Appendix 'A'

Lancashire County Council Scrutiny Committee
DRAFT final report of the task group

"Flooding Lower Alt"

Introduction

In early October 2011, the Environment Agency (EA) published a consultation document, seeking views on their proposals to alter the means and funding for water management of the Lower Alt with Crossens Catchment Area. This area includes a significant proportion of the land of the West Lancashire divisions administered by the County Council. It contains urban centres at Formby, Southport (both administered by Sefton Council) and Ormskirk. In the main, however, the area is a rural environment of high agricultural productivity. A significant amount of the national total of domestic vegetables are produced in this area.

The Environment Agency is a Government funded Agency that reports directly to the Secretary of State for Environment, Food and Rural Affairs. This is currently Caroline Spelman MP. In brief the remit of the EA is

- Protect and improve the environment and make it a better place for people and wildlife
- Operate at the place where environmental change has its greatest impact on people's lives
- Reduce the risk to people and properties from flooding
- Make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate
- Act to reduce climate change and help people and wildlife adapt to its consequences
- Work closely with a wide range of partners

The consultation document contains a draft "Flood Risk Management Strategic Plan" for the Lower Alt with Crossens Catchment, on which the views of the public are sought. The consultation document can be read in full at https://consult.environment-agency.gov.uk/portal/re/nw/flood/alt/lower_alt_and_crossens_consultation

A hard copy is attached at Appendix A.

The deadline for responses to the consultation document was given initially as 16 December, although this has now been extended, following significant pressure from the public and elected representatives.

Since publication of this document, local county and district councillors alike have become aware of a strong and passionate local public reaction to the proposals made. This reaction is partly because of a perception that there is insufficient clarity in the proposals on

- what must, as opposed to, what might happen in the future;
- what the practical options actually are;
- the depth and veracity of the evidence that has been used to inform the consultation document and its proposals; and
- the extent to which the likely impact and consequences of any options have been properly considered.

Public fear and confusion about the potentially destructive effect any changes might have on the sustainability of the local agricultural economy and people's livelihoods feature strongly in this reaction.

Local county and district councillors recommended that further exploration and clarification of the issues directly with the EA was needed to satisfy public interest before well-informed responses could be given to the consultation. As Lead Local Flood Authority, Lancashire County Council has powers to scrutinise the EA in its exercise of local flood risk management strategies.

At its meeting on 11th November 2011, the county council's Scrutiny Committee approved a request to establish an Overview and Scrutiny task and finish group to carry out this work. Initial communication with EA demonstrated a willingness by them to cooperate in this way. Given the place-specific nature of this issue, the composition of the task group included two co-opted members from West Lancashire Borough Council.

Membership

Lancashire County Council:
Mike Devaney (Chair) (Chorley Rural North)
Terry Aldridge (Skelmersdale Central)
Malcolm Barron (West Lancashire North)
William Cropper (West Lancashire West)
Sarah Fishwick (Lancaster Rural North)
Tony Pimblett (Penwortham North)
Maggie Skilling (Skelmersdale West)

West Lancashire Borough Council:
Paul Blane
Jane Houlgrave

Terms of Reference and Methodology

The terms of reference for the task group were:

- To further examine directly with the EA the status and implications of the consultation document and its proposals
- To make recommendations

Senior EA representatives with strategic, tactical and operational responsibility for the area in question attended a closed meeting of the task

group at County Hall on 16th December. They had been given prior to the meeting a detailed range of questions from task group members and been asked to arrive at the meeting with prepared detailed answers.

In addition to the information provided orally at the meeting, the EA subsequently supplied written responses to the questions to supplement the detail.

A key benefit of the meeting was the willingness of the EA to work with a group of Lancashire county and district councillors to ensure effective communication with interested groups and individuals as the consultation and engagement process progresses. It was agreed that the West Lancashire councillors will act as a conduit in this regard, arranging future meetings between the EA, local representatives and other interested parties.
It was agreed by members that this activity would be independent and out-with the corporate authority of both the county and district councils

Witnesses

Keith Ashcroft – Area Manager
Jonathan Croft – Asset Systems Management Team Leader
Steve Crowe – Regional Operation Manager

Findings
The key document that provides the background and context for this task group report is the EA's Consultation Document, "Lower Alt With Crossens Pumped Drainage Catchment – Draft Flood Risk Management Strategic Plan." This document is attached at Appendix A.

The findings of this task group report assume a familiarity with the contents of the consultation document. In addition, it is important in the context of this O&S review to set out the role of the county council in relation to this issue and the potential impacts on it of any changes to current arrangements. Also important is the role of the West Lancashire Borough Council.

Lancashire County Council is the Lead Local Flood Authority (LLFA), with primary responsibility for managing the local flood risk from surface water, groundwater and ordinary watercourses. In this role, however, the county council is bound by the same requirement to focus on prioritising urban flood risk as the EA. In practice, the county council's responsibilities are around ensuring that flood risk resulting from surface water (e.g. heavy rainfall), high groundwater levels, and small rivers, causes as little damage as possible to people and buildings.

There may be some occasional impacts of relevance to the county council as LLFA and highway authority if proposed changes go ahead, in particular if pumping levels are reduced. These could include:

- higher water levels in field drains and ditches
- Surface Water not draining as effectively or quickly at times of heavy rainfall
- Outfalls from surface water/highway drains being under water for longer
- Highway drains at times being less effective resulting in flooding of carriageways
- Increased incidents of Groundwater flooding

In the main, however, these are likely to have a minor impact on county council services.

In addition, the county council as LLFA may choose to take on a significant role in establishing replacement arrangements and securing contributions to maintain any agreed future pumping levels. As the EA is bound by the new DEFRA (Department for Environment, Food and Rural Affairs) partnership funding approach, which is based on "payment for outcomes" – the EA monies available into the future for water management schemes will be allocated primarily on property protection rather than land. The EA will not, therefore, be able to continue to fully fund its current activities in the Crossens with Alt catchment area. Payment for outcomes essentially means that other agencies, individuals, organisations or communities will be expected to top up any costs going forward, according to locally-determined need. In particular, it would be expected that any beneficiaries of any continued land drainage activity would be expected to help fund such activity. This is an approach that the county council may also be expected to engage with for other flood risk management schemes.

In addition to the above responsibility – and perhaps more significantly in the context of this issue - the county council has statutory responsibilities and priority policy commitments in promoting biodiversity, reducing carbon emissions and stimulating local economic development.

- Reductions in land drainage activities and a resulting (deliberate) water-logging of fields will have an impact on their viability for farming and for the long term soil quality, which will have an economic impact on Lancashire. This is a major public concern.
- The county council supports local efforts to reduce carbon emissions.
- Making changes to current water management in the catchment area may improve biodiversity

West Lancashire Borough Council (WLBC) has responsibilities for flooding and flood risk management in the following areas:

- As a coastal authority
- Land drainage to ordinary watercourses
- In line with Planning Policy Statement 25 WLBC as Local Planning Authority ensures that all developments, land and development control policies are fully informed by a Strategic Flood Risk Assessment carried out in liaison with the Environment Agency.

Environment Agency Key Points

- The EA recognises the seriousness and depth of the issues and concerns that have been raised since it published its consultation document. Its representatives agreed that with hindsight it could have explained better that this consultation is more of an " initial discussion" with the public and only the first stage of a comprehensive consultation period that will last 18 months
- The manner of the presentation of the consultation document has been unhelpful. In fact, the intention of the EA is not to put forward proposals, but rather to discuss with all interested parties the issues around ongoing pumping and watercourse maintenance in the catchment. EA stated clearly that they remain very much in listening mode and recognise that there is still a significant amount that they need to understand yet regarding the communities likely to be affected, the key issues, and how best to continue with discussions and engagement.
- No firm decisions have been made yet, EXCEPT that a decision has been taken by the EA **not** to close the Crossens pumping station.
- Tidal protection will not be reduced
- However, the EA believes it is important to inform the public at an early stage of the constraints under which it must now operate and the direction which has been set for it by government. This consultation period is a genuine attempt to discuss "handing over the baton". Once this consultation/initial discussion period closes (now at end March 2012), the process will enter a debating period to discuss in detail the practical ways in which the challenges may be met. This might take place at two levels, the first strategic, taking a themed approach according to key issues, such as economic benefits and sustainability. The second level might be local, working with communities within the catchment to share information with each other and make sure that together the best possible option can be arrived at. New ideas and concerns will be received and welcomed until 31 March 2013. After that date, there will be a transition period to prepare for changes that have been settled upon.
- Practical changes will not take effect until 31 March 2015.
- There will be no immediate changes.
- The EA is under the Secretary of State for Environment, Food and Rural Affairs. It no longer sets policy itself, as it had done to some small extent previously. Furthermore, it has restructured with commensurate reduction in spending power has lost several experienced staff. It currently has an annual budget of approximately £1.3bn a year. It estimates that its current expenditure in this catchment area is approximately £3million (a breakdown of these figures can be found at Appendix B).
- The EA is bound, therefore, to the priorities and framework as set out at the beginning of the consultation document. The key features of this in the context of this specific issue are: managing flood risks with a priority on protecting people and residential properties ie. urban flood risks; limiting EA funding according to outcomes – "payment for

outcomes" principle; promoting more coordinated activity with other interested partners and local empowerment; and …sustainability, including a greater dependence on using the natural flood plain.

- Land drainage carried out for reasons other than EA's stated priorities is no longer a main task of the agency (as it was 5 years ago, when EA invested in a number of satellite pumping stations in the area).
- It is almost certain that the EA, into the future, cannot continue to maintain its existing assets in Lower Alt with Crossens Catchment and to perform drainage activities to the same levels as currently.
- However, it is possible that not all avenues of sources of central government funding have been fully exhausted. The area under question is clearly very special and this does not seem to be fully appreciated by the Government.
- EA state that they are committed to working better with partners – landowners, tenants, growers, local authorities, businesses- to identify the best option for the future, and that those who might wish to take over maintenance have enough time and support to do so. Elsewhere in the country, there are exemplar long-standing arrangements in place (typically in the form of Internal Drainage Boards (IDBs) which secure investment from those locally that benefit from land drainage. For example, there are 100 IDBs in the Anglian region. And similar arrangements in the North East, the Midlands and Somerset Levels.
- According to EA, the North West region is an exception in not having IDB arrangements. However, local communities with water management issues are currently piloting the potential creation of new IDB arrangements in Cumbria, which if set up will need significant funding from local beneficiaries
- The powers of the EA to drain the land are permissive and not obligatory. There are no legal contracts in place, except for Hey Cop pumping station. The legal position is not affected by the fact that the EA has continued to choose to undertake this service for such a long, continuous period of time. They have however agreed to look at the potential legal implications of discontinuing their long term operations.
- EA acknowledge that the effectiveness of the steering group that they established to help inform the proposals was limited for a number of reasons. These included insufficient two-way communication, poor composition and representation, and perhaps not enough meaningful discussion within it. In addition, EA accepts it was wrong not to include Lancashire County Council, as Lead Flood Authority, in that group. This was an oversight. EA welcome the opportunity to work more closely with the county council and other key stakeholders from now on.
- EA fully intends to ensure that councillors from Lancashire County Council and West Lancashire Borough Council have opportunity to be key members of a reinstated and more robust steering group going forward to work with EA through the rest of the consultation and debating period and to further explore in greater details the implications and consequences, across all levels and sectors of local society, of any changes to current arrangements.

- EA believe that looking at new, locally determined ways of managing flood risk and carrying out drainage according to local need will help raise awareness of the costs and benefits involved, better identify efficiencies, and to empower local communities to manage their flood risks and to become more resilient.
- The EA view this consultation period as an opportunity to work with farmers, landowners and other interested parties and consider all the issues involved. It is important, they say, to be aware of how the manner of the land drainage might affect the quality of the land and undermine its productivity in the long term. The EA would like to explore with interested parties the possibilities of creating more flood storage basins, which would serve a multi-purpose of managing flood risk, storing water for periods of drought and improving habitat

Councillors key points of concern and messages for EA

- A significant amount of the nation's domestic vegetables are produced in the area under question. The agricultural success of the area has been facilitated by the land drainage and embankment protection that has been undertaken by the EA, creating conditions that has allowed food production business to grow and flourish. Previous to the current arrangements, flooding was a very serious problem in this area. Since the EA began its service, local agribusiness has taken advantage of the conditions created and committed significant investments, creating many jobs, especially for the villagers who live in the area. This success contributes significantly to UK food production and security. **Those businesses and jobs are now vulnerable to the risk of changes to land quality.**
- **A more detailed analysis is needed into the economic effects – local and national - of any changes to current water management arrangements**. The consultation document, as presented, does not demonstrate that it has fully considered the economic impacts of its proposals. For example, the costs to the Government of potential significant loss of livelihoods and economic contraction could outweigh the savings by Government of a reduction in funding for water management. This analysis should include the collection of accurate figures of turnover for the whole affected area. Estimated figures that have been used are lacking in detail and possibly reliability. Furthermore, there is significant local detail yet to be captured in order that the EA position on this be properly informed. The analysis should also include information derived from EA's current dialogue with the Association British Insurance companies (ABI) about the associated impact that changes in flood risk assessments will have.
- Related to this is **an apparent contradiction between the details and rationale contained in consultation document regarding the role and priority of the EA and the commitment of the Government, through DEFRA, to jobs and growth in the countryside particularly around food and drink production**. The local public would benefit from some clarity from Government on how these varying commitments are to be reconciled in this case.

- **A more detailed analysis is needed on the impact on UK carbon reduction levels of reduced pumping.** Changes to the food productivity capacity of this area are likely to impact on requirements to increase food importation, creating associated increases in carbon consumption relating to transportation. In addition to this, but related, is the issue of food security and the need to support reliable domestic production.
- **Greater consideration followed by more clarity is needed from EA on the weighting of the various drivers behind the proposals** (see 3.0 of the consultation document for details). This should include consideration of the possible sustainability benefits of keeping the pumps going; realities of land shrinkage and peat loss risks (which some locally suggest is less of a risk than the EA might believe).
- There may be **scope for development of more energy efficient means of pumping**, such as in-situ wind-powered turbines, solar panels and greater use of gravity. These options need further consideration before proper conclusions can be reached about, for example, costs, savings targets and carbon emissions.
- In considering potential for creating additional flood storage capacity through use of flood basins, it is important to ensure that all interested parties are included in the reinstated steering group, such as food growers and other rural businesses. Task group members remain concerned that the overall benefits of doing this will not outway the costs and disadvantages involved.
- Arrangements for appropriate compensation to landowners and farmers in the event of land-use change for flood storage, agreements on the level and duration of the compensation must be agreed before any changes take place.
- The **role and input of the EA in decisions around planning permissions must be strengthened**. Government policy on development and flood risk aims to ensure that flood risk is taken into account at all stages of the planning process to avoid inappropriate development in areas at risk of flooding. This approach is highlighted in Planning Policy Statement 25 (PPS25). However, in the past it may have been locally assumed that land drainage arrangements would remain in perpetuity and, therefore, that flooding risks would be minimal.
- There is a concern that a proportion of the water being drained from agricultural and rural land is in fact displaced run-off from the urban areas. This could affect the validity of implementing a "payment for outcomes" scheme. Should farmers be expected to pay for pumping water emanating from communities on higher land, as well as paying for water they abstract for crop irrigation, which reduces the amount of water needed to be pumped out to sea?"
- It is **important to consider more carefully what impact the shoreline management/tidal defence plans have on the drainage issues further inland**. Furthermore, an emphasis in stopping water coming in from the sea might mean that efforts to let high rainfall water out are neglected.

Conclusions
The EA's current consultation document together with its proposals are flawed because:

- The evidence base supporting the proposals made is insufficient and incomplete
- Neither local interests nor local expertise have been properly included in the preceding information gathering process

Since the consultation document is flawed, this puts into doubt the value and validity of the responses they receive to it as a fair and true test of public opinion.

It is encouraging that the EA accept this and that they are now clearly taking steps to rectify these gaps.

It is the view of this task group that, in some senses, the consultation process must begin again. The task group welcomes the intention of EA to reinstate the steering group, but only if it is a reinvigorated and a more robust body than its predecessor. It must also include a more appropriate and inclusive membership and there must be a greater general public awareness of its existence.

The task group also welcomes a closer exploration of all mitigating/relevant factors. In particular, more analysis and research is required around:

- economic impact;
- "payment for outcomes" rationale and urban vs rural beneficiaries;
- carbon emissions impact;
- sustainability and biodiversity issues;
- legal issues around responsibilities,
- insurance and compensation issues
- possible alternative sources of central government funding for the land drainage activity in the area

The task group believes that once this additional evidence base has been developed, a new set of proposals be developed on which the public must again be consulted for their views.

The task group retains some concern that it is the determined aim of the EA to transfer costs of land drainage from the public to the private sector. However, the task group believes that such an aim is premature and that further consideration must first be given to the extent to which the water being drained off the land is water that has been displaced from urban areas. The task group also views this cost-transference aim to be a direct contradiction to the government's stated policy of support to rural communities, particularly measures to boost jobs and growth and to grow the UK's food and drinks sector.

The task group also retains some concern that the requirement to identify cost savings on overall spend in the Alt with Crossens Catchment is being targeted

towards reductions in pumping activities before having fully exhausted possibilities for internal efficiency savings within EA itself.

Recommendations

- **The Environment Agency provides written responses to those questions outstanding of the task group**
- **Councillors continue to be given every opportunity to be engaged in the consultation and debating period.**
- **The Environment Agency reinstates and reinvigorates its steering group as it continues through the consulting and debating period and investigates the many outstanding issues and factors that require a fuller consideration before proposals can be firmed up. This steering group should develop a more relevant membership, including elected members from different councils and different political affiliations.**
- **The Environment Agency also ensures that the steering group includes members of the task group who have local interest, expertise and commitment to the consultation process, namely Cllr Blane, Houlgrave, Cropper and Barron. It should be noted, however, that this involvement will remain independent and out-with the corporate authority of both the county and district counci**l.
- **The Scrutiny Committee invites the Environment Agency to a meeting in summer/autumn 2012 to discuss their progress on developing a more effective public consultation process.**
- **The Executive of the county council plays a full and appropriate role in the continued consultations and debating period, according to its duties, responsibilities and policy commitments**
- **The county council submits a corporate response to the EA's consultation document, this response being informed by the findings of the task group**
- **This task group report be submitted to West Lancashire Borough Council and to local MPs for their information**
- **The Cabinet Member for the Environment communicates with the Secretary of State for Environment Food and Rural Affairs seeking clarification from Government on the reconciliation of policy commitments towards promoting growth and jobs in rural areas, in particular food and drink production, and withdrawing support for flood risk management in rural areas that sustain successful agricultural economies.**

Appendix 'A'

Lower Alt with Crossens Pumped Drainage Catchment

Draft Flood Risk Management Strategic Plan

Consultation Document

We are the Environment Agency. We protect and improve the environment and make it **a better place** for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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1.0 Introduction

The Lower Alt with Crossens Pumped Drainage Catchment Strategic Plan has been prepared by the Environment Agency to define long term sustainable flood risk management in the Lower Alt and the Crossens pumped drainage catchments.

The plan has reviewed current levels of flood risk, management actions and drivers for change before making a series of draft recommendations which we wish to consult you on.

The Environment Agency has a strategic overview regarding flooding from rivers, the sea, surface water and groundwater in England. As well as managing flood risk from rivers and the sea we provide guidance to support local authorities who lead the management of coastal erosion and flooding from surface water, small watercourses and ground water.

1.1 Background

In 2009, we commenced work on the Lower Alt with Crossens Pumped Drainage Strategic Plan. A strategic plan was required to answer a number of issues:

* To define long term sustainable flood risk management in the Lower Alt with Crossens pumped drainage catchments and ensure it aligns with current Environment Agency policies.

* To establish the extent of Environment Agency obligations relating to land drainage and identify opportunities to transfer land drainage assets and obligations to others better placed to deliver this function.

* To define ways of operating that deliver appropriate standards of flood protection whilst reducing the volumes of water that need to be pumped and associated energy requirements.

* To consider the potential to reduce carbon dioxide emissions.

* To identify opportunities to re-naturalise drainage and create wetland habitat.

In response to these issues:

* We understand the hydraulic processes of the catchment, the associated flood risk and how these might be managed into the future in a sustainable way.

* We understand how and where flood storage may sustainably provide flood risk benefit, and in doing so have also identified realistic opportunities for habitat creation or enhancement.

* We have investigated our legal obligations and how others might better deliver land drainage.

* We understand how the existing regime might be changed to satisfy only the requirements for flood risk management.

* We have identified the primary causes of CO2 emissions in the catchments and understand how these emissions could be reduced.

* We have considered the need to change funding and governance

We formed a Steering Group to help us consider a wide range of issues in the development of our plan and have obtained valuable feedback from this group: The group included individuals from: West Lancashire Borough Council; Sefton Council; National Farmers Union; Country Land and Business Association; United Utilities and Natural England

Furthermore, we have identified that Intensive land drainage within the area is causing large peat soil deposits to be gradually lost through "wastage". This has resulted in the gradual lowering of ground levels, which not only impedes effective land drainage, but also causes the release of the greenhouse gas carbon dioxide, contributing to climate change. We suspect that these emissions from drained peat soils are more than one hundred times greater than those from the pumping stations.

We, together with other flood risk authorities can take action to reduce the affects of urban flooding and government policy encourages this. However our powers are generally 'permissive' i.e. there is no general entitlement to expect flood protection in England and Wales. The exception to this is where we (or our predecessor bodies) have entered into a legal agreement to provide flood risk management or land drainage. Our understanding is that only one such agreement applies in respect of Hey Cop pumping station on the Lower Alt system.

Government is asking us to broaden our funding routes to include those that benefit ("beneficiary pays principle"). Much investment is needed in the coming years. Our objectives are dictated by targets given to us by DEFRA. These require us to focus on protecting urban areas, directing our limited resources towards works that benefit the country most on a national basis.

1.2 Purpose of Document

The Environment Agency has developed this draft strategic plan for consultation.

The final Strategic Plan will guide us and other interested parties on how water should be managed in the Lower Alt and Crossens catchments in the future.

We will be holding a number of 'drop in sessions' and would like to invite you :to attend to discuss this plan in more detail and ask any questions you may have.

The proposed dates are:

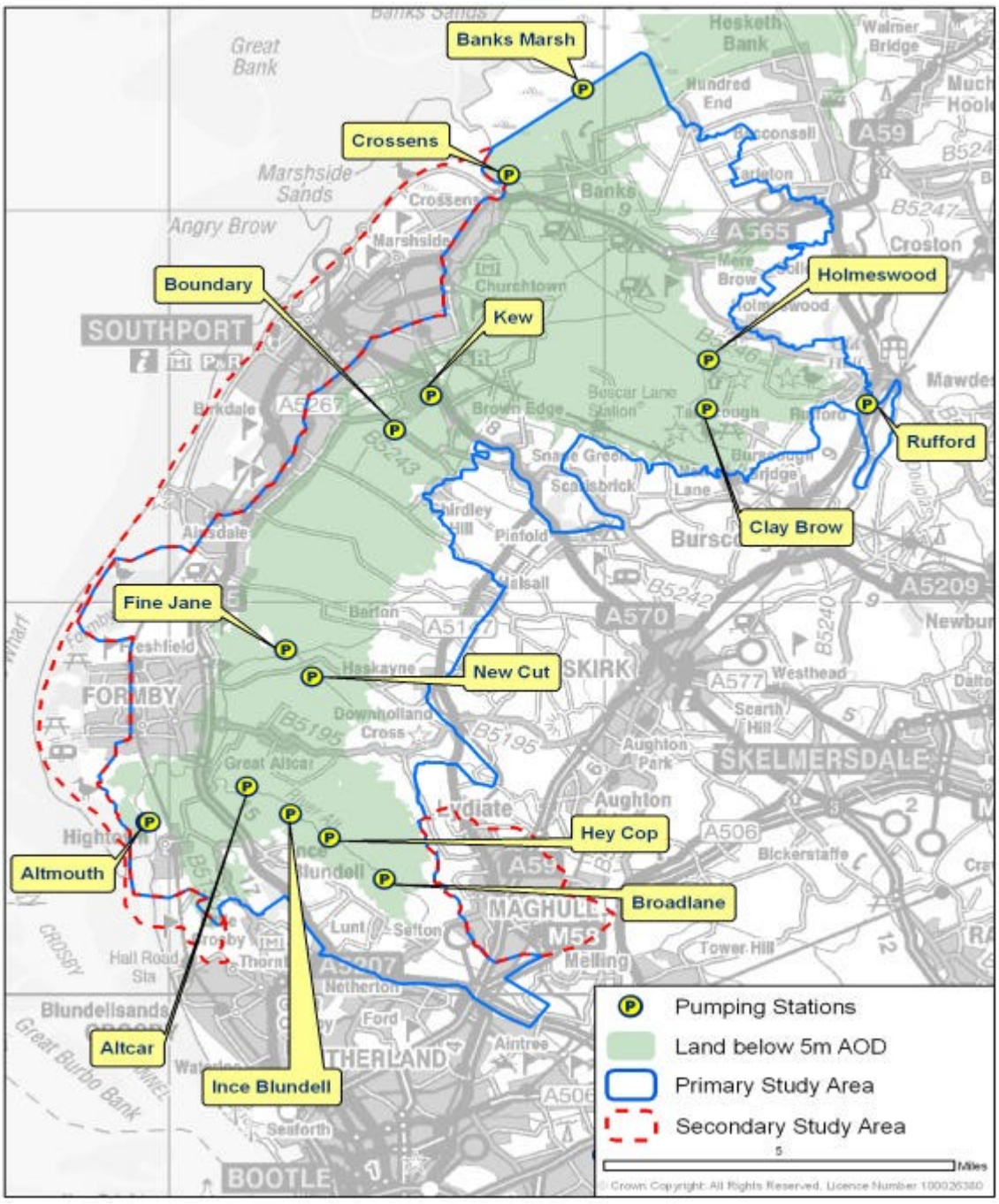
Thursday 27 October (am/pm)
Tuesday 1 November (pm)

Details of times and venues will be available shortly on our website www.environment-agency.gov.uk

Following the consultation period, we will review feedback with the Steering Group and make any appropriate revisions to the plan.

We expect to publish our finalised Strategic Plan by Summer of 2012

2.0 Our Study Area



2.1 Overview

Water management is complex in the Lower Alt and the Crossens pumped drainage catchment. The area is low lying and requires considerable intervention to manage water levels.

The area is rural with centres of population at Formby, Southport, Banks and Maghull at risk from flooding. The agricultural land is valuable and particularly sensitive to how water levels are managed.

The Environment Agency currently operates the two main pumping stations at Altmouth and Crossens at the tidal outfalls and a number of satellite pumping stations providing land drainage to rural areas of the catchment.

Only a proportion of the existing pumping contributes to flood risk management that benefits residential and commercial properties. The system primarily benefits rural land drainage.

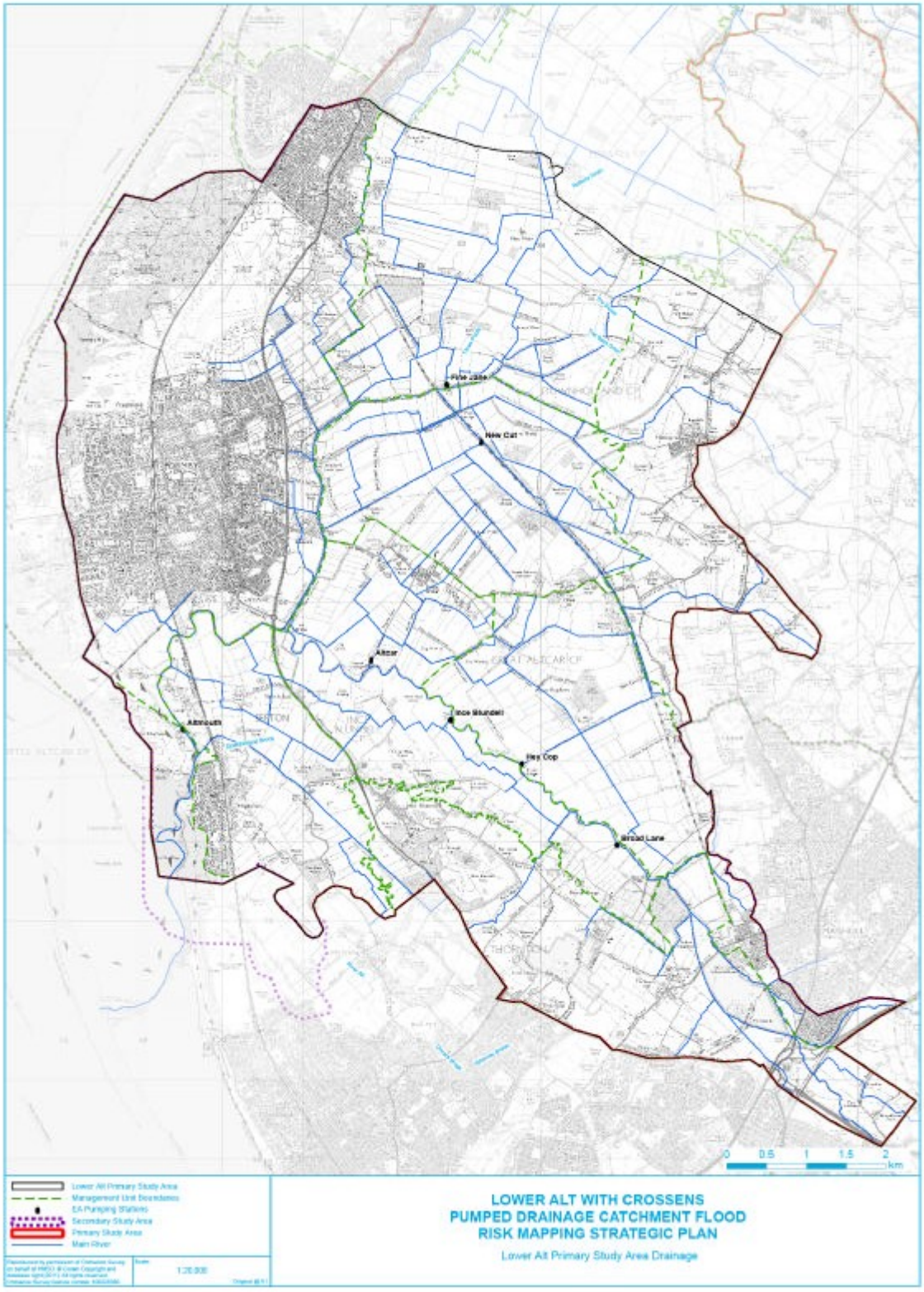
The Environment Agency also maintains over 26 km of raised flood defence embankments within the study area. Approximately 7 km protect the main urban areas; the majority of the remainder protect high grade agricultural land.

Sustaining the current pumping stations (PS) and flood defences currently costs the Environment Agency three million pounds per annum. Approximately 1.5 million is on operation and maintenance.

Our funding, is limited and our ability to continue to invest in this system will be severely limited unless significant contributions by those that benefit are secured.

Because of historical reasons and the natural land form, the pumped drainage catchment can be considered as two systems: The Lower Alt System which drains via the River Alt to Altmouth pumping station, and The Crossens Pumped Drainage System which drains via a number of large ditches to Crossens pumping station

2.2 Part 1 Lower Alt



The Lower Alt system includes Lower Alt and Downholland Brook sub-catchments. At Maghull, on either side of the river are embankments raised above the land for most of the way to Hightown. Downholland Brook also joins the River Alt near Formby and this watercourse has similar embankments. Drainage of the low lying floodplain behind the embankments is provided by small satellite pumping stations. Beyond these is a network of drainage ditches, the larger of which we maintain.

2.2.1 Current levels of flood risk

The Lower Alt catchment is heavily dominated by flows from Maghull and north Liverpool The main tributary into the Lower Alt is Downholland Brook. This accounts for a third of the total catchment area. Flooding is caused by long periods of prolonged rainfall rather than short intense rainfall.

Because of the flat, low lying nature of much of the area, small increases in water level can have a significant impact upon the extent of flooding.

We recognise that there are extensive floodplains in the rural areas. These low lying flood plains help to make sure that there is little risk to life and property from flooding within the catchments. It is important that this is recognised.

There is clear evidence that much of the surface water drainage within the urban areas is held back if flows are high within the river system. There have been several instances of surface water flooding that has affected properties in Formby and also in Maghull.

Altmouth Pumping Station currently provides limited urban flood risk protection to Formby. Through pumping, it reduces the frequency and duration of raised water levels in the downstream reaches of the Alt and Downholland Brook. In turn, this allows improved drainage of Whams Dyke, Moss Side and Boundary Brook.

(Altmouth Pumping Station and River Alt Estuary)

Breaches have occurred to embankments protecting rural land. The most recent occurrence was on the Cheshire Lines Brook. This is the third time in 10 years this embankment has breached. We are also aware that similar breaches have occurred at Lunt Meadows near Maghull, most recently in July 2010.

2.2.2 Significant Flood Risk Assets

Altmouth Pumping Station

Altmouth Pumping Station is located at Hightown. This is our major asset in this area. It allows discharge of water from the Lower Alt catchment by a mixture of gravity discharge and pumping. It also prevents tidal flooding upstream in all but the most severe events. Although the station mainly provides a rural land drainage function, it does provide some urban flood risk benefit, particularly near Formby and on Lighthouse Brook.

(Altmouth Pumping Station from upstream)

Raised Defences

In addition to Altmouth Pumping Station, the Lower Alt system is protected from fluvial and tidal flooding by a system of raised embankments on the River Alt and along Downholland Brook.

Historically, the raised embankments have prevented tidal flooding of the land before the construction of Altmouth pumping station and the tidal gates. This is why the current standard of flood protection in the rural catchment is significantly higher than the nationally accepted standard for agricultural land.

2.2.3 How we manage Flood Risk

Our flood risk management work greatly reduces the flood risk to the urban communities in the catchment. The primary part of this is the tidal defences which greatly reduce the risk to Formby.

Without these defences, working in conjunction with those in the Crossens part of the study area, some 20,000 properties and some 10,000 hectares of agricultural land would be at very high risk of tidal flooding across the whole study area. The tidal gates at Altmouth Pumping Station allow river water to discharge to sea at low tide.

The coastal defences are largely the responsibility of Sefton Council. Based upon discussions with the council, there is currently no justification or need for the replacement of these defences. These assets are therefore not included specifically within this strategic plan.

Through our study we have considered the natural processes in the Lower Alt catchment and the current actions that we, and others, take in the management of the system. The evidence we have collated suggests that fluvial flooding in the urban environment is not a major concern in the catchment.

This is partly because of the performance of our assets and our watercourse maintenance practices, but mainly because of the use of the natural landscape of the area. A lot of the developed areas are on more elevated land, well above the extensive rural low lying floodplain. As a result, when large flood events do occur they tend to spill into the rural floodplain and not affect urban areas to any great extent.

From our understanding of processes at work, we can make a number of observations:

Tidal Flooding

The tidal defences provide a high standard of protection to properties together with the high quality agricultural land and should be maintained. These defences include the upkeep of the tidal gates at Altmouth Pumping Station.

Urban Fluvial Flooding

Urban flood risk is limited on the Lower Alt system and generally well managed. However, the current maintenance of a high rural Standard of Protection (SoP) through maintaining raised channel embankments is detrimental to urban flood risk management. Raised embankments protecting rural land prevent natural use of floodplain.

However, the low lying rural floodplain is currently underutilised for flood risk management purposes and could be used more for this purpose. In this context, the pumping capacity needed for flood risk management could be greatly reduced

The current means of flood risk management in this catchment is not sustainable. An alternative, more sustainable approach to flood risk management would include a reduction in capacity or closing down of some pumping stations and an increased use of the natural flood plain in rural areas for flood storage.

Altmouth Pumping Station provides flood risk management benefit to Lighthouse Brook and from tributaries in Formby. However, both of these functions could be better and more efficiently managed through provision of localised pumping and / or use of flood washlands.

The current washland at Lunt Meadows provides a limited reduction in flood risk from Dovers Brook in Maghull and reduces downstream water levels within the raised embankments. Further works to the washland should be carried to establish this land for this purpose and to provide an example of how flood storage may be utilised to provide sustainable land and flood risk management.

Rural Fluvial Flooding

Altmouth Pumping Station provides a flood risk management function that means agricultural land in the Lower Alt catchment currently enjoys a very high standard of protection as high as 1% chance of a flood in a year in places. Such standards are greatly above normal standards nationally for agricultural land (typically 10%-4% chance of a flood in a year) and prevents the use of natural flood plain in the management of urban flood risk.

There is little economic justification nor government support for the Environment Agency to maintain the current rural standard through continued maintenance of the raised embankment system and pumping stations.

The impacts of climate change are expected to increase flood frequency. This will develop a gradual long term weakening of embankments and will increase the risk of embankment failures and breaches into the future.

Funding limitations will greatly reduce our future maintenance of rural defences and in the longer term the rural standard of protection may revert to a level consistent with nationally accepted standards. However, with appropriate planning, urban flood risk management could be improved as a consequence.

Surface Water Flooding

The operation of Altmouth Pumping Station does reduce the time that water levels are held high in Downholland Brook and this reduces the potential from surface water flooding along Whams Dyke, Moss Side and Boundary Brook. However, localised pumping and / or use of washlands is likely to offer a more cost effective means of reducing risk. The surface water drainage system within the lower part of Maghull is affected by high water levels in Dovers Brook and the greater use of washlands could help the situation.

Rural Land Drainage

We retain permissive powers to provide flood risk management. However, these powers do not necessarily apply to land drainage.

We currently maintain and operate land drainage assets including pumping stations and a network of drains that carry water to them.

Land users also maintain their own ditches and in field land drainage systems. Our satellite pumping stations provide a land drainage function by lifting water from low lying agricultural areas into the higher drains. This means that a significant proportion of the catchment flows are pumped twice.

(Hey Cop Pumping Station – pipes and inlet channel)

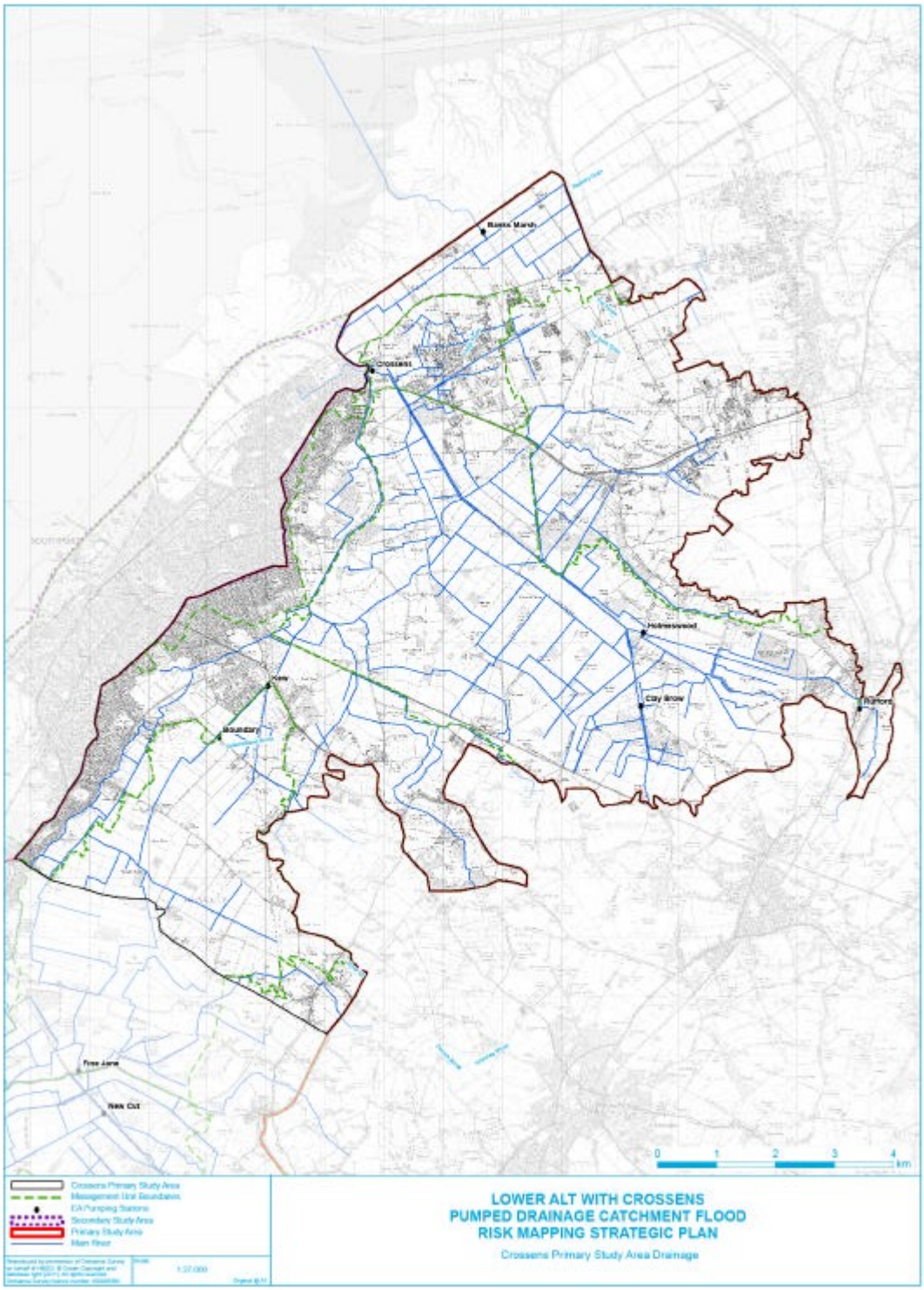
We currently operate five satellite pumping stations on the Lower Alt and Downholland Brook system, namely: Altcar, Ince Blundell, Hey Cop, Fine Jane and New Cut. We have a legal requirement to provide pumping at Hey Cop.

(Hey Cop pumping station inlet)

These pumping stations provide agricultural land drainage to the rural floodplain, lifting field drainage into the River Alt or Downholland Brook. These 'high level carriers' then carry flows to Altmouth Pumping Station where flow is either discharged by gravity (low tide) or pumped to sea (high tide).

We undertake the periodic maintenance of drainage ditches and channels.

2.3 Part 2 Crossens Pumped Drainage System



The Crossens system includes land between Southport and Burscough. It has some important differences compared with the Lower Alt catchment. The largest pumping station, Crossens, drains most of the lowest lying areas directly. This includes 3,400 hectares of very low lying land that has suffered peat wastage over a prolonged period.

The Banks System is located to the east of Crossens Pumping Station. The system is based upon the principal draining watercourses of Banks watercourse and Greaves Hall watercourse.

Water levels in the catchment are strongly influenced by pumping. Unlike the River Alt, much of the flow within the catchment is provided by water running directly off the land and into the large number of principal drains.

2.3.1 Current levels of flood risk

Records of flooding within Southport include one significant instance of fluvial flooding in 1977. This was caused from Three Pools Watercourse as a result of severe storms and high tides that flooded up to 100 properties. There are no records of surface water flooding.

There have been several past instances of flooding within Banks including both fluvial and surface water sources. These are largely associated with the condition and limited capacity of the many piped culverts and various other types of culvert and structures present on Banks watercourse.

Flood risk from the 'upper system' is associated with outflows of water over embankments rather than poor drainage because of the elevated nature of much of The Sluice and Three Pools watercourses but we are aware of large areas that do suffer from poor drainage.

The relatively limited flood history in the catchment is reflective of the urban development having mainly taken place on the raised higher ground within this low lying area. Indeed, this and the lower lying floodplains help to make sure urban flood risk is low: it is important that this is recognised.

2.3.2 Significant Flood Risk Assets

Crossens Pumping Station

(Crossens Pumping Station inlets)

Crossens pumping Station is situated just to the north east of the Crossens area of Southport. It controls the water levels in three watercourses; Three Pools, The Sluice and Back Drain. Back Drain enters the pumping station at a lower level, draining the 'lower system' while Three Pools and The Sluice are elevated, draining the 'upper system'.

Discharge from the Crossens catchment is controlled by the capacity of the pumps present at the station as there is no means of drainage by gravity.

Raised Defences

Upstream of Crossens pumping station, there are several raised defences within the study area. The main raised embankment in the catchment is located along The Sluice separating the 'upper' and 'lower' systems and extending upstream along Boathouse and Rumford Boundary Sluice.

(Three Pools Waterway)

Other short sections of raised embankment are located along Mere Brow Watercourse, a section of Three Pools Watercourse, Drummersdale Lane and Broad Ditch.

The Banks Marsh tidal defences reduce the risk of tidal flooding.

Other Flood Risk pumping stations

Banks Marsh pumping station provides a separate point of discharge to the sea. There is no gravity discharge from Banks watercourse.

2.3.3 How we manage Flood Risk

Our flood risk management work in the catchment greatly reduces the flood risk to the urban communities. The primary part of which is the tidal defences which greatly reduce the risk to Southport and Banks.

Without these defences, working in conjunction with those in the Lower Alt part of the study area, some 20,000 properties and some 10,000 hectares of agricultural land would be at very high risk of flooding across the whole study area. The coastal defences are largely the responsibility of Sefton Council. Based upon discussions with the council, there is currently no justification for the replacement of these defences. These assets are not therefore included specifically within this strategic plan.

There are properties in the east of Southport that are at flood risk from Three Pools and also properties in Banks Village. Both these areas are reliant on the operation of Crossens Pumping Station to manage flood risk.

Through our study we have considered the natural processes in the Crossens catchment and the current actions that we, and others, take in the management of the system. The evidence we have collated suggests that fluvial flooding in the urban environment is not a major concern in the catchment.

This is partly because of the performance of our assets and our watercourse maintenance practices, but mainly because of the use of the natural landscape of the area. A lot of the developed areas are on more elevated land, well above the extensive rural low lying floodplain. As a result, when large flood events do occur they tend to spill into the rural floodplain and not affect urban areas to any great extent.

From our understanding of processes at work, we can make a number of observations:

Tidal Flooding

We recommend the continued benefit of the tidal defences and these should be maintained into the future. The tidal defences provide a high standard of protection to properties together with the high quality agricultural land and should be maintained.

Urban Fluvial Flooding

Urban flood risk is limited in the Crossens Pumped Drainage system and generally well managed. However, the current maintenance of a high rural Standard of Protection (SoP) through maintaining raised channel embankments is detrimental to urban flood risk management. Raised embankments protecting rural land prevent natural use of floodplain.

However, the low lying rural floodplain is currently underutilised for flood risk management purposes and could be used more for this purpose. In this context, the pumping capacity needed for flood risk management could be greatly reduced

The current means of flood risk management in this catchment is not sustainable. An alternative, more sustainable approach to flood risk management would include a reduction in capacity or closing down of some pumping stations and an increased use of the natural flood plain in rural areas for flood storage.

Crossens Pumping Station provides flood risk management benefit to Banks Village and parts of Southport. However, both of these functions could be better and more efficiently managed through use of flood washlands. In this context, the pumping capacity needed for flood risk management could be greatly reduced.

Rural Fluvial Flooding

Crossens Pumping Station provides a robust flood risk management function that means agricultural land in the Crossens catchment currently enjoys a high standard of protection . This is above normal standards for agricultural land (typically 10%-4% chance of a flood in any one year) and prevents the use of natural flood plains in the management of urban flood risk.

The impacts of climate change are expected to result in more periods of intensive rainfall. and increase the frequency of high flows acting upon the defences. This will develop a gradual long term weakening of embankments and will increase the risk of embankment failures and breaches into the future.

We recognise there are current stability problems with the existing embankments at the northern end of The Sluice.

Surface Water Flooding

There are no records of surface water flooding associated with the operation of the pumped drainage system. However, the operation of Crossens Pumping Station does reduce the duration of gravity locking on Three Pools, The Sluice and Back Drain and this reduces the potential from surface water flooding within Banks Village and parts of Southport. However, localised pumping and / or use of washlands is likely to offer a more cost effective means of reducing risk.

Rural Land Drainage

We retain permissive powers to provide flood risk management. However, these powers do not necessarily apply to land drainage.

We currently maintain and operate land drainage assets including pumping stations and a network of feeder drains that convey water to them. Land users also maintain their own ditches and in field land drainage systems. Our satellite pumping stations provide a land drainage function by lifting water from low lying agricultural areas into main drains. This means that a significant proportion of the catchment inflows are pumped twice.

We currently operate five satellite pumping stations on the Crossens system, namely Boundary, Kew, Holmeswood and Prescott Clay Brow and Rufford Causeway.

These pumping stations provide agricultural land drainage to the rural flood plain, present flows via high level carrier drains, to Crossens pumping station where it is pumped to sea.

We undertake the periodic maintenance of drainage ditches and channels.

3.0 Drivers for change

Capacity & Performance

Our review has identified that there is a significant variation in the capacity of the satellite stations with some stations found to have excess capacity, Fine Jane and Hey Cop being examples. Other systems, for example around Boundary Brook, Kew, Prescott Clay Brow, Rufford Causeway and Ince Blundell may have insufficient capacity. Reducing pumping set levels and / or increasing the capacity in the upstream channels are ways of improving drainage.

We have also reviewed the asset condition and remaining life of each pumping station. A number of these stations will require significant investment in the near future if they are to continue to provide effective land drainage services. Channel siltation and reduced channel capacity also lowers performance of the system.

The future including climate change

The expectation is that climate change will result in a greater variability in rainfall through the year, with wetter winters and drier summers predicted. This will place challenges on the existing systems: The overall capacity will be put under increasing pressure as inflows and storm intensity increases. The increased frequency of high flows acting upon the defences will develop a gradual long term weakening of embankments and will increase the risk of embankment failures and breaches into the future.

Greater seasonal variation will put increasing pressure on water resources within the catchments, particularly during the summer.

Anticipated peat wastage will increase areas of poor drainage and necessitate a re-design of pumping station arrangements including a lowering of set levels. Mean peat depths decreased from 1.5m to 1.2m between the surveys in 1955 and 1985. Over the 100 year appraisal period, it is anticipated that peat wastage has the potential to lower existing ground levels by up to1.0m.

Without channel maintenance, the drainage network will silt up necessitating an increase in pump set levels – contrary to the above.

Governance

The Environment Agency is currently one of the main managers of the water levels in the catchment. Some of this work is necessary to maintain acceptable levels of flood risk to the urban community. However, a large proportion of our activity and expenditure is on rural flood risk management and land drainage.

For historical reasons, we have invested in, and operated, much of the existing land drainage assets in these catchments. We are under no legal obligation to continue this activity. Our findings suggest that land drainage is not something that we can, or should continue to invest in and believe there are other parties that benefit from these activities that are better placed to undertake such activities.

Our objectives are given to us by DEFRA. These require us to focus on protecting urban areas, directing our limited resources towards works that benefit the country most on a national basis.

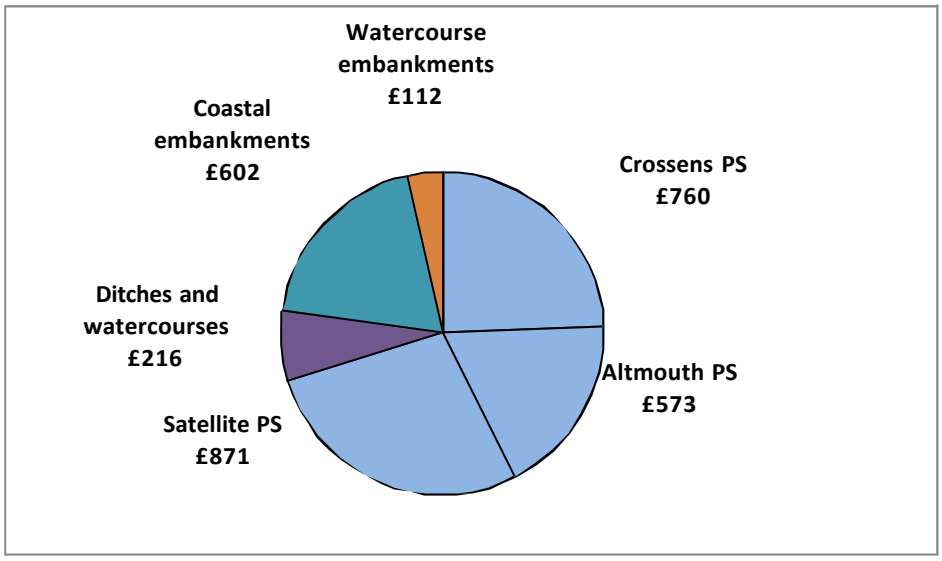
Current DEFRA funding rules mean that it will not be possible for us to continue funding of rural land drainage. Other sources of funding will need to be identified quickly if drainage standards are to be maintained or improved, especially as many pumping stations are in

need of refurbishment. The form and extent of land drainage will depend upon the exact governance and funding mechanisms that emerge. These will be determined by partners.

Funding

Typically, the whole of the existing system currently requires expenditure of approximately three million pounds per annum to maintain and operate. The break down of these costs is illustrated in the following diagram.

Summary of typical annual expenditure needs (£k)



The cost identified for maintaining the pumping stations includes annual maintenance, asset operation, energy consumption, incident response and periodic capital investment in replacement.

The EA also incur revenue expenditure on those channels and embankments on which we carry out maintenance.

Due to increasing restrictions on EA funding, it is likely that there will be a significant reduction to revenue for maintenance activities in the Lower Alt and Crossens catchment. This is expected to be in the order of a 30% reduction for 2012/13.

Flood & Coastal Erosion Resilience Partnership Funding

The way that Government funding is allocated to flood and coastal erosion risk management projects is changing. (Flood & Coastal Erosion Resilience Partnership Funding). They have defined how funding levels for each scheme will relate directly to the number of households protected, the damages prevented, plus the other benefits a scheme would deliver. Where full funding will not be available, projects can still go ahead if ways can be found to reduce costs or if other funding can be found to meet the remainder.

The current regime is considered unsustainable into the future. We therefore need to make longer term investment decisions about the two main pumping stations (Altmouth and Crossens), as well as short and medium term decisions regarding the refurbishment, replacement or abandonment of our satellite pumping stations and other assets such as the many raised embankments.

Therefore any future investment in rural flood risk management will require a very significant contribution from others if the current system is to be sustained.

The Environment Agency also believe that the future of rural flood risk management and land drainage is not just about alternative sources of funding. There are significant environmental issues that need to be addressed in order to establish the sustainable future use of the catchment.

The current system is considered environmentally unsustainable for a number of reasons:

Peat Wastage Trends

There are significant areas of these catchments where the soils are rich in peat.

Two historical surveys (1955 and 1985) of the extent and depth of the peat across the study area have been reviewed. We believe that the datasets are sufficient to conclude that peat wastage is occurring resulting in carbon release and a fall in ground levels.

The peat survey results indicate an average wastage of around 1.6cm per year. Although it is now over twenty five years since the last detailed survey, land use and practice has not changed markedly in that period and it may therefore be assumed that wastage rates have remained constant. On this basis, an estimated further loss of 40mm is possible. We recommend a follow up survey to confirm this trend.

Drainage Impairment

The changes in ground levels result in a decrease in the effectiveness of pumping to adequately drain the land. Drainage impairment is evident in a number of locations within the study area and this impairment is expected to continue.

Climate Change (Carbon Emissions)

We have looked at our pumping and other operations in the catchment in order to appreciate the carbon footprint of these activities. In doing so, it is evident that carbon emissions from the peat shrinkage as a direct result of these activities is a much greater issue than carbon emissions from running the pumps alone.

When translated to a value per hectare it can be compared with other carbon emitting activities that form part of the land drainage and food production system. The following table demonstrates this comparison:

Activity	Indicative CO_2-emissions (tonnes per hectare per year)
Fuel for pumping	0.1
On farm activities	5
Peat wastage	20

3.1 Summary

The current system is unsustainable on a number of levels. The system is largely managed through artificial means that is contrary to the natural processes of the catchment and is largely achieved through expending non-renewable energy through pumping.

Whilst intensive drainage provides short term productivity benefits, the longer term impact on ground levels and associated drainage impairment will reduce the effectiveness of the drainage system and may reduce agricultural productivity overall. In the process, extensive peat shrinkage will result in carbon dioxide emissions.

It is likely that future water demand will exceed supply and the current system is not effective at providing either flood storage, when needed, or a reliable supply of water in dry periods.

4.0 Draft Recommendations

A) Maintain Tidal Defences

With others, we will continue to maintain tidal defences where economically, technically and environmentally appropriate to do so.

B) Continue to invest in fluvial flood risk management in areas where it is economically, technically and environmentally appropriate to do so. This will include:-

i. reducing the amount of pumping by investigating other flood risk management options such as increased flood storage
ii. carry out an appraisal study of potential flood storage areas
iii. exploring the potential for further habitat creation
iv. exploring other ways to reduce costs and / or generate other funding

Priority areas for these activities:-

Formby
Maghull
Banks
Lunt Meadows Washlands
Embankment Crest Height Review
Study Area wide Peat Level Survey
Downholland Embankment Repairs (Left Bank)
Sluice embankment remedial works & other embankment re-profiling?
The Sluice / Back Drain Embankment Remedial works
Moss Lane Siphon Relining

C) By Spring 2015 the Environment Agency will make a significant change from current practice, by either reducing or stopping Land Drainage work within the catchment. To implement this major change we will:-

i. launch a Debating Period with the local and farming communities until Spring 2013, focussed on the best way forward for land management and subject to Government policy

ii. implement a Transition Period whereby we will continue to undertake land drainage activities with the reducing level of funding allocation until Spring 2015.

iii. implement the outcomes discussed and agreed / accepted from Spring 2013 to Spring 2015 We anticipate that in the first 18 months this will be to debate and determine the best way forward within the Lower Alt and Crossens catchment and a further 2 years to implement any agreed actions.
iv. continue to undertake land drainage where legally required to do so.

v. maintain existing pumping stations to a working and safe standard

vi. establish a River Alt with Crossens Pumped Drainage Catchment Care Officer to assist and provide some support to stakeholders through the Transition Period.

We will investigate funding opportunities to carry out a survey of the Peat Levels to provide information to support possible land management and land drainage changes.

5.0 Consultation

The aim of this document has been to provide a summary of the progress in deciding on the preferred flood risk management approach for the Lower Alt catchment and the Crossens Pumped Drainage catchment. The nature of the study area is such that there are many groups and partnerships with an interest in the outcome of the Strategic Plan. As consultation and engagement with all the relevant parties is integral to the development of the plan we have decided to consult on these draft recommendations prior to deciding upon a preferred strategy.

We have prepared this consultation document to show you how we have developed the recommendations, and we welcome your feedback on these proposed approaches to managing flood risk in the study area.

6.0 Your feedback

There are a number of ways you can let us know your views

Online

We would prefer you to respond online using our e-consultation pages. This tool has been designed to make it easy to submit your responses to the questions. It will also help us to gather and summarise responses quickly and accurately. Your responses can be submitted through the consultation section of our website at:

https://consult.environment-agency.gov.uk/portal

By email or letter

You can also submit a response by email or letter. Please use the response form which is included at the end of this document. Alternatively you can download the form from the consultation section of our website.

Please send your response to:

Graham Sheppard
Environment Agency
Richard Fairclough House
Knutsford Road
Warrington
WA4 1HT

Or via email to: AltcrossensPDCFRMSP@environment-agency.gov.uk

The consultation period ends on **16 December 2011**

7.0 What Happens Next

Following the consultation we will take into account all responses and use them to decide upon the preferred approach for the Lower Alt with Crossens Pumped Drainage Catchment Flood Risk Management Strategic Plan.

We aim to present our Strategic Plan findings in Summer 2012.

Definitions

Flooding can occur from a number of different sources. We have defined these sources as:

Tidal (Coastal) - flooding from a combination of high tides and stormy conditions.

Fluvial (River) - flooding that occurs when a watercourse cannot cope with the water draining into it from the surrounding land, causing overtopping of the banks.

Surface Water Flooding - occurs when heavy rainfall overwhelms the drainage capacity of the local area.

Principal drain/high level carrier drain – a major watercourse that carries river flows and drainage run-off to the pumping stations at Altmouth and Crossens.

Satellite pumping stations – small pumping stations that drain agricultural land/fields

Tidal outfalls – gates at the coast that allow drainage to the sea but prevent tidal waters reaching inland.

Washland – natural flood plain where water is stored in time of flood.

Breach –the partial collapse of a flood embankment caused by water breaking through the embankment itself.

Upper System/ Lower System – these terms describe the two different parts of the overall Crossens catchment. The Upper System includes Three Pools and The Sluice. The Lower System includes Back Drain.

Pumped drainage system – the artificial system of drainage that currently exists in the Lower Alt/Crossens catchment consisting of Altmouth pumping station; satellite pumping stations etc.

Set levels – pre-determined water levels that trigger the operation of the satellite pumping stations.

Asset – any flood risk management structure or equipment owned or operated by the Environment Agency.

Standard of protection – the effect of the asset on the flood risk.

Further information – Should you require further information or clarification of the many issues in these catchment we do have a number of documents that could be made available to you. Please contact Graham Sheppard: AltcrossensPDCFRMSP@environment-agency.gov.uk

Feedback Form

Lower Alt With Crossens Pumped Drainage Catchment Flood Risk Management Strategic Plan Consultation

Questions

1. We have identified the following key areas for consideration that we think should form part of the final strategy

Reducing reliance upon pumping
Increased use of flood storage
Future funding of flood risk management
Operational responsibility and future funding of land drainage
Seeking other opportunities to manage flood risk management and land drainage in different ways.

1a. Are there any other issues or activities that you think should be included in the final strategy?

Yes / No / Don't Know

1b. If you answered "Yes" please explain what these are and why you think they should be included?
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2. We have identified a number of potential challenges in the management of flood risk and land drainage in the study area. Decisions need to be made to address these challenges. We think these include:

i. Urban &. Rural Standard of Flood Protection
ii. Pumping vs. Flood Storage
iii. Sustainable Land Use vs. Commercial Drivers
iv. Land Drainage Costs vs. Future Funding and Governance

2a. Are there any other challenges that you think should be considered in the final strategy?"

Yes / No / Don't Know

2b. If you answered "Yes" please explain what these are and why you think they should be included?
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(Please turn over)

We have provided below a short statement on each of the challenges that we have identified above, followed by a number of questions to understand your views:

i. Urban &. Rural Standard of Protection

"In general, both the urban and rural areas of the catchment currently benefit from a high standard of fluvial flood protection (i.e. flooding from rivers). The rural standard is significantly higher than nationally accepted standards. However, the high rural standard of protection is maintained by preventing natural use of the flood plain and flood risk management is instead provided by extensive pumping".

3a. Do you consider that the current standard of **urban** flood protection is appropriate?

Yes / No / Don't Know

3b. Do you consider that the current standard of **rural** flood protection is appropriate?

Yes / No / Don't Know

3c. Do you think the balance between urban and rural standards of protection is right?

Yes / No / Don't Know

3d. If you answered "No" to any of the above, please give your reasons for doing so.
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ii. Pumping vs. Flood Storage

"The existing system is effective in providing flood risk management in the study area. However the extensive use of pumping is considered unsustainable on environmental and cost grounds".

4a. Do you consider it appropriate to reinstate the use of natural flood plain in order to reduce the amount of pumping?

Yes / No / Don't Know

4a. If you answered "No" please answer the following:

Under the current funding rules, sustaining the pumping system for the purpose of flood risk management will almost certainly require contributions from the local community. Would you be prepared to contribute to the cost of sustaining this system?

Yes / No / Don't Know

4b. Do you have any thoughts about how contributions from the local community for flood risk management might be raised?
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(Please turn over)

iii. Sustainable Land Use vs. Commercial Drivers

"We consider that the existing land use, supported by the existing drainage system is unsustainable in the longer term. However, we also recognise that changes to more sustainable land use practices may reduce overall productivity and profitability in the shorter term"

5a. How sustainable do you think current land use practices are in this study area?
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5b. What changes in land use practice, if any, do you foresee in the future?
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iv. Land Drainage Costs vs. Future Funding & Governance

"Sustaining the existing land drainage system, including the operation and maintenance of the pumping stations, is costly. Under current government policy, we will not be able to continue to undertake this role or incur these costs".

6a. Would you be prepared to contribute towards the funding of land drainage in this study area?

Yes / No / Don't Know

6b. Do you have any thoughts on what alternative land drainage governance and funding arrangements might look like?
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(Please turn over)

Aside from the challenges above, we believe there are mutual benefits, to both the environment and those that live and work in the study area, through a move towards more sustainable management of the area.

Peat Wastage

The study area contains significant areas of highly productive peat-rich agricultural land. Agricultural productivity is supported by the existing pumped drainage system. However, our findings suggest that this practice may cause peat wastage, resulting in release of significant levels of the green house gas, carbon dioxide. Over time any loss of the peat will also reduce the productivity of the soil and cause ground levels to fall. Such subsidence will decrease the effectiveness of the drainage system.

7a. Do you consider that the loss of peat in this catchment is detrimental to the environment?

Yes / No / Don't Know

7b. Do you consider that the loss of peat in this catchment is detrimental to flood risk and effective land drainage?

Yes / No / Don't Know

7c. Do you consider that the loss of peat in this catchment is detrimental to the commercial value of the land?

Yes / No / Don't Know

7d. An alternative to pumping would be to provide flood storage, utilising some land as 'washland'. Do you think there would be local community consensus to use land for this purpose?

Yes / No / Don't Know

If you answered "No" to any of the above, please explain your reasons for doing so.
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(Please turn over)

Draft Strategic Plan Recommendations

We have suggested a number of potential recommendations in this plan. These are not final recommendations and subject to change in response to this consultation exercise.

8a. Do you disagree with any of the recommendations? If so, please explain why you disagree.

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8b. Do you think there are other recommendations that have not been included? If so, please explain what these are.

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8d. Do you have any other comments on our recommendations?

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8d. Finally, do you have any suggestions about how this system could work better?

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(Please turn over)

General Information

Please could you also answer the following questions to help us to understand your interest in the study area.

9a. Do you live within the study boundary? **Yes / No**

9b. Do you work within the study boundary? **Yes / No**

9c. Aside from residential premises, do you own or manage land in the study area? **Yes / No**

9d. Do you have any business or other interest in the rural catchment? **Yes / No**

Thank you for your taking the time to tell us what you think. Please return completed forms by **16 December 2011** to:

Graham Sheppard,

Environment Agency
Richard Fairclough House,

Knutsford Road, Warrington,

WA4 1HT

Or via email to: AltcrossensPDCFRMSP@environment-agency.gov.uk

How we will use your information
We will publish all responses after the feedback period has closed, unless you have specifically requested that we keep your response confidential. When we do so, we will not publish names of individuals who respond except where they are responding on behalf of an organisation.

Confidential responses
In accordance with the Freedom of Information Act 2000, we may have to supply your response to this consultation **if asked for it – including your personal information.**

Please let us know if you want us to keep your response confidential and explain why. We will take this into account when dealing with requests but cannot guarantee confidentiality.

Would you like to find out more about us, or about your environment?

Then call us on

03708 506 506 (Mon-Fri 8-6)

Calls to 03 numbers cost the same as calls to standard geographic numbers (i.e. numbers beginning with 01 or 02).

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www.environment-agency.gov.uk

incident hotline 0800 80 70 60 (24hrs)
floodline 0845 988 1188

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Appendix 'B'

Lancashire County Council Scrutiny Committee

Flooding Lower Alt with Crossens Task Group Report

Cost Breakdown of Environment Agency Spend in the Lower Alt with Crossens Catchment Area

- The figure of approximately £3m (including £1.5m on operations and maintenance)is explained in the consultation document and is made up as follows:-
  - Coastal embankments £602k
  - Watercourse embankments £112k
  - Ditches and watercourses £216k
  - Satellite Pumping Stations £871k
  - Crossens Pumping Station £760k
  - Altmouth Pumping Stations £573k
- The figures for the pumping stations include for annual maintenance, asset operation, energy consumption, incident response and periodic capital investment together with revenue expenditure on the channels and watercourse
- We do not have any other funding to off-set against this.