

EAST RIDING OF YORKSHIRE

LOCAL FLOOD RISK
MANAGEMENT STRATEGY
2015-2027

STRATEGIC ENVIRONMENTAL ASSESSMENT

POST ADOPTION STATEMENT

DECEMBER 2015

Contact information

For further information, please contact us using the details below.

Andrew McLachlan – Principal Engineer, Flood Risk Strategy

Angela Cowen – Senior Flood Risk Strategy Officer

Tel: 01482 391705

Email: floods@eastriding.gov.uk

Web: www.eastriding.gov.uk/flooding

Post: Flood Risk Strategy, County Hall, Cross Street, Beverley, HU17 9BA

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I: INTRODUCTION

I.1. The purpose of this document

- I.1.1. East Riding of Yorkshire Council (ERYC) has produced a Local Flood Risk Management Strategy (LFRMS) in accordance with its statutory duties as a Lead Local Flood Authority (LLFA) under the 2010 Flood and Water Management Act (F&WMA). The LFRMS guides the approach to flood risk management within the area.
- I.1.2. ERYC has also produced an accompanying Flood Risk Management Plan (FRMP) dealing specifically with part of the nationally designated Kingston upon and Haltemprice Flood Risk Area - that which falls within the ERYC administrative area. This is to comply with the 2009 Flood Risk Regulations. ERYC is currently producing further FRMPs for the remaining (non-designated) catchments in the East Riding.
- I.1.3. The LFRMS and FRMP were formally adopted by Full Council on 18 November 2015. In developing these documents, the Council undertook a Strategic Environmental Assessment (SEA) in accordance with European Directive 2001/42/EC¹ and the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations). This legislation requires an assessment of the potential environmental effects of the LFRMS and FRMP, before they are adopted. The results of the SEA process have been documented in a SEA Report² that was published for consultation alongside drafts of the LFRMS and FRMP in March 2015. The final SEA Report has been updated in light of the consultation responses received, details of which are set out in a separate report documenting the approach to the public consultation and responses received³.
- I.1.4. The SEA Regulations require a number of steps to be taken upon adoption of a plan or strategy (in this case the ERYC LFRMS and FRMP). Specifically Regulation 16 sets out the post adoption procedures for the SEA and requires that, as soon as reasonably practicable after the adoption of a plan or strategy for which SEA has been carried out, the responsible authority must make a copy of the plan or strategy publicly available alongside a copy of the SEA report and an 'SEA adoption statement', and must inform the public and statutory consultation bodies about the availability of these documents. The SEA adoption statement must explain:
- How environmental considerations have been integrated into the plan/strategy;
 - How the Environmental Report has been taken into account during the preparation of the plan/strategy;
 - How the opinions expressed by the public, consultation bodies (and where appropriate other European Member States) during consultation on the plan/strategy and Environmental Report have been taken into account;

¹ EU Council (2001) Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment

² *Draft Environmental Statement, ERYC, March 2015.*

³ *Report of the Consultation on the Local Flood Risk Management Strategy and Kingston upon Hull and Haltemprice FRMP, ERYC, October 2015.*

- The reasons for choosing the plan/strategy as adopted, in the light of the reasonable alternatives dealt with; and
- The measures that are to be taken to monitor the significant environmental and sustainability effects of the implementation of the plan/strategy.

I.1.5. This document constitutes the SEA Adoption Statement for the ERYC LFRMS and FRMP and is structured according to the SEA Regulations' requirements listed above.

2. INTEGRATION OF ENVIRONMENTAL CONSIDERATIONS

2.1.1. The principal purpose of SEA is:

“To provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development...”

(Article 1, SEA Directive)

2.1.2. As such the SEA process is designed to ensure that environmental considerations inform the development of the relevant plan or programme, and that any potential significant environmental effects arising from the plan/programme are identified, assessed, mitigated and communicated to plan-makers. The SEA Directive specifies that environmental considerations include factors such as human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors (SEA Directive Annex I(f)).

2.1.3. At the start of the SEA process – Stage A ‘Scoping Stage’ – these environmental factors are assessed using best available information to establish a baseline against which to gauge likely future impacts both as a result of continuing existing arrangements and implementing the plan/programme. The environmental baseline for the LFRMS and FRMP is set out in the ‘SEA Scoping Report’, and was used to identify key environmental issues of relevance to them⁴. These informed the development of the ‘SEA Framework’ or SEA objectives against which the LFRMS and FRMP was assessed to determine significant environmental effects. The SEA objectives along with the environmental issues they relate to are shown in Table 2.1.

The draft LFRMS objectives and measures and those of the FRMP, as set out in drafts of these documents published for public consultation, were assessed against the SEA objectives, the results of which were set out in a Draft SEA Environmental Report. The report’s findings were taken into account in developing the final objectives and measures as set out in the adopted LFRMS and FRMP. The final objectives and measures were re-assessed and the results are presented in a final SEA Environmental Report. Further information about how the Environmental Report was taken into account in developing the LFRMS and FRMP is provided in the next section.

Table 2.1 – SEA Objectives and associated environmental issues	
SEA Objectives	Environmental Issue
I. Minimise risk and impact of flooding to people.	<p>Population and human health:</p> <ul style="list-style-type: none"> • Population growth and associated pressures for housing, infrastructure, and services. • Vulnerable population in some locations, with high proportion of elderly residents and pockets of deprivation. • Potential and perceived impacts on health and wellbeing of population due to flooding. <p>Flood risk:</p>

⁴ See Table 4.1 of the SEA Scoping Report (ERYC, 2015).

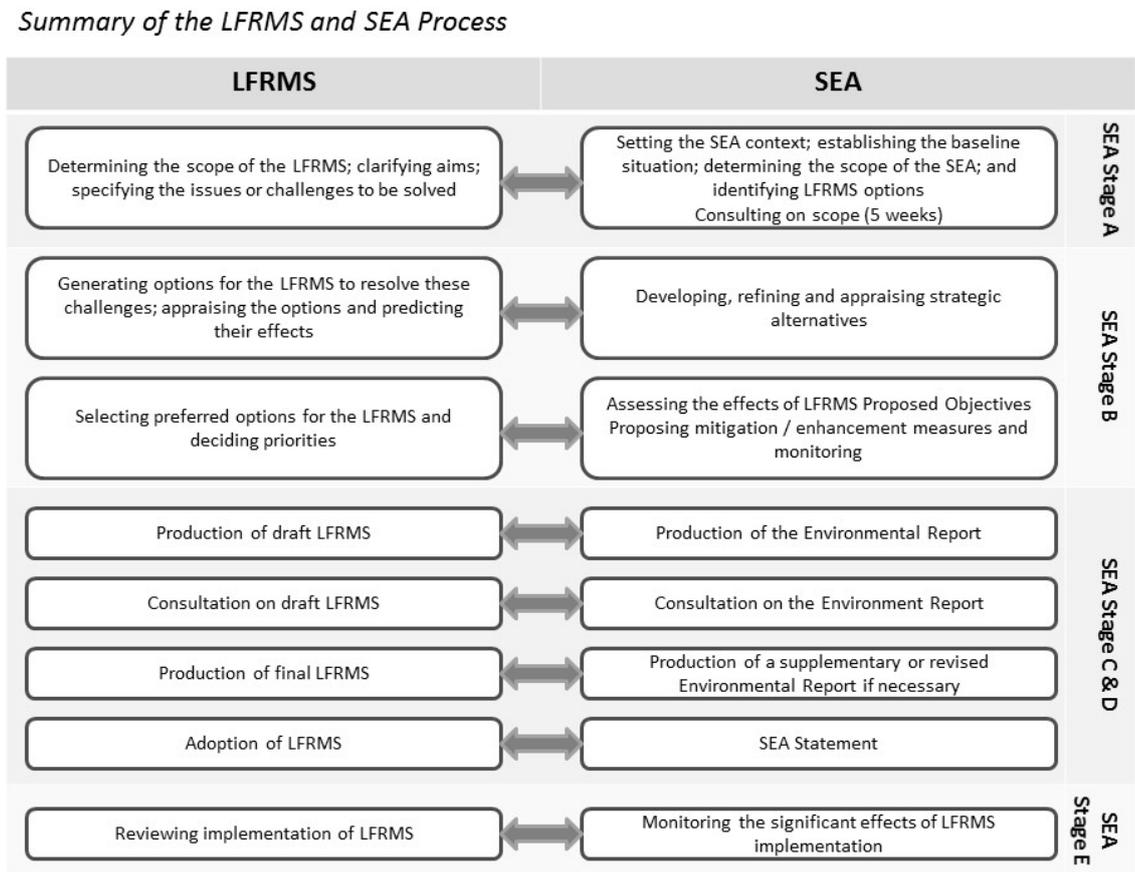
	<ul style="list-style-type: none"> Large proportion of East Riding, including numerous towns, villages, infrastructure and environmental assets at risk of flooding from multiple sources.
2. Promote active voluntary and community engagement in flood risk management activities.	<p>Population and human health:</p> <ul style="list-style-type: none"> Vulnerable population in some locations, with high proportion of elderly residents and pockets of deprivation.
3. Conserve and enhance biodiversity.	<p>Biodiversity, fauna and flora:</p> <ul style="list-style-type: none"> Requirement to maintain and/or restore designated sites to favourable condition. Humber Estuary - coastal squeeze, dissolved oxygen sag and declining bird populations. Lower Derwent Valley - extended unseasonal flooding (in summer) as a result of the Barmby barrage, preventing drainage from the designated sites. River Hull Headwaters - agricultural runoff and water level management. Loss / decline / fragmentation of habitats in the wider countryside. <p>Water:</p> <ul style="list-style-type: none"> Requirement to comply with WFD Directive; only 15% of water bodies classified as 'good' quality in East Riding. 8% are 'poor' and 2% are 'bad'. There are three locations where water levels are below the level required to support 'good ecological status' for the WFD objectives, and where abstraction is restricted. Groundwater source protection zones
4. Minimise adverse impacts on soil quality and high quality agricultural land	<p>Geology and soil:</p> <ul style="list-style-type: none"> Gley soils have greater surface water runoff rates than brown earths. Soil quality, including high quality agricultural land, is at risk of flooding and dependent upon artificial drainage, and the potential for the area's soils to provide other functions, such as carbon storage, may also be at risk.
5. Sustain and enhance water quality	<p>Water:</p> <ul style="list-style-type: none"> Requirement to comply with WFD Directive; only 15% of water bodies classified as 'good' quality in East Riding. 8% are 'poor' and 2% are 'bad'. There are three locations where water levels are below the level required to support 'good ecological status' for the WFD objectives, and where abstraction is restricted.

	<ul style="list-style-type: none"> • Groundwater source protection zones
6. Minimise disruption to key infrastructure and community facilities.	<p>Flood risk:</p> <ul style="list-style-type: none"> • Large proportion of East Riding, including numerous towns, villages, infrastructure and environmental assets at risk of flooding from multiple sources. • Increased risk due to sea level rise, increases in winter rainfall and summer storms, increased number of people, properties.
7. Minimise carbon footprint of flood risk management operations.	<p>Climatic factors:</p> <ul style="list-style-type: none"> • Greenhouse gases – per capita CO² emissions higher than national average.
8. Deliver adaptation to climate change impacts	<p>Climatic factors:</p> <ul style="list-style-type: none"> • Greenhouse gases – per capita CO² emissions higher than national average.
9. Protect and enhance the historic environment.	<p>Cultural heritage:</p> <ul style="list-style-type: none"> • Some heritage assets at risk of flooding; flood defence and drainage network are a significant part of the area's heritage.
10. Protect and enhance the East Riding's landscape character.	<p>Landscape:</p> <ul style="list-style-type: none"> • Sensitive landscape threatened by detractors due to development pressure.

3. HOW THE ENVIRONMENTAL REPORT HAS BEEN TAKEN INTO ACCOUNT

- 3.1.1. The preparation of the Environmental Report is 'Stage C' of the SEA process. It documents 'Stage B' of the process, in which the LFRMS objectives and measures and those of the FRMP have been assessed against the SEA framework (the ten objectives) during their development to determine how wider environmental improvements could be incorporated and considered.
- 3.1.2. Figure 3.1 below, which shows the key stages in the SEA process and how these have been integrated with the development of the LFRMS and FRMP, helps to demonstrate how the Environmental Report has been taken into account.

Figure 3.1 – Summary of the LFRMS and SEA Process



- 3.1.3 The adopted LFRMS and FRMP (Sections 7 and 5 respectively) refer to findings of the SEA Environmental Report in the explanatory text provided alongside each package of measures, highlighting where and how the implementation of the measures can contribute positively to the environment and/or prevent harm.

4. HOW THE OPINIONS OF CONSULTATION BODIES AND THE PUBLIC HAVE BEEN TAKEN INTO ACCOUNT

- 4.1.1. The consultation bodies and the public have been consulted at each key stage of the development of the SEA to enable their responses to be taken into account and thus influence the outcome of the process. This is summarised in Table 4.1 below.
- 4.1.2. The statutory consultation bodies for SEA, as specified in the SEA Directive, are English Heritage, Environment Agency and Natural England. There are also a number of statutory consultation bodies for the LFRMS and FRMP (specified in the 2010 Flood and Water Management Act 2010 and the 2009 Flood Risk Regulations respectively) who were also consulted at each stage, together with various other organisations.
- 4.1.3. The full details of those consulted, how they were notified, the responses received and how they have been taken into account are set out in the *Report of the Consultation on the Local Flood Risk Management Strategy and Kingston upon Hull and Haltemprice Flood Risk Management Plan (2015)*. The consultation responses to the initial consultation on the *Draft SEA Scoping Report (2014)* are included in the *Final SEA Scoping Report (2015)*, with comments on how these have been taken into account.

Table 4.1 – Key consultation dates and stages		
Consultation stage	Date	Consultees
SEA Draft Scoping Report	14 February 2014 to 23 March 2014	Statutory consultation bodies and the public
Draft Local Flood Risk Management Strategy for the East Riding of Yorkshire Draft Flood Risk Management Plan for the Kingston upon Hull and Haltemprice catchment Draft Environmental Report Draft Habitat Regulations Assessment Stage I Screening Report	2 March 2015 to 10 April 2015	Statutory consultation bodies and the public
Second Draft Environmental Report	11 - 25 June 2015	Statutory consultation bodies and some environmental organisations
Second Draft Habitat Regulations Assessment Stage I Screening Report	11 June to 7 July 2015	Statutory consultation bodies and some environmental organisations

Draft Local Flood Risk Management Strategy for the East Riding of Yorkshire – Flood Risk Regulations Review Version 1 Draft Flood Risk Management Plan for the Kingston upon Hull and Haltemprice catchment – Flood Risk Regulations Review Version 1	22 June to 7 September 2015	Environment Agency
Draft Habitat Regulations Appropriate Assessment for the Local Flood Risk Management Strategy	29 June to 27 July 2015	Statutory consultation bodies and some environmental organisations
Draft Habitat Regulations Appropriate Assessment for the Flood Risk Management Plan for the Kingston upon Hull and Haltemprice catchment	13 – 27 July 2015	Statutory consultation bodies and some environmental organisations
Final Draft Environmental Report	12 - 18 August 2015	Natural England
Second Draft Habitat Regulations Appropriate Assessment for the Local Flood Risk Management Strategy	24 August to 10 September 2015	Natural England
Second Draft Habitat Regulations Appropriate Assessment for the Flood Risk Management Plan for the Kingston upon Hull and Haltemprice catchment	24 - 26 August 2015	Natural England
Draft Local Flood Risk Management Strategy for the East Riding of Yorkshire – Flood Risk Regulations Review Version 2 Draft Flood Risk Management Plan for the Kingston upon Hull and Haltemprice catchment – Flood Risk Regulations Review Version 2	17 – 25 September 2015	Environment Agency
Local Flood Risk Management Strategy for the East Riding of Yorkshire	27 October 2015	ERYC Cabinet
Flood Risk Management Plan for the Kingston upon Hull and Haltemprice catchment	18 November 2015	ERYC Full Council
Environmental Report Habitat Regulations Assessment Stage 1 and Stage 2 Reports	18 December 2015	Published on ERYC website

5. REASONS FOR CHOOSING THE FINAL LFRMS / FRMP IN LIGHT OF THE OTHER REASONABLE ALTERNATIVES

- 5.1.1. In respect of reasonable alternatives to the LFRMS and FRMP, Section 7.2 of the *Environmental Statement for the East Riding of Yorkshire Local Flood Risk Management Strategy (October 2015)* explains that due to the high level nature of the LFRMS's strategic objectives and associated measures, which are largely undefined in terms of their spatial and geographical extent, it has been difficult to identify what could be considered reasonable alternatives. Rather, it explains that it was considered sensible to compare the LFRMS objectives and associated measures (including those of the FRMP) to a 'do minimum' scenario, which represents the likely future state of the environment if only the minimum statutory duties concerning flood risk management were to be implemented.
- 5.1.2. The results of the assessment of the LFRMS's objectives and associated measures against the SEA framework identified that the LFRMS and FRMP generated mainly positive effects on the environment, particularly in relation to minimising the risk and managing the consequences of flooding to people and commercial / economic assets, minimising disruption to key infrastructure and community facilities, and adapting to the impacts of climate change. Positive effects were also identified for biodiversity, water quality, soil quality, carbon footprint, historic environment and landscape character, although in some cases these depend on the manner in which certain objectives and measures are implemented. No negative effects were identified for the LFRMS objectives and associated measures, and thus no mitigating measures were formed or alternative objectives pursued. For the 'do minimum' scenario, many negative effects were identified against the SEA objectives particularly in the medium to long term.
- 5.1.3. The final LFRMS and FRMP were chosen in preference to the alternative 'do minimum' scenario firstly because it is the Council's priority to be proactive and invest in flood alleviation works and wider flood risk management activities in the area to manage and where possible reduce this risk to vulnerable communities. This is also supported by key stakeholders and the local community. As outlined above, it is also the most favourable option in terms of environmental effects.

6. HOW SIGNIFICANT ENVIRONMENTAL EFFECTS OF IMPLEMENTING THE LFRMS / FRMP WILL BE MONITORED

- 6.1.1. The SEA Regulations require that “the responsible authority shall monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action” (Regulation 17), and that the environmental report should provide information on “a description of the measures envisaged concerning monitoring” (Schedule 2).
- 6.1.2. Section 7.6 of the *Environmental Statement for the East Riding of Yorkshire Local Flood Risk Management Strategy (October 2015)* sets out a monitoring framework for the purposes of monitoring significant environmental effects associated with the implementation of the LFRMS and FRMP. This is shown in Table 6.1 below. The framework was informed by potential indicators identified in Section 6 of the document, indicators already monitored within the organisation, and those proposed in the LFRMS and FRMP to monitor their implementation and effectiveness.
- 6.1.3. The monitoring of significant environmental effects will be incorporated as part of the monitoring of the LFRMS and FRMP. Section 9 of the LFRMS sets out the approach to monitoring and reviewing the LFRMS. It states that as a minimum, the lead flood risk strategy officer will report on the LFRMS’s implementation as part of the annual report to the Environment and Regeneration Overview and Scrutiny Sub-Committee on flood and coastal risk management work.

Table 6.1 – SEA Monitoring Framework				
No.	SEA Theme / Objective	Proposed Indicator	Already monitored?	Target
I	Minimise risk and manage the consequences of flooding to people and commercial/economic assets.	Number of residential properties with lower flood risk.	Proposed in LFRMS	Increase
		Number of SMEs with lower flood risk.	Proposed in LFRMS	Increase
		Area of commercial floorspace with lower flood risk (m ²)	Proposed in LFRMS	Increase
		No. of planning applications granted contrary to EA advice.	Monitored by Forward Planning	None
		Multi-Agency Flood Plan up to date.	Proposed in LFRMS	Review / update every 6 years

		Economic cost of flood damage. New development with SuDS (Ha).	Assessed as part of S19 reports. Proposed in LFRMS	Decrease All major developments to have satisfactory SuDS.
2	Promote active voluntary and community engagement in flood risk management activities.	Attendees at stakeholder events. No. of consultation responses. Proportion of parish councils with adopted Flood Emergency Plans.	Yes Yes Yes	Greater than current average.
3	Conserve and enhance biodiversity.	Proportion of SSSIs where condition has been maintained/improved. Watercourse ecological status maintained/improved. Area of wildlife habitat enhanced / created (Ha).	Yes Proposed in LFRMS Proposed in LFRMS	5% increase 5% increase 5% increase
4	Minimise adverse impacts on soil quality and high quality agricultural land.	Area of agricultural land at lower flood risk.	No	Increase
5	Sustain and enhance water quality	Changes in ecological status or potential of water bodies. Percentage of river length assessed as: (i) good biological quality and (ii) good chemical quality.	Yes (by EA) Yes (by EA)	Increase Increase

		Bathing water quality.		
6	Minimise disruption to key infrastructure and community facilities.	Community facilities and infrastructure at lower flood risk. Key evacuation routes at lower flood risk. Multi-Agency Flood Plan up to date.	Proposed in LFRMS No Proposed in LFRMS	Increase Increase Increase
7	Minimise carbon footprint of flood risk management operations	Flood alleviation schemes incorporating renewable or low carbon energy.	Proposed in LFRMS	Increase
8	Deliver adaptation to climate change impacts	Standard of protection of new flood alleviation schemes with climate change component.	Proposed in LFRMS	100%
9	Protect and enhance the historic environment	Heritage assets at lower flood risk.	Proposed in LFRMS	Increase
10	Protect and enhance the East Riding's landscape character	No. of flood-related applications granted contrary to Natural England advice concerning adverse effects on landscape character.	No	None

REFERENCES

- East Riding of Yorkshire Council (December 2015) *Local Flood Risk Management Strategy 2015-2027*
- East Riding of Yorkshire Council (December 2015) *Flood Risk Management Plan for the Kingston upon Hull and Haltemprice Catchment within East Riding of Yorkshire 2015-2021*
- East Riding of Yorkshire Council (October 2015) *Environmental Statement for the East Riding of Yorkshire Local Flood Risk Management Strategy*
- East Riding of Yorkshire Council (October 2015) *Report of the Consultation on the Local Flood Risk Management Strategy and Kingston upon Hull and Haltemprice Flood Risk Management Plan*
- East Riding of Yorkshire Council (September 2015) *Habitat Regulations Assessment – Appropriate Assessment for the Local Flood Risk Management Strategy*
- East Riding of Yorkshire Council (September 2015) *Habitat Regulations Assessment – Appropriate Assessment for the Kingston upon Hull and Haltemprice Flood Risk Management Plan*
- East Riding of Yorkshire Council (September 2015) *Flood Risk Management Plan for the Kingston upon Hull and Haltemprice Catchment within East Riding of Yorkshire – Flood Risk Regulations Review Version 2*
- East Riding of Yorkshire Council (September 2015) *Local Flood Risk Management Strategy – Flood Risk Regulations Review Version 2*
- East Riding of Yorkshire Council (August 2015) *Second Draft Habitat Regulations Assessment – Appropriate Assessment for the Kingston upon Hull and Haltemprice Flood Risk Management Plan*
- East Riding of Yorkshire Council (August 2015) *Second Draft Habitat Regulations Assessment – Appropriate Assessment for the Local Flood Risk Management Strategy*
- East Riding of Yorkshire Council (June 2015) *Draft Habitat Regulations Assessment – Appropriate Assessment for the Local Flood Risk Management Strategy*
- East Riding of Yorkshire Council (June 2015) *Draft Habitat Regulations Assessment – Appropriate Assessment for the Kingston upon Hull and Haltemprice Flood Risk Management Plan*
- East Riding of Yorkshire Council (June 2015) *Addendum to the Habitat Regulations Assessment Screening Report for the Local Flood Risk Management Strategy: Screening Report for the Kingston upon Hull and Haltemprice Flood Risk Management Plan*
- East Riding of Yorkshire Council (June 2015) *Flood Risk Management Plan for the Kingston upon Hull and Haltemprice Catchment within East Riding of Yorkshire – Flood Risk Regulations Review Version 1*
- East Riding of Yorkshire Council (June 2015) *Local Flood Risk Management Strategy – Flood Risk Regulations Review Version 1*
- East Riding of Yorkshire Council (June 2015) *Second Draft Environmental Statement for the East Riding of Yorkshire Local Flood Risk Management Strategy*

East Riding of Yorkshire Council (May 2015) *Second Draft Habitat Regulations Assessment Screening Report for the Local Flood Risk Management Strategy*

East Riding of Yorkshire Council (March 2015) *Draft Environmental Statement for the East Riding of Yorkshire Local Flood Risk Management Strategy*

East Riding of Yorkshire Council (March 2015) *Final SEA Scoping Report*

East Riding of Yorkshire Council (March 2015) *Flood Risk Management Plan for the Kingston upon Hull and Haltemprice Catchment within East Riding of Yorkshire – Consultation Draft*

East Riding of Yorkshire Council (March 2015) *Local Flood Risk Management Strategy – Consultation Draft*

East Riding of Yorkshire Council (February 2015) *Draft Habitat Regulations Assessment Screening Report for the Local Flood Risk Management Strategy*

East Riding of Yorkshire Council (2014) *Draft SEA Scoping Report*

EU Council (2001) Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment

Flood and Water Management Act (2010), London HMSO.

The Environmental Assessment of Plans and Programmes Regulations (2004) SI 2004/1633, London HMSO.

The Flood Risk Regulations (2009) SI 2009 / 3042, London HMSO.