

# Overview & Scrutiny Committee Supplementary Agenda

**Title:** Housing, Planning & Environment  
**Date:** Wednesday 13 December 2017  
**Time:** 6.00 pm to 8.00 pm  
**Venue:** GMCA, Churchgate House, 56 Oxford Street, Manchester M1 6EU  
(location map attached)

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**Notes:** Please find attached the **Interim National Infrastructure Assessment Consultation report from Andy Burnham, GM Mayor** which the Chair has agreed can be put forward for consideration as urgent business by the Housing, Planning & Environment Overview & Scrutiny Committee on Wednesday 13 December 2017.

The reason for the urgency is to allow Members of the Committee the opportunity to comment on the content of the draft response before it is considered by the Greater Manchester Combined Authority on 15 December 2017. The deadline for responses to the consultation is 12<sup>th</sup> January 2018.

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6a.	<b>Interim National Infrastructure Assessment Consultation</b> Report of Andy Burnham, Mayor of Greater Manchester	<b>Page 4</b>

- Notes:**
- The Contact Officer for this agenda is Susan Ford, Governance & Scrutiny, GMCA ☎ 0161 778 7009 ✉ [susan.ford@greatermanchester-ca.gov.uk](mailto:susan.ford@greatermanchester-ca.gov.uk).
  - If any Member requires advice on any agenda item involving a possible Declaration of interest, which could affect their ability to speak or vote are advised to contact Jenny Hollamby at least 24 hours in advance of the meeting.
  - For copies of papers and further information on this meeting please refer to the website [www.greatermanchester-ca.gov.uk](http://www.greatermanchester-ca.gov.uk). Alternatively, contact the above Officer.
  - Please note that this meeting will be held in public and will be livestreamed (except where confidential or exempt information is being considered).

<b>Membership:</b>	Councillor Andrew Morgan	Conservative Member for Bolton
	Councillor Elaine Sherrington	Labour Member for Bolton
	Councillor Jamie Walker	Labour Member for Bury
	Councillor James Wilson	Labour Member for Manchester
	Councillor Hannah Roberts	Labour Member for Oldham
	Councillor Linda Robinson	Labour Member for Rochdale
	Councillor Michele Barnes	Labour Member for Salford
	Councillor Robert Sharpe	Labour Member for Salford
	Councillor Lisa Smart	Liberal Democrat Member for Stockport
	Councillor Elise Wilson	Labour Member for Stockport
	Councillor Gill Peet	Labour Member for Tameside
	Councillor Bernard Sharp	Conservative Member for Trafford
	Councillor Lynn Holland	Labour Member for Wigan
	Councillor Fred Walker	Labour Member for Wigan
	Vacancy	Conservative Member

**Substitutes:** At the GMCA meeting on 29 September 2017, it was agreed that the following be appointed as substitutes to each of the three committees:

Councillor David Greenhalgh	Conservative Member for Bolton
Councillor Debbie Newall	Labour Member for Bolton
Councillor Rebecca Moore	Labour Member Manchester
Councillor John McCann	Liberal Democrat Member for Oldham
Councillor Peter Malcolm	Labour Member for Rochdale
Councillor Christopher Clarkson	Conservative Member for Salford
Councillor Karen Garrido	Conservative Member for Salford
Councillor Adrian Pearce	Labour Member for Tameside
Councillor Ruth Welsh	Conservative Member for Tameside
Councillor James Grundy	Conservative Member for Wigan
Councillor Michael Winstanley	Conservative Member for Wigan

**Eamonn Boylan**  
**Secretary and Chief Executive, GMCA**

# Location Map: Churchgate House, Churchgate House, 56 Oxford Street, Manchester M1 6EU

Nearest parking- NCP Great Bridgewater Street  
Nearest disabled parking – Great Bridgewater Street on street parking  
Churchgate House is facing Valerie Patisserie on Oxford Street



## Planning, Housing & Environment Overview & Scrutiny Committee



**Date:** 13 December 2017

**Subject:** Interim National Infrastructure Assessment Consultation

**Report of:** Andy Burnham, Mayor of Greater Manchester

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### PURPOSE OF REPORT

To provide a briefing for Scrutiny members on the interim national infrastructure consultation that was launched on the 13 October 2017 and is being considered by the GMCA on the 15 December 2017. The response is a working draft.

### RECOMMENDATIONS

Members are asked to:

1. Note the report and key issues identified – section 2.5
2. Note the emerging issues for Greater Manchester – section 4.
3. Identify any specific issues that Scrutiny would like to highlight.
4. Note that work on responses to the detailed questions is still underway and the final response will be signed off by the GMCA Chief Executive in consultation with the Portfolio Lead.

### CONTACT OFFICERS

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## 1. BACKGROUND

- 1.1 The National Infrastructure Commission (NIC) was created in 2015 to provide independent advice and analysis to the Government on the infrastructure requirements and future strategy for infrastructure decisions in the UK.
- 1.2 The NIC was formally launched on the 30th October 2015, with Lord Adonis appointed as Chair. The NIC is an executive agency of HM Treasury and its formal role is to: provide expert, independent advice on pressing infrastructure issues and produce an in-depth assessment of the UK's major infrastructure needs on a 30-year horizon. Its objectives are to:
  - Foster long-term and sustainable economic growth across all regions of the UK
  - Improve the UK international competitiveness
  - Improve the quality of life for those living in the UK
- 1.3 The main output of the NIC is the National Infrastructure Assessment. This is a report analysing the economic infrastructure needs of the UK over the next 30 years with the NIC producing one National Infrastructure Assessment each Parliament which will then be formally laid before Parliament.
- 1.4 On the 27 October 2016 the NIC launched a 15-week Call for Evidence to shape the development of its National Infrastructure Assessment. All interested parties were encouraged to submit evidence, ideas and solutions. A joint GMCA/LEP response was submitted on the 9 February 2017. The responses to the call for evidence were published by the NIC on the 16 October 2017 and can be viewed at: <https://www.nic.org.uk/publications/responses-call-evidence-interim-national-infrastructure-assessment-2/>
- 1.5 The NIC are now consulting on the interim National Infrastructure Assessment. The first full assessment will be published in 2018 following this consultation and will lead to the development of a final view of the strategic vision to 2050 and the priorities for the next 30 years as well as recommendations to Government.
- 1.6 A briefing on this consultation was first provided to the 16 November Housing, Planning & Environment Overview and Scrutiny Committee.
- 1.7 The Greater Manchester response will be shaped by the new Greater Manchester Strategy (GMS): Our People our Place<sup>1</sup> following commitments in the implementation plan:
  - Through the Infrastructure Advisory group, outline the vision, scope and process to develop a Strategic Infrastructure Plan to enhance the resilience of existing infrastructure and to accommodate growth and to

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<sup>1</sup> See: [https://www.greatermanchester-ca.gov.uk/news/article/214/blueprint\\_for\\_the\\_future\\_of\\_greater\\_manchester\\_revealed](https://www.greatermanchester-ca.gov.uk/news/article/214/blueprint_for_the_future_of_greater_manchester_revealed)

- Work with GM’s main infrastructure providers to promote collaboration and synchronisation of investment plans

## 2. INTRODUCTION

- 2.1 Consultation on the interim National Infrastructure Assessment was launched on 13 October 2017<sup>2</sup>. The chairman (Lord Adonis) of the National Infrastructure Commission was supported at the launch by five of the country’s seven Mayors – from the West Midlands, Greater Manchester, London, Cambridge and Peterborough and the West of England.
- 2.2 The consultation includes a number of immediate announcements and recommendations primarily focussed on existing transport, energy and digital projects and regulatory frameworks (see Appendix A). It should also be viewed within context of the autumn budget announcements relating to transport, digital innovation, housing delivery and planning reform reported to the GMCA on the 24 November 2017<sup>3</sup>.
- 2.3 The opening section of the assessment highlights the commission’s commitment to work with the recently elected metro mayors. Stating that: *“In parallel with the Assessment the Commission will work with them on developing integrated and comprehensive infrastructure strategies. Whilst transport planning will be central to this work, the Commission will also aim to take a broader perspective, encouraging metro mayors to consider the full spectrum of potential priorities for each city-region....they need their own infrastructure plan of priority projects, policies and delivery systems, complementing Government plans and the work of the National Infrastructure Commission.*
- 2.4 The assessment covers all of the key sectors of economic infrastructure. It encompasses transport, energy, water and sewerage, flood risk, digital and waste. Whilst the assessment doesn’t cover housing, it is identified as *“the greatest capacity challenge of them all”*. The assessment is guided by the Commission’s objectives to support sustainable economic growth across all regions of the UK, improve competitiveness and improve quality of life.
- 2.5 The interim National Infrastructure Assessment examines seven key areas, and sets out the vision and priorities for helping meet the country’s needs up to 2050. The seven areas and key points identified in the assessment are:
- 1. Building a digital society: fast, reliable data services everywhere -**  
Requirement for substantial investment in digital infrastructure in the form of fibre optic cables and mobile networks. But choice over how to deploy it. Infrastructure has a long life and needs to be build and designed well. Support from a national design council covering all of the main

<sup>2</sup> See: <https://www.nic.org.uk/our-work/national-infrastructure-assessment/>

<sup>3</sup> See: [https://www.greatermanchester-ca.gov.uk/meetings/meeting/475/greater\\_manchester\\_combined\\_authority](https://www.greatermanchester-ca.gov.uk/meetings/meeting/475/greater_manchester_combined_authority)

infrastructure sectors. New ways to measure the state of the UKs infrastructure will be developed. Cost benefit analysis is widely used but has its limitations.

2. **Connected, liveable city-regions: linking homes and jobs** - Cities are the engine of growth but to succeed they need effective infrastructure, this includes intercity connections but is more than this and urban transport is not joined up. New technology will play a part such as 'mobility as a service' but will not solve issues of congestion or capacity. The new Metro Mayors provide an opportunity to correct the existing lack of integrated transport and it is crucial that they have funding and resources.
3. **New homes and communities: supporting delivery of new homes** - Housing supply has failed to keep up with demand. Housing cannot be created without the underpinning of transport and utilities. Smart, sustainable and liveable communities depend upon reliable and high-quality infrastructure. In return the value of new and existing infrastructure is enhanced if it enables housing to be built and gives people choices of where to live and work. System limitations include poor co-ordination between new infrastructure in relation to housing supply and the lack of responsiveness with some infrastructure framework. Better co-ordination is needed.
4. **Low-cost, low carbon: ending carbon emissions from power, heat and waste** - There are strong targets for the reduction of greenhouse emissions and good progress has been made. The cost of some supply options has decreased more rapidly than predicted. New storage and demand management technologies will be needed to enable even high levels of renewable energy. There is a gap between existing Government targets and policy and sudden changes in policy have increased the risk for private sector investors. It will not be possible to continue using natural gas to heat buildings. Carbon capture and storage will be needed as well as energy from waste. Demand will have to be managed. There are two priorities (1) improve energy efficiency and (2) provide long term certainty to deliver low cost energy.
5. **A revolution in road transport – seizing the opportunities of electric and autonomous vehicles** - Most journeys are made by road, predominantly by car. The car is about to undergo a revolution with electric, autonomous and connected vehicles will make road travel more comfortable and safer. Society will have to make choices about what changes in road design and use are acceptable for new vehicles. And whether motorists are willing to give up some degree of individual control to improve overall traffic flows. With electric vehicles, fuel duty income will decline. A new pricing system will be needed and new forms of pricing will be required alongside new forms of vehicle ownership.
6. **Reducing the risk of extreme weather: Making sure the UK can stand up to drought and flooding** - The UK relies on water and flood risk infrastructure that dates back in some cases more than a century. Risk are

increasing including from climate change, a growing population and higher environmental standards. The public has a low awareness and has a short term focus on the value of water infrastructure. Efficiency and resilience as well as demand management are needed. A longer term, more joined up and integrated approach to flooding, drainage and sewerage is required. Green infrastructure approaches to flood risk management and river catchment management can provide multifunctional benefits, as can changes to agricultural subsidies but are not necessarily effective against extreme flooding events and investment in traditional defences are required.

**7. Financing and funding infrastructure in efficient ways: getting the balance right between public and private sectors** - The UK's infrastructure is built, owned and run by a mix of the public and private sectors. Constraints set by the Governments fiscal remit mean that access to private sector finance will continue to be key to serving the UKs infrastructure needs. However projects can only be financed if there is a clear funding stream and a way to pay back the upfront costs. The European Investment bank and the Green Investment bank have played an important role in financing infrastructure by undertaking due diligence on complex and 'first of a kind' project The EIB may leave the UK market post Brexit. However the GIB may change after privatisation. New institutions may still be needed.

- 2.6 There is an emphasis on liveability and the integration and interdependency between planning for homes and homes, transport infrastructure and other critical utilities such as digital, water, flood risk management, energy and greenspace. The assessment is about setting the right framework now to help different localities plan for the future and shape their own destiny.
- 2.7 The consultation is supported by 28 open consultation questions (See Appendix B for the draft GMCA response) and the deadline for responses to the consultation is **12 January 2018**.

### **3. DEVELOPING THE GREATER MANCHESTER RESPONSE**

3.1 The following groups and boards are being utilised to gather views from different organisations and stakeholders on the strategic infrastructure issues that Greater Manchester should raise through the consultation. These groups have a good fit with the seven key areas identified in the consultation. The identified groups/boards are:

1. Greater Manchester Planning and Housing Commission
2. Greater Manchester Digital Infrastructure Leadership Group
3. Greater Manchester Infrastructure Advisory Group (including support from the Chief Resilience Officer)
4. Natural Capital Group / Low Carbon Hub
5. Transport for Greater Manchester
6. Greater Manchester Waste Disposal Authority



3.2 The GMCA Planning and Housing Team are responsible for co-ordinating the Greater Manchester response and have been liaising with the NICs thematic advisors, have connected themes leads to the NIC team to initiate ongoing dialogue and engagement. This work is ongoing.

#### 4. **EMERGING ISSUES**

4.1 In our response to the Call for Evidence, we made a number of recommendations and it's encouraging that many of the issues raised have been identified in this consultation. Whilst the issues are acknowledged there are few proposed solutions therefore it is recommended that the Greater Manchester response needs to reiterate our earlier recommendations where they are still relevant as well as responding to some of the new proposals/issues raised in the consultation. The following issues are emerging as important.

##### **Maximising opportunities offered by devolution**

4.2 For the UK's cities to succeed they need effective infrastructure and integration with wider strategic for housing and economic development. The identification, planning, design, delivery and operation of critical city infrastructure is challenging for a number of reasons. Infrastructure is owned and operated by numerous private sector companies, many of whom are required to satisfy the needs of their shareholders and the financial markets. These companies are regulated by a number of organisations such as Ofgem and Ofwat. These utility companies plan their future capital and maintenance work over different time horizons. These infrastructure investment plans need to be approved by their regulators. Our cities and towns do not have governance over the infrastructure that is critical to their success and survival.

4.3 The responsibility for city region infrastructure tends to be fragmented and poorly organised in England. In 2014 the GMCA and LEP established an Infrastructure Advisory Group (IAG) to create a sense of form around infrastructure planning and ensure there is a single voice for dialogue between the utility companies/infrastructure providers and the GMCA. The proposed focus on supporting the recently elected metro mayors in developing integrated and comprehensive infrastructure strategies builds on these foundations and is strongly supported.

4.4 The National Infrastructure Plan should reflect the Government's Northern Powerhouse Strategy and existing government commitments to this strategy, which will both drive a requirement for additional infrastructure provision and be driven by that additional infrastructure provision and thereby add to the diversity of the UK international offer. A bold plan for sustainable and inclusive growth requires a bold plan for infrastructure investment in Mayoral and devolved areas. The National Infrastructure Plan should also recognise the key role of Piccadilly station and also the need to consider commuting into the City Region not just Inter-city commuting. It is essential that any proposals to improve intercity services do not lead to a reduction in commuter services into the City Region.

## **An integrated infrastructure plan for Greater Manchester to support the delivery of the Greater Manchester Strategy**

- 4.5 To deliver our Strategy: Our People, Our Place we need to actively promote collaboration and synchronisation of investments plans between the Mayor/GMCA and the main infrastructure providers: Highways England, TfGM, United Utilities, Electricity North West, Environment Agency, Cadent and BT Open Reach.
- 4.6 The regulated utilities should be subject to a statutory duty to co-operate to ensure that infrastructure providers and the regulators e.g. Ofcom, Ofwat and Ofgem are required to actively engage with Mayoral/Combined Authority areas, to ensure that future investment plans are consistent with the future development strategy for larger than local geographical areas.
- 4.7 This would encourage early dialogue between developers and infrastructure providers to identify the infrastructure needs arising from new development and ensuring that these are addressed through appropriate planning, investment, building design, utility networks and connections in time to serve the proposed development.
- 4.8 It is also important to ensure that national planning policy and legislation supports the phasing and infrastructure ‘pooling’ for sites in multiple ownership and / or where build out will be delivered by different developers.
- 4.9 The NIC acknowledges that better co-ordination is needed and that digital mapping of existing and proposed infrastructure and developments across a broad strategic region can be useful tools. The NIC identified the MappingGM project as a good practice example created to help the Greater Manchester Combined Authority co-ordinate housing, growth, planning and infrastructure<sup>4</sup>. The work undertaken is the start of the process and using the joint Future Cities Catapult and Belfast City Council example: <http://growthplanner.net/> there is certainly scope for additional data and insights from the utility companies to be added and utilised.

### **Infrastructure to support the delivery of new homes**

- 4.10 The NIC is right to identify housing as the greatest infrastructure challenge of them all. Ultimately, people can only live where there is housing. Housing, in turn, requires infrastructure. The mutual benefits of infrastructure and housing have been frustrated by systemic limitations, with poor coordination between how new infrastructure is planned, invested in and delivered in relation to housing supply. Different utilities operate on different investment timetables often using different growth projection and rules. Often it is at the planning application stage that investments are triggered. Communities facing new development in areas with existing infrastructure issues are demanding certainty that the development will not make the existing situation worse.

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<sup>4</sup> See: <http://mappinggm.org.uk/about.htm>

- 4.11 Furthermore a lack of responsiveness within some infrastructure frameworks to market signals, leaving infrastructure development out of kilter with local growth. There are clear benefits to putting this right. Infrastructure and housing development should work together to help shape attractive, well-connected communities where people want to live and work.
- 4.12 Basic infrastructure can take a long time to procure and deliver e.g. a primary substation can take two years. Therefore, investors and developers interested in developing a site, usually in response to market needs, could be faced with unreasonable/unrealistic programmes to bring a housing or commercial development to the market. Theoretically, a network operator is allowed to “invest ahead of need” where it is efficient to do so, but in reality this is not a common practice. One of the main reasons for this is that any such investment will be assessed for efficiency after the fact. Ofgem have yet to consult upon, develop or determine the rules for assessing efficiency.
- 4.13 One of the challenges for investing ahead of need is the risk of stranded assets i.e. the investment has taken place but the planned development doesn’t take place or is delayed. The question is essentially one of risk and certainty, who underwrites the risk that the demand/ development will happen and how any forward investment is paid for and paid back.

#### **Capturing value from infrastructure investment**

- 4.14 Improved infrastructure often increases the value of surrounding land and properties. These uplifts in land and property value can provide windfall benefits to those who own them. By funding projects based on their local capacity to capture this value uplift, there is a strong incentive for scheme promoters and designers to maximise the benefits of any scheme. We are pleased to be working with the GLA and other CA areas to analyze best fit models to achieve LVC.
- 4.15 Local funding can also strengthen local accountability. The interim assessment acknowledges this issue and indeed uses a quote from the GMCA response that: *‘It is notoriously difficult for the planning system to capture land value uplift with existing mechanisms such as section 106 agreements and the Community Infrastructure Levy. This may be fine for site specific infrastructure spending such as a new highway junction but has limitations where significant new investment is required or as an approach to convince local residents that the existing infrastructure issues will be resolved.’*
- 4.16 In response to this issue the commission intends to explore the development of new mechanisms to capture land value. Land value capture is not a panacea to pay for all infrastructure needs. But it may be able to play a role in ensuring a fairer distribution of the costs of infrastructure between general tax payers and property owners who receive windfall gains. The commission suggests that it could help ensure that the infrastructure needs of London and the South East – where land value uplift can make a more significant

contribution to costs – are less directly in competition for national funding with the needs of other parts of the country where land values are lower.

### **Well designed and performing infrastructure**

- 4.17 Good design is clearly essential to many aspects of the built environment and particularly infrastructure projects as their physical and social impacts are so large and long lasting. However, good design should be defined in terms of not only is aesthetic and functional contribution but also its safe delivery and operation, its capital and operational cost and its timely delivery.
- 4.18 Infrastructure covers a wide spectrum e.g. digital to drainage, hence any “expert national infrastructure design panel” will need to draw on a range of design and user experts in a particular field of infrastructure.
- 4.19 Many designers already operate a design review process to test the appropriateness of developing design solutions. On major infrastructure projects the remit of an expert design panel should cover the scope, performance requirements, planning, design, delivery and operation of the asset.
- 4.20 The proposed performance metrics are good and ambitious but cost-benefit analysis too often focuses on producing too much detail about too few alternatives. As the NIC has already highlighted *“the methods used to inform transport investment decisions do not currently support integrated transport and housing planning. Standard economic appraisal methods for transport are good at assessing benefits, such as quicker or safer journeys, but it is harder to capture the benefits from new housing or commercial developments enabled by transport projects”*.
- 4.21 We believe that additional emphasis should be placed on the wider social impacts such as health and wellbeing, inclusiveness, social return on investment. DfT models of business case evaluation are a prime example as they do not work in respect of forward looking infrastructure investment but merely serve to reflect lack of capacity on existing infrastructure. They do not allow for the reflection of future growth unlocked by any investment to be reflected in any evaluation. This has to be a priority for change.
- 4.22 There should be some performance assessment of the interrelationship and hence interdependence of a specific infrastructure with other existing or proposed infrastructure systems the aim being to have better system integration to improve efficiency and effectiveness.
- 4.23 There is a need to give more consideration to the whole life cycle of water supply, drainage/sewage and waste treatment to provide more efficient and effective.

### **Replacing EU and European Investment Bank Funding**

- 4.24 If the UK loses access to EIB funding, a new institution/funding programme would undoubtedly be required to ensure continued infrastructure investment and to prevent significant delays. Such an alternative institution would take considerable time to establish. Therefore an interim measure would be required.
- 4.25 In establishing an alternative, consideration should be made as to the strengths, limitations and restrictions of the current EIB funding structure in order to structure a new programme in the most beneficial way.
- 4.26 It is also be important to consider ways in which to ensure diversity of the portfolio in order to limit risk. Detailed analysis of existing loans and those in the pipeline would need to be undertaken in order to identify the nature of funding requirements (sectors, terms, geography, pricing, risk etc).

## **5. RECOMMENDATIONS**

- 5.1 Recommendations are found at the front of the report.

## **ANNOUNCEMENTS**

- The Government should complete all preparatory work needed for a Parliamentary decision to be taken on a third runway for Heathrow airport, and progress other aviation policy decisions to boost air traffic capacity, particularly in the south-east of England.
- The Government should introduce the hybrid Bill for phase 2a (Birmingham to Crewe) of High Speed 2 and publish the finalised route for Phase 2b (Crewe to Manchester and Birmingham to Leeds), including connections with High Speed 3, and let the major work contracts for the project, by the end of July 2017.
- The Government should publish by the end of 2017 a single integrated plan for the first phase of High Speed 3, incorporating proposals for electrifying and upgrading the trans-Pennine (Manchester to Leeds) rail route, plans for the northern sections of HS2, and plans for the redevelopment of Manchester Piccadilly station, as set out in the Commission's High Speed North report.
- The Government should by the end of 2017 publish a plan, agreed with the Mayor of London, for the funding and phased construction of Crossrail 2, and for securing the necessary parliamentary consent, taking account of the recommendations in the Commission's Transport for a World City report.
- The Government should take a decision on planning permission for the Silvertown Tunnel by the end of October 2017. It should also announce its financing strategy for the new Lower Thames Crossing (to relieve the congested M25 Dartford Crossing), and begin the Environmental Impact Assessment process, no later than September 2017, paving the way for consultation on the detailed route in 2018 and the submission of the development consent application in 2019. And it should agree a policy with the Mayor of London for the next road crossing of the Thames in East London by the end of 2017, to enable substantial new housing development.
- The Government should publish its plan for smart energy systems, as set out in its response to the Commission's Smart Power report, including the actions it will take to enable greater deployment of electricity storage, interconnectors and demand flexibility, no later than September 2017.
- The Government should publish its firm forward plans for supporting renewable energy, at least to 2025, including the use of the remaining funds from the £730m agreed in the last Parliament, by October 2017, and specific longer-term goals in the Autumn Budget.
- The Government should publish its strategy for the decarbonisation of energy, including its emissions reduction plan, no later than October 2017, and set out its trajectory for the future level of the "carbon price floor" in the Autumn Budget.
- The Government should by the end of the year publish a strategy and timetable for replacing the services provided by the UK's membership of Euratom to

support the timely delivery of the new Hinkley Point C nuclear power station and any future nuclear projects.

- The Government should, by the end of 2017, publish its final broadband Universal Service Obligation decision and set out minimum acceptable standards for mobile coverage.
- The Government and Ofcom should implement the recommendations from the Commission's Connected Future report and prepare for the widespread deployment of 5G technology from 2020.
- The Government should finalise the Strategic Policy Statement for Ofwat by the end of September 2017 and publish its review setting out proposals for the effective management of surface water flooding by the end of 2017.
- Responsibility for digital infrastructure should reside in one place in Government.
- Infrastructure should be in place for 5G mobile connectivity on motorways and key rail routes by 2025.
- Local Government should actively facilitate the deployment of mobile telecoms infrastructure.
- Development of meaningful performance metrics for the coverage people actually receive, and use these to determine a mobile Universal Service Obligation.
- A review of the existing regulatory regime to ensure it supports the sharing of telecoms infrastructure between different Mobile Network Operators.
- A review of how 'spectrum' (the range of mobile communication frequencies) is allocated to facilitate greater access, particularly for communities, local or regional networks and businesses requiring connectivity inside buildings.
- Additional investment in northern connectivity should include taking forward an enhanced 'HS3' rail network, beginning between Manchester and Leeds, the two largest economies in the North, and an early boost in road capacity on the M62. Further work is needed to develop and agree a prioritised strategy for HS3, but the aim should be for the initial phases to be delivered broadly alongside Crossrail 2 in London.
- Better connections to the UK's network from countries with cheap, green power supplies, such as Norway and Iceland are needed.
- The Government should exploit the UK's opportunity to become a world leader in energy storage technology, by creating a level playing field between generation and storage.

- The Government should demand flexibility – using technology to allow consumers to save money and cut emissions without inconvenience.
- The Government should give infrastructure the right priority – choosing long-term investment over consumption
- The Government should enable decisions to be made in good time on good projects, and not reopened
- The Government should make full use of leading edge technology – smart infrastructure for a smart nation
- The Government should incorporate innovation in finance and funding – managing demand and driving efficiency
- The Government should focus on design from the beginning – good design is the starting point for delivering high quality infrastructure
- The Government should enhance the environment and protect natural capital, including by improving air quality and driving down carbon emissions
- People and businesses up and down the country should be involved in the creation of a national framework that incorporates local and regional priorities



## CONSULTATION QUESTIONS

**ISSUE 1:** *The UK is preparing to leave the European Union. While the terms of exit are currently uncertain, this raises a wide range of issues. The Commission is focused on strategic issues (eg the implications for environmental policies, such as the Habitats Directive) rather than delivery issues, which are the responsibility of the Infrastructure and Projects Authority (eg the future supply of skilled labour).*

**QUESTION 1) How does the UK maximise the opportunities for its infrastructure, and mitigate the risks, from Brexit?**

### GMCA Response

A stable and clear long term regulatory framework provide certainly for investors, supply chains and skills provision.

Given the decision to withdraw from the European Union, we need to focus on maximising our existing competitive advantages. Greater Manchester has always been an outward looking city with a rich history of global trade and welcoming of diversity and talent. Remaining open, international and connected will be ever more important in the coming years. As the heart and driver of the Northern Powerhouse economy, we need to prepare for, and take advantage of, the transformational opportunities major infrastructure improvements, such as HS2 and Northern Powerhouse Rail, will provide.

Regulations have delivered environmental improvements that have resulted in measurable benefits to Greater Manchester. Our strategy commits us to a reduction in carbon emissions and air pollution, increased resilience, more sustainable consumption and production, and an outstanding natural environment. Expertise and experience of dealing with contaminated land, energy challenges and water management has created skills and jobs in environmental good and services that can be deployed locally and internationally.

**ISSUE 2:** *Good design is essential to ensuring infrastructure that lasts, is useful and enhances both its environment and the quality of life of citizens.*

**QUESTION 2) How might an expert national infrastructure design panel best add value and support good design in UK infrastructure? What other measures could support these aims?**

### GMCA Response to be added (if necessary).

**ISSUE 3:** *The Commission proposes to identify a small set of high-level metrics to assess the UK's progress in achieving high quality, resilient, affordable and sustainable infrastructure. The Commission's initial proposals are set out in Annex A.*

**QUESTION 3) How can the set of proposed metrics for infrastructure performance (set out in Annex A of the interim assessment) be improved?**

### GMCA Response to be added (if necessary).

**ISSUE 4:** *Cost-benefit analysis is a key source of evidence used to inform decisions on infrastructure investments. However, too often it narrows down to a preferred option without giving sufficient consideration to alternatives.*

**QUESTION 4) Cost-benefit analysis too often focuses on producing too much detail about too few alternatives. What sort of tools would best ensure the full range of options are identified to inform the selection of future projects?**

GMCA Response:

We believe that additional emphasis should be placed on the wider social impacts such as health and wellbeing, inclusiveness, social return on investment. DfT models of business case evaluation are a prime example as they do not work in respect of forward looking infrastructure investment but merely serve to reflect lack of capacity on existing infrastructure. They do not allow for the reflection of future growth unlocked by any investment to be reflected in any evaluation. This has to be a priority for change.

**ISSUE 5:** *The UK has invested less in ‘next generation’ infrastructure than many other advanced economies.*

**QUESTION 5) What changes are needed to the regulatory framework or role of Government to ensure the UK invests for the long term in globally competitive digital infrastructure?**

GMCA Response to be added (if necessary).

**ISSUE 6:** *Fixed and mobile networks are converging. Both the technology itself and its uses are driving this increasing convergence.*

**QUESTION 6) What are the implications for digital infrastructure of increasing fixed and mobile convergence? What are the relative merits of adding more fibre incrementally over time compared to pursuing a comprehensive fibre to the premises strategy?**

GMCA Response:

The objective may be the same for all areas but different places have different starting points. The GMCA has developed a digital infrastructure plan. To implement this plan the GMCA intends to work closely with industry, Department for Digital Culture Media & Sport, the regulator Ofcom and key strategic organisations include the Digital Catapult to ensure the actions within this plan are effectively delivered. For Greater Manchester to be considered world leading our digital infrastructure will need to be built upon the foundations of having a full fibre network<sup>1</sup>. Fibre to the home or business – ‘full fibre’ – is considered to be the best technology available. It provides the highest quality of service in terms of speed and reliability. However, physically connecting fibre to every home and office may not be essential in the long term. Many devices are already connect in the first instance via the radio spectrum, through Wi-Fi or Bluetooth. Deploying fibre to support future mobile technologies,

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<sup>1</sup> Where all premises have fibre connections

whether 5G mobile or its successors could be a future option. In the medium to long term devices within homes and offices might then connect directly to 5G, or via a 'fixed wireless broadband' device, which would provide Wi-Fi within the building and connect via 5G rather than needing fibre within the building.

**QUESTION 7:** *Connectivity has become a necessity where people live work and travel, in both urban and rural areas. Rural areas however continue to be excluded. The Commission want to know what role central and local Government should play to ensure ubiquitous connectivity.*

**QUESTION 7) What are the key factors including planning, coordination and funding, which would encourage the commercial deployment of ubiquitous connectivity (including, but not only, in rural areas)? How can Government, Ofcom and the industry ensure this keeps pace with an increasingly digital society?**

GMCA Response:

The acceleration of investment in Full Fibre to the Premises and universal high speed broadband coverage is not solely dependent upon securing Government funding. The opportunities from public sector demand would could still help drive market investment - albeit at a smaller scale. However, it is essential that it is supported by a suite of additional actions in the Plan that can accelerating market investment in Full Fibre by minimising the cost and administrative barriers to Full Fibre Investment and increasing demand. These are:

1. Making available to all market providers key public assets including Metrolink and National Rail ducting.
2. Adoption of a Standardised Wayleave pioneered by City Of London across Greater Manchester to reduce the cost and time involved in delivering fibre to the premises.
3. Fully mapping dark fibre and ducting assets and encouraging a "one dig" approach where ducting is installed on an opportunist and low cost basis when major road and pavement works are undertaken.
4. Adopting policy within the Great Manchester Spatial Framework to specify the provision of open ducting for all new development.
5. Drive demand through targeted business fibre voucher scheme supported by Government funding and leveraging market capacity.

**ISSUE 8:** *As infrastructure systems become more smart, complex and interdependent, the potential for unintended interactions in the system increases. As a result, the likelihood of accidents also increases. Greater use of digital connectivity can make the impact of these 'system accidents' (unanticipated interactions of multiple failures in complex, interconnected systems) accidents more damaging than ever before.*

**QUESTION 8) How can the risks of 'system accidents' be mitigated when deploying smart infrastructure?**

GMCA Response to be added (if necessary).

**ISSUE 9:** *The economic benefits of concentrating economic activity in cities is driving the growth of cities, but this is causing congestion on city transport networks and a shortage of land for housing. Congestion can't be solved by simply building more roads, and current arrangements for infrastructure planning aren't joined up with planning for new housing.*

**QUESTION 9) What strategic plans for transport, housing and the urban environment are needed? How can they be developed to reflect the specific needs of different city regions?**

GMCA Response:

The Greater Manchester Strategy (GMS)<sup>2</sup> outlines our vision and priorities for the future. We are fortunate in Greater Manchester to be working on a joint plan - The Greater Manchester Spatial Framework (GMSF) which allows us to take an integrated, strategic and spatial approach to planning across the city-region, based on a clear understanding of the role of places and the connections between them.

The GMSF alongside our developing housing strategy will boost the pace of housing development and improve the quality, choice and affordability of the homes on offer so that our housing markets meet the requirements and aspirations of existing and future residents. We will continue to develop the high density urban offer in and around the regional centre to attract the increasing number of people who want a city centre lifestyle. We will also look to increase the density of our housing supply around public transport hubs. As part of a broader approach to repurposing and reinvigorating our town centres we will develop Greater Manchester's town centre offer for housing for a broader range of households, to make town centres residential locations of choice.

The GMSF will also include a strategy for the environment and the ecosystem services it provides, protecting the critical green infrastructure assets, especially in the urban areas in light of increasing pressures from people, the economy and a changing climate. The GMSF will seek to protect our existing green spaces by pursuing a brownfield and town centres first approach to housing and employment site development and improving the quality of our parks, rivers and canals.

The Greater Manchester 2040 Transport Strategy sets out our strategy to develop a high quality, fully integrated transport system for Greater Manchester, with travelling customers at its heart. We will take a whole-system approach to the management, maintenance and renewal of the transport network across all modes – roads, trains, trams, buses, active travel and freight, and catering for all types of journey – from local neighbourhood trips to global travel. We will ensure our transport infrastructure and services are accessible to all, including disabled people and those with mobility problems.

**ISSUE 10:** *Currently there is no stable long-term funding arrangement for the major investment needed in city transport outside London. Making this a priority would mean trading off against other objectives within limited resources for transport*

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<sup>2</sup> See: [https://www.greatermanchester-ca.gov.uk/news/article/214/blueprint\\_for\\_the\\_future\\_of\\_greater\\_manchester\\_revealed](https://www.greatermanchester-ca.gov.uk/news/article/214/blueprint_for_the_future_of_greater_manchester_revealed)

*investment, which is especially difficult in the 2020s given existing commitments for major road and rail links between cities.*

**QUESTION 10) What sort of funding arrangements are needed for city transport and how far should they be focused on the areas with the greatest pressures from growth?**

Awaiting response from TfGM.

**ISSUE 11:** *Capturing a greater portion of land and property value uplift could help to fund infrastructure. However, the potential for uplift differs dramatically across the country.*

**QUESTION 11) How can the Section 106 and Community Infrastructure Levy regimes be improved to capture land and property value uplift efficiently and help fund infrastructure? Under what conditions are new mechanisms needed?**

GMCA Response

Improved infrastructure often increases the value of surrounding land and properties. These uplifts in land and property value can provide windfall benefits to those who own them. By funding projects based on their local capacity to capture this value uplift, there is a strong incentive for scheme promoters and designers to maximise the benefits of any scheme. We are pleased to be working with the GLA and other CA areas to analyze best fit models to achieve LVC.

Local funding can also strengthen local accountability. The interim assessment acknowledges this issue and indeed uses a quote from the GMCA response that: *‘It is notoriously difficult for the planning system to capture land value uplift with existing mechanisms such as section 106 agreements and the Community Infrastructure Levy. This may be fine for site specific infrastructure spending such as a new highway junction but has limitations where significant new investment is required or as an approach to convince local residents that the existing infrastructure issues will be resolved.’*

In response to this issue the commission intends to explore the development of new mechanisms to capture land value. Land value capture is not a panacea to pay for all infrastructure needs. But it may be able to play a role in ensuring a fairer distribution of the costs of infrastructure between general tax payers and property owners who receive windfall gains. The commission suggests that it could help ensure that the infrastructure needs of London and the South East – where land value uplift can make a more significant contribution to costs – are less directly in competition for national funding with the needs of other parts of the country where land values are lower.

**ISSUE 12:** *Currently, infrastructure and housing are often not financed, designed, timed or delivered compatibly, which leads to infrastructure delaying housing delivery.*

**QUESTION 12) What mechanisms are needed to deliver infrastructure on time to facilitate the provision of good quality new housing?**

GMCA Response

We would welcome the opportunity to work with the NIC to determine whether new mechanisms are needed, whether existing mechanisms need to work better and then an options appraisal of the likely options and intervention required to address specific issues in different geographical areas.

The mutual benefits of infrastructure and housing have been frustrated by systemic limitations, with poor coordination between how new infrastructure is planned, invested in and delivered in relation to housing supply. Different utilities operate on different investment timetables often using different growth projections and rules. Often it is at the planning application stage that investments are triggered. Communities facing new development in areas with existing infrastructure issues are demanding certainty that the development will not make the existing situation worse.

Furthermore a lack of responsiveness within some infrastructure frameworks to market signals, leaving infrastructure development out of kilter with local growth. There are clear benefits to putting this right. Infrastructure and housing development should work together to help shape attractive, well-connected communities where people want to live and work.

Basic infrastructure can take a long time to procure and deliver e.g. a primary substation can take two years. Therefore, investors and developers interested in developing a site, usually in response to market needs, could be faced with unreasonable/unrealistic programmes to bring a housing or commercial development to the market. Theoretically, a network operator is allowed to “invest ahead of need” where it is efficient to do so, but in reality this is not a common practice. One of the main reasons for this is that any such investment will be assessed for efficiency after the fact. Ofgem have yet to consult upon, develop or determine the rules for assessing efficiency.

One of the challenges for investing ahead of need is the risk of stranded assets i.e. the investment has taken place but the planned development doesn't take place or is delayed. The question is essentially one of risk and certainty, who underwrites the risk that the demand/ development will happen and how any forward investment is paid for and paid back.

**ISSUE 13:** *The UK has an established and mature gas grid, which provides a reliable supply of gas for heating. However, the continued burning of natural gas for heating is not sustainable as the UK progresses towards a low carbon energy system. This brings into question the future role of the gas grid.*

**QUESTION 13) What will the critical decision factors be for determining the future of the gas grid? What should the process for deciding its future role be and when do decisions need to be made?**

GMCA Response to be added (if necessary).

**ISSUE 14:** *The UK has a relatively old and energy inefficient building stock, which results in higher energy consumption. Upgrading the energy efficiency of buildings will enable consumers to save money in the short and longer term as the UK switches to low carbon heat infrastructure. Building refurbishment could be integrated with other enhancements, such as installing solar panels or alternative forms of heating.*

**QUESTION 14) What should be the ambition and timeline for greater energy efficiency in buildings? What combination of funding, incentives and regulation will be most effective for delivering this ambition?**

GMCA Response to be added (if necessary).

**ISSUE 15:** *Keeping the cost of low carbon energy down is one of the most important inputs into a successful industrial strategy for the UK. Well-designed market mechanisms should ideally be open, competitive and technology neutral.*

**QUESTION 15) How could existing mechanisms to ensure low carbon electricity is delivered at the lowest cost be improved through:**

- **Being technology neutral as far as possible**
- **Avoiding the costs of being locked in to excessively long contracts**
  
- **Treating smaller and larger generators equally**
- **Participants paying the costs they impose on the system**
- **Bringing forward the highest value smart grid solutions?**

GMCA Response to be added (if necessary).

**ISSUE 16:** *Nuclear power is an expensive form of generation and is unlikely to get built without Government intervention. However, if electricity is selected as the primary way to heat our buildings in the future, it is unlikely that renewables could generate sufficient electricity to meet total demand. It is also unclear whether system stability can be maintained with very high levels of renewables.*

**QUESTION 16) What are the critical decision factors for determining the role of new nuclear plants in the UK in scenarios where electricity either does, or does not, play a major role in the decarbonisation of heat? What would be the most cost-effective way to bring forward new generation capacity? How important would it be for cost-effectiveness to have a fleet of nuclear plants?**

GMCA Response to be added (if necessary).

**ISSUE 17:** *Carbon capture and storage has the potential to support the transition to a low carbon energy system in multiple ways, including enabling the creation of greener gases for heating, and reducing emissions for fossil fuel power stations and industry. However, it has had a difficult history in the UK. Internationally, it is predominantly used for enhanced oil recovery, rather than reducing carbon dioxide emissions.*

**QUESTION 17) What are the critical decision factors for determining the role of carbon capture and storage in the UK in scenarios where electricity either does, or does not, play a major role in the decarbonisation of heat? What would be the most cost-effective way to bring it forward?**

GMCA Response to be added (if necessary).

*ISSUE 18: Waste can be a valuable fuel for the difficult-to-decarbonise sectors. New and established technologies could make a contribution to the heat and transport sectors.*

**QUESTION 18) How should the residual waste stream be separated and sorted amongst anaerobic digestion, energy from waste facilities and alternatives to maximise the benefits to society and minimise the environmental costs?**

GMCA Response:

The first requirement is a long term waste policy and strategy for England. The current targets only go to 2020 and there is no visibility beyond that point in time as to how the Government will implement EU requirements such as the Circular Economy. This lack of a long term vision will not stimulate investment in new infrastructure. A clear policy vision is required that takes a whole life approach to resource management through the chain of utility rather than simply seeking to provide end of pipe infrastructure.

Products need to be designed for maximum reuse and recyclability at the point of production. Plastic is a prime example with a range of food packaging that cannot currently be recycled (see response to question 19). Supermarkets and retail outlets need to be specifying products that have high recycled content and also use a limited range of materials to make recycling easier for members of the public. Collection systems and materials collected for recycling across the country need to be more consistent in order to increase participation and reduce contamination. Greater investment is needed in communication and engagement with residents on what they can recycle and how they can make more informed choices as consumers.

This change of approach will stimulate demand for recycled products which will therefore require investment in reprocessing capacity. Significant tonnages of recyclable materials are exported from the UK to Europe and China for reprocessing. Post Brexit the European market will be more stringent on what materials it will accept as the Circular Economy regulations are implemented and China is already imposing strict contamination requirements. The UK therefore needs to adopt the approach outlined above to collect better quality materials for recycling and also to invest in its own reprocessing infrastructure.

A similar position exists with energy from waste with many operators predicting a shortfall in capacity over the next 10 years. Over 3 million tonnes of waste are currently export to Europe for energy recovery representing a significant lost opportunity for domestic energy generation. Uncertainty exists over what will happen to this material post Brexit, but with the current predicted shortfall in domestic EfW capacity, it will lead to an increase in gate fees with greater competition and



potentially some landfill of material. Work is therefore required now to look at strategic planning for additional capacity to develop a domestic market for EfW and avoid further exports.

**ISSUE 19:** *The first best option to reduce waste costs for households and businesses is to minimise the amount of waste produced. The packaging recovery note system places costs on the producers of packaging to account for the end-of-life impact.*

**QUESTION 19) Could the packaging regulations be reformed to sharpen the incentives on producers to reduce packaging, without placing disproportionate costs on businesses or creating significant market distortions?**

GMCA Response:

A fundamental change in the approach to Packaging is required. The packaging industry has adapted its approach to the targets set out in the Regulations in order to comply which has had a significant knock on effect for resource management. For example, light weighting has resulted in a shift from glass coffee jars to foil pouches. This enables the producer to meet their target obligations but creates a plastic coated foil lined pouch that is not recyclable. This cannot have been the intention behind the Regulations but a weight based target imposed on a manufacturing sector will result in changes to product manufacture to meet a target as opposed to meeting an environmental outcome. In line with the response to question 18 above, a whole life approach is required to consider how Packaging can be made easier to recycle, have higher recycled content and can be made easier to separate from the waste stream.

There are currently 5 main polymers used for plastic food packaging, with only one (Polypropylene) having a demand and a market as a secondary raw material. This makes it very difficult for the public to understand whether a yoghurt pot or ice cream tub is recyclable. Many councils collect these materials for recycling, in reality they will be rejected during the separation process and used for energy recovery. If all food packaging were made from similar grade Polypropylene then public engagement and participation in recycling would increase, a single polymer plastic stream can be separated and reprocessors will have demand for this material to manufacture new packaging materials. This kind of approach requires investment in manufacturing capacity, packaging manufacturers to limit the range of plastic polymers used, supermarkets to specify polypropylene packaging, local authorities to collect this material and reprocessing capacity to be developed in the Country. This requires Government intervention on a number of fronts and will not simply come from reforming of the Packaging Regulations. It will require a cross Government approach from DEFRA, Treasury and DBIS to establish a whole approach to resource management.

**ISSUE 20:** *After 100 years of incremental change in the design and operation of road vehicles, a new generation of connected and autonomous vehicles will offer higher quality and safer road travel. However, car manufacturers are mainly focusing on building future cars for existing roads, and relatively little work has been done on how the roads themselves should be adapted and used.*

**QUESTION 20) What changes to the design and use of the road would be needed to maximise the opportunities from connected and autonomous vehicles on:**

- motorways and ‘A’ roads outside of cities?
- roads in the urban environment?

**How should it be established which changes are socially acceptable and how could they be brought about?**

Awaiting response from TfGM

***ISSUE 21:** The impact of road transport on air quality is severe, and the Government’s greenhouse gas emissions target means that nearly all vehicles on the road will need to run on low carbon power or fuels by 2050. Electric vehicles provide the most promising means of addressing these challenges, but unmanaged charging can put additional strain on the electricity distribution network, potentially requiring costly reinforcements.*

**QUESTION 21) What Government policies are needed to support the take-up of electric vehicles? What is the role of Government in ensuring a rapid rollout of charging infrastructure? What is the most cost-effective way of ensuring the electricity distribution network can cope?**

Awaiting response from TfGM

***ISSUE 22:** Meeting the Government’s greenhouse gas emissions target means that fuel duty revenue will have fallen towards zero by 2050. Traffic congestion is also a significant and increasing cost to society.*

**QUESTION 22) How can the Government best replace fuel duty? How can any new system be designed in a way that is fair?**

Awaiting response from TfGM

***ISSUE 23:** Given increasing pressures from climate change and population growth, and the need to safeguard the environment, it will be necessary to make better use of the water that is available. Metering can help identify leaks and encourage customers to use less water but will not be enough by itself.*

**QUESTION 23) What should be done to reduce the demand for water and how quickly can this have effect?**

GMCA Response:

We believe that increased smart metering is the way to maximise the potential for demand management. Better insight into consumption patterns will enable smarter, more appropriate targeting of water efficiency campaigns. It would also allow for better quantification of the actual savings achieved and more robust cost-benefit analyses. Having more metered data will enable the development of new, more attractive tariffs for our people that will enable them to financially benefit from wiser water consumption and be more conscious of their water usage.

A Water Efficiency Strategy for the UK (Waterwise, 2016), also supports the view that “if people do not pay for the amount of water they use, there is no financial incentive to use water efficiently” and that “for unmetered customers, it is important to seek alternative ways to incentivise the efficient use of water”. It also recommends to give “freedom for water companies to introduce full metering for benefits beyond water stress status”. Increase in the number of homes that have a water meter is one of means to help in demand management stated in 2011 Mayor of London Water Strategy (GLA, October 2011) on the basis that “Having a meter helps consumers be aware of how much they are using and provides information to help control their bills”.

The framework (Water UK, 2016) also states that: “UK may achieve PCC levels in line with the most efficient European countries over the next 50 years, through preferred metering programmes, sustainable house building and macroeconomic factors, though this is by no means assured”. In the extensive comparison carried by OFWAT (OFWAT, 2007) UK’s PCC is by far the highest (UK PCC 150 l/head/day, second highest – Denmark 131 l/head/day, lowest – Belgium 107 l/head/day). By no means UK is less developed or has significantly poorer infrastructure than any of these countries. The main difference is that in each of these countries’ meter penetration exceeds 90%, whereas in the UK less than 50% of domestic customers are metered.

It is stated in the framework (Water UK, 2016) that there are major uncertainties in the long-term costs of achieving and maintaining ambitious, large-scale savings in both PCC and leakage. These uncertainties are ~ 100% of cost, and depend heavily on both cost of installation of various devices and the cost of maintaining these over time. It is therefore recommended that major large-scale trials of smart meters are implemented as soon as possible to better understand the significant variations in household demand that occur nationally and refine demand forecast uncertainty. The sheer volume of data available from these trials will enable to model any re-bounce effects and appropriately include effect of these in planned demand reductions.

Increase in meter penetration will also help in leakage management activities. As leakage is not directly measured, its accuracy depends on the accuracy of the components used in the leakage calculation, of which consumption is one of the key ones. Improving accuracy and frequency of consumption data will enable to calculate and target leakage more effectively.

In 2019 Price Review consultation Ofwat challenged water companies to take steps to reduce leakage beyond sustainable economic level of leakage (SELL). Its review of SELL concluded that the current approach does not incentivise efficiency or innovation. There is a potential that this industry wide drive for leakage reduction, aside from the environmental benefits, will also boost the need for innovation in leakage management enabling new technologies to become cheaper and more readily available. This should make achieving leakage reductions more affordable and efficient over time. We should see impact of reducing leakage levels on demand by 2025, end of the next asset management period (AMP7).

For new development, the NIC should consider whether this is an issue limited to the South East or whether there are universal benefits from reducing demand overall. For new development, the optional building standards for water stressed areas already enable a higher water efficiency standard to be adopted by the Local Authority via its Local Plan. Local Authorities must however present evidence of need, viability and deliverability. The developer will still have the opportunity to negotiate against the standard in the Plan.

**ISSUE 24:** *Reducing demand is unlikely to be enough to secure resilient water supplies. Some major new water supply infrastructure is likely to be needed well within the next 30 years.*

**QUESTION 24) What are the key factors that should be considered in taking decisions on new water supply infrastructure?**

GMCA Response:

When taking decisions on new water supply infrastructure it is necessary to consider the current day to day operational requirements of the water supply system as well as abnormal extreme events and future operational requirements.

There is a balance to be struck between providing sufficient system capacity to meet current and future demands versus the need to provide water that is of a high quality. This can often prevent the installation of large assets (pipes, reservoirs etc.) with lots of head room in advance of new developments as the current lower demands may lead to water quality issues as a result of low turnover. Therefore understanding the scale and pace of development is key to planning the staged implementation of new infrastructure to avoid water quality problems.

Water usage by new industrial customers can be highly variable and have a large impact on the performance of the existing (fast filling of storage tanks can cause shocks to the pipe network and lead to bursts and pressure issues). It is important the water companies work with new industrial customers to manage their supply of water in a way that benefits both them and other customers in the area, this could be through the installation of additional water storage or control devices to protect the distribution network.

The new developer charging reforms being implemented by the water industry in April 2018 (UU is currently out for consultation with a new developer charging scheme which can be found here <https://www.unitedutilities.com/services/builders-developers/new-connection-charges-consultation/focus-groups/> ) will remove existing cost barriers to individual developers in areas with no spare capacity and will require water companies to take a more proactive approach to planning water infrastructure upgrades to ensure the system is fit for the long term growth of the region.

When designing new infrastructure it is important to consider how the assets will be operated and maintained and factors such as where the asset is located (highway, path or open land) and how it will be accessed to carry out maintenance. Other factors that need to be considered in the design of any new infrastructure include

ground conditions; geology, contaminated land, traffic loading and other underground utilities and services such as gas, electricity, broadband and drainage.

**ISSUE 25:** *There is limited understanding of current drainage and sewerage capacity. Although pressures are increasing, there is little long term planning.*

**QUESTION 25) How can long-term plans for drainage and sewerage be put in place and what other priorities should be considered?**

GMCA Response:

In Greater Manchester responsibility for water management is defrayed across multiple organisations: United Utilities, the Environment Agency, ten Lead Local Flood Authorities. The national flood risk strategy was published in 2011, since then there have been a succession of regional plans and strategies covering water quality (River Basin Management plan), Regional Flood Risk Management Plans (2015), Preliminary Flood Risk Assessments (2011), North West River Basin Management Plan (2015) and ten Flood Risk Management Plans produced by the Lead Local Flood Authorities. Water companies produce their own Sewerage Management Plan and now Integrated Drainage Area Strategies. Each of these plans has been produced for different purposes with scale too large or too small. The most up to date plans for individual and functional catchments are the catchment Flood Management Plans produced in 2009.

A review of long-term drainage and wastewater planning is being undertaken by Atkins on behalf of Defra to assess the current use of Drainage Strategy Frameworks (DSF) and different approaches used by water companies. This is to build on principles outlined in the DSF, embed consistency of approach and draw upon best practice. The results from this, should be considered when implementing long-term drainage plans.

Integrated long term plans should include all aspects of risk and opportunity associated with drainage and sewerage treatment. Risks of network flooding from other causes (blockages etc.), hydraulic risk, sewer overflow increases, river water quality, wastewater treatment works capacity and performance etc. It should involve various stakeholders during the planning and implementation including Water and Sewerage Companies, Local Authorities, Environment Agency, Lead Local Flood Authorities (LLFAs) and other relevant bodies.

Long term plans for drainage and sewerage can be delivered by improving the planning system and through a systems thinking driven approach which integrates the use of assets, leverages data intelligence and employs new technology and work. Some of the ways to implement long term plans are:

**Governance, Standards and legislation**

- Implementation of National Standards on sustainable drainage and the inclusion of Sustainable drainage Systems (SuDS) on all new development sites as a requirement of legislation rather than negotiation through the planning process.

- Rate of discharge decisions to be determined by the organisations responsible for the receiving conduit e.g. sewerage companies for sewer and lead local flood authorities for watercourses.
- Review Riparian rights to discharge to watercourse to reduce the cost and delays associated with third party negotiations.
- Improved mechanism for developers to access 3<sup>rd</sup> party land to undertake drainage works
- Enhanced powers to planning authorities to enable infrastructure to be delivered in a coordinated manner as part of site wide infrastructure strategies.
- LLFAs better equipped and resourced to respond to challenges such as riparian ownership. Increased drainage expertise would enable them to review proposals more effectively and efficiently and understand the full impact.
- The right to connect surface water to combined and surface water systems should only be pursued when there are no alternative options. The broader, long term costs to water bill payers should be considered when making decisions about the surface water discharge to sewer.

### **Catchment Management and Partnership Working to deliver the plan**

- Geographical planning boundaries for WwTWs drainage areas and river catchment areas should be used.
- Include a short, medium and long term plan (5, 25 and potentially 50 year scenario) for context with relevant review milestones.
- Better information sharing to map risks and opportunities to ensure stakeholder needs are identified more efficiently.
- Obtain a full understanding of partner organisation goals and objectives with closer collaboration and early dialogue.
- Agree drainage plans ahead of development, with all developers clear on where their development impacts on the long term plan.
- Regular liaison during planning and implementation so that early information on specific locations, size, timescales etc. of developments can be reviewed and accounted for efficiently.
- Regular interaction with developers as part of the wider plan
- Further exploration of pilot studies of drainage management to share lessons learnt and best practice.

### **Surface Water Management and SuDS**

- Priority to surface water management should be given at all new developments with a clear agreed hierarchy on the most sustainable interventions to apply as part of the development scope. Options to consider removal of all surface water to the drainage network, reducing the volume to the network, retaining the peak flows during high rainfall events and only discharging surface water to the network when there is no alternative solution. This should apply to all sizes and locations, not just large urban developments
- Guidance and information on appropriate types of SuDS can be provided to developers in the early stages for them to incorporate as part of their plans.
- Include a joined up approach to drainage with the adoption of SuDS by the sewerage provider where appropriate.

- Plan a surface water removal programme in collaboration with customers, Local authorities, developers, Environmental groups etc.
- Provision of educational resources and guidance for households and businesses on managing surface water at property level should be included in the overall plan

Other priorities to be considered are the opportunities that a sustainable drainage plan could provide. The additional benefits of green and blue infrastructure to residents, businesses and the local economy can be considered and taken into account when assessing the overall benefit of a proposed plan and the increase in natural capital.

We believe that significant benefits could be delivered through the development of flood risk management strategies at the Mayoral / Combined Authority Level. These should be developed in partnership by the Environment Agency, the relevant drainage authorities and Lead Local Flood Authorities. The Environment Agency have a statutory responsibility to take strategic overview role of flood risk. The development of these strategic should be initiated by the EA but should be accountable to the Mayoral / Combined Authority.

In our call for evidence last February we recommended that regulated utilities should be subject to a statutory duty to co-operate to ensure that infrastructure providers and the regulators are required to actively engaged with the Greater Manchester Mayor and Combined Authority to ensure that future investment plans are consistent with the future development strategy for larger than local geographical areas.

The existing requirements for co-operation outlined in the 2010 Flood and Water Management Act should apply to the Environment Agency and drainage authorities in so far as this related to strategic flood risk and water management activities.

Environment Agency / Defra grant-in-aid calculations remain a challenge for urban areas. The partnership funding formula is principally driven by protecting residential properties (as opposed to benefit, including economic benefits to areas in general) therefore it's harder in some circumstances to defend urban areas and town centres using GiA where there is less residential. Pursing the strategic and catchment approach to flood risk alongside spatial development strategies and integrated infrastructure plans would enable all partners to take a strategic approach to capital and support the delivery of multiple outcomes in specific geographical areas.

***ISSUE 26:*** *Flood risk is increasing due to climate change and population growth. A range of actions are already being taken to manage risk, but the overall level of ambition is unclear.*

**QUESTION 26) What investment is needed to manage flood risk effectively over the next 10 to 30 years?**

GMCA Response:

All water planning should be managed holistically at a catchment level, to include water quality and quantity together. Many natural measures promoted to slow upland

flows have significant quality and biodiversity benefits as well as reducing flood peaks, so the costs and benefits of these should be reviewed holistically. Our view is that flood spending is disproportionately targeted at hard engineering such as flood barriers and other options to tackle flooding through “slow the flow” techniques on upland catchments and in urban areas are not given sufficient consideration. Managing surface water runoff rates at source provide a benefit under any storm condition whereas flood barriers can only protect from a fixed water level. Government sourced funding is not necessarily aligned with other water quality or flooding objectives, particularly farm payments under the Common Agricultural Policy.

A review of how all land management subsidies interact to provide the best overall outcome for farming, flooding and the environment would help to resolve this. Adequate maintenance funding should be provided for highway drainage, gully cleaning and watercourse management to reduce the impact on sewerage operations.

Drainage and flooding responsibilities in England and Wales are fragmented and the system will only operate effectively where all parties fulfil their role and are adequately funded to do so.

Guidance and assurance over long-term funding of upland catchment management would help deliver a more catchment based approach. There would be a real benefit of bringing River Basin Management Panels and Regional Flood and Coastal Committee closer together to maximise the efficiency of water quality and flood plans at a river catchment level.

Through the delivery of our innovative ‘Sustainable Catchment Management Programme’ (SCaMP) we are recognised as industry leaders in securing multiple benefits at a landscape scale. Working with the Environment Agency we routinely design catchment safeguard zones to protect water sources from pollution. Safeguard zones and other catchment initiatives rely heavily on partnership funding and working with land owners and other stakeholders to deliver sustainable and resilient catchments.

It is important to recognise that restoring natural process, which is a requirement for natural flood management, can take several decades to establish. The most extreme example is the restoration of peatlands, where species of moss can hold up to 20 times their dry weight in water. Peat forms very slowly at a rate of 1mm per year meaning a restoration time of 50-70 years for a fully ‘active’ peatland. [We may also include an indication of how much we are planning to spend (or have spent) on sewer flooding reduction in the next AMP (or this AMP) but this is to be agreed]

***ISSUE 27: The European Investment Bank and the Green Investment Bank have played an important role in financing infrastructure, but this may change following Brexit and privatisation of the Green Infrastructure Bank. The UK will need to have continued access to a similar range of services and expertise.***



**QUESTION 27) What would be the most effective institutional means to fulfil the different functions currently undertaken by the European Investment Bank if the UK loses access? Is a new institution needed? Or could an expansion of existing programmes achieve the same objectives?**

GMCA Response:

If the UK loses access to EIB funding, a new institution/funding programme would undoubtedly be required to ensure continued infrastructure investment and to prevent significant delays.

Such an alternative institution would take considerable time to establish. Therefore an interim measure would be required. In establishing an alternative, consideration should be made as to the strengths, limitations and restrictions of the current EIB funding structure in order to structure a new programme in the most beneficial way.

It would also be important to consider ways in which to ensure diversity of the portfolio in order to limit risk. Detailed analysis of existing loans and those in the pipeline would need to be undertaken in order to identify the nature of funding requirements (sectors, terms, geography, pricing, risk etc).

This would take time and there would be a period of stagnation during the period that no funding was available and the new alternative was set up. The time period is unknown but the risk is that it is considerable.

***ISSUE 28:** There is no widely accepted comparable data on the whole life costs and benefits of different financing models for publicly funded infrastructure. This may mean that opportunities are being missed to deliver projects more efficiently, at lower cost and sooner.*

**28) How could a comprehensive analysis of the costs and benefits of private and public financing models for publicly funded infrastructure be undertaken? Where might there be new opportunities for privately financed models to improve delivery?**

GMCA Response:

Detailed analysis of all PFI schemes entered in to would need to be performed to understand the reasons why these deals ultimately proved to be so excessive on the public sector purse, including challenge of the approach to the deals. For example:

- What was the basis of the deals being structured in the way that they were and how could this be improved?
- Was the level of risk retained/transferred appropriate/necessary?
- How effective/value for money were the payment mechanisms as structured
- How was the pricing/negotiation process undertaken and how can this be managed on future deals to ensure better value for money?
- Were appropriate limitations/caps/claw back arrangements in place to limit costs/ensure sharing of savings made?
- Where sufficient incentives provided to the private sector to limit costs and drive efficiencies?

- To what extent were considerations of change in technology, society, political and environmental factors taken in to consideration in developing deals (for example contract terms)
- Did the SPV structure work or could a centrally funded approach work across a variety of projects?

It would need complete consideration of all individual factors influencing the decisions made and what the alternative solutions or approach would have been/would be today whether using public or private sector monies.

The fundamental challenge to any review is that you are measuring against what would have happened if you had not let the contracts and this is impossible to determine and any analysis of it is subjective.