

PRELIMINARY DESK TOP ECOLOGICAL ASSESSMENTS

LANCASTER CITY COUNCIL POTENTIAL ALLOCATED SITES (DEVELOPMENT OPPORTUNITY SITES) (March 2017, report formatting revised May 2018) (At Draft Local Plan stage)

1 INTRODUCTION

The Greater Manchester Ecology Unit (GMEU) was commissioned by Lancaster City Council to under a desk study to identify possible ecological constraints that could affect the potential allocation of sites for development in the emerging Lancaster Local Plan.

1.1 SURVEY BRIEF

The work commission involved:

- Undertaking a desktop analysis of any potential ecological constraints on sites identified for potential allocation for future development in Lancaster City area and
- To make recommendations for sites where further (primary) ecological surveys would be required prior to formal allocation and
- To make recommendations for any sites that are considered unsuitable for allocation because they had been identified as having substantive ecological value.

1.2 PERSONNEL

The desk study was undertaken by Suzanne Waymont MCIEEM Senior Ecologist, Derek Richardson principal Ecologist and Mandy Elford MCIEEM Ecologist with support on the bird assessment being undertaken by Stephen Atkins, Local Record Centre Development Manager, all with the Greater Manchester Ecology Unit.

2 LEGISLATION AND POLICY

The following UK legislation was considered to be most relevant to the proposed site allocations:

- The Conservation of Habitats and Species Regulations 2010 (as amended)
These Regulations designate sites considered to have an international importance for nature conservation. If a development is considered to have the potential to cause harm to the special interest on one or more of these international sites then the development must be subject to a formal Assessment under the terms of the Regulations. Such an Assessment is known as a Habitats Regulations Assessment (HRA).
- The Wildlife and Countryside Act 1981 (as amended)

- The Natural Environment and Rural Communities (NERC) Act (2006)
- Countryside and Rights of Way (CROW) Act 2000
- Protection of Badgers Act 1992

The National Planning Policy Framework (NPPF) 2012 acts as guidance for local planning authorities and decision-takers, both in drawing up plans and making decisions about planning applications.

3 METHODOLOGY

3.1 GIS and Aerial Photography

The boundaries of potential sites for allocation were first digitised onto an Ordnance Survey Base Map on the Ecology Unit's GIS system to enable rapid appraisal of sites against available mapped habitat and species information.

Following the mapping exercise, aerial photography and 'streetview' assessments using freely available datasets (e.g. Google mapping, December 2016) were undertaken to appraise the context of the sites and, as far as possible, to identify the major habitats present.

3.2 Bird Study

Because of the dominating presence of the very large internationally important Morecambe Bay European protected nature conservation site (a site designated primarily for its importance in water and wading bird conservation) on Lancaster the sites were assessed for their potential bird interest by Stephen Atkins, an ornithologist with over 25 years' experience of bird ecology.

In particular the suitability of the sites for use by overwintering birds associated with the Morecambe Bay Special Protection Area (SPA) was assessed using the following factors:

- Habitats present
- Distance from the SPA
- Field size
- Surrounding habitats
- Proximity of factors likely to cause disturbance to birds (e.g. housing)
- Ecological knowledge of bird behaviour

The sites were then assigned a score based on the above criteria. The scoring system was:

- 1 Very low potential to support overwintering birds associated with Morecambe Bay
- 2 Low potential to support overwintering birds associated with Morecambe Bay
- 3 Medium potential to support overwintering birds associated with Morecambe Bay
- 4 High potential to support overwintering birds associated with Morecambe Bay
- 5 Very high potential to support overwintering birds associated with Morecambe Bay

3.3 National/International Designated Sites

To assess whether housing development at each location would have an impact on any nationally or international designated site, Natural England's SSSI Impact Risk Zones (November 2016) were used. SSSI Impact Risk Zones (IRZs) are a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks posed by development proposals to designated nature conservation sites including Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. They define zones around each site which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impact (Natural England 2016).

The results of this appraisal can be found in Appendix 1

3.4 Biological Heritage Sites

Boundaries of Biological Heritage Sites (BHS), local wildlife sites for Lancashire, were obtained from LERN, the Local Environmental Record Centre for Lancashire. The potential impacts of development at each proposed site for allocation were assessed using the following factors:

- Habitats Present using aerial photography on Google Maps (December 2016)
- BHS features of interest
- Distance from BHS
- Potential pathways between housing site and BHS

Summary results of this appraisal can be found in Appendix 2

3.5 Other factors

The habitats present on site were assessed for their potential to support specially protected species and priority habitats based on the information available from up-to-date aerial photographs, OS mapping and any existing ecological information known to the Ecology Unit.

Existing species records from the sites and surrounds were also taken into account.

The summary results of all the above analyses were then combined to identify and describe any likely substantive ecological constraints on allocating the sites.

A precautionary approach has been taken when assessing all sites.

3.6 Study Limitations

An absence of records of species from a site does not imply that the species is absent; rather, it may reflect a lack of survey effort for the site concerned.

Because of the timescales involved in carrying out these appraisals species datasets from some local voluntary recording groups were not able to be obtained.

4 RESULTS

KINGSWAY SOUTH (land at Bulk Road & Lawson's Quay, Central Lancaster)

Site ref. no	365 (SHLAA)
Site Name	KINGSWAY SOUTH (land at Bulk Road & Lawson's Quay, Central Lancaster)
NGR (centre of Site)	348029 462169
Area (Ha)	1.1
Are there existing ecology assessments?	Unknown
Will development of the site affect any statutory nature conservation sites?	No
Would a development proposal be likely to require a Habitats Regulations Assessment?	No – the site is unsuitable for supporting any species associated with Morecambe Bay SPA and the site is too far away for a meaningful pathway to exist for physical abiotic factors to be an issue
Will the development of the site affect any Local Wildlife Sites?	Potential effect on the nearby River Lune BHS from water pollution and/or disturbance effects; both these impacts could be mitigated and would be unlikely to represent a significant barrier to development
Does the Site have any potential to support specially protected species?	Low-moderate potential to support bats in some of the buildings currently on site, mainly because the nearby River represents good feeding habitat for bats. Otherwise no.
Does the Site support, or have the potential to support, priority habitat types?	No
Recommendations for further surveys that would be necessary to inform development plans	Bat surveys required of buildings prior to any planned demolition
Overall recommendations – are there any identified ecological considerations that would impose a significant constraints to future developments?	No

LAND SOUTH OF ULTRAMARK (LUNE INDUSTRIAL ESTATE)

Site ref. no	342 (SHLAA)
Site Name	LAND SOUTH OF ULTRAMARK (LUNE INDUSTRIAL ESTATE)
NGR (centre of Site)	346160 461370
Area (Ha)	0.61
Are there existing ecology assessments?	Yes for sites nearby and adjacent (Lune Industrial Estate)
Will development of the site affect any statutory nature conservation sites?	Potential indirect effects on the Morecambe Bay SPA
Would a development proposal be likely to require a Habitats Regulations Assessment?	Yes – the site is generally unsuitable for supporting any species associated with Morecambe Bay SPA and too far from the Bay for abiotic factors to be an issue but the potential for increased human disturbance to the SPA arising from a population uplift will need to be assessed, particularly in combination with other nearby plans.
Will the development of the site affect any Local Wildlife Sites?	Potential indirect effect on the nearby River Lune BHS from disturbance effects resulting from population uplift.
Does the Site have any potential to support specially protected species?	Low potential to support terrestrial habitat for great crested newts because there are ponds within 500m, although the loss of habitat on this site is unlikely to affect the local conservation status of gcn
Does the Site support, or have the potential to support, priority habitat types?	No
Recommendations for further surveys that would be necessary to inform development plans	Extended Phase 1 habitat survey recommended

Overall recommendations – are there any identified ecological considerations that would impose a significant constraints to future developments?

Not when the site is considered in isolation, although see comments on cumulative effects that could arise from adjacent developments in combination with this site on the Estuary.

FORMER PONTINS HOLIDAY CAMP, CARR LANE (land at Middleton Towers, Middleton)

Site ref. no	418 (SHLAA)
Site Name	FORMER PONTINS HOLIDAY CAMP, CARR LANE (land at Middleton Towers, Middleton)
NGR (centre of Site)	341 300 458260
Area (Ha)	22
Are there existing ecology assessments?	Unknown
Will development of the site affect any statutory nature conservation sites?	Yes , the is directly adjacent to the Morecambe Bay SPA / SAC
Would a development proposal be likely to require a Habitats Regulations Assessment?	Yes – the site may support birds associated with the SPA and Natterjack Toads associated with the SAC and there is potential for increased human disturbance to the SPA arising from a population uplift that will need to be assessed
Will the development of the site affect any Local Wildlife Sites?	Yes , the BHS 'Carr Lane Meadows' is within the site boundary
Does the Site have any potential to support specially protected species?	Yes , some potential to support Natterjack toads and birds associated with the Bay
Does the Site support, or have the potential to support, priority habitat types?	Yes , sand dunes
Recommendations for further surveys that would be necessary to inform development plans	Extended Phase 1 habitat survey recommended and assessment of potential to support amphibians, particularly Natterjack Toads

Overall recommendations – are there any identified ecological considerations that would impose a significant constraints to future developments?

Yes – the site is adjacent to European protected sites, contains a BHS site and the site has potential to support protected species

CAR PARK BEHIND WINTER GARDENS (Morecambe festival Market and Surrounding Area)

Site ref. no	825 (LPSA)
Site Name	CAR PARK BEHIND WINTER GARDENS (Morecambe festival Market and Surrounding Area)
NGR (centre of Site)	343000 464290
Area (Ha)	5.7
Are there existing ecology assessments?	Unknown
Will development of the site affect any statutory nature conservation sites?	Yes , the is directly adjacent to the Morecambe Bay SPA / SAC
Would a development proposal be likely to require a Habitats Regulations Assessment?	Yes – there is potential for increased human disturbance to the SPA arising from a population uplift close to the SPA that will need to be assessed, but given the location of the site and the current high level of public use this is unlikely to be a significant constraint on development
Will the development of the site affect any Local Wildlife Sites?	No
Does the Site have any potential to support specially protected species?	No – built up area / hardstanding
Does the Site support, or have the potential to support, priority habitat types?	No
Recommendations for further surveys that would be necessary to inform development plans	Assessment as part of an HRA
Overall recommendations – are there any identified ecological considerations that would impose a significant constraints to future developments?	No , although an HRA will still be required

FORMER TDG SITE, WARTON ROAD (Land at former TDG Depot, Warton Road Carnforth)

Site ref. no	84 (SHLAA)
Site Name	FORMER TDG SITE, WARTON ROAD (Land at former TDG Depot, Warton Road Carnforth)
NGR (centre of Site)	349820 470950
Area (Ha)	8.25
Are there existing ecology assessments?	Unknown
Will development of the site affect any statutory nature conservation sites?	Potentially Yes , there is a potential pathway for water pollution to the Morecambe Bay SPA / SAC and there is some potential for increased human disturbance arising from population uplift. Both impacts could be mitigated.
Would a development proposal be likely to require a Habitats Regulations Assessment?	Yes – see above
Will the development of the site affect any Local Wildlife Sites?	The site is close to Carnforth Ironworks BHS but it ought to be possible to avoid or mitigate any harmful impacts
Does the Site have any potential to support specially protected species?	Some of the buildings on site have some potential to support bats , mainly because there is good bat feeding habitat nearby
Does the Site support, or have the potential to support, priority habitat types?	No
Recommendations for further surveys that would be necessary to inform development plans	Assessment as part of an HRA. Bat surveys prior to any planned demolitions
Overall recommendations – are there any identified ecological considerations that would impose a significant constraints to future developments?	No , although an HRA will still be required

LUNE INDUSTRIAL ESTATE, NEW QUAY ROAD (including larger area and land to the south)

Site ref. no	256 + 377 + wider area (SHLAA)
Site Name	LUNE INDUSTRIAL ESTATE, NEW QUAY ROAD (including larger area)
NGR (centre of Site)	346160 461890
Area (Ha)	
Are there existing ecology assessments?	Unknown
Will development of the site affect any statutory nature conservation sites?	Potentially Yes , there is a potential pathway for water pollution to the Morecambe Bay SPA / SAC and there is some potential for increased human disturbance arising from population uplift. There is at least some potential for the open field to the south which forms part of this wider site to be used by birds displaced from the Bay.
Would a development proposal be likely to require a Habitats Regulations Assessment?	Yes – see above
Will the development of the site affect any Local Wildlife Sites?	The site is close to the River Lune BHS but it ought to be possible to avoid or mitigate any harmful impacts on the BHS that could arise from development of this wider site (e.g. water pollution).
Does the Site have any potential to support specially protected species?	Some of the buildings on site have some potential to support bats , mainly because there is good bat feeding habitat nearby. There is some potential for the open fields to the south to support great crested newts.
Does the Site support, or have the potential to support, priority habitat types?	No
Recommendations for further surveys that would be necessary to inform development plans	Assessment of any development as part of an HRA. Bat surveys prior to any planned demolitions. Great crested newt assessment (open land)

Overall recommendations – are there any identified ecological considerations that would impose a significant constraints to future developments?

The proximity of the site to the Morecambe Bay European site and any potential harm that could be caused to the special interest of the Bay will need to be fully considered in any development proposals

FORREST HILLS

Site ref. no	808 AND 809 (LPSA)
Site Name	Forrest Hills
NGR (centre of Site)	
Area (Ha)	
Are there existing ecology assessments?	Unknown
Will development of the site affect any statutory nature conservation sites?	Parts of these very large sites lie within the 'impact risk zones' for the SSSIs at the Lune Estuary and the Bowland Fells and are within the risk zones for the European protected sites at the Bowland Fells and Morecambe Bay.
Would a development proposal be likely to require a Habitats Regulations Assessment?	Yes – see above
Will the development of the site affect any Local Wildlife Sites?	No
Does the Site have any potential to support specially protected species?	Yes – foraging bats, Barn owls, great crested newts, water voles, otters
Does the Site support, or have the potential to support, priority habitat types?	Yes – lowland broadleaved woodland, potentially species-rich grassland
Recommendations for further surveys that would be necessary to inform development plans	Assessment of development as part of an HRA. <ul style="list-style-type: none">• Extended Phase 1 habitat survey• Surveys for Water Voles• Surveys for Otters• Surveys for Bats• Surveys for Great Crested Newts• Surveys for Birds

Overall recommendations – are there any identified ecological considerations that would impose a significant constraints to future developments?

Potentially yes across the whole of these very large sites. Further surveys will be required.

5.0 ECOLOGICAL CONSTRAINTS – IMPLICATIONS & RECOMMENDATIONS

Based on the results of the analysis undertaken above no sites have been ruled out as being unsuitable for allocation at this stage because of substantive ecological constraints.

However further surveys / assessments are recommended on a number of sites prior to their formal allocation and/or at application stage. These sites are:

Site No.	Site name	Further Survey Required (Y/N)	Type of survey required prior to allocation / application	HRA likely to be required? (Y/N)	Wintering Birds Potential
365 (SHLAA)	Kingsway South	Y	Bat surveys required prior to any demolitions (application stage)	N	1
342 (SHLAA)	Land South of Ultramark	Y	Extended Phase1 survey (application stage), assessment of recreational impacts on the SPA as part of an HRA	Y	2
418 (SHLAA)	Former Pontins Holiday Camp	Y	Amphibian surveys and extended phase 1 surveys. Birds surveys (application stage)Assessment of impacts on the SPA will be needed as part of an HRA	Y	3
825 (SHLAA)	Car Park Behind Winter Gardens	N	Assessment of recreational impacts on the SPA as part of an HRA may be needed	Y	1
84 (SHLAA)	Former TDG Site Warton Road	Y	Bat surveys required prior to any demolitions (application stage).	Y	2
256 + 377 (SHLAA)	Lune Industrial Estate	Y	Bat surveys required prior to any demolitions (application stage). Great crested newts. Assessment of impacts on the SPA will be needed as part of an HRA	Y	2

808 AND 809 (LPSA)	Forrest Hills	Y	Extended Phase 1 survey, breeding birds, great crested newts (prior to allocation), water voles, otters and bats (application stage)	Y	2
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APPENDIX 1 Risks to Birds Associated with European Protected Sites

Site ref	Site name	Dominant habitats present	Distance from SPA (km)	Area (ha)	Importance for birds (score)	Comment
365	Kingsway South	Existing built development	4	1.1	1	Habitats are unsuitable for supporting wintering bird assemblages
342	Land South of Ultramark	Open grassland, scrub woodland, hedgerows, some built development close to built-up areas	0.8	0.61	2	Although the site is generally unsuitable for supporting any species associated with Morecambe Bay SPA and too far from the Bay for abiotic factors to be an issue but the potential for increased human disturbance to the SPA arising from a population uplift will need to be assessed, particularly in combination with other nearby plans.
418	Former Pontins Holiday Camp	Disused and now demolished holiday camp, some new built development, bare ground, sand dunes, grassland and ponds	Immediately adjacent	22	3	Adjacent to the SPA, although disturbance effects and lack of open habitats may discourage bird use
825	Car Park behind Winter Gardens	Hard standing and built development	0.3	5.7	1	Although close to the SPA the built up and disturbed nature of the site make it unsuitable for use by birds
84	Former TDG Site, Warton Road	Existing built development	1	8.25	2	Although the site is generally unsuitable for supporting any species associated with Morecambe Bay SPA the potential for increased human disturbance to the SPA arising from a population uplift will

						need to be assessed, particularly in combination with other nearby plans.
256 + 377	Lune Industrial Estate	Built development with some open habitats (grassland/scrub	0.8	-		Although the site is generally unsuitable for supporting any species associated with Morecambe Bay SPA and too far from the Bay for abiotic factors to be an issue but the potential for increased human disturbance to the SPA arising from a population uplift will need to be assessed, particularly in combination with other nearby plans.
808 and 809	Forrest Hills	Pastoral farmland, woodlands, hedgerows, ponds, scattered habitation – rural landscape	3	-	2/3	Very large area, although some distance from the SPA there are suitable habitats present needs further assessment.

APPENDIX 2 ADDITIONAL LANCASTER ALLOCATIONS – POTENTIAL RISKS OF DEVELOPMENT TO NATIONAL/INTERNATIONAL DESIGNATED SITES

Nb the following is based on the 'SSSI Impact Risk Zones as published by Natural England, although the type of development as described in the IRZs has been used to determine the likely sources of harm to protected sites

Site Ref	Site name	Nationally Designated Sites	International Sites	Potential Risks to designated sites which would need to be assessed as part of a planning application
342	Land South of Ultramark	Lune Estuary SSSI Morecambe Bay SSSI	Morecambe Bay and Duddon Estuary SAC/SPA/Ramsar	Air Pollution Water Pollution Direct Disturbance Indirect Disturbance
418	Former Pontins Holiday Camp Carr Lane	Lune Estuary SSSI Morecambe Bay SSSI	Morecambe Bay and Duddon Estuary SAC/SPA/Ramsar	Air Pollution Water Pollution Direct Disturbance Indirect Disturbance
825	Car Park behind Winter Gardens	Morecambe Bay SSSI	Morecambe Bay and Duddon Estuary SAC/SPA/Ramsar	Air Pollution Water Pollution Indirect Disturbance
84	Former TDG Site Warton Road	Morecambe Bay SSSI	Morecambe Bay and Duddon Estuary SAC/SPA/Ramsar	Air Pollution Water Pollution Indirect Disturbance
256 and 377	Lune Industrial Estate	Morecambe Bay SSSI Lune Estuary SSSI	Morecambe Bay and Duddon Estuary SAC/SPA/Ramsar	Air Pollution Water Pollution Direct Disturbance Indirect Disturbance

808 and 809	Forrest Hills	Morecambe Bay SSSI Lune Estuary SSSI Bowland Fells SSSI	Morecambe Bay and Duddon Estuary SAC/SPA/Ramsar	Air Pollution Water Pollution Direct Disturbance
			Bowland Fells SPA	Indirect Disturbance

APPENDIX 3 Risks to Local Wildlife Sites

Site ref	Name	BHS concerned	BHS ID	Approximate distance (m)	Habitat Interest
365	Kingsway South	River Lune	LSRLU	100	Av8k, Br1a, Br3, Ff3, Ff4a, Fi1, Ma1a, Mo1, Ri1
342	Land South of Ultramark	River Lune	LSRLU	100	Av8k, Br1a, Br3, Ff3, Ff4a, Fi1, Ma1a, Mo1, Ri1
418	Former Pontins Holiday Camp	Freemans Wood	46SE07	100	Ff3
		Carr Lane Meadows	45NW03	Within the allocation	Gr1
825	Car Park behind Winter Gardens	Middleton Former Refinery Site	45NW02	250	Ar1, Av8, Ff4a, Gr3, Hm1, Od5
		None within 1km			
84	Former TDG Site, Warton Road	Carnforth Ironworks	57W02	50	Ar1, Ff4a, Ff4b, In1, Or5
256 + 377	Lune Industrial Estate	River Lune	LSRLU	100	Av8k, Br1a, Br3, Ff3, Ff4a, Fi1, Ma1a, Mo1, Ri1
		Freemans Wood	46SE07	100	Ff3
808 and 809	Forrest Hills	None within 1km	-	-	-

Summary of risks to Local Wildlife Sites

Site Ref	Site Name	Biological Heritage Site	Potential Risk Arising from development
256 and 377	Lune Industrial Estate	Freeman's Wood River Lune	Air Pollution Water Pollution Direct Disturbance Indirect Disturbance
84	Former TDG Site, Warton Road	Carnforth Ironworks	Indirect Disturbance
418	Former Pontins Holiday Camp	Carr Lane Meadows	Direct Disturbance / Loss
342	Land South of Ultramark	Freeman's Wood River Lune	Air Pollution Water Pollution Direct Disturbance Indirect Disturbance

REFERENCES

CIEEM (2013) *Guidelines for preliminary ecological appraisal*.
http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf

CIEEM (2015) *Guidelines for Ecological Report Writing*
http://www.cieem.net/data/files/Publications/Ecological_Report_Writing_23.12.2015.pdf