Climate Change and the Planning System

1. Introduction

In summer 2019 the Norfolk Strategic Planning Member Forum requested that a Climate Change sub group should be set up as part of the update process to the Norfolk Strategic Planning Framework. The group would review information in relation to Climate Change with a specific focus on the role of and impact on Local Plans and the planning system generally. It would also explore some of the emerging policy work around climate change, and look at best practice where applicable.

Working collaboratively through the Norfolk Strategic Planning Member Forum, Local Planning Authority officers, along with colleagues from the Environment Agency, Local Enterprise Partnership and Norfolk County Council, worked together to research and investigate how measures identified through this research could help inform local plans in order to address some of the impacts of climate change through land use policies at a strategic level.

It should be noted at the outset that planning's role is one of facilitation through mitigation, adaptation and resilience. Although there is a statutory duty to address climate change in the National Planning Policy Framework, the planning system cannot address climate change alone. The subject is broad and cross cutting with impacts ranging from biodiversity to carbon reduction, energy efficiency and supply, settlement distribution, investment choices, technical change and innovation and consumer choice. Addressing Climate change is a shared responsibility. Planning can set out a strategic framework and lay down challenges but delivery through planning requires partnership work, political buy in and effective coherent and consistent approaches through investment strategies as well as legislation and regulatory change. Furthermore, it should be noted that planning can only really affect and influence schemes that need planning permission from the time the policies are in place. Many more buildings are in place now than will be permitted over the coming years.

2. Background

Climate change has been embedded into Land Use Planning for many years; significant emphasis is placed on planners to address climate change through achieving sustainable development. It is recognised that considerable national, international and local research in relation to climate change has been completed in recent years. This includes reports by the Intergovernmental Panel on Climate Change, and there continues to be emerging changes in relation to Government policy on the matter. As a result of this there are already measures incorporated into most local plans to support the impacts of climate change and measures to reduce carbon emissions.

In June 2019 the government amended the Climate Change Act 2008 to extend the national carbon reduction target within it with the aim to reduce carbon levels to net zero by 2050. Nationally many local authorities have either declared climate emergencies, and/or set their own locally applicable targets, replicating the government's or extending it further, as well as enshrining the concept into corporate objectives and plans.

Within Planning, Local Plans can play a central role in helping to facilitate this key national environmental objective. Effective strategic plan making can help deliver sustainable development and help address the challenges that climate change brings, complementing measures outside of the planning sphere but not resolving climate change challenges on its own. Clearly the County is vulnerable to the impacts of climate change from rising sea levels to changing weather patterns. The costs of climate change are projected nationally to be high and it is emphasised that not taking action could cost more than taking steps to reducing emissions now to avoid the worst impacts of climate change in the future. Sustainable development through land use policies is regarded as a key means of addressing climate change and as such the planning system has a duty to ensure that action is taken to encourage and deliver more sustainable development.

Planning for sustainable development need not only cover mitigating and adapting to climate change, it can also help set a framework and assist in changing attitudes and perceptions. Another aspect is that of sequestration of greenhouse gases to reduce the amount in the atmosphere. Local Plans can encourage more sustainable development from the small scale (e.g. improving energy efficiency of dwellings so as to reduce carbon emissions and encourage the transition to cleaner energy, ensuring water is used effectively), to the strategic (e.g. encouraging the sustainable distribution of growth, increasing accessibility and reducing the reliance on carbon emissions from private and public transport).

Mitigating climate change through land use planning by addressing the causes of climate change can be achieved in a number of ways:

- Locating development as near to existing key services and facilities as possible.
- Delivering decentralised energy supplies and promoting its use in existing buildings.
- Supporting the delivery of low carbon and renewable energy.
- Ensuring new development is as energy efficient as possible.

Adapting to climate change addresses consequences and can include:

- Delivering on site sustainable drainage systems.
- Reducing water consumption.
- Adopting precautionary approaches to areas liable to flooding and at risk from coastal change.
- Ensuring that the design of buildings helps them remain cool in summer and warm in winter.

All of the above will demand innovative approaches, and lead to new technology and changes in the landscape and historic buildings which will undoubtedly challenge traditional opinions and views.

As well as ensuring development proposals will mitigate and adapt to the impacts of climate change, Local Plans should reflect the local authorities' overarching aims in building up resilience to climate change and managing long term risk. Action on climate change should be an integral part of the culture of plan-making and should be embedded and integrated in policy preparation. Local Plans are however not a panacea; their focus remains on land use and policy approaches are subject to legal and soundness tests, viability and test of reasonableness that are applied as material considerations at both plan making and decision-making stages. Local Plans also tend to mostly relate to new development that needs planning permission – much development is already in place and some schemes do not need planning permission.

Local Planning Authorities are therefore likely to need to evaluate planning applications through a climate change lens and ensure future local plans clearly set out the decision-making framework, with particular emphasis on the following, for example:

- Placing more emphasis on co-locating uses and planning development near public transport links to reduce car travel.
- Setting more ambitious targets on energy efficiency in buildings.
- Encouraging the greater use of renewable energy.
- Embedding and prioritising climate change in local plan-making and when determining planning applications, including ensuring resilience to climate impacts such as flooding.
- Requiring travel plans with increased sustainable transport obligations - prioritising walking, cycling and public transport over reliance on the car.
- Increasingly plan and help facilitate for the switch to electrified transport.

It is however recognised that each local authority has its own particular circumstances, decisions and actions and these will need to be tailored to local circumstances. However, more co-ordinated efforts are needed where there is a need to follow agreed principles so that future planning decisions are consistently made.

In future years addressing climate change will need to remain a high priority for the planning system if national emission targets are to be achieved. This, though, will be at a time of increasing pressures brought upon LPA's through target driven approaches and increasing deregulation of the planning system and other legislative changes, including the potential for wholescale reform and wider Council devolution.

This report, and the supporting papers, provides some of the tools to enable planning teams to consider how best to embed climate change within the planning system, in advance of any systemic changes that will come through as part of the radical review of the planning system, currently underway.

3. Planning White Paper

It should be noted that at the time of writing this paper, the Government had consulted on fundamental changes to the planning system. One particular relevant proposed change, is that development management policies may be centralised and set at a National level. There are also potential standards for energy efficiency of buildings and electric vehicle charging points that could be set nationally over the coming years.

That being said, the timeline for implementing the final proposals is not known. It will involve redrafting of legislation and changes to the NPPF which could take some time. So, whilst changes may well be made to the planning system in future, recommendations within the report are relevant for the current local plans in production and could be 'in the meantime' policy approaches – in place until the national system is changed.

4. Other benefits of addressing climate change

It is important to be aware that whilst these recommendations relating to topic areas may address climate change adaptation and mitigation, or sequestration of greenhouse gases, that is not the only benefit. It is often wise to do what is recommended, regardless of climate change, because of the many other benefits of which doing so brings. The elements of climate change are also woven into many policy areas with much cross-over, e.g. growth distribution, transport policies, environmental policies as well as specific polices on adaptation and mitigation as all have a role to plan in addressing Climate change.

For example:

- Walking and cycling rather than driving a motor vehicle can reduce greenhouse gas emissions from burning fuel. Adopting a more active lifestyle can lead to improved health and well-being as well as saving individuals money.
- An energy efficient home requires less energy and therefore reduces the amount of emissions associated with producing energy, but it also reduces money a household or business spends on energy bills.
- Green infrastructure can help sequester carbon dioxide but it can also help biodiversity and increase access to the countryside and other greenspaces, which can in turn support mental and physical well-being.
- Tackling climate change is part of facilitating and enabling clean growth. It can help economic recovery and provide job opportunities such as retrofitting of properties, technology development e.g., EVs and electrification of transport and the renewable energy sector.

5. Conclusions

5.1 County Wide Agreements

The conclusions of this work are set out in this section. The group proposes that the Norfolk Strategic Planning Framework should include a new agreement which sets out Local Planning Authorities' commitment to address climate change as follows:

Recommendation 1:
Local Planning Authorities in Norfolk agree that climate change is an urgent, strategic cross boundary issue which will be addressed at the heart of Local Plans. To do this, Local Authorities agree to consider the evidence contained in the NSPF Climate Change research Paper when the relevant policies are next being reviewed and updated as part of the Local Plan process and their appropriateness considered against local factors including viability of developments. Local Authorities agree to collectively review the latest evidence and advice on a regular basis and to update this research to ensure that the most appropriate actions are being undertaken to support climate change initiatives.

Each Local Authority can choose to take actions further than suggested depending on local needs or circumstances.

The Planning White Paper strengthens the need for local design initiatives and the work of this climate change group has highlighted that design guidance could help with both climate change and healthy living initiatives. As such there is a strong case for looking at a Norfolk Design Guide or Charter to underpin much of the recommendations that follow. It is suggested that the initial steps would be to investigate how this could best be achieved and to what level all authorities are willing to work to a single design guide. It is clear that for this to succeed that external and community involvement would be required, as well as exploration of how a county design guide would work in practice with local and national guides for decision makers. There would be the need to understand in more detail any forthcoming proposed changes to the NPPF and legislation. In addition, any existing, or planned, intentions of each local planning authority, will need to be factored in to assist formulate further guidance. It is important to note that Local Planning Authorities could still produce their own design guidance; this county-wide guide or charter would not preclude or prevent that. Indeed, such topic areas as vernacular and aesthetics may well be best addressed by individual Local Planning Authorities.

The group propose that the Norfolk Strategic Planning Framework should include a further new agreement which sets out Local Planning Authorities' commitment to investigate the production of a countywide Design Guide:

Recommendation 2:
Norfolk Local Planning Authorities agree to work together to investigate the production of a county wide design guide and produce a brief/scope for this work. This work could help facilitate climate change and healthy living initiatives across the county by providing high-level principles.
The design guide would meet the requirements of the National Design Guide and look at other country wide initiatives like Building for a Healthy Life. Mitigating for and adapting to climate change could be a key consideration of this guide. Individual Local Planning Authorities could still produce their own guide or they can be produced as part of neighbourhood plans.

The research produced a number of topic-based papers, the conclusions of which can be summarised as below, a summary of each of the paper's key points is attached in Appendix A – Key points from Supporting Documentation.

5.2 Energy efficiency

Construction Standards

- Local Planning Authorities could consider a policy around the use of the energy hierarchy – reduce energy need in the first place (design and orientation of development), energy efficiency and conservation, and then maximise use of sustainable energy (for example non fossil fuel based alternatives) and local energy networks. Local Planning Authorities could consider the use of energy statements to explain and justify the approach taken by developers.
- Local Planning Authorities could consider providing a percentage reduction against Part L of the 2013 Building Regulations (amended 2016). This percentage would need to reflect local viability and would be a 'meanwhile' policy approach prior to any national standard.
- Local Planning Authorities can explore the use of policies which require applicants to demonstrate how climate change has been taken into account in a scheme, this could include applications applying for an increase in floor space.
- For major schemes, whether building developments or transport schemes, Local Planning Authorities could specify the achievement of British Standard 'PAS 2080 – Carbon Management in Infrastructure Verification'.

Non-Residential Development

- Local Planning Authorities could explore the use of BREEAM for non-residential development and aim for a standard that is appropriate for their area in terms of viability and the achievability of this standard.

Community-led renewable heat and energy networks/schemes

- Individual LPAs may consider allocating sites for community heating and consider where it could be appropriate for the support of community heating schemes.

Embodied Energy in Buildings

- Local Planning Authorities should have regard to the Historic England's guidance for adapting historic buildings to reduce carbon footprint.
- When appropriate policies are being reviewed, consider if any conversion policies or similar, set a stance that, subject to PD rights, the presumption is in favour of retention of a building. To allow the demolition of buildings, policies should require thorough justification for such an approach.

Light Pollution

- Local Plans can consider dedicated light pollution policies where appropriate, perhaps using some of the approaches taken by those areas with dark skies.

Modern Methods of Construction (MMC)

- MMC[1] could be considered for incorporation into design codes/guides of Local Plans within Norfolk where appropriate, and Local authorities can consider closer working with developers of larger schemes to adopt MMC as a key element, as these sites are built out.

5.3 Environmental

Integrated Constructed Wetlands

- Local Plans could promote the use of integrated constructed wetlands as a way of treating wastewater and acknowledge the multiple benefits such an approach will bring.

Peat[2]

- Norfolk Local Planning Authorities could investigate the presence of peat in their area. If peat is prevalent, then it is suggested that they consider peat when allocating sites and address peat in relevant policies. There could also be potential for non-site specific policies relating to peat, if it is prevalent. Such policies could seek to reduce the amount of peat excavated and require excavated peat to be disposed of in a way that prevents carbon being released.

5.4 Reducing unnecessary car use and supporting the roll out of new technologies

Reduced/car free developments

- For sites proposed for development in the centre of sustainable settlements with good provision of public transport, consideration could be given to proposals for car free developments or developments with reduced parking.

Walking and Cycling

- Local Planning authorities could consider seeking enhanced walking and cycle connectivity when considering planning applications or providing pre-application advice. The consideration is particularly important for windfall sites which will not have been scrutinised as part of the local plan process. Local planning authorities should consider the following through appropriate plans, policies and processes:
    - Better alignment of plans and decisions with identified local and national strategic infrastructure priorities for walking and cycling.
    - Ensure proposals seek enhanced connectivity to open space and seek to provide connections to, enhancement and maintenance of nearby existing walking and cycling networks.
    - Working with the Highway Authority to establish better provision for active forms of travel.
    - Consider simple, safe and convenient access to and from surrounding local facilities.
    - Consider guiding design principles for walking and cycle connectivity.
    - Engaging with specialists at plan-making, pre-application and planning application stages, particularly on larger planning applications.
    - Consider the use of the principles promoted by SUSTRANS:
        - Safety – space, users, speed
        - Directness – destination convenience
        - Coherence – part of a wider network, signed & navigable

[1] For example modular build (buildings that are prefabricated off site that meet or exceed modern energy efficiency standards)

[2] Peat holds much carbon dioxide which is emitted to the atmosphere when it is dried out. So if excavated and disposed of poorly, peat can change from a carbon sink to a carbon source.

    - Comfort – accessible and attractive to a wide range of users
    - Attractiveness – design, lighting/quiet areas
- Consider requiring a walking & cycling strategy for all major development
- Ensure secure, well located cycle parking for all communal/shared buildings
- Securing funds for maintenance of the existing walking and cycling network (or new/expanded) or supporting infrastructure from new development where appropriate

Live-Work and working from home

- Consideration could be given in Local Plans for the support of live-work units where they meet other local planning policies and subject to appropriate controls (i.e. Removal of PD rights). This would allow acceptable live-work units where there is demand.
- It is also suggested that policies encourage provision of flexible space in new dwellings (both new build and conversion) which could be utilised as home working facilities.

Electric Vehicles

- Local Planning Authorities could consider setting standards in relation to the provision of electric vehicles charging infrastructure. Any standards would be in place until either a national standard is set by the Government, and/or linked to any reviewed parking standards produced by Norfolk County Council, as the Highways Authority. However, in the first instance the LPAs could agree an approach for off-street parking provision – commercial and domestic. Local Planning Authorities can also consider the following:
    - Having an appropriate provision for standard charging of EVs at home and work locations this would be a minimum provision of 7kW /32 amps power capacity.
    - Parking standards - location and design of EV bays have to be considered from the planning stage to maximise the number of cars that can be served by the same charging point, and ensuring that due provision is made to provide safe connectivity to the equipment.
    - On-street charging provision could be designed into the street scene as part of the design and construction process. There is difficulty and cost in retrofitting such provision.
    - Future proofing - develop short term solutions through preparing the site for future technology installations.

Travel plans and Public Transport

- Local Plans could make due reference to the need to support sustainable and active travel on new developments through the production and delivery of Travel Plans as referenced in National Planning Policy Framework Section 9 paragraph 102. Countywide guidance on this can be found here: https://www.norfolk.gov.uk/rubbish-recycling-and-planning/planning-applications/highway-guidance-for-development/travel-plans
- Local Authorities can ensure that the necessary infrastructure to support the provision of public transport is agreed early and encapsulated in the Transport Assessment/Agreement. In addition, appropriate behaviour change measures can be captured in the Travel Plan for a site to support the uptake of any public transport service. Where Travel Plans accompany a planning application, they could be produced in consultation with NCC Travel Plan Officers

Appendix A – Summary of Key points from Supporting Documentation

Walking and cycling

- The aim is to better promote active forms of travel, particularly walking and cycling to reduce unnecessary car use.
- Evidence clearly points to shorter trips (i.e. 1-5 miles) where walking and cycling can most effectively increase, and conversely reduce, travel by private car.
- There needs to be a much more joined up approach, with more collaboration and clear advice on how to realise the multiple aspirations.

Consideration of using BREEAM assessments in planning policies for non-residential development.

- BREEAM is a sustainability assessment method for master planning projects, infrastructure and buildings.
- It recognises and reflects the value in higher performing assets across the built environment lifecycle, from new construction to in-use and refurbishment.
- Ratings available are: Pass, Good, Very Good, Excellent, Outstanding.
- It is not uncommon for LPAs to set different ratings based on floor area and/or unit number although development size should have less of an influence over the potential rating which can be achieved than say viability/development need and local priority.

Design of new build dwellings - energy

- Homes – both new and existing – account for 20% of greenhouse gas emissions in the UK
- The Government consulted on (at the end of 2019) a Future Homes Standard
- Some Local Plans in Norfolk are under production and it may be appropriate to have a policy relating to energy usage of homes – a 'meanwhile' policy, whilst waiting for the new national standard/approach.

Improving the energy use of existing housing stock.

- Dwellings/buildings that are already in place (around 29 million homes) will not necessarily be affected or have their energy use addressed as a result of policies in Local Plans/national policies.
- We will not meet our targets for emissions reduction without near complete decarbonisation of the housing stock.
- The General Permitted Development Order (GPDO 2015) Part 14 – Renewable energy already enables a range of installations related to renewable energy (subject to conditions).
- But retrofitting measures is much more costly than designing them in from the start.
- Building Regulations and Central Government schemes are predominantly the vehicles for change to the existing housing stock.
- There is little scope within the current planning policy framework to require renovation of or upgrade to existing housing stock in local planning policies.

Car Free Housing policies

- Transport is now the biggest contributor to carbon emissions in the UK and within this sector, passenger cars are by far the biggest contributor.
- It is clear from the Department for Transport's research that a modal shift away from the private passenger car would have the most significant impact in reducing greenhouse gases, such an approach could be encouraged through planning policy
- Norwich City Council and the Borough Council of King's Lynn and West Norfolk have adopted local plan policies that promote car free schemes, subject to location and other criteria.

Live-work units and working from home

- Live-work units are living accommodation specifically designed to allow you to both live and work within the same unit.
- Home working is where a person carries out part or all of their paid work from home as opposed to a central office.
- Improved technical infrastructure to support home working

Community led renewable heat and energy networks/schemes

- These schemes tend to be retrofitted to existing communities.
- Do not seem to need a specific policy approach as generic energy policies seem to be adequate.
- Local Plans could support such approaches.

Communal heat and energy networks/schemes

- This needs to be planned in from the start, can be for cooling and heating and hot water and is usually for larger schemes of over 100.
- Often called District Heating networks or Community heating networks
- Again, the generic renewable/low carbon energy policy will provide general support with other policies assessing impacts on any constraints in the site.
- There could be scope to add a requirement to site-specific policies for larger scale development.

Electric Vehicles (EVs)

- EVs represent a small, but growing vehicle market share, set against a back-drop of declining sales of internal combustion engine-based vehicles.
- The issue of how far an electric vehicle can go on a single charge and the related issue of where to charge the vehicle when on a journey and how long that charging would take are important considerations in the purchase of EVs. However, government statistics suggest that the overriding public concern is lack of charging infrastructure.
- The UK Government has shown commitment to facilitating the mass-market uptake of EVs through a number of recently published strategies and action plans. This is imperative to facilitate the roll out of charging infrastructure.
- There is a need to apply policy for promoting the wider uptake of EVs and from 2030 solely ICE (Internal Combustion Engine) vehicles will no longer be sold in addition to setting minimum standard that ensure that any new schemes are future-proofed to incorporate improvements and innovations as they develop. The Government may introduce regulations or requirements at

a national level in due course. So, any Local Plan requirement would be in place until national policy or regulations 'take over'.

- Uptake of EVs in Norfolk should be assessed to determine whether supply of provision meets demand.

Public transport

- The use of public transport over single occupancy car use is an important part of any Climate change initiative. New development will result in additional needs for new residents and it is important that they have access to a good public transport service, this will also benefit existing local residents.
- Smaller developments will have a limited ability to support public transport but should still consider access to public transport and their suitability will be assessed as part of the work to produce a Housing and Economic Land Availability Assessment (HELAA).

Travel Plans

- The delivery of a travel plan is the result of a transport assessment with developers, with the aim of promoting public transport, walking and cycling, and reducing the need to travel in cars.
- The primary purpose of a Travel Plan (on new developments) is to encourage active travel and healthier lifestyles by the promotion of sustainable travel options, such as walking and cycling, and to reduce unnecessary car use.

Embodied Energy in Buildings- Existing Housing Stock conversions and extensions

- Embodied energy is the energy consumed by all of the processes associated with the production of a building such as the mining and processing of natural resources and transport and building of the building.
- Effectively there are three areas. The first relates to historic buildings, the second relates to upgrading a building that is being extended and the third relates to demolishing buildings.
- In relation to historic buildings, there is Historic England guidance that could be incorporated into Local Plans.
- In relation to extensions, there are examples of where policies require a 10% improvement to the energy use of the existing building.
- Another area to consider is that of **demolition:**
    - On occasion, developers demolish buildings to make way for new buildings.
    - Of course, some buildings can reasonably be beyond use, but sometimes they can be re-used.
    - From September 2020, a new Class ZA Permitted Development Right will be in place, for the demolition of some buildings and replacement by either a single purpose-built detached block of flats, or a purpose-built detached house.
    - Much of the research points to the fact that refurbishment is far better than demolition with regards greenhouse gas emissions. But the planning relaxation around demolition and the VAT implications for refurbishing older properties seems to support demolition over refurbishment.

Light pollution

- Light pollution contributes towards climate change by the destruction of nitrate radicals which cleanse our air and only work in the dark and through the wasting of electricity through unnecessary lighting e.g., leaving office lights on overnight.
- Whilst Local Plans tend to refer to light pollution, it is related more to amenity impacts.
- Some areas that protect their dark skies have stronger dark sky/light pollution policies.

Larger industrial installations/premises

- There are some industrial installations in Norfolk that are identified as significant emitters of greenhouse gases.
- There could be scope to require a reduction in the greenhouse gas emissions of the existing operation as part of any scheme seeking planning permission. There could be site-specific policies for these sites. There may be other sites that could be included in the list.

Modern Methods of Construction (MMC)

- 'Modern Methods of Construction' (MMC) is a broad term, embracing a range of offsite manufacturing and onsite techniques that provide alternatives to traditional house building, but can speed up the building process and produce energy efficient buildings as a result, such as those exemplified by Passivhaus standards of efficiency.
- Offsite manufacture (characterised by modular and pre-fabricated construction) represents an opportunity to address many issues associated with on-site construction methods, in addition to increasing capacity and investment in the industry.
- Whilst increasing the take up of MMC may lie with the construction industry and the Government, Local Plans could seek the use of MMC.

Strong/prominent climate change objectives in the Sustainability Appraisal and Local Plan

- Vision and objectives of the Local Plan are what the policies of the Local Plan are based upon.
- These policies are then assessed against sustainability appraisal objectives whereby potential positives are maximised and any negative effects identified mitigated.

Integrated Constructed Wetlands

- Integrated constructed wetlands or ICWs are a type of sustainable wastewater treatment system that looks and functions like a natural wetland.
- Integrated Constructed Wetlands cleanse wastewater by replicating processes that occurs in natural wetlands.
- Integrated wetlands to deal with waste contribute to greater biodiversity net gain.
- The plants in the wetland reduce N2O and CH4 levels and clean water of nitrates.
- One of the products from the natural process is CO2 emissions, however if microbial fuel cells are added to the Integrated wetlands not only do they produce energy, but they reduce these CO2 emissions considerably.

Building for a healthy life

- Building for a Healthy Life aims to help people create better places to live and to be an industry standard for design.
- It is a toolkit that is often referred to in Local Plans. Building for Life 12 was focussed on place making.

- The updated version extends that to have a health-related focus, so not specifically related to climate change.
- It is important to remember that through good and healthy place making, many issues relating to climate change are addressed as well. For example, Building for a Healthy Life recognises the following which are also related to climate change:
    - Responding to pedestrian desire lines – promoting walking and cycling
    - Improving public transport provision and connectivity
    - Protecting habitats – helping biodiversity adapt to climate change

Peat

- Peat has many special qualities, but the one relevant to the climate change work stream, is that peat is a carbon sink. If peat degrades or dries out, it becomes a carbon source.
- Peat soils release stored carbon if they are drained and allowed to dry out. The protection of peat soils is therefore critical to help address climate change.
- There are areas of peat in Norfolk.

Water usage of residential developments

- Fundamentally, the more water used by a development, the more energy is used, with associated greenhouse gas emissions.
- There is the potential for Local Plans to set a water usage standard of 110 litres per person per day, which is better than current building regulations.
- **There is a section in the NSPF that addresses water usage for new developments.**

Broadband and 5G

- Working from home, on-line shopping and communicating with others through the internet reduces the need to travel, with fewer greenhouse gas emissions as a result. There is strong evidence that shifting consumer patterns are now becoming more fixed around online shopping. Therefore, given…
- …some areas in Norfolk do not have good access to broadband. New development needs to make sure that the facilities are in place to enable new occupiers to be digitally ready, including the necessary communications/phone infrastructure to facilitate the rollout of improved broadband (and 5G access in due course).
- **There is a section in the NSPF that addresses broadband and 5G roll out.**

Biodiversity

- A changing climate will affect biodiversity. That being said, ways of mitigating and adapting to climate change could benefit biodiversity. Indeed, ways of sequestering greenhouse gases, such as planting trees, will also benefit biodiversity. Biodiversity ‘Net Gain’ will be an established part of the planning process, once current legislation, going through the system, is fully enacted.