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# Slyne-With-Hest Neighbourhood Plan 2017- 2031 Habitats Regulations Assessment

Slyne with Hest Parish Council

April 2019

## Quality information

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# 1. Introduction

## Background to the Project

AECOM has been appointed by Slyne-with-Hest Parish Council (“the Council”) to assist in undertaking a Habitats Regulations Assessment (HRA) of the potential effects of Slyne-with-Hest Parish Council’s Neighbourhood Plan (2017-2031) on Natura 2000 Network and Ramsar sites. The objectives of the assessment are to:

- identify any aspects of the Plan that would cause a likely significant effect on Natura 2000 sites, otherwise known as European sites or internationally designated sites; and,
- to advise on appropriate policy mechanisms for delivering mitigation where such effects were identified.

The HRA work undertaken to support this Neighbourhood Plan draws extensively, where appropriate, on the work undertaken for the Slyne-with-Hest Neighbourhood Plan Habitats Regulations Assessment Screening Report July, 2018, and the consultation response from Natural England (dated 6<sup>th</sup> August 2018) relating to the Slyne-with-Hest Neighbourhood Plan Habitats Regulations Assessment Screening Report, July 2018.

The HRA is required to evaluate the Likely Significant Effects (LSE) of the Slyne-with-Hest Neighbourhood Plan on internationally important wildlife sites within the zone of influence, and determine if there is a relevant connecting pathway.

Neighbourhood Plans are required to be in conformity with the relevant Local Plan for Lancaster District, in which current planning policy for the district is established. This currently consists of saved policies within the 2004 adopted Lancaster District Local Plan as Saved by the Secretary of State under paragraph 1(2) of Schedule 8 to the Planning and Compulsory Purchase Act 2004 (where not superseded by policies within the Core Strategy, Development Management Document or Morecambe Area Action Plan), the Core Strategy adopted in July 2008, the Development Management Document adopted in December 2014 and the Morecambe Area Action Plan adopted in December 2014.

The council is continuing to progress preparation of its new Local Plan, in the form of the Strategic Policies and Land Allocations DPD and the Review of the Development Management DPD. These documents were submitted to the Planning Inspectorate for examination in May 2018. At Full Council on Wednesday 20th December 2017 the Strategic Policies & Land Allocations DPD and the Review of the Development Management DPD were approved for Publication and Submission to the Government via the Secretary of State. A provisional date 2 April 2019 has been set for the start of the examination hearing.<sup>1</sup> Although these are not yet adopted, emerging local planning policy is a material consideration for a Neighbourhood Plan.

The Neighbourhood Plan area for Slyne-with-Hest Parish Council was formally designated in April 2016. This confirmed the Parish Council’s commitment to preparing a Neighbourhood Plan and identified the proposed Neighbourhood Plan area.

It has been agreed between Lancaster Council and the Neighbourhood Plan group that 40 houses are to be allocated within the Slyne-with-Hest Neighbourhood Plan. In addition, Neighbourhood Planning authorities have no authority to consent or refuse transport or highways schemes that fall within the remit of the local highways authority or Highways England. They can only express their support (or otherwise) for such schemes and set out their opinions in their Neighbourhood Plan. These opinions would constitute a material consideration in the planning process but the inclusion of a highways scheme in a Neighbourhood Plan is essentially on a ‘for information’ basis since the making of the

<sup>11</sup> <http://www.lancaster.gov.uk/planning/planning-policy/about-the-local-plan> [visited February 2019]

plan could not in itself result in delivery of the road scheme. They do not therefore constitute free standing policy.

## Legislation

The need for HRA is set out within Article 6 of the EC Habitats Directive 1992, and interpreted into British law by the Conservation of Habitats & Species Regulations 2017, as amended<sup>2</sup> (**Box 1**). The ultimate aim of the Habitats Directive is to “*maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest*” (Habitats Directive, Article 2(2)). This aim relates to habitats and species, not the European sites themselves, although the sites have a significant role in delivering favourable conservation status. European sites (also called Natura 2000 sites) can be defined as actual or proposed/candidate Special Areas of Conservation (SAC) or Special Protection Areas (SPA). It is also Government policy for sites designated under the Convention on Wetlands of International Importance (Ramsar sites) to be treated as having equivalent status to Natura 2000 sites.

The Habitats Regulations applies the precautionary principle to Natura 2000 sites (SAC and SPA). As a matter of UK Government policy, Ramsar sites are given equivalent status. For the purposes of this assessment candidate SACs (cSACs), proposed SPAs (pSPAs) and proposed Ramsar (pRamsar) sites are all treated as fully designated sites. In this report we use the term “European designated sites” to refer collectively to the sites listed in this paragraph

The Habitats Directive applies the precautionary principle to protected areas. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. This is in contrast to the SEA Directive which does not prescribe how plan or programme proponents should respond to the findings of an environmental assessment; merely that the assessment findings (as documented in the ‘environmental report’) should be ‘taken into account’ during preparation of the plan or programme. In the case of the Habitats Directive, plans and projects may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

On April 13<sup>th</sup> 2018 there was a change as to when mitigation can be applied during a Habitats Regulations Assessment. The Court of Justice of the European Union published its ruling in the Case C323/17 (known as ‘People Over Wind’) with regards to the Habitats Directive. It had been the UK practice that mitigation that was part of the project/plan could be taken into account at the screening stage of a Habitats Regulations Assessment. However, the latest judgement states that the Habitats Directive “*must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site*”. In light of this ruling, this new report has been created and contains both Screening (which looks at Likely Significant Effects) and Appropriate Assessment sections. All avoidance and reduction measures are discussed in the Appropriate Assessment section.

All the European sites mentioned in this document are illustrated in **Appendix A, Figure A1**. In order to ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the plan or project in question:

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<sup>2</sup> The Regulations were slightly amended at the end of 2018 but not of the amendments affect the HRA process as applied to plans

## Box 1: The legislative basis for Appropriate Assessment

### Habitats Directive 1992

*“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives.”*

Article 6 (3)

### Conservation of Habitats and Species Regulations 2017 (as amended)

*“Where a land use plan is likely to have a significant effect on a European site ... the plan making authority must make an appropriate assessment of the implications for the plan or project in view of that site’s conservation objectives... The plan making authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site.”*

Regulation 105

Over the years the phrase ‘Habitats Regulations Assessment’ has come into wide currency to describe the overall process set out in the Conservation of Habitats and Species Regulations from screening through to Imperative Reasons of Overriding Public Interest (IROPI). This has arisen in order to distinguish the process from the individual stage described in the law as an ‘appropriate assessment’. Throughout this report we use the term Habitats Regulations Assessment for the overall process.

## Report Layout

**Chapter 2** of this report explains the process by which the HRA has been carried out. **Chapter 3** explores the relevant pathways of impact. **Chapter 4** undertakes the Test of Likely Significant Effects of the policies and site allocations of the Plan (considered ‘alone’ and ‘in-combination’). **Chapter 5** undertakes the Appropriate Assessment ‘alone’ by examining in detail those policies ‘screened in’ and what impact pathways could lead to adverse significant effects ‘alone.’ **Chapter 6** examines the ‘in-combination’ assessment resulting from the Plan policies and other projects and plans. **Chapter 7** contains the conclusion and a summary of recommendations.

## Consultation

Consultation was undertaken with Natural England for the Slyne-with-Hest Neighbourhood Plan Habitats Regulations Assessment Screening Report (not produced by AECOM) in July 2018. Natural England responded with a number of concerns including the requirement for assessment at the Appropriate Assessment stage due to the ‘People over Wind’ case prohibiting taking mitigation into account at determination of likely significant effects. This request was made because the initial screening HRA report took account of mitigation. Natural England also noted that a number of site allocation references for which only limited information was available at the time would need to be re-assessed once additional information was received.

The above concerns are addressed in this HRA, which assesses the policies of the Neighbourhood Plan including an appropriate assessment.



## 2. Methodology

### Introduction

This section sets out the approach and methodology for undertaking the Habitats Regulations Assessment (HRA). HRA itself operates independently from the Planning Policy system, being a legal requirement of a discrete Statutory Instrument. Therefore there is no direct relationship to the National Planning Policy Framework (NPPF) and the 'Tests of Soundness'.

### A Proportionate Assessment

Project-related HRA often requires bespoke survey work and novel data generation in order to accurately determine the significance of effects. In other words, to look beyond the risk of an effect to a justified prediction of the actual likely effect and to the development of avoidance or mitigation measures.

However, the draft DCLG (now MHCLG) guidance<sup>3</sup> (described in greater detail later in this chapter) makes it clear that when implementing HRA of land-use plans, the Appropriate Assessment (AA) should be undertaken at a level of detail that is appropriate and proportional to the level of detail provided within the plan itself:

*"The comprehensiveness of the [Appropriate] assessment work undertaken should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects [of a strategic land use plan] in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project."*

More recently, the Court of Appeal<sup>4</sup> ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be "achieved in practice" then this would suffice to meet the tests of the regulations. This ruling has since been applied to a planning permission (rather than a Core Strategy)<sup>5</sup>. In this case the High Court ruled that for "a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of reg 61 of the Habitats Regulations".

In other words, there is a tacit acceptance that AA can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers as illustrated in **Box 2**.

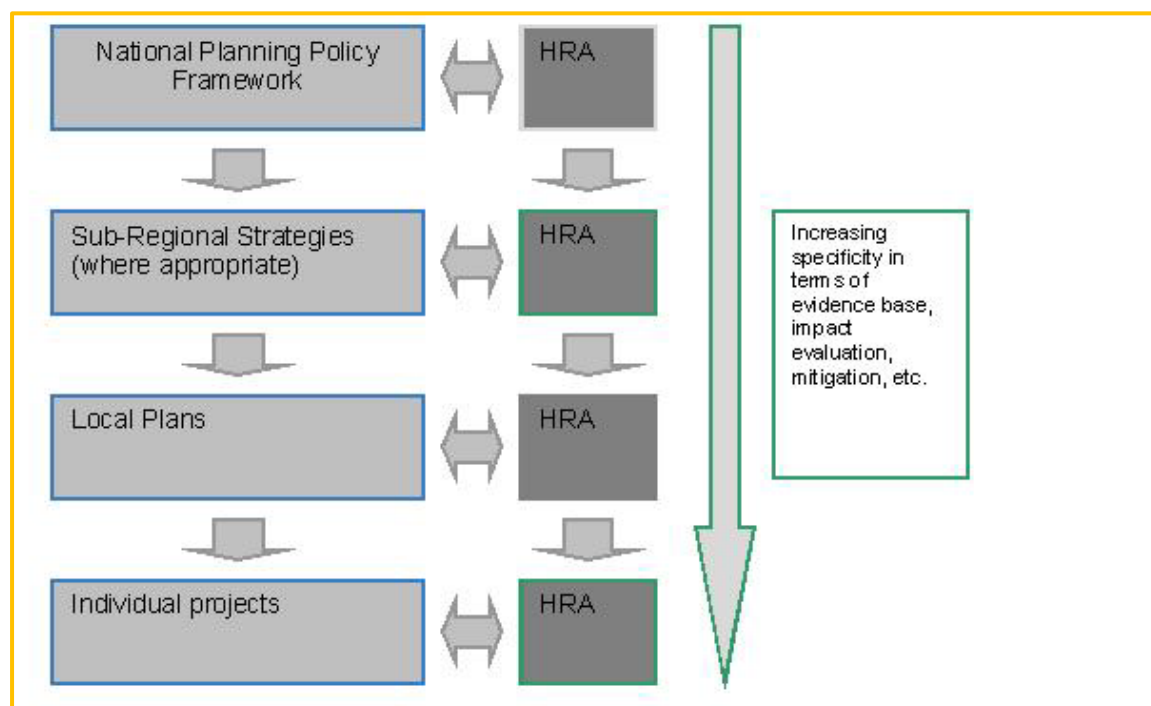
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<sup>3</sup> DCLG (2006) Planning for the Protection of European Sites, Consultation Paper

<sup>4</sup> No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17<sup>th</sup> February 2015

<sup>5</sup> High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

## Box 2: Tiering in HRA of Land Use Plans



For a Local Plan the level of detail concerning the developments that will be delivered is usually insufficient to make a highly detailed assessment of significance of effects. For example, precise and full determination of the impacts and significant effects of a new settlement will require extensive details concerning the design of the new housing sites, including layout of greenspace and type of development to be delivered in particular locations, yet these data will not be decided until subsequent stages.

The most robust and defensible approach to the absence of fine grain detail at this level is to make use of the precautionary principle. In other words, the plan is never given the benefit of the doubt (within the limits of reasonableness); it must be assumed that a policy/measure is likely to have an impact leading to a significant adverse effect upon an internationally designated site unless it can be clearly established otherwise.

## The Process of HRA

The HRA is being carried out in the continuing absence of formal central Government guidance. MHCLG released a consultation paper on AA of Plans in 2006<sup>6</sup>. As yet, no further formal guidance has emerged from MHCLG. However, Natural England has produced its own informal internal guidance and Natural Resources Wales has produced guidance for Welsh authorities on "*the appraisal of plans under the Habitats Regulations*" as a separate guidance document aimed at complementing and supplementing the guidance/advice provided within Technical Advice Note 5: Nature Conservation and Planning<sup>7</sup>. Additionally DTA Publications have produced The Habitats Regulations Assessment Handbook which reflects available HRA guidance<sup>8</sup>. Although there is no requirement for an HRA to follow any guidance, it has been referred to in producing this HRA.

**Box 3** outlines the stages of HRA according to current draft MHCLG guidance (which, as government guidance applicable to English authorities is considered to take precedence over other sources of guidance). The stages are essentially iterative, being revisited as necessary in response to more

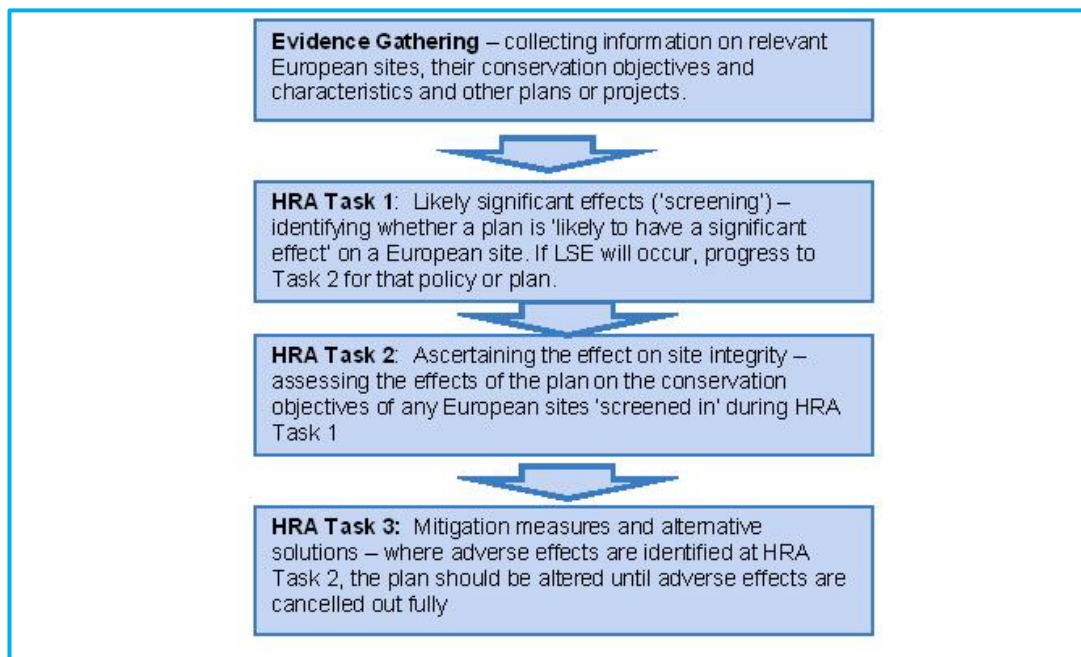
<sup>6</sup> DCLG (2006) Planning for the Protection of European Sites, Consultation Paper

<sup>7</sup> Welsh Government. Technical Advice Note 5, Nature Conservation and Planning (2009) <http://gov.wales/topics/planning/policy/tans/tan5/?lang=en> [accessed 01/12/2016]

<sup>8</sup> DTA Publications (2017). The Habitats Regulations Assessment Handbook

detailed information, recommendations and any relevant changes to the plan until no likely significant effects remain.

### Box 3: Four-Stage Approach to Habitats Regulations Assessment



In practice, this broad outline requires some amendment in order to feed into a developing land use plan such as a Local Plan. The four staged approach shows for simplicity a basic progression from step to step, but it is quite usual for the process to be more iterative and cyclical, with each stage being fed back to the local authority to inform further amendments to the plan which are then re-assessed for implications on internationally designated sites. The following process has been adopted for carrying out the subsequent stages of the HRA.

## Task One: Test of Likely Significant Effect

The first stage of any Habitats Regulations Assessment is a Likely Significant Effect test - essentially a high level risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

*“Is the Plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?”*

In evaluating significance, AECOM have relied on professional judgment and experience of working with the other local authorities on similar issues. The level of detail concerning developments that will be permitted under land use plans is rarely sufficient to make a detailed quantification of effects. Therefore, a precautionary approach has been taken (in the absence of more precise data) assuming as the default position that if a likely significant effect (LSE) cannot be confidently ruled out, then the assessment must be taken the next level of assessment Task Two: Appropriate Assessment. This is in line with the April 2018 court ruling relating to ‘People Over Wind’ where mitigation and avoidance measures are to be included at the next stage of assessment.

## Task Two: Appropriate Assessment

European Site(s) which have been ‘screened in’ during the previous Task will have a detailed assessment undertaken on the effect of the policies on the European Site(s) site integrity. Avoidance and mitigation measures to avoid adverse significant effects will be incorporated where necessary.

As established by case law, ‘appropriate assessment’ is not a technical term; it simply means whatever further assessment is necessary to confirm whether there would be adverse effects on the integrity of any European sites that have not been dismissed at screening. Since it is not a technical term it has no firmly established methodology except that it essentially involves repeating the analysis

for the likely significant effects stage, but to a greater level of detail on a smaller number of policies and sites, this time with a view to determining if there would be adverse effects on integrity. For example, for the air quality pathway the appropriate assessment is where detailed traffic and air quality modelling is reported.

One of the key considerations during appropriate assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the appropriate assessment takes any policies or allocations that could not be dismissed following the high-level Screening analysis and analyse the potential for an effect in more detail, with a view to concluding whether there would actually be an adverse effect on integrity (in other words, disruption of the coherent structure and function of the European site(s)).

## The Scope

There is no pre-defined guidance that dictates the physical scope of an HRA of a Neighbourhood Plan. Therefore, in considering the physical scope of the assessment we were guided primarily by the identified impact pathways rather than by arbitrary “zones”, i.e. a source-pathway-receptor approach. Current guidance suggests that the following European sites be included in the scope of assessment:

- All sites within the Slyne-with-Hest Neighbourhood Plan Boundary;
- All sites with pathways of 10-15 km of the plan boundary.

Briefly defined, pathways of impact are routes by which a change in activity within the Local Plan area can lead to an effect upon a European site. In terms of the second category of European site listed above, MHCLG guidance states that the AA should be “*proportionate to the geographical scope of the [plan policy]*” and that “*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*” (CLG, 2006, p.6<sup>9</sup>).

Morecambe Bay and Duddon Estuary Special Protection Area (SPA), Morecambe Bay Ramsar and Morecambe Bay Special Area of Conservation (SAC) fall within the Slyne-with-Hest Neighbourhood Plan boundary (refer to Table 1 below). Locations of European designated sites are illustrated in **Appendix A, Figure A1**, and full details of all European designated sites discussed in this document can be found in **Appendix B**, detailing their qualifying features, conservation objectives and threats to integrity.

**Note** that the inclusion of a European sites or pathway in the table below does not indicate that an effect is expected but rather than these are pathways for investigation.

**Table 1: Physical Scope of the HRA**

European Designated Site	Distance (km) from Neighbourhood Plan Boundary	Reason for Inclusion (Potential Impact Pathways Present)
Morecambe Bay and Duddon Estuary SPA	Within the Neighbourhood plan boundary.	<ul style="list-style-type: none"> <li>▪ Fishing and harvesting aquatic resources</li> <li>▪ Outdoor sports and leisure activities, recreational activities</li> <li>▪ Marine water pollution</li> <li>▪ Air pollution and air-borne pollutants</li> <li>▪ Interspecific faunal relations</li> <li>▪ Changes in abiotic conditions</li> <li>▪ Changes in biotic conditions</li> </ul>
Morecambe Bay Ramsar	Within the Neighbourhood plan boundary.	<ul style="list-style-type: none"> <li>▪ No newly reported threats.</li> </ul>
Morecambe Bay SAC	Within the Neighbourhood plan boundary.	<ul style="list-style-type: none"> <li>▪ Outdoor sports and leisure activities, recreational activities</li> <li>▪ Fishing and harvesting aquatic resources</li> <li>▪ Air pollution and air-borne pollutants</li> </ul>

<sup>9</sup> Now MHCLG

European Designated Site	Distance from Neighbourhood Plan Boundary (km)	Reason for Inclusion (Potential Impact Pathways Present)
Bowland Fells SPA	6 km	<ul style="list-style-type: none"> <li>▪ Fire and fire suppression</li> <li>▪ Reduced fecundity and genetic depression</li> <li>▪ Changes in biotic conditions</li> </ul>
Calf Hill & Cragg Woods SAC	6 km	<ul style="list-style-type: none"> <li>▪ Air pollution and air-borne pollutants.</li> </ul>
Morecambe Bay Pavements SAC	7 km	<ul style="list-style-type: none"> <li>▪ Grazing</li> <li>▪ Forest and plantation management and use</li> <li>▪ Biocenotic evolution/succession</li> <li>▪ Problematic native species</li> </ul>
Leighton Moss SPA	8 km	<ul style="list-style-type: none"> <li>▪ Pollution to ground water (point and diffuse sources)</li> <li>▪ Problematic native species</li> <li>▪ Human induced changes in hydraulic conditions</li> <li>▪ Changes in abiotic conditions</li> </ul>
Leighton Moss Ramsar	8 km	<p>The site is currently vulnerable to:</p> <ul style="list-style-type: none"> <li>▪ sedimentation /siltation which increases turbidity and a loss of aquatic flora which results in a decrease in the quality of bittern habitat.</li> <li>▪ Pollution – pesticides / agricultural runoff.</li> </ul>
Witherslack Mosses SAC	11.5 km	<ul style="list-style-type: none"> <li>▪ Air pollution and air-borne pollutants,</li> <li>▪ Invasive non-native species</li> <li>▪ Human induced changes in hydraulic conditions,</li> <li>▪ Biocenotic evolution/ succession.</li> </ul>
Roudsea Wood & Mosses SAC	13 km	<ul style="list-style-type: none"> <li>▪ Forest and plantation management and use</li> <li>▪ Invasive non-native species</li> <li>▪ Problematic native species</li> <li>▪ Human induced changes in hydraulic conditions</li> <li>▪ Biocenotic evolution/succession.</li> </ul>

## The “In Combination” Scope

It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the European designated site(s) in question.

For the purposes of this assessment, we have determined that, due to the nature of the identified impacts, the key other plans and projects with potential for in combination likely significant effects are those schemes that have the following impact pathways: recreational pressure, atmospheric pollution, changes in hydraulic conditions and loss of functionally linked land. The following plans have been assessed for their in combination impact to interact with the Slyne-with-Hest Neighbourhood Plan:

- Lancaster City Council Core strategy DPD (adopted 2008);
- Lancaster District Local Plan (adopted 2004)
- Lancaster District Development Management DPD (adopted 2014)
- Lancaster Strategic Policies and Land Allocations DPD (submission version May 2018)
- Morecombe Area Action Plan (adopted 2014)
- Arnsdale and Silverdale Area of Outstanding Natural Beauty (AONB) DPD (submitted for examination 2018)
- United Utilities (2019) Water Resources Management Plan<sup>10</sup>

<sup>10</sup> <https://www.unitedutilities.com/corporate/about-us/our-future-plans/water-resources/developing-our-water-resources-management-plan/>

When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e. to ensure that those projects or plans which in themselves have minor impacts are not simply dismissed on that basis, but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal *Waddenzee*<sup>11</sup> case. The 2015 independent housing requirements study prepared on behalf of Lancaster City Council (by Turley Associates) suggests that Lancaster district needs to plan for around 13,000-14,000 new homes over the 20 years from 2011 to 2031, to support the needs of a growing and changing community and provide opportunities for economic growth.<sup>12</sup> Meeting this requirement is the purpose of the Lancaster Strategic Policies and Land Allocations DPD.

Table 2 shows the strategic sites, non-strategic sites, development opportunities, non-allocated sites with permissions, and student accommodation in Policy SP6 *The Delivery of New Homes* from the Submission version of the Strategic Policies and Land Allocations DPD (May 2018). Between 2011/12 and 2033/34 the Council will seek to deliver a net minimum delivery of 522 new dwellings per annum over a 23 year delivery period, equivalent to 12,000 new dwellings

**Table 2: Provides details of housing delivery throughout Lancaster**

Site Name and Policy Reference	No of Dwellings	No of Dwellings Anticipated in the Plan Period
Bailrigg Garden Village (SG1)	3500	1,655
East Lancaster Strategic Site (SG8)	900	900
North Lancaster Strategic Site (SG10)	700	700
Land at Lundsfield Quarry (SG13)	200	200
Land South of Windermere Road, Carnforth (SG14)	500	500
<b>TOTAL STRATEGIC SITE CONTRIBUTION THROUGH THE PLAN PERIOD</b>		<b>3,955</b>
Non-strategic site delivery (H1-H9)		1,241
Development Opportunities (DOS1-DOS11)		925
Non-Allocated Sites with Permissions (no policy ref)		1,679
Student Accommodation (no policy ref)		1,407
Sites Identified via Arnside and Silverdale AONB DPD		22
Additional Supply Including Neighbourhood Plan Delivery Expectations(no policy ref)		1,,385
Completions 2011/12-2015/16		1,442
<b>TOTAL</b>		<b>12,056</b>

Source: *Taken from Submission version of the Strategic Policies and Land Allocations DPD (May 2018)*<sup>13</sup>

It should be noted that, while the broad potential impacts of these other projects and plans will be considered, we have not carried out full HRA on each of these plans – we have however drawn upon existing HRA that have been carried out for surrounding regions and plans.

<sup>11</sup> *Waddenzee* case (Case C-127/02, [2004] ECR-I 7405)

<sup>12</sup> <https://planningdocs.lancaster.gov.uk/NorthgatePublicDocs/00918337.pdf>

<sup>13</sup> [http://www.lancaster.gov.uk/planning/planning-policy/examination-stage?\\_sm\\_au\\_=\\_iVV57FF5kSDnk55N](http://www.lancaster.gov.uk/planning/planning-policy/examination-stage?_sm_au_=_iVV57FF5kSDnk55N)

## 3. Pathways of Impact

The following indirect pathways of impact are considered relevant to the HRA of the Plan:

- Recreational pressure and disturbance
- Atmospheric pollution
- Loss of functionally linked land outside of the European Site
- Human induced changes in hydraulic condition

### Recreational Pressure and Disturbance

Concern regarding the effects of disturbance on birds stems from the fact that they are expending energy unnecessarily and the time they spend responding to disturbance is time that is not spent feeding (this will apply all year round)<sup>14</sup>. Disturbance therefore risks increasing energetic output while reducing energetic input, which can adversely affect the “condition” and ultimately survival of the birds. In addition, displacement of birds from one feeding site to others can increase the pressure on the resources available within the remaining sites, as they have to sustain a greater number of birds<sup>15</sup>. Moreover, the more time a breeding bird spends disturbed from its nest, the more its eggs are likely to cool and the more vulnerable they, or any nestlings, are to predators.

The potential for disturbance may be less in winter than in summer, in that there are often a smaller number of recreational users. In addition, the consequences of disturbance at a population level may be reduced because birds are not breeding. However, activity outside of the summer months can still cause important disturbance, especially as birds are particularly vulnerable at this time of year due to food shortages. Disturbance which results in abandonment of suitable feeding areas can have severe consequences for those birds involved and their ability to find alternative feeding areas. Several empirical studies have, through correlative analysis, demonstrated that out-of-season (October-March) recreational activity can result in quantifiable disturbance:

- Tuite et al<sup>16</sup> found that during periods of high recreational activity, bird numbers at Llangorse Lake decreased by 30% as the morning progressed, matching the increase in recreational activity towards midday. During periods of low recreational activity, however, no change in numbers was observed as the morning progressed. In addition, all species were found to spend less time in their ‘preferred zones’ (the areas of the lake used most in the absence of recreational activity) as recreational intensity increased;
- Underhill et al<sup>17</sup> counted waterfowl and all disturbance events on 54 water bodies within the South West London Water Bodies Special Protection Area and clearly correlated disturbance with a decrease in bird numbers at weekends in smaller sites and with the movement of birds within larger sites from disturbed to less disturbed areas.

Human activity can affect birds either directly (e.g. through causing them to flee) or indirectly (e.g. through damaging their habitat). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to behavioural changes (e.g. alterations in feeding behaviour, avoidance of certain areas *etc.*) and physiological changes (e.g. an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects by altering the balance between immigration/birth and emigration/death<sup>18</sup>.

<sup>14</sup> Riddington, R. *et al.* 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* 43:269-279

<sup>15</sup> Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72

<sup>16</sup> Tuite, C. H., Owen, M. & Paynter, D. 1983. Interaction between wildfowl and recreation at Llangorse Lake and Talybont Reservoir, South Wales. *Wildfowl* 34: 48-63

<sup>17</sup> Underhill, M.C. *et al.* 1993. Use of Waterbodies in South West London by Waterfowl. An Investigation of the Factors Affecting Distribution, Abundance and Community Structure. Report to Thames Water Utilities Ltd. and English Nature. Wetlands Advisory Service, Slimbridge

<sup>18</sup> Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

Other Disturbing activities are on a continuum. The most disturbing activities are likely to be those that involve irregular, infrequent, unpredictable loud noise events, movement or vibration of long duration. Birds are least likely to be disturbed by activities that involve regular, frequent, predictable, quiet patterns of sound or movement or minimal vibration. The further any activity is from the birds, the less likely it is to result in disturbance.

Hoskin, R. & Liley, D. (2017)<sup>19</sup> state Morecambe Bay SAC, Morecambe Bay Ramsar and Morecambe Bay and Duddon Estuary are vulnerable to recreational pressure, both from residents and tourists. Coastal sites have a particular draw for recreation. With growing increases in new housing and increased populations, gradual increases in recreational pressure such as disturbance to birds, trampling of dune systems and saltmarsh habitats and nutrient enrichment through dog fouling may occur. Breeding birds and high tide roosts occur in the same areas where access is focussed – the narrow strip where land and tide meet are key areas for wildlife and also tend to be the areas people want to visit. Whilst isolated, single disturbance events are unlikely to be a major problem; chronic disturbance will lead to impacts. In general, there is a lack of information for visitors, relatively little engagement and very little access infrastructure (such as marked paths, formalised parking, gates, interpretation etc.). Access is therefore difficult to control or manage, and options to influence how people behave are limited.

Liley *et al* in 2015<sup>20</sup> carried out work involving fieldwork and interviewing visitors at a number of access points around Morecambe Bay SAC/Ramsar and Morecambe Bay and Duddon Estuary, focussing on bird disturbance. A wide range of access reasons were identified: dog walking, walking, wildlife watching, canoeing, water sports (jet skis, kite surfing and wind surfing for example), fishing, horse riding and air borne activities, all of which have the potential to cause disturbance to birds.

Marsh and Roberts (2012) Morecambe Bay Wader Study<sup>21</sup> found Hest Bank is classed as 'urban common' but the access to the actual saltmarsh is more difficult due to channels. The problem at Hest Bank is the eroding saltmarsh and the progressive reduction in distance between the roosting birds and the desire line for dog and other walkers along the foreshore. Kite-surfers are also described by the RSPB staff as 'an increasing problem', although this is not specifically an issue with local residents; people come from a large area to kite surf at Morecambe Bay. The character of this site has changed since the initial publicity as a 'RSPB site' from which to watch Morecambe Bay waders. On the minus side is the continued erosion of the saltmarsh roost, increased disturbance, switching of some of the roosting birds to Morecambe breakwaters, but on the plus side the 'Teal Bay' groyne, at the southern end of Hest Bank shore attracts significant numbers of roosting waders.

The study by Liley *et al* included visitor interviews and collected data on home postcodes. These showed that local residents, travelling from home for a short visit, typically came from within 4km of the access point (median distance between home postcode and interview location was 3.45km).

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<sup>19</sup> Hoskin, R. & Liley, D. (2017) Habitats Regulations Assessment of the South Lakeland Development Management Policies Document. Unpublished report for South Lakeland District Council.

<sup>20</sup> Liley, D., Underhill-Day, J., Panter, C., Marsh, P. & Roberts, J. (2015). Morecambe Bay Bird Disturbance and Access Management Report. Unpublished report by Footprint Ecology for the Morecambe Bay Partnership.

<sup>21</sup> Marsh, P., Roberts, J. & Skelcher, G. (2012) Morecambe Bay Wader Roost Study.



## Atmospheric pollution

The main pollutants of concern for European sites are oxides of nitrogen (NO<sub>x</sub>), ammonia (NH<sub>3</sub>) and sulphur dioxide (SO<sub>2</sub>). NO<sub>x</sub> can have a directly toxic effect upon vegetation. In addition, greater NO<sub>x</sub> or ammonia concentrations within the atmosphere will lead to greater rates of nitrogen deposition to soils. An increase in the deposition of nitrogen from the atmosphere to soils is generally regarded to lead to an increase in soil fertility, which can have a serious deleterious effect on the quality of semi-natural, nitrogen-limited terrestrial habitats.

**Table 3: Main sources and effects of air pollutants on habitats and species**

Pollutant	Source	Effects on habitats and species
Acid deposition	SO <sub>2</sub> , NO <sub>x</sub> and ammonia all contribute to acid deposition. Although future trends in Sulphur (S) emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, it is likely that increased Nitrogen (N) emissions may cancel out any gains produced by reduced S levels.	Can affect habitats and species through both wet (acid rain) and dry deposition. Some sites will be more at risk than others depending on soil type, bed rock geology, weathering rate and buffering capacity.
Ammonia (NH <sub>3</sub> )	Ammonia is released following decomposition and volatilisation of animal wastes. It is a naturally occurring trace gas, but levels have increased considerably with expansion in numbers of agricultural livestock. Ammonia reacts with acid pollutants such as the products of SO <sub>2</sub> and NO <sub>x</sub> emissions to produce fine ammonium (NH <sub>4</sub> <sup>+</sup> ) containing aerosol which may be transferred much longer distances (can therefore be a significant trans-boundary issue.)	Adverse effects are as a result of nitrogen deposition leading to eutrophication. As emissions mostly occur at ground level in the rural environment and NH <sub>3</sub> is rapidly deposited, some of the most acute problems of NH <sub>3</sub> deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides NO <sub>x</sub>	Nitrogen oxides are mostly produced in combustion processes. About one quarter of the UK's emissions are from power stations, one-half from motor vehicles, and the rest from other industrial and domestic combustion processes.	Deposition of nitrogen compounds (nitrates (NO <sub>3</sub> ), nitrogen dioxide (NO <sub>2</sub> ) and nitric acid (HNO <sub>3</sub> )) can lead to both soil and freshwater acidification. In addition, NO <sub>x</sub> can cause eutrophication of soils and water. This alters the species composition of plant communities and can eliminate sensitive species.
Nitrogen deposition (N)	The pollutants that contribute to nitrogen deposition derive mainly from NO <sub>x</sub> and NH <sub>3</sub> emissions. These pollutants cause acidification (see also acid deposition) as well as eutrophication.	Species-rich plant communities with relatively high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication, due to its promotion of competitive and invasive species which can respond readily to elevated levels of N. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O <sub>3</sub> )	A secondary pollutant generated by photochemical reactions from NO <sub>x</sub> and volatile organic compounds	Concentrations of O <sub>3</sub> above 40 ppb can be toxic to humans and wildlife, and can affect buildings. Increased

Pollutant	Source	Effects on habitats and species
	(VOCs). These are mainly released by the combustion of fossil fuels. The increase in combustion of fossil fuels in the UK has led to a large increase in background ozone concentration. Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	ozone concentrations may lead to a reduction in growth of agricultural crops, decreased forest production and altered species composition in semi-natural plant communities.
Sulphur Dioxide SO <sub>2</sub>	Main sources of SO <sub>2</sub> emissions are electricity generation, industry and domestic fuel combustion. May also arise from shipping and increased atmospheric concentrations in busy ports. Total SO <sub>2</sub> emissions have decreased substantially in the UK since the 1980s.	Wet and dry deposition of SO <sub>2</sub> acidifies soils and freshwater, and alters the species composition of plant and associated animal communities. The significance of impacts depends on levels of deposition and the buffering capacity of soils.

Sulphur dioxide emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil as well as (particularly on a local scale) shipping.

Ammonia emissions are dominated by agriculture, with some chemical processes also making notable contributions. As such, it is unlikely that material increases in SO<sub>2</sub> or NH<sub>3</sub> emissions will be associated with Local Plans or Neighbourhood Plans. NOx emissions, however, are dominated by the output of vehicle exhausts (more than half of all emissions). Within a 'typical' housing development, by far the largest contribution to NOx (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison<sup>22</sup>. Emissions of NOx could therefore be reasonably expected to increase as a result of greater vehicle use as an indirect effect of the Neighbourhood Plan in combination with other growth surrounding sensitive European sites.

According to the World Health Organisation, the critical NOx concentration (critical threshold) for the protection of vegetation is 30 µgm<sup>-3</sup>; the threshold for sulphur dioxide is 20 µgm<sup>-3</sup>. In addition, ecological studies have determined "critical loads"<sup>23</sup> of atmospheric nitrogen deposition (that is, NOx combined with ammonia NH<sub>3</sub>). These are bespoke to particular habitats and are available on the Air Pollution Information System [www.apis.ac.uk](http://www.apis.ac.uk).

## Local air pollution

None of the allocations in the Slyne-with-Hest Neighbourhood Plan are of an industrial nature. Industrial developments that would constitute significant 'point source' emitters (e.g. pig farms, Energy from Waste facilities, smelting works, power stations etc.) are not allocated via the Neighbourhood Plan process. Such facilities would need to obtain a permit from the Environment Agency before they were allowed to operate and could not obtain that permit if they posed a risk of an adverse effect on a European site. The Slyne-with-Hest Neighbourhood Plan HRA thus focuses on vehicle exhaust emissions as this is the only potentially significant source of emissions from the type of development allocated in the Neighbourhood Plan.

According to the Department of Transport's Transport Analysis Guidance, "*Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant*"<sup>24</sup>. This is because traffic exhausts are situated only a few inches above the ground and are horizontal to it, such that the vast majority of emitted pollutants are never dispersed far and are very quickly deposited.

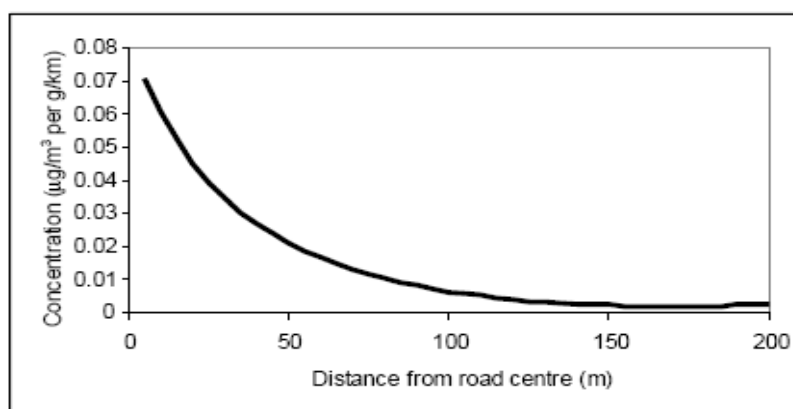
<sup>22</sup> Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. <http://www.airquality.co.uk/archive/index.php>

<sup>23</sup> The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur

<sup>24</sup> [www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf](http://www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf)

This distance is also related to the mix of the exhaust gases, the small dimension of the exhausts and the velocity of the exhaust gases leaving the exhaust.

**Figure 1: Traffic contribution to concentrations of pollutants at different distances from a road (Source: DfT)**



This is therefore the distance that has been used throughout this HRA in order to determine whether European sites are likely to be significantly affected by traffic generated by development under the Plan

## Loss of Functionally Linked Land Outside of the European Site Boundary

While most European sites have been geographically defined in order to encompass the key features that are necessary for coherence of their structure and function, this is not the case for all such sites. Due to the highly mobile nature of wildfowl and waterfowl, it is inevitable that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of the European site for which they are an interest feature. However, this area will still be essential for maintenance of the structure and function of the interest feature for which the site was designated and land use plans that may affect this land should still therefore be subject to further assessment.

The European designated sites identified which support bird species as a qualifying feature are as follows:

- Morecambe Bay and Duddon Estuary SPA;
- Morecambe Bay Ramsar;
- Bowland Fells SPA;
- Leighton Moss SPA; and
- Leighton Moss Ramsar.

A description of each of the above sites, their qualifying features, conservation objectives, vulnerabilities and condition assessment is included at Appendix B.

## Human Induced Changes in Hydrological Conditions

Mires and bogs are sensitive to changes in hydrology and maintenance of natural regimes, water quality, and avoidance of water table lowering are important factors. Areas that have suffered previous damaging activities require enhancement including re-vegetation of bare peat, increased

vegetational diversity in response to past heavy sheep grazing and a reduction of erosion through gullying<sup>25</sup>.

Changes in hydrological conditions that could affect the Morecambe Bay Pavements SAC, Witherslack Mosses and Roudsea Wood & Mosses SAC habitats brought about by additional housing requirements would be through increased water demand and its potential abstraction from reservoirs within or adjacent to the SACs. Reduction in water levels/ changes in the water table could affect the following habitats within the SACs: raised bogs; hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. and calcareous fens with *Cladium*.

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<sup>25</sup> [https://www.highpeak.gov.uk/media/960/Habitats-regulation-screening-assessment-March-2010/pdf/Habitats\\_Regulation\\_Assessment\\_March\\_2014.pdf](https://www.highpeak.gov.uk/media/960/Habitats-regulation-screening-assessment-March-2010/pdf/Habitats_Regulation_Assessment_March_2014.pdf)

## 4. Test of Likely Significance

### Introduction

The initial scoping of European designated sites illustrated in **Table 1** identified that those sites are potentially vulnerable to:

- Recreational pressure;
- Atmospheric pollution;
- Changes in hydraulic conditions; and
- Loss of functionally linked land.

The full Test of Likely Significant Effects for the Slyne-with-Hest Neighbourhood Plan policies is presented both alone and in-combination in **Appendix C**. The assessment took into consideration the above potential vulnerabilities of all of the designated sites listed in Table 1.

**Appendix D** contains the detailed assessment for the plot allocations for Plan Policy 2, 3 and 12. The plot allocations have each been assessed both alone and in-combination. Figure A2 provides the location of the plot allocations in context with the European Sites.

### Summary of Results for Test of Likely Significance

Of the thirteen Plan policies, ten have been screened out (Plan Policy Nos 1,4-11 and 13) as having no likely significant effects alone or in-combination.

The remaining Plan policies are 2) Sites for new development, 3) Sites for possible development in the future and 12) Recreational facilities. These have been screened in as having Likely Significant Effects alone, with the following potential pathways:

- Recreational pressure (Policies 2 and 3); and
- Loss of functionally linked land for non-breeding SPA birds (Policies 2, 3 and 12);

Of the ten European designated sites identified, seven have been screened out as being subject to no likely significant effects alone or in-combination: Bowland Fells SPA, Calf Hill & Cragg Woods SAC, Morecambe Bay Pavements SAC, Leighton Moss SPA, Leighton Moss Ramsar, Witherslack Mosses SAC and Roudsea Wood & Mosses SAC.

The following designated sites have been screened in and have been taken forward to Appropriate Assessment:

- Morecambe Bay and Duddon Estuary SPA;
- Morecambe Bay Ramsar; and
- Morecambe Bay SAC.

## 5. Appropriate Assessment ‘Alone’

### Introduction

This chapter presents a detailed assessment of the European designated sites, and the impact pathways associated with Policies 2, 3, and 12 screened in during the Test of Likely Significant Effects. This section will determine any adverse effects on integrity ‘alone’ on the European designated sites in relation to the pathways identified.

### Morecambe Bay and Duddon Estuary SPA, Morecambe Bay Ramsar and Morecambe Bay SAC

The Test of Likely Significance found that Plan policies 2 and 3 could have likely significant effects on the qualifying features of Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar and Morecambe Bay SAC due to:

- Recreational Pressure.

The Test of Likely Significance found that Plan Policy 12 could have likely significant effects on the qualifying features of Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar due to:

- Loss of functionally linked land

### Recreational Pressure- Alone

Hoskin, R. & Liley, D. (2017)<sup>26</sup> state Morecambe Bay SAC, Morecambe Bay Ramsar and Morecambe Bay and Duddon Estuary are vulnerable to recreational pressure, both from residents and tourists. Growing increases in new housing and increased populations, gradual increases in recreational pressure such as disturbance to birds, trampling of dune systems and saltmarsh habitats and nutrient enrichment through dog fouling may occur. Breeding birds and high tide roosts occur in the same areas where access is focussed – the narrow strip where land and tide meet are key areas for wildlife and also tend to be the areas people want to visit. Whilst isolated, single disturbance events are unlikely to be a major problem; chronic disturbance will lead to impacts. In general, there is a lack of information for visitors, relatively little engagement and very little access infrastructure (such as marked paths, formalised parking, gates, interpretation etc.). Access is therefore difficult to control or manage, and options to influence how people behave are limited.

Work carried out by Liley *et al* in 2015<sup>27</sup> at a number of access points around Morecambe Bay SAC/Ramsar and Morecambe Bay and Duddon Estuary (focussing on bird disturbance) found the following reasons for people to access the areas: dog walking, walking, wildlife watching, canoeing, water sports, fishing, horse riding and air borne activities, all of which have the potential to causes disturbance to birds.

The study by Liley *et al* included visitor interviews and collected data on home postcodes. These showed that local residents, travelling from home for a short visit, typically came from within 4km of the access point. The median distance between home postcode and interview location was 3.45km. This latter number is taken as the core catchment for the SAC, SPA and Ramsar site within the HRA of the submitted Lancaster Strategic Policies and Land Allocations DPD.

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<sup>26</sup> Hoskin, R. & Liley, D. (2017) Habitats Regulations Assessment of the South Lakeland Development Management Policies Document. Unpublished report for South Lakeland District Council.

<sup>27</sup> Liley, D., Underhill-Day, J., Panter, C., Marsh, P. & Roberts, J. (2015). Morecambe Bay Bird Disturbance and Access Management Report. Unpublished report by Footprint Ecology for the Morecambe Bay Partnership.

The number of houses for Policy 2 (Plot 1) is 30-35 dwellings; information relating to the number of dwellings for Policy 3 (Plots 2, 5, 8 and 9) is not detailed within the Neighbourhood Plan. It is however considered that the development for each plot would be very small-scale due to the size of the Plots and the fact that it has been agreed between Lancaster Council and the Neighbourhood Plan Group that 40 dwellings is an appropriate total for the Neighbourhood Plan, leading to a small rise in the population of Slyne-with- Hest of approximately 100 people assuming an average occupancy of 2.4 residents per dwelling, not all of whom will be regular recreational users of Morecambe Bay. It is considered unlikely (but not with certainty) that this development would lead to adverse effects to the qualifying features of Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar and Morecambe Bay SAC through recreational pressure 'alone'. However, as there is uncertainty (and there is also an in combination effect to consider in the next section), mitigation is required. At the Neighbourhood Plan level this will need to take the form of a policy framework to ensure that any housing developments on (or outside, in the case of windfall) the allocated sites deliver measures to avoid or adequately mitigate any adverse recreational effect.

## Mitigation and Avoidance Measures- Recreational Pressures

Currently the Slyne-with-Hest Neighbourhood Plan provides a reference to the protection of both designated and non-designated natural environment assets in Policy 8 in relation to developments (new or major alterations to existing properties) located between the sea and the West Coast Railway Line. No other reference similar to this is made within the Neighbourhood Plan

Lancaster Strategic Policies and Land Allocations DPD (submitted 2018) Policy EN9 states: *"There are a number of sites within the district that have been designated at a European, National and Regional level for their environmental importance. These have been identified on the Local Plan Policies Map and will be protected from development proposals that have a detrimental impact on their designation."*

Policy SP8 includes the following wording *"The Council recognises the importance of biodiversity and geodiversity, and has prepared a Local Plan that will seek to protect sites of recognised importance; it will also seek to protect areas of land that are functionally linked to areas which are of International and National importance."* and *"Development proposals will be expected to protect, maintain and enhance the district's biodiversity and geodiversity through the appropriate location of uses, sympathetic design, sustainable construction techniques and appropriate mitigation measures. The Council will also support opportunities to maximise energy efficiency."*

Lancaster Strategic Policies and Land Allocations DPD (Appendix D) Mitigation Options include the provision of *Home Owner Packs* (for those sites listed in Appendix D of the DPD) which provide new home owners on those sites with details of the sensitivities of the land adjacent to the development (and the wider Morecambe Bay coastline) to recreational pressure, and promote use of alternative areas for recreation, such as public open space within the developments. Also, through Policy SC5, a New Country Park/recreation areas will be delivered which will provide alternative green space for recreation, and provide an alternative locations for dog walkers in preference to visiting more coastal locations. While none of these Recreation Opportunity Areas are within Slyne with Hest Parish boundary experience in other parts of the country indicates that such facilities, if sufficiently appealing, will be used by residents living several kilometres away. The closest Recreational Opportunity Area to Slyne with Hest is the East Lancashire Strategic Site which is located less than 1km (approximately 700m) from the south-eastern boundary of the Slyne with Hest Parish boundary. The next closest Recreational Opportunity is Central Morecambe Area is located approximately 3km south of the Slyne with Hest Parish boundary.

It is therefore considered that additional text for Neighbourhood Plan Policies 2 and 3 should be included to ensure protection of Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar and Morecambe Bay SAC and link more closely to the initiatives that have been identified as being effective in managing recreational pressure in the HRA of the Local Plan. Refer to the paragraphs below with the recommended additional text being underlined.

### **Policy 2**

*Policy 2(b) In the event of the Green Belt boundary being redrawn according to Policy 2(a), the Neighbourhood Plan will support the allocation by the Local Plan of 'Land West of Sea View Drive'*

(LPSA167) for the building development, which must meet the following criteria in accordance with the Lancaster Strategic Policies and Land Allocations DPD Policies EN9 and SP8:

That it would not lead to an adverse effect upon the integrity, directly or indirectly, of the Morecambe Bay and Duddon Estuary SPA, Morecambe Bay Ramsar and Morecambe Bay SAC through increased recreational activities and would participate in measures identified at the Local Plan level to address such effects, such as through circulation of homeowner packs highlighting the sensitivity of the European sites and promoting the use of alternative areas for recreation such as the nearest Recreation Opportunity Areas being created in line with Local Plan policy SC5. Development that would lead to an adverse effect upon the aforementioned European designated sites will not be permitted.

### **Policy 3**

#### *Sites for Possible Development in the Future*

*Policy 3(a) Sites for possible development in the future The Neighbourhood Plan supports the building of dwellings of up to two storeys with three bedrooms or fewer on 'Land at the East end of Kirklands'(LPSA165) following appropriate ground works to mitigate any increased water run-off towards the village recreation ground.*

*Policy 3(b) The following parcel of land is noted as being a site suitable for the development of social housing, being dwellings of three bedrooms or fewer, which would be supported if the site became available during the lifetime of the Plan: Plot 2 'Land South Of 27 Shady Lane' (LPSA589)*

*Policy 3(c) The following parcels of land are noted as sites suitable for development of dwellings of three bedrooms or fewer:*

*Plot 8 'Wooded Land at corner of A6 and Bottomdale Road' (LPSA846)*

*Plot 9 'Land South of Christadelphian Church, Main Road (LPSA847)*

*In accordance with the Lancaster Strategic Policies and Land Allocations DPD Policies EN9 and SP8, sites for possible development in the future would not be permitted if they lead to an adverse effect upon the integrity, directly or indirectly, of the Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar and Morecambe Bay SAC through increased recreational activities. Where deemed necessary during determination of the planning application they will be expected to participate in measures identified at the Local Plan level to address such effects such as through circulation of homeowner packs highlighting the sensitivity of the European sites and promoting the use of alternative areas for recreation such as the nearest Recreation Opportunity Areas being created in line with Local Plan policy SC5.*

*Any development within the Conservation Area must be in accordance with DM37-41 of the Local Plan.*

## **Loss of Functionally Linked Land for non-breeding SPA Birds- Alone**

While most European sites have been geographically defined in order to encompass the key features that are necessary for coherence of their structure and function, this is not the case for all such sites. Due to the highly mobile nature of wildfowl and waterfowl, it is inevitable that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of the European designated site for which they are an interest feature. However, these areas will still be essential for maintenance of the structure and function of the interest feature for which the site was designated and land use plans that may affect this land should still therefore be subject to further assessment.

Neighbourhood Plan Policy 12 includes the provision of new outdoor recreational space. However, there is no information as to the location of this new space. Taking the precautionary approach, it was considered that there could be potential significant adverse effects on non-breeding SPA birds 'alone'



as the new outdoor space could be located in an area used as functionally linked land by non-breeding SPA birds.

## Mitigation: Avoidance Measures- Functionally Linked Land for non-breeding SPA Birds

Currently the Slyne-with-Hest Neighbourhood Plan provides a reference to the protection of both designated and non-designated natural environment assets in Policy 8 in relation to developments (new or major alterations to existing properties) located between the sea and the West Coast Railway Line. No other reference similar to this is made within the Neighbourhood Plan. Lancaster Strategic Policies and Land Allocations DPD, Policy EN9 include the following wording “*There are a number of sites within the district that have been designated at a European, National and Regional level for their environmental importance. These have been identified on the Local Plan Policies Map and will be protected from development proposals that have a detrimental impact on their designation.*”. It is therefore considered that additional text for Policy 12 is to be included to ensure protection of SPA associated land parcels for non-breeding SPA birds. Refer to the paragraph below with the additional text being underlined.

### **Policy 12**

*Support improvements to existing outdoor recreational facilities in the Parish and the provision of new outdoor recreational space to encourage the physical well-being of residents. Locations for new outdoor recreational space will not be permitted where they would be likely to lead to an adverse effect upon the integrity, directly or indirectly, on Morecambe Bay and Duddon Estuary SPA or Morecambe Bay Ramsar site; it will also seek to protect areas of land that are functionally linked to areas which are of International and or National importance.*

## 6. Appropriate Assessment “In Combination Effects”

### Introduction

This chapter investigates the other plans and projects that might lead to adverse effects in combination with the Slyne-with-Hest Neighbourhood Plan, via recreational pressure on Morecambe Bay and Duddon Estuary SPA and Morecambe Bay SAC and Morecambe Bay Ramsar, and the loss of functionally linked for non-breeding SPA birds in relation to Morecambe Bay and Duddon Estuary SPA and Morecambe Bay Ramsar.

### In Combination

Other plans and projects being prepared or implemented in the area may have the potential to cause negative effects on the integrity of European designated sites. These effects may act in combination with the effects of the Slyne-with-Hest Neighbourhood Plan, possibly leading an insignificant effect to become significant. It is therefore important to consider which other plans and projects could generate similar effects as development within the Lancaster district at the same European designated sites, and which may act in-combination. The following plans or projects could act in combination:

- Lancaster Strategic Policies and Land Allocations DPD, which when adopted will replace:
- Lancaster City Council Core strategy DPD (adopted 2008);
- Lancaster District Local Plan (adopted 2004); and
- Development Management DPD (adopted 2014).

### Recreational Pressure- In Combination

The following European designated sites have potential for adverse effects from increased recreational pressure associated with the Slyne-with-Hest Neighbourhood Plan in combination with other projects or plans:

- Morecambe Bay and Duddon Estuary SPA;
- Morecambe Bay SAC; and
- Morecambe Bay Ramsar

The Local Plan Part One includes the delivery of approximately 12,000 new dwellings across the Lancaster district over the period 2011/12-2033/34. Taking the 3.5 km distance<sup>28</sup> identified as the distance that visitors to Morecambe Bay who were on a day-trip/short visit from home travelled, of the 12,000 dwellings allocated, all of the strategic sites (based on Strategic Policies and Land Allocations DPD (May 2018) and therefore 5800 new homes would be located within 3.5 km of Morecambe Bay and Duddon Estuary SPA/Morecambe Bay SAC/Ramsar site. These strategic sites are Bailrigg Garden Village (3,500 new homes), East Lancaster Strategic Site (900 new homes), North Lancaster Strategic Site (700 new homes), Land at Lundsfield Quarry (200 new homes), and Land South of Windermere Road, Carnforth (500 new homes). Additionally, some non-strategic sites and other development sites (a total of 20 site equalling 1771 new homes)<sup>29</sup>. Due to the scale and size of the strategic sites and the locations of all of the development sites, they were assessed in detail in the Habitats Regulations Assessment of the Lancaster Local Plan Part One Strategic Policies and Land Allocations DPD (February 2018) and were considered to have the potential for likely significant

<sup>28</sup> Liley, D., Underhill-Day, J., Panter, C., Marsh, P. & Roberts, J. (2015). Morecambe Bay Bird Disturbance and Access Management Report. Unpublished report by Footprint Ecology for the Morecambe Bay Partnership.

<sup>29</sup> Details taken from Table 25 of Habitats Regulations Assessment of the Lancaster Local Plan Part One Strategic Policies and Land Allocations DPD (February 2018)

effects alone an in-combination and a suite of mitigation measures have been built into the policies within the Local Plan Part One for these allocations.

These mitigation options include those which would also serve to reduce recreational pressure on Morecambe Bay. For example, Option G would ensure there is sufficient public open space (to comply with Policy DM27) incorporated into the new developments to encourage new householders to stay local rather than travelling to the coast. Option F would ensure new home owners receive a home owners pack detailing the sensitivities of Morecambe Bay and providing information on alternative areas for recreation. Finally, Option H (especially applicable to the Bailrigg Garden Village) highlights the new Country Park which will be created as part of Policy SC5. This will provide an alternative area for recreation, which will include areas specifically designed for dog walkers to encourage them away from visiting the coast (one of the issues raised as a concern in the Site Improvement Plan for Morecambe Bay).

All of these measures will help towards mitigating the potential for increased recreational pressure on Morecambe Bay for the allocations within 3.5km of Morecambe Bay It should be noted that 13 of the allocations (comprising 1189dwelling) have already been granted planning permission and have therefore already had potential environmental impacts assessed through the planning application process.

For the remaining 6332new dwellings (within12 allocations) planned for the remainder of the allocations within 3.5 km of Morecambe Bay, wording has been built into the plan to ensure that each of these new households also receives a home owners pack [Option F from Table 16] detailing the sensitives of Morecambe Bay, and outlining the alternative areas of recreation within their own developments and the new Country Park to be created as part of Policy SC5 [Option H from Table 16]. In addition, Policy DM43 and EN9 requires European sites to be taken into account during the planning process, and Policy DM26 outlines the requirements for the amount of public open space within new developments. The more houses within an allocation, the more public open space will be required (refer to Appendix D of Local Plan Part 2 for further details). For allocations within 3.5 km of Morecambe Bay, sufficient public open space [Option G from Table 16] would also be expected to be included within the development (or provide access to sufficient public open space elsewhere). This would include areas which could accommodate a range of activities including areas suitable for use by dog walkers. All of these measures would work towards alleviating the potential effects associated with recreational pressure on Morecambe Bay.<sup>30</sup>

In Section 5 avoidance mitigation has been included in Policies 2 and 3 to ensure that the Slyne-With Hest Neighbourhood Plan does not have significant adverse effects 'alone' on either the Morecambe Bay and Duddon Estuary SPA, Morecambe Bay Ramsar or Morecambe Bay SAC in relation to recreational pressure. These changes to the Slyne-with-Hest Neighbourhood Plan will remove the pathway to lead to significant adverse 'alone' and therefore in-combination effects to these European sites.

Therefore provided that the wording in Section 5 of this report is incorporated within the Slyne-with-Hest Neighbourhood Plan it can be considered that recreational pressure from the Plan will not result in adverse effects upon the integrity of the Morecambe Bay and Duddon Estuary SPA or Morecambe Bay Ramsar either alone or in-combination with other plans or projects

## Loss of Functionally Linked Land for non-breeding SPA Birds-In-Combination

The following European designated sites have potential for adverse effects from the loss of functionally linked land for non-breeding SPA birds associated with the Slyne-with-Hest Neighbourhood Plan in combination with other projects or plans:

- Morecambe Bay and Duddon Estuary SPA;and
- Morecambe Bay Ramsar

<sup>30</sup> ARCADIS LANCASTER LOCAL PLAN PART 1: STRATEGIC POLICIES AND LAND ALLOCATIONS DPD  
Habitats Regulations Assessment Report , February 2018

In Section 5 avoidance mitigation has been included in Policy 12 to ensure that the Slyne-With Hest Neighbourhood Plan does not have significant adverse effects 'alone' on either the Morecambe Bay and Duddon Estuary SPA or Morecambe Bay Ramsar in relation to the loss of functionally linked land. These changes to the Slyne-with-Hest Neighbourhood Plan will remove the pathway to lead to significant adverse 'alone' and therefore in-combination effects to these European sites.

Therefore provided that the wording in Section 5 of this report is incorporated within the Slyne-with-Hest Neighbourhood Plan it can be considered that loss of functionally linked land will not occur and therefore removing potential adverse effects upon the integrity of Morecambe Bay and Duddon Estuary SPA or Morecambe Bay Ramsar either alone or in-combination with other plans or projects.

# 7. Conclusions and Summary of Recommendations

## Introduction

The following section contains a summary of the assessment and recommendations included within this document. Provided these recommendations are incorporated within Plan, it can be concluded that the Plan will not result in any significant adverse effect either alone or in-combination with other projects or plans.

## Summary of the HRA

An assessment of the Slyne-with-Hest Neighbourhood Plan policies was carried out to determine any likely significant effects on the designated sites shown in Table 1. The Test of Significance screened for the following potential pathways:

- Recreational pressure;
- Human induced changes in hydraulic conditions;
- Atmospheric pollution; and
- Loss of functionally linked land for non-breeding SPA birds.

The assessment resulted in, ten of the thirteen Plan policies being screened out (Plan Policy Nos 1, 4-11 and 13) as having no likely significant effects alone or in-combination.

The remaining Plan policies – 2) Sites for new development, 3) Sites for possible development in the future and 12) Recreational facilities - were screened in as having Likely Significant Effects alone, with potential pathways being:

- Recreational pressure (Policies 2 and 3);
- Loss of functionally linked land for non-breeding SPA birds (Policies 2, 3 and 12);

Of the ten European designated sites identified, seven have been screened out as having no likely significant effects alone or in-combination:., Bowland Fells SPA, Calf Hill & Cragg Woods SAC, Morecambe Bay Pavements SAC, Leighton Moss SPA, Leighton Moss Ramsar, Witherslack Mosses SAC, and Roudsea Wood & Mosses SAC

The following designated sites were screened in and were taken forward to Appropriate Assessment:

- Morecambe Bay and Duddon Estuary SPA;
- Morecambe Bay Ramsar; and
- Morecambe Bay SAC.

Policy 2 comprises small scale development (30-35 dwelling) and it was considered that there would be no adverse effects to the qualifying features of the aforementioned three European designated sites due to the size of the development in relation to recreational pressures. However, as there was uncertainty surrounding this conclusion, avoidance mitigation was included (see section below for details) to remove any significant adverse effects in relation to recreational pressure.

The policy wording changes to the Slyne-with-Hest Neighbourhood Plan will remove the potential pathway that leads to both significant adverse alone and in-combination effects to Morecambe Bay and Duddon Estuary, SPA, Morecambe Bay Ramsar; and Morecambe Bay SAC. Therefore it is considered that Policy 2 will not cause significant adverse effects to any of the aforementioned three European designated sites.

Policy 3 comprises small scale development of four plots of land (number of dwellings are not provided in the Neighbourhood Plan) and it was considered that there would be no adverse effects to

the qualifying features of the aforementioned three European designated sites due to the size of the development in relation to recreational pressures. However, as there was uncertainty surrounding this conclusion, avoidance mitigation has been included (see section below for details) to remove any significant adverse effects in relation to recreational pressure.

The policy wording changes to the Slyne-with-Hest Neighbourhood Plan will remove the potential pathway that leads to both significant adverse alone and in-combination effects to Morecambe Bay and Duddon Estuary, SPA, Morecambe Bay Ramsar; and Morecambe Bay SAC. Therefore it is considered that Policy 2 and Policy 3 will not cause significant adverse effects to any of the aforementioned three European designated sites either alone or in-combination.

Policy 12 includes the provision of new outdoor recreational space; however there is no information as to the location of this new space. Taking the precautionary approach, it was considered that there could be potential significant adverse effects on non-breeding SPA birds 'alone' as the new outdoor space could be located in an area used as functionally linked land by non-breeding SPA birds. As the precautionary approach has been taken due to the unknown locations of new recreational space, avoidance mitigation has been included (see section below for details) to remove any significant adverse effects in relation to the loss of functionally linked land for non-breeding SPA birds.

The policy wording changes to the Slyne-with-Hest Neighbourhood Plan will remove the potential pathway that leads to both significant adverse alone and in-combination effects to Morecambe Bay and Duddon Estuary, SPA and Morecambe Bay Ramsar. Therefore it is considered that Policy 12 will not cause significant adverse effects in relation to the loss of functionally linked land for non-breeding SPA birds to any of the aforementioned two European designated sites either alone or in-combination.

## Recreational Pressure Mitigation: Avoidance Measures

Currently the Slyne-with-Hest Neighbourhood Plan includes a reference to the protection of both designated and non-designated natural environment assets in Policy 8 in relation to developments (new or major alterations to existing properties) located between the sea and the West Coast Railway Line. No other reference similar to this is made within the Neighbourhood Plan. The Lancaster Core Strategy Policies SC2 and SC3 include the following wording "*Allocations, Development Control policies and Development proposals will only be allowed where they do not result in a negative impact on a Natura 2000 site. Particular attention will be paid to the impacts of recreation pressure, water or airborne pollution on Morecambe Bay.*" It is therefore considered that additional text for Policies 2 and 3 is to be included to ensure the protection of Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar and Morecambe Bay SAC. The additional text refers to when development would not be permitted and a reference to mitigation in relation to recreational disturbances is included. The paragraphs below detail the additional text underlined.

### **Policy 2**

Below is an excerpt from Policy 2 after which the additional text should be added.

*Policy 2(b) In the event of the Green Belt boundary being redrawn according to Policy 2(a), the Neighbourhood Plan will support the allocation by the Local Plan of 'Land West of Sea View Drive' (LPSA167) for the building development, which must meet the following criteria in accordance with the Lancaster Strategic Policies and Land Allocations DPD Policies EN9 and SP8:*

*That it would not lead to an adverse effect upon the integrity, directly or indirectly, of the Morecambe Bay and Duddon Estuary SPA, Morecambe Bay Ramsar and Morecambe Bay SAC through increased recreational activities and would participate in measures identified at the Local Plan level to address such effects such as through circulation of homeowner packs highlighting the sensitivity of the European sites and promoting the use of alternative areas for recreation such as the nearest Recreation Opportunity Areas being created in line with Local Plan policy SC5. Development that would lead to an adverse effect upon the aforementioned European designated sites will not be permitted.*

### **Policy 3**

#### *Sites for Possible Development in the Future*

*Policy 3(a) Sites for possible development in the future The Neighbourhood Plan supports the building of dwellings of up to two storeys with three bedrooms or fewer on 'Land at the East end of Kirklands'(LPSA165) following appropriate ground works to mitigate any increased water run-off towards the village recreation ground.*

*Policy 3(b) The following parcel of land is noted as being a site suitable for the development of social housing, being dwellings of three bedrooms or fewer, which would be supported if the site became available during the lifetime of the Plan: Plot 2 'Land South Of 27 Shady Lane' (LPSA589)*

*Policy 3(c) The following parcels of land are noted as sites suitable for development of dwellings of three bedrooms or fewer:*

*Plot 8 'Wooded Land at corner of A6 and Bottomdale Road' (LPSA846)*

*Plot 9 'Land South of Christadelphian Church, Main Road (LPSA847)*

*In accordance with the Lancaster Strategic Policies and Land Allocations DPD Policies EN9 and SP8, sites for possible development in the future would not be permitted if they lead to an adverse effect upon the integrity, directly or indirectly, of the Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar and Morecambe Bay SAC through increased recreational activities. Where necessary they will be expected to participate in measures identified at the Local Plan level to address such effects such as through circulation of homeowner packs highlighting the sensitivity of the European sites and promoting the use of alternative areas for recreation such as the nearest Recreation Opportunity Areas being created in line with Local Plan policy SC5.*

*Any development within the Conservation Area must be in accordance with DM37-41 of the Local Plan.*

## **Loss of Functionally Linked Land for non-breeding SPA Birds Mitigation: Avoidance Measures**

Currently the Slyne-with-Hest Neighbourhood Plan includes reference to the protection of both designated and non-designated natural environment assets in Policy 8 in relation to developments (new or major alterations to existing properties) located between the sea and the West Coast Railway Line. No other reference similar to this is made within the Neighbourhood Plan. The Lancaster Core Strategy Policies SC2 and SC3 include the following wording "Allocations, Development Control policies and Development proposals will only be allowed where they do not result in a negative impact on a Natura 2000 site." It is therefore considered that additional text is to be included in Policy 12 to ensure protection of SPA associated land parcels for non-breeding SPA birds. Refer to the paragraph below with the additional text being underlined.

### **Policy 12**

*Support improvements to existing outdoor recreational facilities in the Parish and the provision of new outdoor recreational space to encourage the physical well-being of residents. Locations for new outdoor recreational space will not be permitted where they would be likely to lead to an adverse effect upon the integrity, directly or indirectly, on Morecambe Bay and Duddon Estuary SPA or Morecambe Bay Ramsar site; it will also seek to protect areas of land that are functionally linked to areas which are of International and or National importance*

With the above recommendations in place, it could be concluded that appropriate mechanisms are in place to ensure that no adverse effects on integrity result alone or in-combination as a result of the Neighbourhood Plan.

## 8. References

- Arcadis (February 2018) Lancaster Local Plan Part 1: Strategic Policies and Land Allocations DPD Habitats Regulations Assessment Report. Lancaster City Council.
- del Hoyo, J., Elliott, A. & Sargatal, J. (1996). Handbook of the Birds of the World. Vol. 3: Hoatzin to Auks. Lynx Edicions, Barcelona.
- Clare L. Devereux, Claire U. McKeever, Tim G. Benton, Mark J. Whittingham (2004) The effect of sward height and drainage on Common Starlings *Sturnus vulgaris* and Northern Lapwings *Vanellus vanellus* foraging in grassland habitats, IBIS International Journal of Avian Science
- Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72
- Haworth, F. and Thompson, D.B.A., 1990. Factors associated with the breeding distribution of upland birds in the South Pennines, England. *Journal of Applied Ecology*, pp.562-577 <https://www.jstor.org/stable/pdf/2404302.pdf?refreqid=excelsior%3A37ee9f650b75ff31faea95fceb00f1b8>
- Tamara L. Holmes, Richard L. Knight, Libby Stegall and Gerald R. Craig Wildlife Society Bulletin (1973-2006) Vol. 21, No. 4 (Winter, 1993), pp. 461-468
- Hoskin, R. & Liley, D. (2017) Habitats Regulations Assessment of the South Lakeland Development Management Policies Document. Unpublished report for South Lakeland District Council.
- Liley D, Jackson D & Underhill-Day J (2006): Visitor Access Patterns on the Thames Basin Heaths. A Report to English Nature.
- Liley, D., Underhill-Day, J., Panter, C., Marsh, P. & Roberts, J. (2015). Morecambe Bay Bird Disturbance and Access Management Report. Unpublished report by Footprint Ecology for the Morecambe Bay Partnership.
- Marsh, P., Roberts, J. & Skelcher, G. (2012) Morecambe Bay Wader Roost Study
- Olsen, Henrick, Schmidt Niels S. 2004. Impacts of wet grassland management and winter severity on wader breeding numbers in eastern Denmark, *Basic and Applied Ecology*, 5:2, pp203-210
- Pearce-Higgins, J.W., Finney, S.K., Yalden, D.W. and Langston, R.H.W., 2007. Testing the effects of recreational disturbance on two upland breeding waders. *Ibis*, 149, pp.45-55.
- Riddington, R. et al. 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* 43:269-279
- Ruddock, M. and Whitfield, D.P., 2007. A review of disturbance distances in selected bird species. *A report from Natural Research (Projects) Ltd to Scottish Natural Heritage*, p.181.
- Standing Conference of South Pennine Authorities (SCOSPA1998) South Pennine Moors - South Pennine Moors - An Integrated Management Strategy and Conservation Action Programme LIFE95 NAT/UK/000824



Snow, D and Perrins, (1998) *The Birds of the Western Palearctic* Consize Edition.

Underhill, M.C. et al. 1993. Use of Waterbodies in South West London by Waterfowl. An Investigation of the Factors Affecting Distribution, Abundance and Community Structure. Report to Thames Water Utilities Ltd. and English Nature. Wetlands Advisory Service, Slimbridge

D. W. Yalden & Patricia E. Yalden (1989) The sensitivity of breeding Golden Plovers *Pluvialis apricaria* to human intruders, *Bird Study*, 36:1, 49-55, DOI: 10.1080/00063658909477002

# Appendix A Figures

**LEGEND**

- SLYNE-WITH-HEST PARISH COUNCIL BOUNDARY
- PROPOSED NEIGHBOURHOOD PLAN LAND PARCELS
- RAMSAR SITE
- SPECIAL PROTECTION AREA
- SPECIAL AREA OF CONSERVATION

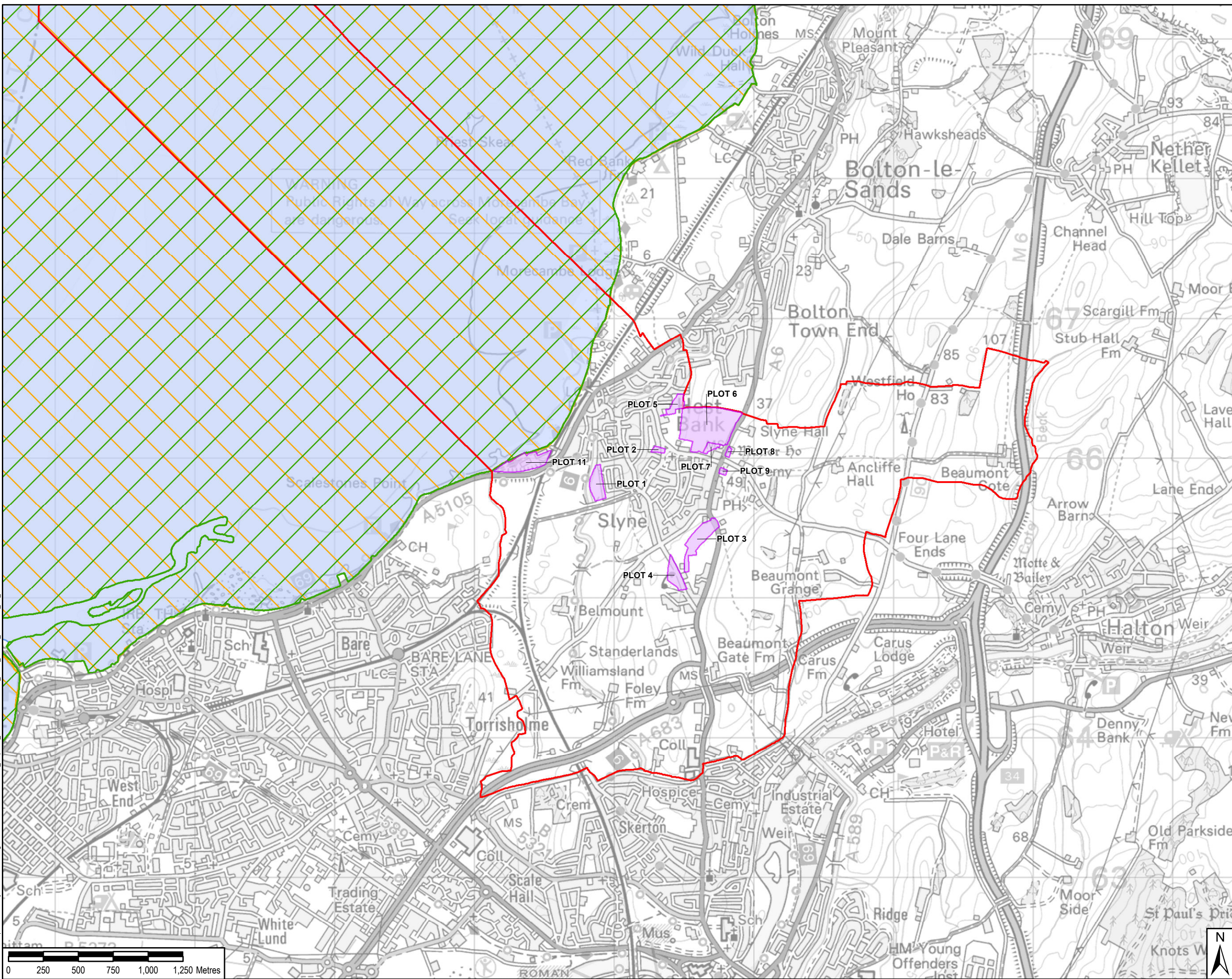


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# Appendix B European Designated Sites

Table B.1 Interest Features, Conservation Objectives and Site Vulnerabilities/Threats to Site Integrity

Site Name	Approx. distance from Neighbourhood Plan Boundary	Qualifying Features	Conservation Objectives <sup>31</sup>	Potential Threats to Site Integrity/Vulnerabilities <sup>32</sup>	Results of SSSI Condition Survey
Morecambe Bay Ramsar	Within the Neighbourhood Plan Boundary	<p><b>Ramsar criterion 4:</b> The site is a staging area for migratory waterfowl including internationally important numbers of passage ringed plover <i>Charadrius hiaticula</i>.</p> <p><b>Ramsar criterion 5</b> Assemblages of international importance with peak counts in the winter: 223709 waterfowl</p> <p><b>Ramsar criterion 6</b> Species/populations occurring at levels of international importance during the breeding season:</p> <ul style="list-style-type: none"> <li>▪ Lesser black-backed gull, <i>Larus fuscus graellsii</i></li> <li>▪ Herring gull, <i>Larus argentatus argentatus</i></li> <li>▪ Sandwich tern, <i>Sterna (Thalasseus) sandvicensis sandvicensis</i></li> </ul> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> <li>▪ Great cormorant, <i>Phalacrocorax carbo carbo</i></li> <li>▪ Common shelduck, <i>Tadorna tadorna</i></li> <li>▪ Northern pintail, <i>Anas acuta</i></li> <li>▪ Common eider, <i>Somateria mollissima mollissima</i></li> <li>▪ Eurasian oystercatcher, <i>Haematopus ostralegus ostralegus</i></li> <li>▪ Ringed plover, <i>Charadrius hiaticula</i></li> <li>▪ Grey plover, <i>Pluvialis squatarola</i></li> <li>▪ Sanderling, <i>Calidris alba</i></li> <li>▪ Eurasian curlew, <i>Numenius arquata arquata</i></li> <li>▪ Common redshank, <i>Tringa totanus tetanus</i></li> <li>▪ Ruddy turnstone, <i>Arenaria interpres interpres</i></li> <li>▪ Lesser black-backed gull, <i>Larus fuscus graellsii</i></li> </ul> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> <li>▪ Great crested grebe, <i>Podiceps cristatus cristatus</i></li> <li>▪ Pink-footed goose, <i>Anser brachyrhynchus</i></li> <li>▪ Eurasian wigeon, <i>Anas penelope</i></li> <li>▪ Common goldeneye, <i>Bucephala clangula clangula</i></li> <li>▪ Red-breasted merganser, <i>Mergus serrator</i></li> <li>▪ European golden plover, <i>Pluvialis apricaria apricaria</i></li> <li>▪ Northern lapwing, <i>Vanellus vanellus</i></li> <li>▪ Red knot, <i>Calidris canutus islandica</i></li> <li>▪ Dunlin, <i>Calidris alpina alpina</i></li> <li>▪ Bar-tailed godwit, <i>Limosa lapponica lapponica</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ The extent and distribution of the habitats of the qualifying features</li> <li>▪ The structure and function of the habitats of the qualifying features</li> <li>▪ The supporting processes on which the habitats and habitats of the qualifying features rely</li> <li>▪ The populations of each of the qualifying features, and</li> <li>▪ The distribution of qualifying features within the site.<sup>33</sup></li> </ul>	No factors reported adversely affecting the sites ecological character (past, present or potential).	<p>Area favourable 94.31%</p> <p>Area unfavourable but recovering 5.69%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p>
Morecambe Bay SAC	Within the Neighbourhood Plan Boundary	<p><b>Annex I habitats</b> that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> <li>▪ Estuaries</li> <li>▪ Mudflats and sandflats not covered by seawater at low tide</li> <li>▪ Large shallow inlets and bays</li> <li>▪ Perennial vegetation of stony banks</li> <li>▪ Salicornia and other annuals colonising mud and sand</li> </ul>	<ul style="list-style-type: none"> <li>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species</li> <li>▪ The structure and function (including typical species) of qualifying natural habitats</li> <li>▪ The structure and function of the habitats of qualifying species</li> <li>▪ The supporting processes on which qualifying natural habitats and habitats of qualifying species rely</li> <li>▪ The populations of qualifying species, and,</li> <li>▪ The distribution of qualifying species within the site.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fishing and harvesting aquatic resources</li> <li>▪ Outdoor sports and leisure activities, recreational activities</li> <li>▪ Air pollution, air-borne pollutants</li> </ul> <p>There are a wide range of pressures on Morecambe Bay but the site is relatively robust and many of these pressures have only slight or local effects on its interests. The interests depend largely upon the coastal processes operating within the Bay, which have been affected</p>	<p>Area favourable 94.31%</p> <p>Area unfavourable but recovering 5.69%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p>

<sup>31</sup> Taken from Natural England's Access to Evidence site [ <http://publications.naturalengland.org.uk/category/6490068894089216>]

<sup>32</sup> Taken from Natura 2000- Standard Data Forms [ <http://jncc.defra.gov.uk/protectedsites/>]

<sup>33</sup> <https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK11045&SiteName=cam&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

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Site Name	Approx. distance from Neighbourhood Plan Boundary	Qualifying Features	Conservation Objectives <sup>31</sup>	Potential Threats to Site Integrity/Vulnerabilities <sup>32</sup>	Results of SSSI Condition Survey
		<ul style="list-style-type: none"> <li>▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</li> <li>▪ Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')</li> <li>▪ Fixed dunes with herbaceous vegetation ('grey dunes') *Priority feature</li> <li>▪ Humid dune slacks</li> </ul> <p><b>Annex I habitats</b> present as a qualifying feature, but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> <li>▪ Sandbanks which are slightly covered by sea water all the time</li> <li>▪ Coastal lagoons *Priority feature</li> <li>▪ Reefs</li> <li>▪ Embryonic shifting dunes</li> <li>▪ Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) *Priority feature</li> <li>▪ Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)</li> </ul> <p><b>Annex II species</b> that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> <li>▪ Great crested newt <i>Triturus cristatus</i></li> </ul>		<p>historically by human activities including coastal protection and flood defence works. Current pressures include fisheries, aggregate extraction, gas exploration, recreation and other activities.</p>	<p>0%</p>
<p>Morecambe Bay and Duddon Estuary SPA</p>	<p>Within the Neighbourhood Plan Boundary</p>	<p>The site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:</p> <p><b>During the breeding season;</b></p> <ul style="list-style-type: none"> <li>▪ Little Tern <i>Sterna albfrons</i></li> <li>▪ Sandwich Tern <i>Sterna sandvicensis</i></li> </ul> <p>Over winter;</p> <ul style="list-style-type: none"> <li>▪ Bar-tailed Godwit <i>Limosa lapponica</i></li> <li>▪ Golden Plover <i>Pluvialis apricaria</i></li> </ul> <p>The site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</p> <p><b>During the breeding season;</b></p> <ul style="list-style-type: none"> <li>▪ Herring Gull <i>Larus argentatus</i></li> <li>▪ Lesser Black-backed Gull <i>Larus fuscus</i></li> </ul> <p><b>On passage;</b></p> <ul style="list-style-type: none"> <li>▪ Ringed Plover <i>Charadrius hiaticula</i></li> <li>▪ Sanderling <i>Calidris alba</i></li> </ul> <p><b>Over winter;</b></p> <ul style="list-style-type: none"> <li>▪ Curlew <i>Numenius arquata</i></li> <li>▪ Dunlin <i>Calidris alpina alpina</i></li> <li>▪ Grey Plover <i>Pluvialis squatarola</i></li> <li>▪ Knot <i>Calidris canutus</i></li> <li>▪ Oystercatcher <i>Haematopus ostralegus</i></li> <li>▪ Pink-footed Goose <i>Anser brachyrhynchus</i></li> <li>▪ Pintail <i>Anas acuta</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ The extent and distribution of the habitats of the qualifying features</li> <li>▪ The structure and function of the habitats of the qualifying features</li> <li>▪ The supporting processes on which the habitats and habitats of the qualifying features rely</li> <li>▪ The populations of each of the qualifying features, and</li> <li>▪ The distribution of qualifying features within the site.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Airports and flightpaths</li> <li>▪ Fishing and harvesting aquatic resources</li> <li>▪ Outdoor sports and leisure activities, recreational activities</li> <li>▪ Marine water pollution</li> <li>▪ Air pollution and air-borne pollutants</li> <li>▪ Interspecific faunal relations</li> <li>▪ Changes in abiotic conditions</li> <li>▪ Changes in biotic conditions</li> </ul> <p>The site is subject to a wide range of pressures such as land-claim for agriculture, overgrazing, dredging, overfishing, industrial uses and unspecified pollution. However, overall the site is relatively robust and many of those pressures have only slight to local effects and are being addressed through Management Plans. The breeding tern interest is very vulnerable and the colony has moved to the Duddon Estuary. Positive management is being secured through management plans for non-governmental organisation reserves, Natural England, Site Management Statements, European Marine Site Management Scheme, and the Morecambe Bay Partnership. There are plans to combine Morecambe Bay and Duddon Estuary SPA with the Duddon SPA (Morecambe and Duddon pSPA) to further protect breeding terns.</p>	<p>Area favourable 94.31% Area unfavourable but recovering 5.69% Area unfavourable no change 0% Area unfavourable declining 0% Area destroyed / part destroyed 0%</p>

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Site Name	Approx. distance from Neighbourhood Plan Boundary	Qualifying Features	Conservation Objectives <sup>31</sup>	Potential Threats to Site Integrity/Vulnerabilities <sup>32</sup>	Results of SSSI Condition Survey
		<ul style="list-style-type: none"> <li>▪ Redshank <i>Tringa totanus</i></li> <li>▪ Shelduck <i>Tadorna tadorna</i></li> <li>▪ Turnstone <i>Arenaria interpres</i></li> </ul> <p>The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 seabirds. The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl.</p>			
Morecambe Bay Pavements SAC	7km	<p><b>Annex I habitats</b> that are a primary reason for selection of the site:</p> <ul style="list-style-type: none"> <li>▪ Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.</li> <li>▪ <i>Juniperus communis</i> formations on heaths or calcareous grasslands</li> <li>▪ Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia)</li> <li>▪ Limestone pavements * Priority feature</li> <li>▪ Tilio-Acerion forests of slopes, screes and ravines * Priority feature</li> <li>▪ <i>Taxus baccata</i> woods of the British Isles * Priority feature</li> </ul> <p><b>Annex I habitats</b> present as a qualifying feature, but not a primary reason for selection of the site:</p> <ul style="list-style-type: none"> <li>▪ European dry heaths</li> <li>▪ Calcareous fens with <i>Cladium</i></li> </ul> <p><b>Annex II species</b> that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> <li>▪ Narrow-mouthed whorl snail <i>Vertigo angustior</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species</li> <li>▪ The structure and function (including typical species) of qualifying natural habitats</li> <li>▪ The structure and function of the habitats of qualifying species</li> <li>▪ The supporting processes on which qualifying natural habitats and habitats of qualifying species rely</li> <li>▪ The populations of qualifying species, and</li> <li>▪ The distribution of qualifying species within the site.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Grazing,</li> <li>▪ Forest and plantation management and use</li> <li>▪ Problematic native species</li> <li>▪ Biocenotic evolution/ succession</li> </ul> <p>The under-grazing of grasslands and decline of traditional cattle grazing is leading to the loss of sward diversity and scrub encroachment problems. Localised overgrazing (sheep-dominated) has impoverished the pavement flora on one of the component sites. A decline of traditional coppice management has reduced the interest of some of the woodland sites.</p> <p>The planting of non-native conifer crops on some of the sites has led to localised declines in condition.</p>	<p><b>Cringlebarrow and Deepdale SSSI</b> Area favourable 0% Area unfavourable but recovering 100% Area unfavourable no change 0% Area unfavourable declining 0% Area destroyed / part destroyed 0%</p> <p><b>Farleton Knott SSSI</b> Area favourable 46.71% Area unfavourable but recovering 36.34% Area unfavourable no change 0% Area unfavourable declining 16.94% Area destroyed / part destroyed 0%</p> <p><b>Gait Barrows SSSI</b> Area favourable 68.98% Area unfavourable but recovering 7.50% Area unfavourable no change 23.52% Area unfavourable declining 0% Area destroyed / part destroyed 0%</p> <p><b>Hawes Water SSSI</b> Area favourable 28.16% Area unfavourable but recovering 67.89% Area unfavourable no change 0.81% Area unfavourable declining 3.13% Area destroyed / part destroyed 0%</p> <p><b>Hutton Roof Craggs SSSI</b> Area favourable 42.52% Area unfavourable but recovering 29.09% Area unfavourable no change 3.88% Area unfavourable declining 24.52% Area destroyed / part destroyed 0%</p> <p><b>Marble Quarry and Hale Fell SSSI</b> Area favourable 4.99%</p>

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Site Name	Approx. distance from Neighbourhood Plan Boundary	Qualifying Features	Conservation Objectives <sup>31</sup>	Potential Threats to Site Integrity/Vulnerabilities <sup>32</sup>	Results of SSSI Condition Survey
					<p>Area unfavourable but recovering 95.01%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p> <p><b>Middlebarrow SSSI</b></p> <p>Area favourable 4.56%</p> <p>Area unfavourable but recovering 54.86%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 40.59%</p> <p>Area destroyed / part destroyed 0%</p> <p><b>Scout and Cunswick Scars SSSI</b></p> <p>Area favourable 63.54%</p> <p>Area unfavourable but recovering 17.45%</p> <p>Area unfavourable no change 0.37%</p> <p>Area unfavourable declining 18.65%</p> <p>Area destroyed / part destroyed 0%</p> <p><b>Thrang End and Yealand Hall Allotment SSSI</b></p> <p>Area favourable 0%</p> <p>Area unfavourable but recovering 100%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p> <p><b>Thrang Wood SSSI</b></p> <p>Area favourable 100%</p> <p>Area unfavourable but recovering 0%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p> <p><b>Underlaid Wood SSSI</b></p> <p>Area favourable 0%</p> <p>Area unfavourable but recovering 100%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p> <p><b>Whitbarrow SSSI</b></p> <p>Area favourable 34.44%</p> <p>Area unfavourable but recovering 58.17%</p> <p>Area unfavourable no change 7.39%</p>



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Site Name	Approx. distance from Neighbourhood Plan Boundary	Qualifying Features	Conservation Objectives <sup>31</sup>	Potential Threats to Site Integrity/Vulnerabilities <sup>32</sup>	Results of SSSI Condition Survey
					Area unfavourable declining 0% Area destroyed / part destroyed 0%
Bowland Fells SPA	6km	<p>This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:</p> <p><b>During the breeding season;</b></p> <ul style="list-style-type: none"> <li>▪ Hen Harrier <i>Circus cyaneus</i></li> <li>▪ Merlin <i>Falco columbarius</i></li> </ul> <p>This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</p> <p><b>During the breeding season;</b></p> <ul style="list-style-type: none"> <li>▪ Lesser Black-backed Gull <i>Larus fuscus</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ The extent and distribution of the habitats of the qualifying features</li> <li>▪ The structure and function of the habitats of the qualifying features</li> <li>▪ The supporting processes on which the habitats and habitats of the qualifying features rely</li> <li>▪ The populations of each of the qualifying features, and</li> <li>▪ The distribution of qualifying features within the site.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture(e.g. due to fishing gear), etc.</li> <li>▪ Fire and fire suppression</li> <li>▪ Reduced fecundity and genetic depression</li> <li>▪ Changes in biotic conditions</li> </ul> <p>The expansive blanket bog and heather dominated moorland provides suitable habitat for a diverse range of upland breeding birds. Favourable nature conservation status of the site depends on appropriate levels of sheep grazing, sympathetic moorland burning practice, sensitive water catchment land management practices and ongoing species protection. Since designation as an SPA, many localised problems of over-grazing have been controlled through management agreements or the Countryside Stewardship Scheme. To date approximately 20% of SPA is under Section 15 management agreements and Countryside Stewardship to stimulate heather regeneration in order to produce better moorland for grouse and raptors alike. Burning plans and stocking levels have also been agreed for all other areas of the SPA through Site Management Statements, whilst problems of raptor persecution continues to be addressed by the RSPB in conjunction with North West Water, Natural England and Lancashire Constabulary.</p>	<p>Area favourable 5.29%</p> <p>Area unfavourable but recovering 85.39%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 14.61%</p> <p>Area destroyed / part destroyed 0%</p>
Calf Hill and Cragg Woods SAC	6km	<p><b>Annex I habitats</b> that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> <li>▪ Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</li> </ul> <p><b>Annex I habitats</b> present as a qualifying feature, but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> <li>▪ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)</li> </ul> <p><b>*Priority feature</b></p>	<ul style="list-style-type: none"> <li>▪ The extent and distribution of qualifying natural</li> <li>▪ The structure and function (including typical species) of qualifying natural habitats, and</li> <li>▪ The supporting processes on which qualifying habitats and rely</li> </ul>	<ul style="list-style-type: none"> <li>▪ Air pollution and air-borne pollutants.</li> </ul> <p>Currently there is limited intervention in land-use/management terms. There is also no immediate need for woodland management in order to safeguard the interest of the site. However, in the long-term it would be desirable to repair some of the walls/fences at the far eastern most end of Calf Hill Wood in order to control sheep grazing from the adjacent fell. In addition, since the canopy of the oak woodland is fairly dense and natural regeneration is quite limited, it would be desirable over the long-term to instigate small-scale selective fellings/silvicultural thinning, whilst felling a small stand of planted larch/pine (&lt;0.5ha) and replacing it with oak/birch.</p>	<p>Area favourable 100%</p> <p>Area unfavourable but recovering 0%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p>
Leighton Moss SPA	6km	<p>This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following</p>	<ul style="list-style-type: none"> <li>▪ The extent and distribution of the habitats of the qualifying features</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pollution to ground water (point and diffuse sources)</li> </ul>	<p>Area favourable 0%</p> <p>Area unfavourable but</p>

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Site Name	Approx. distance from Neighbourhood Plan Boundary	Qualifying Features	Conservation Objectives <sup>31</sup>	Potential Threats to Site Integrity/Vulnerabilities <sup>32</sup>	Results of SSSI Condition Survey
		<p>species listed on Annex I of the Directive:</p> <p><b>During the breeding season;</b></p> <ul style="list-style-type: none"> <li>Bittern <i>Botaurus stellaris</i></li> <li>Marsh Harrier <i>Circus aeruginosus</i></li> </ul> <p><b>Over winter;</b></p> <ul style="list-style-type: none"> <li>Bittern <i>Botaurus stellaris</i></li> </ul>	<ul style="list-style-type: none"> <li>The structure and function of the habitats of the qualifying features</li> <li>The supporting processes on which the habitats and habitats of the qualifying features rely</li> <li>The populations of each of the qualifying features, and</li> <li>The distribution of qualifying features within the site.</li> </ul>	<ul style="list-style-type: none"> <li>Problematic native species</li> <li>Human induced changes in hydraulic conditions</li> <li>Changes in abiotic conditions</li> </ul> <p>Leighton Moss is vulnerable to changes in water quality and water levels. The maintenance of a high quality spring fed water supply is important and although there are few opportunities for this to become polluted within the catchment agricultural run-off from land immediately adjacent to the reserve has been identified as a potential hazard in recent years.</p> <p>Initiatives are currently being initiated to reduce/remove this threat by the EA. The Moss is also susceptible to saline intrusion upstream of its tidal sluice from Morecambe Bay. This is potentially one of the most damaging threats to the reserve, there having been three inundations since 1964 caused by gales pushing in unusually high 10 metre tides</p>	<p>recovering 100%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p>
Leighton Moss Ramsar	8km	<p><b>Ramsar criterion 1</b></p> <p>An example of large reedbed habitat characteristic of the biogeographical region. The reedbeds are of particular importance as a northern outpost for breeding populations of great bittern <i>Botaurus stellaris</i>, Eurasian marsh harrier <i>Circus aeruginosus</i> and bearded tit <i>Panurus biarmicus</i>.</p> <p><b>Ramsar criterion 3</b></p> <p>The site supports a range of breeding birds including great bittern <i>Botaurus stellaris</i>, Eurasian marsh harrier <i>Circus aeruginosus</i> and bearded tit <i>Panurus biarmicus</i>. Species occurring in nationally important numbers outside the breeding season include northern shoveler <i>Anas clypeata</i> and water rail <i>Rallus aquaticus</i></p>	<ul style="list-style-type: none"> <li>The extent and distribution of the habitats of the qualifying features</li> <li>The structure and function of the habitats of the qualifying features</li> <li>The supporting processes on which the habitats and habitats of the qualifying features rely</li> <li>The populations of each of the qualifying features, and</li> <li>The distribution of qualifying features within the site.</li> </ul>	<p>The site is currently vulnerable to sedimentation / siltation which increases turbidity and a loss of aquatic flora which results in a decrease in the quality of bittern habitat.</p> <p>Pollution – pesticides / agricultural runoff</p>	<p>Area favourable 0%</p> <p>Area unfavourable but recovering 100%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p>
Witherslack Mosses SAC	11.5km	<p><b>Annex I habitats</b> that are a primary reason for selection of the site:</p> <ul style="list-style-type: none"> <li>Active raised bogs * Priority feature</li> <li>Degraded raised bog</li> <li>Degraded raised bogs still capable of natural regeneration</li> </ul>	<ul style="list-style-type: none"> <li>The extent and distribution of the qualifying natural habitats</li> <li>The structure and function (including typical species) of the qualifying natural habitats, and,</li> <li>The supporting processes on which the qualifying natural habitats rely</li> </ul>	<ul style="list-style-type: none"> <li>Air pollution and air-borne pollutants</li> <li>Invasive non-native species</li> <li>Human induced changes in hydraulic conditions,</li> <li>Biocenotic evolution/ succession.</li> </ul> <p>Past drainage for peat extraction and forestry has lowered the water table and allowed scrub to spread across the mosses. A programme of restoration works is in place on two of the mosses, and a management plan has been completed for major works on the third</p>	<p><b>Foulshaw Moss SSSI</b></p> <p>Area favourable 0%</p> <p>Area unfavourable but recovering 91.31%</p> <p>Area unfavourable no change 6.11%</p> <p>Area unfavourable declining 2.59%</p> <p>Area destroyed / part destroyed 0%</p> <p><b>Meathop Moss SSSI</b></p> <p>Area favourable 0%</p> <p>Area unfavourable but recovering 100%</p> <p>Area unfavourable no change 0%</p> <p>Area unfavourable declining 0%</p> <p>Area destroyed / part destroyed 0%</p> <p><b>Nichols Moss SSSI</b></p> <p>Area favourable 20.63%</p> <p>Area unfavourable but recovering 0%</p> <p>Area unfavourable no change 8.17%</p> <p>Area unfavourable declining 70.65%</p> <p>Area destroyed / part destroyed</p>

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Site Name	Approx. distance from Neighbourhood Plan Boundary	Qualifying Features	Conservation Objectives <sup>31</sup>	Potential Threats to Site Integrity/Vulnerabilities <sup>32</sup>	Results of SSSI Condition Survey
					0%
Roudsea Wood and Mosses SAC	13km	<p><b>Annex I habitats</b> that are a primary reason for selection of the site:</p> <ul style="list-style-type: none"> <li>▪ Active raised bogs* Priority feature</li> <li>▪ Degraded raised bogs still capable of natural regeneration</li> <li>▪ Tilio-Acerion forests of slopes, screes and ravines* Priority feature</li> <li>▪ <i>Taxus baccata</i> woods of the British Isles* Priority feature</li> </ul>	<ul style="list-style-type: none"> <li>▪ The extent and distribution of qualifying natural habitats</li> <li>▪ The structure and function (including typical species) of qualifying natural habitats, and</li> <li>▪ The supporting processes on which qualifying natural habitats rely</li> </ul>	<ul style="list-style-type: none"> <li>▪ Forest and plantation management and use</li> <li>▪ Invasive non-native species</li> <li>▪ Problematic native species</li> <li>▪ Human induced changes in hydraulic conditions</li> <li>▪ Biocenotic evolution/succession.</li> </ul> <p>In the latter part of the 20th century, coppicing of the woodland ceased and lower water tables on the bogs, caused by drainage for peat-cutting, had allowed scrub to spread across them. Most of the site is now managed as a National Nature Reserve. Woodland management is carried out and much scrub has been cleared from Deer Dike Moss and ditches blocked to allow regeneration of the bog vegetation. Management of the southern bog, added to the National Nature Reserve, has been addressed in the management plan.</p>	<p>Area favourable 2.35%                      Area unfavourable but recovering 56.55%                      Area unfavourable no change 0%                      Area unfavourable declining 41.10%                      Area destroyed / part destroyed 0%</p>

# Appendix C Screening Assessment of the Plan Policies

### Screening Assessment of the Plan Policies

Policies identified in **green** in the “Likely Significant Effect- LSE (alone) plus reasoning” column do not provide for impact pathways that could link to a European designated site. Policies identified in **green** in the “Likely Significant Effect- LSE (In-combination) plus reasoning” column do not provide for impact pathways that could link to a European designated site in-combination with any other policies, Plans or Projects.

Policies identified in **orange** in the “Likely Significant Effect- LSE (alone) plus reasoning” column have potential to provide for impact pathways that could link to a European designated site. Policies identified in **orange** in the “Likely Significant Effect- LSE (In-combination) plus reasoning” column have potential to provide for impact pathways that could link to a European designated site ‘in-combination’ with any other policies, Plans or Projects. In both cases the policy/policies is/are taken forward to the next stage of assessment – Appropriate Assessment and discussed within this document.

Policy Reference	Policy Title	Policy Detail	Likely Significant Effect- LSE (alone) plus reasoning	Likely Significant Effect- LSE (In-combination) plus reasoning
1	Local Housing Need	<ul style="list-style-type: none"> <li>New Developments will only be supported where they contribute to the identified needs of the Parish.</li> <li>Mixed residential developments of 11 or more houses must provide affordable homes in line with Lancaster City Council Local Plan identified ratio.</li> <li>The option for the removal of this policy in exchange for a financial contribution to aid the delivery of affordable dwellings elsewhere will not be considered.</li> </ul>	This Policy relates to housing need density, mix of housing types and reasons for support of housing development within built up areas. This policy does not lead to development and therefore there will be no Likely Significant Effects to European Sites	No Likely Significant Effects as there are no pathways present
2	Sites for New Development	<p>Policy 2(a) Sites for new development The Neighbourhood Plan supports the redrawing of the Green Belt boundary by the Local Plan to remove Land West of Sea View Drive, Hest Bank (Plot 1, LPSA167 of Lancaster City Council's SHELAA 2018) from the Green Belt in order to implement.</p> <p>Policy 2(b) In the event of the Green Belt boundary being redrawn according to Policy 2(a), the Neighbourhood Plan will support the allocation by the Local Plan of 'Land West of Sea View Drive' (LPSA167) for the building development, which must meet the following criteria:</p> <ol style="list-style-type: none"> <li>A full site design shall be provided which shows green space, planting areas for shrubs and small trees and buildings positioned to maximise views through and over the site.</li> <li>The building of 30-35 dwellings on the site to be single storey with gable roofs.</li> <li>Rooflines of one storey dwellings not be raised above their original constructed height.</li> <li>Aspects and placement of buildings to be varied in order to facilitate views through and across the site.</li> <li>The ground profile of the existing site will be maintained as an even gradient down to the Canal.</li> <li>Materials to be in accordance with Policy 4 of this Plan.</li> <li>A minimum of 25% of dwellings to be affordable.</li> <li>The site plan will seek to maximise green space for grass and planted shrubs and trees in public space and allow one public parking space per dwelling. This to be achieved by minimising space for front gardens.</li> <li>Driveways and pathways attached to dwellings should be permeable to allow infiltration of water in line with DM34 of the Local Plan.</li> <li>Site design will include provision of a wildlife corridor alongside the Canal and the retention of natural features and associated native animal and plant species on the site in accordance with DM42 and DM43 of the Local Plan.</li> <li>Access points will be provided to enable a footpath/cycleway through the site from Sunningdale Crescent in the North to Rakes Head Lane (commonly known as Old Bob's Lane) in the South.</li> </ol>	<p>This policy supports sites for new development in relation to the removal of Plot1 from greenbelt in order for development. . Appendix D provides the assessment of the Plot 1</p> <p>Potential impact pathways include:</p> <ul style="list-style-type: none"> <li>Recreation</li> <li>Loss of functionally linked land for non-breeding SPA birds</li> <li>Air pollution associated with traffic movements</li> <li>Human induced changes in hydraulic conditions</li> </ul> <p>Likely Significant Effects 'Alone'. This is therefore considered further in the assessment of site allocations in Appendix D</p>	<p>Likely Significant Effects–In-combination due to : Other developments/increased housing/growth, in neighbouring districts</p> <p>Potential impact pathways include:</p> <ul style="list-style-type: none"> <li>Recreation</li> <li>Loss of functionally linked land for non-breeding SPA birds</li> <li>Air pollution associated with traffic movements</li> <li>Human induced changes in hydraulic conditions</li> </ul> <p>Whether LSE will actually arise depends on the actual site allocations. This is therefore explored further in the site allocations analysis in the following table.</p>

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Policy Reference	Policy Title	Policy Detail	Likely Significant Effect- LSE (alone) plus reasoning	Likely Significant Effect- LSE (In-combination) plus reasoning
3	Sites for Possible Development in the Future	<p>Policy 3(a) Sites for possible development in the future The Neighbourhood Plan supports the building of dwellings of up to two storeys with three bedrooms or fewer on 'Land at the East end of Kirklands'(LPSA165) following appropriate ground works to mitigate any increased water run-off towards the village recreation ground.</p> <p>Policy 3(b) The following parcel of land is noted as being a site suitable for the development of social housing, being dwellings of three bedrooms or fewer, which would be supported if the site became available during the lifetime of the Plan: Plot 2 'Land South Of 27 Shady Lane' (LPSA589)</p> <p>Policy 3(c) The following parcels of land are noted as sites suitable for development of dwellings of three bedrooms or fewer:                      Plot 8 'Wooded Land at corner of A6 and Bottomdale Road' (LPSA846)                      Plot 9 'Land South of Christadelphian Church, Main Road (LPSA847)                      Any development within the Conservation Area must be in accordance with DM37-41 of the Local Plan.</p>	<p>This policy supports sites for possible future development in relation to the following Plots 5 (policy 3a), 2 (policy 3b), 8 (policy 3c, and 9 (policy 3c). Appendix D provides the assessment of the individual Plots(2, 5, 8 and 9)</p> <p>Potential impact pathways include:</p> <ul style="list-style-type: none"> <li>• Recreation</li> <li>• Loss of functionally linked land for non-breeding SPA birds</li> <li>• Air pollution associated with traffic movements</li> <li>• Human induced changes in hydraulic conditions</li> </ul> <p>Likely Significant Effects 'Alone'. This is therefore considered further in the assessment of site allocations in Appendix D</p>	<p>Likely Significant Effects–In-combination due to :                      Other developments/increased housing/growth, in neighbouring districts</p> <p>Potential impact pathways include:</p> <ul style="list-style-type: none"> <li>• Recreation</li> <li>• Loss of functionally linked land for non-breeding SPA birds</li> <li>• Air pollution associated with traffic movements</li> <li>• Human induced changes in hydraulic conditions</li> </ul> <p>Whether LSE will actually arise depends on the actual site allocations. This is therefore explored further in the site allocations analysis in the following table.</p>
4	Building materials	<p>Building designs will be supported which include building materials most commonly found in the village.</p> <ul style="list-style-type: none"> <li>▪ Roofs to be of traditional blue or green Cumbrian slate or grey to black ceramics or other hard roofing materials.</li> <li>▪ Walls to use locally sourced sandstone, other sandstones matching the colour of buildings in the Conservation Area, renders with buff to white finishes or pebbledash finishes, or faux sandstone.</li> <li>▪ Freestanding walls to use the same materials.</li> <li>▪ Brick and building blocks used in construction should not be apparent above damp course level.</li> </ul>	<p>This policy refers to design only and does not lead to development therefore there will be no Likely Significant Effects to European Sites.</p>	<p>No Likely Significant Effects as there are no pathways present</p>
5	Flooding	<ul style="list-style-type: none"> <li>▪ Development in areas where flooding from either surface water or coastal flooding is a known issue development proposals will be resisted unless suitable mitigation can be provided which does not exacerbate run off elsewhere and wherever possible seeks to provide a betterment and will only be considered for development if no other land is available.</li> <li>▪ Development proposals will be required to provide effective surface water drainage measures to protect existing and future residential areas from flooding.</li> <li>▪ New development should be designed to maximise the retention of surface water on the development site and to minimise runoff.</li> <li>▪ Sustainable drainage systems (SuDS) should be implemented in accordance with the SuDS hierarchy unless deemed inappropriate.</li> <li>▪ Local knowledge of flooding incidents must be incorporated into all site specific flood risk assessments, via a consultation exercise involving the Parish Council.</li> </ul>	<p>This policy relates to flooding and does not lead to development. Therefore there will be no Likely Significant Effects to European Sites</p>	<p>No Likely Significant Effects as there are no pathways present</p>
6	Business development	<p>The development of new and existing local businesses will be supported in particularly</p> <ul style="list-style-type: none"> <li>▪ those in keeping with the rural and tourist nature of the Parish</li> <li>▪ people wishing to extend existing premises to work from home</li> <li>▪ development of small storage/work units</li> </ul> <p>Providing</p> <ul style="list-style-type: none"> <li>▪ the design of any development is in keeping with its surroundings</li> <li>▪ there is sufficient off road parking available/created</li> <li>▪ the development does not create additional traffic issues</li> </ul>	<p>This policy relates to the requirements for business development and does not lead to development itself. Therefore there will be no Likely Significant Effects to European Sites.</p>	<p>No Likely Significant Effects as there are no pathways present</p>
7	Maintaining views from within and beyond the village	<p>(a) Given the rolling topography of the area, housing development must respect the setting in which it is placed, by maintaining views of the village from beyond its borders and views from within the village towards seascapes and landscapes.</p> <p>(b) Developments should not cause any loss of significant views from any public right of way, footpath, cycle route or canal towpath, which currently provides open field aspects, views over Morecambe Bay or other long views.</p>	<p>This policy relates to maintaining views and does not lead to development and therefore there will be no Likely Significant Effects to European Sites.</p>	<p>No Likely Significant Effects as there are no pathways present</p>
8	The coastline and development	<p>New development or major alteration to existing properties between the sea and the West Coast railway line will be permitted only when it can be clearly demonstrated that;</p> <ul style="list-style-type: none"> <li>▪ Both designated and non-designated natural environment assets are to be protected</li> <li>▪ The priority for new development should be to avoid direct and indirect impacts upon biodiversity and/or geodiversity. Where impacts cannot be avoided, mitigation and then compensation measures should be provided</li> <li>▪ Development proposals should demonstrate how biodiversity and/or geodiversity will be protected and enhanced including local for wildlife, ecological networks, and how schemes contribute to biodiversity net gain</li> <li>▪ Landscaping schemes should include wildlife enhancements. Wherever possible they should retain existing, and plant new areas of trees, woodlands and hedgerows using locally appropriate native species</li> </ul>	<p>The policy offers protection to designated sites from inappropriate development. The policy (in its rationale) also highlights the importance of the habitats and the legal protection the designated sites have. Therefore there will be no Likely Significant Effects to European Sites.</p>	<p>No Likely Significant Effects as there are no pathways present</p>
9	Non-designated heritage assets	<p>The submitted Local Plan provides comprehensive planning guidance to protect and enhance heritage assets In addition to this:</p> <ul style="list-style-type: none"> <li>▪ the Parish Council will work with Lancaster City Council to identify the unique non-designated heritage assets within Slyne with Hest.</li> <li>▪ development affecting such assets will only be permitted where it complies with planning guidance as outlined in DM37: Development Affecting Non-Designated Heritage Assets or their Settings.</li> </ul>	<p>This policy relates to the protection and enhancement of heritage assets. and does not lead to development, therefore there will be no Likely Significant Effects to European Sites</p>	<p>No Likely Significant Effects as there are no pathways present</p>

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Policy Reference	Policy Title	Policy Detail	Likely Significant Effect- LSE (alone) plus reasoning	Likely Significant Effect- LSE (In-combination) plus reasoning
10	Signs and footpaths	Sites identified for development in this plan will be required to work with the Parish Council in the provision and future maintenance of additional signage / information boards which show all known local and national footpaths, the canal towpath, cycle tracks and bridleways in other amenities within the Parish. Signs must indicate routes which are multi user friendly and traffic free. These boards will be in addition to any other required signage	This policy relates to the provision and maintenance of signage and does not lead to development, therefore no Likely Significant Effects to European Sites	No Likely Significant Effects as there are no pathways present
11	Community facilities	Encourage and support the building and development of multi-use community buildings in the Parish, ensuring any development is of sensitive design, in keeping with its immediate surroundings and offer flexible space that can adapt to the changing needs of the community <ul style="list-style-type: none"> <li>▪ Support the planned rebuilding of St Luke's Church Hall</li> <li>▪ Replace the existing scout hut or incorporate into redeveloped Memorial Hall</li> <li>▪ Improve Memorial Hall facilities and activities.</li> </ul>	This policy does lead to development, however this policy refers to the planned rebuilding of the church hall with a similar footprint, the replacement of a scout hut in the current location to the rear of Memorial Hall and improvements to the Memorial Hall. It should be noted that all of these buildings are located in an urban area. It is also noted that whilst there is an area of grassland to the rear of Memorial hall/adjacent to the scout hut, this area is managed amenity grassland which is surrounding by trees/hedges and is therefore not suitable as functionally linked land (this habitat would usually comprise open farmland).. There this policy will not lead to Likely Significant Effects.	No Likely Significant Effects as there are no pathways present
12	Recreational facilities	<ul style="list-style-type: none"> <li>▪ Support improvements to existing outdoor recreational facilities in the Parish and the provision of new outdoor recreational space to encourage the physical well-being of residents.</li> <li>▪ Address flooding at the Recreation Ground, to increase usable space for outdoor recreation</li> <li>▪ Replace ageing play equipment at the play area on the Recreation Ground</li> <li>▪ The Parish Council will consult on the development of facilities on the field</li> <li>▪ The Parish Council encourages and will support voluntary groups now and in the future, that seek to improve recreational facilities and activities which benefit all ages and groups.</li> </ul>	<p>Whilst the main part of this policy doesn't lead to development, the policy does include for the provision of new outdoor recreational space- the location of which is not shown in the Neighbourhood Plan. Therefore due to this reason there is the possibility that this policy could lead to Likely Significant Effects.</p> <p>The Potential impact pathway is</p> <ul style="list-style-type: none"> <li>▪ Loss of functionally linked land for non-breeding SPA birds;</li> </ul>	<p>Likely Significant Effects – In combination potential pathways include:</p> <ul style="list-style-type: none"> <li>▪ Loss of functionally linked land for non-breeding SPA birds</li> </ul> <p>Refer to <b>Appendix D</b>, for assessment of individual sites</p>
13	Road safety	Recognising that additional development within the Parish will add to the ever increasing traffic numbers, this policy aims to improve/resolve the identified road safety issues within the village by working collaboratively with Lancashire County Council's Highway Department to <ul style="list-style-type: none"> <li>▪ Extend the 20mph zone from the junction of HastyBrow/Throstle Grove down Hest Bank Lane to the Junction of the A6 and include Throstle Grove in the 20mph zone</li> <li>▪ To have effective signage to deter (or STOP) large vehicles from using the Listed Canal Bridges</li> <li>▪ To have effective signage indicating areas where there are no footpaths</li> </ul>	This policy relates to road safety and does not lead to development and therefor will not lead to Likely Significant Effects.	No Likely Significant Effects as there are no pathways present

# Appendix D Detailed Screening Assessment Policies 2, 3 and 12



**Screening Assessment of the Plan Site Allocations**

Policies identified in **green** in the “Likely Significant Effect- LSE (alone) plus reasoning” column do not provide for impact pathways that could link to a European designated site. Policies identified in **green** in the “Likely Significant Effect- LSE (In-combination) plus reasoning” column do not provide for impact pathways that could link to a European designated site in-combination with any other policies, Plans or Projects.

Policies identified in **orange** in the “Likely Significant Effect- LSE (alone) plus reasoning” column have potential to provide for impact pathways that could link to a European designated site. Policies identified in **orange** in the “Likely Significant Effect- LSE (In-combination) plus reasoning” column have potential to provide for impact pathways that could link to a European designated site ‘in-combination’ with any other policies, Plans or Projects. In both cases the policy/policies is/are taken forward to the next stage of assessment – Appropriate Assessment and discussed within this document.

Policy Number and Plot number	Type of development	Distance from closest European Site	Likely Significant Effect- LSE (alone) plus reasoning	Likely Significant Effect LSE (in-combination)
Policy 2 Plot 1	Residential	Over 375m east of Morecambe Bay and Duddon Estuary SPA, Morecambe Bay SAC, Morecambe Bay Ramsar.	<p><b>Recreational Pressure and Disturbance- of Morecambe Bay and Duddon Estuary SPA</b></p> <p><b>Breeding birds:</b></p> <ul style="list-style-type: none"> <li>▪ Little Tern <i>Sterna albifrons</i></li> <li>▪ Sandwich Tern <i>Sterna sandvicensis</i></li> </ul> <p>The breeding tern interest is very vulnerable and the colony has moved to the adjacent Duddon Estuary. The Duddon Estuary is located over 28km north of Plot 1 and so disturbance due to recreational pressure from building houses in this area is unlikely.</p> <p><b>Recreational Pressure and Disturbance – Morecambe Bay SAC/ Morecambe Bay and Duddon Estuary SPA and Morcambe Bay Ramsar</b></p> <p>Impacts relating to recreation pressure and disturbance cannot be ruled out. The study (Morecambe Bay Bird Disturbance and Access Management) by Liley et al (2015) included visitor interviews and collected data on home postcodes. These showed that local residents, travelling from home for a short visit, typically came from within 4km of the access point. Plot 1 is located less than 1km from Morecambe Bay SAC/ Morecambe Bay and Duddon Estuary SPA and Morcambe Bay Ramsar so there is the possibility of this site allocation causing an increase in visitor numbers at these European designated sites.</p> <p><b>Therefore there is are Likely Significant Effects and this Policy will need to be taken to the next stage of assessment- Appropriate Assessment</b></p>	<p><b>Recreational Pressure and Disturbance</b></p> <p><b>N/A going to Appropriate Assessment where this allocation will be assessed in-combination</b></p>

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**Loss of functionally linked land for SPA birds (Morecambe Bay and Duddon Estuary SPA)**  
 Plot 1 is an approximately 2 ha area of grassland located adjacent to houses to the east and north and the Lancashire Canal to the west. To the west of the Lancashire Canal are arable fields.  
 This plot is over 380 m east of Morecambe Bay and Duddon Estuary SPA separated by arable land and housing so will not require land-take from the SPA.

The qualifying features of the SPA Article 4.1 breeding: Little Tern *Sterna albifrons*, and Sandwich Tern *Sterna sandvicensis*, over winter: Bar-tailed Godwit *Limosa lapponica*, Golden Plover *Pluvialis apricaria*.

The site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species- breeding: Herring Gull *Larus argentatus*, and Lesser Black-backed Gull *Larus fuscus*, on passage; Ringed Plover *Charadrius hiaticula* and Sanderling *Calidris alba*, and over winter;

- Curlew *Numenius arquata*
- Dunlin *Calidris alpina alpina*
- Grey Plover *Pluvialis squatarola*
- Knot *Calidris canutus*
- Oystercatcher *Haematopus ostralegus*
- Pink-footed Goose *Anser brachyrhynchus*
- Pintail *Anas acuta*
- Redshank *Tringa totanus*
- Shelduck *Tadorna tadorna*
- Turnstone *Arenaria interpres*

**Little tern** nest exclusively on the coast in well camouflaged shallow scrapes on beaches, spits or inshore islets. They forage out to sea, staying close to their breeding site (studies suggest a foraging range of 2-3 km), which dictates a necessity for breeding close to shallow, sheltered feeding areas where they can easily locate the variety of small fish and invertebrates that make up their diet.

**Sandwich terns** are distributed widely but patchily around the coasts of the British Isles, broadly reflecting the availability of favoured nesting habitat: low-lying offshore islands, islets in bays or brackish lagoons, spits or remote mainland dunes. Sandwich tern forage at sea, but travel a greater distance than little terns  
 Given the habitat requirements of little tern and sandwich tern, these species are unlikely to be found outside of the SPA utilising functionally linked land within the Lancaster District Boundary.

**Bar-tailed godwit** is a long distance migrant visits UK shores for the winter months, and is almost entirely coastal in its winter habits, feeding mainly on worms both on sandy and muddy shores Given this species dependence on earthworms, it is possible that bar-tailed godwit would utilise damp arable or grassland habitat in close proximity to the European designated sites boundary. The SPA is located over 350 m from Plot 1 and is therefore not considered in close proximity and therefore does not constitute functionally linked land for this species.

**Golden plover** inhabit mown grass or close grazed pastures in the winter, as well as stubbles, fallows, harvest-fields and other farmlands of open character, often forming large flocks with lapwings. A 2006 study found that flocks of golden plovers avoided field boundaries and so larger flocks occupied larger fields. Short grass or arable fields more than 5 ha in size allocated for development have the potential to constitute functionally linked land in relation to this species. The area of Plot 1 is only 2 ha in size and therefore does not constitute functionally linked land for this species

**Herring Gulls** are widely distributed around the coasts of the British Isles, and prefers to nest on rocky coastline, with cliffs, islets and offshore islands, though a range of other habitats are used including sand dunes, shingle banks and, increasingly, buildings (such as large warehouses) in urban areas

**Lesser Black-backed Gulls** are found around the UK's coastline in summer and on some inland high moors.. This species is increasingly common in urban habitats, even in inland locations.

Given the widespread distribution of herring gulls and lesser black-backed gulls, areas identified to development, particularly sites with large flat roofed buildings for nesting, have the potential to constitute functionally linked land in relation to this species. Plot 1 does not contain any flat roofed buildings and therefore is not considered to be functionally linked land for these two Gull species.

**Ringed Plover** feed on invertebrates on sand and shingle shores, sandbanks and mudflats, as well as on saltmarshes, short grassland, flooded fields and shores of artificial habitats. They roost communally, close to feeding sites along the shoreline, on sandbanks or bare arable fields, and in low vegetation. This species tends to be most numerous and concentrated on wide sandy or shingle tidal beaches, with access to suitable resting or nesting places above high water mark. It is possible that this species would utilise suitable habitat in close proximity to the European designated sites boundary, preferring areas that are not subject to regular human disturbance. Short grassland and arable habitat may constitute functionally linked land in relation to this species. The SPA is located over 350 m from Plot 1 separated by arable field and housing and is therefore not considered in close proximity SPA and therefore does not constitute functionally linked land for this species.

**Loss of functionally linked land for SPA birds**  
**No Likely Significant Effects 'in combination' as there are no pathways present.**

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			<p><b>Sanderling</b> does not breed in the UK, but is a winter visitor and passage migrant in spring and autumn. It is attracted to long, tidal sandy beaches where it feeds on small marine worms, crustaceans and molluscs. During the passage period this species is unlikely to be found outside of the sandy tidal habitats it prefers. Given the habitat requirements of sanderling, this species is unlikely to be found outside of the SPA utilising functionally linked land within the Lancaster District Boundary.</p> <p><b>Curlew</b> feeds on a wide range of invertebrates using several techniques. Open habitats supporting good populations of invertebrates, typically extensive areas of damp grassland and rough pasture are favoured (Snow &amp; Perrins, 2008).</p> <p><b>Dunlin</b> Adults forage on boggy areas or areas with standing water with a high abundance of insect prey. Suitable areas for foraging are therefore, likely to occur on areas of moorland or bog and not managed pastoral land. Plot 1 does not comprise moorland or bog ,nor is it pastoral land and therefore is not considered to be functionally linked land for this species from this SPA.</p> <p><b>Grey plover</b> as per the golden plover overwinter will inhabit mown grass or close grazed pastures in the winter, as well as stubbles, fallows, harvest-fields and other farmlands of open character, often forming large flocks with lapwings. A 2006 study found that flocks of golden plovers avoided field boundaries and so larger flocks occupied larger fields. Short grass or arable fields more than 5 ha in size allocated for development have the potential to constitute functionally linked land in relation to this species. The area of Plot 1 is only 2ha in in size and therefore does not constitute functionally linked land for this species.</p> <p>Overwintering <b>knot</b> are almost exclusively estuarine in the UK. Given the habitat requirements of knot, this species is unlikely to be found outside of the SPA utilising functionally linked land within the Lancaster District Boundary.</p> <p><b>Oystercatcher</b> Non-breeding oystercatchers are found exclusively in coastal habitats, concentrated on estuaries. Therefore due to the composition of Plot 1 it is therefore considered that Plot 1 does not constitute functionally linked land in relation to this overwintering species.</p> <p><b>Pink footed goose</b> Historically, estuaries provided the most important roost sites, but larger lakes and reservoirs are now also used. Birds usually feed close to their roost site, but may occasionally fly more than 20 km to find suitable forage. Agricultural crops (including grain, winter cereals, potatoes and grass) are eaten in addition to native coastal food-plants. Pink-footed geese are sensitive to disturbance and prefer large, open areas in which to feed. Research suggests that they avoid feeding in fields less than 6 ha in size and fields that are close to major roads. Arable or grassland habitat within fields more than 6 ha in size and away from major roads may constitute functionally linked land in relation to this species.</p> <p><b>Pintail</b> form large flocks on brackish coastal lagoons, in estuaries and deltas, and on large inland lakes. Given the dependence of pintail on large waterbodies, Plot 1 would not constitute functionally linked land in relation to this species. However, there is the potential for disturbance, both during construction and from recreational pressure post-construction, associated with development within 500 m of suitable pintail habitat.. There are no inland lakes within 500 of Plot 1 and so there would be no likely significant effects to pintail related to this SPA during construction or due to recreation post construction.</p> <p><b>Redshank</b> (non-breeding) occur around most of the coast of the UK, as well as at some inland wet grasslands, with approximately 70% occurring on estuaries. Redshanks hunt for insects, earthworms, molluscs and crustaceans by probing their bills into soil and mud It is possible that this species would utilise suitable habitat in close proximity to the European designated sites boundary. Wet grassland may constitute functionally linked land in relation to this species. Plot 1 does not comprise wet grassland and is therefore not considered to be functionally link land for this species.</p> <p><b>Shelduck</b> are found predominantly on the coast but may also utilise large inland waterbodies. Given the dependence of shelduck on large waterbodies, Plot 1 does not constitute functionally linked land in relation to this species. However, there is the potential for disturbance, both during construction and from recreational pressure post-construction, associated with development within 500 m of suitable shelduck habitat. There is no suitable shelduck habitat within 500m of Plot 1. Therefore Plot 1 is not considered to be functionally link land for this species.</p> <p><b>Turnstone</b> are found on the coast, preferring rocky shores as well as sandy and muddy shorelines. They particularly like feeding on rocks covered with seaweed, and will feed along seawalls and jetties. Given the habitat requirements of turnstone, this species is unlikely to be found outside of the SPA utilising functionally linked land within the Lancaster District Boundary.</p> <p><b>It can be confirmed that Plot 1 does not constitute functionally linked land for any of the above SPA species. Therefore there will be no Likely Significant Effects 'alone' on this SPA and functionally linked land with regards to Policy 2 Plot 1.</b></p>	
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			<p><b>Human induced changes in hydraulic conditions</b> The housing allocation site is over 375m from the Morecambe Bay SACSPA/Ramsar and therefore would not change the hydraulic conditions of the SAC/SPA/Ramsar through land take.</p> <p>Domestic water supply for the north west England (excluding Merseyside and Cheshire) is from United Utilities' reservoirs in Cumbria<sup>34</sup> (Thirlmere and Haweswater - of which neither are designated as SACs) and the Pennines. Therefore there are no water abstraction requirement from the of Morecambe Bay and Duddon Estuary SPA, Morecambe Bay SAC, Morecambe Bay Ramsar or Morecambe Bay Pavements SAC.</p> <p><b>Therefore there will be no Likely Significant Effects 'alone'.</b></p> <p><b>Air pollution</b></p> <p>In relation to the European designated sites, local air pollutions is not considered to cause likely significant effects due to the distance between the closest European designated site (Morecambe Bay SAC) and the plot allocation (over 350 m). According to the Department of Transport's Transport Analysis Guidance, "Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant". This is because traffic exhausts are situated only a few inches above the ground and are horizontal to it, such that the vast majority of emitted pollutants are never dispersed far and are very quickly deposited. This distance is also related to the mix of the exhaust gases, the small dimension of the exhausts and the velocity of the exhaust gases leaving the exhaust.</p> <p>Also taking into consideration are any significant journey to work routes within 200m of Morecambe Bay SAC. It is considered that most roads within 200 m of the Morecambe Bay SAC are residential roads or minor roads and are unlikely to form significant journey to work routes for the Slyne-with-Hest residents. Moreover, consultation of APIS and MAGIC indicate that the only air quality sensitive habitats within 200m of coastal roads within the SAC (or SPA/Ramsar site) within 5km of Slyne with Hest parish are saltmarsh and intertidal mudflat and sandflat. These have relatively low sensitivity to nitrogen deposition with a critical load of 20-30 kgN/ha/yr. APIS indicates that the nitrogen deposition rate in this area is 14.84 kgN/ha/yr and is thus well below the critical load for these habitats. Therefore it is considered that there are no Likely Significant Effects from air pollution to the European designated site through significant journey to work routes from this allocation.</p> <p><b>Therefore there will be no Likely Significant Effects 'alone'</b></p>	<p><b>Human induced changes in hydraulic conditions</b> <b>No Likely Significant Effects 'in combination' as there are no pathways present</b></p> <p><b>Air Pollution</b> <b>No Likely Significant Effects 'in combination' as there are no pathways present</b></p>
<p><b>Policy 3</b> <b>Plots 2, 5, 8 and 9</b></p>	<p>Sites for new development - residential</p>	<p>All plots over at least 630 m east of Morecambe Bay and Duddon Estuary SPA, Morecambe Bay SAC, Morecambe Bay Ramsar, separated by residential housing and associated roads.</p>	<p><b>Recreational Pressure and Disturbance- of Morecambe Bay and Duddon Estuary SPA</b></p> <p><b>Breeding birds:</b></p> <ul style="list-style-type: none"> <li>▪ Little Tern <i>Sterna albifrons</i></li> <li>▪ Sandwich Tern <i>Sterna sandvicensis</i></li> </ul> <p>The breeding tern interest is very vulnerable and the colony has moved to the adjacent Duddon Estuary. The Duddon Estuary is located over 28km north of Plot 1 and so disturbance due to recreational pressure from building houses in this area is unlikely.</p> <p><b>Recreational Pressure and Disturbance – Morecambe Bay SAC/ Morecambe Bay and Duddon Estuary SPA and Morcambe Bay Ramsar</b></p> <p>Impacts relating to recreation pressure and disturbance cannot be ruled out. The study (Morecambe Bay Bird Disturbance and Access Management) by Liley et al (2015) included visitor interviews and collected data on home postcodes. These showed that local residents, travelling from home for s short visit, typically came from within 4km of the access point. Plot 1 is located less than 1km from Morecambe Bay SAC/ Morecambe Bay and Duddon Estuary SPA and Morcambe Bay Ramsar so there is the possibility of this site allocation causing an increase in visitor numbers at the these European designated sites.</p> <p><b>Therefore there is are Likely Significant Effects and this Policy will need to be taken to the next stage of assessment- Appropriate Assessment</b></p>	<p><b>Recreational Pressure and Disturbance</b></p> <p><b>N/A going to Appropriate Assessment where this allocation will be assessed in-combination</b></p>

<sup>34</sup> <https://www.unitedutilities.com/corporate/about-us/what-we-do/water-supply/> [visited 18/02/2019]

		<p><b>Loss of functionally linked land for SPA birds (Morecambe Bay and Duddon Estuary SPA)</b></p> <p><b>Plots 2</b> is an area of open ground located adjacent to houses to the west, north and south and Shady Lane to the east. To the east of Shady Lane lies the Church.</p> <p><b>Plot 5</b> is an area of grassland with houses to the north and west, further grassland to the south and arable fields to the east.</p> <p><b>Plot 8</b> is a small area of woodland adjacent to the A6 and Bottomdale Road. The woodland is at the corner of an arable field.</p> <p><b>Plot 9</b> is also a small area of wooded land.</p> <p>These plots are all at least over 630 m east of Morecambe Bay and Duddon Estuary SPA separated by arable land and housing so will not require land-take from the SPA.</p> <p>The qualifying features of the SPA Article 4.1 breeding: Little Tern <i>Sterna albifrons</i>, and Sandwich Tern <i>Sterna sandvicensis</i>, over winter: Bar-tailed Godwit <i>Limosa lapponica</i>, Golden Plover <i>Pluvialis apricaria</i>.</p> <p>The site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species- breeding: Herring Gull <i>Larus argentatus</i>, and Lesser Black-backed Gull <i>Larus fuscus</i>, on passage; Ringed Plover <i>Charadrius hiaticula</i> and Sanderling <i>Calidris alba</i>, and over winter;</p> <ul style="list-style-type: none"> <li>▪ Curlew <i>Numenius arquata</i></li> <li>▪ Dunlin <i>Calidris alpina alpina</i></li> <li>▪ Grey Plover <i>Pluvialis squatarola</i></li> <li>▪ Knot <i>Calidris canutus</i></li> <li>▪ Oystercatcher <i>Haematopus ostralegus</i></li> <li>▪ Pink-footed Goose <i>Anser brachyrhynchus</i></li> <li>▪ Pintail <i>Anas acuta</i></li> <li>▪ Redshank <i>Tringa totanus</i></li> <li>▪ Shelduck <i>Tadorna tadorna</i></li> <li>▪ Turnstone <i>Arenaria interpres</i></li> </ul> <p><b>Little tern</b> nest exclusively on the coast in well camouflaged shallow scrapes on beaches, spits or inshore islets. They forage out to sea, staying close to their breeding site (studies suggest a foraging range of 2-3 km), which dictates a necessity for breeding close to shallow, sheltered feeding areas where they can easily locate the variety of small fish and invertebrates that make up their diet.</p> <p><b>Sandwich terns</b> are distributed widely but patchily around the coasts of the British Isles, broadly reflecting the availability of favoured nesting habitat: low-lying offshore islands, islets in bays or brackish lagoons, spits or remote mainland dunes. Sandwich tern forage at sea, but travel a greater distance than little terns</p> <p>Given the habitat requirements of little tern and sandwich tern, these species are unlikely to be found outside of the SPA utilising functionally linked land within the Lancaster District Boundary.</p> <p><b>Bar-tailed godwit</b> is a long distance migrant visits UK shores for the winter months, and is almost entirely coastal in its winter habits, feeding mainly on worms both on sandy and muddy shores Given this species dependence on earthworms, it is possible that bar-tailed godwit would utilise damp arable or grassland habitat in close proximity to the European designated sites boundary. The SPA is located over 630 m from Plot 2, 5, 8 and 9 and is therefore not considered in close proximity and therefore does not constitute functionally linked land for this species.</p> <p><b>Golden plover</b> inhabit mown grass or close grazed pastures in the winter, as well as stubbles, fallows, harvest-fields and other farmlands of open character, often forming large flocks with lapwings. A 2006 study found that flocks of golden plovers avoided field boundaries and so larger flocks occupied larger fields. Short grass or arable fields more than 5 ha in size allocated for development have the potential to constitute functionally linked land in relation to this species. The areas of Plots 2 and 5 are insufficient in size, Plots 8 and 9 are not suitable habitat types and therefore do not constitute functionally linked land for this species</p> <p><b>Herring Gulls</b> are widely distributed around the coasts of the British Isles, and prefers to nest on rocky coastline, with cliffs, islets and offshore islands, though a range of other habitats are used including sand dunes, shingle banks and, increasingly, buildings (such as large warehouses) in urban areas</p> <p><b>Lesser Black-backed Gulls</b> are found around the UK's coastline in summer and on some inland high moors. This species is increasingly common in urban habitats, even in inland locations.</p> <p>Given the widespread distribution of herring gulls and lesser black-backed gulls, areas identified to development, particularly sites with large flat roofed buildings for nesting, have the potential to constitute functionally linked land in relation to this species. Plots 2, 5, 8 and 9 do not contain any flat roofed buildings and therefore is not considered to be functionally linked land for these two Gull species.</p> <p><b>Ringed Plover</b> feed on invertebrates on sand and shingle shores, sandbanks and mudflats, as well as on saltmarshes, short grassland, flooded fields and shores of artificial habitats. They roost communally, close to feeding sites along the shoreline, on sandbanks or bare arable fields, and in low vegetation. This species tends to be most numerous and concentrated on wide sandy or shingle tidal beaches, with access to suitable resting or nesting places above high water mark. It is possible that this species would utilise suitable habitat in close proximity to the European designated sites boundary, preferring areas that are not subject to regular human disturbance. Short grassland and arable habitat may constitute functionally linked land in relation to this species. The SPA is located over 350 m from Plot 1 separated by arable field and housing and is therefore not considered in close proximity SPA and therefore does not constitute functionally linked land for this species.</p>	<p><b>Loss of functionally linked land for SPA birds</b></p> <p><b>No Likely Significant Effects 'in combination' as there are no pathways present.</b></p>
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			<p><b>Human induced changes in hydraulic conditions</b></p> <p>The housing allocation sites are all over 630m from the Morcambe Bay SAC/ Morecambe Bay ad Duddon Estuary SPA and Morecambe Bay Ramsar and therefore would not change the hydraulic conditions of the SAC/SPA/Ramsar through land take.</p> <p>Domestic water supply for the north west England (excluding Merseyside and Cheshire) is from United Utilities' reservoirs in Cumbria<sup>35</sup> (Thirlmere and Haweswater - of which neither are designated as SACs) and the Pennines. Therefore there are no water abstraction requirement from the of Morecambe Bay and Duddon Estuary SPA, Morecambe Bay SAC, Morecambe Bay Ramsar or Morecambe Bay Pavements SAC.</p> <p><b>Therefore there will be no Likely Significant Effects 'alone'.</b></p>	<p><b>Human induced changes in hydraulic conditions</b></p> <p><b>No Likely Significant Effects 'in combination' as there are no pathways present.</b></p>

<sup>35</sup> <https://www.unitedutilities.com/corporate/about-us/what-we-do/water-supply/> [visited 18/02/2019]

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			<p><b>Air pollution</b></p> <p>In relation to the European designated sites, local air pollutions is not considered to cause likely significant effects due to the distance between the three closest European designated sites and the plot allocation (over 630m). According to the Department of Transport's Transport Analysis Guidance, "Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant". This is because traffic exhausts are situated only a few inches above the ground and are horizontal to it, such that the vast majority of emitted pollutants are never dispersed far and are very quickly deposited. This distance is also related to the mix of the exhaust gases, the small dimension of the exhausts and the velocity of the exhaust gases leaving the exhaust.</p> <p>Also taking into consideration are any significant journey to work routes within 200m of Morecambe Bay SAC. It is considered that most roads within 200 m of the Morecambe Bay SAC are residential roads or minor roads and are unlikely to form significant journey to work routes for the Slyne-with-Hest residents. Moreover, consultation of APIS and MAGIC indicate that the only air quality sensitive habitats within 200m of coastal roads within the SAC (or SPA/Ramsar site) within 5km of Slyne with Hest parish are saltmarsh and intertidal mudflat and sandflat. These have relatively low sensitivity to nitrogen deposition with a critical load of 20-30 kgN/ha/yr. APIS indicates that the nitrogen deposition rate in this area is 14.84 kgN/ha/yr and is thus well below the critical load for these habitats. Therefore it is considered that there are no Likely Significant Effects from air pollution to the European designated site through significant journey to work routes from this allocation.</p> <p><b>Therefore there will be no Likely Significant Effects 'alone'</b></p>	<p><b>Air Pollution</b></p> <p><b>No Likely Significant Effects 'in combination' as there are no pathways present.</b></p>
<p><b>Policy 12</b></p>	<p>Provision of new outdoor recreational space</p>	<p>There is no information provided in the Policy as to the location of the 'new outdoor recreational space'.</p>	<p><b>Loss of functionally linked land</b></p> <p>Potential for Likely Significant Effects alone as the location(s) of the new outdoor recreational space is unknown.</p> <p><b>Potential for Likely Significant Effects 'alone'</b></p>	<p><b>Loss of functionally linked land</b></p> <p>N/A going to Appropriate Assessment where this Policy will be assessed 'in-combination'</p>

