Written evidence submitted by Association of Drainage Authorities (ADA)(FLO0049)

About ADA

ADA is the membership organisation for drainage, water level and flood risk management authorities throughout the UK. Today ADA represents over 230 members nationally, including internal drainage boards, regional flood & coastal committees, local authorities and national agencies, as well our associate members who are contractors, consultants and suppliers to the industry.

Our purpose is to champion and campaign for the sustainable delivery of water level management, offering guidance, advice and support to our members across the UK, and informing the public about our members' essential work.

1. Are the current national and local governance and co-ordination arrangements for flood and coastal risk management in England effective?

1.1. Broadly yes. England has a well-developed system of governance arrangements between a range of risk management authorities operating at a national (Environment Agency), regional (Regional Flood & Coastal Committees, Water Companies) and local level (Internal Drainage Boards, Lead Local Flood Authorities, District Councils). England's governance systems were most recently strengthened following the floods of 2007 and the Pitt Review through the Flood & Water Management Act 2010.

1.2. However, aspects of FCERM in England are overly centralised, require greater resources, especially at a local level, and need to strengthen cooperative working between Risk Management Authorities. The following themes have been highlighted to ADA by our member authorities.

1.3. ***Local authority resources*** | One area that Government particularly tried to strengthen in the Flood & Water Management Act 2010 was the role of local government in FCERM. County and unitary councils became Lead Local Flood Authorities (LLFA) under the Act with responsibility for the overview of surface water flood risk within their respective areas. Unfortunately this expanded formal responsibility for FCERM and change in emphasis between the two tiers of local government coincided with austerity measures being imposed on local government and resulted in a reduction in delivery capacity of district councils to deliver flood risk and land drainage works.

1.4. A number of LLFAs also report a significant divide between their FCERM responsibilities and capacity, alongside the gradual decline of specific flood and drainage expertise and staffing levels. To try and counter this, there have been positive examples of other RMAs sharing their expertise and resources with LLFAs. For instance IDBs in Lincolnshire undertake consenting functions on behalf of Lincolnshire County Council, as do the Bedford Group of IDBs for local authorities that they work with.

1.5. A review of the functions, powers and resources of county and district councils to carry out flood risk management work and better integrate with the delivery by other local risk management authorities would be welcome. ADA agrees with the LGA that the development of a formal mechanism for sharing expertise and experience of flood risk appraisal approaches could help authorities with less experience of delivering FCERM projects and encourage greater collaboration.

1.6. ***Facilitating greater local choices*** | Whilst it is agreed that national funding should be spent in accordance with national priorities, some funding within the FCERM budget is derived locally or regionally. Examples include, Precept funding paid annually by IDBs to the Environment Agency, and Local Levy paid annually to the EA by LLFAs. Both represent funding that should contribute towards local priorities based on local choices made through the existing RFCC system. ADA supports RFCCs and the EA taking a local choices approach that positively engages with those who contribute such funding allowing the EA, IDBs and local authorities to mutually agree local priorities for spending.

1.7. ADA is concerned that the Environment Agency is not routinely sharing schedules with IDBs about how precept money has been spent in past years, nor how it proposes to spend it in the coming year or years. This information would be a helpful aid to partnership working to have better transparency and joint decision-making on how that money was being spent to benefit local priorities. Unfortunately, at present that is unclear and there is a feeling that some of this locally derived funding may be transferred to other projects that do not benefit the local area.

1.8. ***Invest to save*** | ADA has always advocated a strong need to invest in new flood defences, and innovative approaches to reducing flooding, as well as in England's existing flood risk management infrastructure and maintenance of rivers and embankments. However, emphasis should not only be placed on new flood defences, but upgrading aging ones. ADA continues to make the challenge that nationally, that we need to 'invest to save' through a concerted asset renewal or improvement campaign, given the age of some of these assets and watercourses, and the cost of keeping them functioning in their current condition.

1.9. ***Cross-sectoral funding*** | Within FCERM funding in England, significant weight is assigned to the protection of people and property, which inadvertently gives advantage to defence-based approaches over adaptive and landscape scale initiatives. This raises an additional concern that floods and erosion risks are still being framed in FCERM in limited terms, treating different forms of flood risk in isolation, with benefits having to be shared between projects and partners, and not considered as part of a wider socio-economic challenge. Often the valuation of benefits to infrastructure, agriculture, business and the wider economy have not been properly considered within funding appraisal of projects as part of the value of better defending homes.

1.10. In the future, cross-sectoral funding should enable much more integrated, collaborative approaches to be delivered at a local scale. The current funding criteria do not recognise the attractive aspect of reducing flood risk that can increase confidence to invest in an area. This consequently can have much broader positive repercussions on employment, reducing deprivation, poverty, and improving mental health. Conversely, perceived flood risk and the cost of flood recovery can lead to business exiting an area, exacerbating the economic struggles of an area.

1.11. ***Funding equity*** | Whilst the Government's recent increase in investment in flood risk management is welcome, ADA members have highlighted concerns that there is a

growing divergence in funding mechanisms between RMAs (see 1.12 and 1.13 below). With some rules applying differently to the EA, than for IDBs or local authorities for FCERM scheme funding. The current Partnership Funding calculator mechanism is complex and bureaucratic for accessing minor improvement schemes at catchment scale, which is where IDB schemes are focused. The transparency and ownership of the decision-making process for projects supported by Flood Defence Grant in Aid and local levy needs improving, particularly as one RMA (the Environment Agency), oversees the process as well as being the primary recipient of the funding.

1.12. ***Asset Replacement Fund*** | ADA has also formally challenged Defra about why a new £40 million Asset Replacement Fund has been ring fenced solely based on the Environment Agency's needs. Defra appears not to have considered the requirements of other RMAs with similarly aging critical assets. Without focussing on the FCERM assets catchment as a whole, regardless of their ownership, we will not achieve the aspiration of our next National FCERM Strategy to better integrate the management of catchments as a whole. An interlinked and interdependent system is only as strong as its weakest link.

1.13. Expanding and extending the asset replacement fund to other RMAs may be especially important for IDBs that need to refurbish and replace existing pumping stations in lowland England, which are coming towards the end of their operational life. By facilitating innovation through such a fund these stations could:

- ensure that they are more resilient to flooding themselves (e.g. raising electrical equipment and ensuring a route of access during flood conditions),
- be more sustainable (e.g. variable speed electrical motors, and include renewable energy sources such as PPV panels, both reducing electrical, and therefore carbon use)
- be more integrated (e.g. in the Isle of Axholme the EA, local IDBs and the Coal Authority are looking at rationalising a larger number of existing stations into a fewer number of more capable, reliable, and better resourced stations, by making modest alterations to the existing network of watercourses, and
- enhance the aquatic environment (e.g. improved impeller design to reduce eel and fish mortality, so called 'fish friendly pump' technology).

1.14. ***Maintaining the system*** | Much of England's national approach to managing flood risk has been focused around defending people and property and away from looking at other wider impacts to the landscape, infrastructure and the rural environment. This approach has downplayed the valuable role of maintaining assets and systems, which if in better condition may, in some cases have better accommodated recent rainfall events, or expedited swifter recovery from flooding in others.

1.15. Consequently, and perhaps correctly as defined in its operating statutes, the Environment Agency has increasingly focused on its core objectives from a flood risk maintenance angle, meaning that it concentrates its efforts on the high flood risk and high consequence river systems and flood risk assets. According to their own data, the EA currently manages ~42,000km of main river, of which ~13,000km are deemed by the EA to be of low flood risk consequence. England has a total watercourse length of ~302,400km. Of the ~42,000km of main river, ~9,300km relates to watercourses which are less than 2m wide and ~1,600km of low flood risk consequence systems managed by the EA sit within Internal Drainage Districts.

1.16. The current approach and separation between long term capital investment in FCERM schemes versus the uncertainty around revenue funding for FCERM activities by the Environment Agency presents a real risk that new assets are being built at the expense of allowing existing assets to deteriorate. ADA members regularly highlight the poor condition of lowland main rivers, especially in more rural areas, in terms of siltation, trees and other vegetation substantially reducing their capacity and creating pinch points and blockages that may back up a system and exacerbate flooding elsewhere. They also highlight unrepaired damage to main river and coastal embankments, especially where the EA classify the risk as low in terms of numbers of houses protected.

1.17. Taking a catchment-based approach, all water managers accept that as a society we cannot simply stop maintaining sections of watercourse whilst continuing to maintain other sections of the same watercourse. Such a piecemeal approach would not provide the best outcomes either in terms of flood risk management to society, or for water quality and biodiversity.

1.18. Rather than just not maintaining certain assets and systems, ADA supports efforts for closer working between the Environment Agency and other risk management authorities towards transferring low and medium consequence systems and assets to others to operate, manage and maintain, especially where those risk management authorities own systems are dependent on the condition of a main river or flood defence assets.

1.19. ***Cooperation between Risk Management Authorities*** | ADA has been working for many years with the Environment Agency, internal drainage boards and local authorities across England to encourage closer partnerships in flood and water level management. The aim is to achieve better and more efficient working practices that utilise local skills and expertise.

1.20. ADA strongly supports the existing arrangement for Public Sector Cooperation Agreements between Risk Management Authorities to allow two public sector bodies to set out how they will deliver public tasks of mutual benefit together. Each agreement places both parties on a sound legal basis to efficiently deliver river and coastal maintenance works and provide mutual assistance during flood events and subsequent flood recovery works.

1.21. ***Transferring assets and systems*** | ADA sees substantial opportunity in the local operation and delivery of FCERM, especially within systems with lower consequences to people from flooding. Local delivery offers the potential for better value for money, greater local accountability and delivery, and lower costs proportionate to the risk associated with these lower consequence systems and assets. At the same time, this means local Environment Agency staff can focus their own efforts on the remaining high consequence systems and assets in their area (see 1.14 above), and having better capacity to do that critical work with the existing resources that they have.

1.22. ADA considers that the proper transfer of assets represents a sound investment for the future, providing long-term savings. So where assets or watercourses have been under-maintained over a period of years, it is appropriate that investment is made to either put such assets back into a good condition or defray the cost of the receiving authority to do so. ADA asserts that this approach ultimately represents better value for money to the taxpayer, as the alternative would result in further deterioration and greater costs and potential liability for the EA in the future.

1.23. ***Transfer powers*** | ADA is seeking for Defra to provide new legislative powers for assets, land and property associated with a flood and coastal risk management function to be transferred between risk management authorities to facilitate changes in the management of systems over time. This would ensure that the best authority to deliver and fund necessary work is in charge of these assets.

1.24. Currently, the existing legislative framework requires Risk Management Authorities to sell such property at commercial value, despite an asset or land having a specific purpose or function to manage flood risk. This currently acts as a barrier to Risk Management Authorities wishing to ensure that the most appropriate and cost effective Authority manages and maintains these assets. This is currently creating additional costs for the taxpayer.

1.25. The problem was recently demonstrated during the River Maintenance Transfer Pilot project to de-main the Snow Sewer Drain and transfer the EA Pumping Station located in Owston Ferry, Lincolnshire to the Isle of Axholme and North Nottinghamshire Water Level Management Board, which was completed in 2019. The embankments of the Snow Sewer Drain were owned by the Environment Agency and were a flood barrier that compartmentalising the lowland landscape into flood cells, the embankments were also managed as a local nature reserve. Yet the land was initially valued as though it was productive arable land and the pumping station building as though it could be repurposed into other uses. The IDB was initially expected to pay the EA for the value of a potential, which could never realistically be realised.

1.26. To resolve this problem, ADA proposes that the Flood & Water Management Act 2010 should be amended to grant a new power on Risk Management Authority to transfer land and property associated with flood and coastal risk management to another Risk Management Authority without cost. This is analogous with the powers bestowed within Part XII of the Highways Act 1980 to transfer land and property associated with highways between highways authorities owing to a change in highway status.

1.27. ADA recognises that care will need to be taken to ensure that incidental economic activities, such as the leasing of grazing rights on flood embankments, can continue so as to help defray the costs of managing and maintaining such assets. ADA would also assert that if an RMA were in the future to sell land or property associated with flood and coastal risk management commercially any profit derived should be reinvested in flood risk management or returned to the exchequer.

2. What lessons can be learned from the recent floods about the way Government and local authorities respond to flooding events?

2.1. ***Successive rainfall events*** | The flood events of the autumn/winter of 2019/20 have highlighted that whilst we will increasingly face individual significant heavy rainfall and flood events as a result of climate change, we need to systemically plan for a ***series of heavy rainfall events***, given the United Kingdom's Atlantic maritime location that make it exposed to a succession of storm events. Therefore flood risk managers in England need systems, resources, and effective partnerships between authorities in order to be resilient to responding to repeated events in close succession.

2.2. ***Failure of channel embankments*** | ADA is concerned about the apparent increase in sudden failure of embankments along arterial Main Rivers in lowland areas during 2019. For example the embankment failure on the Wainfleet Flood Relief Channel, Lincolnshire in June and on the Barlings Eau and many other lowland tributaries of the River Witham, Lincolnshire during October-December.

2.3. These Main River arteries flow across lowland areas, such as the Fens, carrying water from higher land in an embanked channel above the height of the surrounding land and communities. Failures in such systems, even where areas are sparsely populated, can represent a significant risk to life, and result in prolonged flooding, with substantial repair and recovery costs. These costs affect the communities impacted, the Environment Agency who manages these assets, and also local RMAs such as IDBs whose pumping and water control assets defend the low-lying community may be put out of operation as a result. ADA is concerned that there has been a lack of adequate focus on maintaining these critical embankments in a good condition, both in terms of channel capacity and embankment stability.

2.4. Whilst the Wainfleet flood event in Lincolnshire of June 2019 is an example of such an embankment's failure, the resulting Action Plan developed in response by local RMAs and the community hopefully points to an effective way of addressing such concerns within a local partnership. ADA would welcome a similar partnership approach to be proactively applied by Defra and the Environment Agency to other lowland areas and rivers where there are local concerns about the condition of assets and rivers, before a flood event actually occurs.

2.5. ***Sustaining capacity during the flood event*** | During a flood emergency, when various criteria and thresholds are met, the local Emergency Planning and Local Resilience Forum architecture invokes a Tactical Coordinating Group (TCG) and Strategic Co-ordinating Group (SCG). This system generally works well for the organisations involved and is widely supported. For the management of a more typical intense rainfall or tidal surge flood incident it can provide a clear line of responsibility and accountability.

2.6. However, IDB members in Lincolnshire have highlighted concerns that the Local Resilience Forum Gold Command declared a formal 'emergency' situation for only a short period of days within the Witham catchment during November 2019, in comparison with the wider Autumn/Winter flooding situation which stretched between October 2019 and January 2020 for the River Witham catchment.

2.7. This had a number of impacts for the local IDBs, one of which was to make it harder for support to be called in during this wider period. For instance greater temporary pumping assistance could have more quickly reduced inundation in some areas and supported recovery. Consideration should be given to how temporary pumps owned and operated by RMAs and the fire service can be more strategically and quickly deployed and shared during such successive flood events.

2.8. ***National Resilience Assets*** | Fire & Rescue Services across the UK operate and manage a number of Government-owned National Resilience Assets including temporary high and medium volume pumps. Currently the deployment of these Assets appears to only be possible during a formal state of emergency, which as we have seen from the Lincolnshire flooding events only lasted a couple of days in Autumn 2019. As soon as that state of emergency was disbanded, those assets became unavailable yet the inundation of the area remained for weeks and in some places months and all EA temporary pumps were engaged

in other areas. It is a shame that these Fire Service National Resilience Assets were sat unused across the country in these times when they could have been utilised to significantly hasten the flood recovery efforts in several places. ADA would welcome the criteria for the deployment of these Government-owned assets to be reviewed so that they can be more readily deployed.

2.9. ***Local knowledge is imperative*** | In Lincolnshire, IDBs are involved in the response phase and management of a high rainfall event, tidal/coastal event, and where appropriate, pollution incidents and engage in a coordinated manner with the emergency command structures established. This is good practice and should be further encouraged and developed as normal procedure given that the IDBs provide a sizeable portion of the operational and management of land drainage and flood risk management within Greater Lincolnshire, outside of the main river system maintained by the Environment Agency. Their staff have a detailed and in depth knowledge of both their own and the EA's systems, which has proved highly valuable to emergency planners.

2.10. ***Recovery funding*** | The flood events within the River Witham catchment between October and December 2019 highlighted a significant gap in the emergency recovery funding for internal drainage boards. Unlike other Risk Management Authorities, IDBs do not have an agreed route to seek recovery funding where their assets, systems and workforce have been impacted by flood events even though their actions significantly contributed to coordinated recovery efforts.

2.11. Threshold for the financial assistance needs to consider an RMA's resources. The recent floods have seen an inequitable system for recovery funding applied that silos recovery between the EA, who received a national grant of £120 million for their own costs from the Treasury, and Local Authorities, who received cost reimbursement through the Bellwin Scheme that was triggered. IDBs fall between these two systems, especially during the wider flood events where they incurred third party costs due to the consequences of failures of EA maintained main river systems [river bank breaches, overtopping and significant bank seepage], but a formal emergency situation was not declared. ADA calculates that 12 IDBs incurred direct costs in the region of £700,000 as a result of overtopping, seepages or breaches from Main River during the autumn/winter 2019 floods.

2.12. ADA believes that consideration should be given to introducing a reimbursement claim mechanism for smaller public bodies like IDBs directly to Defra to aid their recovery following flood events. ADA considers that there is a need for the EA, given its national overview of flood risk management in England, to use its existing powers within the Flood & Water Management Act 2010 to assume a greater role in coordinating the recovery funding needs for all RMAs to respond to and repair damage as a consequence of flood events. We have asked Defra to carefully consider how IDBs might be recompensed for the modest £700,000 estimated cost impact of this winter's floods but have not, to date, received a judgement on that request. This request has been made in the context of the £120 million recovery fund ring-fenced for sole use by the Environment Agency to repair its assets.

2.13. ***Section 19 reports*** | These reports are triggered under the Flood & Water Act 2010 which infers a duty on Lead Local Flood Authorities (LLFAs) to investigate flood events that are considered locally significant and to publish a formal report into that event.

2.14. By their nature, S19 reports are politically sensitive, both locally within the communities affected and to the authorities concerned. Looking across the practices of various LLFAs, the minimum number and types of property affected in order to trigger a S19

report varies significantly. ADA considers that firmer national guidance around S19 reports would be beneficial and greater independence introduced to the investigatory system.

2.15. Investigations take too long to produce, and do not go far enough to create Action Plans that give local residents some assurance that accountable steps will be taken to reduce flood risk. Unfortunately, by the time evidence has been gathered, the report has been edited and re-drafted several times, and input received from the various actors/authorities involved, the outcome may avoid the more challenging truths about a flood event. There seems to be too much contemplation of capital scheme options rather than consideration of what could be done to reduce flood risk more immediately and in a sustained manner through adherence to basic maintenance regimes.

2.16. This raises a question as to whether LLFAs are currently best placed to conduct these S19 investigations objectively and with the necessary resources in all circumstances. Perhaps consideration could be given to a national system for appointing independent inspectors that are able to conduct full and unfettered enquiries.

2.17. It would also be useful to look at S19 protocols for LLFA/highways authorities/Water Companies and other relevant authorities to ensure that these public bodies liaise more closely with the investigation, with a view to making recommendations for post-flood actions. If partners are able to share consistent actions post flood (e.g. trigger an automatic CCTV survey of the whole system, both highways and water company) this makes finding the solution easier, regardless of whose water it is, which is more helpful to the public and useful for introducing pro-activeness for inspection and maintenance. This could be agreed as part of any update of Local Flood Risk Management Strategies. IDBs should be included in this where appropriate.

2.18. ***Strengthening response and recovery partnerships*** | There remains a need for a more coordinated mechanism to enable IDBs to be incorporated within response and recovery efforts to flooding. More ***local joint exercises*** should be held between all RMAs concerned would provide many benefits and ease the tension between them in TCG and in the field.

3. Given the challenge posed by climate change, what should be the Government's aims and priorities in national flood risk policy, and what level of investment will be required in future in order to achieve this?

3.1. ***Moving towards resilience*** | Understandably, as a result of such intense and persistent weather events as well as predicted climate change, there is a move within the flood risk management sector away from resistance measures to managing flood risk and towards resilience. The forthcoming National FCERM Strategy can help establish and normalise a consistent, common understanding of resilience and adaptation. However, further efforts will be required to communicate this with other key stakeholders to facilitate a shared understanding of problems and solutions, and shared ownership of these.

3.2. ADA particularly supports the creation of more resilient systems, assets and landscapes with effective funding and support to those who contribute. However, we do not believe that a move towards resilience should come at the expense of reducing standards of defence or as an excuse to not maintain systems and assets in certain areas. Instead we should be looking at offering broader solutions that enable assets and landscapes to

operate in a multifunctional manner to better manage water, and quickly recover from extreme events.

3.3. ADA welcomed the finding within the National Infrastructure Assessment 2018 that a nationwide objective for a minimum level of resilience wherever feasible should be set. It is noteworthy that the National Infrastructure Commission's own social research showed that 59 per cent of people thought everyone should receive the same level of protection, even though in some areas it would cost more, with only 16 per cent against. ADA agrees that a national standard should not be statutory or imply a right to compensation if not achieved.

3.4. ***Integration with water resources*** | It is essential that FCERM policy in England should be more regularly considered alongside water resource policy in the future. The work of partnership bodies such as Water Resource East point to a very positive approach that should be strongly encouraged and supported. Unfortunately, ADA has had to recently challenge OFWAT's determination for the next series of water company business plans. ADA believes that the determination, actively sets out to curtail investment in partnership projects by water companies and will have a negative impact on efforts currently being made by a number of water companies to build a collaborative approach with other risk management authorities in their area, both in terms of the management of flood risk and water resources. The determination has rightly been challenged, but if upheld, this would be a prime example of how a lack of national cross-sector strategy can stifle partnership working.

3.5. ***Catchment based approach*** | RFCCs enable regional FCERM partners to come together and should be supported to jointly review and decide the priorities of each catchment as a whole. It is important that funding prioritisation is accessible to all RMAs so that it can be spent across the catchment in line with its prioritised needs and regardless of the owner of the assets.

4. How can communities most effectively be involved, and supported, in the policies and decisions that affect them?

4.1. ***IDBs provide a local accountability model*** | Ever since Roman times, efforts have been made to control the water, protect the land, and shape our water landscape in lowland areas. Early on, people realised that they would be better off working together than going it alone. They pooled their resources, reclaimed land, dug new rivers, and built new embankments. This required rational collective action and they formed drainage boards to negotiate the works and their maintenance. In doing so they laid an important foundation for the democratic governance of water, and the public water management authorities that continue to this day. The principle of collective responsibility for local water management endures at the heart of IDBs today. It remains more efficient to build and maintain our water environment together, and to delegate the design and execution of works to professional well governed local organisations.

4.2. **RFCCs** also provide an effective means for local representation in funding decisions around flood risk management. Whilst IDBs annually contribute to RFCCs through precept funding, there is currently no mechanism for them to be represented on these committees. As such consideration should be given to the criteria for EA appointed members on the committee where there are a larger number of IDBs within an RFCC area, e.g. the RFCCs for Wessex, Anglian (Northern, Great Ouse, and Eastern), Trent, South East, and Yorkshire.

5. With increasing focus on natural flood management measures, how should future agricultural and environmental policies be focussed and integrated with the Government's wider approach to flood risk?

5.1. ***Catchment management*** | ADA supports a whole catchment management approach in order to effectively manage water both as a resource and as a flood risk. It is important to ensure that throughout a catchment a variety of measures are implemented effectively in the most appropriate parts of a catchment, including those measures termed natural flood management. In England we need to increase and empower local professionals within Risk Management Authorities and communities to manage and operate these catchments together.

5.2. **Natural Flood Management** | As we increasingly utilise measures that both utilise habitats and attenuation measures within the landscape, these are implemented with care. Just as with more artificial measures, NFM need to ensure they present an effective solution throughout their lifespan and are maintained and managed effectively.

5.3. Some techniques such as the use of woody material to construct check-dams can, if not properly engineered or maintained, become dislodged and add to flood risk downstream. Equally it is important to understand the effectiveness of the NFM techniques being applied, many measures can be effective during smaller scale flood events, but may be ineffective during more intense events or prolonged periods of wet weather as seen during the winter of 2019/20.

5.4. Although there is an increased focus on these measures, there needs to be more evidence gathered for their implementation in the most appropriate parts of a catchment. Future policies MUST make the distinction between differing catchments to avoids a one-size solution that is inappropriate in some catchments.

5.5. An example of this would be leaky-dams that slow the rate that water flows through them. These are appropriate in fast reacting upland catchments that need to slow the flow, but would not be appropriate for lowland watercourses.

5.6. It is noteworthy that there are other more resilient approaches that work with nature that can be applied in lowland catchments where there is very little gradient. ADA would particularly highlight the positive measures set out within A Guide to Management Strategies and Mitigation Measures for Achieving Good Ecological Potential in Fenland Waterbodies (2017) published by the EA, ADA, Cambridgeshire ACRE and Fenland IDBs. The uptake of measures, such as bermed/two stage channels, that can create both greater channel capacity and more aquatic habitat within lowland artificial watercourses has often been limited in the past by the cost of purchasing or compensating farmers for the loss of high grade agricultural land. It would be good to explore what agri-environment incentives could be created to enable them to work more closely on such measures with IDBs.

5.7. **ELMS** | The Agricultural Bill 2019-2020 outlines several public goods through which financial assistance will be provided – this includes the management of land, water or livestock in a way that mitigates or adapts to climate change, or helps prevent, reduce or protect against environmental hazards, including flooding. This offers an opportunity to further enhance the role of farmers and the agricultural landscape to reduce the risk of flooding to infrastructure and communities within the Environmental Land Management Schemes

(ELMs) anticipated for 2024 (Defra, 2020). However, to date flood risk managers do not appear to have been included widely in the discussions around ELMS, which may result in opportunities to further reduce flood risk within the landscape being missed.

5.8. ***Washlands*** | ADA would support the changes to agri-environment funding in England being used to explore offering the right long-term incentives/compensation to landowners to enable productive farmland to be utilised for flood storage. We think that such funding should be nationally available where the storage provision is agreed and coordinated with a risk management authority, and flood water is stored in a controlled manner that enables flood water to be swiftly evacuated from land after the flood peak has passed. One aspect of funding for such an approach is to recognise that any flood risk infrastructure requirements, such as control structures, embankments and spillways, should be managed by a local risk management authority.

5.9. The Room for the River programme in the Netherlands offers an inspirational example of reengineering for our lowland landscape to create greater flood storage and aquatic habitat, whilst at the same time retaining productive agriculture, communities and heritage. Room for the River has been achieved by national bodies working with local partners in the Netherlands, such as the 21 regional water boards.

5.10. ***European beaver*** | ADA is not supportive of the release of European beaver (*Castor fiber*) in England without changes to legislation and adequate procedures that would ensure that Risk Management Authorities can take proportionate steps to mitigate and manage the adverse impacts that can result from beavers' dam building and burrowing activity on flood risk and water level management infrastructure (e.g. damage to channel and flood embankments, culvert blockages etc). The procedures and regulations will need to be robust and suitably foresighted to consider the impacts that this species could present as it spreads into lowland areas.

5.11. ADA recognises that there is a widespread societal desire to see the return of this species. Therefore, we want to ensure that England adequately learn lessons from the regulatory procedures that other European countries, such as the Netherlands, have put in place between their Water Boards and Environmental regulators to adapt to living alongside this species in lowland landscapes that require active water level management.

5.12. ***Valuation of agricultural land*** | Funding for schemes in rural areas is an on-going concern for ADA. The current methodology and guidance for valuing the benefit associated with a flood defence scheme undervalues the long term benefit to society provided by farmland not only in terms of flood production and security but also its importance to the local economy and services, positive effect of greenspace on wellbeing in communities and the array of environmental services it provides. The current methodology applies discounted market values, related to government subsidy at an average per hectare amount. Given changes to agricultural subsidy as a result of the United Kingdom's exit from the European Union, and likely transition towards payments for public benefit and ecosystem services, ADA would strongly support the review of this Government guidance.

5.13. ADA considers that the methodology should take account of the true value per hectare of agricultural land taking account of its regional productive capability; and the output per hectare to the food processing and manufacturing sectors as well as its amenity and conservation value to society. Given the importance of the food sector to the economy, it is important that the value of agricultural land should reflect regional variations in both the price of land and the add-on business that it supports in the same way that the value of

domestic properties are able to reflect regional variations in the Flood Defence Grant in Aid process.

5.14. If this is not achieved, then funding for flood defences will continue to ignore the rural environment and put agricultural production at risk, compromising both food security and the significant contribution that the food processing sector makes to the UK economy. The current COVID-19 pandemic has certainly shone a light on national food security, and it would be useful to apply this understanding to the proper valuation of agricultural land in this regard.

6. How can housing and other development be made more resilient to flooding, and what role can be played by measures such as insurance, sustainable drainage and planning policy?

6.1. ***Building in the floodplain*** | The draft National FCERM Strategy states that '*we are likely to see the number of properties built on the flood plain almost double by 2065'.* It also makes clear that we need to work with natural processes and restore floodplains to their natural function as we are to expect 35% more rainfall due to climate change. These two recognitions seem to be at odds and it should be the focus of planning policy to significantly reduce the number of properties built on floodplains and where this is not possible impose criteria that mitigate the impact of flooding on new properties.

6.2. ***The planning process*** | New development should be built to be ***resilient from the point of design***, not after the first flood event at the cost of the individuals insurance companies. This should be at the cost of the developer, if not the insurers should refuse to provide insurance or make it appropriately expensive.

6.3. The Achilles heel in effectively managing surface water flooding often sits with inability of local planning authorities to be able to impose the necessary water management solutions on housing or business development. It is unfortunate that in many instances, outside of unitary authorities, planning matters typically sit with local authorities that are not Lead Local Flood Authorities. This can result in planning authorities lacking sufficient technical expertise on planning matters. Consequently planning authorities may lack the due regard that they give to flooding matters, given the myriad of wider aspects a planning authority must consider from a development.

6.4. While LLFAs are a statutory consultee to planning for major planning applications, we frequently see that minor development is permitted with almost no consideration to surface water flood risk. Currently, it is for the Local Planning Authority to ensure applications do not increase flood risk on site or elsewhere as per paragraph 163 of the National Planning Policy Framework (NPPF). Due to the potential cumulative impacts of minor development, IDB officers endeavour to comment on minor developments that could impact the Internal Drainage Districts (IDDs) despite this not being a statutory requirement. The aim here is to promote compliance with paragraph 163 and therefore safeguard the communities within each IDD, as well as to reduce the potential for conflict between the planning process and each IDB's regulatory controls.

6.5. ***Sustainable drainage systems*** |Successive Governments' have shown a lack of willingness to implement legislation relating to sustainable drainage systems. A workable system needs to be implemented in order to ensure future development can keep pace with the

challenges of the changing climate, and by ensuring that SuDS are properly maintained over the lifetime of a development. Also the automatic right of new houses to connect to drainage systems should be revoked and should only be permitted where there is proven capacity to accept new surface water runoff or make provision for its storage and controlled release.