

Sunderland City Council and South Tyneside Council

International Advanced Manufacturing Park Area Action Plan

Ecology Technical Background Report

February 2017



South Tyneside Council



ARUP

Sunderland City Council and South
Tyneside Council

**International Advanced
Manufacturing Park Area Action
Plan**

Ecology Technical Background
Report

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This report takes into account the particular
instructions and requirements of our client.

It is not intended for and should not be relied
upon by any third party and no responsibility
is undertaken to any third party.

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Appendices

Appendix A

White Young Green Ecology Study Area 2014-2015

Appendix B

Ecology Meeting Minutes

Glossary

| | | | |
|-------|--|------|---|
| AAP | Area Action Plan | LWS | Local Wildlife Site |
| AONB | Area of Outstanding Natural Beauty | NERC | Natural Environment and Rural Communities |
| BAP | Biodiversity Action Plan | NPPF | National Planning Policy Framework |
| CRoW | Countryside and Rights of Way | NPPG | National Planning Practice Guidance |
| DCO | Development Consent Order | PLWS | Proposed Local Wildlife Site |
| Defra | Department for Environment, Food and Rural Affairs | SA | Sustainability Appraisal |
| EC | European Community | SAC | Special Area of Conservation |
| EcIA | Environmental Impact Assessment | SEA | Strategic Environmental Assessment |
| EIA | Ecological Impact Assessment | SPA | Special Protection Area |
| EPS | European Protected Species | SSSI | Site of Special Scientific Interest |
| EU | European Union | SuDS | Sustainable Drainage System |
| HRA | Habitats Regulations Assessment | UK | United Kingdom |
| IAMP | International Advanced Manufacturing Park | WCA | Wildlife and Countryside Act |
| LDF | Local Development Framework | WFD | Water Framework Directive |

1 Purpose

1.1 Overview

1. This is the Ecology Technical Background Report for the International Advanced Manufacturing Park (IAMP) Area Action Plan (AAP). The aim of this report is to provide the technical evidence on ecology issues to inform the approach and policies in the IAMP AAP.
2. The report is one of a suite of Technical Background Reports which form part of the evidence base for the IAMP AAP. The full set of reports can be accessed using the following links:
 - www.sunderland.gov.uk/iamp
 - www.southtyneside.gov.uk/localplan

1.2 Introduction to the IAMP

3. The IAMP represents a unique opportunity for the automotive sector in the United Kingdom (UK). Located next to Nissan UK's Sunderland plant, the UK's largest and most productive car manufacturing plant, the IAMP will provide a bespoke, world class environment for the automotive supply chain and related advanced manufacturers to innovate and thrive, contributing significantly to the long-term economic success of the north-east of England and the national automotive sector.
4. The IAMP proposal is for 260,000 m² gross internal area development aimed primarily at the automotive, advanced manufacturing and related distribution sectors. The IAMP will be located on land to the north of the existing Nissan car manufacturing plant, to the west of the A19 and to the south of the A184. This location benefits from its close proximity to Nissan and excellent transport links with opportunities for integrated connectivity provided by the surrounding Strategic Road Network, rail and port infrastructure.
5. Development of the IAMP will underpin the continued success of the automotive and advanced manufacturing sectors in the UK and north-east of England.

1.3 Structure of this Paper

6. The Paper is structured as follows:
- Section 2 sets out the evidence relevant to this Technical Background Paper, including a summary of the legislation, policy and key findings relating to biodiversity within the IAMP AAP boundary;
 - Section 3 draws on the evidence to set out issues that should be taken into account in developing the approach and policy of the AAP; and
 - Section 4 advises on the potential actions that should be considered in further progressing the IAMP proposal to delivery.

2 Evidence Review

2.1 Overview

7. This section presents a summary of the key findings from the evidence review. A full list of evidence reviewed can be found in section 9.
8. The land within the IAMP AAP area comprises primarily agricultural land, dominated by arable fields separated by species-poor hedgerows and small pockets of plantation and semi-natural woodland, which are mostly located next to the River Don. The River Don runs west to east through the centre of the area covered by the IAMP AAP.
9. The key issues relating to biodiversity are established through legislation and a number of policies and studies, comprising:
 - Legislation:
 - The Conservation of Habitats and Species Regulations 2010 (as amended)¹;
 - Water Environment (Water Framework Directive) Regulations 2003²;
 - The Hedgerows Regulations 1997³;
 - Wildlife & Countryside Act (WCA) 1981 (as amended)⁴;
 - Countryside and Rights of Way (CRoW) Act 2000⁵;
 - Natural Environment and Rural Communities (NERC) Act 2006⁶;and
 - Protection of Badgers Act 1992⁷.
 - Natural Environment White Paper⁸;

¹ The National Archives: The Conservation of Habitats and Species Regulations 2010
http://www.legislation.gov.uk/ukxi/2010/490/pdfs/ukxi_20100490_en.pdf Accessed 11 March 2016.

² The National Archives: Water Environment Regulations 2003
<http://www.legislation.gov.uk/ukxi/2003/3242/contents/made> Accessed 11 March 2016.

³ The National Archives: The Hedgerows Regulations 1997
<http://www.legislation.gov.uk/ukxi/1997/1160/made> Accessed 11 March 2016.

⁴ The National Archives: Wildlife & Countryside Act 1981
<http://www.legislation.gov.uk/ukpga/1981/69> Accessed 11 March 2016.

⁵ The National Archives: Countryside and Rights of Way Act 2000
http://www.legislation.gov.uk/ukpga/2000/37/pdfs/ukpga_20000037_en.pdf Accessed 11 March 2016.

⁶ National Archives: Natural Environment and Rural Communities Act 2006.
<http://www.legislation.gov.uk/ukpga/2006/16/contents> Accessed 11 March 2016.

⁷ The National Archives: Protection of Badgers Act 1992
<http://www.legislation.gov.uk/ukpga/1992/51/contents> Accessed 11 March 2016.

⁸ HM Government (2011) The Natural Choice: Securing the value of nature.

- National Planning Policy Framework⁹;
- Local Planning Policy:
 - Sunderland Unitary Development Plan (1998 / Amended 2007, Sunderland City Council)¹⁰;
 - Sunderland Local Plan: Draft Core Strategy and Development Management Policies¹¹; and
 - South Tyneside Local Development Framework (LDF)¹²;
 - Core Strategy¹³;
 - Development Management Policies¹⁴;
 - Site Specific Allocations¹⁵; and
 - Local Wildlife Sites (LWSs) and Local Geo-diversity Sites Technical Appendix¹⁶;
- The ‘State of Nature’ report¹⁷;
- Durham Biodiversity Action Plan (BAP)¹⁸, ¹⁹;
- Land North of Nissan Ecology Report and associated figures²⁰;

⁹ Department for Communities and Local Government (2012) National Planning Policy Framework.

¹⁰ Sunderland City Council Unitary Development Plan (including adopted alteration no. 2). (SD16) <http://www.cartogold.co.uk/sunderland/text/00cont.htm> Accessed 22 May 2016.

¹¹ Sunderland City Council (August 2013) Sunderland Local Plan: Core Strategy and Development Management Policies. Draft Revised Preferred Options. (SD17) <http://www.sunderland.gov.uk/CHttpHandler.ashx?id=17920&p=0&fsize=6Mb&ftype=Draft> Core Strategy Sept 2013.PDF Accessed 19 May 2016.

¹² South Tyneside Council Local Development Framework. <http://www.southtyneside.gov.uk/article/9065/Local-Development-Framework>. Accessed 28 June 2016.

¹³ South Tyneside Council (2007) South Tyneside Local Development Framework Core Strategy. (SD22) <http://www.southtyneside.gov.uk/CHttpHandler.ashx?id=2468&p=0> Accessed 19 May 2016.

¹⁴ South Tyneside Council (2012) South Tyneside Local Development Framework Development Management Policies (SD21). <http://www.southtyneside.gov.uk/CHttpHandler.ashx?id=13672&p=0>. Accessed 28 June 2016.

¹⁵ South Tyneside Council (2012) South Tyneside Local Development Framework Site-Specific Allocations. (SD20) <http://www.southtyneside.gov.uk/CHttpHandler.ashx?id=14710&p=0>. Accessed 28 June 2016.

¹⁶ South Tyneside Council (2010) South Tyneside Local Development Framework Technical Appendix: Local Wildlife Sites and Local Geodiversity Sites. (SD50) <http://www.southtyneside.gov.uk/CHttpHandler.ashx?id=7038&p=0>. Accessed 28 June 2016.

¹⁷ State of nature (2016) State of Nature 2016.

¹⁸ Durham Biodiversity Partnership (July 2007) Durham Biodiversity Action Plan. <http://www.durhambiodiversity.org.uk/biodiversity-action-plan/> Accessed 22 May 2016.

¹⁹ Durham Biodiversity Action Plan (May 2016) New Priority Birds Species Lists. <http://www.durhambiodiversity.org.uk/new-priority-birds-species-lists-published/> Accessed 02 November 2016.

²⁰ White Young Green (10 December 2015) Land North of Nissan Ecology Report. Sunderland City Council and South Tyneside Council.

- Bat Inspection of River Don Culvert under the A19²¹; and
- IAMP Habitat Regulations Assessment Stage 1 Screening - Statement to Inform²².

2.2 Legislation

2.2.1 The Conservation of Habitats and Species Regulations 2010 (as amended)

10. The Conservation of Habitats and Species Regulations 2010 (as amended)¹ consolidated all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.
11. The Regulations are the British response to the Council Directive issued by the European Community (EC) (which is now the European Union (EU)).
12. The Regulations offer protection to a number of plant and animal species throughout the EC via the designation of Special Areas of Conservation (SAC) and Special Protection Areas (SPA). In the United Kingdom these Regulations are implemented through the WCA 1981 (as amended).
13. The Regulations also offer protection to a number of 'European Protected Species' (EPS), and make it an offence to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4.
14. The regulations in relation to EPS have been amended and consolidated with key changes including the removal of most of the defences from Regulation 40 and Regulation 43, including the removal of the 'incidental result of an otherwise lawful operation' defence, and the increase in the threshold for the offence of 'deliberately disturbing an EPS'.
15. Proposals that will affect EPS may require a licence from Natural England to allow an otherwise unlawful act. The species protection provisions of the Habitats Directive, as implemented by the Conservation of Habitats and Species Regulations 2010 (as amended), contain three 'derogation tests' which must be applied by Natural England when deciding whether to grant a licence to a person carrying out an activity which would harm an EPS.
16. The licensing process is separate from the plan making process, and the level of detail required to inform this would be provided as part of a development consenting process.

²¹ Arup (18 March 2016) Technical Note: Bat Inspection of River Don Culvert under A19. (SD52)

²² Arup (May 2016) Report: Habitat Regulations Assessment Stage 1 Screening - Statement to Inform. (SD54)

17. European protected species include all species of bats, great crested newt (*Triturus cristatus*), and otter (*Lutra lutra*), amongst others.

2.2.2 Water Framework Directive (WFD)

18. The WFD² requires that all proposed works affecting rivers are compliant with the WFD environmental objectives - to consider potential adverse impacts in order to avoid deterioration to those rivers and to contribute towards measures needed to achieve good ecological status.

2.2.3 The Hedgerows Regulations 1997

19. The Hedgerows Regulations 1997 are designed to protect 'Important' countryside hedgerows from removal. To qualify as 'Important', a hedgerow must be at least 30 years old and meet at least one of the eight criteria outlined in the regulations³, which identify hedgerows of particular archaeological, historical, wildlife and landscape value.

2.2.4 Wildlife and Countryside Act 1981 (as amended)

20. This WCA is the primary legislation covering endangered species in England and sets out the framework for the designation of Sites of Special Scientific Interest (SSSI). It confers differing levels of protection on species themselves, their habitats, or both, depending on their conservation status. Species offered protection by the Act⁴ are listed in a series of schedules. These Schedules are subject to a rolling review on a five yearly basis. Protected species are listed under Section 1 (birds), Schedules 5 and 6 (animals other than birds and invertebrates) and Schedule 8 (plants).
21. The WCA makes it an offence (with exception to species listed in Schedule 2) to 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 being built or take or destroy an egg of any wild bird. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young.
22. The WCA also makes it an offence (subject to exceptions) to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The WCA also prohibits certain methods of killing, injuring, or taking of wild animals.

2.2.5 Countryside and Rights of Way Act 2000

23. This Act⁵ affords a greater level of protection to SSSIs, provides enhanced management arrangements for Areas of Outstanding Natural Beauty (AONBs), and strengthens wildlife enforcement legislation. This Act has amended the WCA by the addition of the term 'recklessly' to Section 1(5) and Section 9(4) which has resulted in additional obligations with respect to protected species. As such, it is

now an offence to intentionally or recklessly disturb protected species listed on the relevant Schedules of the Act.

2.2.6 Natural Environment and Rural Communities (NERC) Act 2006

24. The NERC Act 2006⁶, is designed to help achieve a rich and diverse natural environment and thriving rural communities. Under Section 41 there is a duty to conserve biodiversity; specifically Subsection (1) states “Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.” Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The Section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006.
25. Habitats and species of principal importance in England are listed under the provisions of Section 41 of the NERC Act 2006. These include all the habitats and species in England that were identified as requiring action in the now succeeded UK Biodiversity Action Plan (UK BAP), and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework²³.

2.2.7 Protection of Badgers Act 1992

26. This Act⁷ brings together all the legislation that is specific to badger (*Meles meles*), with the exception of their inclusion on Schedule 6 of the WCA 1981 (as amended) (which prohibits certain methods of taking or capture). The Act makes it an offence to intentionally kill or ill-treat a badger, and destroy, disturb or obstruct a sett. Specifically, it imposes restrictions on works carried out within certain distances of badger setts. Any works that will directly impact on an existing sett are only permitted subject to approval through the issue of a licence from Natural England.

2.3 The Natural Environment White Paper

27. On 7 June 2011, the UK government published ‘The Natural Choice’⁸, which provides national policy objectives for nature conservation. This sets out a broad 50-year vision for the natural environment and how the Government in England intends to put natural capital at the heart of economic thinking and decision making. The White Paper outlines a number of initiatives to restore the natural environment, new programmes for connecting people and nature, and several proposals for capturing the economic value of nature and measuring green growth.

²³ JNCC and Defra (on behalf of the Four Countries’ Biodiversity Group) (2012) UK Post-2010 Biodiversity Framework. http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf Accessed 17 April 2016.

2.4 National Planning Policy

28. The National Planning Policy Framework (NPPF) states that:
29. ‘Pursuing sustainable development involves seeking positive improvements in the quality of the built, natural and historic environment, as well as in people’s quality of life, including (but not limited to) [...] moving from a net loss of biodiversity to achieving net gains for nature’ (per paragraph 9).
30. The National Planning Practice Guidance (NPPG) states that should a proposal affect a European or Internationally designated site which is, or is proposed as a SAC, SPA or Ramsar wetland, the planning authority would need to undertake a Habitats Regulations Assessment (HRA).
31. Furthermore, the preparation of any document that can form part of a Local Plan requires a Sustainability Appraisal (SA) to consider the potential environmental impacts of this, in addition to the wider economic and social effects. This should meet all the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004, so that a separate Strategic Environmental Assessment (SEA) should not be required.
32. Further details of the NPPF and NPPG are provided in the Planning Policy Technical Background Report.

2.5 Local Planning Policy

2.5.1 Sunderland

33. The adopted Sunderland Unitary Development Plan¹⁰ (SD16) sets out saved policies with regards to biodiversity, which are:
 - **CN1:** Nature Conservation, in relation to protection and enhancement of important landscape features (including rivers, ponds and watercourses) and significant wildlife habitats and strategic wildlife corridors, trees and hedgerows;
 - **CN16 and CN17:** Woodlands and Forestry, in relation to encouraging the retention and enhancement of existing woodlands, tree belts and field hedgerows, and encouraging planting of new tree belts and woodlands, in the main of native species;
 - **CN18-CN22:** Nature Conservation, in relation to protecting and enhancing Sunderland’s sites of nature conservation and biodiversity interest and legally protected flora and fauna, through working with neighbouring authorities and other agencies. Sites include European, nationally and locally designated sites, SPA, SAC, Ramsar, SSSI, LWS; and
 - **CN23:** Wildlife Corridors, in relation to conserving biodiversity and preserving and improving links for wildlife, and providing appropriate habitat creation measures to minimise detrimental impact.
34. The Sunderland Local Plan: Draft Core Strategy and Development Policies¹¹, with regards to biodiversity, seek to:

- Continue to protect wildlife corridors and designated areas of biodiversity importance;
 - Give priority to increasing tree and woodland planting, particularly within new developments;
 - Increase protection for existing trees, woodland and nature sites where important; and
 - Maintain and enhance all landscape areas.
35. **Policy CS7.7** states that the City Council will:
- Protect, conserve, enhance and review designated ecological and geological sites of international, national and local importance;
 - Ensure that development does not adversely impact upon existing locally distinctive priority habitats and species and makes the fullest contributions to enhancing their biodiversity, both through on-site measures and by contribution to local biodiversity improvements; and
 - Ensure that development does not adversely impact upon local geo-diversity assets.
36. The Sunderland Local Plan: Draft Core Strategy and Development Policies (SD17) make specific reference to the ‘North of Nissan Strategic Site’. The plan notes that any development of the ‘North of Nissan Strategic Site’ would lead to a reduction in the site’s biodiversity (Chapter 3: Background to Economic Prosperity policies).
37. The Sunderland Local Plan: Draft Core Strategy and Development Policies (SD17) has not been adopted, so this document carries less weight than the adopted Sunderland Unitary Development Plan, which is the statutory Development Plan.

2.5.2 South Tyneside

2.5.2.1 Core Strategy

38. The South Tyneside LDF Core Strategy¹³ (SD22) sets out the following policies with regard to biodiversity:
- **EA1: Local Character and Distinctiveness**, in relation to implementing the Great North Forest’s strategies for access, education, enterprise and biodiversity in a forestry framework by enhancing the River Don Valley farmland into a well-wooded recreational landscape enclosing a network of open corridors; and
 - **EA3: Biodiversity and Geo-diversity**, in relation to optimising conditions for wildlife and implementing the Durham BAP and tackling habitat fragmentation by:
 - Securing and enhancing the integrity of designated sites;

- Maintaining, enhancing and restoring biodiversity conservation interests;
 - Ensuring that new development would result in no net loss of biodiversity value of Priority Habitats, including rivers and wetlands and species-rich neutral grasslands;
 - Reducing fragmentation of, improving and extending Priority Habitats;
 - Creating new Priority Habitats, especially in the habitat creation zones, which include the River Don Valley and Wardley Colliery;
 - Protect and strengthen populations of Priority and other protected species;
 - Enhance the biodiversity value of wildlife corridors; and
 - Where appropriate, restrict access and usage in order to conserve an area's biodiversity value.
39. Policy EA3 identifies priority areas for the enhancement and extension of existing Priority Habitats in wildlife corridors, including a wildlife corridor between Boldon Fellgate Farm to the River Don (for water vole (*Arvicola amphibius*) and otter, and a wildlife corridor from West Fellgate Farm to the River Don (for rivers and streams)).

2.5.2.2 Development Management Policies (DMPs)

40. The LDF DMP Plan ([SD21](#)) sets out the development management policies that South Tyneside Council need to address locally distinctive issues that are not covered elsewhere by national policy or other LDF documents. The LDF DMP sets out criteria for determining applications in the following policies:
- **Policy DM1 (Management of Development):** This states that developments should protect existing soft landscaping, including trees and hedges, where possible, or provide replacement planting where necessary; and
 - **Policy DM7 (Biodiversity and Geo-diversity Sites):** This states that South Tyneside will protect and enhance the important environmental assets of the Borough, in line with the Durham BAP targets. All proposals for development must ensure that any individual or cumulative detrimental impacts on sites are avoided, and will only be permitted where they would not adversely affect the integrity, natural character or biodiversity value of designated including SSSIs, LWSs, LNRs and wildlife corridors. It states that development within or outside these designations will only be approved where the benefits of development clearly outweigh any adverse impact on the site, and any broader impacts on the national network of SSSIs. Exceptions will only be made where no reasonable alternatives are available. In such cases, South Tyneside will use planning conditions and/or planning obligations to mitigate or compensate for the harmful effects of the development, and through good

design seek opportunities to incorporate biodiversity features into the development.

2.5.2.3 Site Specific Allocations

41. The Site Specific Allocations Plan (SD20) allocates land for development to meet the Borough's needs. It makes reference to the fact that, in terms of biodiversity, green infrastructure provides habitat corridors and a more permeable landscape to help wildlife adapt to climate change. South Tyneside wants to ensure that these are maintained and enhanced, and where necessary and appropriate to create new green corridors to link the rural and urban fringe areas of the borough with the inner urban and river-side green spaces.

2.5.2.4 Local Wildlife Sites and Local Geo-diversity Sites Technical Appendix

42. This technical appendix document provides a summary of all of the LDF's LWS and Local Geo-diversity Site designations (existing and proposed) (SD51), as set out in the DMP's Development Plan Document. This provides a useful reference as to how South Tyneside are satisfying the requirements of the LDF Core Strategy, as well as those in the NPPF.
43. The technical appendix makes reference to LWSs, of which two fall within the AAP red line boundary:
 - **Elliscope Farm East / Hylton Bridge LWS**, which comprises two small woodlands and the linking section of the River Don, leading east from Hylton Bridge Farm, and contains three Durham BAP habitats, namely river, broad-leaved woodland and scrub (see section 2.6); and
 - **River Don, East House LWS**, which comprises a section of the River Don between East House Farm and Hylton Bridge Farm, and contains two Durham BAP habitats, namely river and scrub (see section 2.6).

2.6 State of Nature 2016

44. This report pools data and expertise from more than 50 nature conservation and research organisations to give a cutting edge overview of the state of nature in the UK and in its seas, Crown Dependencies and Overseas Territories.
45. The report provides up to date statistics, such as the fact that UK biodiversity indicators show that farmland birds have declined by 54% since 1970, and although the rate has slowed in recent years, the decline continues. It highlights that twelve of 26 farmland breeding bird species are red-listed as birds of conservation concern in the UK.

2.7 Durham Biodiversity Action Plan

46. The Durham BAP¹⁸ comprises a series of work-plans to help conserve species and habitats in the Gateshead, Durham, South Tyneside and Sunderland area, which are considered to be under threat locally, nationally or internationally.

47. The habitat action plans relevant to the IAMP, because the habitats have been recorded within the AAP red line boundary²⁰, are:
- Native hedgerows;
 - Woodland and scrub;
 - Ponds, lakes and reservoirs;
 - Lowland fen (reedbed);
 - Rivers and streams;
 - Built structures; and
 - Lowland meadows and pastures.
48. The species action plans relevant to the IAMP, because the species have been recorded within the AAP red line boundary²⁰, are:
- Barn owl (*Tyto alba*);
 - Farmland birds (including skylark (*Alauda arvensis*), corn bunting (*Emberiza calandra*), tree sparrow (*Passer montanus*), linnet (*Carduelis cannabina*), reed bunting (*Emberiza schoeniclus*), yellow wagtail (*Motacilla flava*), snipe (*Gallinago gallinago*), redshank (*Tringa erythropus*) and curlew (*Numenius arquata*));
 - Spotted flycatcher (*Muscicapa striata*);
 - Upland birds (including dunlin (*Calidris alpina*), hen harrier (*Circus cyaneus*), merlin (*Falco columbarius*), peregrine falcon (*Falco peregrinus*), ring ouzel (*Turdus torquatus*), curlew, lapwing (*Vanellus vanellus*), snipe, redshank and yellow wagtail);
 - Urban and garden wildlife (comprising song thrush (*Turdus philomelos*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*) and hedgehog (*Erinaceus europaeus*));
 - Freshwater fish;
 - Great crested newt;
 - Dingy skipper butterfly (*Erynnis tages*);
 - Grayling butterfly (*Hipparchia semele*);
 - Badger;
 - Bats;
 - Brown hare (*Lepus europaeus*);
 - Hedgehog;
 - Otter;
 - Water vole; and
 - Water shrew (*Sorex palustris*).

2.8 Birds of Durham

49. This county avifauna covers the present-day administrative county of Durham plus additional areas in south Tyne & Wear and north Cleveland, which are included in the vice-county of Durham, including Sunderland and South Tyneside. The avifauna presents systematic accounts of individual species recorded within the area, including accounts historical review, recent breeding status, recent non-breeding status and distribution and movements.

2.9 Summary of Ecology of the Land Within and Neighbouring the IAMP

50. White Young Green (WYG) were commissioned by Sunderland City Council in April 2014 to undertake a study and range of ecological surveys covering an area of the land north of the Nissan car manufacturing plant, in Sunderland, in view of the project to create a new IAMP. The scope and extent of the surveys were agreed with the Sunderland City Council Ecologist, and surveys were undertaken in line with best practice survey guidelines. The survey area is shown in Figure 1.3v1 in Appendix A. It extends beyond the IAMP AAP boundary. A broad suite of surveys were undertaken within the blue line boundary shown in Figure 1.3v1, and a more detailed set of surveys were undertaken within the red line boundary shown in Figure 1.3v1. The survey area was reduced during the commission, to focus on a smaller, more central area, where ecological features most likely to be impacted by any development were located, as shown by the dotted blue and red lines in Figure 1.3v1. The figure also shows where access restrictions prevented surveys from being undertaken.
51. The study and surveys comprised:
- A desk top review of statutory and non-statutory designated sites within 2km of the blue line boundary (Figure 1.3v1, Appendix A), and within 10km from the survey area specifically for European designated sites (SAC, SPA and Ramsar);
 - A desk top review of all records of notable species within 2km of the blue line boundary (Figure 1.3v1, Appendix A);
 - A desk top review of all farmland within the blue line boundary (Figure 1.3v1, Appendix A), which is subject to some form of agri-environment scheme;
 - Phase 1 Habitat Survey of all habitats within the blue line boundary (Figure 1.3v1, Appendix A);
 - Scoping of all buildings and trees within the red line boundary (Figure 1.3v1, Appendix A), for their potential to support roosting bats, and bat activity surveys comprising dusk emergence / dawn re-entry surveys on trees and buildings assessed as having a moderate or high bat roost potential, static detector surveys and walked transects;
 - Scoping of all ponds within 500m of the blue line boundary (Figure 1.3v1, Appendix A), for their suitability to support great crested newt, and presence / absence surveys of ponds with potential to support great crested newt (or review of third party data where access was not available);

- Scoping and searching of watercourses and adjacent water bodies and wetland areas within the blue line boundary (Figure 1.3v1, Appendix A), for signs of otter and water vole, and for any holts and burrows respectively;
 - Scoping of buildings, trees and habitats within the red line boundary (Figure 1.3v1, Appendix A), for their potential to support barn owl;
 - Suites of breeding bird and wintering / passage bird surveys (walked transects) within the blue line boundary (Figure 1.3v1, Appendix A);
 - A suite of brown hare surveys (walked transects) within the blue line boundary (Figure 1.3v1, Appendix A);
 - A search for signs of badger and their setts within the red line boundary (Figure 1.3v1, Appendix A); and
 - Noting of incidental results of hedgehog, water shrew and notable invertebrate species, which were recorded during other species surveys.
52. The precise location and scale of the proposed IAMP development had not been confirmed at the time of these surveys being undertaken in 2014 and 2015, therefore surveys were undertaken over a broader area (north of Nissan) than is now covered by the IAMP AAP. Land access was not available for some small land parcels within the defined survey areas, some of which fall within what is now the IAMP AAP area. Areas where land access was not available are shown in Figure 1.3v1 in Appendix A. The results of the ecological survey work completed by WYG have been, and will continue to be, used to inform the ongoing master planning processes, in addition to further surveys to supplement those undertaken in 2014 and 2015, given that a greater clarity on the scheme parameters is now available.
53. The area within the IAMP AAP area comprises primarily agricultural land, dominated by arable fields separated by species-poor hedgerows and small pockets of plantation and semi-natural woodland, which are mostly located next to the River Don.
54. The River Don runs west to east through the centre of the area covered by the IAMP AAP. It is locally designated as a LWS, namely Elliscope Farm East / Hylton Bridge LWS and River Don, East House LWS.
55. In addition, marshy grassland exists in the central-northern part of the IAMP AAP area and there are a number of field ponds spread across this area. A number of farmsteads are also found within this area.
56. Otter, a European protected species, is known to commute along the River Don, and water vole, which is protected under the WCA 1981 (as amended), is present along the entire stretch of watercourse that runs through the IAMP AAP area. Kingfisher (*Alcedo atthis*), also protected under the WCA 1981 (as amended), has also been recorded along the watercourse, and surveys are ongoing to establish possible kingfisher nesting locations.
57. A notable assemblage of breeding bird species has been recorded within the IAMP AAP area, including bird species protected under the WCA 1981 (as

amended), Birds of Conservation Concern²⁴ (BoCC) red and amber listed bird species and bird species listed on the Durham BAP and Durham Urban and Garden Wildlife BAP.

58. There was also a notable assemblage of wintering / passage birds recorded across the IAMP AAP area, including both BoCC red and amber listed bird species, and bird species listed on the Durham BAP, considered to be resident.
59. At least one bird species listed on Schedule 1 of the WCA has been recorded nesting within the IAMP AAP Area and there are also more possible nesting / roosting sites within this area.
60. Small numbers of common pipistrelle (*Pipistrellus pipistrellus*), a European protected species, have also been recorded roosting in three buildings at Elliscope Farm (maximum count of two per roost), and in one building at Make-me-rich Farm, in the north-east of the IAMP AAP area. One soprano pipistrelle (*Pipistrellus pygmaeus*) roost with a single individual has been recorded in a tree near to Elliscope Farm.
61. No hibernating bats were identified in the culvert that runs under the A19²¹ in March 2016, and further checks of the culvert are programmed for January and February 2017.
62. No great crested newt have been recorded within the IAMP AAP area, although great crested newt have been recorded to the south-east of the IAMP AAP area, approximately 750m away from this boundary.
63. No badger setts have been recorded within the IAMP AAP area, although it is possible that some of the land is used by badger living nearby for commuting or foraging.
64. Approximately half of the farmland within the IAMP AAP area is under an entry level stewardship agri-environment scheme. This is a government backed scheme which funds land owners for managing their land for the benefit of the environment.

²⁴ Eaton et al. (2015) Birds of Conservation Concern 4: The population status of birds in the UK, Channel Islands and Isle of Man. British Birds 108, 708-746. Available online at: <https://www.britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf> Accessed 26 May 2016.

3 Discussion of Evidence

3.1 Overview

65. In response to the evidence base outlined above and summary of the existing situation, this section provides an overview of the key issues and constraints and the opportunities and mitigation requirements that the IAMP should seek to address.

3.1.1 Existing Desk Study Data

66. An analysis of the existing desk study data and 2014-2015 survey results for the area shown in Figure 1.3v1 (Appendix A) was undertaken by WYG and reported on in December 2015²⁰. This is summarised briefly in Section 2.8 of this Report, where it is noted that this covers an area larger than the IAMP AAP area.
67. This data has been reviewed, and some additional surveys are being undertaken in 2016, to fill data gaps and gather further information which will be used to inform mitigation proposals. This is the primary document which informs the key issues and constraints outlined in section 3.2.

3.1.2 Habitat Regulations Assessment

68. The closest European Designated Sites are Northumbria Coast SPA and Ramsar and Durham Coast SAC, all approximately 6km east of the AAP red line boundary.
69. As outlined in the IAMP Habitat Regulations Assessment Stage 1 Screening - Statement to Inform²² (PSD4), the proposed IAMP development is not considered likely to have any direct or indirect impact on European designated sites due to its distance from these; the proposed operational activities at the site; the nature of habitats present; and the designated features. It is therefore not considered that there is any requirement for the HRA process to further consider potential effects of the IAMP AAP on European Sites. As a result of this, there is no need for an Appropriate Assessment.

3.1.3 Environmental Workshops

70. Environmental workshops have been held with key stakeholders, comprising:
- Natural England;
 - Environmental Agency;
 - Royal Society for the Protection of Birds (RSPB);
 - Durham Wildlife Trust;
 - North East Local Nature Partnership (NELNP); and
 - South Tyneside, Sunderland and Gateshead Council ecologists.

71. Through the workshops, a series of high level biodiversity strategy principles were developed which highlighted issues which the stakeholders would like to see considered. The outcomes of these workshops informed the key strengths, opportunities, mitigation measures and enhancements outlined in sections 0, 0 and 3.5 respectively, and at a high level, have helped to inform the development of the AAP policies. These principles are reflected in the summary in section 4.1.

3.1.4 No Net Loss Calculations

72. An indicative set of ‘No Net Loss’ calculations, in line with the Department for Environment, Food and Rural Affairs (Defra) developed metric for biodiversity offsetting²⁵, has been undertaken to inform approximate habitat areas required to mitigate and compensate for the loss of semi-natural habitats as a result of the IAMP scheme.
73. Available baseline information, mostly comprising habitat survey information in the Land North of Nissan Ecology Report²⁰, has been used to calculate the number of ‘biodiversity units’ generated by the habitats present within the approximate area of land required for the proposed scheme. Both spatial risk and delivery risk have been taken into account, in order to address the inherent uncertainty involved in habitat creation.
74. As outlined in the IAMP No Net Loss Calculations Supporting Notes, this first iteration of calculations has informed the approximate area of land required within the AAP application boundary, to compensate for a loss in biodiversity resulting from the IAMP.
75. It was assumed that:
- All parcels of woodland and watercourses would be retained;
 - Hedgerows would not be included in area calculations as their contribution to biodiversity in the landscape is far greater per unit of area than even the most biodiversity rich habitats because of their role in the provision of nest sites, corridors, feeding sites and shelter belts;
 - Habitat re-creation of moderate and high distinctiveness habitat types such as species-rich grassland, marshy grassland, dense scrub, woodland and water bodies should be like-for-like in terms of habitat type; and
 - The ‘biodiversity value’ of the areas of the low distinctiveness habitats lost to the development, such as arable land and improved grassland, should be compensated for by creation of habitats with a higher distinctiveness, of a type that already exists within the red line boundary.
76. Based on these assumptions, if all habitats (excluding woodland and watercourses) within the areas allocated as employment or safeguarded land were to be lost to development, there would be a precautionary requirement for a

mitigation area between approximately 85 and 140 ha in size, in order to ensure no net loss in biodiversity, according to the Defra developed metric²⁵.

3.2 Key Issues and Constraints

77. A summary of the broad key issues, constraints and barriers to delivery, as identified through the evidence review, is outlined in Table 1. This is relevant to both the construction and operation of the IAMP, and groups key issues by site designation, habitats and faunal species.
78. This is based on the broad evidence base set out in section 2 of this Technical Background Report.

Table 1: A Summary of the Key Issues, Constraints and Barriers to Delivery

| Key Issue / Constraint / Barrier to Delivery | Explanation |
|--|--|
| Designated Sites | <p>Possible direct effects through habitat loss of locally designated LWSs (see section 2.5.2 for context):</p> <ul style="list-style-type: none"> - River Don East House LWS designated for its unmodified river bank supporting otter and water vole, and breeding and wintering birds; - Elliscope Farm East / Hylton Bridge LWS forms part of River Don unmodified riverbank and contains scrub and broadleaf woodland, supporting otter and water vole; - River Don Proposed Local Wildlife Site (PLWS) river banks support water vole, otter, water shrew, invertebrates, and broad bird assemblage; - Usworth Burn PLWS river banks support water vole, otter, water shrew, invertebrates, and broad bird assemblage. |
| Habitats of Principal Importance and Local BAP Habitats | <p>Potential direct effects through loss of important habitats, specifically potential to lose woodlands, hedgerows, ponds, arable field margins, lowland meadow and marshy grassland, and affect the River Don.</p> <p>It should be noted that ongoing survey work in 2016 is unlikely to identify that any of the hedgerows within the AAP red line boundary as ‘important’, according to The Hedgerows Regulations 1997.</p> |
| European Protected Species (EPS): <ul style="list-style-type: none"> • Bats; • Otter; and • Great crested newt. | <p>Potential to kill or disturb EPS through loss of habitats during construction and / or disturbance to habitats during construction and operation (e.g. noise), and thus contravene European and domestic legislation (see section 2.2.1 for context).</p> <p>Five known bat roosts, at Elliscope and Make-me-rich Farm, and commuting / foraging routes along hedgerows.</p> <p>Otter known to commute / forage along the River Don.</p> <p>Great crested newt known to breed in ponds outside the AAP red line boundary, approximately 750m away.</p> |
| UK Legally Protected Species: <ul style="list-style-type: none"> • Water vole; | <p>Potential to kill or injure UK legally protected species, or interfere with places used by these animals for shelter or protection, during construction, or disturb animals occupying such places during construction and operation, through loss of habitats and / or</p> |

| Key Issue / Constraint / Barrier to Delivery | Explanation |
|---|--|
| <ul style="list-style-type: none"> • Badger • Kingfisher; • Barn owl; • Breeding birds; and • Wintering / passage birds. | <p>disturbance to habitats (e.g. noise), and thus contravene domestic legislation.</p> <p>Water vole and kingfisher present along the River Don. Ecological considerations include the effect of any proposed bridge structure across the river.</p> <p>Confirmed and potential barn owl nest sites and foraging / commuting habitat identified.</p> <p>Notable breeding birds at highest densities in grassland and ditches with hedgerows in the north, farm buildings across the site, particularly Hylton Grove and Elliscope Farms, and by all watercourses, scrub and woodland.</p> <p>Notable wintering birds at highest densities by watercourse and wet ground in the south, marshy grassland in the north, grassland in the centre and north, hedgerows in the centre and south, woodland, and buildings associated with Hylton Grove and Elliscope Farms.</p> |
| <p>Species of Principal Importance (not otherwise protected by legislation):</p> <ul style="list-style-type: none"> • Brown hare; • Hedgehog; • Water shrew; • Wall brown butterfly; • Small heath butterfly; and • Grayling butterfly. | <p>Potential to cause a loss in habitat availability for species of principal importance for conservation of biodiversity in England, in relation to the duty to conserve biodiversity placed on public authorities by the NERC Act.</p> <p>Brown hare, hedgehog and water shrew present across the site at a low density.</p> <p>Notable invertebrates are the wall brown, small heath and grayling butterflies.</p> |
| <p>Birds of Conservation Concern</p> | <p>Potential to adversely affect BoCC red and amber listed species, which are bird species found in the UK, that are of the highest conservation priority, needing urgent action.</p> |
| <p>Loss of Habitat Connectivity</p> | <p>Potential to sever connectivity between habitats, which a wide variety of species depend on to commute between nesting, foraging and breeding areas, and to maintain their population.</p> <p>The greenfield land in this area is used as a commuting corridor by raptors to travel between inland and the coast. Potential to increase risk to raptor species passing through, as a result of narrowing the width of the Greenfield area in this location.</p> |
| <p>New Bridge over the River Don</p> | <p>Potential for a new bridge over the River Don to displace water vole found on the River Don, and possible impacts on kingfisher, if this species is found to be breeding in the riverbank.</p> |
| <p>Lighting</p> | <p>Potential for night-time lighting of any development to negatively affect foraging and commuting behaviour of nocturnal species.</p> |
| <p>Public Pressure on Ecologically Sensitive Areas</p> | <p>Potential for increased disturbance to ecologically sensitive areas (e.g. the watercourse) through changes (and possible increases) in public access across the site.</p> |

3.3 Potential Opportunities

79. Development within the site offers opportunities to create strong links between biodiversity, flood / drainage and landscape solutions, to provide multifunctional spaces to meet legislative and policy requirements. Examples of such opportunities include:
- Integrating the creation of an area of open space / parkland with ecological mitigation and habitat creation to enable public access or views for recreation and provide health benefits to employees (provided access to ecologically sensitive areas can be controlled), which would be in line with National Planning Policy which seeks positive improvements in both the natural environment and people's quality of life;
 - Designing Sustainable Drainage Systems (SuDS) to provide benefits to wildlife, and planting trees, scrub and wet woodland around SuDS features such as ponds, to provide a valuable habitat for amphibians, a food source for invertebrates and help to suppress algal blooms. This would be in line with the Sunderland Local Plan: Draft Core Strategy and Development Policies (Policy CS7.7) and South Tyneside Core Strategy Policy EA3 and National Planning Policy which will seek to ensure that development makes the fullest contributions to enhancing the biodiversity of priority habitats; and
 - Seeking opportunities for collaboration with the River Don Restoration Project. This would be in line with saved policies CN18-22 of the Sunderland Unitary Development Plan, which seeks to protect and enhance Sunderland's biodiversity interest through working with neighbouring authorities and other agencies.
80. Inter-project opportunities could include:
- Integration with the A19 Testos and Downhill Lane Junction Improvements scheme; and
 - Cross local-authority collaboration, including the proposed extension of the Follingsby Industrial Park, to the west of the IAMP scheme.
81. It is possible that there may be a requirement for off-site mitigation in the local area, if compensation measures are required which cannot be accommodated within the IAMP AAP area. This could require additional land to be taken, which would need to be subject to assessment. If such compensation measures are required, there could be an opportunity to create new priority habitats in the River Don Valley or Wardley Colliery, in line with the South Tyneside Core Strategy, Policy EA3, which makes specific reference to these areas.

3.4 Mitigation Measures

82. To address the broad issues and constraints outlined in section 3.2, in line with legislation and planning policy outlined in Sections 2.2, 2.3 and 2.5, some high-level avoidance, mitigation and compensation measures are proposed, as outlined in Table 2.
83. It is the current aspiration to secure these measures through the policies in the AAP and ultimately in requirements within the Development Consent Order (DCO). Measures may be the subject of changes as a result of additional survey results from 2016 surveys and scheme design development.
84. More detailed and scheme specific measures would also be developed to address possible impacts identified in a Preliminary Environmental Information Report (PEIR), the Environmental Statement Scoping Report and an Ecological Impact Assessment (EcIA), which would form part of the Environmental Impact Assessment prepared as part of the DCO and any other relevant planning applications. At that stage, the scheme promoter would need to be able to demonstrate a realistic and viable delivery and maintenance mechanism for all mitigation proposed, including delivery agency and means of funding. This level of detail would be confirmed when mitigation and compensation measures were refined to be scheme specific.
85. At the detailed design stage, the precise details of these measures would be agreed and the phasing of the measures would be planned to aim to avoid delaying development.

Table 2: A Summary of Proposed Key Avoidance, Mitigation and Compensation Measures

| Key Issue / Constraint / Barrier to Delivery | Proposed Key Avoidance, Mitigation and Compensation Measures |
|---|--|
| Designated Sites | <ul style="list-style-type: none"> - Avoid development in LWSs and Potential LWSs (PLWSs), including Elliscope Farm East / Hylton Bridge LWS, River Don East House LWS, Usworth Burn PLWS and River Don PLWS; and - Retain buffers around LWSs and PLWSs to reduce ‘edge effects’. |
| Loss of Habitats of Principal Importance and Local BAP Habitats | <ul style="list-style-type: none"> - Avoid loss of semi-natural habitat, specifically the: <ul style="list-style-type: none"> o River Don / watercourses, and maintain a buffer from the watercourse; o Woodland, and maintain a buffer from woodland edges; o Ponds, and maintain a buffer around them; o Swamp / marshy grassland, and maintain a buffer around these habitats; o Species-rich semi-improved grassland; o Trees, and maintain a buffer around each retained tree; and o Hedgerows, and maintain a buffer along each side of retained hedgerows; - As a general principle, lost or degraded habitats should be replaced with habitat of equivalent or |

| Key Issue / Constraint / Barrier to Delivery | Proposed Key Avoidance, Mitigation and Compensation Measures |
|---|---|
| | <p>greater quantity and / or quality (including hedgerow translocation or re-creation); and</p> <ul style="list-style-type: none"> - Habitat creation for ecological purposes should be targeted at habitat types of high and moderate distinctiveness which currently exist within the AAP red line boundary, namely woodland, hedgerows, species-rich grassland, marshy grassland, dense scrub and standing water (ponds). In these cases, habitat creation should be like-for-like replacement in terms of habitat type. |
| <p>European Protected Species:</p> <ul style="list-style-type: none"> • Bats; • Otter; and • Great crested newt. | <ul style="list-style-type: none"> - Avoid works which may impact on the bat roosts identified; - Avoid key bat commuting and foraging areas and ideally retain buffers around these areas; - Protect otter, avoid works which may impact on the watercourse and associated woodland along the watercourse; - Maintain connectivity along the River Don, with suitable shelter habitat for species such as otter along the length of the watercourse; - Avoid development within 500m of ponds where great crested newt have been confirmed present; and In line with The Conservation of Habitats and Species Regulations 2010 (as amended), if affecting bats, otter or great crested newt, or their habitats, cannot be avoided, then a European Protected Species Licence will be required from Natural England to allow the development to proceed. This will need to demonstrate more detailed, scheme specific requirements, such as habitat replacement and sensitive lighting proposals. |
| <p>UK Legally Protected Species:</p> <ul style="list-style-type: none"> • Water vole; • Kingfisher; • Barn owl; • Breeding birds; and • Wintering / passage birds. | <ul style="list-style-type: none"> - Avoid direct loss of suitable water vole habitat; - Retain connecting habitats between water vole populations along the River Don; - Avoid kingfisher nest sites if found to be present along the River Don; - Avoid impacting upon confirmed barn owl nest sites; - Retain buffers around LWSs and PLWSs to reduce impacts on and protect breeding and wintering / passage bird populations; and - Maintain arable fields for waders, winter passage species and farmland bird species. <p>To mitigate for possible impacts to UK legally protected species;</p> <ul style="list-style-type: none"> - Expand riparian habitats for water vole; - Provide artificial nest sites / bank if kingfisher nests will be disturbed; - Consider the potential for brown/green roofs within to support breeding birds e.g. oystercatcher (<i>Haematopus ostralegus</i>) and skylark; - Provide screening bunds and tree belts in appropriate locations, to discourage barn owl from crossing roads, reducing mortality risk; |

| Key Issue / Constraint / Barrier to Delivery | Proposed Key Avoidance, Mitigation and Compensation Measures |
|---|---|
| | <ul style="list-style-type: none"> - Create semi-improved, tussocky grassland for barn owl, which will also benefit a variety of farmland and general passerine bird species; - Plant hedgerows and trees which will be beneficial to a variety of farmland bird species; - Ensure hedgerows have tall / rank grassland strips either side of them for barn owl foraging and other bird species; - Provide arable field margins for a wide variety of farmland bird species; - Create marshy grassland for a variety of waders and winter passage bird species; and - Create ponds and reed beds for winter passage species and passerine species. |
| <p>Species of Principal Importance (not otherwise protected by legislation):</p> <ul style="list-style-type: none"> • Brown hare; • Hedgehog; • Water shrew; • Wall brown butterfly; • Small heath butterfly; and • Grayling butterfly. | <ul style="list-style-type: none"> - Avoid impacts to species of principal importance and their habitats where possible, including: <ul style="list-style-type: none"> o Avoid disturbing areas likely to support hibernating hedgehog during the winter; and - Create suitable habitat for these species of principal importance as part of the proposed scheme, including: <ul style="list-style-type: none"> o Create areas of open grassland and bare ground for the butterfly species of principal importance. - Avoidance and mitigation measures for farmland birds and barn owl will provide suitable avoidance measures and mitigation for brown hare and hedgehog. |
| Birds of Conservation Concern | <ul style="list-style-type: none"> - See avoidance and mitigation proposals for breeding and wintering / passage birds, barn owl and kingfisher. |
| Loss of Habitat Connectivity | <ul style="list-style-type: none"> - Maintain connectivity for wildlife (e.g. otter, water vole, fisheries, bird assemblage) via watercourses and hedgerows with good field margins; - Replace lost habitat connectivity; - Create a network of ecological 'stepping stones' through the proposed scheme (e.g. network of ponds, grassland and trees); - Create linkages between areas of retained and created habitats, for example through enhancement or greening of existing structures (e.g. green roofs / green walls), and linking areas of ecological mitigation with SuDS features (e.g. planting along swales) and landscape features (e.g. connecting to, and enhancing the ecological value of tree lines used for screening); and - Link proposed ecological mitigation / green infrastructure / green space / SuDS features into a central connective corridor such as the River Don, to create a green network across the site. |
| New Bridge over the River Don | <ul style="list-style-type: none"> - The design of any bridge over the River Don should take into account the sensitivity of the water vole population found along the banks of the river; and - It is recommended that any bridge over the River Don should have a long span, to reduce any negative |

| Key Issue / Constraint / Barrier to Delivery | Proposed Key Avoidance, Mitigation and Compensation Measures |
|---|---|
| | impacts that the bridge may have on the river and the water vole population. |
| Lighting | - Where possible, avoid increased light levels along watercourses, including the River Don, to minimise disturbance to bat commuting / foraging areas. |
| Public Pressure on Ecologically Sensitive Areas | <ul style="list-style-type: none"> - Avoid creating public access immediately adjacent to the River Don due to the potential impact of public pressure / disturbance on habitats and wildlife, and perhaps views of the watercourse could be created instead, to give the impression of access; and - Where habitats serve a dual purpose of both landscape and ecological mitigation, caution should be exercised in case public pressure to manage habitat areas 'neatly', reduces the ecological value of these areas. |
| Securing Long-term Management of any Mitigation Areas of Measures | <ul style="list-style-type: none"> - Provision of an ecological management and monitoring plan; and - Specialist management of any required ecological mitigation area or measures by a suitably qualified land manager. |

3.5 Enhancements

86. National Planning Policy Framework paragraph 9⁹ states that, development should make positive improvements to the quality of the natural environment to achieve net gains for nature.
87. Details of potential interventions to maximise opportunities and support their delivery include:
- Enhancing habitat connectivity by planting to strengthen existing green corridors through the landscape (e.g. bolstering hedgerows, and planting trees in hedgerows);
 - Designing green and brown roofs for landscape purposes, which also provide an ecological function e.g. nesting sites on buildings;
 - Enhancing a series of SuDS features throughout the development which have been suggested, to provide ecological connectivity through the scheme. Areas of permanent water could be included within the SuDS features (e.g. swales), to act as an ecological enhancement; and
 - Reducing pollution of the River Don, to enhance its water quality.
88. More detailed and scheme specific enhancements would be developed following an EcIA, which would be part of the Environmental Impact Assessment for the DCO. It is recommended that policies in the AAP should seek to achieve a net gain in biodiversity, as concluded in 4.2.4 and 4.2.6.

4 Interventions and Actions

4.1 Overview

89. This section summarises the key proposed ‘interventions’ and actions which are recommended for inclusion in the policies in the IAMP AAP. It presents these under the following headings:
- Avoid direct impacts to sites designated for nature conservation;
 - Accommodate protected species located within the AAP boundary;
 - Retain and enhance existing mature trees, hedgerows and woodland blocks;
 - Maintain, replace and enhance habitat connectivity, including maintaining and enhancing the River Don as a functional ecological corridor;
 - Ensure there is ‘no net loss’ in biodiversity of habitats;
 - Provide net gains for biodiversity; and
 - Restrict or minimise public access to areas of ecological sensitivity.

4.2 Key Proposed Interventions to be Progressed through the AAP

4.2.1 Avoid Direct Impacts to Sites Designated for Nature Conservation

90. Designated LWS within the AAP red line boundary include Elliscope Farm, East / Hylton Bridge LWS and River Don, East House LWS.
91. In line with National Planning Policy, Sunderland Unitary Development Plan (SD16) Saved Policy CN22 (and Sunderland Local Plan: Draft Core Strategy and Development Policies (SD17) (Policy CS7.7)) and South Tyneside LDF Core Strategy (SD22) Policy EA3 and Development Management Policy (SD21) DM7, it is recommended that policies in the AAP Policy should seek to continue to protect designated areas of biodiversity importance and enhance their integrity.

4.2.2 Accommodate Protected Species Located within the AAP Boundary

92. There are a number of legally protected or otherwise notable species present within the AAP red line boundary, known to include EPS (bats and otter) (see section 2.2.1), UK legally protected species (water vole, kingfisher, barn owl, breeding birds and wintering / passage birds) (see section 2.2.4) and species of principal importance not otherwise protected by legislation (brown hare, hedgehog, water shrew and wall brown, small heath and grayling butterflies) (see section 2.2.6).

93. In line with legislation, National Planning Policy and the South Tyneside LDF Core Strategy (SD22) Policy EA3 and Development Management Policy (SD21) DM7 (and Sunderland Local Plan: Draft Core Strategy and Development Policies (SD17) (Policy CS7.7)), local populations of priority and other protected species should be protected and strengthened.
94. This should be undertaken on a species-specific basis, through such detailed avoidance and mitigation measures as suggested in Table 2.
95. It is recommended that policies in the AAP should seek to recognise the need to accommodate these species within the IAMP AAP boundary where possible.
96. This could be achieved through appropriate, and species-specific, habitat creation, which satisfies the ecological requirements of individual protected or otherwise notable species and species groups, through provision of food sources, shelter and breeding areas.
97. It is, however, possible that a scheme might not be able to fully mitigate for impacts to a specific species or species-group found within the AAP red line boundary (e.g. the bird assemblage), in which case off-site mitigation may be required to ensure no net loss in the biodiversity of the bird assemblage in the local area.

4.2.3 Retain and Enhance Existing Mature Trees, Hedgerows and Woodland Blocks

98. Small woodland blocks are present within the AAP red line boundary, mostly located along the River Don, and there is a network of hedgerows and mature trees throughout the area covered by the AAP red line boundary.
99. These are habitats of principal importance referenced in the NERC Act 2006, which are regarded as conservation priorities, for which every public authority must have regard to the purpose of conserving biodiversity.
100. It is possible that some of the hedgerows may also be designated as 'Important' under The Hedgerows Regulations 1997 (as amended) (see section 2.2.3).
101. In line with the Sunderland Unitary Development Plan (SD16) Saved Policies CN1, CN16 and CN17 (and the Sunderland Local Plan: Draft Core Strategy and Development Policies (SD17)) and South Tyneside LDF Core Strategy (SD22) Policy EA1 and Development Management Policies DM1 and DM7, any proposed scheme should aim to continue to protect designated areas of biodiversity importance and enhance their integrity, and give priority to increasing tree and woodland planting. The South Tyneside Core Strategy (SD22) Policy makes specific reference to enhancing the River Don valley farmland into a well-wooded recreational landscape.
102. Conclusions from the environmental workshops were, that although woodland creation would be useful for screening, creating large blocks of woodland would be out of character in this particular area. Discrete copses and an increase in hedgerow planting would both however be in line with the landscape character.

103. Based on the evidence outlined, it is recommended that policies in the AAP should seek to encourage the retention of existing woodland, hedgerows and mature trees where possible, and encourage the enhancement of habitats to include woodland, hedgerows and trees.

4.2.4 Maintain, Replace and Enhance Habitat Connectivity, Including Maintaining and Enhancing the River Don as a Functional Ecological Corridor

104. The River Don currently provides an ecological corridor through the area within the IAMP AAP area, and within the wider landscape.
105. National Planning Policy Framework seeks to promote the preservation, restoration and re-creation of ecological networks.
106. In line with the Sunderland Unitary Development Plan (SD16) Saved Policy CN1 and CN23 (and Sunderland Local Plan: Draft Core Strategy and Development Policies (SD17) (Policy CS7.7)) and the South Tyneside LDF Core Strategy Policy EA3 (SD22) and Development Management Policy (SD21) DM7, any proposed scheme should preserve and improve links for wildlife and protect strategic wildlife corridors. The South Tyneside Core Strategy Policy makes specific reference to the River Don Valley as a habitat creation zone.
107. This could be achieved by avoiding development within 50m of the River Don where possible.
108. Maintaining a buffer around ponds and swamp / marsh habitats and habitat creation within the River Don corridor could enhance the strategic wildlife corridor.
109. Creating links between retained and new habitat areas within the IAMP AAP boundary and measures such as enhancing and planting new hedgerows, tree lines and field margins, alongside SuDS features, could ensure the creation of networks linking areas of retained and created habitat.
110. Linking the River Don corridor with the wider green infrastructure corridor to the east and west would also increase its resilience.
111. Based on the evidence outlined in this Technical Background Report, it is recommended that policies in the AAP should seek to maintain and enhance the River Don as a functional ecological corridor and enhance the biodiversity value of this corridor.

4.2.5 Ensure there is 'No Net Loss' in Biodiversity

112. In line with National Planning Policy, the Sunderland Unitary Development Plan (SD16) Saved Policy CN1 and South Tyneside LDF Core Strategy (SD22) Policy EA3, there should be no net loss in biodiversity as a result of any proposed scheme.
113. This could be achieved by avoiding the loss of semi-natural habitats wherever possible and replacing lost or degraded habitats with habitats of equivalent or

greater quantity and / or quality. The retention of open habitats would also help contribute to securing no net loss in the biodiversity of the bird assemblage recorded in the area.

114. Based on the evidence in this Technical Background Report, it is recommended that policies in the AAP should seek to achieve no net loss in biodiversity.
115. Specific proposals for mitigation and habitat creation should be informed by more detailed, scheme specific no net loss calculations.

4.2.6 Provide Net Gains for Biodiversity

116. In line with the Sunderland Local Plan: Draft Core Strategy and Development Policies (SD17) (Policy CS7.7), South Tyneside LDF Core Strategy (SD22) Policy EA3 and National Planning Policy, the proposed scheme should aim to enhance the biodiversity of locally distinctive priority habitats and species, to ensure a net gain in biodiversity.
117. Possible examples of this could be through restoration of the River Don or reducing pollution entering the River Don, as outlined in section 3.5, or integrating biodiversity benefits with green infrastructure, landscape character and SuDS features, as outlined in section 3.3.
118. Based on the evidence in this Technical Background Report, it is recommended that policies in the AAP should seek to achieve a net gain for biodiversity.

4.2.7 Restrict or Minimise Public Access to Areas of Ecological Sensitivity

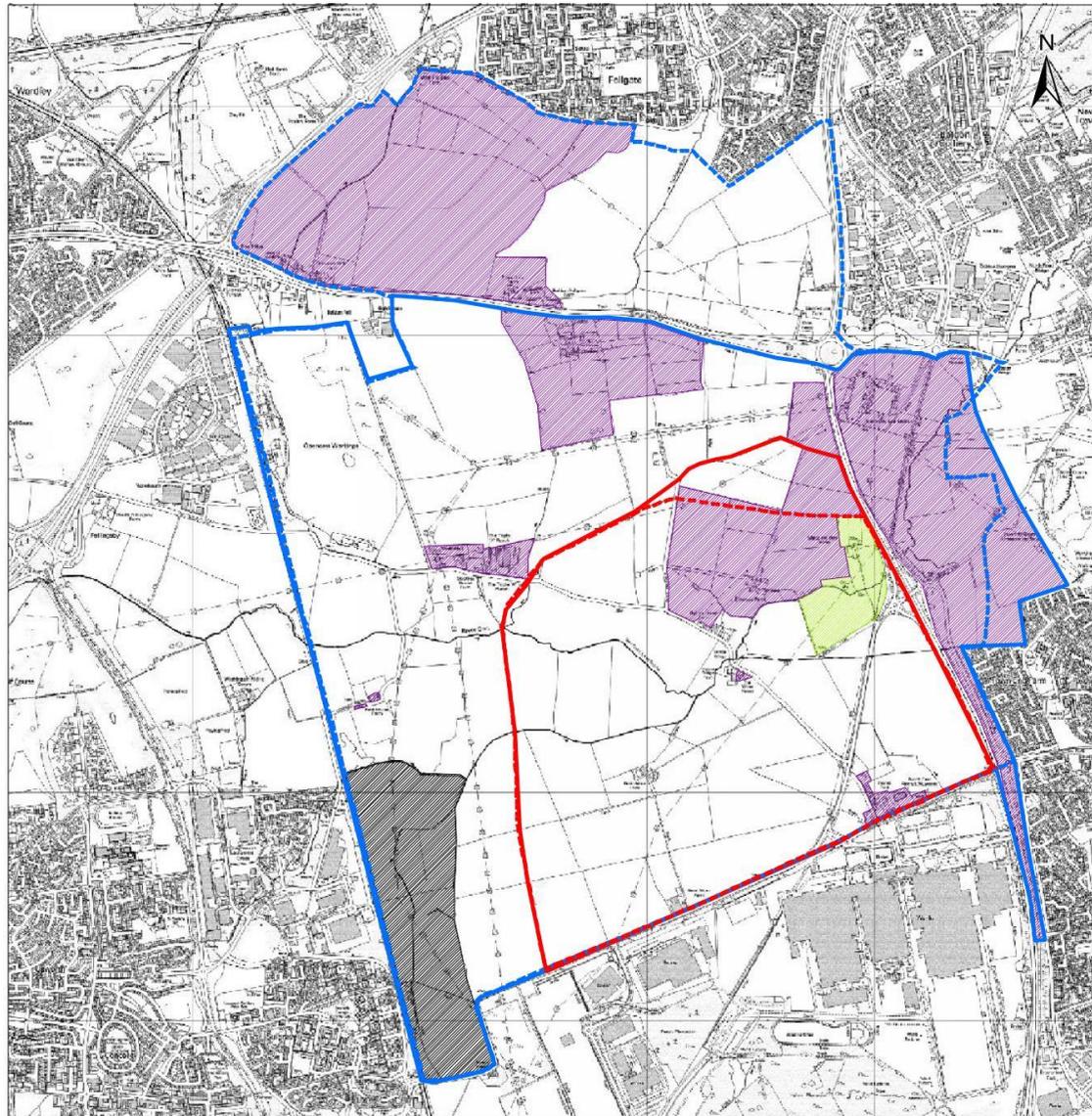
119. The habitats along the River Don are ecologically sensitive areas, due to the habitats and legally protected and notable species these support.
120. Some of the area within the AAP red line boundary is currently used for recreational purposes. Any form of development could increase public pressure on these ecologically sensitive areas.
121. The South Tyneside LDF Core Strategy (SD22) Policy EA3, encourages restriction of public access to the most ecologically sensitive areas of a proposed development, in order to minimise disturbance.
122. Stakeholders, as outlined in Section 3.1.3, requested that public access to the River Don is restricted, to ensure that disturbance to legally protected species and the places that these species occupy, is avoided where necessary to comply with best practice.
123. Based on the evidence in this Technical Background Report, it is recommended that policies in the AAP should seek to restrict public access to ecologically sensitive areas such as the River Don.

4.3 Mitigation through development consenting

124. It is recommended that the AAP acknowledges that as part of an application for development consent, an EcIA should be undertaken to identify the likely effects of any proposed development, and the significance of these effects with and without proposed mitigation. The likely effects identified, will influence the mitigation measures proposed as part of an application for development consent, with the aim to avoid significant effects. Where this forms part of an Environmental Impact Assessment (EIA), the EcIA should comply with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, and where relevant, take account of the implications of changes anticipated to come into effect in 2017 through the legislation required to implement the Environmental Impact Assessment (EIA) Directive (2014/52/EU).
125. At a high level, the AAP should set out the requirement for much of the mitigation to focus on avoiding, mitigating or compensating for impacts to notable habitats and species. If impacts to legally protected species (including EPS) are anticipated, then a relevant licence (e.g. an EPS Development Licence) might be required (e.g. from Natural England in the case of an EPS licence), to allow the development to proceed within the law. Such a licence application would need to demonstrate appropriate mitigation proposals such as habitat replacement and detailed design mitigation.
126. The AAP's policies should seek ecological mitigation proposals secured through an appropriate long term Management Plan, in order to demonstrate that the proposed ecological mitigation that forms part of an application for development consent, will ensure long-term ecological value is maintained.
127. The principles of this approach have been discussed with key stakeholders, as described in section 3.1.3.

Appendix A

White Young Green Ecology
Study Area 2014-2015



Legend

- RLB (original)
- BLB (original)
- Amended RLB
- Amended BLB
- No access - no surveys undertaken
- ▨ No access - surveys being undertaken by third party
- Access restricted - no surveys other than Phase 1 Habitat and Bat Roost Assessments

0 245 490 980 Meters

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Newcastle Upon Tyne
NE1 4AD

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creative minds safe hands 

WYG Environment

Project
LAND NORTH OF NISSAN

Drawing Title:
Figure 1,3v1 : Areas within the amended BLB where access restrictions have prevented survey

| | | | |
|-------------------------------|--------------------------------|----------------------------------|-----------------------------------|
| Scale at A3: 1:17,000 | Drawn by: MN Date: 14/01/15 | Checked By: HJ Date: 14/01/15 | Approved By: MJ Date: 14/01/15 |
| Project No: A086945 | Office 45 | Type 94 | Drawing No. 86945-1.3v1 |
| | | | Revision 01 |

Base map provided by Sunderland City Council

Appendix B

Environmental Meeting Minutes

Meeting Notes

ARUP

| | | |
|-------------------------|---|--|
| Project title | IAMP | Job number 242745 |
| Meeting name and number | Environmental Workshop 1 | File reference 30-08 |
| Location | Arup Office Newcastle (Room A) | Time and date 13:15 26 January 2016 |
| Purpose of meeting | To provide consultees with overview of environmental information with regard to the three options | |
| Present | ██████████ (IAMP coordinator), ██████████ (Sunderland City Council Ecologist), ██████████ (Gateshead Council Ecologist), ██████████ (Arup Environment), ██████████ (Arup Ecologist), ██████████ (DWT/NELNP), ██████████ (NELNP), ██████████ (NELNP), ██████████ (Natural England), ██████████ (RSPB), ██████████ (EA), ██████████ (South Tyneside Countryside Officer), ██████████ (NE), ██████████ (EA). | |
| Apologies | | |
| Circulation | Attendees Cc: ██████████ (Arup Planning), ██████████ (Arup Landscape), ██████████ (JMP) | |

SUMMARY OF DISCUSSIONS

AGENDA

1. Introductions - ██████████, IAMP Project Coordinator
 - o Aims of the meeting.
 - o Green Belt Options Paper consultation
 - o Consideration of emerging environmental issues
2. Ecological Survey Work and Results – ██████████, Sunderland City Council
3. Greenbelt Options & outline of the broader environmental issues / mitigation strategy - ██████████
4. Ecological issues & outline strategy - ██████████, Arup
5. Discussion – key issues for consideration – All
6. Next Steps – ██████████
7. AOB

Prepared by ██████████
Date of circulation 22nd February 2016
Date of next meeting TBC

Minutes

Project title

Job number

Date of Meeting

IAMP

242745

26 January 2016

SUMMARY OF DISCUSSIONS

POINTS TO NOTE

- Key principles
 - Ecology to drive landscape mitigation.
 - Strong links between ecology, flood/drainage and landscape solutions to provide multifunctional spaces, including use of Water Framework Directive (WFD) to make most of opportunities and improve habitats.
- Key issues noted are the breeding and wintering [REDACTED]
 - [REDACTED] require a large area of habitat – possible that will need to consider habitat enhancements off site, in nearby intensively farmed areas, as well as something like arable reversion (arable land reverted to grassland).
 - [REDACTED] have apparently already had their habitat squeezed by Nissan to the south and development to the north – limiting area for them to be displaced to.
 - [REDACTED] are found along the River Don both east and west of the proposed development site. Likely that the population is at least regionally significant. [REDACTED] has survey data for River Don [REDACTED] from 1999, 2007 and 2013 and [REDACTED] are present throughout these years.
- River Don discussion
 - River Don has good WFD classification but in reality is poor.
 - Opportunities for seasonal wetland to form part of the ecology solution.
 - Currently project underway to map the features on the Don and look at how river can be restored.
 - Project meeting on 25th February 2016 – Arup should attend to see how they can align ecology of proposed development with aims of River Don project.
 - In the medium term plans for WFD there is mention of the River Don. [REDACTED] suggests this may be partnership working opportunity / may be some money available.
- Opportunities and constraints
 - Reconnect river and floodplain.
 - Tie in ecological buffer along watercourse with flood risk management.
 - Create larger shallower wetland areas for birds.
 - Might be opportunity to secure Wardley Colliery / part of it for and its long term management – currently not managed for biodiversity well. It is contaminated land.
 - Maintain cross-boundary wildlife corridors (i.e. into Gateshead).
 - Lack of lighting along watercourse very important.
 - Need to consider other developments ongoing (e.g. Gateshead Follingsbury development – Argus Ecology worked on this) and how this will tie in with the IAMP ecological mitigation.
 - What are the mechanisms for management of areas in future – will management be secured?
 - Beware woodland planting risk to [REDACTED], if woodland planting replaces hedgerow planting – is woodland planting in character with the landscape, which only has small patches of woodland in?

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26 January 2016

SUMMARY OF DISCUSSIONS

- Length of bridge if bridge required over R. Don – would like to see long span bridge to reduce impacts on watercourse, especially on [REDACTED]
- Beware the pressure that comes with public access to manage areas ‘neatly’.
- Seek to introduce smaller connected wetland/drainage areas as opposed to one large drainage area.
- Management strategy for the ecology/landscape/drainage will be key – to demonstrate sustainability of the measures proposed.
- Resist temptation to create access along length of the watercourse due to potential impact on habitats and wildlife – perhaps create views of this instead, to give the impression of physical access.
- Will a biomass/gas renewable energy solution be part of this scheme? Currently unconfirmed.
- ‘No net loss’ calculations
 - Receptive of using calculations to inform mitigation requirements, so long as value of arable farmland for birds and other protected species is taken into account, in addition to calculations.
 - Approach to offsetting considered new to the region – not really tried before – IAMP could be the regional pilot.
 - [REDACTED] to run first iteration of calculations for next meeting. Consultees might be able to help provide local knowledge to inform this, specifically in relation to habitat quality.

ACTIONS

- Arup to sit in on River Don restoration meeting on 25th Feb 2016 at Rainton Meadows.
- Arup to draft ecology strategy document with broad principles – areas to avoid, habitats to create etc.
- [REDACTED] (Arup) to draft landscape strategy for next meeting.
- [REDACTED] (JMP) to draft flood risk / drainage strategy for next meeting.
- Arup to meet and swap data with Jacobs regarding the A19 Testos/Downhill scheme.
- Arup to undertake first set of ‘no net loss’ calculations in readiness for next meeting.
- [REDACTED] to look into the medium term plan for WFD re opportunities for River Don.
- [REDACTED] to provide citations for LWS that fall within proposed development boundary
- [REDACTED] to obtain GIS files from WYG – [REDACTED] to follow up with [REDACTED].
- [REDACTED] can advise on specific access arrangements with landowners if required.

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SUMMARY OF DISCUSSIONS

NEXT STEPS

Need to synchronise AAP (Policy) and DCO (Consent).

- 1) AAP Consultation
- 2) DCO Consultation – stage 1
- 3) Publication draft
- 4) DCO Consultation – stage 2
- 5) AAP submitted
- 6) DCO submitted

Note: AAP boundary bigger because of safeguarded areas.

NEXT MEETING

- [REDACTED] to organise meeting for mid-March.

| | | |
|-------------------------|--|---|
| Project title | IAMP | Job number 242745 |
| Meeting name and number | Environmental Workshop 2 | File reference 30-08 |
| Location | Arup Office Newcastle (Room A) | Time and date 13:30 to 16:30 17 March 2016 |
| Purpose of meeting | To discuss strategies for drainage/flood alleviation, landscape and ecology | |
| Present | ██████████ (IAMP Coordinator); ██████████ (Sunderland City Council Ecologist); ██████████ (South Tyneside Countryside Officer); ██████████ (NELNP); ██████████ (Natural England); ██████████ (Gateshead Council Ecologist); ██████████ (Environment Agency); ██████████ (JMP); ██████████ (Arup Environmental Consultant); ██████████ (Arup Ecologist) and ██████████ (Arup Landscape Architect) | |
| Apologies | ██████████ (DWT/NELNP); ██████████ (NELNP); ██████████ (Natural England); ██████████ (Natural England); ██████████ (RSPB), ██████████ (Environment Agency) | |
| Circulation | Those present and apologies Cc: ██████████ (Arup Planning); ██████████ (Arup Director) | |

1. Agenda

- Introduction
- AAP update
- Landscape & Visual Strategy
- Flood Risk and Drainage Strategy
- Biodiversity Strategy
- No Net Loss Calculations
- River Don Partnership
- Programme for DCO
- Next meeting date
- AOB

2. AAP Update and Programme for DCO

Prepared by ██████████
Date of circulation 31 March 2016
Date of next meeting TBC

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| Project title | Job number | Date of Meeting |
|---------------|------------|-----------------|
| IAMP | 242745 | 17 March 2016 |

Strategy documents: The strategy documents discussed in this workshop will be used to inform master-plan design. Any comments on the strategy documents to be sent to [REDACTED] in the next two weeks.

Redline boundary: Boundary line to be shared with the consultees before Public Draft of AAP presented for consultation.

AAP: Public draft of AAP will be ready for consultation around June / July 2016. Finalised AAP to be submitted to PINS by the end of this year.

EIA Scoping Report: EIA scoping report will be prepared over the next couple of months, and is due to go to PINS in July 2016. PINS will have the scoping report for up to 45 days, so EIA Scoping report due to be issued in September.

DCO: The first consultation on DCO will be high level, and consultees should expect to hear about this in June (Section 42 consultation). DCO submission is planned for April 2017.

3. Landscape and Visual Strategy

[REDACTED] presented Landscape Strategy (see attached).

Broad aims of the strategy are to:

- integrate development with existing landscape character;
- integrate development from viewpoints (e.g. from hills); and
- integrate development with public rights of way (PROWs).

Key ideas for discussion are to create:

1. bund and tree line along A19 for screening and to create impression of separation between settlements; and
2. some form of planting along north and western edges of development to screen development and protect setting for surrounding houses; and
3. access for recreation.

1. Discussion around bund and tree line along A19

Comments: Ecological value of tree belt would be higher, the wider the strip of woodland planting, so wide strip of trees welcome.

Later on in the design process, the species mix for the A19 woodland strip needs to be considered. Assume that for screening purposes, that evergreen will form part of the mix, but conscious that not many native evergreen species which would be suitable. Scots pine would be ok, although mindful that Highways England are wary of this so close to roads. Gorse and broom would be acceptable. Wild privet could be useful, if allowed to flower.

Later on in the design process, need to give more thought to the seeding of verges. [REDACTED] is particularly interested in this, given her involvement in coordinating verges on

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17 March 2016

A1 and A19 road networks. General consensus on grassland is that to create and maintain a species rich grassland, management is very important, as a minimum of one cut a year is required (and remove cuttings), and the substrate needs to support good quality grassland, so should have low nutrients. [REDACTED] suggested that on the A1 road widening they used a blend of road planings and crushed aggregate with 20% low nutrient sub-soil, to encourage species diversity. Conservation grazing is good for management of larger areas of grassland, so this might be something to consider away from the A19 in the ecological / environmental mitigation land.

General consensus: Concern about protecting [REDACTED] from road collision. Need to take into consideration time taken to establishment for tree belt along A19 while they establish, to prevent [REDACTED] colliding with traffic. In the first few years, these areas of tree planting will have coarse grassland to benefit [REDACTED], which poses a risk.

Action: Need to discuss with Highways England possibility of access to their Environment Fund to help with the [REDACTED] discouragement from the road issue [REDACTED]. It is recognised that the priority for this funding is targeting grassland habitat creation along verges.

2. Discussion about planting to the north and west of the development

Comments: Woodland out of landscape character, although would be useful for screening.

Discrete copses would be compatible with landscape character, and tree planting brings benefits for water, and historically there were more hedgerows so increase in hedgerow planting would be in line with landscape character.

Other possible suggestions for softening the edges of the development include vertical greening (green walls) and lower level buildings around periphery of site.

Avenue trees along development could break up appearance and soften views for elevated areas, and provide [REDACTED].

Green / brown roofs could integrate views from elevated areas.

General consensus: Like to see softer edge along north and west edges of development. Might be more appropriate to use dense hedgerows with standard trees as screening, which would soften edges and bring benefits for wildlife e.g. potential [REDACTED], away from A19.

3. Discussion around access for recreation

Comments: There is an option to relocate part of the Heritage Trail (although possible conflict with Access Forum noted), and landscape strategy to take into account how to fit PROWs around/through the development.

Noted that the Access Forum have undertaken some counts and very high numbers of cyclists recorded in the area. Landscape strategy should take this into account.

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General consensus: The green corridor along the River Don could serve a recreational purpose, however concern raised that ecologically sensitive areas should be protected from public access.

Things to think about in carefully designed, zoned, managed access include:

- stock-proofing boundary features along footpaths to prevent dogs accessing ecologically sensitive areas;
- ensuring there are wide enough strips of land planned in for footprint of access, to allow space for boundary feature (e.g. hedgerow), verge, multi-purpose access route and SUDS features; and
- creating views over spaces to give the impression of access, rather than providing physical access.

Action: [REDACTED] to speak to [REDACTED] (Arup Planner) about the key entry and exit points to the area, identified from a meeting with the Access Forum, as an annotated plan was created at this meeting.

4. Other

[REDACTED] noted that if buildings are built over time, there would likely be a design code for future design phases. It would be likely that Phase 1 would be very detailed, with the level of detail for later phases to be confirmed by local development order (LDO), although PINS likely to want detail.

4. **Drainage and Flood Management Strategy**

[REDACTED] presented Drainage and Flood Management Strategy (see attached).

[REDACTED] also presented two plans that show predicted flood behaviour if no flood defences were in place (plans with green colouring) and predicted flood behaviour if flood defences were in place. Not much different to each other, or to indicative Environment Agency plans tabled at Environmental Workshop 1.

The Environment Agency brought out new climate change factors this year. Tabled drawings include 20% flood factor, although it is noted that a range of factors that can be applied depending on sensitivity of site to flooding. To be discussed with Environment Agency. If sensitivity increased due to commercial importance of site, climate change factor could go up to as high as 50% maximum.

All possible flood extents fall within the proposed 50m 'green' buffer along the watercourse at the moment.

Need to consider possibility of flooding downstream as a result of the development.

There was a suggestion of floodplain creation along River Don, in relation to floodplain performance, WFD and improving views. One option would be to re-naturalise river and introduce meanders. General consensus was that this would increase costs and have ecological considerations (e.g. in relation to [REDACTED]), however opportunities to re-

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17 March 2016

naturalise heavily modified watercourses are few and far between and seeing as IAMP is a NSIP, it would be good to know that this opportunity would be taken seriously.

This could provide betterment for development downstream and improve the WFD classification, as well as create a more appealing landscape to be internationally competitive. Introducing meanders can increase flood storage.

██████████ suggested there could be some trade-off between number of ponds and some river / floodplain restoration.

There was some discussion around possible funding opportunities via the Environment Agency to help with river restoration (ESIF money, WFD money and River Don partnership money), is this were to be seen as an enhancement. There is a strand in Environment Agency regarding River Don. Once there is a scheme design, it might be possible to look at possible funding mechanisms, however it might be a question of timescales.

It was noted that consideration needs to be given to where (spatially) river restoration could happen, as it might need to be within the red line boundary to manage control over it. Possibility that safeguarded ecological land could be used.

Surface water

The design team will aim to keep drainage ponds <10,000m² to avoid reservoir legislation.

The drainage load will depend on how much green infrastructure is included in scheme, as this will reduce drainage load of proposed ponds.

A climate change factor of 30% has been used (new factors 20-40%) i.e. 30% more rainfall anticipated by 2060, so need to account for storing 30% more water by 2060.

Comments include:

- Consider a minimum of 3 interventions linked together;
- Sunderland surface water management plan in progress. Question on who will maintain features;
- Commercial premises messier than residential. Need mixture of softer engineered SUDS and harder engineered management; and
- Need to consider design over different phases and bands on which calculations will be based, based on the current assumption that the project plan would be to acquire land, then construct roads and infrastructure and then provide service development plots, from which there are a variety of options going forward. The plan would be for these stages to happen in a 2-2½ year period following consent.

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Action: [REDACTED] will follow this up with [REDACTED], to understand justifications for this statement.

It was noted that the River Don has very few refuges away from watercourse for species such as [REDACTED]. [REDACTED] noted that after the 2012 deluge the [REDACTED] population hung on in the area despite this, even in very restricted habitat.

It was also noted that we need to consider the opportunities for connectivity provided by the A19 culvert – what are the opportunities? Do we have information on what species pass through currently?

Bridge design

Arup will need to address possible impacts of a bridge across the River Don in the Environmental Statement.

There is a draft, indicative bridge design with the abutment location set back from the watercourse. Shading impacts (loss of vegetation, temperature change) and risk of predation need to be considered in any assessment.

Need to have a greater understanding on where possible bridge would be best placed.

6. **No Net Loss Calculations**

Noted that this is an iterative process which will refine the calculations as more information on the site and scheme design becomes available

General consensus: Principal of creating smaller areas of higher quality habitat is sound. There was also broad support for developing/adapting an offsetting metric specifically to the IAMP site, for example so that it can take account of species specific requirements.

Action: Arup to circulate no net loss methodology.

7. **River Don Partnership**

River restoration is an ambition of the River Don Partnership.

Action: Draft River Don vision document to be re-shared by [REDACTED], and it is currently open for comments.

It was noted that lots of partners on the River Don Restoration Project is a positive, however window of opportunity for IAMP to influence the River Don restoration opportunities is quite small.

Action: River Don Partnership ([REDACTED]) to pass information on to Arup that they have mapped up.

[REDACTED] has £10,000 from Northumbrian Water for River Don. Could be used for small works or to bid for more funding. The money originally for misconnection raising.

8. **Next Meeting Date**

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| Project title | Job number | Date of Meeting |
|---------------|------------|-----------------|
| IAMP | 242745 | 17 March 2016 |

Useful to meet again in 4-5 weeks' time when AAP redline boundary option decided, before publication draft of AAP goes to Councils at the end of April.

It is proposed that the team will share a plan with consultees for comments before it gets formally put together.

9. AOB

██████████ asked about the kinds of development industry likely to be within the IAMP scheme, specifically in relation to the possibility for biomass boilers and energy and heat recovery. ██████ noted that possible impacts of these would need to be considered, and that an environment permit via EA would be required for these.

Arup is undertaking separate piece of work looking at an energy strategy for IAMP. It is likely that preferred renewable energy solutions are very expensive.

Anaerobic digestion (AD) plant at Wardley got planning permission approximately two years ago. ██████████ noted that the council is desperate for an AD plant that takes grass.

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ARUP

| | | |
|-------------------------|---|----------------------------------|
| Project title | IAMP | Job number 242745 |
| Meeting name and number | Environmental Workshop 3 | File reference 30-08 |
| Location | Arup Office Newcastle (Room A) | Time and date 10am 6 May 2016 |
| Purpose of meeting | Discussion on environmental / ecological issues - AAP / DCO programme, WYG ecology report, Green Belt Options Appraisal Paper, No Net Loss Calculations, Masterplan evolution, river restoration aspirations | |
| Present | [REDACTED] (Arup) [REDACTED] (Arup) [REDACTED] (Sunderland CC) [REDACTED] (Sunderland CC) [REDACTED] (RSPB) [REDACTED] (JMP) [REDACTED] (Gateshead Council) [REDACTED] (Environment Agency) [REDACTED] (Durham Wildlife Trust) [REDACTED] (Environment Agency) [REDACTED] (NELNP) [REDACTED] (Gateshead Council) | |
| Apologies | [REDACTED] (Arup) [REDACTED] (Natural England) [REDACTED] (South Tyneside Council) [REDACTED] (Natural England) [REDACTED] (Natural England) [REDACTED] (NELNP) [REDACTED] (Natural England) [REDACTED] (Urbed) | |
| Circulation | Those present and apologies, wider IAMP project team | |

Prepared by [REDACTED]
Date of circulation 16.06.16
Date of next meeting TBC – 18-20th July

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| IAMP | 242745 | 6 May 2016 |

Additional information As [REDACTED] (Natural England) and [REDACTED] (South Tyneside Council) were unable to attend the meeting on 06 May 2016, a follow up meeting was held with [REDACTED] on 18 May 2016 at 15:00, to discuss the same agenda. Meeting notes from this follow-up meeting, where they are in addition to discussions on 06 May 2016, are included in these minutes in blue.

3.1 Introductions

4. Future Programme and Consultation

FM presents current IAMP programme for Area Action Plan (AAP) and Development Consent Order (DCO). Presented by [REDACTED] on 18 May 2016.

AAP is to take area out of green belt. DCO is planning application for the scheme, which includes the detail of the masterplan.

Area Action Plan (AAP) Programme

- April 2016 – Publication Draft AAP preparation;
- 6th May 2016 – IAMP Environmental Workshop #3;
- 12th May 2016 – Publication Draft AAP presented to client group;
- June 2016 – Client review, sign off, Committee sign off;
- July / August – Consultation on Publication Draft AAP;
- September 2016 – Schedule of Recommended Changes;
- September / October 2016 – Preparation of Submission Draft AAP;
- November 2016 – Draft AAP Submitted to Secretary of State (SoS) and Planning Inspectorate (PINS); and
- February 2017 onwards - Examination period.

Development Consent Order (DCO)

- Summer 2016 - Section 47 Consultation (Stage 1) – Issues stage;
- Supported by Preliminary Environmental Information (PEI), which is essentially a light scoping report;
- June 2016 – Issue Environmental Impact Assessment (EIA) Scoping Report to Client for Review;
- Possible Environmental Workshop in June? This could be arranged to discuss EIA scoping if anything significant is arising, or the emerging masterplan if progressed with more detail than the AAP boundaries;
- August 2016 - Issue EIA Scoping Report to PINS;

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- August / September 2016 – PINS Consultation on Scoping Report;
- August 2016 onwards - EIA work in progress;
- Autumn 2016 – Section 47 (Stage 2) & Section 42 Consultation;
- January 2017– Draft EIA / Preliminary Environmental Information Report (PEIR) (80%) Review; and
- April 2017 - DCO / Environmental Statement (ES) submission.

█ adds that Highways England (HE) will be going through a similar process with a similar timescale for the Testos Scheme and Downhill Junction Improvements (current DCO submission November 2017). They have a view to start on site around March 2019.

5. Ecological data, WYG report and ongoing survey work in 2016

White Young Green (WYG) Ecology Report for Land North of Nissan shared with group before the workshop. This summarises survey results for 2014-2015 surveys of the general area. It was recognised that people need more time to review the data.

Surveys currently being undertaken in 2016 are to fill data gaps where land access was not available, and to build on survey information from 2014-2015.

Discussion Points

- Level of importance of bird assemblage (county, regional) needs to be established. Consultees highlighted need to maintain the value across the site within the mitigation corridor. It was noted that further bird survey work is ongoing this year, and data will all be reviewed together. Questions to be answered include: (a) What level of importance is the bird assemblage? (b) What is the make-up and are the habitat requirements of the bird assemblages? And (c) Are we likely to be able to mitigate for this within the red line boundary? █ ***will provide more information on this at next Environmental Forum Meeting;***
- It was noted that there is anecdotal evidence from a lot of bird watchers over a number of years, that the existing green belt serves as a connective corridor for raptors travelling between the coast and in-land. This is reflected in some of the WYG survey data which █ passing through. █ ***to see if more data on this is available;***
- Geographic level of importance of the water vole population. Is it potentially of national significance? NELNP has surveyed for water vole within 15km of IAMP and the populations are largely gone. This will be addressed at future stages of the ecological impact assessment (EcIA) ***All - Who can share information on water vole in the local area with Arup?;***
- █ suggests using camera traps on the River Don to establish whether water vole pass through the A19 culvert, or whether these are two distinct populations. This is something that HE should be doing, given the likely impacts of their proposed

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█ provided brief overview of preferred option by discipline.

- Visions and objectives of IAMP
- Landscape character
- Ecology
- Utilities
- Transport
- Food risk and drainage
- Green Belt
- Master-planning
- Financial viability and deliverability
- Consultation responses

Discussion Points

- The Highways Agency is going through the same option appraisal process for its Testos Roundabout (and Downhill Junction) scheme, publishing options in July 2016, and a preferred option in December; and
- Consultees would like to have a written summary of █ explanation. █ *to check with █ when we can share this, and feed back to consultees through █, or at the next meeting.*

8. **Red Line Boundary & Emerging Masterplan (current draft)**

An indicative first iteration of the emerging masterplan was shared. Noted that this is confidential at this stage, as there will be formal consultation on a version of this later in the year, however the scheme promoter would like to discuss this as early as possible, hence why it is being shared so soon.

Discussion Points

- Clarification of red line boundaries:
 - The draft AAP red line boundary plan includes possible phasing of the development i.e. development land, and future safeguarded land;
 - The DCO red line won't include the area 'safeguarded for future development' that is being taken out of the green belt; and
 - This 'safeguarded for future development' would be subject to future planning applications (or DCO).
- Consultees raised concern that Arup won't be able to mitigate for all bird species within the red line boundary:

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- █████ acknowledges that this may potentially be the case, in particular for bird species which need working farmland. █████ *to undertake more detailed analysis of bird populations within area;*
- █████ highlighted that there may well be land outside of red line boundary that is within the scheme promoter's control which could be used for mitigation; but the scheme promoter will need to demonstrate to PINS that it has control over these areas to ensure their management in the long-term:
 - i. Suggestion that Wardley Colliery would be a good option to consider, if 'off-site' compensation is required. This would strengthen the north-south link to the west of the IAMP site;
 - ii. Preference for off-site compensation, and mitigation for farmland birds, by Natural England and both Councils would be to use the area either side of the River Don, west of the IAMP scheme, to strengthen the integrity of the green corridor along the River Don; and
 - iii. Question was asked about whether the land 'safeguarded for future development' will continue to be farmed until it is developed, or whether the scheme promoter will have bought the land, and farm buildings might become derelict (in which case impacts of this need to be considered). █████
- Clarification on how IAMP fits with Local Plans:
 - █████ stated that the AAP Publication Draft work is to facilitate the IAMP area being released from the green belt. The AAP will set the policy framework for the land and how this will complement the borough wide local plans.
- Question was asked regarding the phasing of plot development within the area. Which areas are likely to be developed first? █████ *to feed back to wider stakeholder group on this, at next meeting.*

9. **How Indicative Emerging Masterplan has started to account for the Biodiversity, Drainage and Landscape Strategies**

Mitigation corridor along the River Don is shown on plan and buffers around notable habitats and designated sites shown on plan.

Would be useful to see the ecological constraints marked onto the next iteration of the indicative masterplan, so that it is easier to comment on it, as well as building / farmstead names.

Flood Risk and Drainage

- Flood-risk from River Don & Tributary – Unlikely to be an issue, except to any

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road crossing, although the aspiration for any road crossing the river, would be to position this where the floodplain is confined to the incised channel;

- Minor stream behind Hylton Grange – Should try to retain this or, if diverted, allow a corridor within which a reasonably-natural channel can be recreated;
- Drainage – Have previously discussed a hierarchy of surface channels and swales within access corridors with Urbed (Masterplanners), looking for grids of dykes to act both as conveyance and as storage features, limiting need for larger basin features within the overall layout. Dispersal of drainage management is key;
- Will look for some drainage management within plots, both in terms of quantity management and water-quality management;
- There is scope for surface water-features to contribute to landscape and ecological quality of the development; and
- Restriction on southern site boundary of depth/capacity of existing land-drain to which large part of scheme will discharge. May affect ground levels for development platforms, needing land-raising on lower-lying areas.

Landscape, Ecology and Flood Risk/Drainage Suggestions for Masterplan Design

- Connectivity of attenuation basins is important to avoid habitat or species (amphibian) fragmentation. Use grid of channels along road network to link this through, which should be a bit more than a ditch next to a road;
- SuDS features need to be well designed, well integrated and have biodiversity value e.g. dykes for water vole. They should ideally be shallow features with seasonal fluctuations and connect into existing ponds. SuDS components should be linked, so that surface water gets three levels of treatment before any discharge;
- Can use dykes and swales and stock proof fencing to zone development and control public access;
- Question was asked whether the mitigation area would look more like farmland, or a 'nature reserve'. Conclusion that it would likely appear more like a 'nature reserve', by virtue of the fact that a lot of mitigation which serves multiple purposes needs to go into this area, and this is unlikely to allow space for much farmable land. [REDACTED] acknowledged that some bird species require working farmland. Suggestion that permanent species-rich grassland, actively managed for species such as skylark, curlew and lapwing, may be more beneficial than arable crops;
 - i. If horse grazing is going to be a management option for the land, this should require a legal agreement, as the risk of over-grazing habitats by horses is high; and
 - ii. Question was asked whether we need to get particular permissions to

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change land use of farmland i.e. to put mitigation into good quality farmland.

- Discussion around climate proofing development by over attenuation, and whether the benefits of reduced flood risk this would bring, would be a USP to help sell to developers;
- Amphibian friendly drainage across the scheme will be required e.g. avoid gully pots;
- [REDACTED]
- Concern over bridge location shown on indicative masterplan, and risk of severing connectivity between [REDACTED] location and wider mitigation area. Would like to see bridge location moved further east. Recognise that this is possibly constrained by floodplain, but suggest area in narrow strip of woodland where floodplain appears to narrow, as a possible alternative bridge location. [REDACTED] *to feedback to [REDACTED] who is meeting Urbed on 19 May 2016;*
- Ditch that links pond in north-east of proposed scheme, to the River Don via a ditch, could be a possible location for enhancement for water vole / habitat creation;
- Is there scope to retain West Moor Farm, with some form of green corridor. [REDACTED] *who is meeting Urbed on 19 May 2016;*
- Masterplan required more thought about the interaction of power lines with connecting corridors, especially in an area where [REDACTED] are a constraint;
- Emerging masterplan requires more thought in relation to connectivity;
- Suggest planting a scattering of single trees, as this is in keeping with landscape character and will provide [REDACTED];
- Think more about the height of the buildings, especially in the northern part of the scheme. What height are these likely to be?;
- [REDACTED] would like to see a minimum buffer of 20m along the northern edge of the proposed scheme, to serve its intended functions (screening, habitat creation etc.);
- Ditches between tree-lines/hedgerows/scrub and grassland strips could reduce scrub encroachment onto grassland. in order to maintain this habitat for foraging [REDACTED]
- Would like to see a 20m buffer around marshy grassland;

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- Trees can provide some screening of dark areas from lighting; and
- Can there be pre-emptive planting in areas 'safeguarded for future development'?
█ *to follow up with* █

Discussion Points

- █ explained that the DCO will include a design code, possibly similar to the Local Development Order (LDO) process used successfully for the EZ areas around Nissan;
- █ explained that the scheme promoter is likely to establish the ecological mitigation infrastructure, as part of the main infrastructure works in the early years;

10. River Restoration Ambitions

█ presented an example of river restoration of what might be possible (see River Skerne paper):

- In WFD terms there is a wider ambition for the River Don, to improve the status of it with regard to water quality and morphology;
- █ spoke to ecologists in relation to the water vole issue on the Ormesby Beck in Teesside. This scheme created a new channel and over time water vole began to use the new 500m stretch, which prevented the need for active water vole displacement. Cost was approximately £40k for 500m, so not prohibitive;
 - i. █ noted that as of this year, there is now a requirement for a licence for water vole displacement.
- █ asks are the consultees receptive to such improvements? General consensus was yes. Discussion over whether there is enough water in the channel, and note that any new side channel creation might need to be kept small scale;
- █ is currently looking at desk based reporting on what river restoration may look like from a morphological perspective;
- █ noted that a hydro-geomorphology walkover to support the WFD assessment has not yet been undertaken; and
- █ notes that marketing of the scheme is key, asking what kind of river do international businesses want to be overlooking?

█ summarised that the failing measures for WFD on the River Don are the form (morphology) of the channel (straightened and over-deepened) and water quality. █ stated that the EA expect to see improvements in the River Don as part of the IAMP scheme. Ecological 'mitigation' will justify some form of river restoration which can demonstrate WFD benefits.

JMP to look at first edition maps for the River Don to compare what the historical

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4.1 Introductions

████████████████████ from Jacobs were present to discuss the adjacent Highways England scheme that will seek to upgrade Testos Roundabout and the Downhill Lane Junction, regarding approach to Ecology, Landscape and Flooding.

4.2 Minutes from Environmental Workshop 3

████████████████████ recognised that the River Don is the most sensitive ecological receptor, however stated that the impact from the A19 / Testos scheme will be small, if any, as there is no proposed land-take from the River Don corridor apart from one replaced outfall.

████████████████████ noted that there is a potential opportunity to shorten the River Don culvert on the western side (not committed to currently) if this would provide a good scheme enhancement. █████████████████████ asked to what length this would be. █████████████████████ stated that this was currently unknown.

████████████████████ stated it would be of benefit if █████████████████████ could see daylight at other end of the culvert. Currently not possible as culvert isn't straight.

████████████████████ would be keen to keep the historic bridge encapsulated in the culvert (historic value and possible value to █████████████████████), as it could provide an access route for pylon maintenance.

████████████████████ *still to look at 1st edition maps for river restoration.*

4.3 Update on AAP and DCO Process

Overview of boundary lines and what these mean

Draft Area Action Plan (AAP) Boundary Line – boundary for which the aim is to release land from the green belt, and to establish a specific policy position for this area of land, for its future use. This comprises developable land, land safeguarded for future development, and land to be used for ecological and landscape mitigation.

A masterplan for this area is being developed.

Draft Development Consent Order (DCO) Boundary Line – boundary of the IAMP scheme, a Nationally Significant Infrastructure Project (NSIP). This comprises developable land and land to be used for ecological and landscape mitigation.

Summary on progress

AAP work is going in in front of cabinets on the 20th July.

Options papers, AAP background papers and AAP policies currently sit with council members but will be sent out to stakeholders asap for formal consultation.

Expected next steps and consultation timings

Scoping consultation for the DCO due at the end of August, following submission of scoping report to the Planning Inspectorate (PINS).

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The current plan is for the DCO statutory consultation on the masterplan to be undertaken in about October.

Preliminary Environmental Information Report will be consulted on in about December.

4.4 AAP Background Papers

Ecology

The background paper summarises the evidence which informs the key proposed 'interventions' and actions recommended for inclusion in the policies in the IAMP AAP. It presents these under the following headings:

- Avoid direct impacts to sites designated for nature conservation;
- Accommodate protected species located within the AAP boundary;
- Retain and enhance existing mature trees, hedgerows and woodland blocks;
- Maintain, replace and enhance habitat connectivity, including maintaining and enhancing the River Don as a functional ecological corridor;
- Ensure there is 'no net loss' in biodiversity of habitats;
- Provide net gains for biodiversity; and
- Restrict or minimise public access to areas of ecological sensitivity.

Landscape

This paper summarises the key proposed interventions, mitigation measures and actions which are recommended for inclusion in the IAMP AAP and presents these under the following headings:

- Visual amenity of the green belt;
- Existing trees and other vegetation;
- Landscape buffer;
- River Don;
- Public rights of way;
- Listed buildings;
- Open space;
- New planting;
- Building height;
- Building materials/cladding;

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- Massing of buildings;
- Green and brown roofs;
- Green walls; and
- Sustainable urban drainage systems.

Flood Risk

Flood risk not a huge issue, however flood risk is present further downstream and drainage development would need to be managed. The northern area mainly drains into the River Don, and the southern area mainly drains to the road.

Drainage management will be required, which will involve trying to utilise a linear grid of conveyance and attenuation. There is the potential to enhance features from an ecology and landscape point of view.

4.5 **Draft EIA Scoping Report**

Landscape

█ would like to discuss the proposed 50m buffer along the A19 with Arup, about future proofing in relation to the 'Express-way Standard'. █ *to talk to █ at JMP about the standard. █ to follow up with █ outside of the environmental forum meeting.*

Regarding recreational receptors, █ noted that Jacobs have been doing non-motorised user counts at downhill land junction and surrounding network. Jacobs can share this data if Arup don't have it already. █ *to talk to █ about obtaining the headline figures for the user counts - otherwise obtain data from █.*

Noted that there is a conflict regarding policy on woodland planting and the defunct great north forest plan. █ advises not to place too much value on the principle of the Great North Forest, and suggests that it might be worth stating categorically that the Great North Forest is defunct and to acknowledge that this is a remnant policy. █ *to address this issue in the Environmental Statement.*

Flooding and Drainage

The JMP model was submitted to EA, and EA have some comments on this. █ *will check if █ has received these. █ to follow up with █ to forward comments to █.*

A WFD assessment is proposed to give indication of the status quo. █ states that within the assessment there is a requirement to look at ambitions of WFD versus the minimum environmental requirements.

█ from the EA noted that WFD improvements relate to the whole catchment so urbanisation of previously green areas which change water should be included.

4.6 **Bird Data Analysis**

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- Grassland creation ([REDACTED]) should be away from/screened from main roads;
- Woodland copses should be scattered to maintain landscape character;
- Marshy grassland should sit along watercourses within flood extents and where there is poor drainage and possibly also on the flat area in south-west (good for creating scrapes), topography dependent;
- Reedbeds to be created around water bodies;
- Marshy grassland to be used to discourage people from accessing sensitive areas, for example dog-walkers;
- [REDACTED]
- Arable farmland retained away from watercourses to reduce risk of pollution to the watercourse;
- Arable fields might be justified by farm viability;
- Aim for species-rich grassland, which can be achieved through seeding/green hay/seed collection from nearby grasslands;
- Consider the future management of habitats, for example low intensity conservation grazing;
- Talk to land managers when planning mitigation areas; and
- Where possible, create the conditions for habitats/communities to develop themselves e.g. scrapes versus planting colonisation.

[REDACTED] *to draw up a short document to detail the principles of the design of the mitigation area, which can be used to justify the habitat type, habitat area and habitat location of habitats within the mitigation area.*

[REDACTED] *to draw up a draft proposal for the mitigation area based on the principles outlined (including hedgerows).*

Public Access

[REDACTED] raises idea of walkway along the River Don at the Downhill Lane end, which currently dog walkers and bird watchers use. [REDACTED] notes that the desire isn't to stop public access to the 'mitigation area', just to control/manage it enough to avoid adverse impacts to sensitive ecological features.

AAP Boundary Discussion

Discussion relating to the location of the AAP Blue Line boundary (mitigation area boundary):

- AAP supports release of green belt for ecological mitigation purposes;

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- [REDACTED] notes that the AAP boundary does not extend westwards as far as Gateshead – to secure protection of the River Don corridor all the way to Gateshead, and asks how fixed the AAP boundary is;
- [REDACTED] – fixed for publication draft but open for consultation;
- [REDACTED] – ecological benefits would be increased if shape of mitigation area were changed to include the River Don further west (same total area);
- [REDACTED] - can we change shape of mitigation area by reducing it in the south-west corner and extending it westwards along River Don instead;
- [REDACTED] asks does it need the AAP boundary need changing for this to happen; and
- [REDACTED] raises point that consultation showed that preferred option was for a north-south alignment and there is a risk of straying from this if we run mitigation further west;
- [REDACTED] - Justification can come in part from partners on the River Don, but need must arise from the development; and
- [REDACTED] points out that it may not be possible to maintain the ecological function of mitigation along the watercourse without control of the western section of the River Don.

Action: [REDACTED] *to check with Pinsent Masons (legal advisors) if we can change shape of mitigation area (not total area).*

QU: If this is not appropriate, how else can the councils protect the R. Don to west?

GQB raises cross boundary issues. How do we link up across the Gateshead, Sunderland and South Tyneside Boundaries? We have a duty to cooperate. The heads of planning at the councils have had discussions outwith this project. [REDACTED] *will feed back to group.*

4.9 Integration with A19 Testos Roundabout Scheme

DJ says that the Testos and Downhill Lane scheme is not as advanced as IAMP on landscape and drainage, as the scheme is still at option selection phase.

Landscape – no substantial mitigation ideas yet. DJ sees non-motorised users as biggest influence.

Drainage – Only scheme principles at this stage. Water from the northern part of scheme will outfall into the River Don north of the downhill lane junction. For the rest of the water, there will likely be a balancing pond north of Testos Junction which will feed back into existing highways drainage, and eventually back into the River Don further north.

4.10 River Restoration

[REDACTED] is hoping for recognition of the EAs river restoration ambitions by IAMP LLP, and commitment by IAMP LLP to work with partners to help realise this ambition. He hopes that this will be reflected in the AAP Policy.

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The EA says River Don is a heavily modified water-body and has a range of required mitigation measures. The EA are doing a lot of positive work at top end of River Don with Northumbrian Water. EA have funding to survey whole length of the River Don and identify areas where there can be most benefit.

The EA are undertaking a River Restoration Survey and ask what the timescale of survey findings would need to be, for the findings to be taken into account in the DCO.

█ confirmed that submission is due in spring 2017, so findings would need to be provided before this. █ noted that the EA project can work within these timescales, probably come back with information this year. █ *to follow up with the EA in the autumn.*

Rivers Trust have some European funding multiple pockets of funding coming together, tied into the Local Nature Partnership.

SCC and STC progressing their flood studies etc. █ thinks could be more joined up and suggests a separate meeting to discuss with relevant stakeholders ambitions and working together. The scoping/consultation process may provide vehicle for this.

SCC are still working on flood strategy but not sure if timelines would tie up.

█ what is being done to protect R. Don at the Follingsbury Development. █ says 50m buffer for ecology and SUDS.

4.11 AOB

Letters are going out to landowners about land acquisition (█ a copy of the letter going out).

4.12 Next Meeting

The next meeting will take place in earliest mid-September, once the bird data is complete and the AAP documents have been issued.

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| Project title | IAMP | Job number | 242745 |
| Meeting name and number | Environment Agency - update / progress meeting | File reference | |
| Location | EA Newcastle office | Time and date | 10am 24 November 2016 |
| Purpose of meeting | To update the EA, as statutory consultees, with the recent progress around the IAMP AAP and DCO | | |
| Present | [REDACTED] (Arup) [REDACTED] (EA) | [REDACTED] (EA) | |
| Apologies | | | |
| Circulation | Those present [REDACTED] (EA) | [REDACTED] (IAMP) | |

Action

1. General Update

Apologies from FM for lack of progress / updates, but likely to be 'all systems go' from here.

2. Area Action Plan

AAP current consultation complete and revised documents going through Council cabinet approval (SCC 23.11.16 and STC 30.11.16)

- Final amendments by January 18th
- Submission to PINS end of January
- Examination in May-July 2017

Policies – IN2 Flood Risk Damage

Feedback from the EA AAP consultation response has led to amendments to Policy EN2, which now reads 'maintain and enhance biodiversity', and 'maintain and enhance the River Don as a functional ecological corridor'.

The minimum 50m wide buffer either side of the River Don is included, with the aim that it provides multi-functional benefits to wildlife, landscape and water quality.

Prepared by [REDACTED]
 Date of circulation 25.11.16
 Date of next meeting tbc

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Discussion regarding that the AAP boundary and redline boundary could not be extended westwards to link directly to the potential Follingsby Lane development. Therefore, both STC and SCC had committed to developing policies that would support a fully integrated catchment management approach and support the work of the River Don Partnership. [REDACTED] and [REDACTED] had seen and commented on the proposed wording of the Sunderland Core Strategy policy. [REDACTED] made them aware that South Tyneside's draft Local Plan may be a year away.

[REDACTED] suggested engaging with [REDACTED] at Gateshead Council, so she is aware of the policies of the two IAMP Councils and may want to consider such an update in due course. The Gateshead Local Plan was adopted two years ago.

[REDACTED] to pass on at
Env Forum #5

3. DCO Consultation and Programme

[REDACTED] passed on IAMP consultation leaflets and draft masterplan that are the background information or subject of the consultation exercise starting w/c 28th November.

Programme currently estimated to be as follows:

- Section 47 (public) consultation starting next week (28th), until mid-January
- Section 42/47 – mid February-early March
- DCO/ES submission in spring 2017
- Examination – late 2017 (+ 3 months for SoS recommendation and + 3 months for final decision)

4. Ecology and Landscape Mitigation Corridor

Arup have produced a proposed habitats map for the mitigation corridor, and this is current undergoing technical review with [REDACTED] (Sunderland Council) and legal review (Pinsent Masons) to [REDACTED]

Arup aim to issue this a week in advance of the next Environmental Forum meeting on December 13th, once reviewed. Both [REDACTED] confirmed that they could attend that date (post-meeting note that the meeting invite has been issued for 10am on the 13th).

[REDACTED] explained that from an ecological perspective there needs to be a balance of habitats = smallest area would be all ponds, and all woodland would lead to the largest area. It needs to be a balance, taking into account the bird assemblage of the area e.g. areas of

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marshy and species-rich grassland too. Discussions ongoing between Arup and JMP (flood risk / drainage) to determine what habitats can be achieved next to the River Don. The ecology corridor map was not tabled or issued as part of the meeting, but was discussed in broad terms.

5. River Don Partnership

██████████ stated that there are currently sonds in the River Don collecting water quality data. From a Water Framework Directive perspective it is showing that there are poor levels of ammonia.

Durham Wildlife Trust are working on a water vole conservation strategy, which is being led by ██████████.

6. AOB

██████████ stated that the EA are against deep infiltration SuDS and that they shouldn't be specced due to former mining activity and therefore the groundwater contamination risk. ,

EA, a current key focus is working with Northumbrian Water Ltd, as a lot of the water quality issues are isolated to raw sewage entering the River Don, due to bad connections.

7. Next meeting

As part of the Environmental Forum #5 on December 13th.

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ARUP

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| Project title | IAMP | Job number | 242745 |
| Meeting name and number | Environmental Workshop #5 | File reference | 30-08 |
| Location | Arup Newcastle, Forth Street, Room A | Time and date | 09:30am 13 December 2016 |
| Purpose of meeting | Scheme update and to discuss the design of the proposed mitigation area | | |

Present

- ██████████ (IAMP Coordinator)
- ██████████ (Arup EIA)
- ██████████ (Arup Ecology)
- ██████████ (Arup Ornithology)
- ██████████ (Arup Landscape)
- ██████████ (Sunderland CC)
- ██████████ (South Tyneside Council)
- ██████████ (Gateshead Council)
- ██████████ (Gateshead Council)
- ██████████ (Environment Agency)
- ██████████ (Environment Agency)
- ██████████ (Durham Wildlife Trust)
- ██████████ (Tyne Rivers Trust)
- ██████████ (Jacobs Ecologist)
- ██████████ (Tyne Rivers Trust)
- ██████████ (Jacobs Ecologist)

Apologies

- ██████████ (Natural England)
- ██████████ (Natural England)
- ██████████ (Environment Agency)
- ██████████ (Environment Agency)
- ██████████ (NELNP)
- ██████████ (NELNP)
- ██████████ (Jacobs)
- ██████████ (JMP)
- ██████████ (RSPB)

Circulation Those present and apologies, wider IAMP project team

4.1 Introductions

Prepared by ██████████
Date of circulation 20 December 2016
Date of next meeting TBC

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■ noted that the first draft of the DCO (approximately 50% complete) is due to be ready by the end of January 2017, with the plan to submit the DCO in the early summer.

There is now a draft masterplan that is currently the subject of Section 47 (public) consultation (within the pack of papers at the meeting).

The first stage of consultation exhibitions finished on 12 December 2016, but the consultation exercise continues until January 16th 2017. This has involved seven rounds in different locations. To date there have been very few comments on the overall scheme, and most of the questions and comments concerned the detail of the proposed scheme.

The DCO scheme will take on board comments and come back with full Section 42 (statutory consultee and stakeholders) and Section 47 (public) consultation in March 2017, following which consultation responses need to be analysed and addressed before the DCO is submitted.

The examination period is expected to be late 2017. There is then three months for a Secretary of State recommendation and three months for a final decision.

Masterplan Progress

The masterplan as it stands (see attached) includes a 50m landscape buffer along the A19, a 20m landscape buffer around the northern periphery of the proposed development site, a bridge over the River Don, a bridge over the A19 for increased traffic capacity and to provide a second access to Nissan, street trees/swales, a hub (perhaps hotel/shop/crèche) and footpaths and cycle-ways.

The proposed development site has been designed to be permeable and 'green'.

The plan is for the North East Sea Land and Air Museum (NESLAM) to stay, and the majority of the farmsteads and other houses not to be demolished. Follingsby Lane would be restricted to prevent HGV and through traffic, but would remain an NMU route and potentially a bus route.

Urbed is working towards finalising the masterplan design for public consultation in March.

The Design and Access Statement is being drafted now, and will be consulted on in March. This will also include a Design Code for individual developers, for when they build out plots within the IAMP scheme.

Interface with Testos-Downhill Lane Scheme

Consultation has been occurring at a similar time (early December) for the Downhill Lane scheme in similar locations to that for IAMP.

HE has now split the scheme into two parts:

- 1) Downhill Lane, for which there has been consultation on the preferred option; and
- 2) Testos roundabout, for which there has previously already been consultation undertaken.

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There has been consultation with the Access Forum as part of both schemes, and the next forum meeting is planned for 14th December 2017.

Over the next few months, IAMP and the HE need to tie down the details of the interface of the two schemes.

Questions on the Proposed Masterplan

■ asks about which farmsteads would remain. ■ responds that likely only Make-me-Rich farm would need to be demolished.

■ asks about access to Follingsby Lane. ■ confirms that this would likely to be stopped as a through-road to the public, which will make the area safer, however residents would still be able to access the lane.

■ notes that in the south-east corner of the proposed development site, there are currently two watercourses that discharge in this area (see pluvial flood map), and asks what the fate of these watercourses will be? ■ notes that JMP are still looking at drainage in this area, but it will be taken into consideration. ■ also notes that camera surveys to look at the robustness of the existing drainage in this area have been commissioned. ■ states that he would not recommend deep infiltration SuDS in this area, given the state of the aquifer here, and as a policy the EA do not support the use of them. Any properties built in this area he thinks are likely to flood in a big monsoon type event, and asks whether it's possible for the masterplan to stipulate the need for green roofs specifically in this south-east corner of the development.

Action: ■ or JMP drainage team to meet ■ at the EA, before 16th January.

■ notes that in relation to this area, it would be wise to design for exceedences, and strongly consider the use of other features to help alleviate the pressure in this area e.g. sedum roofs.

■ warns about resistance of developers to green infrastructure e.g. green and brown roofs, as they quote the costs as a barrier. Gateshead Council have policies that encourage GI, and the NPPF encourages use of GI, but this doesn't tie developers to use of GI.

■ asks whether we can adapt the existing drainage ditches in this area to help.

■ asks whether PRowS are to be included on the plan. ■ responds that these will be shown on the masterplan, and within the mitigation area design.

4.4 **Review of Ecological Mitigation Strategy**

General Comments

- ■ acknowledge that the design will largely be driven by the topography / geology of the site.
- ■ notes that it would be useful to see the contours on the map, in order to provide detailed comment on the proposed mitigation design.

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- ■ agrees that wet grassland creation (along with associated wetland habitats) will provide the greatest benefit for biodiversity for a given area
- ■ notes that any work to the watercourse needs to consider impacts to the water vole population (e.g. provide refuges for water vole).
- ■ notes the need to balance public access against the sensitivity of the ecological features. ■ responds that the desired aim from an ecological perspective would be to minimise public access as far as is possible.
- ■ notes that during time taken to establishment, fences and ditched will likely need to be used as a means of controlling public access.
- ■ note that lighting is a key issue, and lighting of the mitigation area needs to be avoided. ■ reassured that Urbed are aware that this is a constraint, and are looking at how low level lighting can be managed. ■ notes that the current draft of the masterplan has been designed on this basis, with lower level lighting at the interface between developable area and mitigation area.
- ■ notes that land ownership may influence the next iteration of the Mitigation area Design.
- ■ asks whether the DCO will need to have confirmed the details and mechanism for future management of land within the DCO, in perpetuity. ■ notes that the DCO will need to demonstrate control through legal agreement and/or ownership. ■
- ■ notes that we are looking at opportunities for advance planting, based on land ownership. ■ welcomes this, but notes that if advance planting is dictated by land ownership, this will still need to be well connected.
- ■ suggests that conservation grazing is likely to prove a useful management tool for the mitigation area. Stakeholder group generally receptive to this suggestion. He suggests use of highland cattle or Exmoor ponies. The main considerations for mitigation area design if grazing is to be used, are compartmentalising of fields to allow for rotation, biosecurity, access and animal welfare.
- ■ notes that there might need to be a warden / manager to oversee maintenance of the mitigation area. ■ agrees, as he notes that the mitigation area is essentially a nature reserve.
- ■ notes that from a legal perspective, the scheme needs to be very clear on distinguishing between a net loss, no net loss and a net gain in biodiversity.
- ■ notes that the scheme will need to address residual impacts. ■ notes that he is concerned that there will be residual impacts to a number of high profile species.

Comments in relation to River Don Restoration

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- [REDACTED] notes that although River restoration is not within the remit of the IAMP scheme, any proposed mitigation should not be planned to conflict with the aims of any future river restoration work, and may also provide benefits to the River Don.
- [REDACTED] comments that from a river restoration point of view, the proposed plan looks pretty ideal. He notes that historically the River Don has been canalised so much that the water drains away too fast. He proposes that any methods used in the creation of the mitigation area, which slow water down in the River Don are very welcome as they will provide additional benefits to the River Don.
- [REDACTED] notes that they have just finished survey work by the River Restoration Centre.

Action: [REDACTED] to pass on findings from the River Restoration Centre.

Comments in relation to Mitigating for Impacts to the Bird Assemblage

- [REDACTED] notes her concern over [REDACTED] [REDACTED] notes that the majority of farmsteads are likely to be retained, and provide possibilities for [REDACTED] [REDACTED] notes that in reality she thinks the proposed development is likely [REDACTED] [REDACTED] [REDACTED]
- [REDACTED] [REDACTED] He is concerned that the plan as it stands, asks a lot of a small area. It will be a “busy area”. Does it have the carrying capacity required? [REDACTED] notes that Arup have undertaken literature reviews looking at cohabitation and territory overlap between species.
- [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
- [REDACTED] asks whether there will be species of bird that benefit from the mitigation area proposals. [REDACTED] notes that the mitigation proposals are likely to benefit waders (e.g. through scrapes in areas that naturally flood) and other wetland associated species. [REDACTED] [REDACTED] [REDACTED]

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- [REDACTED] notes that the scheme needs to acknowledge [REDACTED]
- [REDACTED] noted that the retained farmland within the 'area available for mitigation' is likely to be able to support the species with more specific farmland habitat requirements ([REDACTED]), only if it is managed appropriately. If this area were managed under some form of Higher Level Stewardship type scheme ([REDACTED]), this might be enough.
- [REDACTED] asks whether the development would have control over the land within the 'area available for mitigation', which does not form part of the mitigation area design. [REDACTED] notes that this area would remain to be farmed, outside of the control of the developer.
- [REDACTED] notes that in reality, the mitigation area needs to be managed for invertebrate and small mammal populations, as these (along with suitable nesting areas), are what will sustain bird assemblages.
- [REDACTED] notes that some bird species will be able to make use of the developed area, and making the development area itself more permeable (e.g. through use of green roofs and green walls) would allow for this.
- [REDACTED] notes it would be useful to discuss specifically which bird species there are concerns over, for which stakeholders feel the proposed mitigation area is not going to be sufficient.

Action: [REDACTED] to set up a meeting of stakeholders with bird specific interests to meet before 16th January, to discuss species-specific requirements in relation to the mitigation proposals. [REDACTED], Wildlife Trust Representative to attend. RSPB will be invited, and potentially a couple of local birders or habitat creation experts.

Action: [REDACTED] to send out an interim summary of the 2016-2017 Wintering Bird survey results.

Action: [REDACTED] to send out a breakdown of the bird survey work undertaken to date, and all relevant survey data (PDFs of distribution maps) to stakeholders ([REDACTED]/the EA and the Tyne Rivers Trust).

Design Specific Comments

- [REDACTED] suggests that looking at the pluvial flood map, it might be best to move the location of some of the ponds between the two watercourses to the eastern part of this area.

Action: Arup to liaise further with JMP about best locations for marshy grassland and wetland creation within the mitigation area.

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- ■ notes that marshy grassland on the south side of the mitigation area would be useful to help prevent public accessing the River Don.
- ■ notes that the areas of different habitats in the east of the proposed mitigation area are very small, and from a management perspective, it would be easier to have larger areas of the same habitat type (less compartmentalised).
- ■ notes that in the same regard, it would be best to have hedgerows as boundary features, rather than offset from boundaries, to make management of an area easier. This would have the added benefit of controlling access to an area better.

Action: ■ to organise a site visit for ■ to one of the Wildlife Trust Reserves, to provide additional ideas for how to design habitats with management in mind, before 16th January.

- ■ agrees that to manage the area between the two watercourses sustainably, it might be worth removing the north-south hedgerows that currently bisect these land parcels.
- ■ advises caution with tree planting along watercourses, due to the potential shading impacts this would have. If any tree planting along watercourses to be done, small amounts of black poplar and willow suggested, however if tree planting is necessary, it would be best placed towards the edges of the mitigation area, in small copses / spinneys (to keep in character with the landscape). Ps would prefer to see use of trees in well-structured hedgerows.

Permits for Implementing the Proposed Mitigation Plan

- ■ asks what consents we would need, to be able to use water from the River Don to create/feed marshy grassland habitats. ■ notes that the scheme could need permits to cut into the main river.
- ■ notes that a river model has already been developed by JBA.
- ■ notes that all permits / consents need to be rolled up into the DCO. ■ notes that this will also need to include water vole displacement licences.
- ■ notes that legally the EA have two months to turn around any permits.
- ■ notes that a lot of river restoration works could also be undertaken in-channel e.g. raising the bed of the watercourses in-channel.

Actions: ■ to advise Arup planners about need for permits from the EA.

Mitigation for the Safeguarded Land

- ■ asks whether it is worth considering the future mitigation requirements of the safeguarded land shown in the AAP, but not part of the DCO. ■ notes that this is not within the remit of the DCO, so cannot be considered as part of the DCO process. ■ agrees and notes that perhaps this is something that needs to be addressed through the council's policies.

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- [REDACTED]

- [REDACTED] notes that he assumes the rest of the arable land which falls into the 'area available for mitigation', which does not form part of the mitigation area currently being designed as part of the DCO, would be the obvious choice of area to mitigate for impacts of developing the safeguarded land.

Action: [REDACTED] to note as part of the wider project considerations.

4.5 Update on Proposals for Bridge over the River Don

Draft plan of bridge from JMP circulated during meeting. Comments from stakeholders on factors which need to be considered in the bridge design were requested. In summary, comments were:

- Positive that this is a single-span bridge ([REDACTED]);
- Mammal ledge required ([REDACTED]);
- Is it worth putting in bat roost provision in the bridge – although potential vibration and disturbance effects are noted, this would be easy to design in ([REDACTED]);
- Standard distance for abutment wall from watercourse to satisfy water vole requirements is given in the published guidance. This is likely to be less than the distance required by the EA e.g. to ensure that the abutments are outside of flood zone 3 ([REDACTED]);
- Need to look at flood maps to determine the height of the soffit of the bridge. There needs to a 100year plus climate change plus freeboard allowance factored in ([REDACTED]); and
- There needs to be a minimum of 1/3 slope as this will be less prone to erosion ([REDACTED]).

[REDACTED] has previously passed his comments onto JMP, but will do so again, as there have been some staff changes.

Action: [REDACTED] to relay stakeholder comments to [REDACTED] at JMP.

Action: EA to pass on comments on requirements for bridge design to JMP. JMP to follow this up with the EA if they do not receive comments.

4.6 AOB

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█ notes that as the scheme is progressing quickly, we need to receive any comments from stakeholders asap, in line with the close of the consultation period.

Action: Please could all comments from stakeholders be passed to Arup, via █, by 16th January.

Tyne Rivers Trust Update

█ notes that any actions undertaken to accommodate slowing of the flow of the River Don will be beneficial. █ notes that as well as relieving flood risk downstream of the proposed development, which he acknowledges is outside of the remit of this project, this will provide Water Framework Directive and ecological benefits, which can be claimed as part of the scheme.

Action: JMP and Arup to review findings from River Restoration Centre.

Jacobs update on Testos-Downhill Lane Scheme

From now until March, the EIA for the Testos part of the scheme is being drafted, and the ecology baseline reports are being updated.

In relation to ecology, the headlines are:

█ █
█
█

█ █

█ █
█ noted that █ passing through the culvert under the A19 were record in March 2016 during a culvert inspection).

█ █
█ Emergence / re-entry surveys undertaken at Make-me-Rich Farm, although █ this year so assumed it's a █ that has previously been recorded.

Action: Jacobs and Arup to share summaries of ecological data.

4.7 Next Meeting

Focus of the next Environmental Forum Workshop (likely to be February), can be the Design Code and any updates to the masterplan and the mitigation corridor proposals.

Action: █ to organise date for next forum meeting.