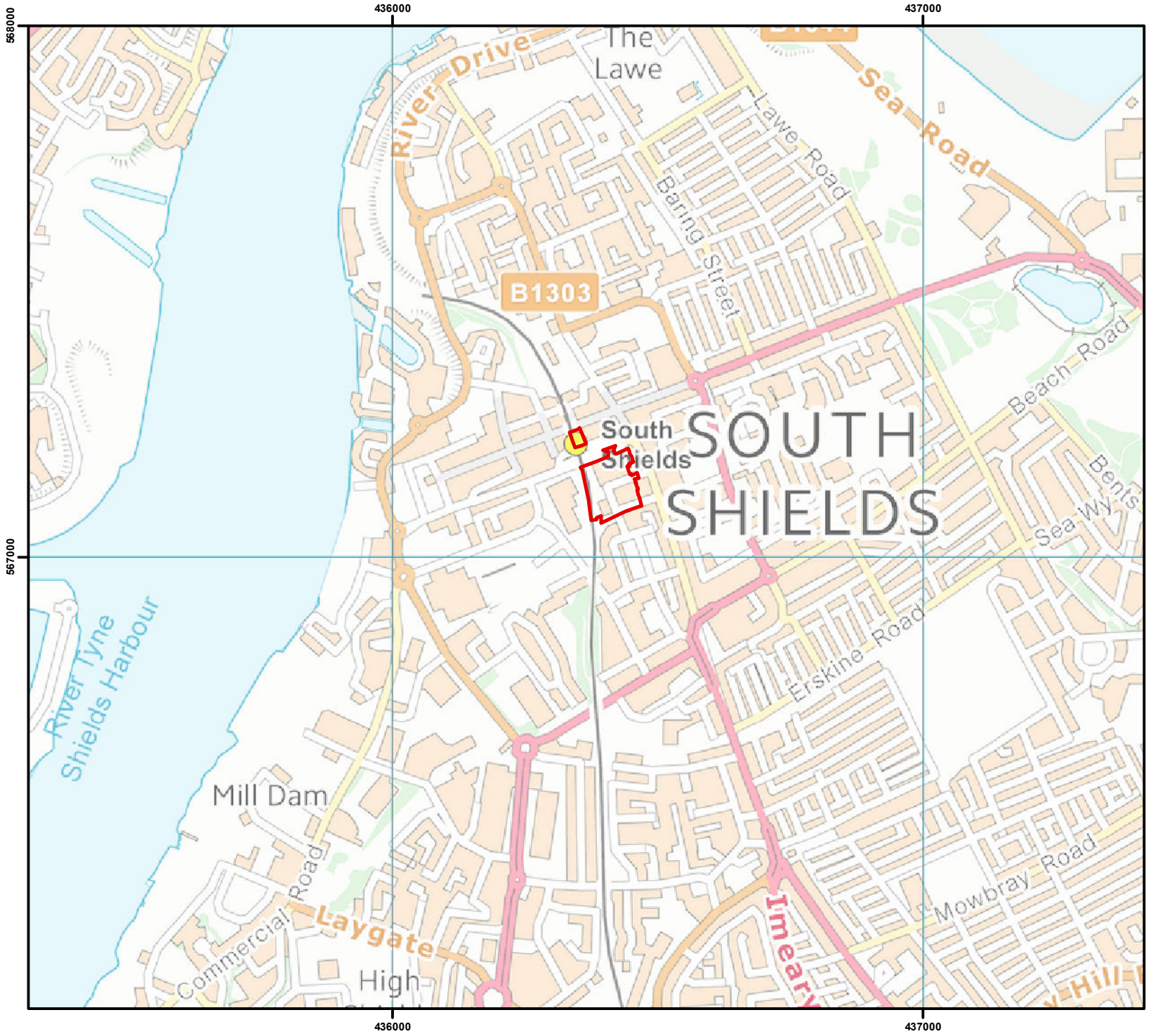
Resource	Importance	Reasons	Recommendations
Habitats			
Dense/continuous scrub (A2.1) on railway embankments	Parish / Neighbourhood	Species poor and supporting a limited range of common and widespread species. Value increased due to lack of other semi-natural habitat in this urban location Has some local value for breeding birds	No further habitat survey work recommended. No further bird survey work recommended because no habitat losses will occur to accommodate proposed development and impacts will be limited to temporary disturbance during the construction phase.
Introduced shrubs habitat (J1.4) in amenity planting areas	Negligible	Contain a range of non-native species and limited numbers of native species, typically those of disturbed ground.	No further habitat survey work recommended.
Protected Species			
Bats	Negligible	No trees suitable for roosting bats present in Site. Buildings assessed to be of negligible value for roosting bats and no bat activity recorded during transect activity survey	Further surveys only recommended if demolition work does not occur within 12 months of the current assessment. Re-survey would include new roost risk assessment and possibly activity surveys
Wild Birds	Parish / Neighbourhood	Scrub vegetation on railway embankment provides some habitat for nesting birds and flat roofs on buildings marked for demolition may provide nesting places for roof nesting gulls although none were recorded during the field surveys	Surveys only recommended where building demolition works have to be programmed to occur in bird breeding season (March to September). Flat roof areas to be checked for roof nesting gulls by suitably qualified ecologist.

8. FIGURES

Figure 1 — Site Location

Figure 2 — Nature Conservation Designations

Figure 3 — Phase I Habitats



South Shields Transport Interchange

KEY

Tranport Interchange Boundary

Scale 1:10,000

N

RDF ecology
Consultant Ecologists
3 Bramble Close
Wickersley
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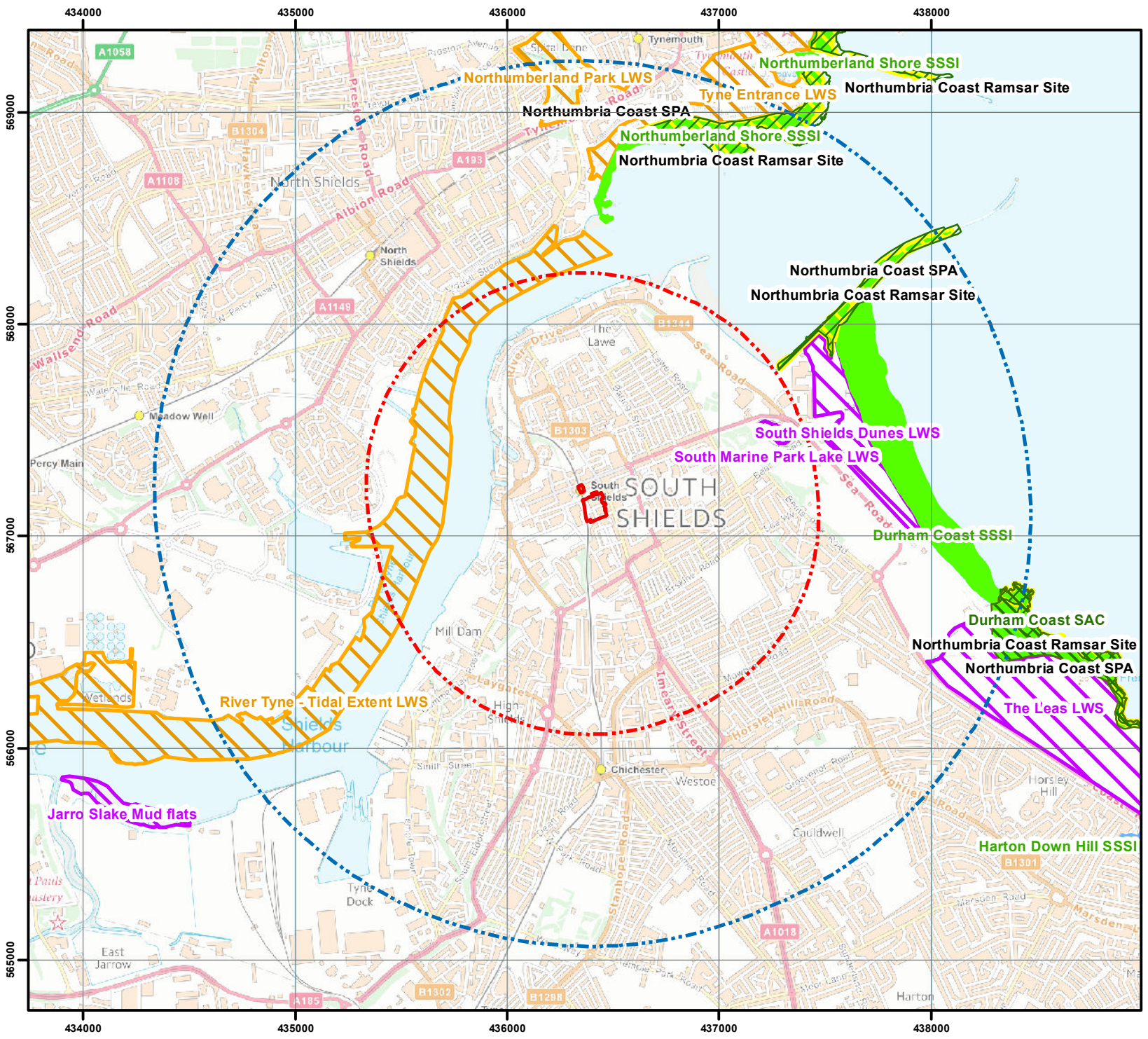
Fig: 1 Site Location



South Shields Transport Interchange

KEY

- Tranport Interchange Boundary
- *Special Area of Conservation*
- *Special Protection Area*
- *Ramsar*
- *Site of Special Scientific Interest*

Local Wildlife Sites

- Northumberland LWS
- South Tyneside LWS

Scale 1:25,000

N

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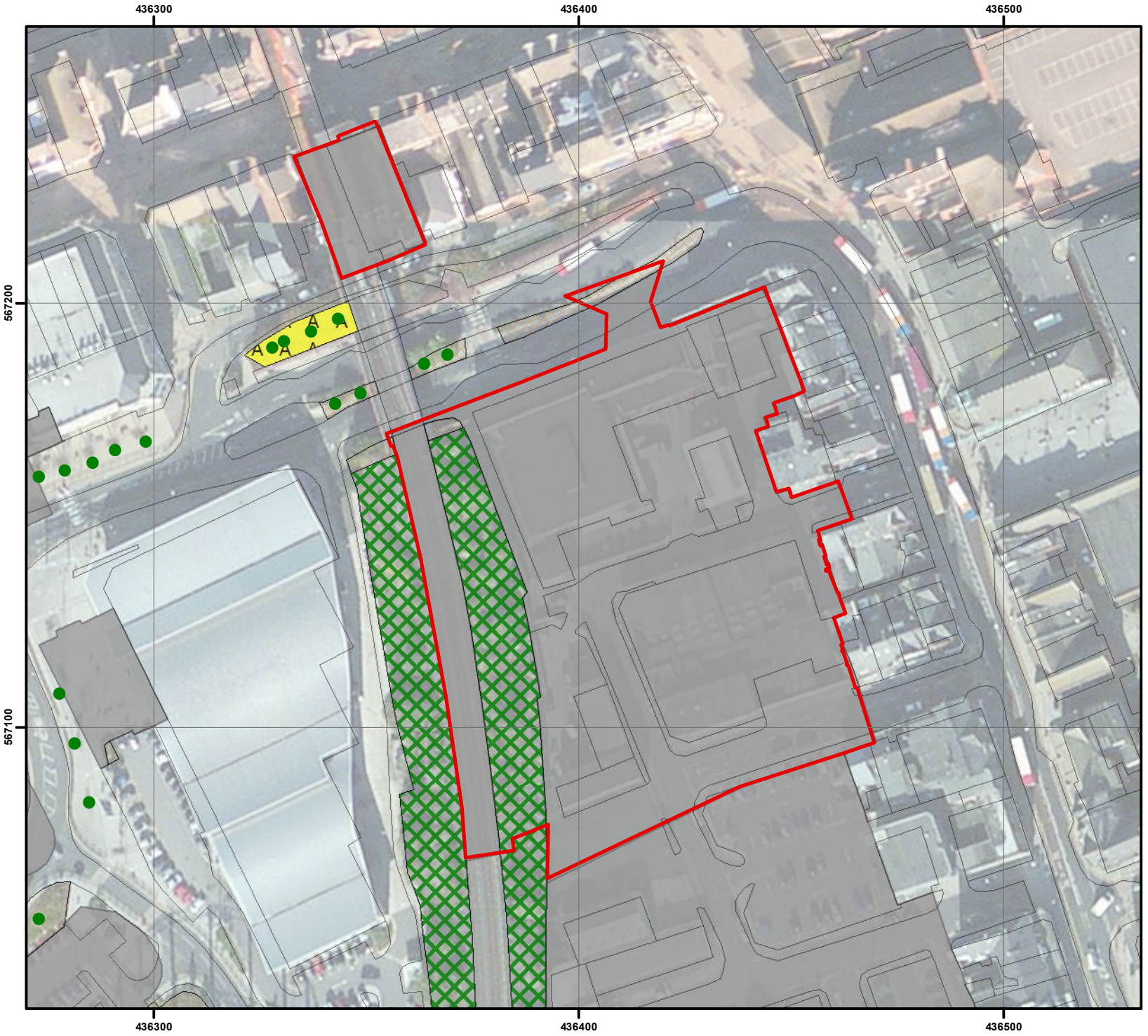
Fig: 2 Designations



South Shields Transport Interchange

KEY

Tranport Interchange Boundary

Phase 1 Habitats

Woodland and Scrub

- Broadleaved woodland - plantation
- Scrub dense/continuous
- Bramble Scrub dense/continuous

Grassland and Marsh

- Unimproved neutral grassland/tall ruderal mosaic

Miscellaneous

- Cultivated/disturbed land amenity grassland
- Introduced shrub
- Buildings and hard Surfaces
- Street Trees

Scale 1:1,250

N

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Fig: 3 Phase 1 Habitats

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10. APPENDICES

10.1. Appendix 1—List of Species

Common Name	Scientific Name	Scrub (A2.1)	Introduced Shrubs (J1.4)
Common Bent	*Agrostis capillaris*	R	
Cow Parsley	*Anthriscus sylvestris*	F	R
Mugwort	*Artemisia vulgaris*	O	O
Butterfly Bush	*Buddleja davidii*	R-O	
Common Mouse-ear	*Cerastium fontanum*	R	R
Creeping Thistle	*Cirsium arvense*	O	
Spear Thistle	*Cirsium vulgare*	O	R
Cotoneaster species	*Cotoneaster spp.*		F
Hawthorn	*Crataegus monogyna*	F	R
Cock's-foot	*Dactylis glomerata*	O-LF	O-LF
Red Fescue	*Festuca rubra*	O	O
Ash	*Fraxinus excelsior*	O	
Common Fumitory	*Fumaria officinalis*		R
Cleavers	*Galium aparine*	O-LF	R
Hogweed	*Heracleum sphondylium*	O	
Yorkshire Fog	*Holcus lanatus*	F	O-LF
Red Dead-nettle	*Lamium purpureum*	R	
Perennial Rye-grass	*Lolium perenne*	O	O
Ribwort Plantain	*Plantago lanceolata*	R	
Annual Meadow-grass	*Poa annua*	O	O-LF
Cherry Laurel	*Prunus laurocerasus*		O
Creeping Buttercup	*Ranunculus repens*	O	O
Bramble	*Rubus fruticosus agg.*	F-A	O
Broad-leaved Dock	*Rumex obtusifolius*	R	R
Elder	*Sambucus nigra*	F	
Common Ragwort	*Senecio jacobaea*	R	
Groundsel	*Senecio vulgaris*	R	O
Prickly Sow-thistle	*Sonchus asper*	R	O
Rowan	*Sorbus aucuparia*	R	
Common Chickweed	*Stellaria media*		O
Dandelion	*Taraxacum officinale agg.*	O	O
White Clover	*Trifolium repens*	R	
Scentless Mayweed	*Tripleurospermum inodorum*		R
Common Nettle	*Urtica dioica*	O	

10.2. Appendix 2—Valuation Criteria

10.2.1. Guidelines for ecological evaluation and the assessment of impacts have been published by Institute of Environmental Assessment (1995) and the Institute of Ecology and Environmental Management (CIEEM 2006 and 2010).

10.2.2. The value that is attached to an ecological resource influences:

- whether, as part of screening, potentially affected features or resources are considered sufficiently valuable that there could be a significant effect that would trigger an EIA;
- whether, as part of scoping, ecological features or resources are considered for inclusion in the EcIA—this is influenced by their value in relation to a 'threshold' level of value that should be defined during scoping;
- deciding what mitigation is appropriate and
- considering legal and policy implications.

10.2.1. Legislative Framework

10.2.1.1. Species, communities or habitats receiving legal protection under UK or EC law have high importance on national and international scales.

10.2.1.2. Internationally important sites include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. In the UK candidate SACs, potential SPAs and proposed Ramsar sites should be given the same consideration as designated sites in accordance with country specific policies and supporting guidance.

10.2.1.3. Species, communities or habitats requiring protection under EC law are listed on schedules I and II (whose conservation requires the designation of Special Areas of Conservation), IV (species in need of strict protection) and V (species whose exploitation may be subject to management measures) of the EC Directive on the Conservation of Habitats and Wild Fauna and Flora (92/43/EEC). The enabling legislation for the UK is the Conservation (Natural Habitat, &c) Regulations 2010. Species may also be scheduled under Appendix 1 of the Convention on the Conservation of European Wildlife and Natural Heritage 1979 (Bern Convention).

10.2.1.4. Other sites of international importance designated under international obligations include Biosphere Reserves (UNESCO Man and Biosphere Programme), Ramsar Sites (Convention on Wetlands of International Importance especially as Wildfowl Habitat 1971) and Special Protection Areas (EC Wild Birds Directive 79/409).

10.2.1.5. Species with special protection under UK law are listed on the schedules of the Wildlife and Countryside Act 1981 and amendments. The act also gives rise to statutory site designations i.e. National Nature Reserves, Sites of Special Scientific Interest, Areas of Special Protection for Birds, and orders e.g. Limestone Pavement Orders.

10.2.2. UK Site Designations

10.2.2.1. Sites of national importance include the statutorily designated Sites of Scientific Interest (SSSI) and National Nature Reserves (NNRs).

10.2.2.2. Lower levels of importance attach to locally designated sites such as those non-statutory site designations applied by Local Authorities or Wildlife Trusts e.g. Sites of Importance for Nature Conservation (SINC's or equivalent) or Local Nature Reserves designated under the National Parks and Access to the Countryside Act 1949. Such sites may be considered to be of High Local Importance i.e. important at the county or metropolitan level (CIEEM 2006).

10.2.3. Rarity of Species and Habitats

10.2.3.1. The British Red Data Book for vascular plants (Perring and Farrell 1983) lists 317 species or subspecies as extinct, endangered, vulnerable and rare. Nationally rare species are defined as occurring in 1–15 10km squares of the national grid in Britain, nationally scarce species occurring in 16–100 10km squares. The presence of a breeding population of any nationally rare species is of national importance whereas a breeding population of a nationally scarce species is of regional importance. Assemblages of 2 or more species may increase the importance of a site further.

10.2.3.2. Regional rarities are defined as occurring in 15 or fewer localities or 1km squares in a former Nature Conservancy Council region (NCC 1989).

10.2.3.3. Biodiversity: The UK Steering Group Report contains a "Long List" of key species in the UK that fall into 1 or more of the following categories: threatened endemics or globally threatened; where the UK holds greater than 25% of the world population; where numbers or range have declined by more than 25% in the last 25 years; nationally rare species; and statutorily protected species. Presence of viable populations of such species may be of high importance.

10.2.3.4. County floras and biodiversity action plans, or district action plans may identify species that are rare at the county or district level. Viable populations will therefore have conservation importance in these contexts.

10.2.3.5. Further information on species rarity may be found in Scarce Plants in Britain (Stewart et al 1994) and the Atlas of the British Flora (Perring and Walters 1962) and subsequent revisions.

10.2.3.6. Biodiversity: The UK Steering Group Report has identified a number of key habitats under the following criteria: those for which the UK has international obligations; rare habitats or those with high rates of decline; functionally critical habitats (marine areas); and habitats that are important for key species. Sites containing good examples of viable areas of any key habitat may be considered nationally important.

10.2.3.7. Importance may be attached to plant community types defined in the National Vegetation Classification (Rodwell 1991 etc) that are also described as rare, declining or with restricted distributions or are identified as being of particular botanical importance (NCC 1989).

10.2.4. Criteria for Overall Site Evaluation

10.2.4.1. The accepted criteria for site evaluation are set out by Ratcliffe (1977) in a Nature Conservation Review and are also explained in Guidelines for the Selection of Biological SSSI's (NCC 1989). The principal criteria are briefly outlined below:

10.2.4.2. **Naturalness.** Truly natural habitats are valued highly but are rare in Britain and most sites are modified and semi-natural at best. Physical habitat modifications vary greatly in their impact, some being beneficial whilst others are harmful. A greater degree of conformity of a particular community or site with semi-natural rather than highly modified vegetation types in the National Vegetation Classification and the absence of species indicating disturbance are likely to lead to attachment of higher importance. However, note that communities that appear to be intermediate between semi-natural NVC types are not necessarily of lesser quality.

Size. The area of a site or habitat judged to be viable varies greatly between different habitat types and with factors such as the condition of the habitat, the shape of the habitat area and surrounding land use. In addition, the territorial requirements of particular species within the site/habitat and habitat management factors may need consideration.

In general, larger sites or areas of habitat tend to be valued more highly because of the greater population sizes and hence more robust populations of the species within them; the potential for increased site or habitat diversity and hence greater species-richness over a larger area; and a reduced importance of edge effects (pollution drift, habitat

degradation/change for other reasons at the site edge) if the site is block rather than ribbon shaped. Small sites become increasingly important in areas of little semi-natural habitat.

Rarity. Criteria for rarity of species and habitats are outlined above. The scarcer the habitat or species then the higher the level of importance attached.

Diversity. Diversity tends to be valued positively as it increases. At the phytosociological level, some habitats are more species-rich than others and so have a higher value, provided that the richness does not involve non-native species. Some plant communities are intrinsically more species-rich than others so comparisons should only be made between the same community type.

The standard of floristic diversity is guided by the floristic tables within the National Vegetation Classification (NVC) (Rodwell 1991 etc). A community having more than 75% of the total plant species list for its type in the NVC would be rated very highly. Diversity of different communities within a vegetation formation (e.g. woodland) may also be rated highly as may structural diversity (e.g. rides, glades and differing age structures or canopy layering in woodland). Habitat diversity across a site may also increase its importance.

Fragility. Fragility is a measure of the intrinsic sensitivity of nearly all natural and semi-natural habitats and species to human impact. It is the fragility of such habitats and species which causes them to be more highly valued than any of the artificial substitutes which replace them through human activity; and the greater their fragility the greater their value. Fragility is therefore clearly related irreplaceability or non-recreatability. Re-creation of habitats that have taken centuries to develop, sometimes with centuries of traditional management, is impossible to the full extent of their former complexity.

Typicalness. Typicalness is an indication of how characteristic the features of a site are compared to its particular ecosystem. It is intended as a guard against designation of those sites with unusual features as being always the most important.

Position in an Ecological/Geographical Unit. This is a landscape ecological criteria designed to identify sites or habitats which may be important to maintaining the viability of a larger group thereof; or which is essential in maintaining the population of a species with a large territory spanning several sites; or is one of a number of sites important to a

metapopulation of a species in fragmented landscapes; or may be important in a wildlife corridor or network of habitat patches.

10.2.5. Amenity Value

10.2.5.1. The amenity value of a site in ecological terms is generally seen as its value for the study or quiet enjoyment of wildlife. Sites with high intrinsic appeal and good access are therefore regarded as important in this context. Also important are issues such as site safety, proximity to schools and population centres and site management difficulties. Less emphasis is placed on the criteria outlined in section 9.1.4 in such situations.

10.2.6. Ecological Importance Summary Table

10.2.6.1. The following table has slightly modified from Regini (2000). Its definitions are adopted in this report. Where species, habitats or sites occur in more than one category, the highest level of importance is applicable. Sites that meet the criteria for a particular designation are afforded the level of importance corresponding to that designation whether or not they are actually designated.

Table 5—Ecological Importance Summary Table

Level of Value	Examples
International	An internationally designated site or candidate site (SPA, pSPA, SAC, cSAC, pSAC , Ramsar site, Biogenetic Reserve). A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat which are essential to maintain the viability of a larger whole. Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP. A regularly occurring, nationally significant population of any internationally important species. Also a regularly occurring and nationally significant number of an internationally important species during a critical phase of its life cycle.
National	A nationally designated site (SSSI, ASSI, NNR, Marine Nature Reserve) or a discrete area, which meets the published selection criteria for national designation (e.g. SSSI selection guidelines). A viable area of a priority habitat identified in the UK BAP, or of smaller areas of such habitat which are essential to maintain the viability of a larger whole. Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP). A regularly occurring, regionally or county significant population of any nationally important species. Also a regularly occurring and regionally or county significant number of a nationally important species during a critical phase of its life cycle.

Level of Value	Examples
Regional	Viable areas of key habitat identified in the Regional BAP or smaller areas of such habitat which are essential to maintain the viability of a larger whole; Viable areas of key habitat identified as being of Regional value in the appropriate Natural Area profile; Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; A regularly occurring, locally significant number of a regionally important species during a critical phase of its life cycle; Sites which exceed the County-level designations but fall short of SSSI selection guidelines, where these occur.
County / Metropolitan	Semi-natural ancient woodland greater than 0.25 ha; County/Metropolitan sites and other sites which meet the published ecological selection criteria for designation, including Local Nature Reserves selected on County / metropolitan; A viable area of habitat identified in County BAP; Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan "red data book" or BAP on account of its regional rarity or localisation; A regularly occurring, locally significant number of a County/Metropolitan important species during a critical phase of its life cycle.
District / Borough	Semi-natural ancient woodland smaller than 0.25 ha; Areas of habitat identified in a sub-County (District/Borough) BAP or in the relevant Natural Area profile; Local Nature Reserves selected on District/ Borough criteria Sites/features that are scarce within the District/Borough or which appreciably enrich the District/Borough habitat resource; A diverse and/ or ecologically valuable hedgerow network; A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation; A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.
Parish / Neighbourhood	Areas of habitat considered to appreciably enrich the habitat resource within the context of the Parish or neighbourhood, e.g. species-rich hedgerows. Local Nature Reserves selected on Parish criteria.
Zone of Influence Only	Low grade, widespread and common habitats.