

The 77th Annual Conference of the Association of Drainage Authorities was held on 12 November at One Great George Street at Westminster. This report presents an extended summary of the Conference. The report includes Association business, Board and Committee Reports, presentations and a summary of the Question Time Panel.

Welcome by Henry Cator OBE

Welcoming delegates to the Conference, Henry observed that the pace of change is increasing, with policies pursued by Defra coming under greater pressure. He highlighted the unintended consequences of the priority scoring system which promotes maintenance where a river runs through a populated area, but not through rural areas, leading to inconsistent conveyance capacity down the length of the river.

Moving on, Henry told the Conference that what the water level management industry requires is stable, long term funding, not just for capital spending but also for maintenance, as much of the national infrastructure is ageing. Refurbishment can be carried out but he warned that environmental issues, such as the eel regulations, escalate the price of what should be a fairly routine replacement. Henry told delegates that there is a need for ADA to make itself heard by Treasury but questioned whether they were listening; adding that it seemed a common sense approach to invest in the very basic infrastructure at a time when we should be encouraging our economy, through creating local employment, by investing in this very basic infrastructure which everyone will benefit from. Tensions between the environment and drainage are not going to go away but at the same time ADA has to persuade Treasury that this work shouldn't be at the expense of work that should be done in terms of flood defence.

Touching on the subject of dredging, Henry remarked that there had much talk regarding dredging terminology: moving the conversation away from the basic facts that if a channel is full of silt, it isn't going to convey water. He added that presently any event of about 40mm of rain in a 24-hour period results in over-topping, flooding and crisis, which is concerning. This not excessive rainfall: it is becoming more and more common.

Henry then commended the investment put towards dredging the Rivers Parrett and Tone in Somerset. He added that there was concern that in order to continue to maintain the rivers, the County Council could be involved in collecting drainage precept from the rate payers. This has the potential to be misguided at best and probably disastrous at worst. He explained that once control of finances in a drainage district is lost then the control of the district has been lost – if another party has control of funds then there is

competition with other budgets. The beauty of an IDB is that the money raised is used for the purpose it is raised for – maintaining assets and drainage channels. Moving to a more positive subject, Henry praised the increase in the amount of co-operative work taking place between IDBs and the Environment Agency, largely due to the Public Sector Co-operation Agreement. He commented that North Level District IDB had maintained and cleared two kilometres of watercourse under the agreement for the same cost as it would have been for one kilometre, proving that collaboration and partnership were smart ways to manage dwindling resources.

Henry recognised that IDBs must be efficient and effective bodies and through adopting best practice from each other this will be achieved. This is one of the principal reasons for adopting a new, incorporated structure for ADA which will enable a much more grass roots approach, enabling delivery on the ground. Finally, Henry added that, by working together, work will be done.

Opening address: Albert Vermuë, Director General, Unie Van Waterschappen and Honourary Secretary, EUWMA

Albert thanked ADA for inviting him to address delegates, adding a small declaration of interest in water level management in the UK stemming from an ancestor by the name of Cornelius Vermuyden, who “carried out some jobs in the UK”.

Beginning, Albert explained to members that, with 26% of the Netherlands below sea level and 60% of the country at risk of flooding, water level management is essential as without proper management, much of the Netherlands would be under water.

Albert said that in the four years he has been involved in the water level management industry, he has seen that each country has a different way of organising it with one thing in common; all ways are relatively complicated. The Netherlands is no different, with some organisation at European level; national level; within the 12 provinces; at municipality level and within water authorities. Additionally within this structure there are four to five layers of Government with a level of responsibility which requires co-operation. Continuing, he explained that at the time of the last big flooding event in the Netherlands (1953) there were 2,600 water authorities. In 60 years the number has

reduced to 23, which are fully fledged Government Institutions who collect taxes, have legal powers and a strong and clear mandate of work which should be carried out.

He then touched on the subject of climate change, pointing out that for a country as low-lying as the Netherlands, climate change could pose serious problems. In order to investigate any preparations which may need to take place a study was commissioned, returning three key points to consider:

1. *Safety standards within the Netherlands*; Albert said that the first item which was highlighted was safety standards in the Netherlands. This is a fairly straightforward conclusion when discussing climate change and rising sea levels; there is a need to look at safety standards.
2. *Spatial Planning within the Netherlands*; Albert explained that successful water level management has led the Dutch people to forget the importance of water. This has led to construction of industry and properties in regions at the highest risk of flooding, with infrastructure such as electricity in the cellars of buildings, something which cannot now be changed but causing consideration of how to make essential items waterproof in the future.
3. *The potential for more extreme weather conditions*; Albert told the Conference that in the future it is possible that heavy rain events will be combined with longer periods of drought. Fresh water is economically important to the Netherlands, both for agriculture and industry, and also for transportation on rivers. One of the conclusions of the committee was to look closely at water retention during times of heavy rainfall for periods of drought.

Following the completion of the study, Albert explained that the water authorities then asked themselves whether the challenges were clear, whether the various organisations were strong enough, if they had enough funding and whether they worked together cohesively. In order to answer these questions the water authorities asked the OECD (Organisation for Economic Co-operation and Development) in Paris, to review whether the various systems were fit for the future.

The final report gave the Water Authorities a mark of 8.5 out of 10 – a good indication, Albert said, that the Water Authorities are fit for the future. However the report also provided recommendations for improvements. Albert explained that one subject which struck the reporting group was that many Dutch people don't realise that they are living in a delta, below sea level – a majority of the population takes it more

or less for granted. One explanation could be that the last big disaster in the Netherlands was more than 60 years ago, and without flooding events, awareness has faded. The report also highlighted that spatial planning and water level management need to be brought together more. The OECD were also asked to look into the financing of water management as this is a concern in the Netherlands as well as in the UK.

Describing the taxation system, Albert explained that the main standard system for tax in the Netherlands is very centralised. However this does not extend to water management, where water authorities pay around 40-50%, while the National Government only pays 15%. The advantage of the water authorities paying such a high proportion is that these funds can only be spent on water management, while funding from government faces competition from other areas. The OECD saw this method of funding as an advantage stating that it is a robust system. However, a robust tax system is not without problems and when tax bills are sent out it tends to generate negative press.

However, Albert said, the report was not without recommendations. Amongst the suggestions was ensuring that the "polluter pays" principle is applied more strictly and if certain users have an interest in having more fresh water – for example farmers – then they should pay an additional fee. The report also highlighted that a decreasing population in certain areas will result in the remaining population paying higher taxes in order to maintain structures, which may be unpalatable for those paying the taxes. A further point, reiterating what was said in first study, highlighted the need for greater policy coherence with regards to construction of houses.

The conclusion to be taken from the finance report, Albert told delegates, is that that water authorities in the Netherlands have a good financial system, with the targeted tax negating the need for discussions as to whether the amount of funding is high enough. Therefore if more money is required then taxes are raised: something Albert said was simple in theory but not in practice.

In closing, Albert reiterated the importance of water management to the Netherlands. Despite the ongoing debate regarding who pays the bills and the type of levies which can be imposed on groups, by explaining the ongoing work Water Authorities carry out the public will have some understanding.

Association Business & AGM

Elections: Henry Cator was unanimously re-elected as ADA's Chairman, proposed by John Heading, seconded by Graham Littleton.

Lord De Ramsey was unanimously re-elected as ADA's President along with the Vice Presidents as proposed on page 5 of the Conference Handbook. Attention was drawn to the appointment of Neil Parish MP as Vice President to ADA, bringing the total Vice Presidents to five. Neil is farmer beside the River Parrett, an MP for Tiverton and Honiton in the South West of England, and is also a member of the House of Commons EFRA Committee.

Following incorporation a Board of Directors has replaced the Executive Committee. The Directors of the Board were listed in Appendix A, page 4, of the Conference Handbook and unanimously confirmed. Conference noted its approval for that board to administer ADA for the coming year.

Accounts: The audited accounts for the year ending 31 March 2014 were presented to the Conference. Henry Cator explained to the Conference that these accounts were for a 15 month period, rather than the previous 12 month period owing to ADA's incorporation on 1st April 2014. The accounts for 2014 will be for a nine month period from 1 April 2014 until 31 December 2014, and then ADA's accounts will get back in step to being a 12 month period going forward. The Auditors, Streets Auditors LLP were reappointed as auditors for ADA's 2014 accounts, proposed by John Carrick and seconded by Ian Thornton.

Subscriptions 2015: Conference unanimously adopted the subscription proposals made by the Board for 2015 as set out in Appendix C on page 17 of the Conference Handbook.

Membership: It was noted that the total number of IDBs in England and Wales had reduced to 114 following recent amalgamations.

ADA Committees: Henry Cator presented the reports of the Executive Committee, Board, Policy & Finance Committee and Technical & Environmental Committee, thanking those that served on them. Henry highlighted the work undertaken to make ADA an incorporated company and noted the change in structure this had brought to ADA's governance with a smaller Board of Directors replacing the Executive Committee. Henry thanked Jean for all her hard work as ADA's Chief Executive and welcomed the incoming team of Innes Thomson, Chief Executive designate and Ian Moodie, Technical Manager designate. Neil Parish paid tribute to Jean and the very good evidence she gave before the EFRA Select Committee. Jean thanked all of ADA's members because "ADA does punch

above its weight because of all the volunteer work that is done by various other people representing us at conferences, events, meetings, and long may that continue".

Technical Speaker, David Porter, Rivers Agency Northern Ireland

David Porter, (Director of Operations, Rivers Agency NI) opened by relating a story from his first ADA Conference which highlights the tension between environmental concerns and land drainage, when an RSPB presentation demonstrated how their management in a particular area had led to an increase in Lapwings. The first comment in the question and answer session following the presentation came from land drainage expert who thanked the RSPB for the presentation, but pointed out that people don't eat lapwings.

David then described the role of the Rivers Agency, which is actually a division within the Department of Agriculture with a focus on flood risk management and land drainage, not a government agency. Many aspects of rivers do not fall under the responsibility of the Rivers Agency – navigation is looked after by Waterways Ireland, and environmental regulation of rivers looked after by the Northern Ireland Environment Agency. This enables the Rivers Agency to focus purely on flood risk management, with a number of key drainage functions to oversee, including maintaining 6,800km of designated water course and 26km of designated sea defences; constructing drainage assets and sea defence structures; and regulatory functions where consent is required.

With changing times, David explained, roles have developed and the Rivers Agency has moved into the world of flood risk management, which poses many challenges. One of the biggest challenges is public understanding, because although the public understands drainage and flood alleviation, there is less understanding of flood risk management.

David told delegates that the EU Flood Directive has helped to shift the focus onto flood risk management. Its requirement for preliminary flood risk assessments and flood risk management plans has highlighted areas at significant risk, and also that not everywhere floods. It is important to remember that floods can bring benefits – for example bringing nutrients to land which makes it more productive. Using the Flood Directive's logical approach to identifying and mapping a problem, then identifying a solution has helped the Rivers Agency to focus on places where it can do the most good to manage flood risk. David explained that the Rivers Agency has gone a stage further than the

requirements of the EU Directive, and in addition to the 20 areas identified under the Directive, it has investigated 49 additional areas at risk in Northern Ireland. It is hoped that, by using this process, the public will begin to understand what flood risk management is and who needs to do what.

Moving on, David touched on the subject of climate change, saying that rising sea levels aren't the issue in Northern Ireland that they are in the Netherlands, but surface water flooding could pose a more significant challenge. It is not possible to upsize every drainage network across all urban areas, but at the same time growth must be accommodated. Drainage professionals need to use the new detailed information available to them to give good advice as to where can be developed, and how it can be developed in order to minimise harm.

Concluding, David said that the big challenge is managing surface water and flooding in urban areas. This requires explaining to communities what flood risk management is and the flood risk that they face, in a way which can be understood. The NI Rivers Agency is working with communities so that flood risk can be managed collectively.

Question Time

The 77th Annual Conference's Question Time session provided a forum to discuss and question the panel on major issues in the water level management industry. This year's panel comprised of: Trefor Owen (Natural Resources Wales, Executive Director of National Services), Martin Spray (Wildfowl & Wetland Trust, Chief Executive), Jean Venables (ADA, Chief Executive), Peter Fox (Head of FCERM Strategy & Investment, Environment Agency), Dan Osgood (Defra, Deputy Director, Floods Coastal Erosion & CBRN Recovery). Delegates' questions were focused mainly around: implications of the Local Audit and Accountability Act 2014, funding, environmental legislation and regulations, sustainable drainage systems (SuDS), and defining statutory consultees.

Implications of the Local Audit and Accountability Act 2014: The Local Audit and Accountability Act 2014 contains a clause on council tax referendums to enable taxpayers to block council tax rises including those parts of the council tax bill determined by other local public bodies, including IDBs. The threshold percentage (2% in 2014) for an increase in council tax that triggers a local referendum now includes special levy that an IDB receives from a local authority.

The first question was asked by Tom Ledger, a Board

Member of the Lower Medway IDB. He explained that at their last budget meeting the issue of needing to increase drainage rates and special levy was discussed, as recommended by the Board's clerk and engineer to cover anticipated expenditure required to replace two of the Boards pumps. The increase in special levy would need to increase by more than 2%. One local authority member on the Board argued strongly that the 2% overall limit (that would trigger a local referendum) should also apply to IDB special levy. The decision went to a vote with all the local authority appointed members voting for the Board's special levy increase to be limited to 2%. All elected members voted against. As the appointed members are in the majority, the Board will face difficulties addressing the issue of pump replacement and the cost of operational activities, especially after recent wet winters. Tom Ledger went on to ask whether IDBs are subject to the financial limits imposed by local authorities by Government and whether other Boards had any other relevant experiences of this issue.

Dan Osgood was first to respond saying that the 2% limit applies only on the total increase in council tax and not the component parts. The best way forward would be to make sure there are good early discussions with local authority members of the IDB, making sure that their understanding of the rules on council tax is correct, and also to impress on them the benefits that would be gained in an increase in special levy of greater than 2%. Jean Venables then added to the discussion, providing greater clarity and insight into ADA's involvement in the matter. She stated that when the Act was in its Bill phase and going through parliament, ADA tried very hard to get an amendment made to it to get IDBs removed from the list of levying bodies that it would affect. However, it was a very difficult Bill to get amended and went through very quickly. Jean confirmed that it is only the total council tax increase that is limited by 2%. The legal position is that if an IDB wants to have, say a 10% rise, and can justify it (and has been properly voted on), then legally that local authority has to pay the bill to the IDB. Placing a limit on special levy would cause great difficulties when extra costs are incurred due to: repairs and pumping costs after high rainfall/ flooding events, amalgamations and their associated redistributions in special levy to different local authorities, and local authority boundary changes. Jean Venables finished by saying that local authority Board members need to act in the interests of the Board and have with them that mind-set when taking their decisions.

Frances Bowler, Clerk and Chief Executive of the Bedford Group of IDBs stated that with so much

development in their area, the matter of special levy increase has also been a major issue for them in Bedford. A local authority may not be happy about this however they need to also bear in mind that they are getting an increase in council tax from the new development or business rates. Lastly, John Dennis from Selby IDB discussed the situation his Board had experienced where local authority appointed members have a 51% majority. With this majority, they have voted on reducing any increase in special levy. This year the Board could not increase special levy at all even though the Board is looking to improve its pumping stations.

Funding: The funding of flood risk management, maintenance and IDBs in particular, was questioned heavily during Question Time. David Thomas, Engineer at the Middle Level Commissioners, made first reference to funding and said: “The issue, I think, and this is where we are tripping over repeatedly, is that it is an under-funded industry, and we are playing on the margins.” He asked the panel whether they thought the industry is underfunded and also what an ideal funding model for the future might look like.

Dan Osgood was first to respond. He mentioned the merits of partnership funding which was aimed at making Government contributions going further. Evidence suggests that more schemes are going ahead as a result of partnership funding coming in. He also talked about the 6 year capital investment pipeline that is going to be announced in December 2014 which will hopefully give certainty. Other things that are being looked at include thinking about getting more of a contribution from other beneficiaries. He stated that here there is scope to go further. Pete Fox also provided an answer and drew attention to the fact that in terms of central government funding, the industry is competing in a very difficult environment with a lot of other priorities. Many Government departments are underfunded.

Trefor Owen provided insight from a Welsh perspective. He agreed that the industry is under-funded but added that this was also the case for many other industries. He stated that Wales are looking at some new opportunities in terms of funding. He mentioned the need to make best use of what are effectively common resources. He also talked about expected legislation in Wales that will place a duty to develop natural resource plans for catchment areas across all parts of Wales. Involving IDBs into integrated planning will give a broader context allowing them to look at what the influences are beyond the boundaries that could actually be pushing up costs. Lastly he mentioned that

the Welsh Government is looking at innovative sources of funding connected with developing an enterprise capability in Natural Resources Wales.

On the subject of funding, John Duckitt from the Danvm Drainage Commission said that his Board paid over £300,000 per year in precept to the EA. He asked if the EA could be a bit more forthcoming in how they are spending the precept. He also commented on the River Parrett scheme in Somerset and asked that now that it has been concluded, who actually paid for it?

Pete Fox responded to the first question saying that the Board should be having discussions with area flood and coastal risk managers about explaining exactly where it goes. Dan Osgood then responded to the second question saying that the Somerset partners had drawn up an action plan for Somerset. The Government contributed £20.5 million. £10 million came from Defra and the majority was spent on dredging the 8 km of the Parrett and Tone.

On the subject of funding Jean Venables then discussed the issue of discontinuous capacity on Main Rivers due to Defra’s cost benefit calculation to justify maintenance. This has resulted in the lack of maintenance in rural areas, such as in Somerset. Rural land is flooding more often than it should and this also puts urban areas at risk downstream.

Julian Taylor, a Councillor from Bridgewater, returned the discussion to what has been happening in Somerset. He mentioned that water would flow from upland areas of the catchment. He asked the panel whether they agreed that the people living in these areas, which includes parts of Devon and Dorset, should be contributing to the payments made in the lowland areas. Pete Fox replied acknowledging that the 20 year action plan in Somerset had been devised to influence catchment management as a whole system. Farming practices in the upper part of the catchments have been identified as a contributor to flooding downstream and therefore good land management must be promoted. He said that it is important to find the right funding formula for Somerset - “at the moment the funding for river maintenance is either very local, through IDBs, or very national, through the EA”.

Lord De Ramsey reflected on the discussion adding that some time ago, a general drainage charge had been applied in the Anglian region. The mechanism applies to a wider area and raises a relatively small amount of money. He asked whether this is not a route to consider. Dan Osgood agreed that the general drainage charge still exists and is an option for other parts of the country. In Somerset they are trying to implement something similar so that the Somerset

Rivers Authority, once set up, can levy all the land owners, not just those within IDBs.

Neil Parish, MP for Tiverton and Honiton, joined in the discussion:

“I think we need to look at this situation of spreading the load and trying to bring in those that are up on the hills to pay.... there is a way of doing it through the local authorities... the problem with the public however, is that they all want their water removed, but they all want low taxes.... it might work if we spread the load so that it is a smaller amount of money per individual. I think we could put the argument to the public, where does your water go? I think we could prove they need to pay for it.”

Jeff Fear from the Axe Brue IDB, continued the discussion, asking how changes in Somerset with the Somerset Rivers Authority and potential disaggregation for funding purposes may affect the identity of the IDBs. Jean Venables replied stating that the Somerset Rivers Authority's initial purpose was to coordinate what other bodies do. However, now they actually want money going through the Somerset Rivers Authority. The danger could be that special levy goes through the Rivers Authority, not the IDBs, which would then allocate money according to its priorities to the various parties. This would need primary legislation, and if passed, wouldn't just apply to Somerset and could have serious implications for IDBs. Dan Osgood said that this was a Somerset specific solution, and from a Defra point of view, he did not envisage it being forced elsewhere in the country, and so the legislation would be a Somerset specific bill. Tony Bradford from the Parrott IDB recognised that this was a unique situation facing the IDBs in Somerset and that they would like the support from ADA before signing up to anything.

Environmental legislation and regulations:

Several questions asked were based around environmental legislation and regulations. Peter Burton, Chairman of Bluntisham IDB in Cambridgeshire explained that earlier this year changes were made to the hedge cutting rules which delayed hedge cutting for at least another month. He asked Dan Osgood whether a derogation for IDBs could be introduced so that they could work when conditions are right. Dan said that he would be happy to look further into this. He stated that if there was to be consideration of a derogation, they would need to be clear of the benefits. Henry Cator suggested that Peter writes a letter to Dan and Defra on the matter.

Martin Spray also responded to the question and said that there is a need to work together to find the best

solutions for both people and the natural environment. He stated, “we should always remain aware that the natural environment is our only environment and is the thing we fundamentally depend upon for our future survival, and success”. Although unaware of the specific case, Martin reasoned that in some cases such as this one there may be a very good case for those hedges to be treated in a different way to others in the particular region.

Peter Dyas from the River Stour IDB made his concerns known about the Eels Directive. He described an incident in Kent where an eel was killed and consequently the pumping system had to be stopped, interrupting a scheme that had been in place for 40-50 years. Unfortunately they experienced three inches of rain and consequently land flooded and there was also flooding to properties and roads. Peter called for common sense in such a case. He added that as the water levels raised during this event, a lot of water voles may have drowned, all because of one eel. Martin Spray replied to Peter Dyas commenting that the way it had been phrased, the reaction in this case did not exactly look sensible. He stated that we need a strategic and sustainable water management plan for the future, which is going to benefit both people and the natural environment.

Andy Carrot, Engineer at Witham Fourth IDB said that his Board has a pumping station that is a priority site for eel and fish paths work. The EA have come up with a solution for the site costing £13 million, five times more than their annual expenditure. The maintenance and operational costs of the necessary equipment alone would involve a 5% increase in drainage rates. Andy asked the panel how this can be justified to the Board, local authorities and the local rate payers. Pete Fox replied admitting that the requirement to protect eels is impacting us all in the industry. He stated that so far the EA has been able to deliver the vast majority of requirements with only small costs. However, increasingly they are now coming across ‘big ticket cost items’ like the case for Witham Fourth IDB, where bigger pumps would need replacing. He finished by stating that he can't provide an answer today as “there are some big investment decisions we need to make which are challenging us all”.

Tony Bradford also provided a perspective from Somerset on the eels situation. He stated that we seem to spend thousands of pounds on protecting eels in some parts of the country, yet on the River Parrett they have a large population of eels, so large that for a small fee unlimited fishing is allowed. He questioned whether regulations should be in place to stop the removal of eels on this scale. Peter Fox replied stating

that he will discuss this with his colleagues from the EA.

Sustainable Drainage Systems (SuDS): Sam Markillie from South Holland IDB turned the panel's and room's attention to the subject of surface water. Specifically he asked how we are going to control development that happens in the future, with the impact of greater surface water flooding in mind. He mentioned Defra's plans to re-consult on SuDS and the fact that the plans are being reworked to appease developers. Dan Osgood from Defra confirmed that the plans had been reconsidered and consequently Defra has put a consultation out earlier in the summer. The consultation is still under review after receiving over 400 responses. He continued that the particular issue of how the maintenance of SuDS will be paid for is the most difficult consideration at the moment. Sam Markillie replied saying that he was disappointed that SuDS was being consulted on again, especially as a lot of effort has already taken place with regards to setting up SABs across the country. He agreed that how the maintenance of SuDS is arranged would be vitally important and said that he was concerned that the new approach proposed in the consultation implies that developers will be the ones who decide whether SuDS are put in place.

IDBs as Statutory Consultees: Keith Moore from the Goole and Airmyn IDB announced a plea to ADA to lobby Government to ensure that IDBs become statutory consultees. He commented that he had experienced IDBs views being disregarded on certain planning issues because IDBs are not statutory consultees. Jean Venables accepted his point.

Henry Cator brought the question time session to a close and thanked panel members for their contributions.

Guest speaker: Brian Collins, University College London

Professor Brian Collins, Professor of Engineering Policy at University College London (UCL), addressed the attendees after lunch in the Great Hall. Professor Collins thanked ADA for the chance to address the conference in such an inspiring room as the Great Hall. Professor Collins began his speech by outlining his experience of the floods in 2007. He was attending graduation day when he was Professor of Information Systems at Cranfield University and he got extremely wet after the sunroof on his car would not close and he had to drive with an open sunroof 125 miles home.

During the experience and afterwards, he started to reflect on the profound interaction between the floods, the heavy rain, and the transport system. He took this forward at a professional level as the Chief Scientific Advisor at the Department for Transport, considering the strong interaction between flooding, water, and transport systems. He went on to talk about the flooding in Tewkesbury and the water pumping station and local electricity substation, and the interaction between brown water and clean water and local electricity supplies. This got him very interested in the interdependence between infrastructure systems and the fact that a distributed event such as a very large rainstorm that covers a significant part of the country was a different form of hazard from an event that occurs in a power station or a pumping station or any other localised asset.

Professor Collins discussed the work one of his colleagues is doing in Jakarta to manage surface water in a coordinated way across the city to reduce floods. He mentioned how they are using Twitter to get information on where the water is coming from. He used Twitter as an example of the interaction between water management systems and social ICT. These are two elements of infrastructure not normally talked about together. This is attracting a lot of money from the United Nations because they are realising that such things can happen anywhere in the world.

Professor Collins was critical about the how over the last 30 or 40 years, as we have privatised our utility infrastructure we have managed to badly misalign authority, accountability and responsibility. We are continually trying to fix that lack of alignment. He believes there is a debate beginning with the Treasury about this because they are starting to realise that this is a waste of public money. He added that there is a lack of private investment confidence because without alignment of responsibilities investors are not going to put big money into solving the big problems.

Professor Collins pointed out to the conference the need to modernise our national infrastructure over the next 40 or 50 years at a very large scale. This point was well received, with many attendees nodding and agreeing. He said we need to develop systems thinking, not just systems engineering but bringing financial systems, governance systems, environmental systems and agricultural systems together to come to a consensus which is compatible with their objectives. We are in danger of losing a huge amount if we don't achieve this alignment and universities can facilitate this, and help us get a better outcome for local areas, and convince government at local, national and in some cases international level what needs to be done to end

up in a better place.

The main point Professor Collins wanted to get across was how we should use our local universities, drawing on their expertise and knowledge to help solve the big problems. Professor Collin's last point was that it is a long journey, we may not be starting from the best place but we could do better than we currently are.

President's Address

Opening his address, Lord De Ramsey, ADA President offered a warm welcome to all attendees and guests and thanked speakers and panel members of the day, he also expressed how honoured he was to be re-elected as President. With reference to Brian Collins address Lord De Ramsey recalled the sight of over 400 acres of farmland flooded with only the tops of trees and buildings visible at Erith following the 1953 tidal surge. Lord De Ramsey welcomed the appointment of Sir Philip Dilley to Chairman of the Environment Agency noting Sir Philip's background as an engineer and his experience in commerce.

Lord De Ramsey acknowledged and thanked everyone for giving their time, so often freely in helping the drainage of the country. A special mention and thanks were also extended to Jean Venables for all her valuable work and skills, which greatly benefited ADA.

Talking of changing times, Lord De Ramsey highlighted the media's sudden interest in the climate - a positive for ADA, giving our work added importance and greater exposure to the general public. He recognised and thanked Jean and team for continuing to ensure politicians take notice of what we do, as well as the work being done to engage with the general public so they begin to understand the important role we all play and why we do it.

Lord De Ramsey welcomed the fact that Defra and National Audit Office are talking more about maintenance and he looked forward to the outcome of the Environment Agency Maintenance Review and, in closing, expressed his hope that the new Secretary of State for the Environment, Food & Rural Affairs, Elizabeth Truss would, like her predecessor, Owen Paterson, recognise the importance of maintenance funding for the industry.