Northamptonshire Local Flood Risk Management Strategy
Habitat Regulations Assessment Screening and Scoping Report
Northamptonshire County Council
November 2016
**Document Status**

This Habitat Regulations Assessment Screening and Scoping Report has been prepared and is intended solely for Northamptonshire County Council's information and use in relation to the Northamptonshire Local Flood Risk Management Strategy (LFRMS). This document will be updated annually in line with the annual LFRMS Action Plan update.

<table>
<thead>
<tr>
<th>Rev</th>
<th>Date</th>
<th>Details</th>
<th>Author</th>
<th>Checked and Approved By</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>September 2013</td>
<td>Final Report for October 2013 LFRMS</td>
<td>J Bateman, Flood and Water Manager, NCC</td>
<td>J Bateman, Flood and Water Manager, NCC</td>
</tr>
<tr>
<td>02</td>
<td>October 2014</td>
<td>Draft Report for Stakeholder Consultation – Action Plan update 2014</td>
<td>R Burnham, Senior Flood and Water Officer, NCC</td>
<td>J Bateman, Flood and Water Manager, NCC</td>
</tr>
<tr>
<td>03</td>
<td>April 2016</td>
<td>LFRMS Partner Consultation Draft LFRMS Action Plan Update April 2016</td>
<td>S MacDonald, Planning Services, NCC</td>
<td>J Bateman, Flood and Water Manager, NCC</td>
</tr>
<tr>
<td>04</td>
<td>June 2016</td>
<td>Public Consultation Draft LFRMS Update June 2016</td>
<td>S MacDonald, Planning Services, NCC</td>
<td>J Bateman, Flood and Water Manager, NCC</td>
</tr>
<tr>
<td>05</td>
<td>November 2016</td>
<td>Final Report</td>
<td>S MacDonald, Planning Services, NCC</td>
<td>J Bateman, Flood and Water Manager, NCC</td>
</tr>
</tbody>
</table>
CONTENTS

1. INTRODUCTION .................................................................................................................. 1
2. METHODOLOGY ..................................................................................................................... 6
3. SCREENING NORTHAMPTONSHIRE’S LFRMS ................................................................. 9
4. CONCLUSIONS ON THE POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS ............ 31
5. REFERENCES ......................................................................................................................... 33

APPENDIX A: HRA FLOW DIAGRAM ...................................................................................... 34
APPENDIX B: OTHER PLANS AND PROGRAMMES, AND RELEVANT POTENTIAL IMPACT .... 35

Figures

FIGURE 1: ADMINISTRATIVE MAP OF NORTHAMPTONSHIRE ............................................. 2
FIGURE 2: EUROPEAN DESIGNATED SITES AROUND NORTHAMPTONSHIRE .................. 11

Tables

TABLE 1: STAGES IN THE HRA PROCESS .............................................................................. 6
TABLE 2: KEY TASKS IN HRA SCREENING ........................................................................... 7
TABLE 3: EUROPEAN SITES AND THEIR DESIGNATION ....................................................... 9
TABLE 4: CRITERION 6 QUALIFYING FEATURES FOR UPPER NENE GRAVEL PITS .......... 12
TABLE 5: CRITERION 6 QUALIFYING FEATURES FOR RUTLAND WATER ...................... 14
TABLE 6: CRITERION 6 QUALIFYING FEATURES FOR NENE WASHES ......................... 15
TABLE 7: INITIAL SCOPING OF LFRMS MEASURES ............................................................ 19
TABLE 8: RAPID SCREENING ASSESSMENT OF POTENTIAL AMENDED/NEW SCHEMES WITHIN 10KM OF THE UPPER NENE VALLEY GRAVEL PITS SPA ................................................. 21
1. INTRODUCTION

1.1. Northamptonshire County Council (NCC) is currently in the process of updating the Local Flood Risk Management Strategy and associated Action Plan (hereby referred to as LFRMS). NCC has undertaken this Habitats Regulation Assessment (HRA) in line with the requirements set out by the UK Conservation of Habitats and Species Regulations (2010).

1.2. This HRA Screening and Scoping Report addresses the identification and description of European Sites within 10km of the LFRMS area that may potentially be affected by the LFRMS Action Plan where individual action items are subject to amendment through the current update process. It should be noted that the LFRMS objectives and policies have not been amended as a result of the revision process. In addition the majority of the Action Plan items have been rolled forward without amendment. It also identifies potential pathways of impact and likely significant effects of the LFRMS on the integrity of designated sites within its catchment. The Flood and Water Management Act states that the LFRMS must cover:

- The risk management authorities in the authority’s area;
- The flood risk management functions that may be exercised by those authorities in relation to the area;
- The objectives for managing local flood risk;
- The measures proposed to achieve those objectives;
- How and when the measures are expected to be implemented;
- The costs and benefits of those measures, and how they are to be paid for;
- The assessment of local flood risk for the purpose of the strategy; and
- How and when the strategy is to be reviewed, and how the strategy contributes to the achievement of wider environmental objectives.

Background

1.3. Northamptonshire is located within the East Midlands Region of England and covers an area of over 200,000 ha. Uniquely it adjoins three other regions the South East, West Midlands and East of England (See Figure 1). Despite recent rapid population growth Northamptonshire has retained traditional shire county characteristics. The area is predominantly rural in character, albeit interspersed with large to small towns built on commercial activities ranging from manufacturing to farming.

1.4. The natural floodplain (defined by the Environment Agency Flood Zones) is relatively extensive due to the topography and hydrology of the area. There are significant material assets within the flood plain including transport networks, water management facilities, sewage works, and other associated infrastructure as well as residential and business property. There are also listed and historic buildings and monuments, registered parks and gardens, and conservation areas within the floodplain.

1.5. Under the requirements of the Flood and Water Management Act (2010), NCC as Lead Local Flood Authority (LLFA) must develop, maintain, apply and monitor a strategy for local flood risk management in its area. The LFRMS will manage local flood risk from surface water, groundwater and ordinary watercourses and it is an important document that sets the scene for the management of local flood risk in Northamptonshire for the coming years.

1.6. Within Northamptonshire there is a designated Special Protection Area (SPA) and Ramsar Site with habitats and bird species interests, of International, European and National nature conservation importance. Therefore the potential implications of the LFRMS need to be formally reviewed within a Habitat Regulations Assessment (HRA).
Figure 1: Administrative Map of Northamptonshire

Legend
- Northamptonshire County Boundary
- County Boundaries

Administrative Map of Northamptonshire
NCC LFRMS HRA Scoping
Figure 1

Drawn: RAB. Checked: AU. Date: 20/03/2012. Scale: 1 to 500,000 on A4.
Contains Ordnance Survey data © Crown copyright and database right 2012
1.7. The HRA process is generally divided into four stages and it is often referred to as ‘Appropriate Assessment’ (AA). However, appropriate assessment forms only one stage of the HRA, which is preceded by an initial ‘screening stage’ to determine whether or not AA is needed. The AA stage is followed by an assessment of alternative options stage and assessment where adverse impacts remain, if considered necessary.

Legislative Context

1.8. The European Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC, the Habitats Directive) requires a competent authority to carry out a HRA of a plan or project to establish whether it will have a “likely significant effect” on sites designated for their nature conservation interest at an international level. In the United Kingdom, this Directive has been transposed into national laws through the Conservation of Habitats and Species Regulations 2010 (Habitats Regulations 2010). In particular Regulation 61 states that:

“A competent authority, before deciding to undertake, or give any consent, permission, or other authorisation for a plan or project which:

a) is likely to have significant effect on a European site in Great Britain (either alone or in combination with other plans or projects); and

b) is not directly connected or necessary to the management of the site shall make an appropriate assessment of the implications for the site in view of that site’s conservation objectives”.

1.9. A European site (also known as a Natura 2000 site) is usually designated as either a Special Area of Conservation (SAC) identified through the EU Habitats Directive (Council Directive 92/43/EEC) or Special Protection Area (SPA) identified through the Birds Directive (Council Directive 79/409/EEC). In the UK, Ramsar sites (identified through the Ramsar Convention 1976) receive the same protection as designated SPAs and SACs, as a matter of national policy. Consequently, Ramsar sites are included under the European Site heading for the purposes of carrying out a HRA, even though in principle they are not classed as European sites.

1.10. It is also UK Government Policy (Office of Deputy Prime Minister (ODPM), Circular 06/2005; Scottish Government (SG), 2010; Welsh Assembly Government (WAG), 2010; Department of Environment for Northern Ireland (DOENI), 1997) that HRA obligations are extended to sites that are proposed for designation; for example, potential SPAs (pSPAs) and candidate SACs (cSACs), as well as any proposed extensions or additions to existing Natura 2000 sites.

1.11. When the outcome of the HRA process demonstrates that a plan or project will have an adverse effect on the integrity of a European site (either alone or in combination with other plans or projects), the plan can only be adopted if it has been established that there are no alternative solutions and it is essential for Imperative Reasons of Overriding Public Interest (IROPI), including those of a social or economic nature. In such cases, compensatory measures must be implemented to make certain that the overall consistency of the network of Natura 2000 sites is maintained.

1.12. Additionally, the HRA of the LFRMS does not rule out the need for HRAs at a project-level. It will remain a statutory condition for projects undertaken as part of the LFRMS to also undergo a project-level Appropriate Assessment wherever the possibility of likely significant effects on a European site cannot be excluded.
Northamptonshire Local Flood Risk Management Strategy

1.13. The Flood and Water Management Act (FWMA, 2010) requires NCC as LLFA to develop, maintain, apply and monitor a strategy for local flood risk management in its area. The strategy sets out how local flood risk from surface runoff, groundwater and ordinary watercourses will be managed. It is an important document that sets the scene for the management of local flood risk in Northamptonshire for the coming years.

1.14. The LFRMS for Northamptonshire is consistent with the statutory requirements for LFRMS set out in Provision 9(4) of the FWMA, 2010. The LFRMS should therefore have a positive impact on the environment. It can also influence and complement existing spatial planning policy and inform where development should and should not occur.

Aims and Objectives

1.15. The broad aim of the LFRMS is to provide a robust local framework that employs a full range of complementary approaches towards managing the risks and consequences of flooding arising from all sources of flood risk in Northamptonshire and surrounding areas with a specific focus on local sources of flood risk from surface water runoff, groundwater and ordinary watercourses. The LFRMS priority objectives are set out below. It should be noted none of the objectives are included within the scope of the update.

1) **Collaborative Approach** – Adopt a collaborative approach to managing local flood risk by working with local partners and stakeholders to identify, secure and optimise resources, expertise and opportunities for reducing flood risk and increasing resilience to flooding;

2) **Local Flood Risk** – Develop a greater understanding of local flood risk by improving the scope of local knowledge and understanding of current and future local flood risks;

3) **Enhance the Natural and Historic Environment** – Adopt a sustainable approach to reducing local flood risk, seeking to lessen the risk of localised flooding using mechanisms that are economically viable, deliver wider environmental benefits, conserve and enhance heritage assets and their settings, and promote the wellbeing of local people;

4) **Preparedness and Resilience** – Reduce the harmful consequences of local flooding through proactive actions, activities and education programmes that enhance preparedness and resilience to local flood risk and contribute to minimising community disruption;

5) **Flood Risk and Development** – Minimise the increase in local flood risk that may arise from new development by producing guidance, setting standards and supporting the development of local policies and guidance, discouraging wherever possible surface water runoff in new and future developments and where possible influencing or supporting developments that seek to reduce existing flood risk;

6) **Economically Sustainable Approach** – Ensure the financial viability of flood related schemes through the development of appropriate policies and assessment tools to ensure that flood risk management measures provide value for money whilst minimising the long-term revenue costs. Seeking to use natural processes where possible or source the costs of any maintenance from the financial beneficiaries of the development;

7) **Riparian Responsibilities** – Encourage flood management activities by private owners of ordinary watercourses and flood defence structures as well as limit the development of constrictions on ordinary watercourses.

1.16. The LFRMS provides the framework for sustainable flood risk management across the county, having due regard for the measures/actions to be taken for flood reduction,
response and recovery. It considers the future resilience and resistance measures that will be required as a result of increasing flood risk arising from climate change and reflects the role that spatial planning can play in reducing existing and future flood risk.

1.17. Given the presence of an international designated site within the LFRMS area and the proximity of other European designated sites to its boundary, the possibility of ‘likely significant effects’ on European designated sites arising from the possible LFRMS options cannot be excluded and therefore a HRA Screening exercise is required.
2. METHODOLOGY

2.1. The following sections set out the overarching methodology for carrying out an HRA. It also outlines in detail the methodological steps applied in the first stage of the HRA process, which is the focus of this report. This methodology is applied specifically to the screening and scoping of the LFRMS in Section 3.

Guidance and Best Practice

2.2. Guidance on HRA has been published in draft form by the Government (DCLG, 2006). The guidance recognises that there is no statutory method for undertaking Habitats Regulations Assessment and that the adopted method must be appropriate to its purpose under the Habitats Directive and Regulations. The guidance identifies four stages to the HRA process, as outlined in Table 1 below, although the fourth stage is strongly discouraged by DCLG.

Table 1: Stages in the HRA Process

| Stage 1: Screening stage | Gathering information on the plan/project, European Sites, their conservation objectives and characteristics and other plans/projects. Considering the potential for likely significant effects (LSE) and screening European sites out of or into the HRA. |
| Stage 2: Appropriate Assessment (AA) | If the potential for LSE is identified and European Sites ‘screened in’ to the HRA, then undertake further work to ascertain the effect on the site conservation objectives and site integrity. Considering how effects might be avoided or effectively mitigated through alterations to the plan/project. |
| Stage 3: Assessment of Alternative Solutions | If proposal for avoidance and/or mitigation unable to cancel out adverse effects, then alternative solutions must be considered (may include different locations or process alternatives). Any alternative solutions should be subject to Stage One and Stage Two, Appropriate Assessment if necessary. |
| Stage 4: Assessment where no Alternative Solutions Exists | If no alternative solutions exist, consideration should be given to whether the sites host priority habitats/species, and if there are important human health/safety considerations or important environmental benefits from delivering the plan. If Imperative Reasons of Overriding Public Interest (IROPI) are determined, then compensatory measures must be designed, assessed and put in place, prior to the commencement of the plan. |

2.3. Stage 4 will be incorporated into the HRA process only when stage 3 cannot produce alternative solutions or mitigation to remove or reduce adverse effects to insignificant levels, there may be a need to explore Imperative Reasons of Overriding Public Interest.

2.4. For this HRA, an iterative and auditable methodology will be adopted to ensure the transparency of the HRA process and also to ensure that the relevant documentation can be easily accessed, interpreted and scrutinised. The methodology developed is based on recommendations within the relevant Government Guidance on HRA (DCLG, 2006) Habitats Regulations Guidance Note (HRGN1) on Appropriate Assessment methods (English Nature, 1997) and agreed guidance for undertaking HRAs for plans in England, which has been produced by David Tyldesley and Associates (2010). A detailed graphical illustration of the HRA methodology can be found in Appendix 1.

2.5. A brief outline of the thirteen methodological steps that will be adopted for the HRA of the LFRMS is set out below:

- **Step 1:** Decide whether plan is subject to Habitats Regulations Appraisal.
- **Step 2**: If plan is subject to appraisal, identify European sites that should be considered in the appraisal.
- **Step 3**: Gather information about the European sites.
- **Step 4**: Discretionary consultation on the method and scope of the appraisal.
- **Step 5**: Screen the plan for likely significant effects on a European site.
- **Step 6**: Apply mitigation measures.
- **Step 7**: Rescreen the plan after mitigation measures applied.
- **Step 8**: Undertake an appropriate assessment in view of conservation objectives.
- **Step 9**: Apply mitigation measures until there is no adverse effect on site integrity.
- **Step 10**: Prepare a draft record of the HRA.
- **Step 11**: Consult Natural England (NE) and other stakeholders and public if appropriate on draft HRA.
- **Step 12**: Screen any amendments for likelihood of significant effects and carry out appropriate assessment if required, re-consult NE if necessary on amendments.
- **Step 13**: Modify HRA report in light of NE representations and any other amendments to the plan and complete and publish final/revised HRA record with clear conclusions.

2.6. The first five methodological steps represent the screening and scoping stage of the HRA process, while the next three steps set out the overarching approach to stages 2 and 3 of the HRA process. A more detailed analysis of the methodological approach used to complete the HRA screening and scoping of the LFRMS is provided in the succeeding section of this report.

**HRA Screening Methodology [Steps 1-5]**

2.7. Screening is the first stage of a HRA, which considers whether a plan is likely to have a significant effect on any European Site. Screening involves considering ‘as far as may be reasonably predicted’ the likely nature, magnitude, duration, location and spatial extent of changes resulting from implementation of the plan, policies and proposals at a plan level. This is effectively a risk assessment process that seeks to understand whether the plan may adversely affect European Sites (e.g. through a cause-effect pathway). In reaching a decision the screening can take account of avoidance, cancellation and reduction measures that are proposed both as part of the plan, and in response to emerging HRA findings. The HRA Screening of the potentially suitable sites involved the key tasks outlined in Table 2 below.

**Table 2: Key Tasks in HRA Screening**

<table>
<thead>
<tr>
<th>Task</th>
<th>Details</th>
</tr>
</thead>
</table>
| European Site Identification and Characterisation | - Scoping European sites for inclusion in screening based on known sensitivities and the likely spatial extent of impacts arising from the strategy.  
- European Sites within a 10km radius were scoped into the screening process.  
- Examining conservation objectives of European sites (where available).  
- Considering environmental conditions necessary to support site integrity and identifying known vulnerabilities, sensitivities and pressures. |
<p>| Review of Strategy Proposal and Identification of Potential Impact Pathways | - Identifying likely impacts arising from the strategy and the spatial extent of changes arising from its implementation. |
| Identification and Consideration of Other Plans and Projects | - Identifying other plans and projects whose effects may combine with those of the plan under consideration, in such a way that the effects become significant. |</p>
<table>
<thead>
<tr>
<th>Task</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening Assessment</td>
<td>• A systematic consideration of the information gathered to determine whether significant effects are likely and if further AA is required.</td>
</tr>
</tbody>
</table>

2.8. Where the screening identifies the potential for likely significant effects, from the potentially suitable sites either alone, or in-combination with other plans and projects, then further Assessment will be undertaken as part of future investigatory studies.

2.9. The Habitat Regulations requirement for a high degree of certainty necessitates the application of the precautionary principle and thus there is a presumption in favour of ‘screening issues in’ at this stage of the HRA process. This will also be important for undertaking any detailed Assessment where there needs to be ample confidence in the evidence base and that the delivery of projects under the LFRMS can be satisfactorily managed to avoid undesirable effects on site integrity. The precautionary principle also applies when considering the relevant screening methods to determine likely significant effects, and there is a bias in favour of including rather than excluding interest features and designated sites. Furthermore any potential pathways of impact arising as a result of the proposed strategy will only be an issue to interest features that form part of the screened-in site and will only exist at locations where a direct and/or indirect impact will occur as a result of implementing the strategy.
3. SCREENING NORTHAMPTONSHIRE’S LFRMS

3.1. This section reports on the outcomes of the initial evidence gathering process, the identification of pathways of impact associated with the LFRMS and the preliminary assessment of likely significant effects to screen European sites and interest features.

European Sites – Interest Features and Conservation Objectives

3.2. European sites in the LFRMS catchment area are designated as Special Protection Areas (SPA) - under the Birds Directive (79/409/EEC); Special Areas of Conservation (SAC) - under the EU Habitats Directive (92/43/EEC); and Wetlands of International importance designated under the Ramsar Convention. The rationale for designating a site for statutory protection is described below:

- The EC Birds Directive (79/409/EEC) requires all member states to identify areas to be given special protection for the rare or vulnerable waterbird species listed in Annex 1 (Article 4.1) and for regularly occurring migratory species (Article 4.2) and for the protection of wetlands, especially wetlands of international importance.
- The EC Habitats Directive (92/43/EEC) requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended).
- Under the 1972 Ramsar Convention on Wetlands of International Importance, it is a requirement of signatory states to protect wetland sites of international importance, including those that are important waterfowl habitats.

3.3. The consideration of European sites both within and outside the LFRMS area, whilst not standard practice, was undertaken to pick up on issues relating to the potential for indirect and cumulative pressures on adjoining European sites as a result of implementing the Strategy. The HRA will keep the European sites that need to be considered under review as the work progresses and the content of the LFRMS is finalised.

3.4. The LFRMS area covers the whole of Northamptonshire County, which is largely rural with several large to small urban settlements scattered within the county boundary. The international nature conservation importance of the area has been recognised through the statutory designation of a Special Protection Area and a Ramsar site within its borders. There are equally several other European sites in areas adjoining the county, particularly to the north-east of its boundary (see Table 3 below). At this stage of the HRA process all internationally designated sites located at distances greater than 10km from the proposed LFRMS area have been screened out of the assessment, while internationally designated sites within 10km of the proposed strategy area were considered for further screening. Figure 2 shows the Plan boundary and the location of the European sites within 10km of the county boundary.

Table 3: European Sites and their Designation

<table>
<thead>
<tr>
<th>European Site</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Nene Valley Gravel Pits</td>
<td>SPA; Ramsar</td>
</tr>
<tr>
<td>Rutland Water</td>
<td>SPA; Ramsar</td>
</tr>
<tr>
<td>Nene Washes</td>
<td>SPA; SAC; Ramsar</td>
</tr>
<tr>
<td>Woodwalten Fen</td>
<td>SAC; Ramsar</td>
</tr>
<tr>
<td>Orton Pit</td>
<td>SAC</td>
</tr>
<tr>
<td>Barnack Hills and Holes</td>
<td>SAC</td>
</tr>
</tbody>
</table>
3.5. The consideration of European sites both within and outside the LFRMS area, whilst not standard practice, was given in order to pick up on issues relating to the potential for indirect and cumulative pressures on adjoining European sites as a result of implementing The Strategy. The HRA will keep the European sites that need to be considered under review as the work progresses and the content of the LFRMS is clarified.

3.6. Further information on the qualifying and interest features, conservation objectives and vulnerabilities for the designated sites that will be covered by the assessment are given in the subsequent sections.
Figure 2: European Designated Sites around Northamptonshire

Legend:
- Ramsar
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- 10km buffer of County Boundary
- County Boundary

European Designated Sites around Northamptonshire
NCC LFRMS HRA Scoping
Figure 2

Drawn: RAB. Checked: AU. Date: 20/03/2012. Scale: 1 to 500,000 on A4.
Upper Nene Valley Gravel Pits (SPA; Ramsar)

3.7. The Upper Nene Valley Gravel Pits SPA and Ramsar site is the only designated European site of international significance within Northamptonshire. The site comprises a chain of both active and previously extracted sand and gravel pits. These extend for approximately 35 kilometres (km) along the alluvial deposits of the River Nene floodplain from Clifford Hill on the southern outskirts of Northampton, downstream to Thorpe Waterville near Thrapston. Collectively, the Gravel Pits occupy an area of 1,357.67 hectares (ha) within Northamptonshire and comprises 49% inland water bodies, 19.0% Bogs, Marshes, water fringed vegetation and fens; 27.0% improved grassland and 5.0% broad-leaved deciduous woodland. The boundary of the Rutland Water SPA/Ramsar site in relation to the study area is shown in Figure 2.

SPA Designation

3.8. The site qualifies under Article 4.1 of the Birds Directive (79/409/EEC) as it regularly supports internationally important population of breeding Annex 1 species, comprising 2.0% of Great Britain’s population of Bittern \( [Botaurus stellaris] \) and 2.3% of Great Britain’s population of Golden Plover \( [Pluvialis apricaria] \).

3.9. The site qualifies under Article 4.2 of the Birds Directive (79/409/EEC) as over the winter the area regularly supports 2.0% or more of the bio-geographic populations of Gadwall \( [Anas strepera] \), which is a regularly occurring migratory species of European importance.

3.10. It also qualifies under Article 4.2 of the Birds Directive (79/409/EEC) as an internationally important assemblage of birds. In the non-breeding season the area regularly supports 23,821 individual waterfowl including: Shoveler, Wigeon, Mallard, Gadwall, Pochard, Tufted Duck, Bittern, Coot, Cormorant, Golden Plover (North-western Europe – breeding), Great Crested Grebe, and Lapwing.

Ramsar Designation

3.11. In addition the Upper Nene Valley Gravel Pits are also designated as Ramsar Wetland of International Importance. The site qualifies under Criterion 5 of the Ramsar Convention (1976) because it regularly supports 20,000 or more waterbirds: in the non-breeding season, the site regularly supports 23,821 individual waterbirds (5 year peak mean 1999/2000 – 2003/2004).

3.12. It also qualifies under Criterion 6 because it regularly supports 1% of the individuals in the populations of the following species or subspecies of waterfowl in any season, as shown in Table 4 below.

<table>
<thead>
<tr>
<th>Table 4: Criterion 6 Qualifying Features for Upper Nene Gravel Pits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Species</strong></td>
</tr>
<tr>
<td>Mute swan <em>Cygnus olor</em></td>
</tr>
</tbody>
</table>

Current Condition, Conservation Objectives and Vulnerabilities

3.13. When monitoring results demonstrate that the specific biological or geological features for which a SSSI was designated are meeting all of the mandatory site-specific monitoring targets set out in the Favourable Condition Table, the site is said to be in
Favourable condition. When the Upper Nene Valley Gravel Pits SSSI was designated it was assessed as being entirely in Favourable condition. Its condition is currently a mix of Favourable (41.6%) and Unfavourable – Recovering (58.4%)\(^1\).

3.14 However, Natural England has assessed the SPA (which comprises most but not all of the SSSI) as being “at risk” from recreational disturbance. Natural England has prepared a Site Improvement Plan addressing public access and consequent disturbance that has been identified as a threat (http://publications.naturalengland.org.uk/file/6292733117333504).

3.15 The conservation objectives of the Upper Nene Valley Gravel Pits SPA are summarised below:

- Maintain populations of key wintering waterbird species at, or above, five year average populations present at notification (including the largest nesting colony of Grey Herons *Ardea cinerea* in Northamptonshire); and
- Maintain assemblages of over 20,000 waterbirds in any season.

3.16 The main threat to the site is that of human recreational pressure. The intensity and location of recreational activities taking place can have a significant effect on the site’s interest features and conservation objectives. The site is vulnerable to varying water levels in the main water bodies, and the maintenance of optimal water depths throughout the year is essential for the continued viability of the site and its interest features. Depending on the species, water depths that are either too great, or too shallow, can have an impact on the conservation value.

3.17 Additionally, the site is vulnerable to water abstraction, and diffuse and point-source pollution arising from potential development pressures in the urban fringe area may cause a potential effect.

Rutland Water (SPA; Ramsar)

3.18 The Rutland Water site is located approximately 10km from the north-western boundary of Northamptonshire. It is a man-made pump storage reservoir created by the damming of the Gwash Valley in 1975 and is the largest reservoir in the United Kingdom. The site covers an area of 1556.87ha and comprises 80% inland water bodies, 0.1% bogs, marshes, water fringed vegetation and fens; 9.9% dry grassland and steppes and 10% mixed woodland. In general the reservoir is drawn down in the summer and filled during the autumn and winter months when river levels are high. The main habitats are open water and a mosaic of lagoons, reedswamp, marsh, old meadows, scrub and woodland. The lagoons are one of the most important areas for wintering wildfowl. The boundary of the Rutland Water SPA/Ramsar site in relation to the study area is shown in Figure 2.

SPA Designation

3.19 The site qualifies under Article 4.2 of the Birds Directive (79/409/EEC) as over the winter the area regularly supports relatively large bio-geographic populations of Shoveler, Teal, Widgeon, Gadwall, Tufted Duck, Goldeneye, Mute Swan, Coot, Great Crested Grebe and Goosander, which are regularly occurring migratory species of European importance.

3.20 It also qualifies under Article 4.2 of the Birds Directive (79/409/EEC) as an internationally important assemblage of birds as it is regularly used by 20,000 waterfowl (as defined by the Ramsar Convention) in any season. In the non-breeding season the area regularly

---

\(^1\) [https://designatedsites.naturalengland.org.uk/SiteSearch.aspx](https://designatedsites.naturalengland.org.uk/SiteSearch.aspx)
supports 25,037 individual waterfowl including: Great Crested Grebe, Wigeon, Gadwall Teal, Shoveler, Tufted Duck, Goldeneye, Goosander and Coot.

**Ramsar Designation**

3.21. In addition the Rutland Water site is also designated as identified as a potential Ramsar (Ramsar) Wetland of International Importance. The site qualifies under Criterion 5 of the Ramsar Convention (1976) because it regularly supports up to 20,000 waterbirds: In the non-breeding season, the site regularly supports 19,274 individual waterfowl (5 year peak mean 1998/99 – 2002/03).

3.22. It also qualifies under Criterion 6 because it regularly supports 1% of the individuals in the populations of the following species or subspecies of waterfowl in any season, as shown in Table 5 below.

**Table 5: Criterion 6 Qualifying Features for Rutland Water**

<table>
<thead>
<tr>
<th>Species</th>
<th>Count and Season</th>
<th>Period</th>
<th>% of Subspecies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gadwall <em>Anas strepera</em></td>
<td>1014 individuals – spring, autumn</td>
<td>5 year peak mean – 1998/1999- 2002/2003</td>
<td>1.6% NW Europe (breeding)</td>
</tr>
<tr>
<td>Shoveler <em>Anas clypeata</em></td>
<td>619 individuals – spring, autumn</td>
<td>5 year peak mean – 1998/1999- 2002/2003</td>
<td>1.5% NW and C Europe</td>
</tr>
<tr>
<td>Mute swan <em>Cygnus olor</em></td>
<td>563 individuals – wintering</td>
<td>5 year peak mean – 1998/1999- 2002/2003</td>
<td>1.5% Britain</td>
</tr>
</tbody>
</table>

* for future consideration under Criterion 6

**Current Condition, Conservation Objectives and Vulnerabilities**

3.23. The SSSI summary assessment of the current condition of the site indicates that 100% of its area is in favourable condition.

3.24. The SSSI conservation objectives for the Rutland Water European site are to maintain, in favourable condition, the habitats for the internationally important populations of the regularly occurring migratory bird species, with particular reference to open water and surrounding marginal habitats:

- Wintering population of gadwall;
- Wintering population of shoveler; and
- Over 20,000 over-wintering waterfowl.

3.25. The site is vulnerable to water pollution (including agricultural run-off), neglect of appropriate management regimes for grasslands, and disturbance. Open-water habitat would decrease if water use were to exceed supply.

**Nene Washes (SPA; SAC; Ramsar)**

3.26. The Nene Washes SPA, SAC, and Ramsar site forms an extensive area of seasonally flooding wet grassland ('washland') lying along the River Nene. It is situated approximately 11km from the north-western boundary of Northamptonshire County. The Nene Washes extend over 20km from Fengate on the outskirts of Peterborough (south-east) to Guyhirn in the east. The site is located within Cambridgeshire and covers an area of 1,517.49ha. It comprises 67.0% inland water bodies, 2.0% tidal rivers, estuaries,

---

2 The Nene Washes was included in the screening exercise because it was considered to be sufficiently close to the 10km radius of the study area as well as the need to adhere to the precautionary principle.
mudflats, sandflats and lagoons; 10.0% humid grassland, mesophile grassland; 20.0% other arable land and 1.0% broad-leaved deciduous woodland. The boundary of the Nene Washes SPA/SAC/Ramsar site in relation to the study area is shown in Figure 2.

SPA Designation

3.27. The site qualifies under Article 4.1 of the Birds Directive (79/409/EEC), as over the winter it regularly supports internationally important populations of breeding Annex 1 species, namely 23.9% of Great Britain’s population of Bewick’s Swan [Cygnus columbianus bewickii].

3.28. The site qualifies under Article 4.2 of the Birds Directive (79/409/EEC) as during the breeding season the area regularly supports relatively large bio-geographic populations of the following: Shoveler, Garganey, Gadwall and Black-tailed Godwit, which are a regularly occurring migratory species of European importance. Over the winter, the site also regularly supports relatively significant populations of Pintail, Shoveler, Teal, Wigeon and Gadwall.

SAC Designation

3.29. The area within the Nene Washes designated as a SAC is Moreton’s Leam, a large drainage channel running along the eastern flank of the Nene Washes. This area contains the highest recorded density of Spined Loach Cobitis taenia in the UK and is one of only four known outstanding locations for this species in the UK.

Ramsar Designation

3.30. The Nene Washes is also designated as Ramsar Wetland of International Importance. The site qualifies under Criterion 2 of the Ramsar Convention (1976) as it supports an important assemblage of nationally rare breeding birds. In addition, a wide range of raptors occur through the year. The site also supports several nationally scarce plants, and two vulnerable and two rare British Red Data Book invertebrate species have been recorded. It also qualifies under Criterion 6 because it regularly supports 1% of the individuals in the populations of the following species or subspecies of waterfowl in any season, as shown in Table 6 below.

Table 6: Criterion 6 Qualifying Features for Nene Washes

<table>
<thead>
<tr>
<th>Species</th>
<th>Count and Season</th>
<th>Period</th>
<th>% of Subspecies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tundra Swan</td>
<td>694 individuals</td>
<td>5 year peak mean –</td>
<td>2.3% NW Europe</td>
</tr>
<tr>
<td>columbianus bewickii</td>
<td>spring, autumn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Tailed Godwit*</td>
<td>482 individuals</td>
<td>5 year peak mean –</td>
<td>1.0% Iceland and W</td>
</tr>
<tr>
<td>Northern pintail</td>
<td>1848 individuals</td>
<td>5 year peak mean –</td>
<td>3.0% NW Europe</td>
</tr>
<tr>
<td></td>
<td>wintering</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For future consideration under Criterion 6

Current Condition, Conservation Objectives and Vulnerabilities

3.31. The SSSI summary assessment of the current condition of the site indicates that 20% of its area is in Favourable condition and 80% in Unfavourable - Recovering condition. The conservation objective of the Nene Washes is to maintain, subject to natural change, the following habitats in favourable condition; Lowland neutral grassland and Standing open water, or restored to favourable condition if features are judged to be unfavourable. With
particular reference to any dependent component special interest features for which the land is designated- Counter Drain/Old Bedford (Outer River) and the Old Bedford/River Delph (Inner River) and spined loach. The site and its interest features are vulnerable to:

- Land take from within the site;
- Changes to water quantity: particularly through increased abstraction, but also through increase in occurrence of spring flooding and winter flood depths (leading to an adverse impact on vegetation and bird features of the site);
- Decrease in water quality: specific threats come from increases in nitrogen and phosphorous, turbidity and sediment load;
- Changes to river flow;
- Increased salinity levels.

**Woodwalten Fen (SAC, Ramsar)**

3.32. Woodwalten Fen is part of the Fenland SAC, part of a patchwork of wetland communities, providing a habitat for an appreciable assemblage of wetland plants and invertebrates - a number of which are confined to East Anglia. Whilst most of the Fenland SAC lies much farther afield from Northamptonshire, Woodwalton Fen National Nature Reserve lies approximately 10km west of Northamptonshire County boundary (see Figure 2). The site covers an area of 208.13ha and is dominated by floristically rich mixed fen and swamp, wet grassland and wet woodland which support a number of rare species.

**SAC Designation**

3.33. The Woodwalton Fen together with two other Fens\(^3\) sites make up the Fenland SAC. It is designated under the Habitats Directive for the presence of an extensive example of Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); and large areas of Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*

3.34. Other qualifying features:

- Spined Loach *Cobitis taenia*, for which the area is considered to support a significant presence.
- Great Crested Newt *Triturus cristatus*, for which the area is considered to support a significant presence.

**Ramsar Designation**

3.35. The Woodwalton Fen area is also designated as a Ramsar Wetland of International Importance. The site qualifies under Criterion 1 of the Ramsar Convention (1976) as it is within an area that is one of the remaining parts of East Anglia which has not been drained. The fen is near-natural and has developed where peat-digging took place in the 19th century. The site has several types of open fen and swamp communities.

3.36. It also qualifies under Criterion 2 of the Ramsar Convention as it supports two species of British Red Data Book plants, *Fen Violet*, *Viola persicifolia* and *Fen Wood-rush* *Luzula pallidula*. Woodwalton also supports a large number of wetland invertebrates including 20 British Red Data Book species. Aquatic beetles, flies and moths are particularly well represented.

\(3\) Chippenham Fen and Wicken Fen
Current Condition, Conservation Objectives and Vulnerabilities

3.37. The SSSI summary assessment of the current condition of the site indicates that the overall condition of the sites is mixed: favourable condition (Chioppenham Fen - 90.3%, Wicken Fen 47%), Unfavourable - Recovering condition (Chioppenham Fen 9.7%, Wicken Fen 53%).

3.38. The primary conservation objective for the Woodwalten Fen site is to maintain, in favourable condition, the following features:

- Standing open water and canals;
- Fen, marsh and swamp; and
- Broadleaved, mixed and yew woodland.

3.39. Other objectives include restoring the above elements to favourable condition if features are judged to be unfavourable. With particular reference to any dependent component special interest features for which the land is designated (e.g. Cladium mariscus swamp and sedge beds; Phragmites australis swamp; Peucedo-Phragmites australis fen; Phragmites australis-Eupatorium cannabinum fen; Phalaris arundinacea tall-herb fen; Salix cinerea-Galium palustre semi-natural woodland; and, Salix cinerea-Betula pubescens-phragmites australis semi-natural woodland).

3.40. The site and its interest features are vulnerable to:

- Land take from within the site;
- Decreased water quality: including water clarity, extent of algal dominance and water chemistry;
- Eutrophication (or nutrient enrichment) of the swamp and fen meadow habitats;
- Changes to water quantity: including increases and decreases in fluvial flows and groundwater levels;
- Increased numbers of invasive species within the site (resulting in gross distortions to aquatic plant communities present);
- Decreased air quality: including increases in Ozone, nitrogen deposition, particulate matter (including dust), nitrogen oxides, ammonia and sulphur dioxide;
- Drainage/land claim for agriculture; and
- Vegetational succession: causing the loss of swamp and fen areas.

Orton Pit SAC

3.41. The Orton Pit SAC is located approximately 5-6km to the north-west of Northamptonshire’s County boundary (see Figure 2). The Orton Pit SAC contains extensive pond systems created by clay workings, at various succession stages, which support the largest great crested newt population in the UK. The Orton Pit covers an area of 141.24ha and comprises 25% Inland water bodies (standing water, running water); 3% Heath, Scrub, Marquis and garrique, Phygrana; 23% Broad-leaved deciduous woodland; and 49% other land (including towns, villages, roads, waste places, mines, industrial sites). The range of habitats found throughout the site, including surrounding areas of grassland and scrub, provide good conditions for feeding and sheltering newts.

SAC Designation

3.42. The Orton Pit site is designated as a SAC for its hard oligo-mesotrophic (low nutrient) water with benthic vegetation of stonewort (charophytes). The site supports a total of ten species of charophyte including the main English population of bearded stonewort Chara canescens. The site also supports the largest known population of Great crested newt Triturus cristatus in the UK and possibly in Europe.
Current Condition, Conservation Objectives and Vulnerabilities

3.43. The SSSI summary assessment of the current condition of the site indicates that 28.7% of its area is in Favourable condition, and 71.3% in Unfavourable - Recovering condition. The site’s conservation objective provides for the protection of the largest known population of great crested newts, as well as maintaining the pond habitat for ten species of charophyte. Active management of this site is required in order for special wildlife interests to be maintained.

3.44. The site and its interest features (Great crested newt populations and species of charophyte) are vulnerable to:
- Decreased water quality - charophytes require unpolluted low-nutrient water;
- Natural succession - both great crested newts and vegetation of Chara spp., for which the site is designated, thrive in the early succession stages;
- Recreational pressure - trampling and erosion due to recreation;
- Air pollution - due to deposition of nitrogen compounds.

Barnack Hills and Holes SAC

3.45. The Barnack Hills and Holes SAC is located approximately 5-6km to the north-west of Northamptonshire’s County boundary (see Figure 1). The Barnack Hills and Holes SAC comprises of semi-natural, species-rich limestone grasslands, which has developed on the site of an old quarry. Barnack Hills and Holes covers an area of 23.27ha and comprises of 15% Heath, Scrub, Marquis and garrigue, Phygrana; 79.5% Dry grasslands, Steppes; and 5.5% Broad-leaved deciduous woodland. The grassland is of a type which is now scarce in the UK and includes pasque flower, orchid species, purple milk-vetch and the common rock-rose.

SAC Designation

3.46. The site has been selected as a SAC for its semi-natural dry grasslands and scrubland species on calcareous substrates (Festuco-Brometalia). The site supports what is considered to be the largest UK population of the nationally scarce man orchid Aceras anthropophorum. It also supports a rich assemblage of other orchid species, such as fragrant orchid Gymnadenia conopsea, pyramidal orchid Anacamptis pyramidalis and bee orchid ophrys apifera.

Current Condition, Conservation Objectives and Vulnerabilities

3.47. The summary assessment of the current condition of the site indicates that 100% of its area is in Favourable condition.

3.48. The conservation objective for the Barnack Hills and Holes European site is to maintain, in favourable condition (or restored to favourable condition if features are judged to be unfavourable), its calcareous grassland and the nationally important populations of man orchid Aceras anthropophorum and other orchid species.

3.49. The site and its interest features are vulnerable to neglect (cessation of grazing); trampling and erosion from recreational pressures; and air pollution from high rates of Nitrogen deposition, nitrogen oxides and sulphur dioxide.

Update of the LFRMS

3.50. The broad aim of the LFRMS is to provide a robust local framework that employs a full range of complementary approaches towards managing the risks and consequences of flooding arising from all sources of flood risk in Northamptonshire and surrounding areas.
with a specific focus on local sources of flood risk from surface water runoff, groundwater and ordinary water courses.

3.51. The LFRMS is a high-level strategy; the action plan does however bring together flood alleviation proposals. The Strategy includes robust policies to ensure new flood alleviation schemes adequately address any HRA impacts at the site-specific stage.

3.52. The process of updating the LFRMS has a limited scope as the majority of the document’s content is fit for purpose. It should be noted that the LFRMS objectives and policies have not been amended as a result of the revision process. In addition the majority of the Action Plan items have been rolled forward without amendment. Several action items have been subject to amendment in line with results of investigations and four new action items have been identified (two of which are related to groundwater flood risk forecasting, one relates to a condition survey of an existing culvert and one relates to continued investigation of options for rain water garden SuDS schemes). One action item, the Islip Sluice Refurbishment, previously assessed through the HRA screening and scoping process (2013) has been removed from the Action Plan. The main amendments have focussed on updates relating to progress made and removal of guidance from the LFRMS; much of this content now forms the NCC online flood toolkit.

Scope of LFRMS Measures Considered for HRA

3.53. A coarse initial scoping exercise was applied to the measures identified in the LFRMS; the aim of this was to:

- Identify measures that, because of their nature, could not conceivably have a negative effect or are not suitable for assessment; and
- Identify measures that, because of their nature, are only suitable for assessment at the project level.

3.54. This initial appraisal indicated that non-structural measures for flood risk management in the LFRMS should be scoped out, leaving a reduced list of measures that require further assessment. These measures are summarised in Table 7 below.

Table 7: Initial Scoping of LFRMS Measures

<table>
<thead>
<tr>
<th>Type of Measures</th>
<th>Reasons for Screening In/Out</th>
<th>Examples of Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education, awareness, influence, encourage,</td>
<td><strong>Scoped Out:</strong> These types of measures are expected to contribute to the LFRMS' objectives</td>
<td>Education and awareness raising with Stakeholders and</td>
</tr>
<tr>
<td>promote, advise, provide guidance</td>
<td>through raising awareness and influencing positive behaviour change. Due to their intangible</td>
<td>Partners; Flood Maps</td>
</tr>
<tr>
<td></td>
<td>nature, assessment of these with regard to European sites is beyond the scope of the HRA.</td>
<td></td>
</tr>
<tr>
<td>Research, monitor, investigate, collect</td>
<td><strong>Scoped Out:</strong> These types of measures improve our understanding of the environment. These</td>
<td>Flood Risk Assessment; Flood Maps; Flood Forecasting;</td>
</tr>
<tr>
<td>data/information, review</td>
<td>actions are concerned with information gathering rather than taking any concrete actions and</td>
<td>Assets Register</td>
</tr>
<tr>
<td></td>
<td>as such have not been assessed. They will however contribute to making sure that flood</td>
<td></td>
</tr>
<tr>
<td></td>
<td>management actions are fully informed and based on good evidence.</td>
<td></td>
</tr>
<tr>
<td>Type of Measures</td>
<td>Reasons for Screening In/Out</td>
<td>Examples of Measures</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Introduction of plan, programme, scheme, code of practice, code of conduct</td>
<td><strong>Scoped Out:</strong> There are a number of plans, programmes, schemes etc. identified as part of or closely associated with the LFRMS in order to address specific issues or pressures. Where the plans provide no indication that physical actions are inherent in measures to be adopted, these measures are not suitable for assessment at this stage but rather a project-level HRA will be more appropriate.</td>
<td>Surface Water Management Plans; Emergency Planning, Response and Recovery</td>
</tr>
<tr>
<td>Partnerships, working together, sharing information, coordinated approach</td>
<td><strong>Scoped Out:</strong> These describe ways of working rather than physical actions and are therefore not suitable for assessment.</td>
<td>Work in partnership with Risk management Authorities to develop plans, carry out research and implement the LFRMS SWMPs</td>
</tr>
</tbody>
</table>

3.55. New action items scoped out for the above reasons include undertaking further Groundwater Flood Risk Assessment in highest priority wards to inform preparedness and mitigation.

**Assessment of policies, objectives and actions contained within the plan**

3.56. The adopted LFRMS policies and objectives are not subject to amendment as part of the update process. These components were previously subject to assessment through the HRA process. In addition, there have been no substantial changes in local circumstances to warrant reassessment; as such there is no requirement for further assessment.

3.57. A rapid assessment has been applied to amended and new actions items included within the LFRMS Action Plan in order to determine what could, or is likely to, have an effect on the Upper Nene Gravel Pits SPA.

3.58. This rapid screening assessment has been derived from the 7 tests identified in Assessment of regional spatial strategies and sub-regional spatial strategies under the provisions of the Habitats Regulations, Tyldesley and Associates 2006. A summary of the test results are outlined below:

3.59. Reasons why policy/action will have no effect on European sites:

1. The policy/action itself will not lead to development (e.g. it relates to design or other qualitative criteria for development, or it is not a land use planning policy).
2. The location of the development is unknown, and will be selected following consideration of options in lower plans.
3. Applies to regional spatial strategies; therefore not applicable.
4. The policy/action concentrates development in existing urban areas, steering development and land use change away from European sites and associated sensitive areas.
5. The policy/action will steer development away from European sites and associated sensitive areas.
6. The policy/action is intended to protect the natural environment, including biodiversity.
7. The policy/action is intended to conserve or enhance the natural, built or historic environment and enhancement measures will not be likely to have any effect on a European site.
3.60. Reasons why policy could have an effect on European sites:

- The policy steers a quantum or type of development towards, or encourages development in, an area that includes a European site or an area where development may indirectly affect a European site.

3.61. Reasons why policy would be likely to have an effect on European sites:

- The policy makes provision for a quantum or type of development that in the location(s) would be likely to have a significant effect on a European site.

3.62. In taking the precautionary approach, as required under the Habitats Regulations, where development location is unknown (2 above) or where policy steers development away from European sites (4 and 5 above), consideration must be given to the potential pathways for adverse effect to occur. Development located some considerable distance from a European site can give rise to adverse effects if a suitable pathway exists.

3.63. The assessment of impacts will result in a finding of either:

- No adverse impact (resulting in the policy being ‘screened-out’); or
- A definite adverse effect or unable to rule one out (resulting in the policy being ‘screened-in’ and requiring further assessment).

3.64. The rapid screening assessment of the amended and new action items identified within 10km of the SPA is detailed in Table 8.

Table 8: Rapid screening assessment of potential amended/new schemes within 10km of the Upper Nene Valley Gravel Pits SPA

<table>
<thead>
<tr>
<th>Identified Scheme</th>
<th>Aim</th>
<th>Tests Applicable</th>
<th>Adverse Impact</th>
<th>Likely Significant Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of Groundwater Flood Risk Forecasting</td>
<td>Develop a groundwater flood risk monitoring and forecasting system, potentially through installation of up to 3 new boreholes within the county. The Groundwater Flood Risk Study outputs should be used to set up cumulative rainfall alarms as further warning.</td>
<td>2</td>
<td>No</td>
<td>This is an investigatory study. The proposal will therefore not impact upon the SPA. There is the potential for a future scheme to affect the integrity of the European site, but it cannot be ascertained due to uncertainty and lack of clarification/design and evaluation of the proposed scheme. This assessment at the plan level does not remove the need for a Habitats Regulations assessment at the project level.</td>
</tr>
</tbody>
</table>
### Identified Scheme

<table>
<thead>
<tr>
<th>Identified Scheme</th>
<th>Aim</th>
<th>Tests Applicable</th>
<th>Adverse Impact</th>
<th>Likely Significant Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welland and Nene Property Level Protection (Whiston Road, Cogenhoe)</td>
<td>EA and NCC will continue to work in partnership with residents to secure funding for the survey and installation of property level protection measures to properties that are at high risk of flooding and have experienced recent flooding. The project will focus on properties where traditional flood risk management schemes could not be economically justified. Locations are likely to include: Scrivens Hill, Woodford Halse; High Street and Broughton Road, Pytchley; Burcote Fields, Towcester; Wappenam Road, Syresham; Warren Bridge, Oundle; Harts Lane, East Farndon; Whiston Road Cogenhoe; Grafton Underwood; Hellidon.</td>
<td>1</td>
<td>No</td>
<td>This is an investigatory study. The proposal will therefore not impact upon the SPA. There is the potential for a future scheme to affect the integrity of the European site, but it cannot be ascertained due to uncertainty and lack of clarification/design and evaluation of the proposed scheme. This assessment at the plan level does not remove the need for a Habitats Regulations assessment at the project level.</td>
</tr>
<tr>
<td>Blackmile Lane, Grendon Flood Risk Management Scheme</td>
<td>Blackmile Lane in Grendon has been flooded due to extreme volumes of runoff. Proposed to re-grade existing and create new drainage ditches. Informed by S19 Flood Investigation and completed Project Appraisal Report. Additional property level resilience measures may be required at additional cost.</td>
<td>8</td>
<td>Unable to rule out</td>
<td>There is a potential for a likely significant effect on the integrity of the European site, but it cannot be ascertained due to uncertainty and lack of clarification/design and evaluation of the proposed development. A site-level Habitats Regulations assessment will be required.</td>
</tr>
<tr>
<td>Identified Scheme</td>
<td>Aim</td>
<td>Tests Applicable</td>
<td>Adverse Impact</td>
<td>Likely Significant Effect</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----</td>
<td>------------------</td>
<td>----------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Flood Risk Improvement Works at Quinton</td>
<td>Reduce risk of flooding to properties in Quinton from surface water through the formalisation of runoff channels and provision of property level resilience. Informed by S19 Flood Investigation and completed Project Appraisal Report.</td>
<td>8</td>
<td>Unable to rule out</td>
<td>Potential likely significant effect in combination with accompanying housing development. There is a potential for a likely significant effect on the integrity of the European site, but it cannot be ascertained due to uncertainty and lack of clarification/design and evaluation of the proposed development. This assessment at the plan level does not remove the need for a Habitats Regulations assessment at the Development Plan (LDF) and corresponding planning application stage.</td>
</tr>
<tr>
<td>East Brook Culvert, Kettering - Condition Survey</td>
<td>To review the current condition of the East Brook Culvert which runs through the length of Kettering and to determine the risk and extent of flooding to properties should the culvert fail, whilst determining necessary works and future responsibilities.</td>
<td>7</td>
<td>No</td>
<td>This is an investigatory study. The proposal will therefore not impact upon the SPA. There is the potential for a future scheme to affect the integrity of the European site, but it cannot be ascertained due to uncertainty and lack of clarification/design and evaluation of the proposed scheme. This assessment at the plan level does not remove the need for a Habitats Regulations assessment at the project level.</td>
</tr>
</tbody>
</table>
3.65. Other amended action items that are located over 10km from the SPA, and so were scoped out include Flood Risk Improvement Works at: Stanford Road, Cold Ashby; Grimscote; Helmdon; and Syresham.

**Rapid screening results**

3.66. The rapid screening assessment has concluded that none of the new action items identified through the update of the LFRMS should be ‘screened in’ to require further assessment at this time.

3.67. Any proposed work to watercourses or development associated with flood reduction would be subject to further environmental investigation in order to assess any adverse effects on the integrity of the Nene Gravel Pits SPA and would take place prior to any work commencing. The schemes highlighted as being ‘unable to rule out an adverse impact’ will be subject to a project level HRA in order to fully evaluate any impacts on the designated site and to ensure appropriate measures are in place to avoid any adverse effects on integrity. The potential schemes that are included within the LFRMS Action Plan require further technical investigation and evaluation. Funding sources for each of the proposals would also have to be established. Alone these are not considered to have an effect as there would be further environmental assessment completed if and when these current potential schemes become independent projects.

3.68. There is however the potential for likely significant effects to occur in-combination with other development projects which they are associated with. For example the creation of additional flood storage/attenuation to support large-scale mixed-use development. These schemes have been highlighted within the rapid screening table as potentially having a likely significant effect on the Nene Gravel Pits SPA and the potential adverse impacts have also been included in the table and are explained below.

**Identified potential adverse effects on Upper Nene Gravel Pits**

3.69. For those potential schemes where an adverse impact cannot be ruled out, the following potential adverse effects could include:

- Water supply and water level management;

<table>
<thead>
<tr>
<th>Identified Scheme</th>
<th>Aim</th>
<th>Tests Applicable</th>
<th>Adverse Impact</th>
<th>Likely Significant Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kettering Rain Water Garden (SuDS) Schemes</td>
<td>To continue to review locations where rain water gardens can be implemented, to responsibly and positively discharge surface water in local communities without increasing the volume of water that discharges through artificial systems.</td>
<td>2</td>
<td>No</td>
<td>This is an investigatory study. The proposal will therefore not impact upon the SPA. There is the potential for a future scheme to affect the integrity of the European site, but it cannot be ascertained due to uncertainty and lack of clarification/design and evaluation of the proposed scheme. This assessment at the plan level does not remove the need for a Habitats Regulations assessment at the project level.</td>
</tr>
</tbody>
</table>
- Water quality; and
- Disturbance.

**Water supply and water level management**

3.70. There is the potential for in-combination effects of the proposed development of potential flood alleviation schemes required to facilitate future growth within Northamptonshire.

3.71. The appropriate assessment of the West Northamptonshire Joint Core Strategy, which promotes the growth of towns within West Northamptonshire, states that strategic infrastructure and resource strategic planning within the Ruthamford Water Resource Zone will support the proposed growth within the study area until 2035. Within the LFRMS, wording has been included in Objective 5 to promote the sustainable use of water. Through the detailed guidance that Northamptonshire County Council will be producing, the concept of the SuDS Train (See diagram set out below) will be promoted. Source control measures include the use of water butts, green roofs, grey water harvesting etc. and will therefore contribute towards the reduction of water usage.

3.72. For completeness and in order to ensure impacts on European sites are considered, wording has been included specifying that all developments will need to be in compliance with the Habitats Regulations and that new development does have the necessary means of water supply, but that this does not affect the water levels at the Upper Nene Valley Gravel Pits Special Protection Area (SPA), or overall water quality.

3.73. Therefore no adverse effects on the integrity of the SPA and Ramsar site have been identified due to the mitigation measures set out above.

**Water quality**

3.74. The provision of housing and other forms of development whilst not set out within the LFRMS is associated with a number of the potential flood alleviation schemes set out in the Action Plan. It was determined that in-combination these could potentially result in adverse effects on the integrity of the European sites through potential deterioration in water quality.

3.75. Avoiding such effects will require the timely delivery of ‘essential’ infrastructure such as sewage and waste water treatment systems; this will be broadened by the future requirement to include sustainable urban drainage systems. The provision of such infrastructure is, to a certain extent, controlled by utility providers. Specific to sewage and waste water treatment systems, which are provided by the relevant water company, the
delivery of additional capacity is subject to planned investment and identified infrastructure requirements (often set out through the five year Asset Management Plan); alternatively applicants would be required to enter into an requisition agreement for the provision of infrastructure systems. In addition the discharge of waste water is regulated by the Environment Agency rather than the Lead Local Flood Authority.

3.76. The Appropriate Assessment of the West Northants Joint Core Strategy states that deterioration of water quality would not occur downstream as a result of the growth proposed in the town and associated increase in capacity at Great Billing WwTW.

3.77. The Environment Agency continues to licence and control all discharges and abstractions on all water bodies. They have responsibilities to ensure no deterioration of water quality under the Water Framework Directive.

3.78. There is limited information relating to the potential schemes outlined in the Action Plan in terms of design or specific location and therefore they could result in an adverse effect on the integrity of the SPA and Ramsar site.

3.79. It is not considered that the objectives or policies outlined in the Strategy will have an adverse effect on the SPA or Ramsar site.

**Disturbance**

3.80. The proposed objectives, policies and proposed actions set out in the LFRMS will not result in an increased number of visitors to the SPA and Ramsar site.

**Screening European Sites**

3.81. The screening of European sites involves high-level analysis of the conservation objectives and vulnerabilities for each of the identified European sites against the potential pathways of impact associated with the LFRMS. Based on these objectives and vulnerabilities, the exercise will determine whether there is a potential for likely significant effects on each site and its interest features via each of the impact pathways. A preliminary view will then be taken about the effect on site integrity of the proposed LFRMS both alone and in-combination with other extant plans or projects. The screening process determines whether a site is included for further assessment as part of the Appropriate Assessment stage of the HRA.

3.82. The results of the preliminary screening of European sites within a 10km buffer of the LFRMS area indicated that all six sites can be screened out of the HRA and no further appropriate assessment is required (unless new measures are introduced or existing measures change substantially). This preliminary conclusion is based on analysis which indicates that potential hazards arising from the LFRMS measures were of a nature and magnitude that is unlikely to cause significant effects that would undermine the conservation objectives of European sites.

3.83. The views expressed about the effects on site integrity will be based on: current scientific understanding; the proposed manner in which the plan is to be implemented, and any proposals for mitigation measures to avoid or reduce impacts. The resulting screening matrix is show in Table 9 below.
### Table 9: Screening of European Sites

<table>
<thead>
<tr>
<th>European Site</th>
<th>Vulnerabilities</th>
<th>Conservation Objectives</th>
<th>Screening Results</th>
</tr>
</thead>
</table>
| Upper Nene Valley Gravel Pits [SPA, Ramsar]        | • Human recreational pressure  
• Changes in water levels - depending on the species water depths that are either too great, or too shallow, can have an impact on the conservation value  
• Water abstraction  
• Diffuse and point-source emissions  | • Maintain in favourable condition, populations of Annex 1 Species (Bittern & Golden plover) important migratory bird species (Gadwall & Mute Swan) at, or above, five year average populations (including the largest nesting colony of Grey Herons *Ardea cinerea* in Northamptonshire), and  
• Maintain assemblages of over 23,000 waterbirds in any season.  | **Screened In for Further Scoping:**  
Following the development of the LFRMS additional screening has been undertaken on the potential significant effect on the conservation objectives and vulnerabilities of the site. It is considered that the LFRMS measures are unlikely to have any significant effect. |
| Rutland Water [SPA, Ramsar]                        | • Water pollution (including agricultural run-off),  
• Neglect of appropriate management regimes for grasslands and disturbance.  
• Open water habitat susceptible to changes in water level.  | • Maintain, in favourable condition, the habitats for the internationally important populations of the regularly occurring migratory bird species, with particular reference to open water and surrounding marginal habitats  | **Screened Out:**  
The LFRMS measures are unlikely to have any significant effect on the conservation objectives and vulnerabilities of the site. This is because the hydrological and physical connection between the LFRMS area and the Rutland Water site is tenuous at best. It is therefore improbable based on available evidence that the hazards that may result from the strategy will lead to significant effects on the site. |
<table>
<thead>
<tr>
<th>European Site</th>
<th>Vulnerabilities</th>
<th>Conservation Objectives</th>
<th>Screening Results</th>
</tr>
</thead>
</table>
| Nene Washes [SPA, SAC, Ramsar]  | • Land take from within the site  
• Changes to water levels-particularly through increased abstraction, but also through increase in occurrence of spring flooding and winter flood depths  
• Decrease in water quality: specific threats come from increases in nitrogen and particularly phosphorous, increased turbidity and sediment load;  
• Changes to river flow  
• Increased salinity levels | • Maintain in favourable condition or restore to favourable condition if judged to be unfavourable, the following interest features; Lowland neutral grassland and Standing open water. Particular focus should be given to any dependent component special interest features for which the land is designated- Counter Drain/Old Bedford (outer river) and the Old Bedford/River Delph (inner river) and spined loach. | **Screened Out:** The LFRMS measures will not result in land-take, decrease in water quality or salinity. It is unlikely to have any significant effects on the conservation objectives of the European site as this site is over 10km away from the administrative boundary of Northamptonshire. Although the site is hydrologically connected to the LFRMS area via the River Nene, it is judged improbable that the measures proposed by the LFRMS could have a significant effect on the water levels and flow of the River Nene. |
| Woodwalten Fen [SAC, Ramsar]    | • Land take from within the site  
• Decreased water quality  
• Eutrophication (or nutrient enrichment)  
• Changes to water quantity  
• Increased numbers of invasive species within the site  
• Decreased air quality  
• Drainage/land claim for agriculture  
• Vegetational succession | • Maintain, in favourable condition, the following features: Standing open water and canals; Fen, marsh and swamp; and, Broadleaved, mixed and yew woodland. Particular focus should be given to any dependent component special interest features for which the land is designated. | **Screened Out:** The LFRMS measures and potential hazards have no connection to the vulnerabilities of this site. It is improbable they will lead to any significant effects on the conservation objectives of the site given that the site’s physical and hydrological connection to the LFRMS area is tenuous at best. |
<table>
<thead>
<tr>
<th>European Site</th>
<th>Vulnerabilities</th>
<th>Conservation Objectives</th>
<th>Screening Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orton Pit [SAC]</td>
<td>• Decreased water quality</td>
<td>• The site’s conservation objective provides for the protection of the largest known population of great crested newts, as well as maintaining the pond habitat for ten species of charophyte.</td>
<td><strong>Screened Out:</strong> The LFRMS measures and potential hazards have no connection to the vulnerabilities of this site. It is improbable they will lead to any significant effects on the conservation objectives of the site given that the site’s physical and hydrological connection to the LFRMS area is tenuous at best.</td>
</tr>
<tr>
<td></td>
<td>• Natural succession: both great crested newts and vegetation of Chara spp., for which the site is designated, thrive in the early succession stages</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Recreational pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Air pollution: vulnerable to deposition of nitrogen compounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barnack Hills and Holes</td>
<td>• Poor management practice (cessation of grazing)</td>
<td>• Maintain, in favourable condition (or restored to favourable condition if features are judged to be unfavourable), its calcareous grassland and the nationally important populations of man orchid Aceras anthropophorum and other orchid species.</td>
<td><strong>Screened Out:</strong> The LFRMS measures and potential hazards have no connection to the vulnerabilities of this site. It is improbable they will lead to any significant effects on the conservation objectives of the site given that the site’s physical and hydrological connection to the LFRMS area is tenuous at best.</td>
</tr>
<tr>
<td></td>
<td>• Recreational pressures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Air pollution: vulnerable to deposition of nitrogen compounds and sulphur dioxide.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Assessment of Cumulative and In-Combination Effects

3.84. The Habitats Regulations require that, in determining whether a plan or project is likely to have a significant effect on a European site, the plan or project should be considered both alone and in-combination with other plans or projects.

3.85. By way of guidance and direction to project-level HRAs, the potential sources of in-combination effects to the LFRMS are set out in Appendix B of this report and include the following relevant plans, programmes and projects:

- Catchment Flood Management Plans (CFMP) for the Rivers Great Ouse; Nene, Severn, Welland and Thames
- River Basin Management Plans (RBMP) for the Anglian, Severn and Thames River Basins
- Catchment Abstraction Management Strategy for the Rivers Nene, Welland
- West Northamptonshire Joint Core Strategy
- North Northamptonshire Joint Core Strategy
- Northamptonshire Mineral and Waste Local Plan
- Northampton SWMP
- Other relevant plans, programmes and projects for adjoining areas in Leicestershire, Lincolnshire, Rutland, Cambridgeshire, Warwickshire, Bedfordshire, Buckinghamshire and Oxfordshire.
4. CONCLUSIONS ON THE POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

4.1. It is important to reiterate that there is potential for a wide variety of activities that may stem from the LFRMS to have an effect on designated European sites within the LFRMS catchment. However in accordance with Natural England guidance, the purpose of HRA is to identify likely significant effects.

4.2. In this respect, an effect is considered to be ‘significant’ when it could potentially undermine the conservation objectives or disturb/affect designated interest features of a European Site, and is considered ‘likely’ if it cannot be excluded on the basis of objective information that it will occur. It does not automatically follow that an impact will occur, or that the impact would be significant, with a decision of LSE being purely an indication of the need for an Appropriate Assessment. It however excludes trivial or inconsequential effects.

4.3. A wider range of European sites have been looked at for consideration and details of the sites, their conservation objectives and/or qualifying interest have been assessed alongside vulnerability issues for each of the identifies sites to try and identify potential significant effects. It must be noted that many of the sites do not have specific conservation objectives and the quality of data available varies across sites, which has proved problematic in undertaking this initial screening report.

4.4. The screening exercise indicated that certain sites (Rutland Water, Woodwalton Fen, Orton Pit and Barnack Hills and Holes) could be screened out of further assessment because they have an intangible physical and/or hydrological connection with the identified impact pathways that would arise as a result of the LFRMS. Consequently direct impacts (e.g. habitat loss, disturbance) and indirect impacts (changes in water level/flow regime, introduction of non-native species) arising from the implementation of the LFRMS proposed measures will have no significant effect on these sites.

4.5. Other sites (Nene Washes) have been screened out because they were outside the 10km screening radius and the identified impact pathways are considered unlikely to lead to any significant effect on the site based on the current scope of the LFRMS and the conservation objectives/vulnerabilities of the site.

4.6. The Upper Nene Gravel Pits SPA/Ramsar Site was however screened in for further scoping.

4.7. The measures proposed in the LFRMS are likely to lead to a reduction in the frequency of surface water flooding in the county. However, some habitats rely on localised flooding events or inundation by water and as such an action has been included in the strategy to assess each designated habitat to establish if flooding of the site would be positive, negative or neutral.

4.8. The LFRMS creates many opportunities for managing flood risk and conserving/enhancing biodiversity assets in the county.

4.9. Whilst it is acknowledged that there are schemes within the plan that could potentially lead to adverse impacts on the integrity of the Nene Gravel Pits SPA, it has been concluded due to the very early stages of the scheme evaluation, design and potential locations, it is not possible to measure any potential likely significant effects.

4.10. No further assessment work is required in relation to the update of the LFRMS at this time. The reasoning for this being that whilst the strategy acknowledges that potential schemes are being required, it does not actively promote or permit any work or development as a result of or in association with proposed development. Further work or
scheme development would be subject to standard planning practice, consenting or Environment Agency Permit and will have to undergo further rigorous environmental assessment including an HRA.

4.11. This assessment at the strategy level does not remove the need for a Habitats Regulations assessment at individual project level, regardless of whether or not the project is consistent with the LFRMS. As a result of uncertainties concerning the potential impacts of the LFRMS Action Plan on the European site, detail emerging at the scheme-design stage may identify additional impacts that have not been assessed here. Consequently, any project arising out of the strategy will be assessed to ensure any adverse effects on integrity of European sites are avoided.
5. REFERENCES


Department for Communities and Local Government (DCLG, 2006): Planning for the Protection of European Sites: Appropriate Assessment (Draft).


Flood and Water Management Act (2010).


The Conservation of Habitats and Species Regulations 2010 (Habitats Regulations).

Welsh Assembly Government 2010. Planning Policy Wales Chapter 5 Conserving and Improving Natural Heritage and the Coast.
1. Identify all international sites in and around the LFRMS area.

2. Acquire, examine and understand conservation objectives of each interest feature of each international site potentially affected.

3. Consider the policies and proposals in the LFRMS and the changes that they may cause that may be relevant to the European sites. Introduce measures to avoid likelihood of significant effects on European sites.

4. Acknowledging the LFRMS is not necessary for site management, would any elements of The LFRMS be likely to have a significant effect on any interest feature, alone or in combination with other projects?

5. No significant effects are likely to occur as a result of implementing The Strategy

6. Significant effects are likely, or it is uncertain whether there would be significant effects.


8. Undertake an appropriate assessment of the implications for each affected site in light of its conservation objectives, using the best information, science and technical know-how available.

9. Consider whether any possible adverse effect on integrity of any site could be avoided by changes to The Strategy, such as modifying a policy or proposal whilst still achieving the plan aims and objectives.

10. Draft a Record of the Habitats Regulations Assessment and consult Natural England and if necessary the public.

11. Taking account of Natural England and public representations, can it be ascertained that the LFRMS will not adversely affect the integrity of any international site?

12. No, because effects on integrity are adverse or uncertain.

Yes

13. The LFRMS may be adopted without further reference to Habitats Regulations

See Regulation 103 of the 2010 Regulations
**APPENDIX B: OTHER PLANS AND PROGRAMMES, AND RELEVANT POTENTIAL IMPACT**

Table 9: Potential Impacts of Other Plans, Programmes and Projects

<table>
<thead>
<tr>
<th>Plans, Programmes and Projects</th>
<th>Relevant Overlap with LFRMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northampton Preliminary Flood Risk Assessment, 2012</td>
<td>The PFRA provides a high level overview of historical and future flood risk from local flood sources in Northampton, taking into consideration significant harmful consequences for human health, economic activity, the environment and cultural heritage</td>
</tr>
<tr>
<td>River Nene CFMP/Great Ouse CFMP/River Welland CFMP/River Thames CFMP</td>
<td>These CFMPs gives an overview of the flood risk in the Rivers Nene, Great Ouse, Welland and Thames catchment areas and sets out the preferred plan for sustainable flood risk management over the next 50 to 100 years</td>
</tr>
<tr>
<td>Anglian River Basin Management Plan/Thames River Basin Management Plan/Severn River Basin Management Plan</td>
<td>These River Basin Management Plans focuses on the actions to address the protection, improvement, sustainable use of water and other pressures facing the water environment in the Anglian River, Thames River and Severn River Basins</td>
</tr>
<tr>
<td>West Northamptonshire Level 1 Strategic Flood Risk Assessment/ West Northamptonshire (Daventry and South Northamptonshire) Level 2 Strategic Flood Risk Assessment/ Northampton Level 2 Strategic Flood Risk Assessment</td>
<td>These programmes provide several levels of strategic assessment of flood risk across the boroughs within West Northamptonshire.</td>
</tr>
<tr>
<td>West Northamptonshire Development Corporation Water Cycle Outline Strategy/ West Northamptonshire Water Cycle Study</td>
<td>Aims to provide guidance and recommendations to assist planning authorities in West Northamptonshire in locating development, in relation to water infrastructure</td>
</tr>
<tr>
<td>North Northamptonshire Outline &amp; Detailed Water Cycle Strategy/ Corby Water Cycle Outline &amp; Detailed Strategy</td>
<td>Aims to provide guidance and recommendations to assist planning authorities in North Northamptonshire in locating development, in relation to water services infrastructure.</td>
</tr>
<tr>
<td>North Northamptonshire Flood Risk Management Study/ North Northants Joint Planning Unit Flood and Water Management Strategy/Corby Borough Council Level 1 &amp; 2 Strategic Flood Risk Assessment / East Northamptonshire Council Strategic Flood Risk Assessment Level 1/Kettering and Wellingborough Level 1 &amp; 2 Strategic Flood Risk Assessment</td>
<td>These programmes provide several levels of strategic assessment of flood risk across the boroughs within the West and North of Northamptonshire.</td>
</tr>
</tbody>
</table>
### Plans, Programmes and Projects

<table>
<thead>
<tr>
<th>Plans, Programmes and Projects</th>
<th>Relevant Overlap with LFRMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northamptonshire Biodiversity Action Plan</td>
<td>Provides guidelines and targets for protecting and enhancing biodiversity within Northamptonshire</td>
</tr>
<tr>
<td>Northamptonshire Green Infrastructure Strategy</td>
<td>The GI strategy provides long term vision for functioning landscapes of high quality and character, and gives an environmental context for development and regeneration including opportunities for access, leisure and recreation.</td>
</tr>
<tr>
<td>Northamptonshire Environmental Character Assessment</td>
<td>Provide an assessment of the character and distinctiveness of Northamptonshire’s biodiversity character types and areas.</td>
</tr>
<tr>
<td>Northamptonshire Mineral and Waste Local Plan</td>
<td>Northamptonshire’s land use planning strategy for minerals and waste related development in the county. It provides the basis for investment in new waste and minerals development in Northamptonshire, and where it should go in the county.</td>
</tr>
<tr>
<td>Northamptonshire’s Joint Municipal Waste Management Strategy</td>
<td>It sets out the strategic approach of the Northamptonshire Authorities to managing municipal solid waste.</td>
</tr>
<tr>
<td>Northamptonshire Local Transport Plan 3</td>
<td>The plan set out the aims, objectives and strategies for achieving more sustainable and integrated transport system and infrastructure throughout Northamptonshire.</td>
</tr>
<tr>
<td>West Northamptonshire Joint Core Strategy/North Northamptonshire Joint Core Strategy</td>
<td>These strategies outline strategic spatial policies that will guide the future social, economic and environmental development of West and North Northamptonshire.</td>
</tr>
</tbody>
</table>