

Achieving a Healthy Green Recovery – the essential role of green infrastructure

Tuesday 6th July 2021-
Webinar 2

#GreenInf21

#GreenRecovery



Department
for Environment
Food & Rural Affairs

Making the most of Biodiversity Net Gain

Dr Nick White – Principal Advisor, Net Gain

Net Gain – A Transformational Opportunity



Nature



People & Places



Economy



From Net Loss to Net Gain



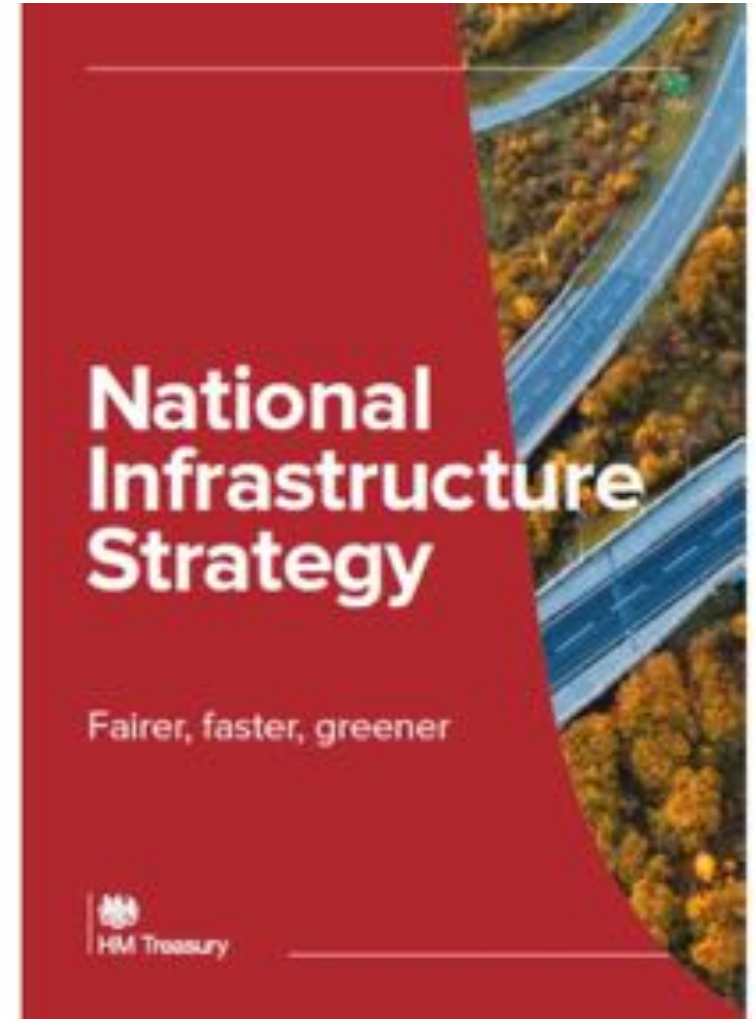
From this  to this



Biodiversity Net Gain Now



- **National Planning Policy Framework (NPPF)**
- **Planning Practice Guidance (PPG)**
- **National Design Guide**
- **National Infrastructure Strategy**



Additional Net Gain Drivers

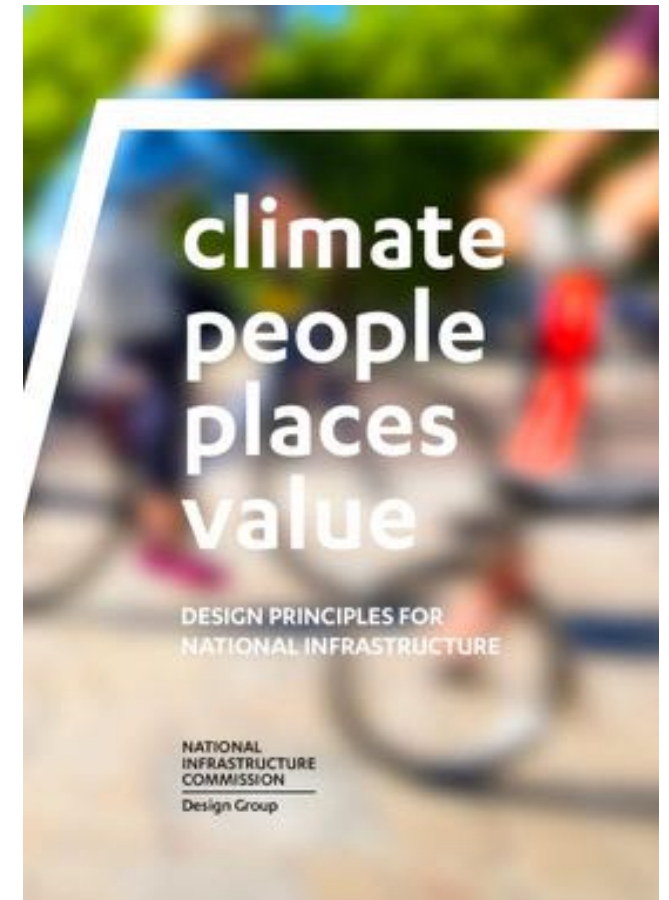


NIC Design Principles

- *Good design supports local ecology, which is essential to protect and enhance biodiversity.*
- *Projects should make active interventions to enrich our ecosystems.*
- *They should seek to deliver a net biodiversity gain, contributing to the restoration of wildlife on a large scale while protecting irreplaceable natural assets and habitats*

**British Standard for Biodiversity Net Gain – BS8683
(coming '21)**

Green Infrastructure Standards framework (coming)



Mandatory Biodiversity Net Gain – Key Components



The Environment Bill

- England only
- Amends the Town & Country Planning Act (TCPA)
- Applies down to mean low water
- Minimum 10% gain required calculated using Biodiversity Metric & approval of net gain plan
- Habitat secured at least 30 years
- Delivered, on-site, off-site or via statutory biodiversity credits
- National register for net gain sites
- Likely to become law – second-half 2023
- Does not change existing legal protections
- ****Extended to cover Nationally Significant Infrastructure Projects (NSIP)s****
- Does not apply to Marine – addressed separately



Secondary Legislation and Regulations



Secondary Legislation covering:

- Biodiversity Net Gain Plan
- Exemptions
- Irreplaceable habitats
- Phased developments
- Net gain register
- Etc

Further Regulations e.g.

- Additionality incl. stacking and bundling
- Statutory Biodiversity Credits



Additional Related Components of the Environment Bill

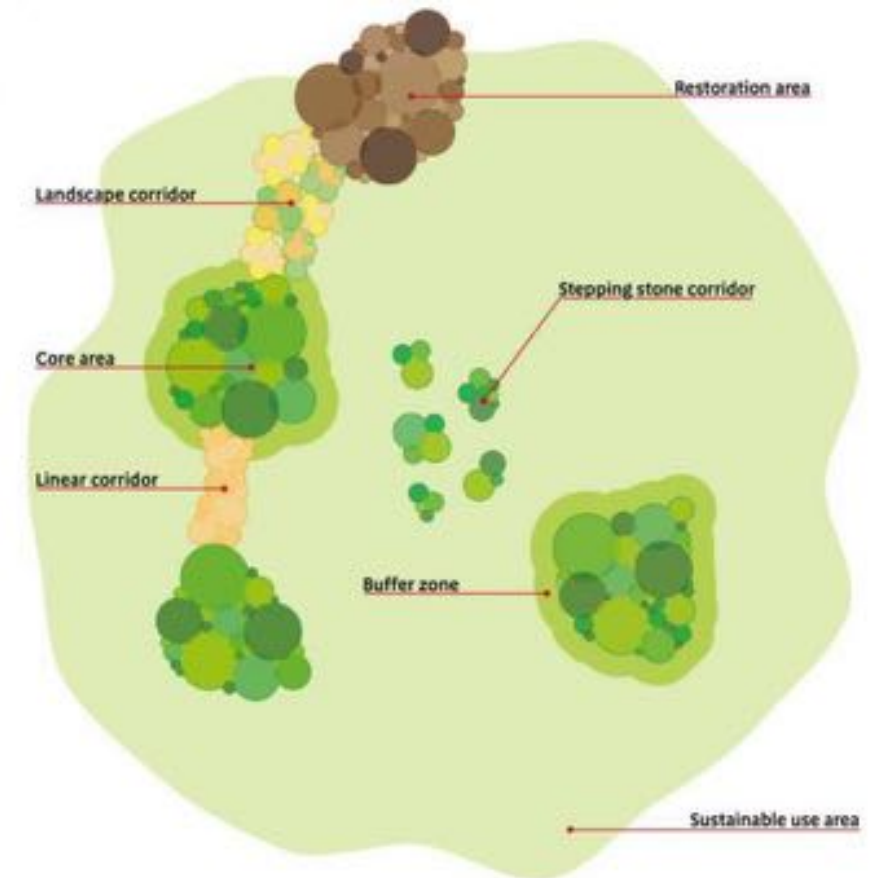


Local Nature Recovery Strategies

- Locally developed, spatial strategies for nature working within a national framework.
- Identify opportunities and priorities for enhancing the natural environment
- Inform and underpin the national Nature Recovery Network (NRN)
- Can be used to target net gain delivery

Conservation Covenants

- Legally binding private voluntary agreements between landowners & responsible bodies
- Can be used as alternative to planning obligations to secure BNG outcomes



Mechanisms for Biodiversity Net Gain Delivery



Onsite (units)

Potentially in full or combination



Delivered via habitat creation/enhancement via soft estate/green infrastructure/landscaping

Offsite (units)



Delivered through new habitat creation/enhancement on land holdings or via habitat banks

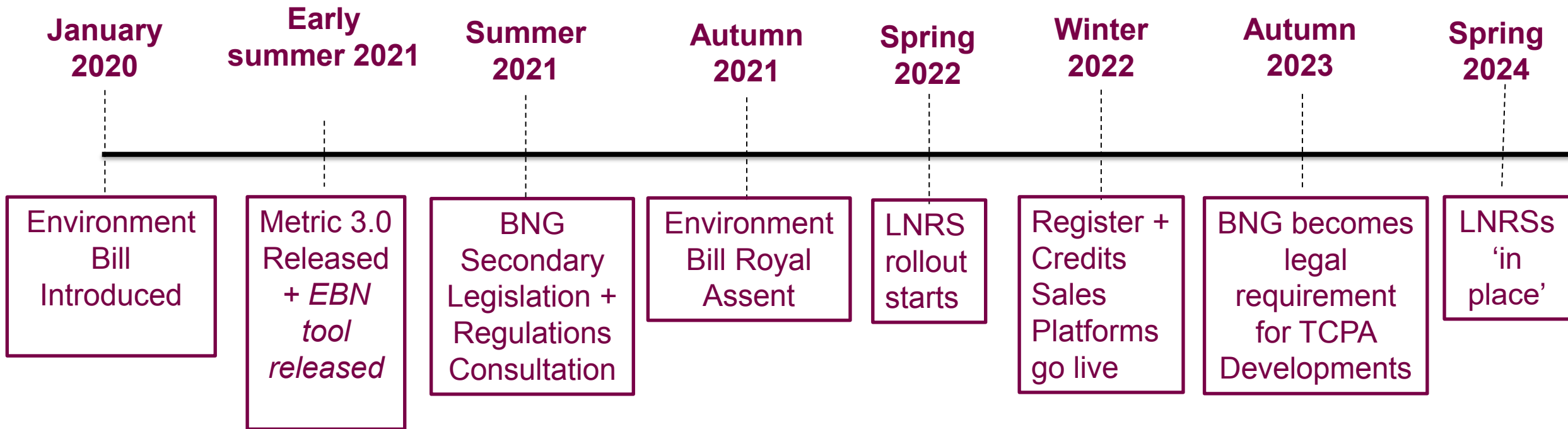
Statutory Credits (2023 onwards)

Only if units not available



Delivered through landscape-scale strategic habitat creation delivering nature-based solutions

Mandatory BNG - Indicative Timetable*

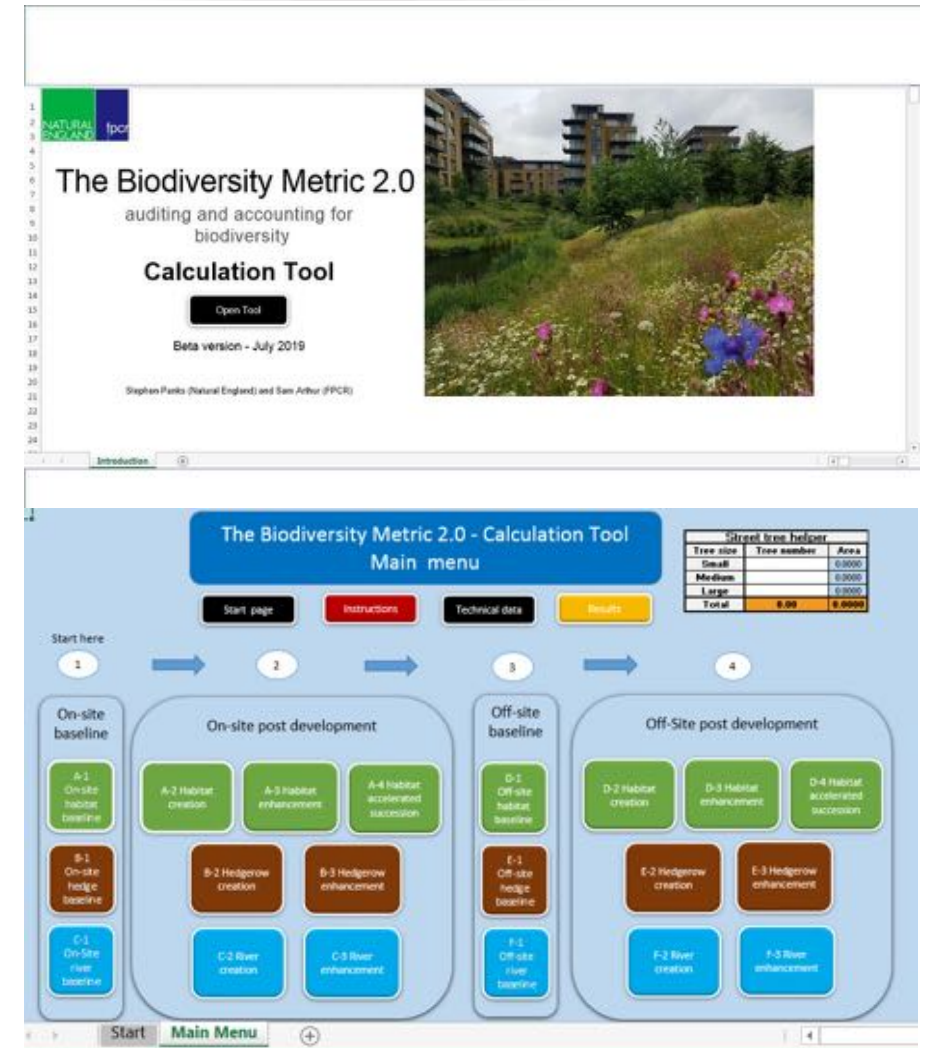


* All dates subject to potential change

Biodiversity Metric 3.0



- The successor to the beta Biodiversity Metric 2.0 – to be released summer '21
- Uses habitat features as a 'proxy' measure
- Translates into biodiversity units
- All intertidal and terrestrial habitat features
- Area and linear habitat types
- Calculations based upon:
 - Habitat size
 - Habitat condition
 - Habitat distinctiveness
 - Spatial location
- GIS data import facility



The Importance of a Metric



Fundamental to net gain

Net gain is an approach to development, and/or land management, that leaves the natural environment in a measurably better state than beforehand.

The metric:

- Calculates baseline + forecast outcome
- Provides confidence
- Ensures consistency of approach

Needs to be:

- Simple yet sound



Metric Applications

NATURAL
ENGLAND



BNG and Blue/Green Infrastructure



Q Can biodiversity net gain be delivered through blue/green infrastructure?

A Yes - onsite and offsite

Q Can parks and greenspaces be used to deliver biodiversity net gain?

A Yes – will need to put on national net gain register

Q Can road verges and other linear blue/green infrastructure features be used to deliver biodiversity net gain?

A Yes – will need to put on national net gain register

Q Can net gain be applied to small development sites?

A Yes - there is a specific Small Sites Metric being tested



BNG Key Considerations



- **LPA role is key**
- **Net gain opportunities** now e.g. embed into local plans/SPDs
- Refer to **guidance/standards** – CIRIA/CIEEM/IEMA, BS8683* or Government Advice
- Agree and map your **local priorities** in conjunction with Local Nature Partnerships, eNGOs etc e.g. LNRS, GI strategy, biodiversity opportunity areas
- Consider **links to other plans and strategies** e.g. Health & Well Being
- Consider you **own land holdings** and raise awareness amongst **local landowners**
- Gain familiarity with the **biodiversity metric 3.0**
- Establish your **reporting/monitoring requirements**



* to be published July 2021

Beyond Biodiversity Net Gain



- 25 YEP commitment to go beyond biodiversity net gain to environmental net gain
- **Environmental Benefits from Nature Tool (EBNT)** – available soon
 - Compliments biodiversity metric 3.0
 - Illustrates change across 18 different ecosystem services e.g. pollination, carbon storage etc
 - In not part of the future mandatory BNG requirement



Thanks



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Recovering Nature in Greater Manchester

Krista Patrick
Natural Capital Coordinator
GMCA

@GMGreenCity #GMGreenCity



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Optimise Sustainability



Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.



Carbon
capture

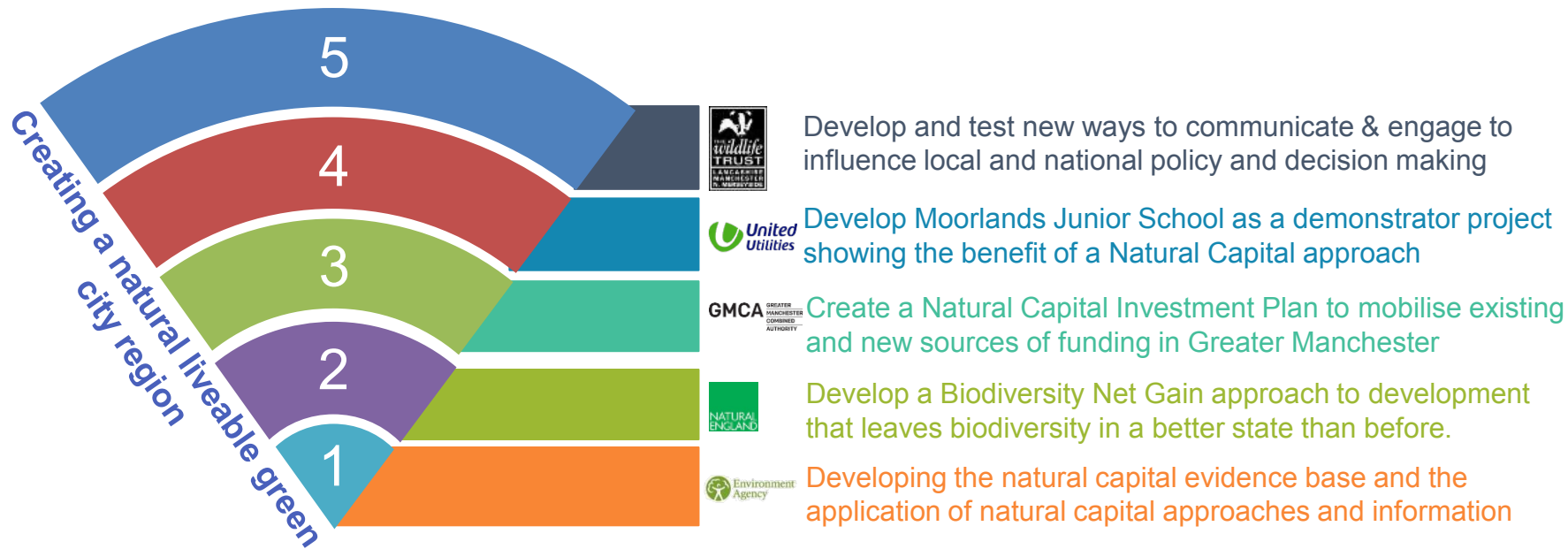
Flood risk
management

Recreational
space

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Testing a Natural Capital Approach

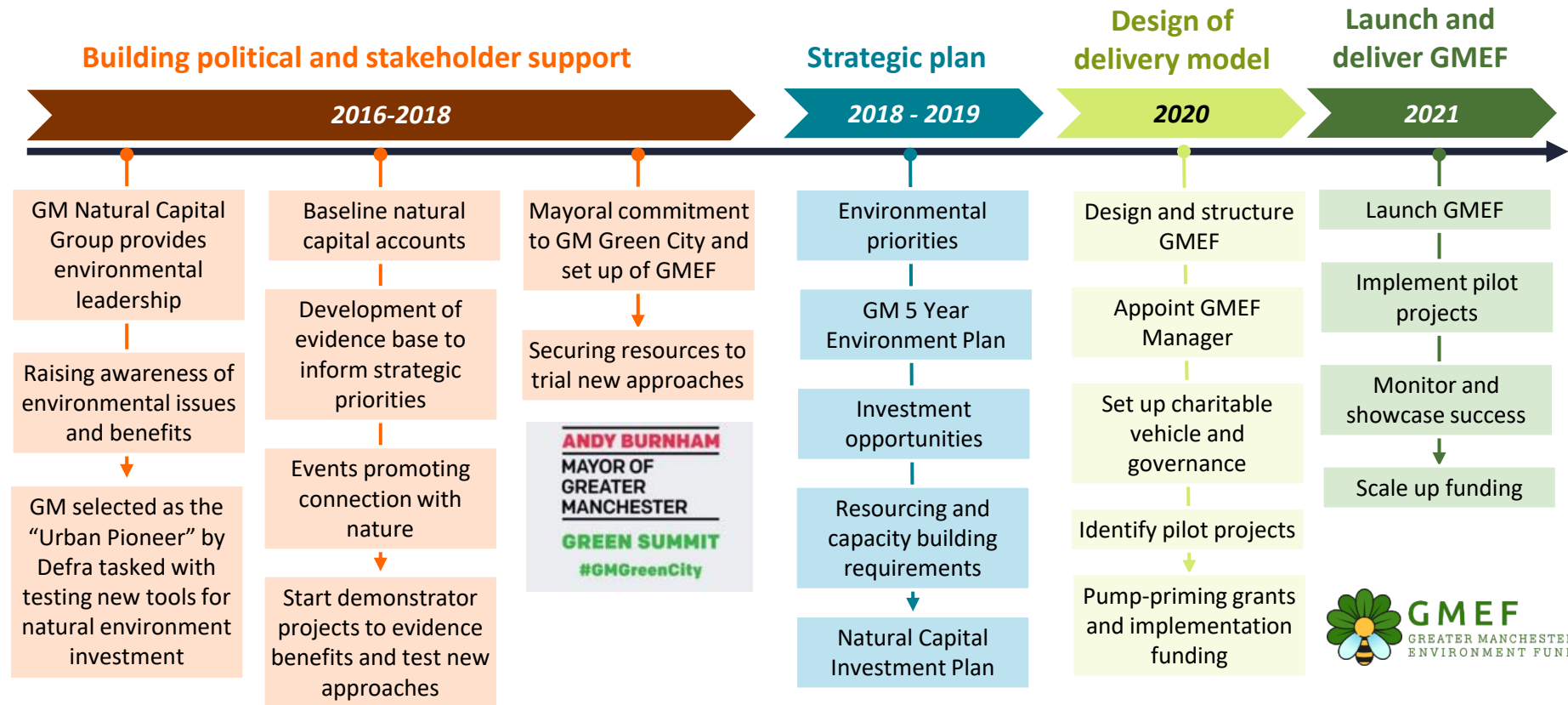
A programme to test new tools and methods for investing in and managing the natural environment.



URBAN PIONEER

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The Natural Capital Journey



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Developing the Evidence Base

£1bn - total annual benefit



£372m



£264m



£56m



£74m



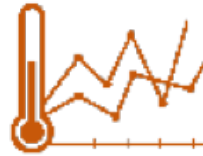
£3m



£44m



£38m



£5m



£3m

£9bn – total value of avoided healthcare costs (over 60 yrs)



Preventing **370** hospital admissions, avoiding **1,200** life year's lost



Approx. **44,000** buildings receive noise mitigation



135,000 people meet their physical activity guidelines, giving over **4,600** QALYs



Greater Manchester's Environmental Ambitions



GM Environment Plan

“Protect, maintain and enhance, and take steps to achieve environmental net gain”

Places for Everyone

“Achieving a measurable net gain in biodiversity of no less than 10%”

Local Plans

National deadline for all Local Planning Authorities to have a Local Plan in place by December 2023.

Strategic Direction

Priority 1:
Managing our land sustainably

Priority 2:
Managing our water and its environment sustainably

Priority 3:
Achieving a net gain in biodiversity for new development

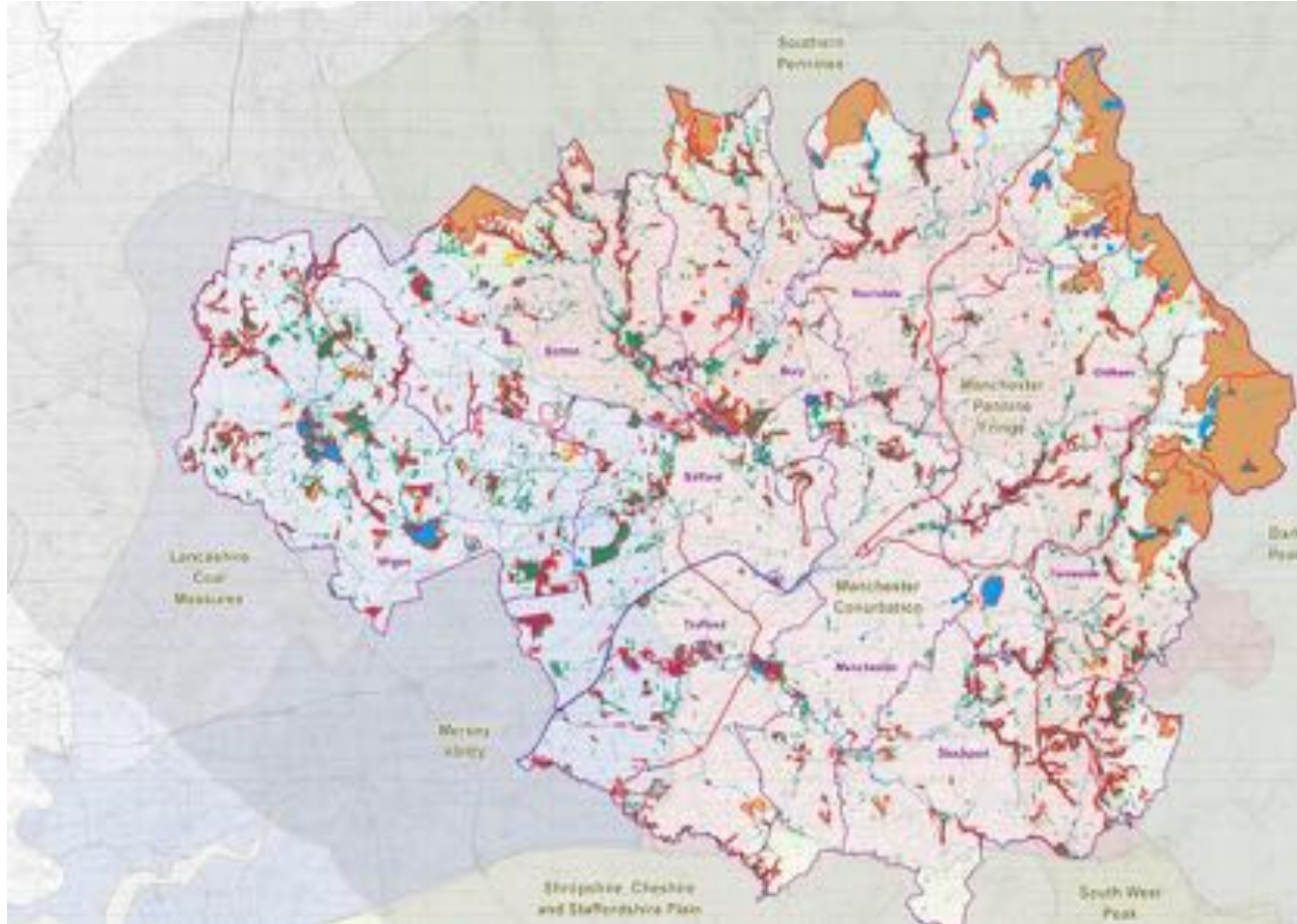
Priority 4:
Increasing investment into our natural environment

Priority 5:
Increasing our engagement with our natural environment



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Managing our Land Sustainably



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Managing our Water and its Environment

Integrated Water Management

Improved water quality

Reduced flood risk

Enhanced biodiversity

Natural Capital & Catchment Based Approach

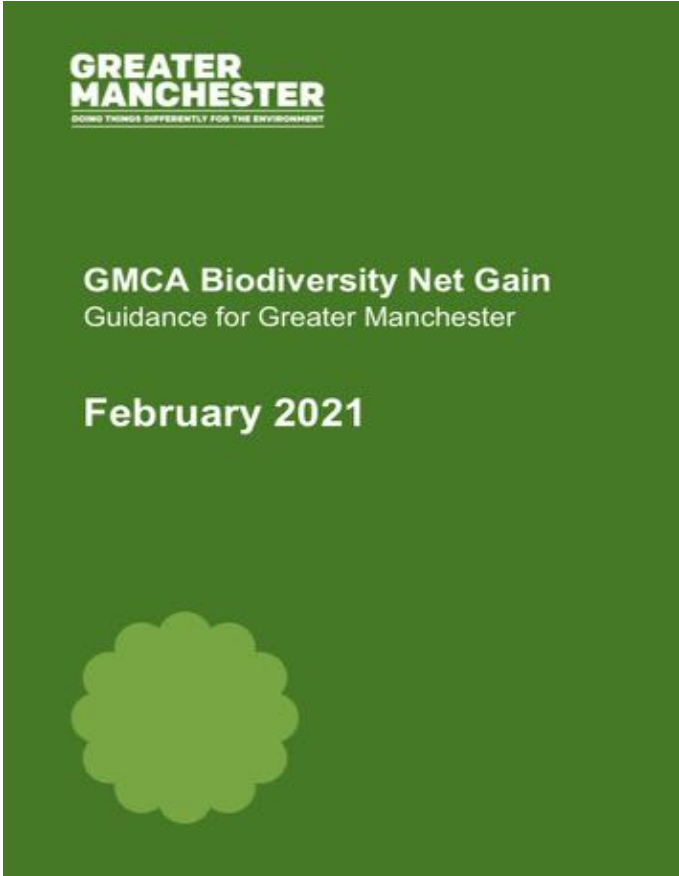
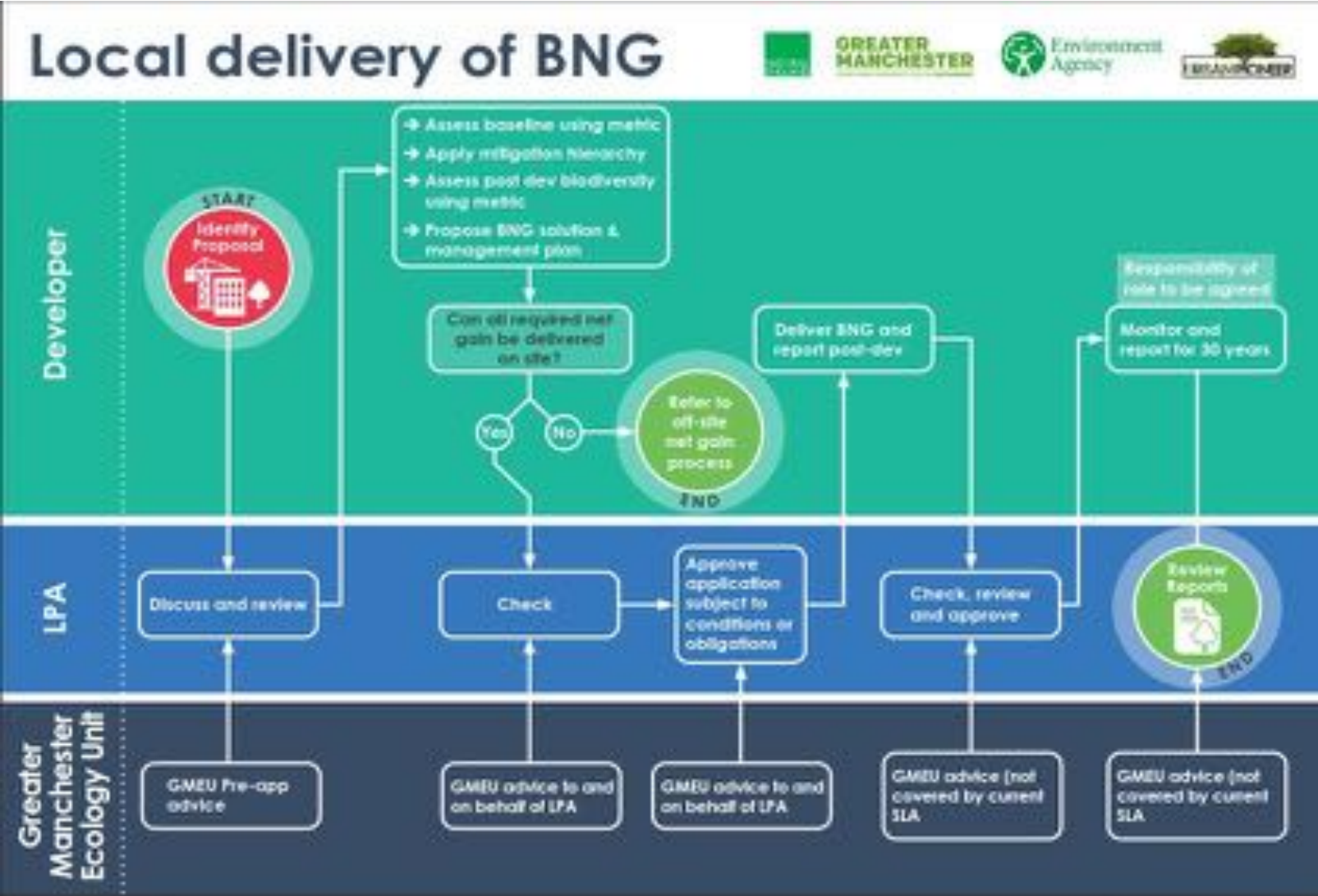


NATURAL
OUR WATER. OUR FUTURE
COURSE



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Achieving a Net Gain in Biodiversity




Increasing Investment into our Natural Environment

Opportunity for a Habitat Bank Facility



Increase access to financing and unlock co-funding for projects with multiple outcomes e.g. flood defence, to accelerate the Nature Recovery Network




Streamline development in GM by developing habitat banks, providing developers with high quality “off-the-shelf” offsite BNG



Set high standards to deliver genuine ecological recovery at scale in places where it is most needed



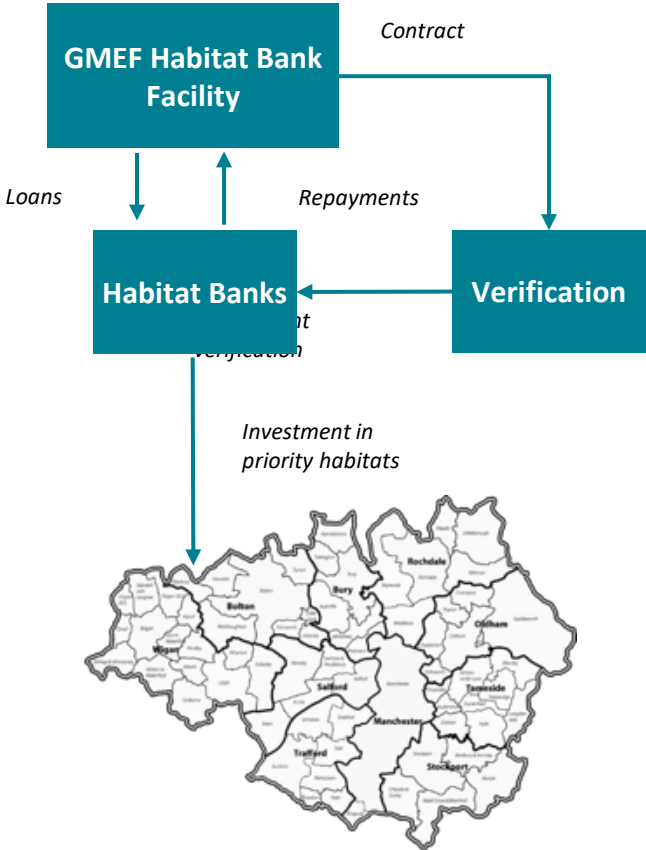
Reduce development and verification costs by centralising these across habitat projects in GM



Diversify local NGO income sources thus building delivery capacity and financial sustainability in GM



Support GM’s position as the BNG pioneer region Demonstrating how to effectively balance economic and environmental objectives



GM market opportunity analysis

Salford	Whole GM Region
<p>Identified as the clear leader in BNG development, on track to implement ahead of national policy by early-mid 2021.</p> <p>Investment opportunity</p> <p>>£300k annual income for offsite BNG, attracting >£1m investment to the area</p>	<p>BNG proof of concept pilot funding is urgently required, to provide policy development and regional learnings to scale up BNG across GM.</p> <p>£5m-£7m annual offsite BNG income reflecting a sizeable habitat bank investment opportunity</p>



Local Authority Nature-based Solutions Guide – IGNITION project

Available May, with webinars in Summer

The IGNITION project will be producing a **finance-focused** guide that enhances **investor confidence** regarding public sector funding of Nature-based Solutions (NBS).

The guide will highlight the ways in which Local Authorities can **innovate** their operations to deliver on **Climate Emergency pledges** and provide **resilient communities**. It will include:

- GM-specific spatial data
- GM citizen perceptions on nature and our parks
- Key environmental, social and economic evidence for nature-based solutions
- Innovative funding mechanisms and business models
- How NBS can address LA priorities
- How to overcome some barriers for NBS



Increasing Engagement in the Natural Environment



England | Local News | Regions | **Manchester**

RHS Bridgewater: Europe's 'biggest horticultural project' opens

18 May



Coronavirus pandemic



CORONAVIRUS: ADVICE AND SUPPORT
FOR EVERYONE

Greater
Manchester
Health and
Social Care
Partnership

GMCA GREATER
MANCHESTER
COMBINED
AUTHORITY **NHS**
in Greater Manchester

**SOCIAL PRESCRIBING
SET TO GROW
BETTER MENTAL
HEALTH ACROSS
GREATER
MANCHESTER**



**GREATER
MANCHESTER**
DOING THINGS DIFFERENTLY

Taking Action, Today, Tomorrow and Together



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GREATER MANCHESTER

DOING THINGS DIFFERENTLY

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<https://naturegreatermanchester.co.uk/>

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Park Living

UrbanCivic plc



Master Developer- Business Model

Moving from wholesale to retail



Getting on with things

But it's more than just homes



33,500
consented and
submitted homes



53km
of roads



8m ft²
employment floor
space



18
Primary Schools



5
secondary schools



2,000
acres of open space



Planning - Large sites are different

An increasing level of design detail via a tiered approach



Embedding landscape quality and functionality

Design codes and clear statements of intent



Design codes a key part of each Key Phase

Sustainability is fundamental to operating at scale

Even small decisions have a big impact



136,608

trees planted (72,000 in 2019)



154

hectares of land remediated

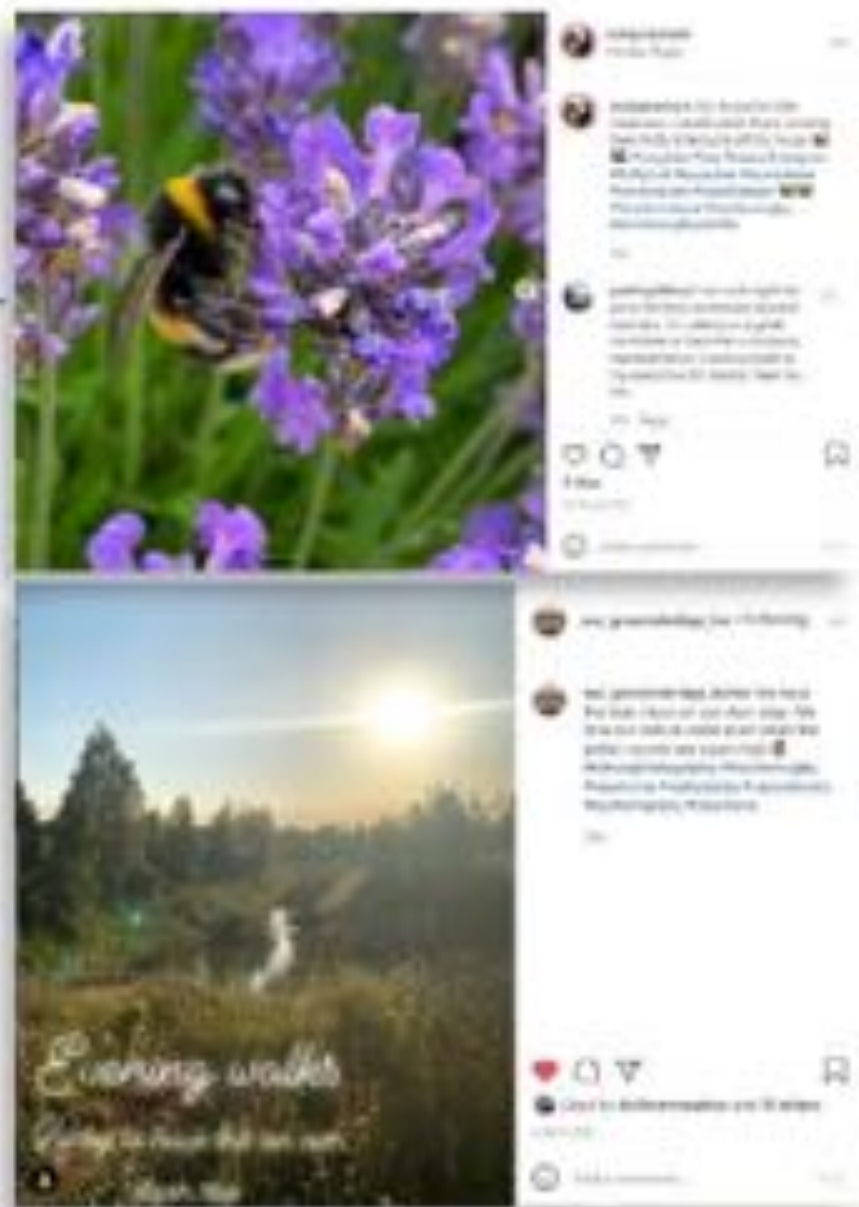


28,340

metres of cycle lanes delivered

What have we learned from lock down?

Green spaces are essential



Putting biodiversity at the heart of our design

Evolving our own tool kit

4. Biodiversity Stewardship

MANAGEMENT

- Ongoing management
- Subscribing
- Funding
- Monitoring

EDUCATION

- Welcome Parks and nature guides
- Wayfinding and interpretation
- Community events and activities
- Work with schools and local groups
- Community improvement and ownership

3. Biodiversity Guardianship

MITIGATION

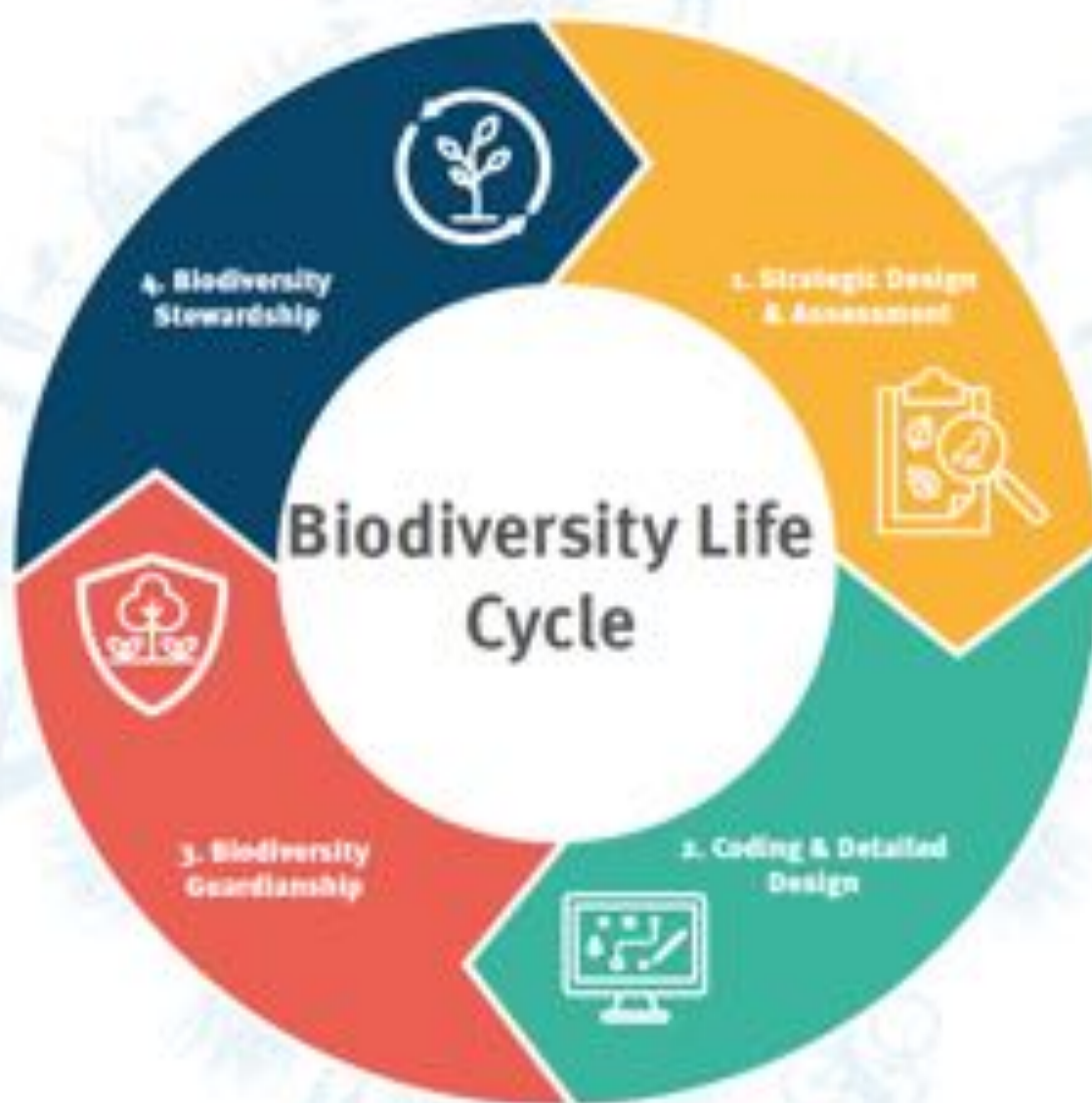
- Avoid
- Minimize
- Compensate

COMPENSATION

- Compensation
- Creation
- Enhancement
- Replacement

MAINTENANCE

- Implementation of new habitats and landscape
- Maintenance guidelines developed



1. Strategic Design & Assessment

IDENTIFY RELEVANT HABITATS & SPECIES

- Local CL strategy and Nature Recovery assessments
- Confirmation of local priority species and habitats
- Strategic design and vision
- Opportunities and Constraints

ASSESSMENT

- Biodiversity audit
- Site surveys
- Existing challenges
- Potential impacts

2. Coding & Detailed Design

STRONG ACTION

- Outline planning
- Environmental Impact Assessment
- Biodiversity strategy / CL strategy

STRONG ACTION

- Key plans
- Design Code input to Key Plans
- Frameworks
- Detailed Design input to all
- Exempted Works Applications
- Landscape Design SMDs

So what does this mean in practice?

Landscape first

NODES

Key Nodes

- Country Parks
- Informal Parks
- Formal Parks
- Pocket Parks
- Sports Pitches
- Allotments
- Orchards
- Landscape Buffers

CONNECTIONS

Key Connections

- Grey Infrastructure
- Green Infrastructure
- Blue Infrastructure

URBAN ELEMENTS

Key Urban Elements

- Urban Squares
- Green / Brown Roofs
- Green Walls
- Vertical Planting
- Green Links
- Verges



An integrated approach

Greater than the sum of its parts



Park living

Everyone and everything can benefit



NODES

- | | |
|---|---|
|  Country Parks |  Sports Pitches |
|  Informal Parks |  Allotments |
|  Formal Parks |  Orchards |
|  Pocket Parks |  Landscape Buffers |

CONNECTIONS

- | |
|--|
|  Grey Infrastructure |
|  Green Infrastructure |
|  Blue Infrastructure |

URBAN ELEMENTS

- | | |
|---|--|
|  Urban Square |  Vertical Planting |
|  Green / Brown Roofs |  Green Links |
|  Green Walls |  Verges |



School Walks



Habitat Ponds



Dollman Orchards



Wildlife Corridors



Village Ponds



Playgrounds

Education, education, education

Understanding and prioritising



Educational signage around the landscape



Welcome packs for new residents



Really Wild events and podcasts

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BNG: From Concept to Reality

Surrey Wildlife Trust
Sarah Jane Chimbwandira





Ecological Crisis

- **Over 1M species globally are threatened**
- 20 percent of countries are at risk of their ecosystems collapsing due to a decline in biodiversity *Source: Swiss Re*
- State of Surrey's Nature shows a third of species lost or in decline



Economic Crisis

- **Green recovery (3.5 x more invested in harmful practices than beneficial)**
- Environmental risks are the greatest systemic risks to our global economy *Source: WEF*
- developing nature based solutions
- Supporting green economic recovery through skills and jobs, delivering BNG



Health & Connection Crisis

- **People need access to healthy nature in order to thrive**
- Surrey only 23% of county meets ANGS standard
- Young people and BAME communities are particularly affected
- 38% of adults said spending time in nature was the moment they looked forward to most each day during lockdown *Source: YouGov*



Climate Crisis

- **Impacts of climate change are already being experienced**
- Nature based solutions are a key part of both adaptation and mitigation strategies

Surrey's Natural Capital Approach



Sustainable management of natural capital assets; value, amount, use and Return On Investment



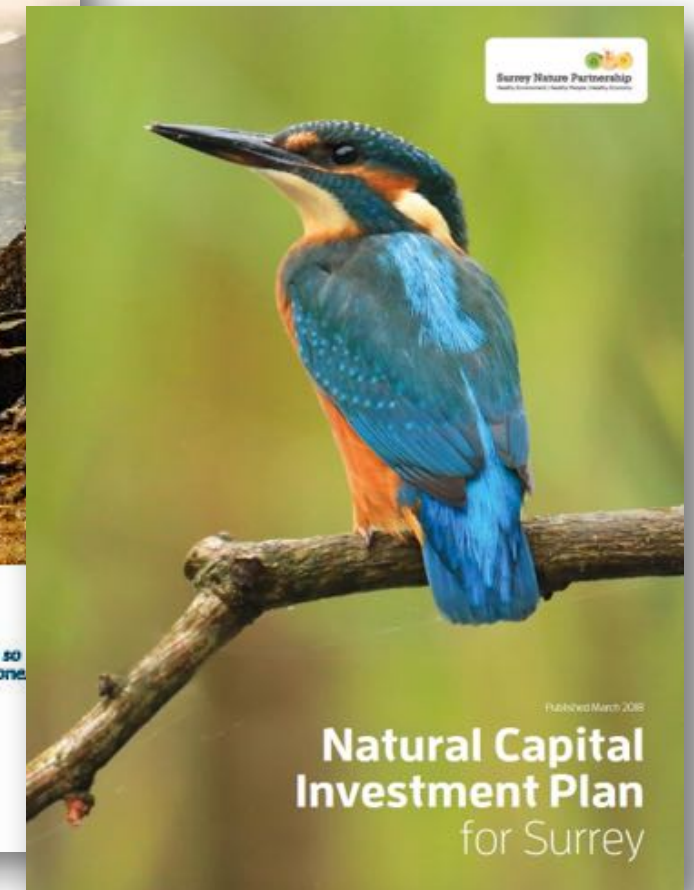
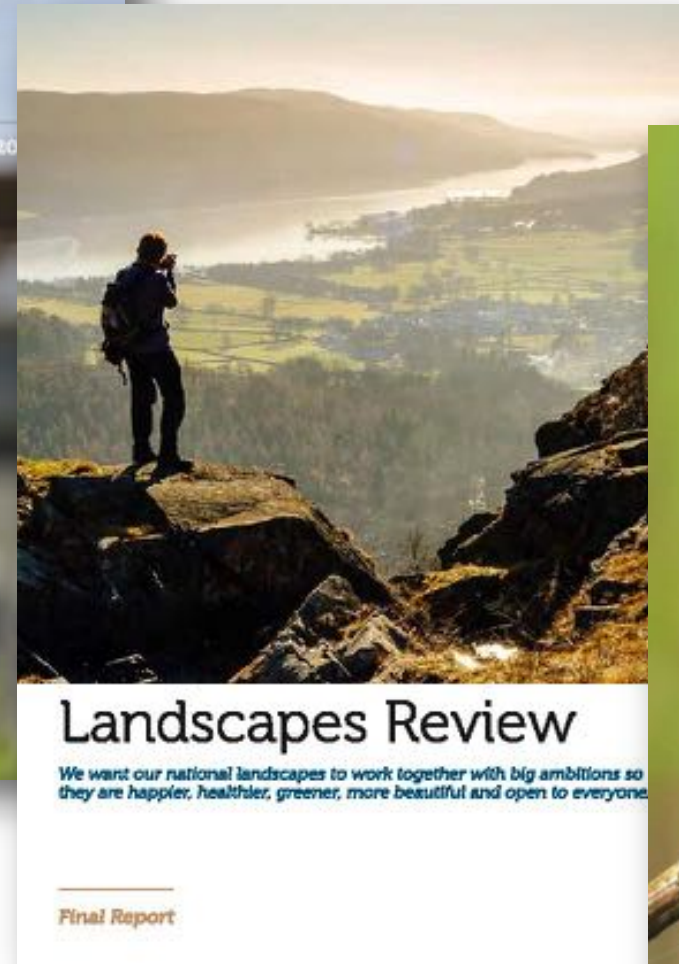
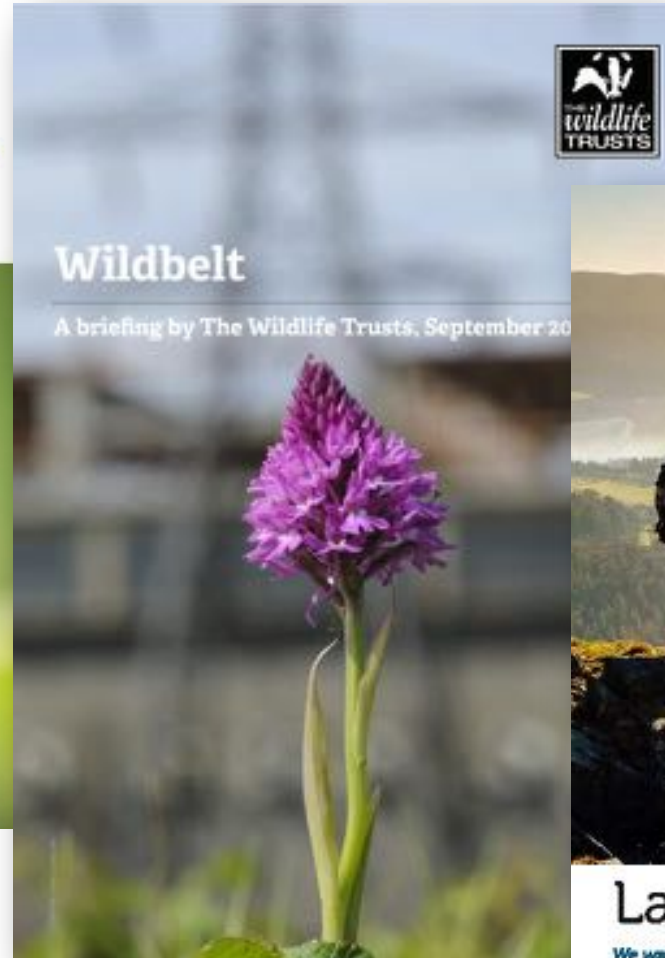
Nature based solutions to 4 crises:
Ecological, People, Climate & Economic





Realising nature's value:
The Final Report of the Ecosystem
Markets Task Force

March 2013



Delivering the Environment Bill,
ambitiously & together

“Every space in Britain must be
used to help wildlife.”

Sir David Attenborough

IUCN Global Standard for **Nature-based Solutions (NbS)** – a framework for delivery



Nature based solutions:

1. Effectively address Societal Challenges
2. Design is informed by Scale
- 3. Deliver Biodiversity Net Gain & ecosystem integrity**
4. Are economically viable
5. Are based on inclusive, transparent and empowering Governance
6. Equitably balance trade-offs between achieving their primary objective and delivering continued multiple benefits
7. Are managed adaptively, based on evidence
8. Are sustainable and mainstreamed



Nature-based solutions (NBS) refers to the [sustainable management](#) and use of nature for tackling socio-environmental challenges. The challenges include issues such as [climate change](#), [water security](#), [water pollution](#), [food security](#), [human health](#), and [disaster risk](#) management.

.....these solutions are "inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build [resilience](#).

Looking to the Future: Surrey's Nature Recovery Network

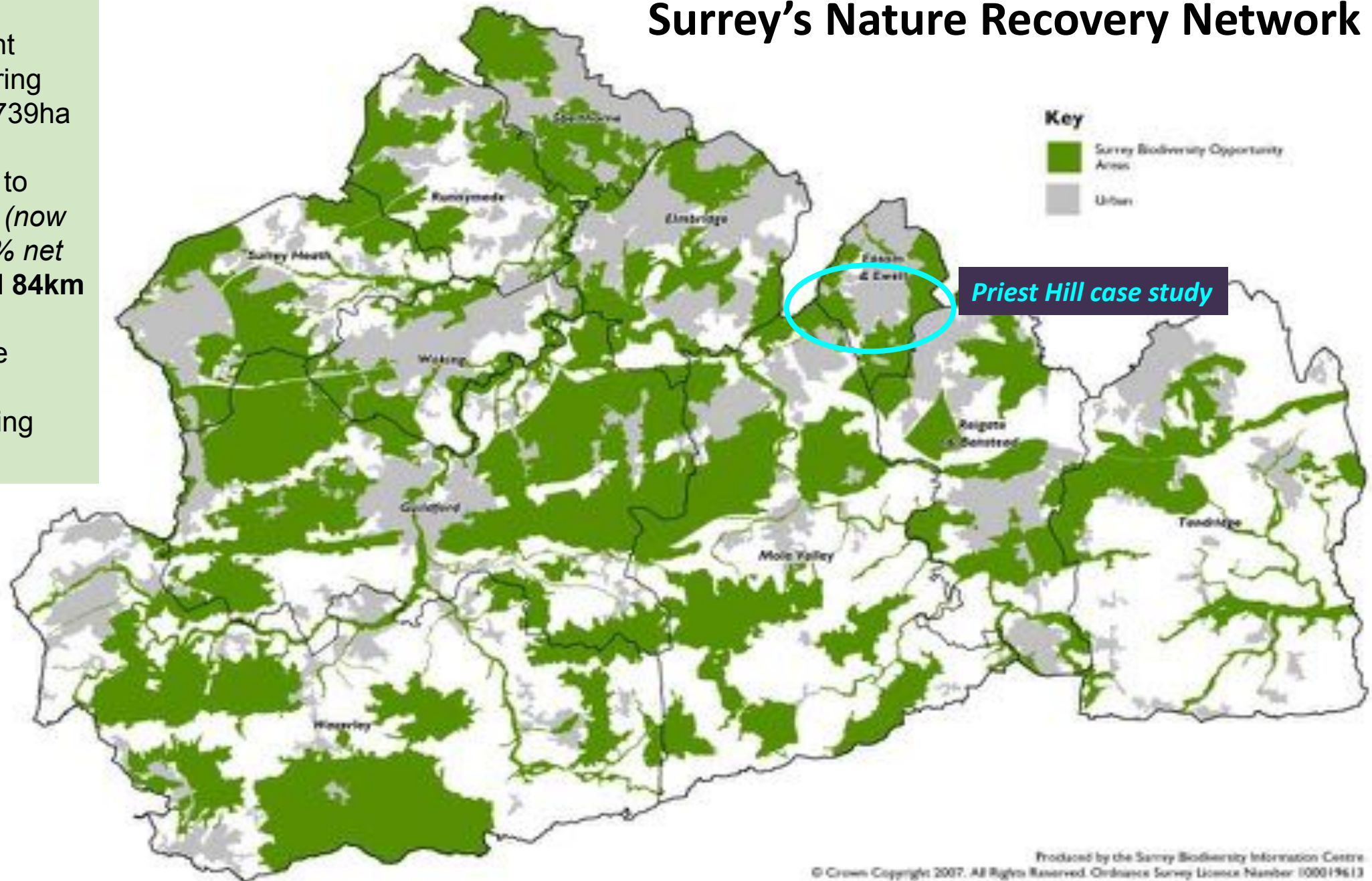
“.....more, bigger, better and more joined up.” Lawton



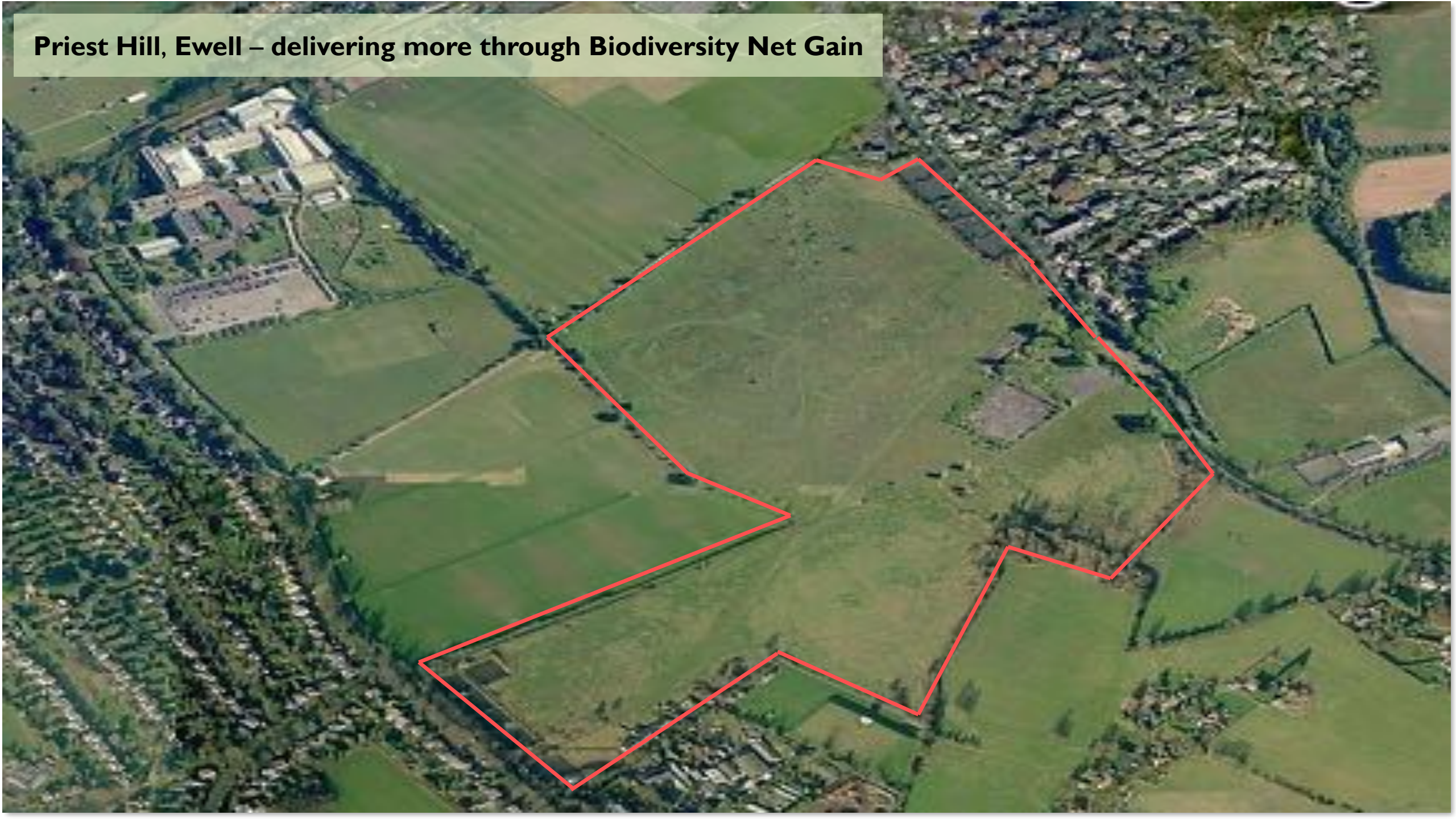
Net Gain Potential (2014 – 2019)

- Area of development requiring offsets during the 5 year period - 739ha
- Area of habitat restoration/creation to achieve *no net loss* (now aim is *minimum 20% net gain*) - 1,059ha and 84km hedgerow
- This would generate **£1.6M funding** for creating & maintaining natural assets

Surrey's Nature Recovery Network



Priest Hill, Ewell – delivering more through Biodiversity Net Gain



Priest Hill, Ewell – delivering more through Biodiversity Net Gain



site originally worth c.195 Biodiversity Units – this
has been more than doubled



Build back stronger, smarter and greener

Coast to
Capital



Accelerate and scale our pilot project to become a
leader in natural capital investment and bio-diversity
net gain



C2C Natural Capital Account eftec, 2020

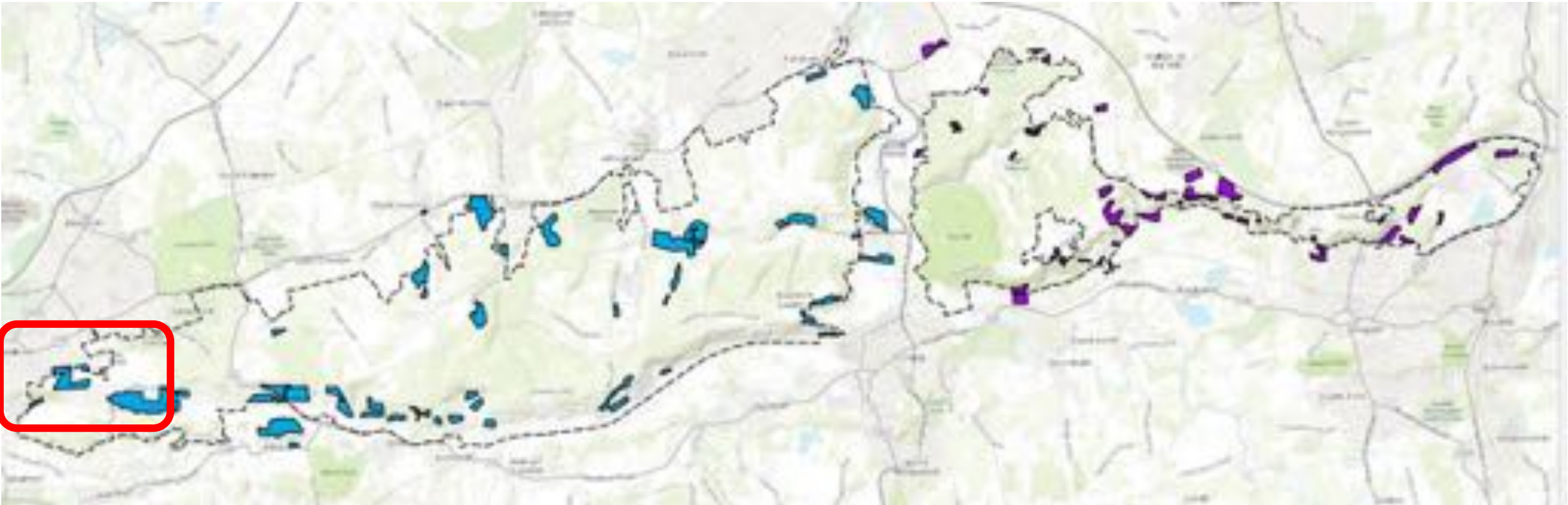
Placemaking	The value of natural capital benefits across the C2C LEP area are estimated at £792 million per year. The area's natural capital assets are valued at £22.5 bn:
Business turnover	£3.3 bn are direct benefits to businesses (e.g. agriculture, renewable energy, minerals).
Supporting health and wellbeing	Majority of benefits (approx. £19.2 bn) are to wider society, particularly through recreation and public health (physical activity and reduced air pollution) benefits.
The restoration economy	Local biodiversity investments into approx. 700ha of habitat in Holmesdale can increase biodiversity credits (under the Defra metric) by 50%, enhance benefits by £70m (PV60), which is 15x greater than the costs, and support 18 FTE jobs.
Leadership in green finance	Understand the size and distribution of these values assists in designing appropriate finance mechanisms.

Investing in natural assets to enhance and maintain benefits: an investment of £2M in this 1400ha landscape provides a biodiversity score improvement of 1,682 biodiversity units & additional benefits from natural capital of £70m over 60 years. (eftec, 2020)



Application: BNG Project Areas, North Downs

- 80+ project areas (approx. 400ha)
- Primarily creation/restoration of chalk grassland and neutral grassland
- Strategically positioned throughout North Downs area



Strategic Acquisition under BBB programme



Strategic fit

✓ Direct Land Management

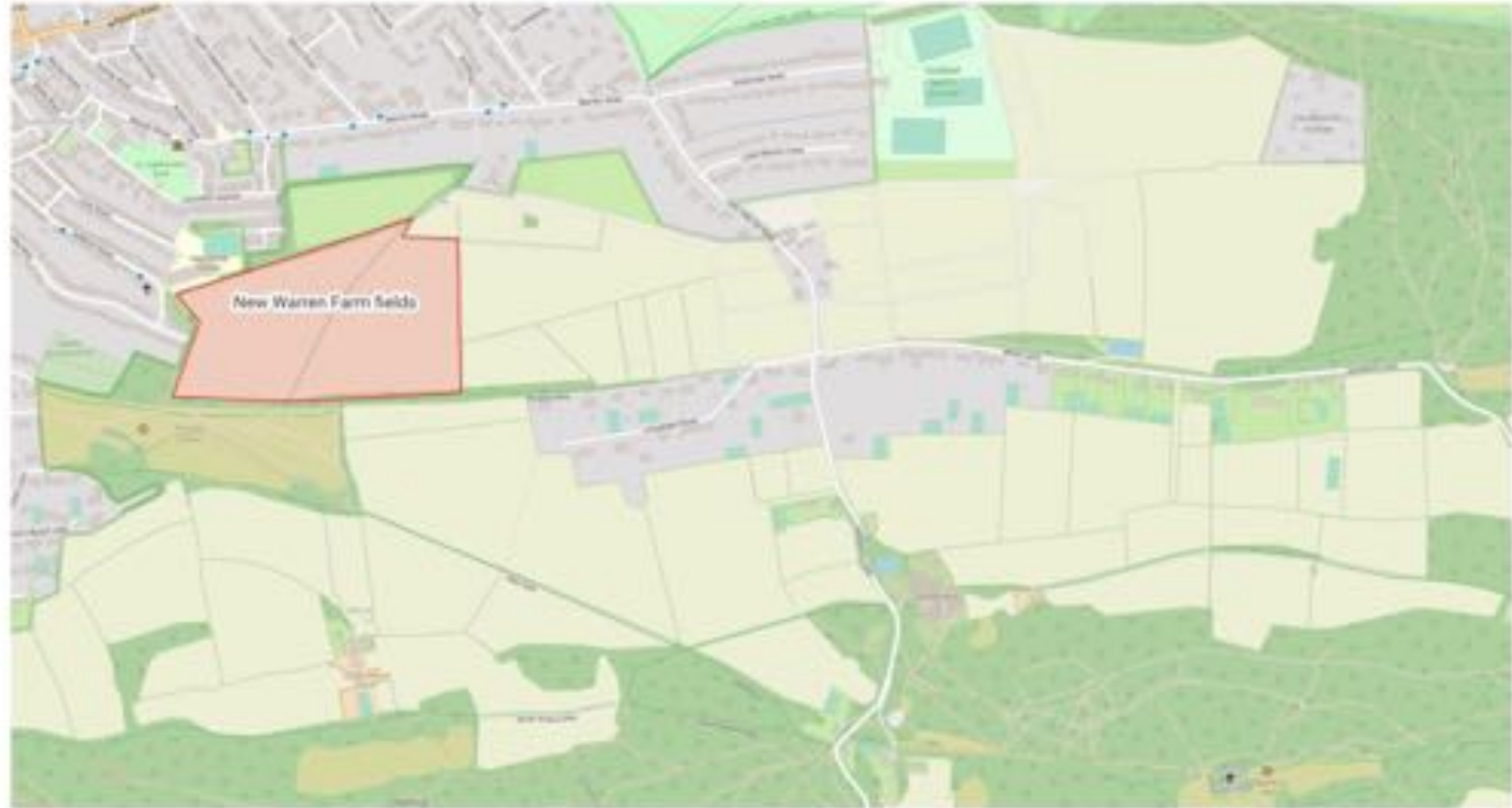
Target: 5% land directly managed by SWT by 2030 (currently approx. 3.5%)

✓ Empowering people

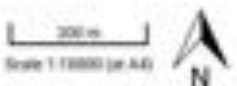
Target: 1 in 4 people taking action

✓ Indirect land management

Target: 25% partner managed land being connected and managed for nature by 2030



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Contribution to building the Nature Recovery Network



Boundary of acquisition



Existing Local Wildlife Site (SNCI)



ND02 Project 01 boundary

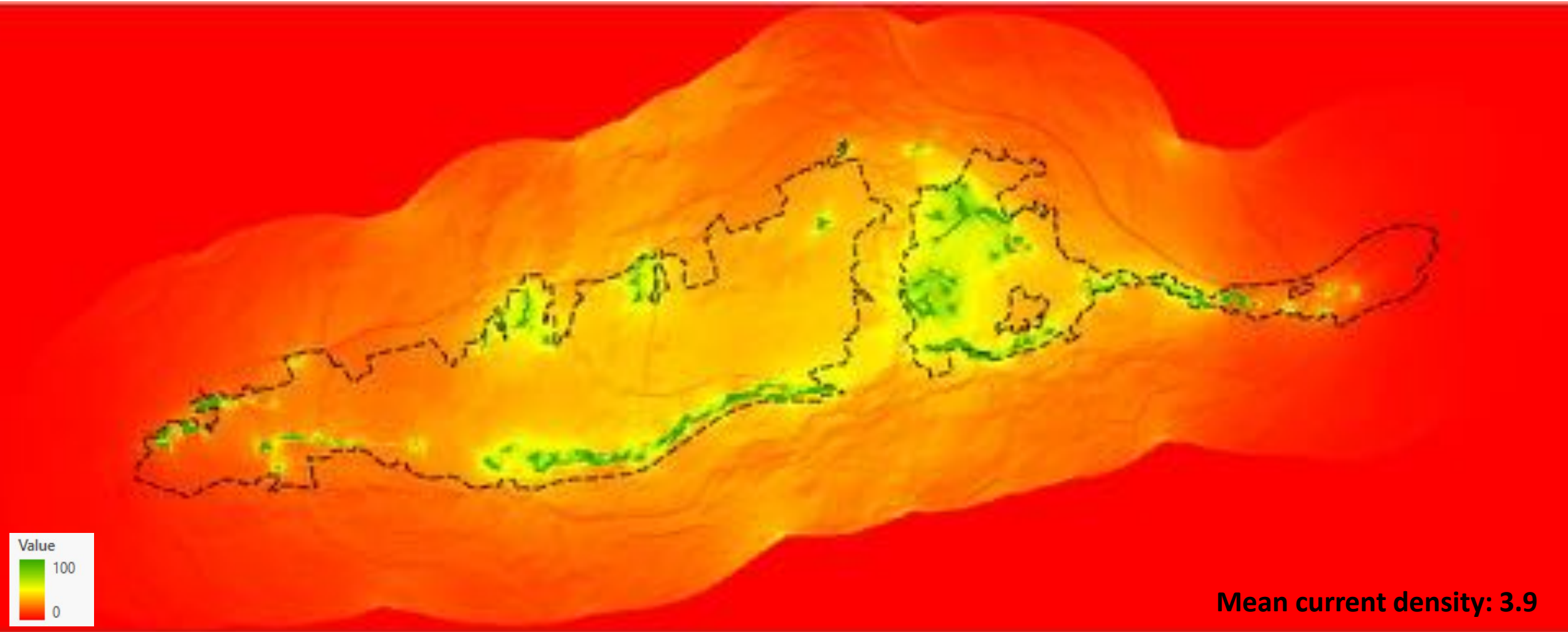
12.28 BioUnits

27.34 BioUnits
+4.12 Hedgerow Units

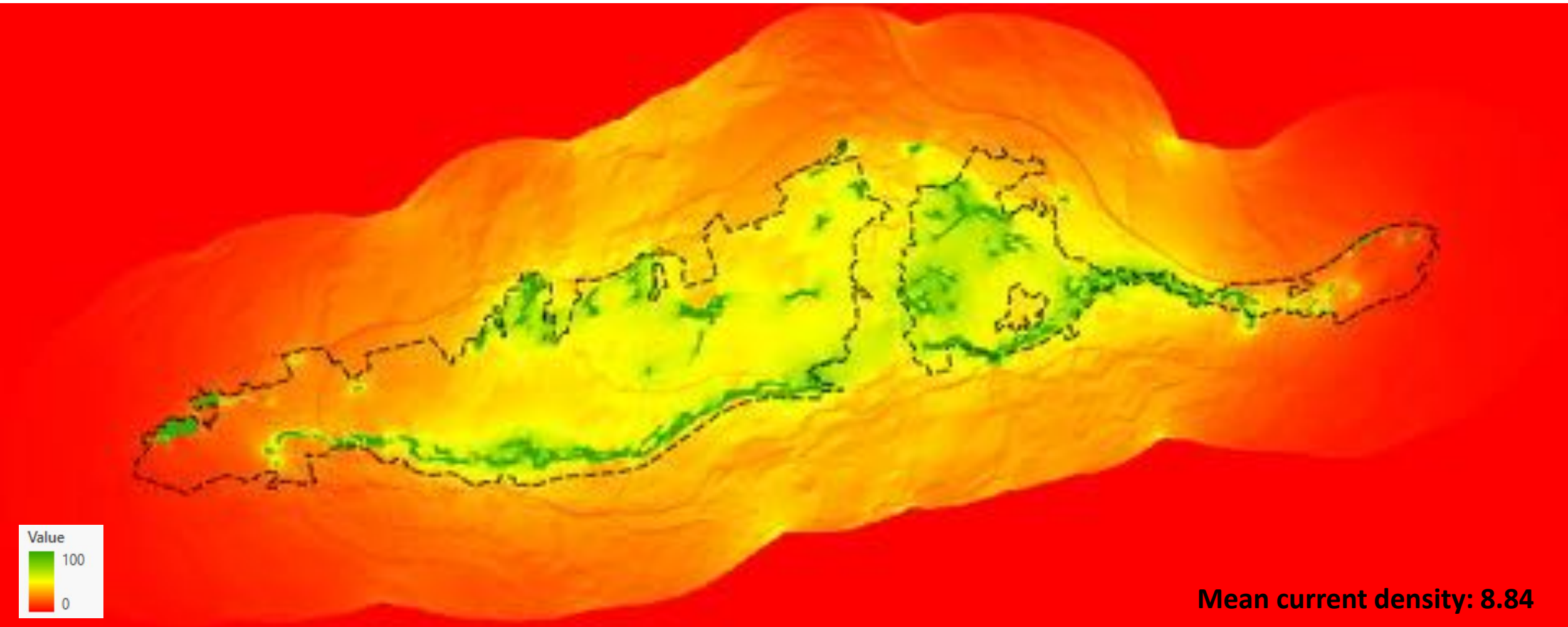
2.29 BioUnits
+hedgerow 0.14

27.34 BioUnits
identification of
BNG opportunity

North Downs 2019 – delivering a Nature Recovery Network



North Downs 2050 – delivering a Nature Recovery Network



[Surrey Development Forum](https://surreydev.co.uk)

Building growth and homes together

1.185m

Current Population

3,510

Planned homes per annum

65+

1 in 5 residents 65+

Standards Framework

(BwN 2.0)

UK's First Benchmark for
Green Infrastructure

12 Quality Standards providing a definition of high-quality green infrastructure

CORE



WELLBEING



WATER



WILDLIFE



Next Steps:

- Expanding the site register eg strategic acquisitions such as Pewley Downs, working with others such as The Land Trust
- Liaising with LPAs and landowners eg working with Adur & Worthing BC to develop a strategic BNG approach
- Training – ensuring sufficient skills available
- Baseline BNG assessments – Regenerative Surrey programme to prepare for nature based solutions & increase supply:
 - Building a collaborative community of landowners & managers across Surrey
 - Signposting help & support for landowners to deliver nature based solutions
 - Accelerating the development of our project pipeline to increase investment opportunities
- Encouraging developers to include BNG calculations at an early stage



**A healthy, well managed natural environment is
fundamental to our health, well-being and economy**



Thank you for listening

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