Appendices

Appendix A: OxCam Arc level – Notes from workshop breakout sessions

Breakout group 1

Session 1

What do you think are, or could be, the benefits of applying a natural capital-led approach and using NC/ES mapping to strategic planning at the OxCam Arc Level?

There are two aspects to this question – benefits of applying a NC approach generally & benefits of applying it at an Arc scale.

It is important that we take a NC approach so that we can take into account, when in making decisions, the widest possible impacts on society of these decisions in term of losses and damages to assets versus the benefits from that choice. Allows us to take a more rounded view.

Taking a NC approach at the Arc scale relates back to our need to understand the collective impact of other Arc wide decisions on the NC of the Arc. It is also important to understand how we spatial apply some of that decision making to make sure we are doing it in ways which builds on the overall coherence of NC and help us identify opportunities and risks.

The big value added is having a strategic policy and framework that sits above local policies. Local Plans are aware of best practice but struggle to harness this along and cross boundaries. By its very nature NC crosses borders and I think there is a huge value in the support it gives to this cross arc thinking. Also by socialising this as concept we have a huge body of evidence that each Local Authority does not have to commission which would be expensive and which they do not have the expertise to do. The next stage is about trying to make sure the data available is something that is very useable that gives Local Authorities the opportunity to use the data in a meaningful way and embed in Local Plans

Strategic Arc scale means something to us but may mean something different to others. From a Local Authority perspective there is something about being really clear about why thinking at a strategic scale is important for them. The relevance and value of thinking strategically needs to be recognised which will then help to sell the use of cross Arc evidence and so Local Authorities recognise the scale beyond their boundary and that the individual outputs they deliver will contribute to something that is greater than the sum of its parts. We need Local Authorities to recognise that it is worth investing in and using this data at their level which is how you will get long term embedding and use. This can be complicated because there is politics involved here but it would support them to think on a strategic scale.

If you want to develop a Nature Recovery Network (NRN) or a Biodiversity Net Gain (BNG) approach you really want to locate that into the contextual understanding of

your NC as you want to get the maximum benefits. We need to be able to integrate benefits from interventions and minimise costs which this allows us to do. For some of the ES flows – the impacts are felt much wider than the locality of the decision and you have to think at an Arc scale to get those decisions right. We also need to locate things like BNG in places which are most workable and beneficial for society and you need a NC approach to provide the framework for this.

Those that are rolling this out and delivering this need to disentangle the various approaches and terminology so that a policy planner at a Local Authority can understand this and know how to deliver this at pace. This will be one of many pieces of information for planners so you need to make it absolutely clear about how to use it so that they do not get baffled by all the info.

You need to put yourself in a Local Authority planner's shoes and then consider what success looks like if that Local Authority gets their plan right. Is it about highlighting key elements in their policy e.g. investment in woodland that is part of larger game plan of investment across the Arc? What do we want to be done at a local level as a result of the evidence base that is being provided? The Spatial Framework will consider the NC/ES data and that will provide a framework and a flow that Local Plans need to consider so what do we want that to look like.

Comes down to simplicity of message – can we get all of the information down into something tight and simple that means it is more likely to be adopted.

What Local Planning Authorities need to do is uniform and consistent – they all have the same processes they need to go through for a Local Plan for instance, so one could establish a simple message or guide around what the LNCP does and what it provides to those different processes e.g. if you are doing X this is how the approach and data can support you in this. It would also help if Government acknowledged and approved the LNCP as an evidence base that should be used and considered, as opposed to it being one of many competing versions of the truth.

Aligned to the Spatial Framework will be a data observatory that would give you the one version of the truth in terms of data.

It is about understanding the interaction points between what a Local Authority can actually produce and the NCES data and approach. It may be that we may want to have a model policy that can be used and adapted by different Local Authorities to use in their plans. In some of the master planning work NC data was used to help move the work along and so there is evidence to show that you can use it on a practical level.

Local Authorities are a bit baffled by all of this and to some extent they have not got to grips with what they need to do with this information. They need a user guide to make all of this easier to use.

How could the consideration of NC/ES data influence the approach to regional planning, natural resource management and spatial growth at an Arc level?

If we can get the hooks into the Spatial Framework and it is meaningful and it becomes Government policy for the Arc, then from that its use will flow, but without that you will miss your opportunity.

How do we embed the NC approach at the top level to support our aspiration to double nature across the OxCam Arc?

What do we mean by top level as this means different things? Do we mean 5 county level or do we mean at a Local Authority level. In this context we are talking about cross arc level.

This goes back to question about what is success – could partial success be socialising this by making a step in the right direction so Local Authorities recognise the value and use of this before it gets to a stage where it is completely embedded into policies and is driving everything. Getting Local Authorities to set the context of the Local Plans and think about the NC in a conscious way would be a successful step in the right direction before you get to a full bloodied embedment. First step is socialising the concept so that in a future cycle of Local Plans it becomes further embedded.

Think that two-step process would be useful. It I though good to aspire to higher level full blooded embedding but think we can have both. From a Government perspective this is now in the common parlance and we think it will be in those top level policies like the Spatial Framework but there is still scope to take it to that next level. However at a Local Authority level they may not yet be at that same stage and so step one is still needed before you move onto step two.

This will be in the Spatial Framework and so there will be golden thread running through this. It is also going to be in the Dev Corp principles but we need to take it that step further and understand what it means practically for those plans. It is all quite new and so there is more spread needed.

From a Government point of view it does not need to be forced upon people. Given that it will be in a national policy statement Local Authorities will need to be in conformity with that and so that will help to spread it more widely amongst them.

Question about whether it is clear enough what taking a NC approach actually means. It does need some consistent explaining of the simple message about what this means. We do not think there is a standard understanding of what this is – for lots of people it is a nice sounding thing that people know should be used and included but what it actually means is less clear.

NC approach is about understanding what assets you have and the value they have to society and then considering this in each level of their decision making, but it is not clear if there is yet a straight forward message about this and what it means for Local Authorities. You almost need a checklist that people can use to understand that they have taken a NC approach.

Session 2

What advice, information or guidance is required to give you the tools and confidence you need to take natural capital into account in your decision making?

It is really tricky to have a single thread that helps you to join NC approaches through to taking specific decisions on alternative investment or alternative activities as you need different methods to understand the impacts of this. There are not the tools or processes that make that easy to do at the moment. I think it is possible to do this and with the nature after minerals work we are looking at how you can build on the NC baseline to see options and principles for restoration strategies. This will then help you to understand what this restoration work could mean for NC uplift – though this is still at a very early stage.

It is a reality that there are not yet those concrete demonstration projects of how NC has been used in these ways that are needed to develop the tools and approaches for how it can be used that would support further decision making.

Struggle with this as what is decision making at an Arc scale and where does a NC approach come to into play. Should it be used to inform the scale of ambition for the Arc and the restoration and additional NC requirements that will be needed across the Arc to match the demands being put on it. Also should it be played into the work around the water cycle study across the Arc to understand the demand on water both now and in the future and how we address these – understanding the natural capital assets now could help us address some of the challenges faced in the future and this could be a good case study of applying this approach at an Arc wide scale.

Demonstration projects and examples could be useful in helping people to understand this better. Case studies help to understand benefits but initially are we able to use the evidence we have today to help underpin the arguments for the needs of the NC of the Arc.

Anything that can be used to support the case for greater restoration ambitions and investment in NC assets within the Arc is definitely valuable if we think there is a way to use the NC baseline to help make that argument. If this data can be made to make the case for specific aspects of NC like water or carbon sequestration that would be really useful.

Strategic decision making at an Arc scale and where it is happening is really unclear at the moment. At the Whitehall end there is not a clear steer on how much they want to give top down direction and at the other end the Arc's own governance structures is not clear on their role and authority. Having the NC hooks in the Whitehall end may influence decision making at one end – equally having CEO/CL sitting round the table and using this data would be another way to influence decision making. With the local level it may be more about agreeing principles and approaches that they then take away and implement locally which would then produce a whole Arc outcome from these different parts. Overall point needs to be clear on where decision making for the Arc is actually taking place.

Having got this evidence base and this credible information – how does this lend greater weight to the ambition for the environment and using it as leverage for change. Through this we are able to show a coherent understanding of NC and the services it provides.

How could we promote the adoption and use of a natural capital approach, and use of NCES data, within OxCam Arc level planning and growth policies?

We are looking at the mineral restoration project as something concrete that will be looking to test an approach to using this data that hopefully will provide demonstration and an example of it being used to inform decisions that will hopefully lead to stuff happening on the ground in the form of mineral restoration - will be using NCES data with opportunity mapping data being done at both a local and arc wide level

Not quite sure with NRN how we relate this but clearly we need to relate the two things – evidence base of what is there and the need to articulate where nature will need to recover across the Arc scale so that we can inform deliberation at a local scale. If we are to go down that path then we will want to explore nature recovery in the context of impacts on wider enhancement of NC and ES.

Bit that jumps out at me is relevance to people – unless people understand this in the context of their work and lives then it will not get used. It is about building the message of relevance and importance to each person own view – important to get messaging right about importance and added value using this approach and data gives them. This will define whether it get used as without a specific team nudging it, it will not get used unless people naturally see its value and it becomes a thing they just do. Think people still see it as a nice to do and recognise its value but they do not understand when and where they will actually use it in their work. Without this it will never become the norm.

If we want to normalise this then we need to get Council Leaders and Chief Exec's to have champions for this within their organisations who will be asked to own this and think about how it can be applied within that organisation so that it has a hook and is not just something that floats around. Will need this sort of thing to keep drip feeding it so that it slowly becomes embedded.

Not sure in my own mind how much NC is seen as a spatial planning tool as to how much it should be seen as a way to value or make investments in Natural assets to secure investment. This is not the only way spatial planning can be done and it can be agreed on what to do and where. If NC approach and thinking can help to establish that decisions should be taken with thinking to protecting and enhancing NC in mind, and to express the value that comes from doing this to secure the investment may be the greater value in taking a NC approach

Need to socialise this so that people are more minded to invest in this and so it is not just seen as a spatial planning tool.

Struggle to see how you could produce a NC metric in the same way you have a Biodiversity metric though the Eco-metric is trying to do that at a site level.

Could we ask Local Authorities to direct a planners to think about how this NCES data and approach could be utilised and embedded into their work.

If NC approach becomes a requirement for Local Authorities then having a relatively simple guidance on taking this approach and applying it would be very helpful.

Work going on around Environmental Net Gain (ENG) at a Defra level could lead to Local Authority or organisations being asked to demonstrate a ENG plan somewhere down the line and there may be ways that they could do that but do not think you will ever get to a legislating stage for this

What level and type of data is required and are there any gaps in the current evidence base at OxCam Arc level?

Bit that stands out is the opportunity mapping – lots of information is available on what the state of play is now but not as much on opportunities. There needs to be more work to do some demand and need analysis of the data to help guide peoples focus. Where you decide to put your investment needs a stronger evidence base and we think this is a sizeable gap. Potential for Local Nature Recovery Strategies to fill this gap but it is probably too early to say this and whether they cover the wider ES is a question – will be clear on nature but maybe not ES

Breakout group 2

Title: Natural Capital - The strategic view

What do you think are, or could be, the benefits of applying a natural capital-led approach and using nc/es mapping to strategic planning at the OxCam Arc level?

- The natural environment is the basic building block [for development] and NC has a central role in providing information
- NC also creates a link between the natural environment and development
- There is still the question of roles/responsibilities in providing and using the information
- The Ox/Cam Arc is a construct, it isn't a body of people/organisation and has no governance
- Need to develop and embed vision for the Arc – environment is part of this.
- Need to get Strategic Framework in place for the Arc to give it more substance. How this rolls out is important – what does this mean for leaders?
- NC engages with economic discussions and provides the mechanism for monetary value to be placed on the environment
- NC therefore provides a 'linking' role, but it is unclear who is 'responsible' for taking forward
- NC approach can provide consistency through different levels – Arc, local plan, neighbourhood

How could the consideration of nc & es data influence the approach to regional planning, natural resource management and spatial growth at an OxCam Arc level?

- Example, using the water resource data to allow the management of resources to support growth going forward
- SEMPLEPS economic strategy includes pointers to allow connections between economy/natural environment/built environment
- Allows consistency in approach
- Some of the factors/mapping needs to be broader that just the arc geographically, e.g. water resources and catchments

How do we embed the natural capital approach at the top level to support our aspirations to double nature across the OxCam Arc?

- NIC discussion paper https://nic.org.uk/studies-reports/natural-capital-environmental-net-gain/
  Perhaps provides a way to speed up the planning process?
- Statutory framework needed e.g. New National Design Code, should also be a new 'environmental code' or a code for sustainable communities
- The Environment Strategy for the Arc, the principles will soon be agreed
- There is a difficulty in understanding terminology, what is GI? What is NC? There needs to be a unifying description

- The ‘Green Arc’ concept includes wider issues than NC such as green technology
- Environmental Principles coming in March.

Title: Enabling, promotion and information

What advice, information or guidance is required to give you the tools and confidence you need to take natural capital into account in your decision making?

- Noted that none of group considered themselves ‘decision-makers’ at the Arc level
- There needs to be support from politicians and officers at a local level, there is such a risk of challenge at policy making stages (Local Plans etc) NC needs to be embedded in statutory processes (or at least be a material planning consideration)
- At Arc level, there needs to be the capacity and inclination to use the tools available for the NC/ES approach. A strong technical knowledge isn’t necessary at this level
- The (forthcoming) Environment Act requiring 10% net gain in biodiversity has a methodology attached to it, the same needs to be done for the EC approach i.e. a net environmental gain methodology. It is not felt that this is as big a ‘leap’ as may be thought?

How could we promote the adoption and use of a natural capital approach, and use of nc/es data, within OxCam Arc level planning and growth policies?

- Comes back to supporting
- NC should be a material planning consideration to ensure that planning applications are determined using the approach
- If developers are making net gain ‘claims’ in applications we need to be confident and consistent in assessing
- Some Councils will go beyond statutory requirements/standards and may be open to producing policy/supplementary planning guidance on the NC/ES approach (Northampton JTU as an example) – how can we support these ‘brave’ authorities
- Government agencies (as operational bodies) need to embed the NC approach – can then be exemplars
- Major house builders may be persuaded for exemplar projects (e.g. Barratt’s in Aylesbury working with the RSPB)
- Needs to be a dedicated group of NC experts available to give advice/guidance to LPA’s/developers in the Arc to avoid different consultants using differing methodologies to produce supporting information for large scale planning applications
- There is no governance/decision making body for the Arc
- The environment is a really important communication tool/marketing exercise to promote the positive aspect of the Arc growth as opposed to the negative message of more growth

- The environment will provide strong imagery for wider audiences to engage with the Arc. Things like the LNP collaborative mapping are a potential tool but need further work and ground-truthing, and testing against NC / ESS opportunities

What level and type of data is required and are there any gaps in the current evidence base at OxCam Arc level?

- Gap for irreplaceable habitats and species (associated with them)
- Opportunity mapping is very important as a tool
- General point – not all the gaps will be filled, but we can live with the ambiguity. NC approach provides a strong enough foundation

Breakout group 3

Title: Natural Capital - The strategic view

What do you think are, or could be, the benefits of applying a natural capital-led approach and using nc/es mapping to strategic planning at the OxCam Arc level?

How we might feed into the Spatial Framework, environment principles/environment strategy to enable a holistic, integrated (not siloed) approach to the environment – enable multiple benefits, reduced costs > this can only really be done at a strategic scale (consistent / overarching approach).

How do we ensure local support & multi-functionality for a strategic piece of infrastructure?

Nat cap mapping should support this as works across boundary – waterway project ideally suited to NC approach

Varying levels of governance/decision making that NC approach needs to fit in with to ensure embedded and delivers desired outcomes – need to agree where duty & responsibility sits at the various spatial levels

Fundamentally NC approach is aiming to ensure the value of natural environment in recognised in decision making – take account of environmental costs and benefits

Feeding into Spatial Framework and plan making, leading to strategic policy that's applied across the Arc (enables cross-boundary thinking/join up), leading to application within local plans > policy needs to ensure /enable delivery – a policy can both support and hold back innovative approaches

Need both top-down and bottom-up approaches – depth of LNCP data could allow this > layering of data and evidence

How could the consideration of nc & es data influence the approach to regional planning, natural resource management and spatial growth at an Arc level?

Natural Capital plan highlights where investment should be made at a strategic scale

This is where earlier comment re: investment fits in – <u>being able to measure is key, value to development/communities is key, how we value environment may change over time</u>

Is the mapping live? No, agreed this is an issue – links to future ownership and costs to update

We also need to be able to absorb data from others e.g. developers, Highways England, conditions assessment from EWR etc. to ensure LNCP continues to be built on best available data

How do we embed the nc approach at the top level to support our aspirations to double nature across the Arc?

Spatial Framework key to embedding at the top level

Existing non-statutory basis of Spatial Framework causes uncertainty. Agree but 25YEP and Climate Emergency declaration support this. Agree – but early application can support future legislation (case studies / arc as a test bed)

Important to demonstrate benefit of considering the environment early in the process to avoid unnecessary delay later

Is take up about awareness, access to the resource etc.? A marketing issue? Key is to be able to understand and measure benefits to justify investment in development - we may need to rethink how we appraise projects in the future

Title: Enabling, promotion and information

What advice, information or guidance is required to give you the tools and confidence you need to take natural capital into account in your decision making?

How might we use this info. In our various roles - barriers to take up

Investment side: we have a baseline, have collated opportunities – but don't have an opportunities for investment map

How useful would it be to have opportunity mapping at a strategic scale?

Use the tool to identify which aspects of natural capital areas are specialised in – to justify which types of projects SEMLEP need to support i.e. level of flood risk to justify flood risk schemes

Displacement affects vs levelling up agenda > how measure / ensure net environmental gain (avoid unintended negative impacts)

Are we giving an additional data set or something useful - take info.to a level so that a planner understands an area which provides greatest value needs safeguarding to enable a planner to make an informed judgement (important to outline an approach how this info could be used)?

Identify key principles/strategic priorities (what we're trying to achieve) behind the data

We also need to consider future demand of ES in a holistic sense – 'a what if analysis'?

NC approach not only about data, but NC thinking (working slightly differently)

How could we promote the adoption and use of a natural capital approach, and use of nc/es data, within Arc level planning and growth policies?

Recognise this is in the context of Project Speed – is it going to make things simpler or add a layer of complexity > ensure marketed as easy to use (cost to access may have an impact on take up) – to give confidence scope for lunch time CPD?

To ensure easy to understand we can't only provide data, need obvious tangible outputs/recommendations

Where measurements = easier: carbon, Defra metric etc. > lead to siloed rather than overarching approach

Role of Arc as a test bed – to overcome some of these concerns

Could speed up planning process by providing info upfront – informs decision making

Challenge/difficulty of different, seemingly competing approaches: LNCP, WRE SCP, RSPB

What level and type of data is required and are there any gaps in the current evidence base at Arc level?

Do we really know what's out there/ what we'd find useful?

Difficult, struggling to apply as local level user (BMK waterway) – create a checklist or roadmap to enable users to apply themselves/understand what they need? i.e. ORVAL for wider natural capital ahead of bringing in experts

Breakout group 4

Question	Key outcomes
Natural Capital – The strategic view	
What do you think are, or could be, the benefits of applying a NC approach and using NC/ES mapping to strategic planning at the Arc level?	• Provides a scientific evidence base for the environment, similar to other areas of strategic planning • Enables mapping at the same scale to other areas of strategic planning which can be comparable • Generates further opportunities for investment
How could the consideration of NCES data influence the approach to regional planning, natural resource management and spatial growth at an Arc level?	• Provides evidence for nature-based solutions • Barriers include the availability of funding which could be addressed through arc level investment, limited policy drivers which mapping could improve and time required to influence local plans • Resource management evidence at a greater scale for benefits at a local level
How do we embed the NC approach at the top level to support our aspirations to double nature across the Arc?	• Policy within the Arc environment pillar and potentially within the Environment Bill • A champion to target decision makers about NC • Guidance document • Training and support
Enabling, Promotion and Information	
What advice, information or guidance is required to give you the tools and confidence you need to take natural capital into account in your decision making?	• Customised information about NC for the Arc • A guide, evidence and opportunities map • Assessment of the level of understating about NC • Recognition of the limitation to NC and the debates about whether nature should be monetised • Recognition that developments brings opportunities for NC • Recognition the wider objective to environmental net gain • EcoMetric assesses ES at the Arc landscape scale and how can be linked to NC • Important to recognise the wider ES from NC

	• Best practice examples would be useful of NC delivery • Membership and user training
How could we promote the adoption and use of a NC approach, and use of NC/ES data, within Arc level planning and growth policies?	• Improve the understanding Arc level governance • Understanding if NCES is being applied across all the aspects of planning within the Arc • Environment as a priority in decision making with a top down approach • Embed within other elements in planning
What level and type of data is required and are there any gaps in the current evidence base at Arc level?	• Local Authorities to include Arc level data within their local plans • A shared database across the Arc for local authorities • Developer and public body contribution using the same datasets could be beneficial • Who is going to maintain the data, drive the process to use the data/guidance/tools and measure NC achievements? Should local authorities resource the process?

Summary of all groups

Natural Capital – The strategic View

What do you think are, or could be, the benefits of applying a natural capital-led approach and using nc/es mapping to strategic planning at the Arc level?

- Nature at the right scale which is presented at in the Arc level which is a good opportunity
- The housing, economic and transport growth are existing area within strategic planning, the environment has been missed. NC adds a scientific rigorous process providing environmental data for discussions which may not have previously been present to inform planning. There is an improvement to the scientific base. How can this influence decisions?
- Important to work at the same scale as others within the Arc e.g. Highways England
- Embeds the environment across all themes e.g. transport.
- Monetising nature creates an opportunity for further investment from the private sector and private investors
- ES connection to local business investment into opportunities to improve for example soil quality. Could this be picked up across the Arc?

How could the consideration of nc & es data influence the approach to regional planning, natural resource management and spatial growth at an Arc level?

- Data provides evidence for nature-based solutions
- Barriers include if there is funding available and encouraging private sector investment
- Time consuming to influence local plans and this has to be balanced with the political agenda
- Local nature recovery strategies are essential
- The policy drivers are not currently present, however the availability of data and mapping will be a valuable approach to implement NCES at the Arc level.
- BNG and agriculture within the Chilterns conservations board includes regenerative agriculture. Outlines how can this assist farmers at the individual level which is included within the Arc level NCES mapping. However, these benefits are not currently explored to their full potential
- Resource management e.g. strategic upstream flood storage, which otherwise would constrain development. The Arc is a greater scale which is essential for local level resource management

How do we embed the nc approach at the top level to support our aspirations to double nature across the Arc?

- Arc environment pillar will be essential to embed the approach
- Target key decision makers in the process. However, a champion is required at a high level, at an Arc wide level. This could be also at a ministerial level

- Guide for how this should be taken into account would be useful. Similar to the methodology for the delivery of BNG
- Could this be embedded within the environment bill?
- Training and support is also required to inform and advise

Enabling, promotion and information

What advice, information or guidance is required to give you the tools and confidence you need to take natural capital into account in your decision making?

- There is a lot if existing available information and tools. This need to be customised to the Arc and assessed for how appropriate this is
- An Arc NCES tool (similar to the DEFRA biodiversity metric), guide, specific evidence and opportunities would be useful for decision makers. ELMS could provide an interesting example
- Careful assessment of how to pitch a NCES tool is also required given the difference in level of understanding about natural capital
- Recognition of the limitation to natural capital and the surrounding debate about whether nature should be monetised is required to increase uptake by decision makers
- Recognition of how development brings opportunities would be useful.
- Important to recognise the wider objective to the environmental net gain. Arc NCES needs to feed into this
- Ecometric assess ES at the Arc landscape scale and how this can be included in planning. Could this be connected to NC assessment at the Arc level.
- Important to recognise the ES and demonstrate a link to climate change and carbon accounting
- Best practice examples would be useful for how a NC approach is delivered elsewhere e.g. in the US
- Member and user training could also be useful, this would provide support in local planning

How could we promote the adoption and use of a natural capital approach, and use of nc/es data, within Arc level planning and growth policies?

- Promotion is difficult without understanding the governance of the Arc
- A need to understand if NCES is being applied across all the aspects of planning within the Arc
- The approach to the environment would need to change to having a leading role within decision making, which may require a top down approach
- Should be embedded within other elements in planning e.g EIA

What level and type of data is required and are there any gaps in the current evidence base at Arc level?

- The Local Authorities in the Arc don't include Arc level data within their local plans with could be useful for NCES
- There isn't always a requirement to consider regional levels within non-statutory Spatial Frameworks. So although there is the potential for this to still be included at the local level the political landscape may present a barrier
- A shared database across the Arc would help to create shared information for local authorities
- Developer and public body contribution using the same datasets could be beneficial
- Who is going to maintain the data and drive the process to use the data/guidance/tools? Should local authorities resource the process?
- Data observatory is being established which is Arc wide which may provide a data source
- How can we measure the achievements in NC that is regularly assessed and reviewed?

Appendix B: Arc level – Case studies of major infrastructure projects within the OxCam Arc

Case Study: A14 Cambridge to Huntingdon Improvement, Highways England

Description

The £1.5bn A14 Cambridge to Huntingdon improvement scheme includes a major new bypass to the south of Huntingdon and upgrades to 21 miles of the A14. It included widening sections of the existing A14, new local access roads and improved junctions. The scheme was completed in May 2020[9].

Use of Natural Capital

Highways England commissioned the Atkins CH2M Hill Joint Venture (ACJV) to undertake a natural capital valuation of the A14 scheme habitat creation areas[10] identified during construction. Six borrow pits were identified as sources of minerals for road building and subsequently needed restoration after use. Most of the areas were proposed to be restored to mosaics of wetland, woodlands and other habitats that maximise social as well as ecological value.

The assessment was undertaken using Natural Capital Studio (Atkins' natural capital and ecosystem services valuation tool). Using the draft designs available in 2018, the likely type and extent of various habitat types was estimated, taking an asset-based approach.

From the overarching asset types, the flow of ecosystem service benefits arising from the scheme were mapped. These were subsequently monetised to reveal how changing land use (from before to after scheme) could add value across a range of services, including recreation, carbon, air quality and biodiversity. The economic analysis highlighted the variation in the contribution of the various habitat types and sites to ecosystem services provision and ultimately wider net benefits of the scheme.

In this case, the natural capital approach was applied retrospectively to the highway design in order to explore an innovative approach. While it wasn't able to influence decision making, it enabled an innovative approach to be tested. It has since led to further exploration of using natural capital within Highways England to inform investment and decision making on other projects.

Future use of natural capital

Highways England have been using a natural capital approach to influence development of infrastructure from concept to detailed design. One approach is the development of the 'Environmental Benefits from Nature Tool' (EBNT, previously known as the Ecometric) with Natural England, which has sought to address issues

[9] https://highwaysengland.co.uk/our-work/a14-cambridge-to-huntingdon/about-the-scheme/

[10] Atkins, Valuing Our Natural Capital: The Atkins Approach

such as quality and accuracy of data; a proportionate approach to assessment; consistency with application, including comparison to other projects; and use in decision making. The tool has been applied to several projects internally, an early example from published sources is provided below.

Environmental Benefits from Nature Tool (Ecometric) example

Natural England developed a metric to measure ecosystem services provision from a projects habitats losses and gains. The metric was piloted on the M25 design, build, finance, operate (DBFO). The aims were to support Natural England's work to incorporate ES provision in biodiversity unit calculations and to respond to HEs commitments outlined in their 2015 study[11].

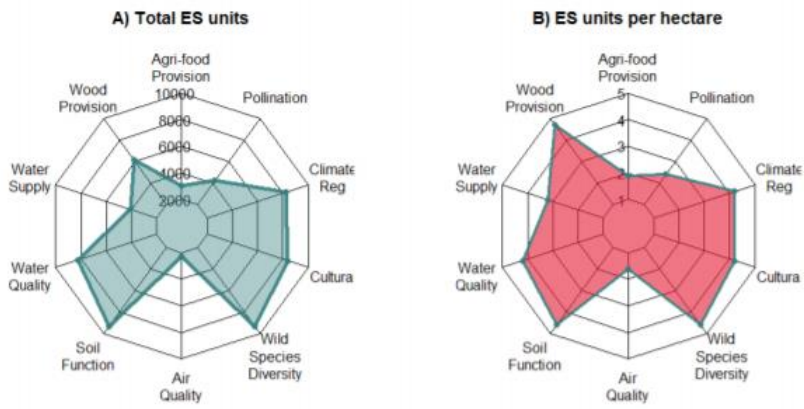


Fig 4: Radar chart showing total ES units and ES units per hectare across the M25 DBFO

Conclusions of the study found:

- The pilot demonstrated the Ecometric offers usability and cost effectiveness in a highways context. Usability was demonstrated through successful application of pre-existing habitat data to determine ES provision. Cost effectiveness is addressed through timeliness in application
- Mainstreaming the Ecometric through Environmental Impact Assessment with BNG approaches could contribute to more sustainable infrastructure development through improved decision making
- Employing the metric to evaluate environmental improvement schemes may improve the cost effectiveness of investments in GI and BNG whilst allowing better targeting of highways interventions at key services

Current Stage of Development - Environmental Benefits from Nature Tool

The Ecometric has since been further developed to help inform decision-making, improve design and outcomes of development. The EBNT tool is designed to be used with BNG to plan for ecosystem service change and enable wider benefits for people and nature. It is based on the premise that BNG is a primary driver for growing natural capital and looks at changes across 18 different ecosystem services. The next version of the tool is due to be launched Summer 2021.

[11] https://www.balfourbeatty.com/media/317115/ecometric_2018.pdf in association with Scotland's Rural College and University of Edinburgh.

Case Study: Network Rail, Biodiversity Net Positive

Description: Network Rail defines *net positive biodiversity as replacing more natural habitat than is lost as part of their work.*

This approach has been applied to a number of major projects – Thameslink Programme, The Greater West, East West Rail, Midland Mainline route upgrade and Gospel Oak to Barking electrification[12]. The Thameslink Project was the first to establish biodiversity net gain and other schemes have followed.

Environmental Impact Assessment (EIA) for major rail infrastructure, for example East West Rail, include assessments for net positive biodiversity.

The preferred option between Bedford and Cambridge was partly chosen to avoid the most environmentally challenging areas and potential direct impacts on irreplaceable or sensitive environmental features, including heritage assets, with good opportunities to achieve biodiversity net gain[13].

Biodiversity Action Plan

The Network Rail Biodiversity Action Plan contains examples of best practice management for biodiversity across the railway, including alternatives to tree felling, such as crown reduction, pollarding and coppicing of large trees. The plan pledges to not just replace ecologically important vegetation that we have to remove to maintain safety and services, but to create habitats to increase connectivity between existing habitats.

Rail workers will be able to identify suitable areas where they could create species-rich grassland or plant new trees and hedgerow that support wildlife. They will do this by using UKCEH's new web-based tool (see below).

There will be regular analysis of satellite and aircraft imagery to detect changes in habitat composition across the railway, as well as targeted ground surveys where there are likely to be rare species.

Habitat Mapping:

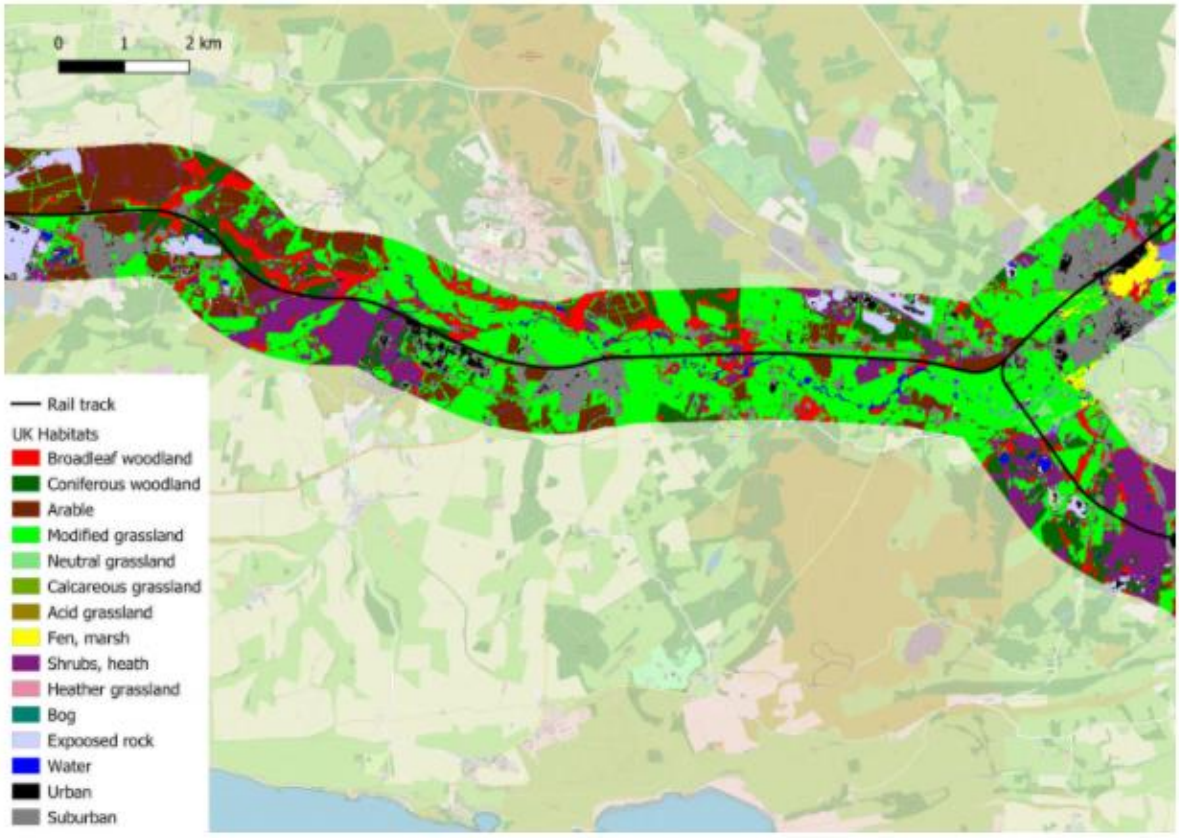
The UK Centre for Ecology & Hydrology (UKCEH) is using images from satellites and aircraft to produce a detailed national map of all the habitats found alongside the railway[14].

[12] https://www.networkrail.co.uk/communities/environment/wildlife/managing-habitats-by-the-railway/

[13] https://eastwestrail-production.s3.eu-west-2.amazonaws.com/public/MediaObjectFiles/339ba6a468/Preferred-Route-Option-Announcement-Summary-Document.pdf

[14] https://www.networkrail.co.uk/stories/latest-technology-to-improve-thousands-of-miles-of-biodiversity/

They contain priority wildlife habitats including lowland heath lands, wetlands and coastal sand dunes. The railway is also home to a large number of rare and threatened species and UKCEH has combined its information with millions of records of species to predict what animals and plants are likely to live in habitats near the railway.



Habitat map

Appendix C: Arc level – Case studies of Strategic-level approaches to influencing strategies and planning policy using a Natural Capital approach

Case study: Greater Manchester Combined Authority

Greater Manchester was one of the four Defra Pioneer projects to support the UK government's 25 Year Environment Plan. It was the home of the Urban Pioneer programme, testing new tools and methods for investing in and managing the natural environment. The vision for the Urban Pioneer was to make a clear and evident contribution to Greater Manchester's natural environment, engaging and connecting people with nature, maximising their health and economic benefits through taking a natural capital approach, investment in the environment, creating sustainable growth and a good quality of life. This ambitious project has been supported and driven by the Greater Manchester Combined Authority (GMCA) with the full support and backing of Mayor Andy Burnham.

As part of this work, a Natural Capital Investment Plan has been developed to help promote investment and the delivery of opportunities that protect and enhance Greater Manchester's natural capital, to support a healthy population and economy. Key elements of this are a natural capital approach and the use of natural capital and ecosystem services data and mapping.

Their natural capital approach

GMCA wanted to take a natural capital approach to help understand what they have, how it benefits them and value it so it can be incorporated within key strategies and policies.

1. Collecting the evidence base

They collected a detailed evidence base using natural capital accounting (https://naturegreatermanchester.co.uk/resource/gm-natural-capital-accounts/) and ecosystem services opportunity mapping (https://mappinggm.org.uk/gmodin/?lyrs=v_tep_ecosystem_services_2019os_maps_light/10/53.5069/-2.3201). These allowed them to ascertain what assets they had, the ecosystem services they provide and the benefits of these to Greater Manchester and its people.

The ecosystem services opportunity mapping tool is open access and available for all to use.

2. Embedding the natural capital approach and thinking within GMCA policy

The natural capital approach and nc/es evidence base has been influential and widely employed - it underpins all of their work on the natural environment. It has helped influence political minds and strategies, and achieved considerable buy-in.

The key strategies where it has been used are:

- **Greater Manchester Spatial framework**
  Greater Manchester's Plan for Homes, Jobs and the Environment prepared on behalf of the city-region's 10 local authorities. The plan looks ahead over the period of 2020-2037 to manage growth so that Greater Manchester is a better place to live, work and visit.

  https://greatermanchester-ca.gov.uk/what-we-do/housing/gmsf2020/the-plan/

  https://greatermanchester-ca.gov.uk/GMSF2020-Evidence/Districts/1.%20Greater%20Manchester/2.%20Chapter%205%20A%20Sustainable%20and%20Resilient%20GM.zip

- **Greater Manchester Local Industrial Strategy**
  Greater Manchester's Local Industrial Strategy is designed to deliver an economy fit for the future, with prosperous communities across the city-region and radically increased productivity and earning power. It incorporates desires for a green city-region and the 5 Year Environment Plan

  https://www.gov.uk/government/publications/greater-manchester-local-industrial-strategy/greater-manchester-local-industrial-strategy#greater-manchesters-industrial-strategy

- **Greater Manchester 5 Year Environment Plan 2019-24**
  The plan outlines actions to reduce carbon emissions and improve the environment. Within this, the five priority areas are:
  - Mitigation of climate change
  - Improved air quality
  - Sustainable consumption and production
  - To protect, maintain and enhance the natural environment (including a section on natural capital)
  - Resilience and adaptation to climate change.

  https://www.greatermanchester-ca.gov.uk/media/1986/5-year-plan-branded_3.pdf

- **Local Plans**
  Local Plans are also being developed for each of the 10 Local Authorities at differing speeds and some have already used the NC/ES tools produced.

Other strategies/projects using natural capital and the evidence base

- **Creating a natural capital investment plan**
  The Greater Manchester Natural Capital Investment Plan was published in 2019 and is the first of its type for a UK city region.

  https://www.greatermanchester-ca.gov.uk/what-we-do/environment/natural-capital/

The NCES evidence base is a foundation of this plan which aims to support the agreed vision of “A Greater Manchester where investments in natural capital enhance the long-term social, environmental, and economic health and wellbeing of its people and businesses”.

- **Greater Manchester Environment Fund**
  The Environment Fund is being set up to provide grant funding to non-statutory environmental initiatives that are currently underfunded through existing funding mechanisms.

- **The IGNiTION (Innovative financinG aNd delivery of naTural climate sOlutioNs in Greater Manchester) project**
  This partnership project aims to develop a pipeline of natural capital (Green/Blue infrastructure) climate adaptation projects at the €10m+ scale which could be attractive to private investors, while creating the mechanisms and confidence for investments to be made in natural capital and nature-based solutions (NBS).

- GMCA are in the process of developing a **LNRS and nature recovery network map** which builds on their previous GI maps, implementation will be informed by the nc/es evidence base to help identify potential opportunities.

- They are also in the process of developing a **site mapping tool** which will enable landowners, etc., to submit sites which can then be assessed. The es mapping will be one of the key layers within that tool.

Their NCES evidence base

The use of GMCA’s NCES data and mapping has been extensive, it is far greater than how it might appear as it has all been used in the evidence base.

At the Greater Manchester scale, they present the data as basic information to keep it user friendly. However, within catchments (CaBA) they focus down to ward-level data but still only communicate the very top-level findings.

They have found that the evidence base is being used well at a strategic level (see above) but less well at specific project level. This is because there is a lot of detailed information which partner organisations are finding difficult to interpret and apply in practice. As a result, with support from the Environment Agency, they have carried out research with their partners and are producing a user guide.

Key elements of this user guide will be:

- Text-based resource
- Include FAQ’s and case studies
- Have clear signposting
- Make the data easy to understand
- All data will be open source

Another key issue is communications – although nc/es maps are helpful they advise to use ‘hooks’ to gain peoples interest and show how nc/es can be applied in your

day-to-day work. You need to explain what natural capital accounting and ecosystem services actually mean and how they can be used. So, you need to talk to audiences in suitable language and communicate the 'hidden' benefits.

To aid with communications, GMCA have now run two Green Summits – whole day events dedicated to the natural environment.

Case study: South Downs National Park

The South Downs National Park Local Plan and Policies Map 2014-2033 was adopted in July 2019 and covers the whole national park. The Local Plan is informed by a range of factors relating to the special qualities of the National Park, including landscape character, biodiversity and cultural heritage, neighbourhood plans, local housing and economic needs and the impact of climate change. Thus it covers numerous natural capital assets and the ecosystem services that these provide, supported by an evidence base which includes ecosystem services mapping.

The plan is driven by a desire to ensure that the park flourishes, that even the smallest communities need some growth but that the quality of all new development must reflect the quality of the landscape. The plan aims to be an exemplar for rural planning.

The Local Plan sets out how the National Park Authority will manage development over the next 15 years (based upon the statutory purposes and duty for national parks as specified in the National Parks and Access to Countryside Act 1949, as amended by the Environment Act 1995). It is supported by a wide evidence base including Ecoserve mapping (to determine the availability of ecosystem services), tranquillity mapping, dark night skies and transport assessments. It also includes the Strategic Housing Land Availability Assessment where many parameters relate to landscape matters such as views, impact upon the special qualities of the National Park and other statutory assessments such as Habitat Regulation Assessments and Sustainability Appraisals**.**

Objectives of the Local Plan, relevant to taking a natural capital approach, include:

1. To conserve and enhance the landscapes of the National Park
2. To conserve and enhance the cultural heritage of the National Park
3. To conserve and enhance large areas of high-quality and well-managed habitat to form a network supporting wildlife throughout the landscape
4. To achieve a sustainable use of ecosystem services thus enhancing natural capital across the landscapes of the National Park and contributing to wealth and human health and wellbeing
5. To protect and provide opportunities for everyone to discover, enjoy, understand and value the National Park and its special qualities
6. To adapt well to and mitigate against the impacts of climate change and other pressures
7. To conserve and enhance the villages and market towns of the National Park as thriving centres for residents, visitors and businesses

8. To protect and provide for the social and economic wellbeing of National Park communities supporting local jobs, affordable homes and local facilities
9. To protect and provide for local businesses including farming, forestry and tourism that are broadly compatible with and relate to the landscapes and special qualities of the National Park

What are the strengths?

It is a spatially driven plan so may fair better than other plans in the light of the proposals set out in the Planning White Paper.

With its focus upon landscape, this Local Plan has a strong emphasis on landscape characteristics and the nature of the areas as mapped out in the South Downs Integrated Landscape Character Assessment. Allocations and policies are therefore landscape capacity led, not target driven, which helps promote a natural capital approach.

The evidence base included ecosystem services mapping.

What are the weaknesses?

Because the Local Plan is landscape focused it gives consideration to biodiversity, water and cultural heritage, but it doesn't give equal weight to the whole spectrum of natural capital assets and the ecosystem services that they provide.

Note: This case study is based upon a draft Defra Environmental Net Gain case study on the South Downs National Park Local Plan.

Appendix D: County level - Review of the different LPA approaches to natural capital and using NCES data and mapping within the OxCam Arc

It should be noted the review identifies published sources at the time of writing (February 2021). It is recognised that there are emerging local plans, as well as local plan reviews may also include natural capital but are not documented here.

Plan Name and Local Authorities	Evidence of NCES within policy - Ecosystem Services - Natural Capital - Green Infrastructure - BNG	Evidence of NCES data use and mapping within policy	Any other supporting information relating to NCES e.g. supporting guidance or SEA/SA for the Plan
Bedfordshire (Unitary Authorities)			
Bedford Borough Local Plan 2030 Bedford Borough Council (2020)	Ecosystem Services - Policy 39 Retention of trees, reference to the wider ecosystem services offered by trees. Ecological networks are mentioned in Policy 42S Protecting biodiversity and geodiversity and Policy 43 Enhancing biodiversity. Natural Capital - Policy 39 Retention of trees, specific mention of NC accounting in relation to calculating to value. Green Infrastructure - 2.12 Landscape and natural environment, specific mention. 3. Vision, includes creating a robust network of green infrastructure. 4. Objectives, 4.8 'Develop a strong and multifunctional urban and rural green infrastructure network through protecting, enhancing, extending and linking landscapes, woodland, biodiversity sites, heritage sites, green spaces and paths.' Policy 25 Former Stewartby Brickworks, includes green infrastructure for the site. Policy 28S Place making, includes a contribution to provision of green infrastructure as requirement for development proposals. Policy 35S Green Infrastructure, refers to the Bedford Borough Green Infrastructure Plan 2009 including landscape, historic environment, biodiversity, accessible green space, access routes. Policy 36S Forest of Marston Vale, environmental regeneration and delivery of green infrastructure. Policy 72S Additional strategic employment development includes landscape biodiversity with GI as a mitigation method. Planning obligations includes enhancement of green	Evidence of biodiversity characterisation study 2009 as part of the 'Rebuilding Biodiversity' including opportunity mapping by the Bedfordshire and Luton Biodiversity Partnership (now the Wildlife Working Group). This report followed on from the Bedfordshire study published in 2006. The studies identified existing biodiversity assets and used them to map ecological networks at both the borough and county levels. The studies also summarised the characteristics of each network, including the species and habitats found there and then looked for opportunities to enhance the	Green Space Strategy with specific projects: - Green Wheel project - Bedford River Valley Park and the Bedford to Milton Keynes Waterway Park which seeks to join together the River Great Ouse in Bedford and the Grand Union Canal in Milton Keynes. Both of these projects lie within the Forest of Marston Vale. Bedford Borough Green Infrastructure Plan 2009 Allocations and

	infrastructure assets Biodiversity Net Gain - mention of Biodiversity but not specific evidence of commitments to net gain.	network across the landscape. The studies can be found on the Bedfordshire and Luton Biodiversity Recording and Monitoring Centre's (BRMC) website. Policies allocated which include green infrastructure on the policies map.	Designations Local Plan 2013 SA (Sept-2018) - Biodiversity enhancement and mitigation. Mention of green infrastructure policies. An environmental constraints map.
Open Space SPD Bedford Borough Council (2013)	Ecosystem Services - mention of open space to increase biodiversity.	None identified	None identified
Luton Local Plan 2011-31 Luton Borough Council (2017)	Ecosystem Services - outlined to be provided by trees, shrubs and woodland. Green Infrastructure - GI is identified as a challenge and that areas need to be protected and enhanced. Specific site allocation policies include GI. Policy LLP25 - High Quality Design specifically outlines design should provide GI. Within the natural and historic environment section of the plan the limited supply of GI networks is discussed as a key issue. Policy LLP27 - Open Space and Natural Greenspace outlines support for proposals which establish new GI. BNG - Outlined as key issue within the natural and historic environment section and that BNG should be provided where possible. Policy LLP28 - Biodiversity and Nature Conservation outlines support for proposals which help to delivery net gain in the conservation and enhancement of sites.	Mapping of Luton Green Infrastructure Network with associated aspirations.	Luton Green Infrastructure Plan
Milton Keynes Plan:MK Milton Keynes Council (2019)	Ecosystem Services - mentioned throughout relating to biodiversity. Also within Policy NE4 Green Infrastructure as a multi-functional GI to delivery ecosystem services. Green Infrastructure - Plan provides strategic policies for detailed context for the more detailed development management policies. Included within Policy SD1 Place-making principles for development, Policy SD9 General Principles	*None identified*	Vision for Green Infrastructure in Buckinghamshire

	for Strategic Urban Extensions, Policy SD10 Delivery of Strategic Urban Extensions, Policy INF1 Delivering Infrastructure, Policy FR2 Sustainable Drainage Systems (SUDS) and Integrated Flood Risk Management, Policy NE4 Green Infrastructure, L3 Change of Use of Amenity Open Space, Policy L4 Public Open Space Provision in New Estates. Also within specific site and growth area policies such as Policy SD3 Central Milton Keynes Growth and Areas of Change. BNG - Included within Policy SD1 as a result of development and NE1 as a compensatory provision in line with the mitigation hierarchy. NE3 Biodiversity and Geological Enhancement specifically includes BNG as a result of development proposals where possible. NE4 also includes BNG relating to GI networks.		
Central Bedfordshire Local Plan Central Bedfordshire Council Under review pre-submission Jan 18 reviewed.	Ecosystem Services - are discussed in the environmental enhancement overview. Also outlined as a provision created by SUDs, a value of the landscape and provided by woodland, trees and hedgerows. Natural Capital - Tools for analysing GI and Natural Capital have been development and are mentioned to be used by developers to assess impact, refer to Ecosystem Knowledge Network website in the 'Tool Assessor' section. Green Infrastructure - Policy EE1 Green Infrastructure outlines that major developments will demonstrate a net gain in GI and refers to a number of guidance plans for implementing GI. Policy SP3: Generic Requirements for Strategic Sites mentions a Green Infrastructure Strategy to environmental protection and enhancement within the Site. Specific site allocations also outline that developments should create GI and mention specific locations for this. GI is also mention in Policy EE11: The River and Waterway Network for developments to promote waterways and towpaths. Policy EE13: Outdoor sport, leisure and open space includes GI for complementing open space design. Policy CC3: Flood Risk Management GI is mentioned a mitigation method for maximising water efficiency and contributing to net gain. Policy HQ1: High Quality Development outlines that proposals should compliment GI. BNG - Specific site allocations outline that developments should ensure net gain in biodiversity as mitigation, compensation and/or enhancement. Policy EE2: Enhancing biodiversity specifically mentions that development proposals should provide a net gain in biodiversity and how this should be achieved.	*None identified*	Bedfordshire, and Mid and South Bedfordshire GI plans. Green Wheel and Greenway plans Parish Green Infrastructure Plans Accounting for Natural Capital Event for the OxCam Arc

Buckinghamshire			
Buckinghamshire Green Infrastructure Strategy Buckinghamshire County Council (2009)	The strategic context and evidence base for GI in the county. The strategy highlights the county's GI resource, where deficits in accessible GI can be found in and priority areas for action/improvement. The Natural Environment Partnership oversees the delivery of the strategy. The strategy specifically mentions the policy context for GI with case studies for GI delivery.	Buckinghamshire Habitat Mapping Project Strategic Biodiversity Opportunity Mapping	Buckinghamshire and Milton Keynes Natural Environment Partnership (the "NEP"), Vision and Principles for the Improvement of Green Infrastructure in Buckinghamshire and Milton Keynes
Buckinghamshire GI Delivery Plan Buckinghamshire County Council (2013)	Builds on other GI planning frameworks. It defines GI and the policy context. It includes a map list and of the strategic GI projects within Buckinghamshire which includes the project status, cost and time scales.	Detailed GI mapping for each project site including the key issues and opportunities and a list of data sources used. The maps also include GI analysis	Aylesbury Vale GI Strategy 2011-2026
Pilot - Nature Recovery Network initiative Buckinghamshire County Council - Selected local authority for the pilot (2020)	*No detailed information currently available.*		
Vision and Principles for the Improvement of Green Infrastructure in Buckinghamshire and Milton Keynes NEP (2016) - Supplementary update to the 2009 Buckinghamshire Green Infrastructure Strategy	Provides a vision for GI in Buckinghamshire and Milton Keynes and outlines what considerations should be taken into account when planning for GI as a strategic scale to individual projects.	*None identified.*	Natural Environment Partnership
Aylesbury Vale Local Plan 2013-2033 Aylesbury Vale District Council	Ecosystem Services - NE1 Protected sites mentions that development benefits must out way adverse impacts on protect sites and ecosystem services they provide. It is also outlined as a principle of the Aylesbury Vale that GI should be planned to provide benefits to ecosystem services.	Specific Green Infrastructure proposals map for Aylesbury Linear Park GI.	Aylesbury Vale Green Infrastructure Strategy

- Currently under main modifications consultation so the proposed submission has been reviewed	Green Infrastructure - a well managed GI network is included as part of the spatial vision. Accessible GI is also included part of the strategic objectives. S2 Spatial strategy for growth identifies site to support GI. I1 Green Infrastructure is a specific policy which outlines that development proposals will need to maintain and where appropriate enhance the GI network for certain situations such as flooding and further information on monitoring. There are GI proposal maps for specific sites and to support specific site allocations such as Aylesbury Garden Town and with specific percentage targets for GI. GI is outlines to be multi-functional BNG - Site allocations mention habitat should be retained for BNG. NE2 Biodiversity and geodiversity outlines that BNG will be required on greenfield sites and that loss can be mitigation or compensated with BNG, development that result in damage or loss in biodiversity should also mitigate or compensate with BNG with planning conditions/obligations. NE9 Trees, hedgerows and woodlands loss should result in BNG. I1 Green Infrastructure outlines that development proposals should include BNG where possible.		
Chiltern District Development Framework Core Strategy Chiltern District Council (2011) - Chiltern and South Bucks Local Plan 2036 will supersede the core strategy	Green Infrastructure - Mentioned throughout in relation to multiple policies. Policy CS7 - Major Developed Sites within the Green Belt Allocated for Housing includes incorporation of multifunctional green infrastructure. Policy CS32 Green Infrastructure outlines a commitment to identify, protect and enhance strategic green infrastructure assets and how this will be measured. BNG - Policy CS4 - Ensuring that development is sustainable includes ensuring net gain in biodiversity by meeting targets in the national and local biodiversity action plans. Policy CS24 - Biodiversity outlines that BNG can be used a mitigation or compensation where developments adversely impact on biodiversity.	*None identified.*	*None identified*

South Bucks Local Development Framework Core Strategy South Bucks District Council (2011) - Chiltern and South Bucks Local Plan 2036 will supersede the core strategy	Green Infrastructure - outlines GI opportunities in designations. Mentions GI in relation to other districts. Core Policy 5 - Open Space, Sport and Recreation identified access to GI and highlights specific areas fragmented and under pressure and opportunities. Core Policy 6 - Local Infrastructure Needs GI is identified as a type of infrastructure. Core Policy 9: Natural Environment outlines that conservation and enhancement should be informed by the Green Infrastructure Plans and investment is required to maintain and enhance. Core Policy 15 – Mill Lane (Opportunity Site) includes GI improvements BNG - mentioned as factor for critical success of conservation and enhancement. Core Policy 9: Natural Environment includes BNG as a method for mitigation or compensation for new developments. It also mentions the Biodiversity Opportunity Areas and other specific areas to be part of development proposals. Core Policy 14: Wilton Park (Opportunity Site) specifically mentions delivery of net gain in biodiversity resources. Core Policy 15: Mill Lane (Opportunity Site) delivery of BNG.	Mapping available which identifies opportunity areas for park access but not GI specific.	*None identified*
Wycombe District Local Plan Wycombe District Council (2019)	Ecosystem Services - Principles for Princes Risborough include an ecosystem services approach and the associated benefits. Policy PR7 outlines an integrated ecosystem services approach to environmental management and flood mitigation across the Main Expansion Area. 6.0 Delivering the Strategy, Managing Development outlines the benefits of green infrastructure to include ecosystem services. Green Infrastructure - GI is identified as a strategic delivery policy CP10 Green Infrastructure and the Natural Environment which outlines how to protect environmental assets and enhance them with GI and within Policy CP7 Delivering the Infrastructure to Support Growth for delivery of key infrastructure. Policy CP9 - Sense of Place also mentions that GI is an importance element. Policy CP12 Climate Change promotes mitigation and adaptation to climate change with GI integration into design of new developments. Policy HW4 Abbey Barn North includes green infrastructure. Policy HW5 Abbey Barn South and Wycombe Summit continued included GI as a link for riding to Deangarden Wood. Policy HW6 Gowm Valley and Ashwells outlines GI to be included for biodiversity/habitat improvement/BNG. Policy HW7 Terriers Farm and Terriers House outlines that developments will require GI and specific sites. Policy HW8 Land off Armsham Road including Tralee Farm, Hazlemere identifies that GI links should be provided. Principles of Princes Risborough include local infrastructure to facilitate new and enhance green infrastructure. Policy PR4 The Main Expansion Area Development	*None identified*	*None identified*

	Framework which included delivery of GI. Policy PR7 Development Requirements includes a comprehensive strategic GI with mention to specific locations within the concept plan. Policy BE1 Slate Meadow, Bourne End and Wooburn includes GI provision and enhancement opportunities. Policy BE2 Hollands Farm, Burne End and Wooburn which includes provision, maintenance and enhancement areas. Policy RUR7 Land Off Clappins Lane, Naphill included GI provision. Policy RUR8 Land South of Mill Road, Stokenchurch includes GI provision in a specific location. DM34 Delivering Green Infrastructure and Biodiversity in Development sets out our approach to achieving and maximising GI and enhancements to local biodiversity. BNG - CP10 Green Infrastructure and the Natural Environment includes ensure BNG for proposals. Policy HW6 Gowm Valley and Ashwells includes delivering significant BNG that reflects the site. Principles of Princes Risborough includes BNG. Policy PR7 Development Requirements includes ecological enhancement through BNG such as mitigation or retention.		
Cambridgeshire			
Greater Cambridge Green Infrastructure Opportunity Mapping South Cambridgeshire District Council, Cambridge City Council (2020)	Document produced with the joint Local Plan to 2041 to provide a sound evidence base of the quantity and quality of existing GI assets and an analysis of deliverable interventions to enhance the GI network supported by local policies. Natural Capital is mentioned and in relation to mapping natural capital and opportunities for habitat creation in Cambridgeshire.	Extensive mapping identifies GI opportunity zones and existing assets. Also includes carbon density in topsoil and carbon sequestration broad opportunity areas.	Cambridgeshire and Peterborough Doubling Nature Vision Mapping Natural Capital and Opportunities for Habitat Creation in Cambridgeshire.
Cambridgeshire Green Infrastructure Strategy 2011 Cambridge County Council (2011)	Ecosystem Services - GI is outlined as essential for ecosystem services. Green Infrastructure - provides an overarching strategy for Cambridgeshire which highlights existing natural green space and opportunities for creating, linking, and improving it. Outlines specific target areas for GI and the strategic GI network. The Strategy provides a depth analysis of GI policy and variables which are associated with GI such as well-being which demonstrates a basis for GI provisions.	GI study mapping with existing, emerging and no strategy areas. The GI mapping is detailed and provides analysis and data that details the quality of GI e.g chemical status of groundwater. GI is also evaluated against social indicators and well-being.	*None identified*

Cambridge City Local Plan Cambridge City Council 2018 – 2031 (2018)	Ecosystem Services - broadly mentioned as a benefit. Green Infrastructure - Policy 8: Setting of the city includes site abutting GI corridors and outlines support for proposals which deliver the strategic green infrastructure network and priorities set out in the Cambridgeshire Green Infrastructure Strategy. Cambridge's natural environment strategy delivers GI. Also includes specific site policies which provide appropriate GI which will integrate with existing and new development and the surrounding area Policy 19: West Cambridge Area of Major Change. Policy 69 – Protection of biodiversity and geodiversity importance specifies a delivery mechanism which includes the Cambridge Green Infrastructure Strategy. BNG - Biodiversity enhancement mentioned but nothing specific about BNG.	*None identified*	Cambridge's natural environment strategy
East Cambridgeshire Local Plan East Cambridgeshire District Council (2015) - First and Second reviews have provided updates	Green Infrastructure - Climate change and GI identified as a key issue and challenge. Policy Growth 3 - Infrastructure Requirements includes appropriate GI in place to serve needs of new development. Policy COM 5: Strategic green infrastructure is specifically for GI and outlines the requirements for proposal support for new and improved strategic GI. Specific sites are identified for GI.	Map of the Strategic Green Infrastructure Network with identified target areas.	Cambridgeshire Green Infrastructure Strategy
Fenland Local Plan Fenland District Council (2014) - Currently under review	Green Infrastructure - Outlined as an objective to create and enhance multifunctional open spaces for healthy, inclusive and accessible communities. Policy LP7 – Urban Extensions included GI to provide, commensurate with the scale of the urban extension as a network of open spaces with multifunctional benefits. GI is mentioned in relation to mitigation and being compliant with the aims of the Cambridgeshire Green Infrastructure Strategy. BNG - Policy LP19 – The Natural Environment outlines mitigation or compensation with net gain for biodiversity where harm to protected habitats or species is proposed.	*None identified*	Cambridgeshire Green Infrastructure Strategy (2011)

Huntingdonshire's Local Plan to 2036 Huntingdonshire District Council (2019)	Natural Capital - Identified as an opportunity to enhance existing biodiversity assets. Green Infrastructure - LP 2 Strategy for Development outlines that the development strategy will provide complementary GI enhancement and provision to balance recreational and biodiversity needs with support for climate change adaptation. This is then specified in a number of specific site policies. LP 3 Green Infrastructure outlines that proposal are expected to support GI and how this should be demonstrated. Several GI priority areas have been identified and are shown on the Policy Map. LP 30 Biodiversity and Geodiversity includes multifunctional GI provision. BNG - 8 Conserving and Enhancing the Environment included BNG as an aim. LP 30 Biodiversity and Geodiversity outlines the proposals should provide a net gain where possible.	*None identified*	Natural Cambridgeshire publication 'Developing with Nature Toolkit' for BNG
South Cambridgeshire Local Plan South Cambridgeshire District Council (2018)	Green Infrastructure - is included within the objectives of the Local Plan when ensuring new developments provide services and facilities for healthy lifestyles and well-being. Specific site policies include the delivery of a GI network and outline the details for this to be achieved. Major Development sites also include GI. Policy NH/4: Biodiversity outlines that new developments must maintain, enhance, restore or aid biodiversity which will aid the delivery of the Cambridgeshire Green Infrastructure Strategy. Policy NH/6: Green Infrastructure aims to conserve and enhance GI and outlines the responsibility for new developments to contribute to enhancement of GI. Mapping outlines specific focus areas for GI. BNG - Policy E/2: Cambridge Biomedical Campus Extension includes BNG as mitigation for any adverse ecological impacts.	Map of the Green Infrastructure Strategy Network.	Cambridgeshire Green Infrastructure Strategy (2011)

Peterborough (Unitary Authority)			
Peterborough Local Plan Peterborough City Council (2019)	Ecosystem Services - Policy LP21 New Open Space, Sport and Recreation Facilities outlines the importance of ecosystem services through flood alleviation and reducing air pollution. Policy LP22 Green Infrastructure Network, includes benefits and importance of design and layout of GI for ecosystem services linked to the green infrastructure network. Policy LP24 Nene Valley outlines the importance of development recognising the full range of ecosystem services in NIA and enhancement. Natural Capital - Policy LP22 Green Infrastructure Network outlines that developments can impact on the extent and ability of natural capital to provide ecosystem services. Green Infrastructure - Policy LP7 Health and Wellbeing, green infrastructure to contribute to improving physical and mental health. Policy LP21 New Open Space, Sport and Recreation Facilities, delivering multi-functional green infrastructure benefits, maximise the benefits and function and connect to the strategic Green Infrastructure Network to create facilities on site as part of a development. Policy LP22 Green Infrastructure Network, outlines all development should ensure existing and new green infrastructure is considered and integrated into scheme design, opportunities for green infrastructure provision in strategic and major development proposals. Proposals include maintenance and management/enhancement of GI assets. No development permitted with harm or loss of GI network. Policy LP23 Local Green Space, Protected Green Space and Existing Open Spaces mentions open space to contribute to GI network. Policy LP24: Nene Valley, included protection and enhancement of biodiversity through GI. Policy LP26 Green Wedges outlines proposals should improvement GI quality. Policy LP28 Biodiversity and Geological Conservation, green infrastructure as a method to promote effective functioning ecological network. BNG - Policy LP 28 Biodiversity and Geological Conservation, mentions the council will ensure that through planning decisions no net loss in biodiversity and a net gain where possible. Encourage use of the Natural Cambridgeshire's 'Developing with Nature Toolkit' to demonstrate BNG within proposals.	NE environment maps.	Peterborough Open Space Strategy Natural Cambridgeshire's 'Developing with Nature Toolkit SA (July-19) - GI, BNG and Ecosystem Services included as mentioned in the local plan.

Peterborough City Council Biodiversity Strategy Peterborough City Council (2018)	BNG - Outlines specific actions for biodiversity within developments including no net loss and BNG.	*None identified*	Peterborough Nature Partnership Cambridgeshire Green Infrastructure Forum Cambridgeshire & Peterborough Biodiversity Partnership
Peterborough's Green Infrastructure & Biodiversity SPD Peterborough City Council (2019)	Ecosystem services - section on delivering ecosystem services which includes the benefits, link to economics and national policy. Step by step recommended approach to GI and biodiversity for planning applications. Natural Capital - mentioned as a way ecosystem services contribute to economic welfare. Green Infrastructure - benefits are outlined to support healthy lifestyles, active access, conservation of landscape character and built heritage, enhancing biodiversity, healthy ecosystems, climate change and economy. Includes areas for GI focus. Schedule of priority green infrastructure projects. BNG - connection to the ecological mitigation hierarchy is explained to achieve BNG for development proposals.	Map of the green infrastructure focus areas. A habitat opportunity mapping project is planned which will cover the whole city; this will look at opportunities to create new habitat that would enhance a) biodiversity, b) water quality and c) air quality, and then bringing everything together to look at multiple benefits (Ecosystem Services) and highlighting the best sites to this take forward. In addition, strategic access opportunities for access to good quality, well managed natural green spaces are included. This will included targeted habitat and habitat connectivity mapping. Reference to magic map. ArcGIS mapping https://peterborough.maps.arcgis.com/home/index.html	None identified

Northamptonshire			
Creating Sustainable Communities: Planning Obligations Framework and Guidance Document Northampton County Council (2015)	Green Infrastructure - mentioned as a potential infrastructure consideration.	*None identified*	*None identified*
Habitat Opportunity Mapping in Northamptonshire and Peterborough Northamptonshire County Council, Peterborough City Council (2018)	Provides a baseline for Natural Capital assets and constrains with opportunity mapping for a variety of ecosystem services.	Mapping for a range of environmental factors e.g water flows regulation. Mapping of opportunity areas for biodiversity.	*None identified*
North Northamptonshire Joint Core Strategy 2011-2031 Corby Borough Council, East Northamptonshire Council, Kettering Borough Council and Wellingborough Borough Council (2016)	Ecosystem Services - included as an aspect of sustainable development that cuts across multiple principles within the strategy. It is also included within the vision for where ecosystems will be protected and enhanced and provision of ecosystem services increased where demand exists. Link between GI and ecosystem services also included. Outlined to be supported by biodiversity and geodiversity, aswell as by GI. Green Infrastructure - Place shaping includes enhancing the framework of GI with maps indicating the components to include settlements, connections and GI. Includes a Green Infrastructure Framework which includes special policy areas and details for the delivery of GI. Policy 4 - Biodiversity and Geodiversity includes protection for developments with GI where appropriate. Site specific policies also include GI and methods for achieving this. Access to connected green networks is included throughout. Policy 19 – The Delivery of Green Infrastructure includes managing development to secure a net gain in GI, safeguarding GI corridors and contributions towards enhancement. BNG - an integrated approach to biodiversity management and a net gain in GI is included. Policy 4 - Biodiversity and Geodiversity mentions that a net gain in biodiversity will be sought. BNG is also included within site allocations.	Interactive map with policies but also includes green space layers. Mapping of environmental assets which includes local and sub regional GI corridors. The GI corridors are included across the region. GI mapping is included per site allocation.	The Green Infrastructure Delivery Plan - identifies key GI projects planned and underway in North Northamptonshire.

West Northamptonshire Joint Core Strategy Daventry District Council, Northampton Borough Council and South Northamptonshire (2014)	Policy BN1 - Green Infrastructure Connections	*None identified*	*None identified*
Part 2 Local Plan for Corby 2011-2031 Corby Borough Council - Submitted to the Secretary of State on 19th December 2019 for examination	Ecosystem Services - mentioned throughout as a benefit. Natural Capital - outlined within the Plan and achieved through the Green Infrastructure framework. Green Infrastructure - includes the GI corridors and local green space. GI is identified to provide strategic outcomes for Corby. Policy 1 Open Space, Sport and Recreation outlines that this should be linked to the GI corridor network. Policy 2 Health and Wellbeing outlines provision through GI. Policy 6 Green Infrastructure Corridors includes protection and enhancement. There are also specific site policies which include GI. BNG - Net gain is mentioned but there are no specific policies.	GI corridors included within the Policies Map	North Northamptonshire Joint Core Strategy 2011-2031
East Northamptonshire Local Plan Part 2 East Northamptonshire Council - Submission draft	Ecosystem Services - Outlined as a benefit to biodiversity and green space and mentioned in specific site policies. Natural Capital - Included within an individual section and specific policies. Green Infrastructure - Included within an individual section and specific policies. Priority GI corridors map included. Policy EN7 Green Infrastructure corridors outlines opportunity areas. Policy EN15 Tourist and cultural developments includes delivery of enhanced GI corridors.	GI corridors map	North Northamptonshire Joint Core Strategy 2011-2031
Kettering Site Specific Part 2 Local Plan Kettering Borough Council - Submission draft	Section 8 of the Plan includes a section on natural capital and green infrastructure - this covers importance of natural capital and ecosystem services, designated natural assets (biodiversity), and green infrastructure policy. It refers to the Green Infrastructure Delivery Plan below. Policy NE2 sets out a Borough Level Green Infrastructure Network (BLGIN) for enhancement and protection from new development.	*None identified*	*None identified*
Green Infrastructure Delivery Plan for the Kettering Borough	The Green Infrastructure Delivery Plan was developed to build on work undertaken at the strategic level for the North Northamptonshire Joint Core Strategy and North Northamptonshire Green Infrastructure Delivery Plan. The	*None identified*	*None identified*

Kettering Borough Council (2018)	plan identifies opportunities within the sub-regional, local and district GI networks to enhance existing and create new GI for the area and provides specific project plans detailing benefits, delivery partners, estimated costs and plans and diagrams.		
Northampton Local Plan Part 2 Northampton Borough Council - Submission draft	Ecosystem Services - outlined as a GI benefit. Natural Capital - Specifically mentions enhancing Northampton's Natural Capital Green Infrastructure - Objective 10 Green Infrastructure. Local Level Green Infrastructure (LLGI) Network included within the Northampton Green Infrastructure Plan. Policy 27 outlines that developments should protect, manage, maintain and connect to GI multi-functionality. Specific GI projects are mentioned. Policy 32 includes GI for sustainable transport and travel. GI enhancement is included within specific site policies. BNG - Objective 10 Green Infrastructure included BNG and outlines this as a benefit. Policy 29 Supporting and enhancing biodiversity outlines that major developments will offset loss and secure a net gain in biodiversity.	*None identified*	Northampton Green Infrastructure Plan West Northamptonshire Joint Core Strategy
South Northamptonshire Part 2 Local Plan South Northamptonshire Council (2020)	Green Infrastructure - Policy NE3 Green Infrastructure Corridors outlines delivery and protection relating to GI corridors. BNG - Policy NE5 Biodiversity and Geodiversity mentions that development proposals should provide measurable net gains. Also included within specific site policies	GI corridors and local green space included within the proposals map.	West Northamptonshire Joint Core Strategy
The Plan for the Borough of Wellingborough, Part 2 Wellingborough Borough Council (2019)	The Green Infrastructure Framework is included with a map of the GI corridors with a plan for delivery. Natural capital is mentioned relating to the GI corridors. Policy GI 1 – 5	Map of the GI corridors	*None identified*

Oxfordshire			
Oxfordshire Plan 2050 Oxfordshire County Council *Expected to be adopted in March 2022, Scoping Document available		*None identified*	Natural Capital Assessment Joint Statutory Spatial Plan - Scoping document available. *Scoping Document mentioned GI and Natural Capital (with specific Natural Capital Assessment) is within the Joint Statutory Spatial Plan strategic policies.
The Cherwell Local Plan 2011 – 2031 Cherwell District Council (2015)	Green Infrastructure - Policy ESD 17 Green Infrastructure identifies methods to maintain and enhance GI. S0 10 Green Infrastructure is identified as a strategic objective for building sustainable communities to provide sufficient accessible, good quality services, facilities and infrastructure. Policy ESD 1 Mitigating and Adapting to Climate Change included GI as an adaptation measure. GI identified and maintained in Policy ESD 10 Protection and Enhancement of Biodiversity and the Natural Environment outlines that proposals should identify and maintain existing corridors as they form an essential component of GI provision. Policy ESD 15: The Character of the Built and Historic Environment outlines that GI should be integrated and enhanced. Provision of GI is fundamental to Bicester including for climate adaptation and outlines a percentage of green space. GI provision is identified in a number of specific site policies in the Cherwell District. Policy INF 1: Infrastructure considered GI. BNG - Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment outlines that proposals which include BNG are sought and that loss can be mitigated with BNG. Bicester policies outline that developments should achieve BNG. BNG is sought in a number of specific site policies.	Detailed Green Infrastructure map with Key Policies map including GI per development area.	Oxfordshire Wildlife & Landscape Study which includes downloadable GIS data with a focus on landscape type. SEA and SEA (July-15) GI is included for a number of SA objectives

Oxford Local Plan 2016-2036 Oxford City Council (2020)	Ecosystem Services - explained to be important in relation to trees. Green Infrastructure - Policy S2: Development Contributions mentions GI as a maintained provision for new developments. Policy G1 Protecting and enhancing Oxford's green and blue infrastructure network outlines the protection of GI and that planning permission will not be granted for developments that result in harm to GI. Policy G7 Protection of existing Green Infrastructure features outlines that planning permission will not be granted for developments that result in GI loss. Policy G8 New and enhanced Green and Blue Infrastructure Features outlines that development proposals that effect existing GI should demonstrate how GI has been incorporated into design. BNG - Local Plan to seek to ensure a net gain in biodiversity. Policy G2 Protection of biodiversity and geo-diversity outlines BNG as a measure for compensation and mitigation to offset loss with reference to a BNG calculator.	*None identified*	Green Infrastructure Network SA and SEA (Sept-18) refers to a Green Infrastructure Study and GI throughout as an objective. BNG is within Biodiversity as a topic
Oxford Green Infrastructure Study: Stage 1 Oxford City Council (2017)	Provides an overview of GI in Oxford highlighting the benefits, how it address the NPPF and assess Green Spaces.	*None identified*	*None identified*
Guidance note: Creating a Green Infrastructure base map University of Oxford, Cherwell District Council, Bicester Town Council (2020)	The project aimed to provide local authorities with quick, easy and freely available tools for mapping, planning and assessing the costs and benefits of GI. The guidance includes potential data sources and methodologies.	The guidance is about GI mapping for local authorities.	*None identified*
Oxford Green Space Strategy 2013-2027 Oxford City Council (2013)	Green Infrastructure - outlines GI to have multiple benefits in and around Oxford. Outlines that GI shouldn't be overburdened by new developments. Links the connection between Oxford, the River Thames and River Cherwell to form an integrated GI network.	Includes specific Green Space maps which have green space typologies, walking distance to green space priority sites per area of Oxford.	*None identified*

South Oxfordshire Local Plan South Oxfordshire District Council (2020)	Ecosystem Services - Policy ENV4: Watercourses outlines the importance of water quality, drainage and flood management from GI Green Infrastructure - Objective 7 includes green infrastructure. Policy STRAT3: Didcot Garden Town includes supporting delivery of GI. Policy STRAT4: Strategic Development includes a landscape management plan to provide a GI network. Policy STRAT7: Land at Chalgrove Airfield identified GI to be provided as an integrated network. Policy STRAT9: Land Adjacent to Culham Science Centre includes appropriate GI throughout the site. Policy STRAT10: Berinsfield Garden Village included GI with percentages and an integrated network to be provided. Policy STRAT11: Land south of Grenoble Road includes GI provision. Policy STRAT12: Land at Northfield identifies a specific area for GI to be provided. Policy STRAT13: Land North of Bayswater Brook outlines a specific GI network to be provided. Policy INF1: Infrastructure Provision refers to the Green Infrastructure Strategy for infrastructure proposals. Policy ENV5: Green Infrastructure in New Developments outlines GI requirements for proposals. Policy DES4: Masterplans for Allocated Sites and Major Development outlines that GI provision must be stated. BNG - Policy STRAT7: Land at Chalgrove Airfield includes integration of BNG into the masterplan. Policy STRAT8: Culham Science Centre proposals to achieve BNG. Policy STRAT9: Land Adjacent to Culham Science Centre integration of BNG into the masterplan. Policy STRAT10: Berinsfield Garden Village specifies BNG percentages and type of BNG to be delivered. Policy STRAT11: Land south of Grenoble Road specifies BNG to be delivered and the location. Policy STRAT12: Land at Northfield outlines BNG creation and restoration and specific location. Policy STRAT13: Land North of Bayswater Brook outlines BNG protection and enhancement and specific locations. Policy ENV3: Biodiversity outlines all development to provide a BNG where possible.	*None identified*	Green Infrastructure Study SA (Feb-15) includes green infrastructure
South and Vale Green Infrastructure Strategy South Oxfordshire District Council and Vale of White Horse District Council - Consultation Draft March 2017	Outlines the Councils' vision and objectives for the future provision and management of Green Infrastructure in South and Vale up to 2031. It identifies the strategic GI network and areas and the delivery framework within local policy.	Mapping throughout. Includes analysis of GI and social indicators. Types of GI and strategic growth corridors and links	South Oxfordshire Green Infrastructure Strategy

Vale of White Horse Local Plan Part 2 Vale of White Horse District Council (2019)	Ecosystem Services - 3. Building Healthy and Sustainable Communities includes green infrastructure and other ecosystem services for watercourses. Green Infrastructure - Commitments to address deficit and enhance in green infrastructure. Didcot Garden Town Masterplan principles includes landscape and green infrastructure. Core Policy 45: Green Infrastructure ensures a net gain in GI is achieved for new development proposals. The Part 1 plan recognises the contribution of waterways and river corridors to the character, biodiversity and landscape quality in the Vale. 3. Building Healthy and Sustainable Communities includes creating, maintaining and enhancing wildlife corridors which can also be used as part of the GI. BNG - Commitments to net gain biodiversity.	Allocation map with basic environment development constraints.	*None identified*
West Oxfordshire Local Plan 2031 West Oxfordshire District Council (2018)	Ecosystem Services - mentioned in relation to the NE White Paper and multifunctional open spaces providing a wide range of ecosystem services. Green Infrastructure - Identified as an opportunity. Policy OS4 High Quality Design, enhance local GI and its biodiversity. Policy OS5 identifies GI as infrastructure alongside physical and social infrastructure. GI as part of the landscape character West Oxfordshire's Green Infrastructure resource. Green Infrastructure key to NIA. Policy EH3 Biodiversity and Geodiversity outlines opportunities to enhance biodiversity and help networks of GI. Policy EH4 Public realm and green infrastructure included new development to avoid loss and fragmentation and improve the multi-functional network of GI, GI within proposal and demonstrate how lighting doesn't adversely impact on GI function for nocturnal wildlife. Existing projects: the Lower Windrush Valley Project, the Cotswolds Save Our Magnificent Meadows Campaign, BBOWT's Upper Thames Living Landscape Project, RSPB's Futurescapes Initiatives, the River Windrush and Evenlode Catchment Partnership Projects and Conservation Target Areas. Policy EH5 Sport, recreation and children's play included multi-functional GI. Policy EH7 Flood risk includes reference to GI policies within the local plan and flood management with GI. Policy WITI East Witney Strategic Development Area, must include provision for GI. Policy WIT2 North Witney Strategic Development Area includes provision for GI. Policy WIT6 Witney sub-area strategy includes new development to ensure GI. Policy CA1 REEMA North and Centre includes provision for GI. Policy CA5 Carterton sub-area strategy includes new development to ensure GI. Policy CN2 Chipping Norton Sub-Area Strategy includes new development to ensure GI. Policy EW1 Oxfordshire Cotswolds	Reproduced maps.	Green Infrastructure Plan to be prepared. SA (Feb-15) Green Infrastructure, Ecosystem Services and Biodiversity.

	Garden Village Strategic Location for Growth, masterplan to include GI. Policy EW2 West Eynsham Strategic Development Area, masterplan and new developments to include GI. Policy BC1 Burford – Charlbury sub-area strategy Burford – Charlbury sub-area strategy new developments include GI. BNG - Policy EH3 Biodiversity and geodiversity include enhance overall net gain in biodiversity, avoid loss, deterioration or harm of locally important wildlife and geological sites and supporting irreplaceable habitats with mitigation through BNG. All major and minor applications to demonstrate net gain in biodiversity where possible. BNG a target in Policy WIT1 – East Witney strategic development area, Policy WIT2 – North Witney strategic development area, Policy WIT6 – Witney sub-area strategy, Policy CA1 – REEMA North and Central, Policy CA5 – Carterton sub-area strategy and Policy CN1 – East Chipping Norton strategic development area.		
West Oxfordshire Green Infrastructure Study West Oxfordshire District Council (2011)	Green Infrastructure - focus of the study. Includes the benefits, types and delivery	Includes Parks and Gardens, Semi-natural site and green corridor maps.	*None identified*
OxCam Arc			
Natural Capital Investment Planning for the Oxford-Milton Keynes-Cambridge Growth Corridor Local Nature Partnerships and Local Authorities (2018)			

Additional Notes
*Natural Capital/Ecosystem Services - NCES
The majority of Local Authorities have additional specific Green Infrastructure Plans/Strategies.

Appendix E: County level - Summary of workshops with County/Local Planning Authority (LPA) teams

Note: To aid information sharing in workshops it was agreed that we would keep the findings anonymous wherever possible.

Level of awareness of the Natural Capital approach, LNCP team and Natural Capital and Ecosystem Services (NCES) data.

Response
LPA team 1
Aware of what natural capital is but have little detailed information
One respondent attended LNCP workshops, others had little awareness of LNCP
Aware of LNCP NCES dataset, but not used it
Not clear how to use NCES data, as have focussed on Green Infrastructure (GI) standards
Some knowledge of Biodiversity Net Gain (BNG) metrics
Want to better understand how NCES can be used in the county
Used GI, not sure about differences between GI and natural capital approaches
Not clear how to use NCES data, so have focussed on GI standards
LPA team 2
Aware of natural capital approach, natural capital accounting and ecosystem services
Haven't started to use the mapping yet, but aware of the Local Nature Partnership (LNP) and LNCP work
Local authorities are aware of the LNP environmental opportunity mapping and would like to use this information in emerging plans and planning reviews
LPA team 3
Some know about a natural capital approach, but others don't – a mixed bag
Some have access to NCES data, others don't know how to access
General awareness satisfactory as those who don't know, know who to ask (expert within the team)
LPA team 4
Aware of natural capital approach and actively involved in Arc workshops, but little detailed knowledge
Commissioned a consultant report (baseline, ecosystem services and opportunity mapping) and this was used with growth board to tell a story. Used in baseline data for LNRS. Incorporated NCES mapping and opportunity mapping into LNRS. So actively using it to tell a story and for LNRS
NCES not used in planning policy at the moment
Team ecologist is using NCES for Local Nature Recovery Strategy (LNRS) and specific projects

LPA team 5
Reasonable level of awareness of natural capital approach and have begun to think about its potential and how it could be applied. Most of this awareness is focused on the county level work (which is currently at final draft stage, and has been reported at both county and LA levels)
Have received a draft report from their consultant, but have not had access to GIS layers yet
Not very aware of LNCP NCES data
Generally mixed knowledge of NCES data – some have good knowledge but others are less confident about these new terms and concepts
People are busy – little time for new approaches
Not clear about differences between GI & NCES data and approaches
Not fully comfortable with GI planning and interpreting the policies

Current use of Natural Capital and NCES data & mapping

Response	Number
How are you using it?	
See collated findings in section 4.3.2.	
What are the main drivers?	
Opportunity/necessity to use natural capital approach and NCES data	5
Opportunity presented by a new Local Plan	4
Promoting the natural environment as essential infrastructure – this tells an important story	1
It is being used as part of the evidence base for the Oxfordshire 2050 Plan and policies that eventually get made in this Plan will make recommendations to the Districts in their Local Plan Reviews	1
25YEP and want to take a more holistic approach in the county	1
Recent research helped to act as a driver	1
BNG within two Local Plans	1
BNG Supplementary Planning Document (SPD) – whole county/unitary-wide, helped by LNP	1
MKC will have a BNG SPD this summer and already in Milton Keynes plan. MKC adopted the 2050 Vison in January, a key element of this is around the environment which includes a green buffer around the city. This is a non-statutory policy for Milton Keynes growth & environment. The LNCP Approach would also inform the sustainability data	1
MK2050 – strong emphasis on biodiversity, net zero and public health. Lots of alignment between these	1
MKC's Local Plan Review has strong ambition around the environment and could identify opportunities for BNG – they will use it as a clear direction. It will also influence allocations	1
Sustainability strategy and aim to be carbon negative by 2050	1
MK2050 includes how we will use existing green spaces and council land to increase green areas and BNG in city	1

New Local Plan – environmental ambitions. Incorporate net gain to show where opportunities are in MK to direct offset through the local Plan	1
Opportunity as going to unitary	1
Strong political ambition in MK to plan for the environment, biodiversity and public health	1
Delivery of a strong GI network	1
Driven by climate and biodiversity crises	1
High growth agenda therefore environment is on the back foot, so not just green for greens sake	1
Improving the evidence base	1
Driven by time and resources. i.e. LP timetable	1
What are the main barriers?	
Not used yet - due to timing, opportunity or using something else	5
Limited resources for learning new skills and applying new data. Resourcing VERY important	4
Requires resource and funding beyond local planning teams current knowledge/capacity	4
Do not really understand how to use it and how we use it in decision making (interpretation)	4
Consultants carried out the work for us, consider that this might be a barrier to us learning and understanding better for ourselves	3
Lack of training and support - will need to be guided/supported	2
Licensing can be a barrier. There needs to be a system of who can freely access the data and who needs to pay, the latter includes developers (similar to Biological Records Centre data)	2
Natural capital not being a statutory requirement	1
Licensing a big issue especially when sharing datasets	1
GI is the traditional approach	1
Do not have ability to interrogate data	1
Navigation of the data	1
Scale (being able to analyse by Local Planning Authority boundary as well as site allocation level)	1
Not easy to use	1
Hard to separate 18 ecosystem services layers	1
How to prioritise the data?	1
Detailed data from Alison Smith was overwhelming! Made available to team, but not widely distributed through the service	1
Issues of software and access	1
Issues in making it more available, need to use public datasets	1
What support is required?	
Need training and support	5
More resources are needed for LPAs to deliver	3
Would welcome live testing and support	2
Additional support – access to map layers	1
Additional support – interpretation of the mapping	1
How best to achieve BNG?	1

Non-statutory habitat data – how do we value this? How can we prioritise these things?	1
Struggle to see how this feeds into Local Plan decision making	1
Need guidance on depth of data	1
Evidence needed	1
Not sure what all the data shows – need support with this	1
Do not understand difference between GI & NCES	1
Pros / advantages / benefits of using a Natural Capital approach and NCES data	
It could assist with Duty to Cooperate discussions – many of the catchment / landscape scale issues are cross-boundary	2
Strategic level - Broad data is useful for regulated & cultural assets	1
Strategic level - Overview comparison: high vs low value	1
Maps / illustrations are helpful	1
NCES maps new to us - like the combined approach of NCES	1
Strong links between natural capital approach and LNRS	1
Main benefits – identify key sites, offsetting and joining up	1
Maximise opportunities	1
Cons / disadvantages / problems of using a natural capital approach and NCES data	
Hard to determine due to lack of current use, but interpretation of the raw data was highlighted as a key issue	5
How could it be improved to meet your needs better?	
Need strong LNP's funded by Local Authority contributions. They led Arc opportunity mapping work and should be driving BNG and a natural capital approach	2
LNP's have an important role but are unfunded, Local Enterprise Partnerships (LEPs) are more active as are better funded	2
Delivery of wider initiatives is the real key – prioritisation / investment are key. LNPs should lead on this	2
Like an overall OxCam Arc approach	2
Need OxCam Arc-wide data in one source	1
Spatial leadership needed to give clarity	1
Need one approach not natural capital & GI	1
Need standardisation of the data and shared metrics	1
OxCam Arc level information needs to be cascaded, everyone needs to be using the same datasets and metrics	1
Need a natural capital masterplan to influence growth and explain how we can develop GI	1
Need adopted framework to protect natural capital assets – need evidence to use against developers	1
Think about scale, i.e. county has one set of priorities, OxCam Arc others and Regional = others still	1
Help needed on deciding national and local priorities	1
Want maps and how to interpret them site by site	1

How to set priorities?? Built into sustainability appraisals. Natural capital outputs have no status so Sustainability Appraisal the best way	1
Sustainability Appraisal might be the best way to incorporate NCES at a Local Plan level	1
Evidence on priorities – hierarchy of protection already. National priorities / local context - we need a green light to do so	1
NPFF should be a minimum whereas developers think NPPF is the beginning and end! NPPF is just the start	1
Natural capital needs to be embedded in the NPPF to inform Local Plan making	1
Working on strategic plans – datahub would be helpful	1
Need tools everyone can use and access	1
Robust use – i.e. how will it stand up to being challenged?	1
Be aware of challenges from developers and their lawyers	1

Information, data and mapping

Response	Number
How adequate was the NCES data	
Datasets need to be accurate, regularly updated and kept up to date	5
Strong need for good quality data	5
Local input and ground truthing needed to help accuracy – for example at a parish or site level	2
Need projects/case studies to add credibility to the data	2
Important to define the assumptions behind the data set	2
For planning, they need to protect the land long-term for nature recovery, so data needs to be specific and detailed	1
Parish level contribution to databases, linked to Neighbourhood Plans (NP) will include the cultural value of the data	1
Some current data out of date	1
Accurate data adds value	1
National data can be patchy	1
MHCLG Data Observatory project could be beneficial to have shared resources	1
Scale of the data	
Lower scale mapping = strategic level decisions, planning, grappling with nature recovery strategies and need to protect land for nature. So has to be high quality data	3
25m x 25m accuracy okay, but more detail needed for set aside as a future ambition	3
Arc-wide data all in one source – shared metrics, messages and use of data. Everyone needs to be using the same datasets, metrics and messages	2

Need to be able to zoom down to site level to assess and compare site allocations, approximate scale should be fields and field boundaries	2
Arc-wide gives a framework to work within and consistency	1
Start with a large (OxCam Arc) dataset then extract by Local Authority boundaries	1
Top level data is the starting point (i.e. which location is better) but from then on more detailed data will be needed	1
Need to be able to apply to geographically focused policy areas and so apply Local Authority boundaries as well as Neighbourhood Plan areas to the OxCam Arc wide data set and extract relevant information	1
Villages – quibble over boundaries, NP plans, etc. So need data field by field	1
For developments need to look down to field or hedgerow level	1
Small village scale needed	1
Higher scale useful for site allocations	1
Higher scale - GI/woodlands joining up	1
Is it the right type of data?	
Would be good to access as GIS layers, with access to background information if possible, to aid reporting. Although the information is web-based, it also needs to be interactive so user does not have to look in different documents for underlying evidence	2
More GIS layers needed, but help also needed with interpretation and prioritising key natural capital assets and ecosystem services	1
Include data base and evidence base	1
Assessment tools – need tools everyone will, and can, use	1
View using web map	1
Problems – too detailed, very time consuming loading all the maps. Need an interactive web interface	1
Variety of data layers – hard to collate	1
Data needs to be flexible	1
Accessibility for all users / practitioners	
Need open, sharable data which is as accessible as possible	4
Licensing can be a barrier. There needs to be a system of who can freely access the data and who needs to pay, the latter includes developers (similar to Biological Records Centre data)	2
Part of the issue with data availability is how it will be used / applied. The missing link is often the interpretation of the data. All data needs to be easy to understand and access	2
Who to host this data – Biodiversity Records Centre or Wildlife Trust? – or should we have a national database?	2
Environmental Record Centres need sustainable funding therefore data is not always sharable	2
Who to pay for it	1

Developers are likely to be willing to pay for this data as it would cost more to collect and analyse themselves. Charging could pay for keeping the data updated	1
Environmental Record Centre – rich data. Should be core funded	1
Records Centre Data should be core funded and availability for everyone to access	1
Does the NCES data give you the info you need?	
Interpreting data is an important issue. It needs to be easier to understand and interpret	5
Ecosystem services 18 layers – how do you to use it?	3
Ecosystem services 18 layers – how are they measured?	3
How do we use this data in decision making?	2
NCES data and mapping will be used by developers, planning officers, ecologists, Neighbourhood Plan groups and consultants (who undertake SA/SEA on behalf of local authorities)	2
Interpretation of the raw data was also referenced, and examples were given as to where the raw data was being interpreted by experts and consultants.	1
Need more explanations and examples of how judgements are made based on it	1
Guidance needed on what, and what not, to use this data for	1
Explanations/examples of how it can be used and what for i.e. beyond just Local Plans	1
Protection – how outside of statutory sites?	1
How does NCES limit offsetting questions and accounting	1
Air quality – how to assess this? Note: Some ecosystem services are VERY complex	1
Ecosystem services a number, but the outcomes are very complicated = rabbit holes to fall into	1
Aesthetic value?? What is this and how is it measured?	1
Need clear guidance on how to work through the datasets	1
Internally NCES data could help Development Control Officers, who are under a lot of pressure as well as Environmental Health Officers, who use a different system	1
Currently they might all be using different mapping systems!	1
Need to counter subjectiveness with data	1
Decisions will be challenged so evidence will need to be robust	1
Need robust interpretation guidelines	1
Gaps in the evidence base	
Quality/condition of natural capital assets is missing from datasets, therefore open to misinterpretation	4
Focus on current situation, but should also show opportunity mapping/areas to extend and create uplift. Hopefully lead to uplift in net gain credits and link to ELMs and LNRS's	2
The ability to store Carbon in habitats. Habitats does not consider the value that habitats make to carbon capture	1

How could it be made easier to use	
Needs to be easier to use	3
Needs to be easier to access	2
Main problem is interpretation of the data, needs to be built-in	2
An interactive, web-based user guide and maps would be required	2
Training and support for officers is required	2
Would welcome live testing and support	2
Problems – too detailed, very time consuming loading all the maps. Need an interactive web interface	1
18 ecosystem services layers are a big challenge – how do we interpret it in a meaningful way? Needs to be interpreted / simplified	1
Needs to identify key layers that carry weight	1
Need a smart system to save time, resources and expertise	1
All use GIS, so link with this?	1
Need to have the time, resources and expertise to interpret the data.	1
Need clear guidance on how to work through the datasets	1
Specific comments on LNCP NCES data	
Aware of LNCP NCES dataset, but have not engaged with it yet	4
Not sure how to access it	4
Used LNCP NCES data via Alison Smith's work	1
From preliminary use of the LNCP mapping, there is a disincentive due to the scale of the data – it can't be interrogated at a local/site allocation level so more detailed data is required. Also there are problems with navigation, so it can be difficult to find individual sites	1
Needs a better search tool	1
Needs to be easier to use	1
Supplied the datasets that were required	1
Comments on other sources of NCEA data	
Northants comments on Natural Capital Solutions data • Using it but have not fully put it into practice yet. • Mapping not data • Habitat Opportunity Mapping is useful and visual, it will be referenced in North Northants Natural Capital SPD. • Easy to understand • Would prefer interactive mapping	
Cambs. comments on GI study from LUC • Getting good quality data is difficult, particularly if it is going to be used for decision-making • Data used for GI study was augmented with remote sensing • The GI work has been qualitatively structured according to a number of natural capital themes. However, the opportunity areas are quite broad, they are struggling to know how to use them meaningfully in Local Plan development. It is difficult to identify priority areas	

• Work to date comprises more qualitative rather than quantitative data. Judgement themes. NOT an algorithm approach • Using GI data via LUC advice, they used GI themes which covered NCES approaches = GI+ • GI supports NC themes in evidence base • Confident about using GI, but not sure yet about difference between GI and natural capital approaches • GI work can be misleading as it does not represent biodiversity value, so there's a conflict between BNG and greenspaces / amenities • Not clear how to use NCES data, so focussed on GI standards	

Specifications for a natural capital planning user guide

Response	Number
General comments	
Would be really helpful/useful to have a user guide and we would use it	5
Key problem is interpretation of the data - what does this data tell us and what does it mean?	5
Needs to be easy to use and navigate	3
Interpretation needs to be very clear	2
Needs to be easy to access	1
Needs to be concise and clear – just enough detail (not too much)	1
Readily sharable, including data	1
Sharing – every data sharing project uses GIS in different formats, this takes times and becomes costly. Never just a single package!	1
Standard format needed	1
All data as accessible as possible	1
Format	
An interactive, online/web-based user guide would be required. Must be interactive	5
Online interactive layers. Ability to layer up data sets would be helpful. E.g. Great Crested newt layer	2
Include chapters tailored to identified end-users	1
Videos instead of just reading	1
Online lessons	1
Back-up text also helpful for reference	1
Use dashboards	1
Needs a web mapping tool that has text & maps at the same time	1
Links to get to right part quickly	1
Narrative + maps	1
Magic map + a front end	1
Data and guidance in many formats (pdf & online) for different users	1
GIS data is always in different formats and is a problem to convert.	1
Like EA Flood maps	1

Issue – Environmental record centres data layers, format can be problematic	1
Step-by-step process or flow chart	1
Want a clear structure and well organised	1
Datasets – should highlight 'this is important', traffic light coded and then what you have to do. So not JUST data but also add the 'so what?' Link to the proof and case studies	1
Content	
Interactive maps	5
Include proof and case studies	2
Data needs to be up to date and regularly updated	2
Evidence Arc-wide and beyond	2
Quality of habitat/asset needed and important	2
Include data base and evidence base	1
Do not just want a map - needs interpretation and what you now have to do	1
Different uses of data so it has to be flexible on data & levels	1
Glossary	1
Explain Ecosystem Services terms – i.e. what do they actually mean and how are they measured?	1
How to prioritise and target key NCES assets	1
Multiple opportunities can be very helpful to maximise the use of space e.g. show multiple ecosystem services benefits of a land parcel	1
Other audiences	
Need to share it with site proposals, developers, applicants and consultants	1
Need to use the right language for each audience	1
Needs to be accessible by applicants and consultants	1
Support	
Training and support will be required	3
Guidance needed on what to, and what not to, use this data for	2

How a natural capital approach might fit with key strategies and policies

Response	Number
Biodiversity Net Gain vs Environmental Net Gain	
Direction of travel is now to BNG to ENG	3
Current focus is BNG using Defra metrics, would like to push for ENG as well but no metrics available yet	2
Understand the difference between BNG and ENG	1
What does BNG policy actually mean?	1
BNG has policy drivers through Environment Bill and NPPF, nonetheless the forthcoming Natural Capital SPD for North Northamptonshire seeks to achieve ENG. It will be interesting to see	1

whether developers will push back on this when it goes to consultation	
BNG – mapping should help identify offsetting sites	1
Views on ENG	
ENG – waiting for metric, legislation or both!	3
Struggling with the concept of ENG	3
Low awareness of ENG	1
Natural capital does not have enough sustainability in it, so ENG will be better	1
Will not push ahead with ENG until it is statutory	1
ENG – at grassroots level what does it mean?	1
ENG – how to implement and police it	1
NC approach	
Desire to take natural capital approach now or in the future – with guidance/support	5
Benefit of natural capital = forces user to look at many different uses/benefits. Moves game from land: build or not, to many shades of grey	1
Comments on LNRS	
General lack of knowledge /interest	3
LNRS – important in the future but just starting to happen. Like the habitat opportunity mapping work	2

Future uses of a Natural Capital approach and NCES data and mapping

Response	Number
YES – planning to use it in the near future	
Future and forthcoming Local Plans	4
MK2050/Oxon 2050 – strategic plans	2
Use by other council departments and delivery teams, Land teams, highways, etc. i.e. cross-cutting uses. Roads / drainage – mitigation data could be useful to us	2
Minerals restoration site selection and restoration. Help select best sites. The potential application of a LNCP approach to the restoration of Minerals and Waste sites was of great interest. Link to RSPB's 'Nature After Minerals'	2
Helpful to Neighbourhood Planning teams who should be using this data (if easy to access and use and interpret)	2
Data would be used for Sustainability Appraisal (SA) of the Local Plan. It could also be used for monitoring the implementation of the Local Plan	1
The Scoping stage of SA forms part of the evidence base and it would be particularly valuable to integrate NCES data	1

The data could also inform the Issues and Options stage of Local Plan development including options development and assessment	1
Needs to inform both environmental protection and environmental opportunities in the Local Plan including policy development	1
Key link in the LNRS	1
BNG SPD going through Bucks cabinet this month	1
Data can be used to identify offsetting locations and to help identify GI networks which need to be everywhere, rather than confined to key corridors in order to support Local Nature Recovery Strategies	1
Use to assess onsite or offsite comparative benefits	1
Can support identification of Growth, Renewal and Protection areas	1
Planning applications & appeals, ecology officers could use it. Used for decision making and appeals. Link to section 106 monies? Yes	1
Guiding future strategies and locations for growth	1
Use it to prioritise areas for enhancement and natural capital improvement	1
NO – not planning to use it in the near future	
Local Plan is current focus and is using GI+ approach	1
Hoping the Local Plan will integrate these things together as everything is connected and everything affects everything else	1

Appendix F: County level - Examples of good practice

Planning policy example within the OxCam Arc

Kettering Local Development Plan 2021

The Plan is being prepared by Kettering Borough Council and will cover the whole of Kettering Borough with the exception of issues addressed in the North Northamptonshire Joint Core Strategy (JCS) and the Area Action Plan for Kettering Town Centre.

The Site Specific Proposals LDD, now entitled the Site Specific Part 2 Local Plan (SSP2), is due for adoption in Winter 2020/2021 and will form part of the North Northamptonshire Development Plan.

Green Infrastructure Delivery Plan

The Council commissioned a Green Infrastructure Delivery Plan (GIDP) for Kettering. It builds on the work undertaken at a strategic level by focusing on enhancing and expanding the Green Infrastructure network for Kettering Borough. In addition, it outlines the Best Practice Principles to help stakeholders create a climate change-resilient Green Infrastructure for wildlife and people.

The GIDP identifies seven new Borough Level Green Infrastructure Corridors that will support and enhance the strategic network. To reinforce and expand these corridors GIDP identifies projects and includes associated project plans which provide the means for implementation. The plans identify the multi-functional opportunities of each project for the enhancement, restoration and protection of existing and /or creation of new Green Infrastructure assets.

Relevant Policy

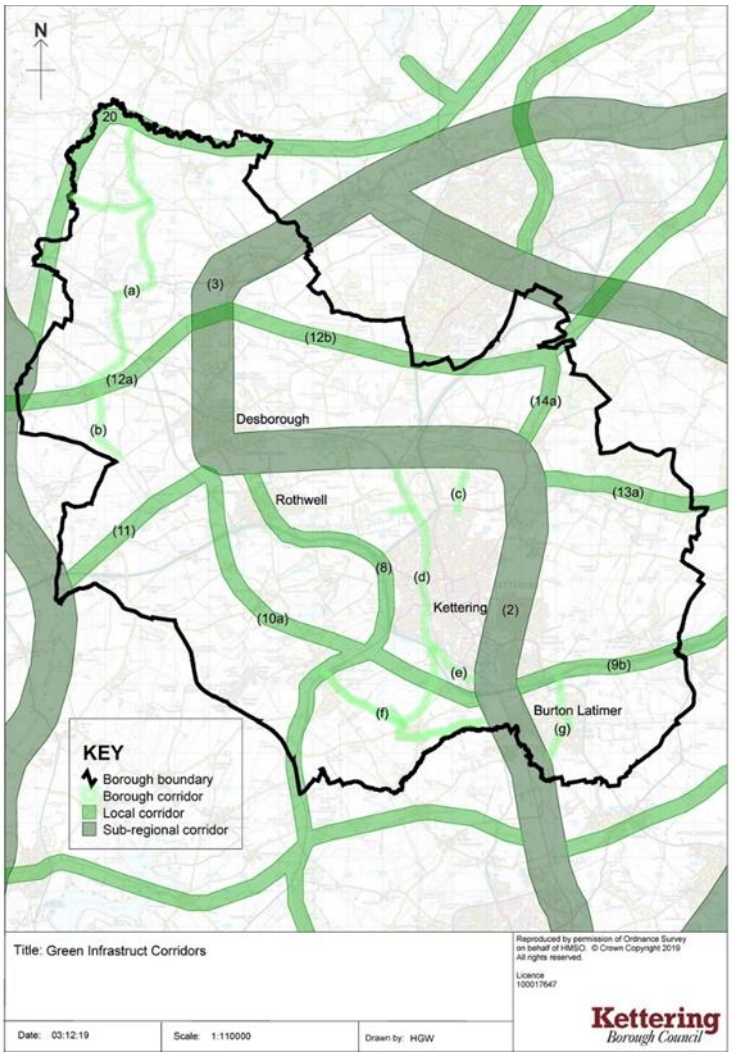
Policy NEH2 - The integrity of the Borough Level Green Infrastructure Network (BLGIN) as set out in Figure 8.1 of this Plan will not be compromised by new development. It will be recognised for its important contribution to the built, historic and natural environment, to people and wildlife and to Ecosystem Services.

Any statements of advantages/disadvantages

- Refining the Green Infrastructure corridors at a Borough scale makes it possible to understand how Kettering's Green Infrastructure functions at the local level. The Borough corridors, in tandem with the sub-regional and local corridors, provide a focus for investment to ensure the overall function and quality of the Green Infrastructure network for Kettering Borough is a justified outlay

- The pragmatic, project led approach set out in the GIDP makes it easier to identify what needs to be done in the first instance to enhance Green Infrastructure at the local level. As these projects are delivered, new projects will

be identified to pursue a continued development and investment program that will to secure a net gain in Green Infrastructure for Kettering Borough



Additional Information

The strategic approach to the delivery of Green Infrastructure in North Northamptonshire is set out in the Joint Core Strategy (JCS). The JCS identifies the Green Infrastructure corridors of sub-regional and local importance; within Kettering Borough the sub-regionals follow down the Jurassic Way and along the valley of the River Ise. Policy 19 of the JCS provides a framework for managing development and investment and for protecting and enhancing Green Infrastructure. The policy focus is on the sub-regional and local Green Infrastructure corridors. It gives priority to green infrastructure investment in areas where net gains can be made to the range of functions a site can offer, particularly those that improve access between the towns and their surrounding countryside, and remedy local deficiencies in open space provision and quality.

The JCS emphasises that the local Green Infrastructure corridor positionings are indicative. It goes on to note that the alignment and extent could be defined further through, inter alia, Part 2 Local Plans.

Planning policy examples outside the OxCam Arc

Lake District Local Plan 2020 – 2035

The Lake District National Park began reviewing the Local Plan in 2016 and submitted it on 1 August 2019 to the Planning Inspectorate for examination. When adopted, the plan will play an important role in shaping how towns and villages develop, protecting and enhancing our natural environment, developing the local economy, improving leisure and visitor facilities and supporting more sustainable forms of travel.

Natural Capital Evidence Base

A Natural Capital Evidence and Main Issues Paper was produced to support the Review. The paper recognises that elements of Natural Capital and Ecosystem Services underpin the national Park's Special Qualities and attributes of Outstanding Universal Value for World Heritage Site status. The paper presents natural capital under seven themes which are assessed against national, regional and local policy. They are described by their current characteristics. Also described are the overarching issues and opportunities for Natural Capital and Ecosystem Services as a whole and under each theme. The evidence base recommended a Natural Capital masterplan that prioritises large areas for Ecosystem Services such as carbon sequestration, flood protection, local fuel production or health and wellbeing services and Natural Capital policy.

A Draft Biodiversity Supplementary Planning Document was produced in March 2019 which, in addition to setting our measures for ecological protection in line with existing legislation and policy, also identifies landscape features of major importance for biodiversity and the Nature Recovery Network and sets out principles for Biodiversity Net Gain in decision-making.

Policy 04 Biodiversity and Geodiversity includes provisions for improving the function of ecosystems and supporting proposals which conserve and enhance biodiversity and ecosystems processes.

The Plan also sets out **17 'Principles of Development'** in order to integrate Natural Capital and Ecosystem Service approaches into the Plan and ensure natural and cultural assets will be managed and used wisely for future generations.

However, policy mapping only identifies protection of existing landscape, biodiversity and recreational resource, and the Natural Capital masterplan has not been developed.

North Devon & Torridge Local Plan 2011-2031

Adopted on 29 October 2018, the North Devon and Torridge Local Plan 2011-2031, forms part of the statutory development plan for North Devon and Torridge District Councils. It is evident that the Local Plan takes into consideration Natural Capital and Ecosystem Services in its approach to land use planning. Indeed, the Plan's Spatial Planning Vision states that, "*Ecosystem services form the cornerstone of northern Devon's continued success and are enshrined in the Local Plan'*.

A number of the Plan's policies and supporting text cite ecosystem services, with respect to development, including:

- **Policy ST14: Enhancing Environmental Assets -** The quality of northern Devon's natural environment will be protected and enhanced by ensuring that development contributes to: ….. (i) conserving and enhancing the robustness of northern Devon's ecosystems and the range of Ecosystem Services they provide.

- **Policy ST03: Adapting to Climate Change and Strengthening Resilience** Development should be designed and constructed to take account of the impacts of climate change and minimise the risk to and vulnerability of people, land, infrastructure and property by: …. (k) promoting the potential contribution from Ecosystem Services that support adaptation to climate change.

The Local Plan's evidence base includes documents on a range of planning related topics used to support the development and implementation of the Local Plan. A number of these documents, such as the North Devon Coast AONB Management Plan 2014-2019, use a natural capital/ecosystem services approach to highlight the special qualities and value of the area's natural features.

North Devon and Torridge District Councils are partners in the South West Partnership for the Environment and Economic Prosperity (SWEEP) programme, which has recently published its report *'Applying the Natural Capital approach to Sustainability Appraisal - October 2020'.* The process of identifying Sustainability Appraisal as the preferred mechanism for integrating the natural capital approach into local decision-making, was developed and tested through case studies, including the North Devon and Torridge Local Plan 2011-2031. The devised framework has been developed with the broader planning and licensing system in mind, and so has a wider application beyond Sustainability Appraisal. For example, setting overarching Local Plan objectives and application to Environmental Impact Assessment, supporting better integration of assessment at site and strategic scales.

It is clear that a natural capital and ecosystem services approach has been a focus in elements of both of the Councils' activity, the Local Plan's evidence base and in the formation of Local Plan policy. It is not clear that the policy approach was informed by a Natural Capital Planning Tool.

Solihull Local Plan – Draft Submission Plan October 2020

Currently in its draft submission stages, the Solihull Local Plan forms part of the statutory development plan for Solihull Metropolitan Borough Council. It is evident that the Local Plan takes into consideration natural capital and ecosystem services in its approach to land use planning. Indeed, the *Reg 19 Draft Local Plan: Natural Environment Topic Paper*, contains a series of papers supporting the Council's Draft Local Plan. Included in these papers is a natural capital and Green Infrastructure map, which appears to have been prepared in-house, and is at a large-scale.

A number of the draft Plan's policies and supporting text cite natural capital and ecosystem services, with respect to development, including:

- **Policy P10: Natural Environment**

  1. The Council recognises the importance of a healthy natural environment in its own right, and for the Natural Capital benefits it provides to the people, places and economy of the Borough. The Council will seek to protect, enhance, restore, increase and connect the natural environment and secure measurable net gains in biodiversity.

- **Policy P20 Provision for Open Space, Children's Play, Sport, Recreation and Leisure**

  2. The Council recognises the value of public open space for the health and wellbeing of communities, as integral to the character and visual amenity of local areas and for their contribution to the natural capital of the Borough. The Council will support proposals which will contribute towards a network of high quality provision as new and/or enhanced recreational facilities; children's play and open space.

  4. Where existing provision is not being protected then the Council will require appropriate compensatory measures. The alternative provision should be at least the equivalent in terms of size, quality, accessibility, use, visual amenity, natural capital value, and supported by a management plan to ensure ongoing viability of provision.

It is interesting to note that natural capital mapping has been used to inform the creation of Local Plan policy in respect of both environmental protection and green infrastructure enhancement.

Appendix G: Neighbourhood Plan level - Summary of Adopted Neighbourhood Plans and environmental policy coverage in the OxCam Arc area

Adopted Neighbourhood Plans	Green Infrastructure Plan?	Green Spaces	Biodiversity	Renewable Energy	Water issues	Air/Light Pollution	Re-use of Brownfield Sites	Rights of Way	Green Infrastructure	Flooding
City of Oxford										
Headington		2	1	0	0	0	0	0	0	0
Summertown & St Margaret's		3	1	2	1	1	0	0	0	0
South Oxfordshire										
Baldons		2	0	0	0	0	0	0	0	0
Benson	GI & biodiversity audit	3	2		0	0	0	0	1	1
Berrick Salome		1	1	0	1	0	0	1	1	1
Brightwell-cum-Sotwell		1	1	1	0	0	0	1	1	0
Chalgrove		0	0	0	1	0	0	0	0	1
Cholsey		3	0	0	1	0	0	1	0	1
Dorchester		0	2	0	0	0	0	0	0	0
East Hagbourne		1	1	0	1	1		1	1	1
Henley and Harpsden		1	1	0	0	0	0	0	0	1
Goring		1	1	0	1	1	0	1	0	0
Little Milton		1	1	0	1	0	0	0	0	1
Pyrton		2	0	0	0	0	0	0	0	1
Sonning		0	1	0	0	0	0	1	0	0
Thame		4	0	0	0	0	0	2	0	0
Woodcote		0	0	0	0	0	0	1	0	0
Vale of the White Horse										

Ashbury		1	0	0	1	0	0	0	0	0
Blewbury		0	0	0	1	0	0	0	0	1
Drayton		2	1	0	0	0	0	3	0	0
Faringdon		0	0	0	0	0	0	3	0	0
Great Coxwell		1	3	0	1	0	0	1	0	0
Longworth		0	2	0	0	0	0	0	0	0
Radley		0	0	0	1	0	0	0	0	1
Uffington		2	2	0	1	0	0	1	2	1
Wootton and St Helen Without		1	0	1	0	0	0	0	0	0
West Oxfordshire										
Chipping Norton		2	1	1	0	0	1	1	0	0
Eynsham		1	1	1	0	0	0	1	1	0
Hailey		2	1	0	0	1	0	0	0	0
Shilton		1	0	0	0	0	0	0	1	0
South Leigh		2	1	0	0	0	0	1	1	0
Cherwell										
Addebury		2	0	0	0	0	0	0	1	0
Bloxham		1	0	1	0	0	0	0	1	1
Hook Norton		1	0	1	0	1	0	1	0	0
Mid Cherwell		1	0	0	0	1	0	1	0	0
West on the Green		4	1	0	0	1	0	0	1	0
Wycombe										
Bedlow Cum Saunderton		2	1	1	0	1	0	0	1	0
Longwick cum Ilmer		1	0	0	0	0	0	1	0	1
Daws Hill		3	1	0	0	0	0	0	0	1

Aylesbury Vale										
Aston Clinton		2	2	0	0	0	0	1	0	1
Buckingham		3	2	0	0	0	0	0	1	0
Buckland		0	1	0	0	0	0	0	1	0
Cheddington		1	1	0	0	0	0	0	0	0
Edlesborough		1	0	0	0	0	0	0	1	0
Great Horwood		1	0	0	0	0	0	0	0	0
Haddenham		1	1	0	0	0	0	0	0	0
Ickford		2	2	0	0	1	0	2	1	2
Ivinghoe		0	1	0	0	0	0	1	0	0
Long Crendon		1	1	0	0	0	0	0	1	0
Marsh Gibbon		2	2	0	1	0	0	0	1	0
Pitstone		1	1	0	0	0	0	0	0	0
Quainton		1	1	0	0	0	0	0	1	0
Slapton		1	0	0	0	0	0	0	0	0
Steeple Claydon		1	0	0	0	0	0	0	0	0
Waddesdon		1	1	0	0	0	0	0	1	0
Wendover		2	1	0	1	0	0	1	1	0
Weston Turville		1	1	0	0	0	0	1	0	
Wing		3	2	0	0	0	0	3	1	1
Wingrave		1	0	0	0	1	0	0	0	0
Winslow		1	1	0	0	0	0	1	0	0
Worminghall		0	1	0	0	0	0	0	0	0
Northampton										
Duston		2	1	1	0	0	0	2	1	0
Growing Together		1	0	1	0	0	0	1	0	0
Spring Boroughs		1	1	0	0	0	0	1	0	0

South Northamptonshire										
Ashton		1	2	0	0	0	0	0	0	0
Harpole		2	1	0	0	0	0	1	1	0
Kislingbury		2	2	0	0	1	0	1	1	1
Roade		2	2	0	0	1	0	1	1	0
Daventry										
Badby		2	1	0	0	0	0	1	0	0
Bardy & Onley		2	0	0	0	0	0	1	1	0
Braunston		2	1	0	0	0	0	1	1	0
Brixworth		2	3	1	0	0	0	2	1	
Crick Village		2	1	0	0	0	0	0	1	0
Flore		2	0	0	0	0	0	1	1	0
Guilsborough		2	2	2	0	0	0	0	1	0
Kilsby		1	1	0	0	0	0	1	0	0
Maidwell		1	0	1	1	1	0	1	0	1
Moulton		2	1	1	1	0	0	1	1	0
Spratton		3	1	1	0	0	0	1	1	0
Welford		2	1	0	0	0	0	2	0	0
Welton		2	2	1	1	0	0	0	1	0
West Haddon		2	1	0	0	0	0	0	0	0
Woodford		1	0	0	0	0	0	0	1	0
Wellingborough										
Earls Barton		4	1	0	1	0	0	0	1	0
Irchester, Knustson etc.		1	0	0	0	0	0	1	0	0
Wollaston		1	1	0	0	0	0	1	0	0

Kettering										
Broughton		2	0	0	0	0	0	1	0	0
Corby										
No plans have completed referendums										
East Northamptonshire										
Brigstock		2	3	0	0	1	0	0	1	1
Chelveston Cum Caldecott		0	0	1	0	0	1	1	0	0
Glapthorn		2	1	0	0	0	0	1	1	0
King's Cliffe		1	1	0	0	0	0	1	1	0
Raunds		2	1	1	0	0	0	1	1	0
Rushden		2	0	0	0	0	0	2	1	0
Stanwick		1	0	0	0	0	0	1	1	1
Warmington		2	1	0	0	0	0	1	1	0
City of Cambridge										
No current plans are underway										
South Cambridgeshire										
Great Abington		2	0	0	0	0	0	1	1	0
Huntingdonshire										
Godmanchester		1	1	0	0	0	0	1	0	0
Houghton & Wyton		2	2	0	0	0	0	1	0	1
Huntingdon		1	1	0	0	0	0	1	1	0

St Neots		1	0	0	0	0	0	1	1	1
East Cambridgeshire										
Fordham		1	1	0	0	0	0	1	1	0
Sutton		1	1	0	0	0	0	1	1	0
Witchford		1	0	0	0	0	0	1	1	0
Milton Keynes										
Campbell Park		1	1	0	0	0	0	1	1	0
CMK business		2	1	0	0	0	0	0	1	0
Hanslope		3	0	0	0	0	0	0	2	0
Lavendon		2	2	0	0	0	0	0	0	2
Newport Pagnell		1	0	0	0	0	0	1	0	0
Olney		2	1	0	0	0	0	1	0	0
Ravenstone		1	1	0	0	0	0	1	1	1
Sherington		1	1	0	0	0	0	1	1	0
Stony Stratford		2	0	0	0	0	0	2	1	0
Walton		3	1	0	0	0	0	0	1	0
West Bletchley		1	1	0	0	0	0	0	1	0
Woburn Sands		2	1	0	0	0	0	1	0	0
Wolverton		0	0	0	0	0	0	1	1	0
Woughton		1	2	0	0	0	0	1	2	0
Luton										
No current plans										
Bedford										
Carlton & Chellington		2	1	0	1	0	0	1	0	1
Oakley		1	1	0	0	0	0	1	1	0

Central Bedfordshire										
Arlesey	Yes	1	1	0	1	0	0	1	1	1
Caddington & Slip End	Modified GI Plan	1	0	1	0	0	0	1	1	0
Eaton Bray		1	2	0	0	1	0	1	1	0
Fairfield	Yes	1	0	0	0	0	0	0	1	0
Northill	Yes	0	1	0	0	0	0	0	1	1
Potton	Yes	1	1	0	0	0	1	1	2	0
Silsoe	Yes	1	2	0	0	0	0	2	1	1
Wrestlingworth	Yes	4	2	0	0	0	0	0	0	1
Peterborough City										
Ailsworth		2	1	0	0	0	1	1	0	0
Castor		1	0	1	0	0	0	1	0	1
Peakirk		2	2	1	0	0	0	1	1	1
130 Made Plans										
Total of Policies		191	115	23	20	15	4	92	73	34

Appendix H: Neighbourhood Plan level - Review of individual Neighbourhood Plans: summaries and profiles

Silsoe (Green Infrastructure approach)

Silsoe is a large village with significant constraints due to proximity to a listed Park and Garden and part of the parish being within the visual context of the Chilterns Area of Outstanding Natural Beauty (AONB). The Neighbourhood Plan focusses on heritage, rural character and design, appropriate homes and designates a large number of Local Green Spaces. There were no housing allocations.

Background evidence gathering focussed on producing a Green Infrastructure Plan and using the Village Design Statement to influence the scope and range of policy within the document.

The extent of landscape and Green Infrastructure policy is impressive, including a range of issues, some of which are relatively unusual in Neighbourhood Plans such as buffering of wildlife and habitats sites and linking of areas of biodiversity value. It also includes more familiar policy content around enhancements of biodiversity assets and networks, use of Sustainable Urban Drainage systems, and protection and creation of rights of way.

The range of environmental policies was fairly narrow (omissions include sustainable building, climate change/flood risk and renewable energy).

Neighbourhood Plan Status: Made November 2019

Key characteristics of Parish: Village with historic past, connected to a Grade 1 listed stately home and gardens, retention of facilities, small scale development

Population: 1770

Neighbourhood Plan focusses on: providing appropriate homes, heritage, Green Infrastructure, designation of Local Green Spaces (22)

Mapping used: Green Infrastructure Network – from Records Centre (historic landscape, historic finds, landscape character, biodiversity assets. Mapping from Local Plan

Background environmental documents: Village Design Statement (includes a landscape strategy), Green Infrastructure Plan

Environmental policies:

Policy	Policy Title	Policy Contents	Could add/comments
SNP/HQ1	High Quality	Promote use of alternative transport, landscaping	Edges of settlement

SNP/DC1	Development in the countryside	Diversification, use of redundant buildings	
SNP/EP2	Environment Policy	Avoid flood risk areas, use SUDS	
SNP/EP3	Environment Policy	Support protection, buffering, enhancement of biodiversity assets and networks, hedgerows, linking areas of biodiversity value	
SNP/EP4	Environment Policy	Respect landscape setting, especially AONB	
SNP/EP5	Environment Policy	Protection/creation of public rights of way	

Omissions: Renewable energy, sustainable building/climate change, flood risk

Natural capital approach could have been used for more detailed opportunity mapping.

Caddington and Slip End (modified Green Infrastructure approach)

Caddington and Slip End are two large villages on a hilltop setting in the Green Belt in close proximity to Luton. The Neighbourhood Plan was restricted in allocating sites for housing due to the Green Belt (Neighbourhood Plans cannot alter Green Belt boundaries) but nevertheless a site assessment on potential sites was carried out. The final selected sites included an 'aspirational' site within the Green Belt as an extension to Slip End, as well as a redevelopment site within the settlement of Caddington. The site assessment also used a traditional Local Plan constraint mapping approach (no landscape character or habitat mapping).

The interesting element that emerged during the production of the Neighbourhood Plan was that a large brownfield site within the Green Belt some distance away from the main village of Caddington became available for redevelopment for a large number of homes. In order to capitalise on the opportunities arising from this, the Green Infrastructure Plan (which was already underway) was modified to provide a 'Heritage Greenway' document. This document comprises a stage-by-stage project plan for a heritage trail along a series of multipurpose routes (surfaced paths) linking the new development across farmland with Caddington and then ultimately to Slip End village.

Other environmental policies include designation of the village green as a Local Green Space (no assessment was carried out for other potential sites) and a sustainable energy policy supporting community renewable energy schemes.

This neighbourhood plan contains no policies on biodiversity, landscape protection/enhancement or water issues.

Neighbourhood Plan Status: Made August 2018

Key characteristics of Parishes: Joint Neighbourhood Plan for 2 parishes. The two villages are separated from Luton by the M1, Green Belt except for the main villages and several outlying hamlets, gently rolling landscape, mostly arable.

Population: 5,500

Neighbourhood Plan focusses on: Providing a Heritage Greenway across the two Parishes

Mapping used: Mapping from Records Centre, historic landscape, landscape character assessment, biodiversity, archaeological findings, rights of way, Flood risk using Central Bedfordshire Local Plan information

Background environmental documents: Site Assessment, Heritage Greenway (South), Heritage Greenway (North),

Environmental policies:

Policy	Policy Title	Policy Contents	Could add/comments
CASE3	Bridlepaths	To increase bridleways via Heritage Greenway	
CASE4	Cycle paths	To increase Cycleways via Heritage Greenway	
CASE7	Local Green Space	1 Local Green Space designated	
CASE8	Heritage Greenway	Multipurpose route to be provided across the whole of the 2 Parishes funded by new developments	Enhanced planting along route
CASE9	Sustainable Energy	Support for Community renewable energy schemes and household schemes	Suitable sites could have been identified

Omissions: No policies on biodiversity, landscape protection and enhancement, flooding

Natural capital approach could have been used for opportunities for enhancing landscape, planting, wildlife corridors etc.

Stevington

Stevington is a small village in Bedfordshire. No housing allocations were made. Policies include an extensive natural environment policy referencing contours, natural features, maintaining biodiversity, retaining native species, wildlife corridors, mitigation and having regard to designated sites. Reference is made to ecological networks and the text refers to the natural capital approach, although there is no evidence to suggest that this approach is understood or was carried out.

A Local Green Space assessment was carried out and four sites were designated. A traditional Local Plan mapping constraint approach was used to assess sites.

Neighbourhood Plan Status: Passed Examination October 2020, awaiting referendum

Population: 580

NP focusses on: Small scale development and design, and historic character

Mapping used: Local Plan constraints and allocations map. Met office mapping (for windmill)

Background environmental documents: Local Green Space Allocations

Environmental policies:

Policy	Policy Title	Policy Contents	Could add/comments
DH1	Design and Character	Design of buildings, retaining trees and hedgerows, parking, bin storage, Conservation Area, disability access	
DH3	Windmill Wind Corridor	Development not permitted within wind corridor	
Page 43		Reference to Ecosystems Services approach	Reference to documents but not included within policy
Policy EN1	Natural Environment	New development must preserve and enhance the natural environment, respecting contours and natural features, maintaining biodiversity of sites and prioritising retention of native	Extensive policy

		species, wildlife corridors, safeguard ecological networks, impact must have mitigation, regard to designated sites	
Policy EN2	Local Green Space	4 Local Green Spaces	
Policy T12	Cycling and Walking	New dwellings providing storage and link to pavement	
Policy T13	Sustainable Urban Drainage Systems	All new development must incorporate SUDS	Needs more information in the policy regarding small scale developments (mentioned in text)

Omissions: Landscape, hedgerows, renewable energy/sustainable building

Natural capital approach could have been used for opportunity mapping and Green Infrastructure network.

Note: whilst the Ecosystem Services approach is referenced in the document, there is no application in the Neighbourhood Plan or policies.

Ickford (heritage-first approach)

Ickford is a small village close to Oxford with considerable issues with drainage and flooding. A scoping report was carried out which included landscape character assessment mapping, dark skies mapping, flood risk mapping, Local Plan constraint maps and a wildlife survey was carried out by residents.

Much work was done considering the historic development of the village and identifying historically important buildings, views, landscape and open spaces. The information was put into a Built Heritage Assessment background document and used as a basis for policy formulation.

Environmental policies include landscape views and dark skies, Green Infrastructure and 10% biodiversity gain, Green Infrastructure/flood mitigation link, Local Green Space designation, retention of natural features (trees/hedgerows/watercourses), landscaping required in new development, permeable surfaces.

There are no policies on renewable energy or sustainable building methods.

Cottenham (Strategic Environmental Assessment)

Cottenham is a large village at the edge of the fens, close to Cambridge. The Parish has some allocations in the Local Plan. The Neighbourhood Plan focusses on

making the most of brownfield sites within the village and enhancing community facilities on the recreation ground including the provision of a village hall.
The Neighbourhood Plan required a full Strategic Environmental Assessment, the scoping report of which provides a baseline using mapping for flood risk, agricultural land grade and water quality. Whilst this establishes a baseline, the plan does not address these issues with relevant policies.

Environmental policies include landscape character and ensuring planting enhances the fen edge (non-continuous hedges, vistas out to the countryside), native tree planting, identifies two Local Green Spaces and two amenity spaces.

There is a community action plan within the Neighbourhood Plan including improvements to off-road routes, access to the countryside and cycle links.

Neighbourhood Plan Status: Awaiting referendum passed examination December 2019

Key characteristics of Parish: Edge of fens, village with historic High Street, A10 running through Parish, River Great Ouse along northern boundary.

Population: 6,400

Neighbourhood Plan focusses on: conserving character, affordable housing, improving amenities, encouraging employment, reducing traffic impact. Brownfield sites identified in the village centre to provide new shops and commercial development with flats above, new facilities planned for the recreation ground including a village hall and nursery.

Mapping used: National Landscape Character Areas, Local Plan Policies Map constraints/allocations.

Background environmental documents: Site assessments (by AECOM consultants), Village Design statement. Strategic Environmental Assessment uses mapping for flood risk (some areas are at risk in zone 3), Agricultural land grade (2/3 for parish), water quality.

Environmental policies:

Policy	Policy Title	Policy Contents	Could add/comments
COH/1-1	Landscape Character	Take account of vistas from particular points, inclusion of non-continuous hedge and tree planting, subdued lighting	Sensitivity of landscape to new buildings, protection of existing landscape feature such as hedgerows, woodland, ponds etc
COH/1-4	Village character – alterations and extensions	Alterations and extensions but includes vistas	-

		between properties to open countryside and retaining/introducing native species trees	
COH/1-5	Village Character – new build	Incorporate measures to conserve the fen-edge landscape character, vistas, incorporate native trees	Limited explanation of fen edge character, other than 'flat and appears featureless as its ditches, hedges and rivers blend into the landscape allowing the big sky to dominate'
COH/1-7	Local Green Space	Changes boundaries to one space and designates a new one – explaining it is woodland	
COH/1-8	Protected Village amenity areas	Identifies two amenity spaces, a ditch used as SUDS and a space with trees surrounding	Seeks protection but could propose enhanced planting (aspiration)
COH/2-2	Large site design	For sites of over 50 houses, includes reference to landscape and drainage network	
T/3, T/4, T/5	Within community action plan (aspirational)	Improve off road routes especially to green spaces, improve access to the countryside, improving cycle links to neighbouring villages	

Omissions: Nothing in the Plan about biodiversity/habitats/species, no suggestions for additional planting other than native trees in gardens/boundaries to properties. Whilst flood risk/climate change impact, agricultural land grades issues are identified in the SEA, nothing is directly addressed in the Plan.

Natural capital approach could have been used for identifying opportunities for additional planting for carbon offsetting/wind reduction/noise reduction from major road, clarifying/locating drainage & flood risk issues and alleviation measures.

Eynsham

Eynsham is a large village, close to Oxford with allocations in the Local Plan for a new 'Garden Village', Park & Ride and Science Park, plus an extension to Eynsham. The A40 and the River Thames run through the Parish.

The Neighbourhood Plan focusses on policies relating to the possible impact of the new developments in the parish, retention of village facilities and employment, it designates Local Green Space.

The scoping report sets out baseline information (nature conservation and biodiversity, landscape and townscape, air quality and climate factors, archaeology, soil and geology and water. The Local Green Spaces Assessment and site assessment documents use Local Plan mapping, and includes criteria for flood risk, conserving biodiversity, conserving and enhancing the landscape.

The policies include a Green Infrastructure policy requiring landscaping, visual buffer, planting, design of planting near paths, protection of existing green infrastructure and long term maintenance. The biodiversity policy also includes protection of watercourses and best agricultural land and protection of the Special Area of Conservation in the parish. There is a general climate change policy and sustainable transport policy, but carbon sequestration is not mentioned. Local Green Spaces are designated but a proposal for a large linear park relating to the planned development was unable to be included although it received support from the community at an earlier stage of the Neighbourhood Plan.

There is a policy specifically to address the strategic developments and the expectations that the Parish Council wish to see met.

Strongly worded intentions of the Parish Council are included regarding the rate of building, impact on the A40 and the linear park are included in the document, although not enshrined in policy.

Neighbourhood Plan Status: Made February 2020 (started 2015)

Key characteristics of Parish: New ‘garden village’, Park & Ride and Science Park plus extension to Eynsham allocated in Local Plan within Parish. A40 runs through Parish. Flood zone 2/3 and Green Belt to East of village

Population: nearly 5,000

Neighbourhood Plan focusses on: Coping with two large scale development proposals in the Local Plan (no allocations), retention of facilities and employment, design of new development (both smaller scale and strategic), designates Local Green Space, biodiversity/trees

Mapping used: Local Plan constraint maps, data from ACRE, reference to West Oxfordshire Landscape Assessment

Background environmental documents: SA Scoping Report setting out baseline information (Nature Conservation and biodiversity, landscape and townscape, Air quality and climate factors, archaeology, soil and geology, water, Local Green Spaces Assessment. Site Assessment documents use Local Plan mapping, and includes criteria for flood risk, conserving biodiversity, conserve and enhance landscape, local green space designation

Environmental policies:

Policy	Policy Title	Policy Contents	Could add/comments
ENP2	Design	Design of new buildings, street trees and planting encouraged, well designed new Green Infrastructure, SUDS and masterplan for larger development	More about landscaping and retention of existing features
ENP4	Green Infrastructure, the setting for new developments	Landscaping, visual buffers, inclusion of open spaces, appropriate planting, design of planting near paths, protect existing Green Infrastructure, long term maintenance	Green corridors, biodiversity opportunity network
ENP4a	Enhancing biodiversity	Biodiversity plan required, Protection of watercourses, best agricultural land, not affect the SAC	Requirement for wildlife friendly features in new buildings,
ENP5	Sustainability-climate change	Support for proposals that meet Climate change Act intentions including efficient use of land and materials and renewable and low carbon energy	Opportunity mapping, carbon sequestration Text gives lots of detail because the policy is unenforceable at present
ENP7	Sustainable transport	Links to main roads, not village roads, public transport improvements, encouragement to alternatives to the car, school traffic provision	
ENP8	Connected place	Walking distances between facilities and new development, provide wide footpaths, green corridors to open countryside, linking to existing footpaths and bridleways	Inappropriate use of term ‘green corridor’ when the meaning is attractive planting to retain rural character

ENP12	Local Green Spaces	Designates 6 Local Green Spaces	
ENP13	Trees	Retention of healthy trees, trees lost should be replaced on site or nearby.	Seeks Tree Preservation Orders on specimen trees in their Local Green Spaces and trees in hedgerows in development areas. Register of important trees being made. Could reference planting for carbon retention/noise attenuation etc
ENP14	Sustainable growth	Seeks similar qualities to the village within new developments, relationship with the wider countryside, protection of floodplain trees and hedgerows, watercourses, impact on views of village from the countryside, new paths, connectivity, traffic impacts	
ENP14a	Strategic development area and Garden village	Adds to ENP14 for the strategic development area in the Local Plan, timing impacts on residents, services, provide employment, mitigate infrastructure constraints, impact on A40, garden village principles, extensive and high-quality Green Infrastructure and rights of way	Mapping of opportunities would be helpful to give a spatial interpretation to these requirements. The timing of the Neighbourhood Plan against the Local Plan and plans for the area is unfortunate, more detailed requirements cannot be set out in policy as they could prejudice the outcome
REC17	EPC Intentions (not a policy)	Rate of building, impact on A40, concern over a bypass, Linear Park proposal	

Omissions: Opportunity mapping but the timing is difficult due to the difficulty of merging Neighbourhood Plan aspirations with upcoming developments. A Linear Park was included at an earlier stage of the plan (Regulation 14).

Natural capital approach could have been used for opportunity mapping, particularly tree planting and rights of way/accessibility. It could also have been used at a more strategic level to map out the proposed development area/garden village.

Lewes (natural capital approach)

Lewes is a town of around 3,000 people, set in the River Ouse valley within the South Downs AONB. The Lewes Neighbourhood Plan is the only example known of a Neighbourhood Plan that has embraced the natural capital approach. There are other made Neighbourhood Plans in the South Downs Authority area, but they do not have a policy directly referencing natural capital.

The Neighbourhood Plan focusses on an environmental approach, significant enhancements/projects for the environment, both natural and historic, affordable housing, managing visitors, environmental design, green spaces, biodiversity, reducing energy and climate change resilience.

The process of producing the Neighbourhood Plan using a natural capital approach is unclear. The South Downs Local Plan also embraces this approach, but it is likely that an individual or group of individuals were influential in using the approach. The consultants appointed to carry out the Strategic Environmental Assessment (and therefore the initial scoping and baseline establishment) are a specialist energy and sustainability consultant (Clearlead Consulting). However, the Strategic Environmental Assessment is traditional in approach although the maps pack includes some opportunity mapping in terms of biodiversity network.

The policies in a number of areas are innovative, with exemplar policies which may be used as examples of good practice. These include: Natural Capital, Architecture and Design, Flood Resilience, Renewable energy and the resource efficiency of new buildings, Protection and enhancement of Green Spaces, River Corridor Strategy.

There are further policies encompassing biodiversity, active travel networks, sustainable tourism, site allocations and heritage protection which are less innovative although seem to be well constructed policies.

Neighbourhood Plan Status: Made April 2019

Key characteristics of Parish: Town set within South Downs AONB, heritage challenges, key wildlife sites, River Ouse corridor, traffic, affordable housing & workspace issues

Population: 3,233

Neighbourhood Plan focusses on: Environmental approach, significant enhancements/projects for environment, both natural and historic affordable housing,

managing visitors, environmental design, green spaces, biodiversity, reducing energy, climate change resilience

Mapping used: Not clear, maps derived from South Downs National Park Local Plan, Heritage England. https://www.southdowns.gov.uk/wp-content/uploads/2019/01/C0174_Lewes-NP_SA_AnnexD_Maps_4.pdf

Background environmental documents: Full sustainability appraisal, Baseline Data report, Maps report (tranquillity, historic landscape character, landscape character, BAP priority Areas, Biodiversity opportunities, SSSI's, Habitat management areas, historic environment, Historic urban character)

Environmental policies:

Policy	Policy Title	Policy Contents	Could add/comments
LE1	Natural Capital	Natural capital assessment needed for housing sites for 5 houses or more, Ecosystem Services should be enhanced, and support given to proposals that give net gain in Natural Capital	Exemplar policy, reliant on Local Planning Authority
LE2	Biodiversity	Net gain, hierarchy of designations – international, national, local sites, will require Environmental Impact Assessment, support given to proposals that give a biodiversity net gain	SAC's, SSSI's, local sites, LNR all mapped, within Neighbourhood Plan Area. Not 10% net gain, predates Environment Bill
HC3A	Heritage protection of Landscape and Townscape	Townscape, includes countryside setting, roofscape, Conservation Areas, Settlement Pattern, flint walls, prominence of the chalk ridge in views, low rise buildings to preserve roofline	Views of landscape included in townscape value
HC3B	Planning application requirements and Heritage Issues	Avoid or minimise harm to heritage including archaeology, no demolition in conservation area, Contemporary designs	

		include energy saving and water conservation	
HC5	Sustainable tourism	Positive impact, seeking bus pickup/drop off, better connections between the town, South Downs and railway station, campsite, large scale tourism supported	Policy relates to sustainable transport
PL1B	Housing allocations	15 brownfield sites allocated with criteria including design, heritage, highways, car parking, archaeology, ecological investigations, protection of groundwater	Basic menu of requirements for the sites.
	Sites	Each site has a profile	Profile includes Ecosystem design response 'This site offers potential to improve Ecosystem Services and Green Infrastructure by including swales, trees, small gardens, green walls, green roofs and water butts', flood zone
PL2	Architecture and Design	High standard of Design, respect for traditional materials in conservation areas, modern construction outside Conservation Areas, solar orientation, climate change, water storage, setting, space standards, accessible buildings, flat roofs should support solar/green rooves, roof materials should	Exemplar policy giving detailed requirements for design approach to developments

		enhance views from Downland	
PL3	Flood resilience	New development which would increase discharge should address matters, permeable surfacing, SUDS	Exemplar policy referencing particular issues with River Ouse
PL4	Renewable Energy and the resource and energy efficiency of new buildings	Increase energy efficiency, support carbon neutral standards, onsite power generation, promote water efficiency (105 litres/person/day), reuse of materials/sustainably sourced materials supported	Exemplar policy for climate change resilience
AM1	Active Travel networks	Prioritise and support safe walking and cycling routes, less mobile encouragement	
AM2	Public Transport Strategy	Support, protect and improve public transport	
	Public Realm Strategies, identifying existing features and enhancements	Detailed maps within document showing countryside gateways, green links, cycle networks, pedestrian routes, animated river corridor	Valuable addition to Neighbourhood Plan
SS3	Protection and Enhancement of Green Spaces	Local Green Spaces and community spaces identified, new Green Infrastructure to assist in flood protection/public health/corridors for wildlife, new housing development must provide outdoor space, tree cover and biodiversity, key views, sensitivity of landscape must be recognised and enhanced, wildlife	Exemplar policy, includes ‘bonfire sites’ of historic importance

		corridors protected, support for community food production	
SS4	River Corridor Strategy	Pathway, links to residential areas and countryside, design features to enhance setting, open up views, moorings not supported, development and flood risk, new development must not impact on natural river function and enhance green infrastructure and wildlife corridors	Exemplar policy, identifying potential for enhancement projects
	Neighbourhood Projects	Wide selection of aspirations	

Omissions: Air Quality management, suggested mitigation, light pollution

Natural capital approach is used but not clear how this was integrated into the policy making process. SEA shows a traditional approach.

Appendix I: Neighbourhood plan level - Local Green Space Assessment Template incorporating Ecosystem Service components into pre-existing framework

For the purpose of this report the text is emboldened where ecosystem services have been considered.

Site Reference	D
Site Name	Plantation
Site Owner	Privately owned
Location	Adjacent to village edge and A6 at eastern end of the parish
Status/Designations	None
Size	3.5ha
Description	An area of secondary woodland adjacent to the A6
Boundaries	A6 is western boundary. Quarry to east. Woodland is clearly defined
Distance from Village	Southernmost tip of site is immediately adjacent to village edge Nearest point in terms of pedestrian access = 500m
Uses	Unmanaged plantation. Some evidence of use by people for informal recreation beyond legal right of way along perimeter. **The site performs an important role in sequestering carbon, as evidenced by the ecosystem service map for carbon storage capacity. It also plays a role in regulating local climate (urban heat island effect).**
Quality	Medium quality semi-natural habitat
Facilities	None
Visual Attractiveness	Medium/High – relatively attractive woodland, forming part of a wooded backdrop to the village which is valued by residents
Historical Significance	Sandstone wall on part of A6 boundary. Otherwise low
Recreational Value	Moderate/High – although not legally accessible (beyond the right of way along its eastern edge) it is clear from the informal paths within it that people use if for informal recreation. **Although it does not fall within any deficit areas on the 'access to nature' ecosystem service map, it does provide an important function for residents in this respect because it avoids the need to cross the busy A6 to come into contact with woodland habitats**
Tranquillity	Generally Low/Moderate – traffic on the nearby A6 was audible on the day of surveying. **The woodland does play an important role in mitigating noise pollution, especially for users of the public footpath on the other side of the site. The ecosystem service mapping for noise regulation capacity clearly highlights the role this site plays in a parish with relatively few areas of woodland in locations to perform this role.**
Wildlife Value	Moderate/High – woodland is not actively managed and is not designated but does have some wildlife value and does create opportunities for people to see common species.

Recommend as a local green space?	Yes – particularly because it plays an important role in the local landscape as part of the wooded backdrop, **provides people with access to nature and mitigates the impacts of noise** at the western end of the village and associated footpaths.

Appendix J: Masterplan level case studies

Marston Valley, Bedfordshire

Marston Valley scheme (https://marstonvalley.co.uk/marston-valley-vision/)

Marston Valley is a proposal for 5,000 homes and associated infrastructure in Bedfordshire's Marston Vale. The project is controlled by the O&H group, who are a major landowner in the area. The Marston Valley Outline Planning Application establishes the key development principles which are described by the Parameter Plan, written Development Specification and supporting submitted information. Future tiered design codes will define parameters and specifications to guide phased implementation. This structure follows from O&H taking a 'master developer' role with the potential to pass development of land parcels on to other developers.

The Marston Valley site is set in a landscape of disused brickwork clay quarries, and within the Forest of Marston Vale community forest. This provides substantial natural capital opportunities, and also active environmental stakeholders – the Forest is supported by strong local planning policies, the landscape has good populations of protected species with the potential for further improvement, and existing residents have considerable interest in landscape. This provides the opportunity to create new communities within a nature-rich setting, as promoted by the Oxford-Cambridge Arc concept.

The masterplan process for Marston Valley began two decades ago, before the Natural Capital framework was created. The process has produced detailed environmental plans, designed to provide multiple environmental benefits, with

essential concern for protected species considerations and for the policy requirement for 30% canopy cover in any development within the Forest of Marston Vale.
A natural capital assessment was conducted in 2019 for Central Bedfordshire Council to review site selection using the 'Natural Capital Planning Tool' and showed strong positive results. This assessment has not influenced site design as the findings are not yet available to the masterplan team. The Defra Biodiversity Net Gain metric (version 2.0) has also been applied recently and provides a sufficient metric score, despite the low scores available for woodland habitats, but the metric has not provided substantial benefits for site design.

The project manager and lead ecologist for the Marston Valley masterplan were both interviewed for this project and had a very good understanding of the natural capital framework. In their experience, natural capital assessments can be time-intensive and do not yet contribute enough to the masterplan and plan-making process, especially as this was already advanced at Marston Valley. To overcome this barrier, natural capital approaches will need to explicitly address the concerns of planning determination and policies, and need better to recognise and address how different environmental priorities interact and can be improved.

Tresham Garden Village, Northamptonshire

Artist's illustration of Tresham Garden Village (treshamvillage.co.uk/about-us/)

Tresham Garden Village is a proposed development of 1,500 dwellings in Northamptonshire. The site was identified through the 2016 North Northamptonshire Joint Core Strategy. Government development funding was assigned to develop a Masterplan and Delivery Strategy for public consultation in spring 2018. As a condition of this funding the Local Planning Authority required a natural capital assessment comparing an early-stage (Spring 2017) draft masterplan to the undeveloped site, and an expert workshop to consider this assessment and recommend improvements to the masterplan. This was led by the consultancy Natural Capital Solutions, using the same broad methods they applied to produce

the OxCam LNCP NCES datasets - making the lessons learnt from Tresham Garden Village particularly pertinent to this research project.

The assessment mapped eleven categories of ecosystem services before and after development. For a sub-set of these, demand for the services was also mapped to indicate the additional demand created by new residents. This involved similar datasets to those applied to the OxCam LNCP data, with the addition of Local Record Centre, Wildlife Trust and Local Planning Authority Data.

According to the consultant leading the work, the most useful features within this were considered to be:

- Demand maps.
- The modelling of scores 'after' development, following the draft masterplan, and not just of 'before' (baseline) scores.
- The results highlighting poorer results from the draft design; negative flood management and Biodiversity Net Gain scores and less strong public access benefits than expected.

The main advantage of these was allowing workshop participants to identify potential shortfalls in natural capital provision, and then where (in spatial terms) improvements could be made to the main Ecosystem Service demands

The consultant considered the monetary valuation of impacts as being less useful (not providing enough additional information to justify the time involved) and would remove them if repeating the exercise. He also noted the exercise of generating 'after' maps was labour-intensive and would need to be streamlined.
An expert-opinion workshop of planners and ecologists suggested changes to the draft spatial design, to remedy the potential shortfalls identified by the Natural Capital assessment. The main changes were (i) to allow access to a far greater area of existing woodland, (ii) to propose new areas of woodland and parkland, and (iii) to make alterations to SuDS and tree-planting plans.

This revised masterplan was modelled to improve on the original draft in most categories of benefit, most markedly the level of public access, but still to provide lower levels of biodiversity and of water flow management than the undeveloped site. Improvements were also at the cost of a small further decline in agricultural productivity. The natural capital consultants then made additional recommendations for improvements to the masterplan, aimed at delivering net gains for biodiversity. Most of these recommendations were taken up, although not all. Some recommended parkland planting was not taken forward, and access was considerably improved but with some woodland areas remaining closed.

Waterbeach Barracks, Cambridgeshire

Waterbeach Barracks illustration (fletcherpriest.com/projects/waterbeach-cambridge)

Waterbeach Barracks is a 6,500 dwelling development on a 290ha site to the north of Cambridge. The development process has been managed by Urban & Civic, who have taken a 'master developer' role for the Defence Infrastructure Organisation and will be creating the site's Green Infrastructure in advance of housing.

The Waterbeach site is allocated for development through the South Cambridgeshire District Council Local Plan. This is supported by the Waterbeach New Town Supplementary Planning Document (SPD), which establishes strategic principles for development to guide master planning of the site. The SPD includes a detailed analysis of the existing site context including development constraints such as heritage assets, landscape character and flood risk, and opportunities from the assets already present on the site. This is an approach led by 'Green Infrastructure' concepts and landscape design, although this uses many of the concepts later adopted for the natural capital framework.

Subsequent masterplan design has also been landscape-led, with a relatively early application of the Defra Biodiversity Net Gain metric (version 2.0) to ensure a 10% uplift in biodiversity gain units. Key parameters for Green Infrastructure and Biodiversity Net Gain habitat provision have been set within the approved Outline Planning Consent for the development and reinforced through Design Codes for each phase, which all house builders and contractors working in partnership with Urban & Civic must work to through planning and delivery. These include:

- the provision of connected mosaic habitat within the >40% of the site that is parkland and amenity green space
- the upfront implementation of Green Infrastructure and sustainable transport links

- a coherent sustainable drainage system feeding an existing lake and new watercourses
- reinstatement of a medieval causeway across the site.

It was not possible to arrange interview dates with key staff working on Waterbeach Barracks within the timescale of this project. As a result the case study has not been taken forward in the same detail as Tresham Garden Village and Marston Valley.

Appendix K: Planning reform proposals - Summary of comments on consultation response/influencing document from SEMLEP PDIIDG 23 February 2021, online meeting

Note: Agreement, disagreement and comments from PDIIDG members were taken from the chat feed.

Summary of White Paper Proposal	Summary of our recommendations	Comments
Proposal 7: Local Plans should be visual and map-based, standardised, based on the latest digital technology, and supported by a new template.	There are a number of technical challenges to overcome but shared data sets, including natural capital, for use at multiple tiers is fundamental. Shared between local authorities, statutory bodies, developers, etc. Paid for by the private sector. Interrogate at different data levels – from Arc to Masterplan E.g. hosted by Environmental Records Centres	16 agreed
		0 disagreed
		Visual, map based and conceptual
		Visual mapping exercise needed
		Ironically, a start-up I nurture has built the compete GIS set with all of these land use polygons, and integrated it into google maps, land registry, companies house, banking information, satellite information (so we can tell contaminated brownfields from merely "marked as brownfield"), demographic data, distance to shops, rail links, busses, roads, transport hubs
		Cost of access will be a factor
		Downloadable issues though for some, perhaps with viewing online depending on size of data
Conclusion – no changes made to recommendation.		
Proposal 15: Amend the NPPF to ensure that it targets those areas where a reformed planning system can most effectively play a role in mitigating and	We believe this needs to include a natural capital approach and Environmental Net Gain (incorporating BNG), preferably using a single metric.	15 agreed
		1 disagreed, on issue of targeted areas
		Agree on standard approach but need to be careful as there are limitations in the

adapting to climate change and maximising environmental benefits.		methodology. But in practice, a standard approach can provide clarity and certainty.
		Need to have a single metric.
		The practicalities need to be better understood
		There are excellent Biodiversity Net Gain metrics as proposed by Dr Joanne Treweek and adopted in part by Defra. I guess you already know of the work done by Sam Sinclair and perhaps that done at WWF by Richard Perkins?
Conclusion – no changes made to recommendation.		
Proposal 19: The Community Infrastructure Levy should be reformed to be charged as a fixed proportion of the development value above a threshold, with a mandatory nationally-set rate or rates and the current system of planning obligations abolished.	We propose that a percentage of any infrastructure levy to be given towards natural capital, for example mapped Opportunity Areas for the local area.	7 agreed
		2 disagreed
		Infrastructure Levy is not likely to go ahead. But if it does then either provision on site or off-setting is correct in principle. A blanket percentage feels a bit blunt though.
		Didn't the government try this type of levy in the 1970's? Did not work then - unlikely to work this time either....
		The same percentage may not be appropriate in every area where there are other infrastructure needs
		Agree, as per comment on same percentage not appropriate
		I would want land to be fully taxed for the unearned gains from holding it and I would like government to fully cost

		infrastructure and charge that to developers
		Needs to take into account local context
		Don't agree with the proposed Infrastructure Levy!
		Disagree - As a developer of small to medium housing sites every site is different so a fixed % is too blunt in relation to natural capital
Conclusion – no changes made to recommendation, as disagreement mainly made in relation to CIL rather than principle of incorporating natural capital.		
Proposal 11: To make design expectations more visual and predictable, design guidance and codes to be prepared locally with community involvement, and ensure that codes are more binding.	We propose that environmental design codes incorporate natural capital / Environmental Net Gain and Local Nature Recovery Strategy.	8 agreed
		2 disagreed
		Need to address how this works at a regional and local level.
Conclusion – no changes made to recommendation.		

Appendix L: Glossary

This glossary presents definitions of a number of terms referred to within this report.

Term	Definition
Biodiversity	Biodiversity is the variety of life found in a place on Earth or, often, the total variety of life on Earth. Biodiversity includes all living organisms, such as plants, animals and microorganisms.
Design code	A set of illustrated design requirements that provide specific, detailed parameters for the physical development of a site or area. The graphic and written components of the code should build upon a design vision, such as a masterplan or other design and development framework for a site or area.
Development plan	Is defined in section 38 of the Planning and Compulsory Purchase Act 2004, and includes adopted Local Plans, Neighbourhood Plans that have been made and published spatial development strategies, together with any regional strategy policies that remain in force.
Ecosystem	A dynamic complex of plant, animal, and microorganism communities and their non-living environment interacting as a functional unit.
Ecosystem Services	A way of describing and understanding the benefits we get from nature. Ecosystem services are grouped into 4 categories: provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services such as nutrient cycling that maintain the conditions for life on earth.
Environmental Impact Assessment	A procedure to be followed for certain types of project to ensure that decisions are made in full knowledge of any likely significant effects on the environment.
Green Infrastructure	A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.
Local Enterprise Partnership	A body, designated by the Secretary of State for Housing, Communities and Local Government, established for the purpose of creating or improving the conditions for economic growth in an area.
Local Nature Partnership	A body, designated by the Secretary of State for Environment, Food and Rural Affairs, established for the purpose of protecting and improving the natural environment in an area and the benefits derived from it.
Local Natural Capital Plans	As part of implementing the 25 Year Environment Plan the government is developing its approach to Natural Capital planning. Part of this approach will involve the production of Local Natural Capital Plans. Natural Capital plans will be locally produced and aligned with the 25 Year Environment Plan (ensuring a clear line of sight to national government) but be particularly relevant to the local area or geographies within them. How these plans will be developed is being trialled, the first LNCP pilot is in the Oxford to Cambridge growth Arc.

Local Nature Recovery Strategy	Local Nature Recovery Strategies will help to map the most valuable sites and habitats for wildlife in an area and identify where nature can be restored. They will underpin the Nature Recovery Network a flagship element of the Government's 25 Year Environment Plan
Local Planning Authority	The public authority whose duty it is to carry out specific planning functions for a particular area.
Local Plan	A plan for the future development of a local area, drawn up by the Local Planning Authority in consultation with the community. In law this is described as the development plan documents adopted under the Planning and Compulsory Purchase Act 2004. A local plan can consist of either strategic or non-strategic policies, or a combination of the two.
Multiple benefits	An approach, strategy or plan which identifies and covers multiple Natural Capital and/or Ecosystem Services benefits including; biodiversity, carbon, water and air quality, reducing flood risk, access to green space, leisure, health and wellbeing.
Natural Capital	Natural Capital is the elements of nature that directly or indirectly produce value to people including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions
Natural Capital Accounts	A way of recording the current amount and condition (stock) of our natural resources that allows us to see if they are improving or declining. It can be thought of as a kind of balance sheet where we look at the changes in our natural resource. The accounts can be produced in different ways. They can; describe and compare the importance of natural resources and processes, they can be a physical measure of our natural resources and processes or a summary of some of the monetary values of the natural environment.
Natural Capital approach	A Natural Capital approach is the understanding that nature underpins human wealth, health, wellbeing and culture. The approach provides a practical framework to manage nature as an asset so that it can continue to provide services that benefit people. As part of this the Natural Capital approach focuses on sustainability by protecting and enhancing natural assets; it promotes management of ecosystems in a joined up way; and it delivers for people by focusing on what we value.
Natural Capital investment strategy/plan	Strategies and plans that promote investment and delivery of opportunities that protect and enhance Natural Capital to support a healthy population and economy.
Natural Capital metrics	Measurements of different aspects of the environment and the way me manage and use it.
Nature Recovery Network	An expanding, increasingly connected, network of wildlife rich habitats supporting species recovery, alongside wider benefits such as carbon capture, water quality improvements, natural flood risk management and recreation. It includes the existing network of protected sites and other wildlife rich habitats as well as landscape or catchment scale recovery areas where there is coordinated action for species and habitats.

Neighbour-hood Plan	A plan prepared by a parish council or neighbourhood forum for a designated neighbourhood area. In law this is described as a neighbourhood development plan in the Planning and Compulsory Purchase Act 2004.
Net gain - biodiversity	Measurable improvement in biodiversity following an activity after all significant positive and negative impacts have been taken into account.
Net gain - environmental	Measurable improvements in the environment following an activity after all significant positive and negative impacts have been taken into account. Environmental Net Gain takes into account a wider range of environmental impacts than Biodiversity Net Gain and considers impacts on the capacity of Natural Capital to deliver Ecosystem Services. The full scope of Environmental Net Gain is still to be set. Examples of what may be included are; carbon storage and sequestration, water purification and recharge, and flood water regulation.
Net gain – Natural Capital	Similar to Environmental Net Gain. It is a measurable improvement in Natural Capital assets following an activity after all significant positive and negative impacts have been taken into account.
Priority habitats and species	Species and Habitats of Principal Importance included in the England Biodiversity List published by the Secretary of State under section 41 of the Natural Environment and Rural Communities Act 2006.
Spatial development strategy	A plan containing strategic policies prepared by a Mayor or a combined authority.
Stepping stones	Pockets of habitat that, while not necessarily connected, facilitate the movement of species across otherwise inhospitable landscapes.
Strategic Environmental Assessment	A procedure (set out in the Environmental Assessment of Plans and Programmes Regulations 2004) which requires the formal environmental assessment of certain plans and programmes which are likely to have significant effects on the environment.
Supplementary Planning Documents	Documents which add further detail to the policies in the development plan. They can be used to provide further guidance for development on specific sites, or on particular issues, such as design. Supplementary Planning Documents are capable of being a material consideration in planning decisions but are not part of the development plan.
Wildlife corridor	Areas of habitat connecting wildlife populations.

Terms adapted from the Environment Agency Natural Capital glossary and the Ministry of Housing, Communities & Local Government National Planning Policy Framework glossary.