CIEEM Summer Conference Natural Capital in Planning

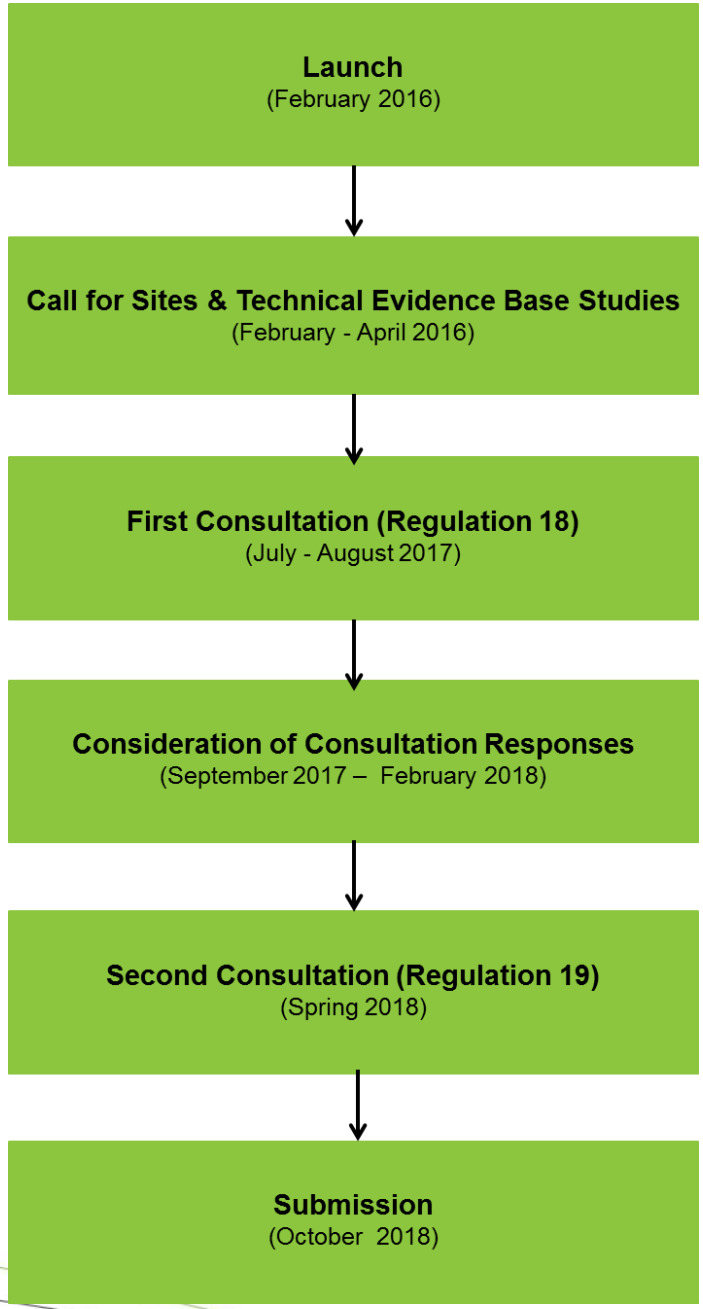
Laura Kitson – Central Bedfordshire Council

Integrating the Natural Capital approach into strategic decision making

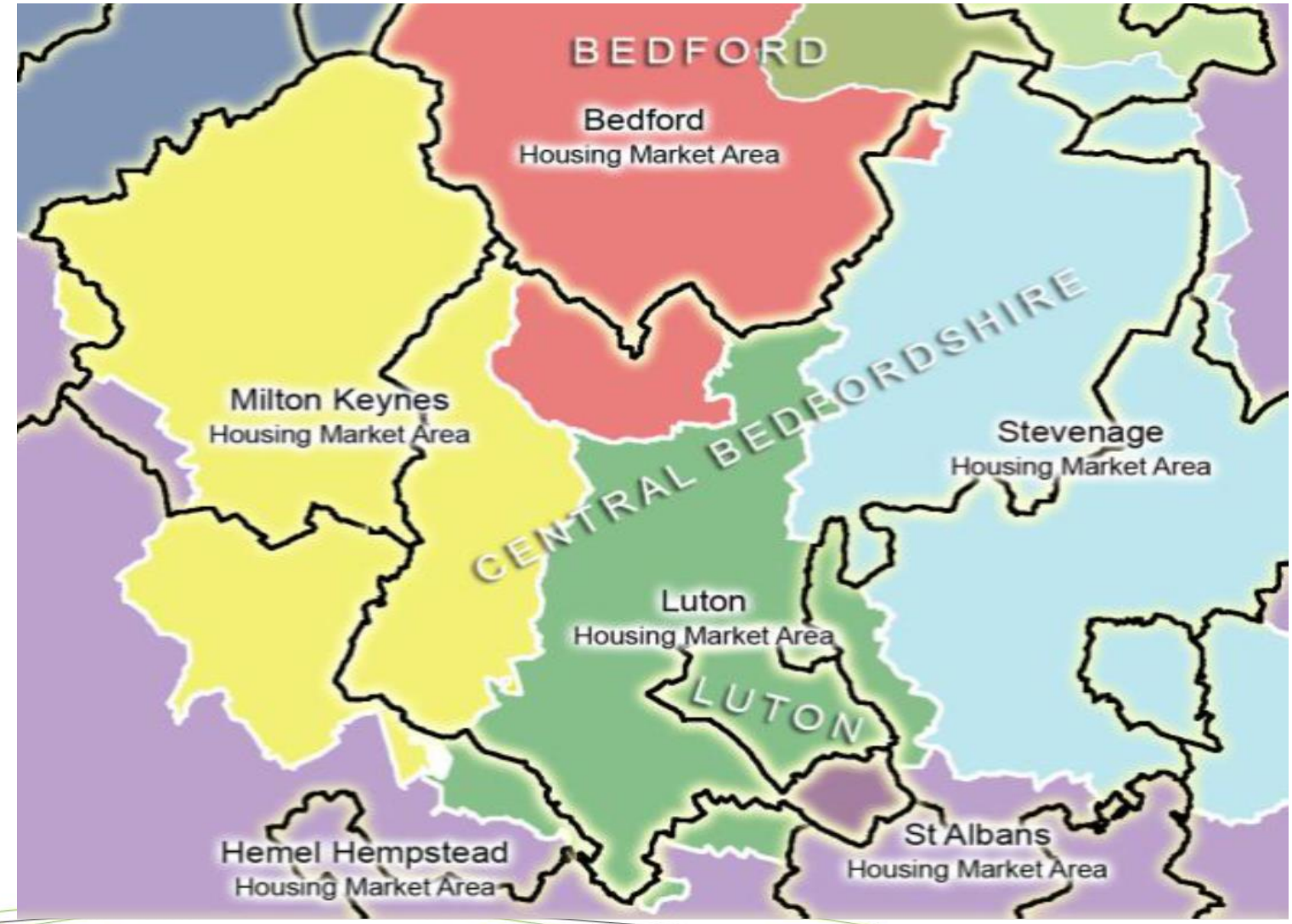
- Central Bedfordshire and our Local Plan
- How we're including Natural Capital
- The 'Natural Capital Planning Toolkit' and how we're using it
- How we've found the natural capital approach useful in communicating with planners, managers and politicians

Our new Local Plan

- How Central Bedfordshire will develop over the next 20 years
- Ensuring the growth that we need is delivered in the right place, and is of the right character and quality
- Supporting infrastructure needs identified



Central Bedfordshire

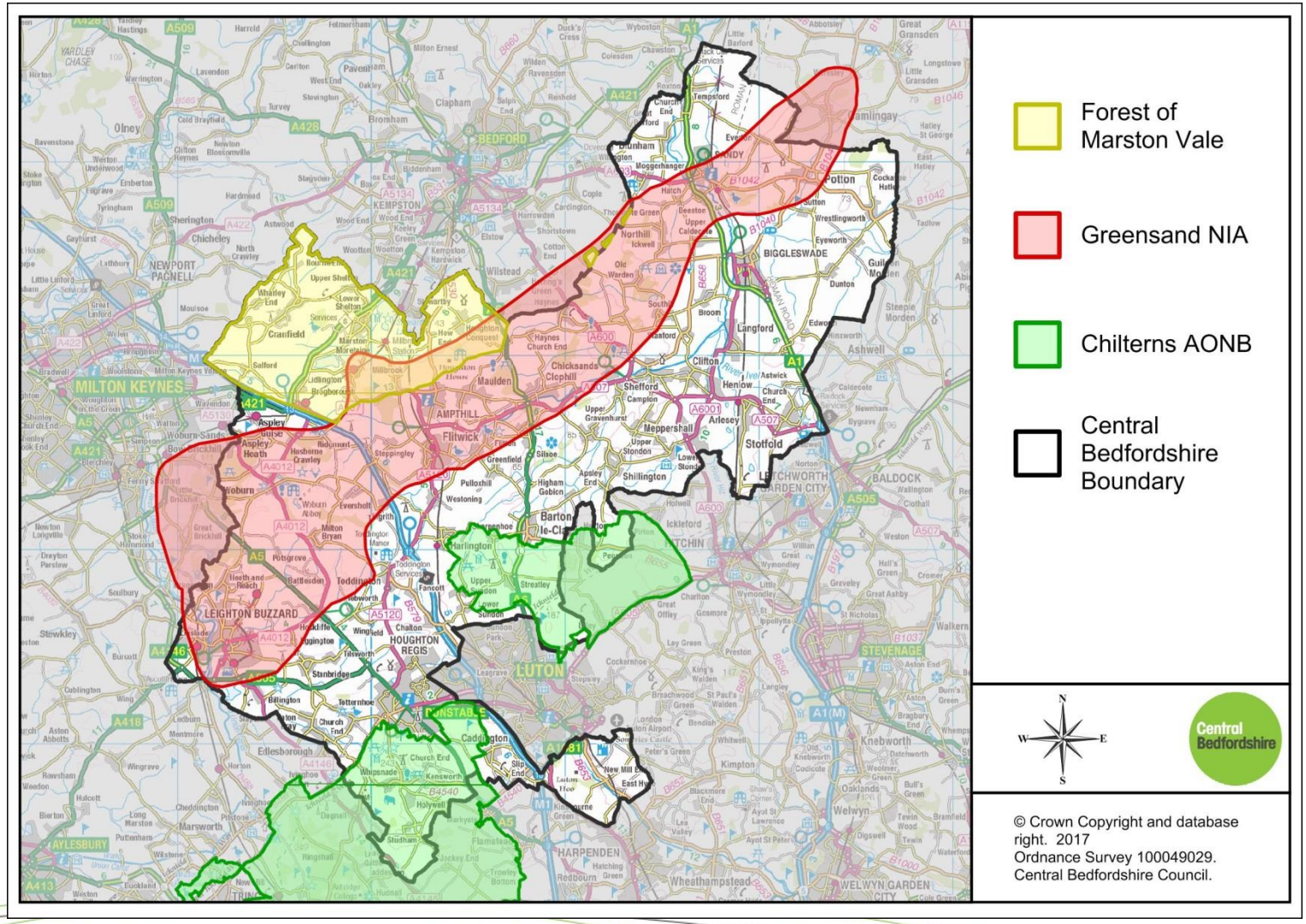


Growth pressures

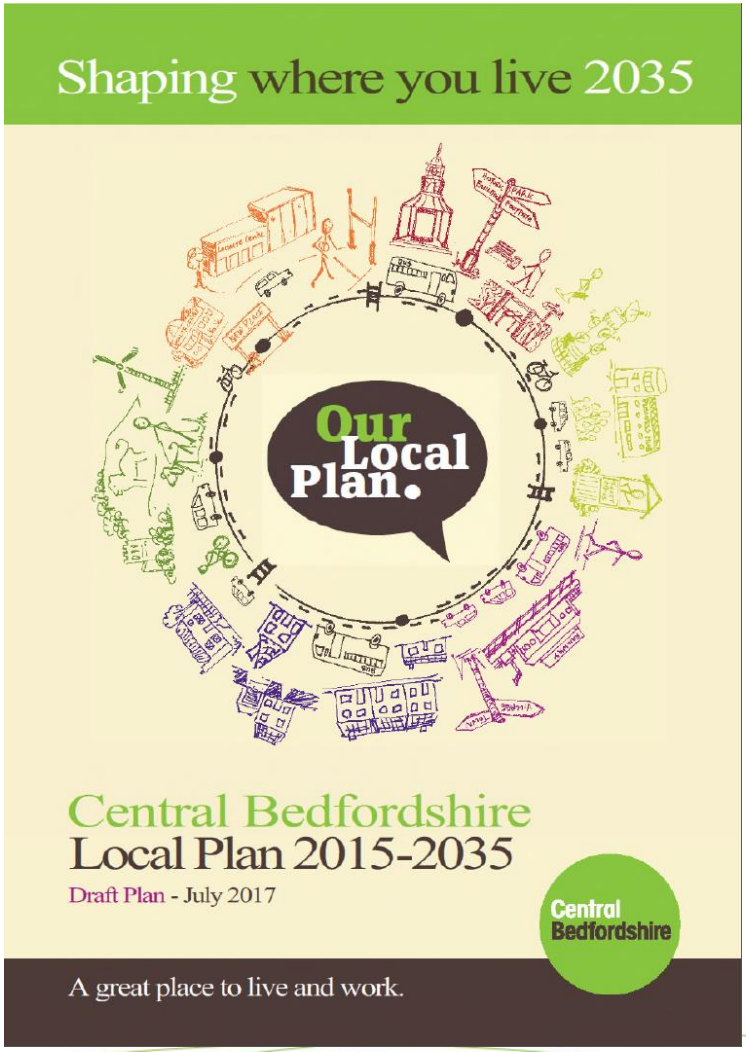
Deliver between **20,000 and 30,000 homes** close to **key transport corridors**

In addition to the 23,000 homes that already have planning permission

Natural Capital in CBC



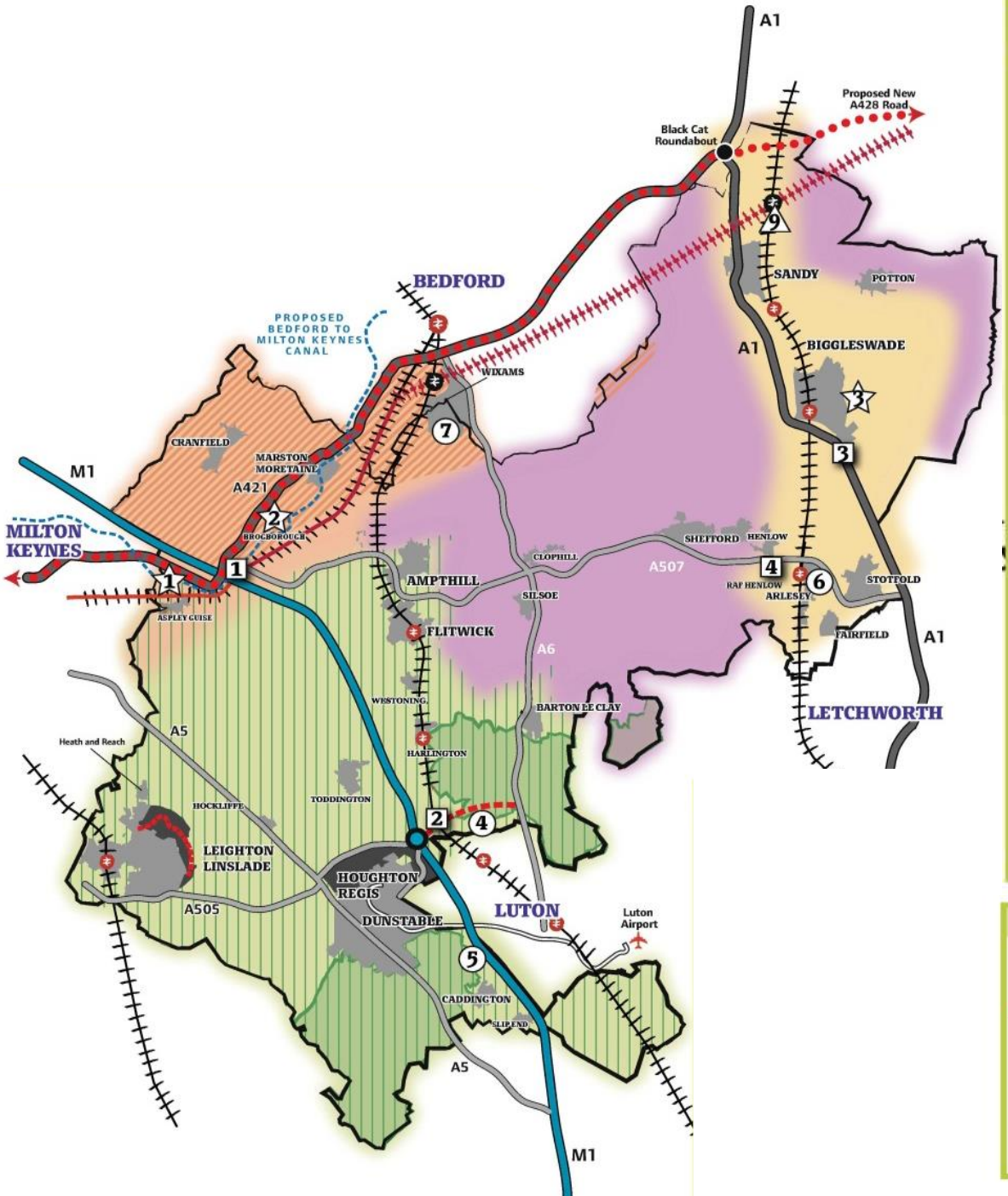
Natural Capital in the Local Plan



Contents

Natural capital and site allocation

THE LOCAL PLAN – OVERALL STRATEGY



KEY - PROPOSED DEVELOPMENT

NEW VILLAGES

- **3 villages near Aspley Guise** (around 3,000 homes & employment land)
- **4 villages in Marston Vale** (around 5,000 homes & 40ha employment land)
- **4 villages east of Biggleswade** (around 3,000 homes & 4.6ha of employment land)

TOWN EXPANSION

- **North of Luton** (around 4,000 homes & 20ha employment land)
- **West of Luton** (around 2,000 homes)
- **East of Arlesey** (around 2,000 homes & 3ha employment land)
- **Wixams** (around 500 homes)

NEW MARKET TOWN

- **Near Tempsford** (around 7,000+ homes & business park)

Plus small scale growth in villages across Central Bedfordshire but only where this can be supported by existing services and transport networks.

EMPLOYMENT SITE

1. J13 of M1
2. J11a of M1
3. Biggleswade South Roundabout on A1
4. RAF Henlow

KEY - INFRASTRUCTURE

- ROADS
- RAILWAY LINE AND STATION
- SECTION OF EAST-WEST RAIL LINE
- EAST-WEST RAIL CENTRAL SECTION PREFERRED CORRIDOR OPTION
- EAST-WEST RAIL PREFERRED STATION LOCATIONS
- PLANNED NEW ROAD
- LUTON & DUNSTABLE BUSWAY
- EAST-WEST EXPRESSWAY
- GREEN BELT
- FOREST OF MARSTON VALE
- AREA OF OUTSTANDING NATURAL BEAUTY

GROWTH AREAS

- AREA - A
- AREA - B
- AREA - C
- AREA - D
- PLANNED STRATEGIC DEVELOPMENTS

The Natural Capital Planning Toolkit

Core Project Team

University of Birmingham

northumbria University Newcastle

Funder

NERC Science of the Environment

Case Study Partners

Birmingham City Council

Central Bedfordshire

Greater London Authority

Manchester City Council

Natural Capital Solutions

Shropshire Council

SKANSKA

Solihull Metropolitan Borough Council

Southampton City Council

South Downs National Park

TARMAC A CRH Company

Project Partners

Business Council for Sustainable Development United Kingdom

ceep Consultancy for Environmental Economics & Policy

CIEEM Chartered Institute of Ecology and Environmental Management

defra Department for Environment Food and Rural Affairs

Ecosystems Knowledge Network

Natural England

RICS

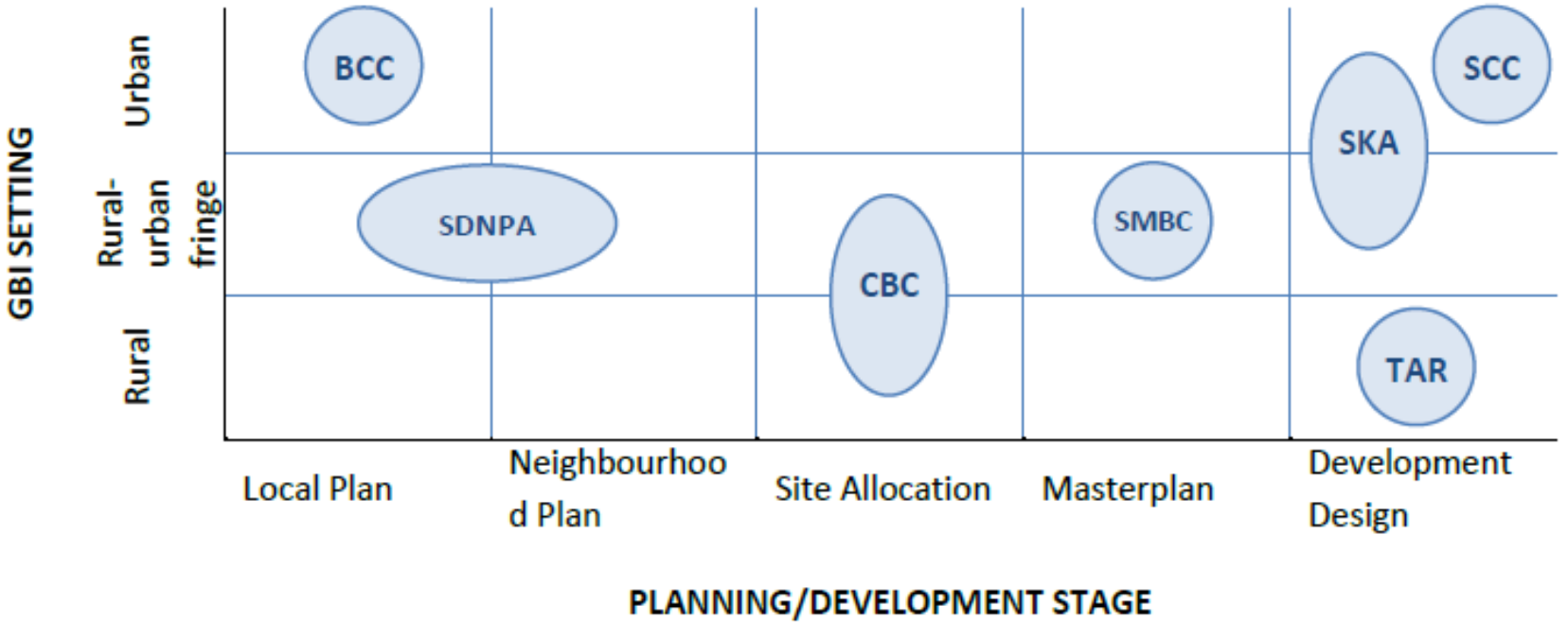
RTPI

How the toolkit works

Looks at the impact of land use change associated with new development on 10 ecosystem services:

- Harvested products
- Biodiversity
- Aesthetic values & sense of place
- Recreation
- Water quality regulation
- Flood risk regulation
- Air quality regulation
- Local climate regulation (climate change adaptation)
- Global climate regulation (climate change mitigation)
- Soil contamination

Testing the toolkit



For more information

Project synopsis and researcher contact details

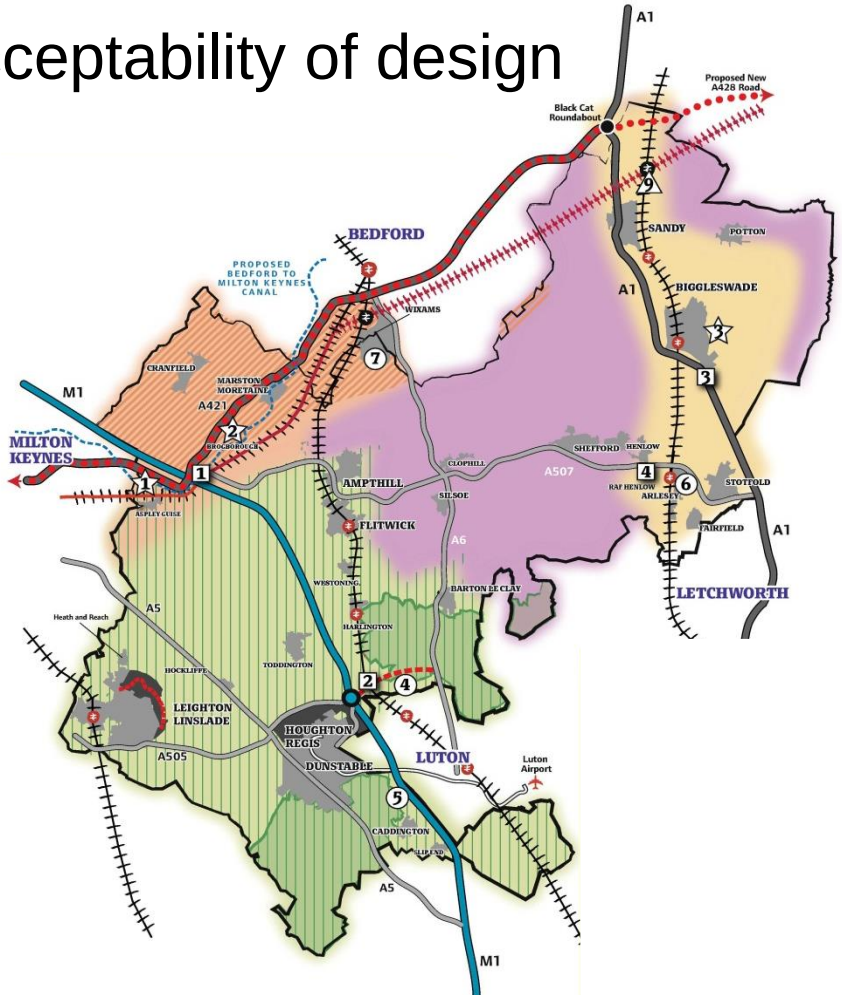
http://ecosystemsknowledge.net/natural-capital-planning-tool-ncpt

Webinar
https://ecosystemsknowledge.webex.com/ecosystemsknowledge/lsr.php?RCID=aa1dfdadadc4e418ed24903a35318103

How we're using the toolkit

Testing growth locations

- Acceptability of site
- Acceptability of design



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What information you need

- Land use and habitat changes
- Population density
- Proportion of built up area and heat exposure
- Flood risk and water protection zones
- Air quality management area
- Importance within ecological network
- Public open space
- Soil drainage
- Soil carbon
- Agricultural land classification
- Contamination

What ‘answers’ the toolkit gives

Development Impact Score
Average Per-Hectare

Ecosystem Service	Max Possible	Adjusted Scores	Min Possible
1. Harvested Products	+0.4	-1.95	-3.0
2. Biodiversity	+4.6	+0.22	-0.4
3. Aesthetic Values	+2.6	+0.11	-1.4
4. Recreation	+4.0	+1.48	+0.0
5. Water Quality Regulation	+2.0	-0.21	-2.1
6. Flood Risk Regulation	+6.0	+1.63	-0.0
7. Air Quality Regulation	+2.4	+0.45	-1.2
8. Local Climate Regulation	+3.6	+0.66	-1.8
9. Global Climate Regulation	+4.0	-0.37	-1.0
10. Soil Contamination		+0.00	
Development Impact Score		+2.02	

Development Impact Score
Total for 66.8 Ha of Assessed Land-use Changes

Ecosystem Service	Max Possible	Adjusted Scores	Min Possible
1. Harvested Products	+24.1	-130.4	-200.3
2. Biodiversity	+305.2	+14.8	-28.7
3. Aesthetic Values	+174.3	+7.4	-92.8
4. Recreation	+267.1	+98.9	+0.0
5. Water Quality Regulation	+136.3	-14.1	-139.3
6. Flood Risk Regulation	+397.7	+109.0	-2.9
7. Air Quality Regulation	+160.2	+30.0	-80.1
8. Local Climate Regulation	+238.2	+44.0	-120.2
9. Global Climate Regulation	+266.7	-24.6	-67.1
10. Soil Contamination		+0.0	
Development Impact Score		+135.1	

What we found from using the toolkit

- Design, design, design! (Not location, location, location…)
  - Nowhere incapable of delivering net benefits (i.e. had both low minimum and maximum scores)
  - The sites that had a low minimum (i.e. potential to significantly damage ecosystem services) also had a high positive (potential to enhance)
  - Some sites were performing well below what was possible in terms of delivering benefits – substantial scope for enhancement through design
  - And some sites proposed designs that should deliver positive results as they are – but could be further improved

Benefits of the toolkit

- ‘Quantitative’ / externally developed approach
- Testing both the location and design of development
- Start of a process
    - Site assessment
    - Allocation of sites
    - Site based policies
    - Pre-application discussions
    - Evaluating planning applications

Benefits of the natural capital approach

- Moving away from environment vs growth dialogue

- Demonstrating the potential of net gain