Summary of Environment Agency Flood and Coastal Erosion Risk Management Plans / Strategies

1. River Catchment Flood Management Plans (CFMPs)

CFMP policies for the East Riding

Spatial Strategy Statments	CFMP / Policy Unit	Selected Policy Option (1-6)	Proposed Actions
Major Haltemprice Settlements			
Cottingham Anlaby Willerby Kirkella Hessle	Hull and Coastal Streams: Lower Hull	5 - Take further action to reduce flood risk. • *There are many organisations and individuals with different responsibilities and accountabilities that will need to work together to reduce flood risks in Lower Hull Sub-area.* • *Reducing flood risk will be a long and expensive process. We need to start to work together now and openly share information with one another.* • *Surface water, drainage networks, rivers and tides all come together to contribute to the complex flood risk in Lower Hull Sub-area.*	• Working with Hull City Council and landowners, make improvements where required to flood defences on the River Hull. • Working with Hull City Council and landowners, make improvements where required to better manage flood risk on the River Hull. • Ensure emergency response plans are reviewed and take account of increases in flood risk through climate change and other catchment changes. • Work in partnership to reduce the risk of flooding from surface water. • Improve public awareness of the risk of flooding from all sources. • Work in partnership to support the development of both Hull City Council and East Riding of Yorkshire Council's Surface Water Management Plans, and to deliver the resulting strategic and co-ordinated set of actions.
Principal Towns			
Beverley	Hull and	3 - Continue with	• Finalise, publish and implement the River Hull flood risk management strategy

	Coastal Streams: Upper Hull	existing or alternative actions to manage flood risk at the current level. • *The drainage network here is heavily engineered and complex, any changes to its management need careful consideration as the impact may be widespread.* • *Whilst all of the assets we operate perform an important function, some of our land drainage assets are unlikely to receive flood risk funding in the future.* • *We will work in partnership with local bodies to to find alternative funding sources to help to reduce flood risk.*	and continue consultation with stakeholders during the implementation of its actions and work in partnership to reduce flood risk by securing the long-term future of the flood risk assets. • EA to work with ERYC to review evidence of land management and flood risk benefits of pumping stations in the Holderness Drain system. • Consider the implications of changing the flood regime on SSSIs. The findings should be used to inform future sustainable approaches to flood risk management and ensure that the condition of each SSSI is maintained, and where possible improved. • Work in partnership with the Lead Local Flood Authority to reduce the risk of flooding from surface water.
Bridlington	Hull and Coastal Streams: Bridlington	3 - Continue with existing or alternative actions to manage flood risk at the current level. • *Regeneration presents an opportunity to remove culverts through the town.* • *Our broadscale model over estimates the number of properties at risk.*	• Develop detailed development plans for the Bridlington Regeneration Strategy which consider water management. • Develop a System Asset Management Plan which will ensure risk is managed at current levels. This will include finding appropriate solutions to monitor culvert capacity. • Produce a register of all culverts and outfalls within the sub-area. As part of this study; identify locations where culverts can be removed or improved through redevelopment. • Improve public awareness of the risk of flooding.
Driffield	Hull and	3 - Continue with	• Finalise, publish and implement the River Hull flood risk management strategy

	Coastal Streams: Upper Hull	existing or alternative actions to manage flood risk at the current level. • *The drainage network here is heavily engineered and complex, any changes to its management need careful consideration as the impact may be widespread.* • *Whilst all of the assets we operate perform an important function, some of our land drainage assets are unlikely to receive flood risk funding in the future.* • *We will work in partnership with local bodies to to find alternative funding sources to help to reduce flood risk.*	and continue consultation with stakeholders during the implementation of its actions and work in partnership to reduce flood risk by securing the long-term future of the flood risk assets. • EA to work with ERYC to review evidence of land management and flood risk benefits of pumping stations in the Holderness Drain system. • Consider the implications of changing the flood regime on SSSIs. The findings should be used to inform future sustainable approaches to flood risk management and ensure that the condition of each SSSI is maintained, and where possible improved. • Work in partnership with the Lead Local Flood Authority to reduce the risk of flooding from surface water.
Goole	Aire: Lower Aire tidal	6 - Take action with others to store water or manage runoff in locations that provide overall flood risk reduction or environmental benefits, locally or elsewhere in the catchment. *We need to continue to raise people's awareness of the importance of our washlands.*	•Produce a system asset management plan to maintain current infrastructure and channel structure. Work in partnership to take into account all sources of flooding as well as the implications of climate change to develop the most sustainable long term approach to managing flood risk within the sub area, particularly through the utilisation of existing washlands. • With the Humber Strategy, establish the potential for wetland creation, flood storage and managed realignment within the Humber Estuary. • Develop the flood risk management regional habitat creation programme. This should look to provide environmental benefits through future flood risk management works. • Work in partnership to complete the Flood Risk Management Strategy for the Lower Aire. • Develop a programme of works to enable partnerships to implement long term

		• *We are currently reviewing the role of washlands on the Lower Aire to understand better the condition and function of the washlands.* • *Flood risk will increase in this sub area in the future. We can mitigate some of this risk however some will remain.* • *Washlands are vital in the management of flood risk. Creating additional flood storage capacity and improving our current assets, will enable us to control the movement of water away from the built environment.*	sustainable land management.
	Don: Lower Don	3 - Continue with existing or alternative actions to manage flood risk at the current level. • *Climate change will result in a greater risk of flooding, particularly due to rising sea levels.* • *Our current approach to managing flood risk needs to be scrutinised in light of climate change predictions to ensure that the risk to life is reduced through effective flood*	• Produce and implement a System Asset Management Plan (SAMP) for the Lower Don sub-area to determine the most sustainable approach to managing assets to ensure that the standard of protection is maximised under current levels of investment. • Significantly improve flood awareness throughout the sub-area using approaches such as Flood Action Groups (FAG); development of a Local Flood Website; focused flood warning and awareness campaign carried out in partnership. • Determine in greater detail the risk of flooding to utilities, i.e. gas, electricity, water and telecommunications installations and the consequences of the loss of these installations during flooding. • Ensure that the reviews/updates undertaken by the local councils of their internal and multi-agency flood emergency plans take adequate account of changes in flood risk arising from climate change and other catchment changes, such as development. • Develop a 'Tidal River Don FRM Study', to identify the long term approach to

		risk management. • *Flood storage is vital in reducing the risk to life. We may need to increase the amount of water we store within natural floodplains and storage areas.*	managing flood risk between Went Outfall and Goole (including this sub-area). • As part of future works, ensure that the potential for habitat creation and environmental improvement is fully investigated. • Develop a role for a Sustainable Land Management Officer to work with landowners and our partners to promote sustainable agricultural land management, where possible implementing the principles of Higher Level Stewardship. • Carryout a long term assessment into the implications of the water environment to the agricultural sector.
	Ouse: Upper Humber/ Tidal Ouse and Wharfe	4 - Take action to sustain the current scale of flood risk to the future. • *Pumping is vital in this sub area and may have to increase to cope with higher rainfall in the future.* • *Flood storage on Selby Dam and Bishop's Dyke could reduce risk further.* • *If there were no defences, hazard would be extremely high.* • *Action to address low spots in defences could be important to prevent flooding in Selby and Cawood.* • *The Upper Humber Study has studied the combined effects of river and tidal flows in the upper Humber area.*	• Produce a System Asset Management Plan to determine the best approach to managing existing assets that ensures that the current level of risk is managed into the future. • Following completion of the managed realignment study in the Lower Wharfe, we will do further modelling to find out how effective the washlands are. • Work in partnership with the relevant Lead Local Flood Authority to reduce the risk of flooding from surface water. • Identify the long term approach to the current pumping regime. This study should highlight the long term sustainable approach to flood risk management, of which pumping is one possibility, whilst taking into consideration the implications of climate change. • Investigate the best ways to manage the risk of flooding around Goole. • Investigate the need for flood risk reduction between Barmby and Boothferry as well as the Rawcliffe area.

Local Service Centres			
Brough Howden Market Weighton	Hull and Coastal Streams: Market Weighton	3 - Continue with existing or alternative actions to manage flood risk at the current level. *Action will continue to be taken to manage river and surface water flood risk in key locations. Risk in Howden is managed adequately but there is dispersed risk from rivers and surface water throughout the unit. North Cave and Market Weighton have already benefited from targeted action to manage risk but our approach in the future must consider all sources of flood risk in combination.*	• Produce and implement a System Asset Management Plan for the sub-area to determine the most sustainable approach to managing assets. • Complete work on North Cave Beck flood alleviation scheme. • Develop a Surface Water Management Plan for Market Weighton and other communities at risk of surface water flooding and remove culvert register action. • Work in partnership to identify the long term approach to the current pumping regime. • Investigate the interaction between Market Weighton Canal and the River Foulness and the risk canal flooding poses on local development. • Establish and maintain a register of structures or features which are likely to have an effect on flood risk in their area together with information about them. Use this register to identify the location of pinch points where flood water may overspill.
Hedon	Hull and Coastal Streams: Burstwick	5 - Take further action to reduce flood risk. *Action will be taken to reduce the risk of surface water flooding in Hedon and other vulnerable locations and we will adequately manage flood risk from Burstwick Drain. The ongoing partnership work on*	• Produce a System Asset Management Plan to determine the most sustainable approach to reducing flood risk. • Complete the flood defences in Hedon and Burstwick (predicted completion in 2010). • Work in partnership to provide information and advice to individual properties within Hedon and Burstwick to improve flood resilience and flood proofing. • Work in partnership to develop a Surface Water Management Plan for the sub-area. Where locations of surface water flood risk are identified, ensure that cross boundary issues are taken into account and fed into the management of surrounding sub-areas.

		the South Holderness study will enable us to understand combined flood risk from all sources and will consider potential solutions for managing this risk in the future. It is important that risks from all sources are managed and it is essential that the key partners work together to develop integrated management plans to achieve this.	
Hornsea	Hull and Coastal Streams: Hornsea	3 - Continue with existing or alternative actions to manage flood risk at the current level. •*Balancing the requirements of maintaining water levels in Hornsea Mere and reducing flood risk is key to the future management of water in the Hornsea area.* • *More detailed understanding of the interactions between surface, tidal and river flood risk should inform the detailed management approaches in the future.*	• Development of a greater understanding of the interaction between Hornsea Mere, surface water drainage and tide locking. • Confirm responsibilities for management of structures and of water levels within the mere. • Work with partners to develop detailed management plans for managing risk in the sub-area that are consistent with all plans and policies. This will include a Systems Asset Management Plan, Water Level Management Plans and the Shoreline Management Plan. • Improve flood warning service available within the sub-area. • Continue to promote the use of SuDS and other drainage control solutions for development and re-development within Hornsea.
Pocklington	Derwent: Pocklington	5 - Take further action to reduce flood risk.	• Produce a system asset management plan for the sub area to determine the most sustainable approach to managing assets to reduce the risk of flooding.

		• *The risk of flooding is predicted to increase in the area in the future from both river and surface water flooding.* • *The risk of flooding is from more than one source which will require organisations to work together to coordinate plans to manage the risk.* • *The long term sustainability of the local economy will be aided through our work to reduce the risk of flooding.*	• Develop a feasibility study for Pocklington. This study should aim to reduce the risk of flooding from both river and surface water sources. • Continue to manage localised sedimentation build up where it poses a risk of flooding. Investigate the source of this sediment and the potential for land management actions to reduce its input into the beck. • Determine in detail the risk of flooding to the transport and the consequences of road closures during flooding. Where possible ensure that key routes remain operational during flood events. Following the identification of flood risk to these facilities, ensure alternative routes and emergency plans are developed and reviewed periodically. • Work in partnership with East Riding of Yorkshire Council to reduce the risk of flooding from surface water. This should include areas of known problems in the policy unit and lead to works that improve the standard of protection from small watercourses and land drainage and overland flow.
Witherensea	Hull and Coastal Streams: Holderness	3 - Continue with existing or alternative actions to manage flood risk at the current level. *The risk of flooding will continue to be managed but that we will review our maintenance activities on rivers to ensure that they are economically justified. The ongoing partnership work on the South Holderness study will enable us to understand combined flood risk from all sources and will consider potential solutions for*	• Work with partners to develop joint management plans for all sources of flooding. • Ensure there are no conflicts between policies and that all sources of flooding are managed in an integrated manner; this will be developed in the South Holderness Study. • Identify risk and develop emergency plans for critical infrastructure. • Improve flood warning take up within the sub-area. • Work with land owners and communities to reduce the consequences of flooding.

		managing this risk in the future. Tidal and coastal flood risk is the dominant source of flood risk in the sub-area but its management is dealt with by the Humber Strategy and the Shoreline Management Plan.	
Rural Service Centres			
Aldborough Beeford Hutton Cranswick Kilham Leven Middleton on the Wolds Wetwang	Hull and Coastal Streams: Upper Hull	3 - Continue with existing or alternative actions to manage flood risk at the current level. • *The drainage network here is heavily engineered and complex, any changes to its management need careful consideration as the impact may be widespread.* • *Whilst all of the assets we operate perform an important function, some of our land drainage assets are unlikely to receive flood risk funding in the future.* • *We will work in partnership with local bodies to to find alternative funding sources to help to reduce flood risk.*	• Finalise, publish and implement the River Hull flood risk management strategy and continue consultation with stakeholders during the implementation of its actions and work in partnership to reduce flood risk by securing the long-term future of the flood risk assets. • EA to work with ERYC to review evidence of land management and flood risk benefits of pumping stations in the Holderness Drain system. • Consider the implications of changing the flood regime on SSSIs. The findings should be used to inform future sustainable approaches to flood risk management and ensure that the condition of each SSSI is maintained, and where possible improved. • Work in partnership with the Lead Local Flood Authority to reduce the risk of flooding from surface water.
Bubwith	Derwent: Lower Derwent and	3 – Continue with existing or alternative	• Produce a system asset management plan to determine the most sustainable approach to managing assets to ensure that the current standard of protection is

	the Wolds	actions to manage flood risk at the current level. •*The level of flood risk in this part of the catchment is determined by flood flows generated upstream in the area above Malton.* • *Flood flows in the lower area overtop into the Lower Derwent Valley SPA and SAC.* • *Actions to manage flooding must comply with the requirements of the Habitats Directive and SSSI requirements.* • *Our flood risk management actions are necessary here to prevent widespread flooding in the area.* • *We will continue to manage the flood defences in the area.*	maintained. • Work in partnership to provide information and advice to property owners and businesses on improving flood resilience and flood proofing of properties. • Continue to maintain Barmby Barrage to ensure that flood risk does not increase. • Improve modelling and understanding of flood risk in the Lower Derwent to determine a sustainable long term approach to managing flood banks and assets in the area. As part of this work evaluate the benefit of defences within the sub area as well as the role of Barmby Barrage in reducing flood risk to Selby from the tidal influence of the Humber Estuary. • Following the improved understanding of defences within the sub area, ensure that the most sustainable approach to managing flood risk has been adopted. This analysis should include the potential for managed realignment, wetland creation, defence removal and if required a long term appropriate standard of protection. • Implement the River Derwent Restoration Plan to recover the SSSI section of the river to an unfavourable recovering or favourable condition in partnership with Natural England and others.
Gilberdyke Holme on Spalding Moor	Hull and Coastal Streams: Market Weighton	3 - Continue with existing or alternative actions to manage flood risk at the current level. *Action will continue to be taken to manage river and surface water flood risk in key locations. Risk in*	• Produce and implement a System Asset Management Plan for the sub-area to determine the most sustainable approach to managing assets. • Complete work on North Cave Beck flood alleviation scheme. • Develop a Surface Water Management Plan for Market Weighton and other communities at risk of surface water flooding and remove culvert register action. • Work in partnership to identify the long term approach to the current pumping regime. • Investigate the interaction between Market Weighton Canal and the River Foulness and the risk canal flooding poses on local development.

		Howden is managed adequately but there is dispersed risk from rivers and surface water throughout the unit. North Cave and Market Weighton have already benefited from targeted action to manage risk but our approach in the future must consider all sources of flood risk in combination.	• Establish and maintain a register of structures or features which are likely to have an effect on flood risk in their area together with information about them. Use this register to identify the location of pinch points where flood water may overspill.
Patrington	Hull and Coastal Streams: Holderness	3 - Continue with existing or alternative actions to manage flood risk at the current level. *The risk of flooding will continue to be managed but that we will review our maintenance activities on rivers to ensure that they are economically justified. The ongoing partnership work on the South Holderness study will enable us to understand combined flood risk from all sources and will consider potential solutions for managing this risk in the future. Tidal and coastal flood risk is the dominant source of flood risk in the sub-area but its management*	• Work with partners to develop joint management plans for all sources of flooding. • Ensure there are no conflicts between policies and that all sources of flooding are managed in an integrated manner; this will be developed in the South Holderness Study. • Identify risk and develop emergency plans for critical infrastructure. • Improve flood warning take up within the sub-area. • Work with land owners and communities to reduce the consequences of flooding.

		is dealt with by the Humber Strategy and the Shoreline Management Plan.	
Snaith	Aire: Lower Aire Tidal	6 - Take action with others to store water or manage runoff in locations that provide overall flood risk reduction or environmental benefits, locally or elsewhere in the catchment. • *We need to continue to raise people's awareness of the importance of our washlands.* • *We are currently reviewing the role of washlands on the Lower Aire to understand better the condition and function of the washlands.* • *Flood risk will increase in this sub area in the future. We can mitigate some of this risk however some will remain.* • *Washlands are vital in the management of flood risk. Creating additional flood storage capacity and improving our current assets, will enable us to control the movement of water away*	• Produce a system asset management plan to maintain current infrastructure and channel structure. Work in partnership to take into account all sources of flooding as well as the implications of climate change to develop the most sustainable long term approach to managing flood risk within the sub area, particularly through the utilisation of existing washlands. • With the Humber Strategy, establish the potential for wetland creation, flood storage and managed realignment within the Humber Estuary. • Develop the flood risk management regional habitat creation programme. This should look to provide environmental benefits through future flood risk management works. • Work in partnership to complete the Flood Risk Management Strategy for the Lower Aire. • Develop a programme of works to enable partnerships to implement long term sustainable land management

		from the built environment.	
Stamford Bridge	Derwent: Stamford Bridge	3 - Continue with existing or alternative actions to manage flood risk at the current level. •*A strategic catchment wide approach to flood risk management, such as reducing runoff and increasing flood storage upstream, will mean that additional actions to counter the effects of climate will not require additional localised actions in this area.* • *For flood risk to remain low any future development should take place outside of the floodplain.* • *The flood defences constructed in Malton and Norton following the autumn 2000 floods has reduced the risk of flooding in the area. Although flood defences can never remove the risk of flooding completely.*	• Produce and implement a system asset management plan to determine the most sustainable approach to managing assets to ensure that the current standard of protection is maintained. • Determine in detail the risk of flooding to transport and the consequences of rail closures during flooding. Where possible ensure that key routes remain operational during flood events. Following the identification of flood risk to these facilities, ensure alternative routes and emergency plans are developed and reviewed periodically.
Primary Villages			
Rawcliffe	Aire: Lower Aire Tidal	6 - Take action with others to store water or manage runoff in locations that provide	• Produce a system asset management plan to maintain current infrastructure and channel structure. Work in partnership to take into account all sources of flooding as well as the implications of climate change to develop the most sustainable long term approach to managing flood risk within the sub area, particularly through the

		overall flood risk reduction or environmental benefits, locally or elsewhere in the catchment. • *We need to continue to raise people's awareness of the importance of our washlands.* • *We are currently reviewing the role of washlands on the Lower Aire to understand better the condition and function of the washlands.* • *Flood risk will increase in this sub area in the future. We can mitigate some of this risk however some will remain.* • *Washlands are vital in the management of flood risk. Creating additional flood storage capacity and improving our current assets, will enable us to control the movement of water away from the built environment.*	utilisation of existing washlands. • With the Humber Strategy, establish the potential for wetland creation, flood storage and managed realignment within the Humber Estuary. • Develop the flood risk management regional habitat creation programme. This should look to provide environmental benefits through future flood risk management works. • Work in partnership to complete the Flood Risk Management Strategy for the Lower Aire. • Develop a programme of works to enable partnerships to implement long term sustainable land management
	Ouse: Upper Humber/ Tidal Ouse and Wharfe	4 - Take action to sustain the current scale of flood risk to the future.	• Produce a System Asset Management Plan to determine the best approach to managing existing assets that ensures that the current level of risk is managed into the future. • Following completion of the managed realignment study in the Lower Wharfe, we will do further modelling to find out how effective the washlands are.

		• *Pumping is vital in this sub area and may have to increase to cope with higher rainfall in the future.* • *Flood storage on Selby Dam and Bishop's Dyke could reduce risk further.* • *If there were no defences, hazard would be extremely high.* • *Action to address low spots in defences could be important to prevent flooding in Selby and Cawood.* • *The Upper Humber Study has studied the combined effects of river and tidal flows in the upper Humber area.*	• Work in partnership with the relevant Lead Local Flood Authority to reduce the risk of flooding from surface water. • Identify the long term approach to the current pumping regime. This study should highlight the long term sustainable approach to flood risk management, of which pumping is one possibility, whilst taking into consideration the implications of climate change. • Investigate the best ways to manage the risk of flooding around Goole. • Investigate the need for flood risk reduction between Barmby and Boothferry as well as the Rawcliffe area.
Melbourne Wilberfoss	Derwent: Lower Derwent and the Wolds	3 – Continue with existing or alternative actions to manage flood risk at the current level. •*The level of flood risk in this part of the catchment is determined by flood flows generated upstream in the area above Malton.* • *Flood flows in the lower area overtop into the Lower Derwent Valley SPA and SAC.* • *Actions to manage flooding must comply with the*	• Produce a system asset management plan to determine the most sustainable approach to managing assets to ensure that the current standard of protection is maintained. • Work in partnership to provide information and advice to property owners and businesses on improving flood resilience and flood proofing of properties. • Continue to maintain Barmby Barrage to ensure that flood risk does not increase. • Improve modelling and understanding of flood risk in the Lower Derwent to determine a sustainable long term approach to managing flood banks and assets in the area. As part of this work evaluate the benefit of defences within the sub area as well as the role of Barmby Barrage in reducing flood risk to Selby from the tidal influence of the Humber Estuary. • Following the improved understanding of defences within the sub area, ensure that the most sustainable approach to managing flood risk has been adopted. This analysis should include the potential for managed realignment, wetland creation, defence removal and if required a long term appropriate standard of protection. • Implement the River Derwent Restoration Plan to recover the SSSI section of

		requirements of the Habitats Directive and SSSI requirements. • *Our flood risk management actions are necessary here to prevent widespread flooding in the area.* • *We will continue to manage the flood defences in the area.*	the river to an unfavourable recovering or favourable condition in partnership with Natural England and others.
Flamborough	Hull and Coastal Streams: Gypsey Race	2 - Reduce current flood risk management actions. • *Flooding within the sub-area is limited.* • *We will reduce maintenance but ensure that there is no increase in risk of blockages to Bridlington, downstream of the sub-area.* • *A study into the impacts of groundwater flooding will help to determine how it should be managed*	• Develop a System Asset Management Plan to manage the river channel within the sub-area proportionately to the level of local and downstream risk. • Raise individual property owners awareness about flood risk and possible resilience measures. • Improve understanding of groundwater flooding through the sub-area.
Brandesburton Skirlaugh Cherry Burton Dunswell Leconfield Nafferton Tickton	Hull and Coastal Streams: Upper Hull	3 - Continue with existing or alternative actions to manage flood risk at the current level. • *The drainage network here is heavily engineered and*	• Finalise, publish and implement the River Hull flood risk management strategy and continue consultation with stakeholders during the implementation of its actions and work in partnership to reduce flood risk by securing the long-term future of the flood risk assets. • EA to work with ERYC to review evidence of land management and flood risk benefits of pumping stations in the Holderness Drain system. • Consider the implications of changing the flood regime on SSSIs. The findings

Walkington Wawne Woodmansey		*complex, any changes to its management need careful consideration as the impact may be widespread.* • *Whilst all of the assets we operate perform an important function, some of our land drainage assets are unlikely to receive flood risk funding in the future.* • *We will work in partnership with local bodies to to find alternative funding sources to help to reduce flood risk.*	should be used to inform future sustainable approaches to flood risk management and ensure that the condition of each SSSI is maintained, and where possible improved. • Work in partnership with the Lead Local Flood Authority to reduce the risk of flooding from surface water.
Easington Keyingham Roos Thorngumbald	Hull and Coastal Streams: Holderness	3 - Continue with existing or alternative actions to manage flood risk at the current level. *The risk of flooding will continue to be managed but that we will review our maintenance activities on rivers to ensure that they are economically justified. The ongoing partnership work on the South Holderness study will enable us to understand combined flood risk from all sources and will consider potential solutions for managing this risk in the future. Tidal and coastal*	• Work with partners to develop joint management plans for all sources of flooding. • Ensure there are no conflicts between policies and that all sources of flooding are managed in an integrated manner; this will be developed in the South Holderness Study. • Identify risk and develop emergency plans for critical infrastructure. • Improve flood warning take up within the sub-area. • Work with land owners and communities to reduce the consequences of flooding.

		flood risk is the dominant source of flood risk in the sub-area but its management is dealt with by the Humber Strategy and the Shoreline Management Plan.	
Eastrington Newport North Cave South Cave North Ferriby Swanland	Hull and Coastal Streams: Market Weighton	3 - Continue with existing or alternative actions to manage flood risk at the current level. *Action will continue to be taken to manage river and surface water flood risk in key locations. Risk in Howden is managed adequately but there is dispersed risk from rivers and surface water throughout the unit. North Cave and Market Weighton have already benefited from targeted action to manage risk but our approach in the future must consider all sources of flood risk in combination.*	• Produce and implement a System Asset Management Plan for the sub-area to determine the most sustainable approach to managing assets. • Complete work on North Cave Beck flood alleviation scheme. • Develop a Surface Water Management Plan for Market Weighton and other communities at risk of surface water flooding and remove culvert register action. • Work in partnership to identify the long term approach to the current pumping regime. • Investigate the interaction between Market Weighton Canal and the River Foulness and the risk canal flooding poses on local development. • Establish and maintain a register of structures or features which are likely to have an effect on flood risk in their area together with information about them. Use this register to identify the location of pinch points where flood water may overspill.
Preston Swanland Bilton	Hull and Coastal Streams: Lower Hull	5 - Take further action to reduce flood risk. • *There are many organisations and individuals with different*	• Working with Hull City Council and landowners, make improvements where required to flood defences on the River Hull. • Working with Hull City Council and landowners, make improvements where required to better manage flood risk on the River Hull. • Ensure emergency response plans are reviewed and take account of increases in flood risk through climate change and other catchment changes.

		responsibilities and accountabilities that will need to work together to reduce flood risks in Lower Hull Sub-area. • *Reducing flood risk will be a long and expensive process. We need to start to work together now and openly share information with one another.* • *Surface water, drainage networks, rivers and tides all come together to contribute to the complex flood risk in Lower Hull Sub-area.*	• Work in partnership to reduce the risk of flooding from surface water. • Improve public awareness of the risk of flooding from all sources. • Work in partnership to support the development of both Hull City Council and East Riding of Yorkshire Council's Surface Water Management Plans, and to deliver the resulting strategic and co-ordinated set of actions.

2. River Hull Flood Risk Management Strategy (draft 2010)

Spatial Strategy Settlement	**Strategy Area**	**Principal findings**
Major Haltemprice Settlements		
Cottingham	Middle	We can definitely continue to maintain the flood banks and similar defences beside the River Hull. It is difficult, however, to justify funding to continue to operate and maintain all our land drainage pumping stations in this part of the system for flood risk management benefit, though we recognise that they are needed for land drainage purposes.
Anlaby Willerby, Kirk Ella, Hessle	Lower	The number of people and properties at risk in Hull mean there is an overwhelming case for continuing to maintain and improve the flood defences in the lower catchment (including the Hull Barrier). Many of the defences beside the River Hull which are in private ownership are in poor condition.
Principal Towns		

Beverley	Middle	We can definitely continue to maintain the flood banks and similar defences beside the River Hull. It is difficult, however, to justify funding to continue to operate and maintain all our land drainage pumping stations in this part of the system for flood risk management benefit, though we recognise that they are needed for land drainage purposes.
Driffield	Upper	Although we can continue to provide ongoing maintenance for the flood defences in the upper catchment, we will not be able to use our funding to carry out much needed improvements
Rural Service Centres		
Hutton Cranswick Kilham Wetwang Beeford	Upper	Although we can continue to provide ongoing maintenance for the flood defences in the upper catchment, we will not be able to use our funding to carry out much needed improvements
Leven Skirlaugh	Middle	We can definitely continue to maintain the flood banks and similar defences beside the River Hull. It is difficult, however, to justify funding to continue to operate and maintain all our land drainage pumping stations in this part of the system for flood risk management benefit, though we recognise that they are needed for land drainage purposes.
Primary Villages		
Nafferton	Upper	Although we can continue to provide ongoing maintenance for the flood defences in the upper catchment, we will not be able to use our funding to carry out much needed improvements
Walkington Brandesburton Tickton Cherry Burton	Middle	We can definitely continue to maintain the flood banks and similar defences beside the River Hull. It is difficult, however, to justify funding to continue to operate and maintain all our land drainage pumping stations in this part of the system for flood risk management benefit, though we recognise that they are needed for land drainage purposes.

3. Humber Flood Risk Management Strategy (2008)

Spatial Strategy Settlement	Flood Area	Proposals
Major Haltemprice Settlements		
Anlaby Willerby, Kirkella Cottingham Hessle	6. Hull West	The estuary defences are generally in good condition and provide a good standard of protection. The Environment Agency will continue to protect this area and will work with the local and regional authorities, property owners and developers to make sure flood risk is taken into account into account at all stages of the planning process. They will seek to supplement public funds where necessary with contributions from major beneficiaries and from developers, who will be expected to pay the full cost of any new works needed to protect their development.
Principal Towns		
Beverley	6. Hull West	The estuary defences are generally in good condition and provide a good standard of protection. The Environment Agency will continue to protect this area and will work with the local and regional authorities, property owners and developers to make sure flood risk is taken into account into account at all stages of the planning process. They will seek to supplement public funds where necessary with contributions from major beneficiaries and from developers, who will be expected to pay the full cost of any new works needed to protect their development.
Goole	12. Goole	The remaining life of the existing defences is 20 years or more. The defences are managed by the Environment Agency. Defences are generally in good condition and provide a good standard of protection. However, in places the banks of the River Ouse are being eroded by the river and are showing signs of instability, for example at Hook Road. Parts of the area are also at risk of flooding from high flows in the river Ouse. The Environment Agency intend to improve the area's existing defences. To enable this to happen the Environment Agency are seeking public funds with contributions from major beneficiaries and from developers to pay the full cost of new works needed to protect their development.
Local Service Centres		
Hedon	5. Hull East	The remaining life of the existing defences is 10 to 20 years. The defences are managed by Environment Agency, Hull City Council and British Ports. The defences are generally in good condition. At Paull the defences are subject to spray from waves during severe storms- the Environment Agency are looking into this. Defences will need to be improved. To enable this, the Environment Agency are seeking public funds with contributions from major beneficiaries and from developers to pay the full cost of new works needed to protect their development.

Elloughton / Brough	9. Brough	The remaining life of the existing defences is variable - the western end is 20 years or more, and the eastern end 10 to 20 years. The defences are managed by Environment Agency. The defences at the western end have been improved within the last 10 years and as a result are in good condition and provide a good standard of protection. Work is needed to improve the condition of the remaining defences and the standard they provide. The Environment Agency intend to protect Brough and the BAe factory as well as improving the standard of protection they receive by building a new defence across the new airfield to high ground behind Welton Water. They cannot economically justify maintaining defences at the eastern end of the area, therefore intend to withdraw from these defences.
Rural Service Centres		
Gilberdyke	11. Weighton Lock to Boothferry Bridge	The remaining life of the existing defences is generally 10 to 20 years. The defences are managed by the Environment Agency, Associated British Ports and others. Defences are generally in a reasonable condition and provide an appropriate standard of protection. The banks of the River Ouse are being eroded in a number of places and there is concern about the stability of the defences at some points. Two stretches between Blacktoft and Yokefleet, and at Sand Hall, require improvement in the next 15 years. Sand Hall is a possible flood storage area. The area is at risk from the Rivers Derwent, Humber and Ouse.
Primary Villages		
Easington	1. Easington and Kilnsea	The remaining life of the existing defences is generally 10 to 40 years. The defences are managed by the Environment Agency, apart from the new sea defences at Kilnsea which are managed by local residents. The area is protected by two sets of defences, beside the estuary and the sea. The sea defences are threatened by the retreating coastline; those protecting Kilnsea have recently been replaced and are expected to last for between 20 and 30 years before the retreating coastline reaches them, while those protecting Easington are expected to last for between 30 and 40 years. The estuary defences are expected to need minor repairs every few years and major improvement in about 20 years. The Humber Flood Risk Management Strategy states that the Environment Agency have no plans to maintain the new flood defence embankment built near to the sea at Kilnsea. The Easington lagoons are threatened by coastal erosion – work is planned to re-create features and habitats.

Keyingham	3. Sunk Island	The remaining life of the existing defences is generally 10 to 20 years. They are managed mostly by the Crown Estate but also by Associated British Ports and the Environment Agency. Some work is needed to protect the defences against erosion and this will probably need to be repeated every few years. Major improvements are likely to be needed in 20 to 30 years. The Environment Agency anticipate that defence maintenance will have to be withdrawn from the existing defences, and that secondary defences may have to be created to protect villages. Associated British Ports has created a new inter-tidal habitat at a site near Welwick to compensate for their development at Immingham. The Environment Agency has identified land behind this site for creating the inter-tidal habitat required to replace the losses caused by flood defence improvements and sea level rise. They plan to develop this after 2020.
North Ferriby	8. North Ferriby	At present we are continuing to maintain the defence along the edge of the estuary. As sea levels rise we may find it difficult to justify spending public money doing this, in which case we may have to withdraw. Before doing so we will consider other options for protecting the area. Uncertainty about the rate at which sea levels will rise and the defences deteriorate means we cannot say when this might happen, although we think it is unlikely to be within the next 20 years. We will re-assess the situation each time we review the strategy and tell all property owners in the area about the outcome. We are reviewing the risk of allowing the erosion of the landfill site to continue. Any work needed as a result will be separate from the flood defence strategy.
Newport	11. Weighton Lock to Boothferry Bridge	The remaining life of the existing defences is generally 10 to 20 years. The defences are managed by the Environment Agency, Associated British Ports and others. Defences are generally in a reasonable condition and provide an appropriate standard of protection. The banks of the River Ouse are being eroded in a number of places and there is concern about the stability of the defences at some points. Two stretches between Blacktoft and Yokefleet, and at Sand Hall, require improvement in the next 15 years. Sand Hall is a possible flood storage area. The area is at risk from the Rivers Derwent, Humber and Ouse.
Rawcliffe	12. Goole	The remaining life of the existing defences is 20 years or more. The defences are managed by the Environment Agency. Defences are generally in good condition and provide a good standard of protection. However, in places the banks of the River Ouse are being eroded by the river and are showing signs of instability, for example at Hook Road. Parts of the area are also at risk of flooding from high flows in the river Ouse. The Environment Agency intend to improve the area's existing defences. To enable this to happen the Environment Agency are seeking public funds with contributions from major beneficiaries and from developers to pay the full cost of new works needed to protect their development.