Wiltshire and Swindon Local Nature Recovery Strategy

Report of Usability Testing
March 2024

Wiltshire Council

Summary of recommendations

1. **It is recommended that:**

   1. the following Story Maps be prepared:
      - o Farmers and foresters
      - o The development sector
      - o Parish and Town Councils and community groups
      - o Environmental bodies
      - o All layers

      2. It is not known at this which of the layers requested by the user groups are available for display on the LNRS website/pages and it will be necessary for the GIS team to identify those that can be provided through the LNRS. This should be done before decisions are made on which layers will be provided on which story map.

   2. the GIS team confirms which suggested data layers are publicly available and can be included on the LNRS

   3. the GIS team consider which of the suggested layers will be made available to the LNRS and

   4. the steering group consider which GIS layers would be appropriate for each user group story map. This can be done in a group discussion at a steering group where each layer is assessed for inclusion within the relevant Story Map.

   5. the LNRS layer be put onto the interactive policies maps for both local planning authorities. This is not a requirement but would significantly improve uptake of the tool.

   6. a detailed methodological report be prepared alongside the preparation of the LNRS for publication on the website/pages as justification for the use of LNRS in project design. There should be a feedback feature to allow users to flag suspect data.

   7. two interactive layers be prepared if resources allow. These layers are not a requirement of the LNRS but would significantly increase stakeholder uptake and joint working. This work could be done after the LNRS content had been finalised.

      a) A BNG opportunities layer;
      b) A LNRS projects layer.

   8. shortlisting addresses what to do in cases where there is an overlap in data layers with clear priorities expressed wherever possible.
   9. the GIS team consider how the allow export of polygons and associated metadata as a matter of priority.
   10. the shortlisting exercises also ask participants to provide links to other websites and funders relevant to the priorities and measures they are proposing.
   11. The measures attributes should include the links where appropriate.
   12. A "library" of links could usefully be created on the LNRS website/pages that is searchable for users to find other relevant organisations and resources.
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13. the GIS team adds the features listed where possible. Some attributes will require additional data gathering, for instance where a dataset is uncertain, and this should be addressed during the shortlisting process.
14. It is recommended that a user manual and/or video be prepared and posted prominently on the LNRS website/pages.

Project plan

3. Month	4. GIS activity	5. LNRS activity
6. March 24	- Create full set of story map tiles to be populated - GIS team to review all available Type B public layers to determine which can be imported - Find a mechanism for exporting polygons onto users' systems. Should also include associated metadata - Agree how shortlisting will address the following GIS actions: - Description of data collection methodology - How to capture data for interactive layers (this might be postponed till summer) - How to address layer overlaps and how to capture priority measures in overlap areas - How to capture links to other websites to link to measures and library - How to flag data reliability issues and signpost to new available data	7. Longlisting events
8. April 24	- Deliver GIS shortlisting actions that were agreed in March during shortlisting sessions. - Agree which layers can be included in LNRS as Type B - Work with steering group to determine which layers go onto which Story Map - Load layers onto Story Maps - Obtain agreement that LNRS will go onto both LPA planning policy maps - Design a feedback form/page to collect info on where data should be improved (this could be postponed until Summer) - Load mock-up interactive pages for usability testing - Go live on export function	9. Shortlisting
10. May 24	Reconvene usability testing in a session to check with users whether LNRS meets their expectations	11. Shortlisting

	• Adjust system after usability testing second event • Work on adding other user defined features and functionality	
12. June 24	• Prepare a user manual and video to include in invites to roadshow events.	13. Shortlisting 14. Roadshow
15. July 24	• Prepare report on data collection methodology and load • Design interactive layers (BNG projects and LNRS projects) and test. • Identify where data is not reliable and add "warnings" to relevant attributes	16. Roadshow
17. August 24	• Finalise all outstanding actions	18. Report/finalisation
19. September 24	• Load LNRS onto panning policy interactive maps • Load interactive layers	20. First draft

Introduction

15. The Wiltshire and Swindon Local Nature Recovery Strategy steering group (LNRS steering group) spent December 2023 and January 2024 refining its approach to consultation for the preparation of the LNRS. Andrea Pellegram Ltd. is leading on the engagement activities on behalf of the steering group.

16. The overall consultation programme consisted of a number of activities each designed to identify and refine measures and priorities for the LNRS. These steps are set out below.

    - **Longlisting events**: three in-person consultation events to identify all potential priorities and measures across Wiltshire and Swindon (March 2024)
    - **Longlisting survey**: an online survey to allow all stakeholders to make a contribution to identify all potential priorities and measures (March, April 2024)
    - **Shortlisting workshops**: a series of intensive workshops attended mainly by ecological professionals and professionals from related disciplines to refine and develop the priorities and measures. (April, May 2024)
    - **Ground truthing events and public consultation**: a roadshow of weekly events held in all parts of Wiltshire and Swindon to allow all stakeholders to verify the identified priorities and measures. (May, June, July 2024)

17. The LNRS will be delivered via an online portal based on Story Maps[1] which is a web-based geographical information system (GIS) on the ArcGIS platform. This GIS would of necessity fit alongside other GIS systems held by other government departments and bodies, other stakeholders and many users. Most users utilise their own mapping system inhouse. These other GIS products are not necessarily fully compatible with the usability requirements and outputs of Story Maps.

18. The steering group started the LNRS preparation with no GIS in place and it would be the overall LNRS project task to populate a new GIS with the LNRS in 2025. The preparation of the LNRS would require a significant investment of time and resources, including volunteer time from many stakeholders over 2024. Since the GIS would need to be built over that time, and would not be reviewed again for 5-10 years, the steering group were determined that the GIS should be built in such a manner that it would remain relevant for all potential user groups.

19. The steering group identified the following potential LNRS user groups, each with their own requirements and motivations for referring to the LNRS:

    - Farmers, foresters and other landowners;
    - Town planning professionals, developers, consultant ecologists, BNG[2] providers and scheme developers;
    - Local Planning Authorities (Forward Planning and Development Management);
    - Parish and Town Councils and community groups;
    - Government organisations and public bodies;
    - Non-governmental organisations (NGOs) with an interest in environmental matters.

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[1] ArcGIS StoryMaps
[2] Biodiversity Net Gain

20. The steering group decided that the LNRS would use the Story Map software to present the LNRS differently to these different user groups to provide them with a bespoke experience for their sector. This is so that each group only needs to view GIS layers of interest to them and thus to provide a faster experience for each user group since each additional layer will slow the system. By presenting only maps of interest to each user group, the LNRS would run more quickly and would be more targeted to their requirements. Should anyone wish to view all layers, or look at different layers, this would still be possible (but slower).

21. The steering group considered that given the disparities between these main user groups, it would be prudent to understand their different requirements so that the GIS could be built to meet as many needs as possible in order to create a final LNRS product that would have maximum effectiveness across all groups.

22. The steering group decided that before the formal LNRS engagement programme would commence, and while the steering group was working with the GIS builders, it would undertake a programme of **Usability Testing**, where all identified user groups could express their requirement and preferences to make the most of the LNRS as a tool for their sector.

23. In February 2024, the steering group held two events in Trowbridge where representatives of each user group were invited to attend a two hour session looking at a mock-up LNRS to discuss what they wanted the LNRS to provide for them.

Summary of the Usability Testing sessions

24. Two sessions were held for the user groups as follows:

   a) February 13 2024:
      i. Farmers, foresters and other landowners
      ii. Planning consultants, developers, environmental consultants, BNG providers;
      iii. Local Planning Authority officers (Forward Planning and Development Management).

   b) February 20 2024:
      i. Public bodies
      ii. Nature groups and NGOs
      iii. Parish and Town Councils and Community greening groups

25. **Appendix 1** shows who attended each session.

26. Each session was based on a presentation of a mock-up of the LNRS and a demonstration of anticipated usability features, map detail and potential map layers. A discussion then ensued where participants were invited to share their views on the mock up and make suggested changes.

27. The results of each session is presented in unrefined form in **Appendix 2**.

28. Email comments were submitted after the events and these are included in unabridged form in **Appendix 4**. These comments are taken into account in this report.

GIS layers

29. Three **types** of layers may become part of the LNRS website tool.

   A. **LNRS priorities and measures** (A static layer that will be updated every 3-5 years once the LNRS is adopted). This is the statutory requirement on Wiltshire Council as the Responsible Authority. The data for this layer will be generated through longlisting, shortlisting and ground truthing.
   B. **GIS layers of other data sets** that will enable users to develop projects based on priorities and measures in the LNRS (These are fairly static layers but new data sets and layers will be made available from time to time). These are publicly available GIS layers that could be loaded onto the LNRS web pages.
   C. **Interactive user generated layers** that are dynamic and allow users to create relationships with other users (These are "living" and always changing). These GIS layers do not exist but users in the sessions suggested that they would be very helpful.

30. The full list of GIS layers (Types B and C) is provided in **Appendix 3**. This table shows all GIS layers that participants considered would help them to delivery LNRS to be used in addition to the actual LNRS map (Type A).

31. The final column shows GIS layers that area already publicly available on the Wiltshire Council website that could be migrated to the LNRS pages. The GIS layers for Swindon Borough have not yet been checked in this regard.

Story maps

32. The layers proposed in the usability testing exercise can be broken down into the following main categories:

   c) Borders and boundaries;
   d) Publicly available data;
   e) Constraints;
   f) Local Authority data including planning data;
   g) Farming, forestry;
   h) Environmental layers;
   i) Dynamic layers and local projects;
   j) Other layers.

33. The original working assumption going into the sessions was that Story Maps would be used to create bespoke maps for each user group. The usability testing sought to identify which layers would be useful to which user group.

34. The data in Appendix 3 shows and "x" where each GIS layer was suggested by a user group. This shows that some layers were deemed useful by various groups. However, it cannot be inferred that because a group did not mention a layer that was suggested by another group, that this means that another layer would not be of interest to them as well. Therefore, the number of "x"s against a layer is not reason to conclude that other groups would not be interested in that layer as well.

35. In the usability testing sessions, it became apparent that most user groups wanted access to a very wide range of data, and sometimes to all the data layers.

36. Most groups also agreed that it would be useful for the usability testing to be reconvened an a few months to check on the build of the LNRS website before the ground truthing stage.

37. *It is recommended that the following "story maps" be prepared:*

      k) *Farmers and foresters*
      l) *The development sector*
      m) *Parish and Town Councils and community groups*
      n) *Environmental bodies*
      o) *All layers*

38. It is not known which of the layers requested by the user groups are available for display on the LNRS website/pages and it will be necessary for the GIS team to identify those that can be provided through the LNRS. This is a matter of copyright and data ownership. Data availability and copyright should be checked and confirmed before decisions are made on which layers will be provided on which story map.

39. *It is recommended that*

      p) *The GIS team confirms which suggested data layers are publicly available and can be included on the LNRS*

      q) *The GIS team consider which of the suggested layers will be made available to the LNRS and*

      r) *the steering group consider which GIS layers would be appropriate for each user group story map. This can be done in a group discussion at a steering group where each layer is assessed for inclusion within the relevant Story Map.*

40. For the development sector group, there was a strongly expressed view that the planning pages of the local authority websites were critical for them because they needed to incorporate the LNRS in the design of their schemes particularly with regard to Biodiversity Net Gain requirements. It is proposed above that a separate Story Map be prepared for this user group. However, for those developers who are not aware of the LNRS, it would be useful to add the LNRS as another layer on the Wiltshire interactive policy map (Wiltshire Core Strategy (arcgis.com) or the Swindon interactive policies map (Swindon Local Plan 2026 | Swindon Local Plan 2026 and New Local Plan | Swindon Borough Council).

41. *It is recommended that the LNRS layer be put onto the interactive policies maps for both local planning authorities. This is not a requirement but would significantly improve uptake of the tool.*

Data accuracy and methodological transparency

42. All groups stressed the importance of data reliability. The LNRS would be used in projects and to calculate funding streams and BNG. It would need to be reliable if it were to avoid challenge. Clear statements of methodology would therefore be welcome alongside rigorous and tested data capture. Boundaries of priority areas should be as precise as possible for most stakeholders.

43. Where date is unreliable or imprecise, this should be noted in the attributes. Potential data accuracy issues should be able to be flagged by users.

44. *It is recommended that a detailed methodological report be prepared alongside the preparation of the LNRS for publication on the website/pages as justification for the use of LNRS in project design. There should be a feedback feature to allow users to flag suspect data.*

Interactive layers and BNG opportunities

45. A few of the user groups, mainly those who have an involvement in land use planning as applicants, regulators or as landowners, were interested in a function that would allow BNG opportunities to be created and developed.

46. Though discussions, it was felt that one way of doing this would be to mimic the planning system and do a "call for sites" where landowners and BNG project promoters could submit their sites for inclusion on a layer of the LNRS. This would be a "red line" around a site with contact details of the land owner or promoter. This would require ongoing maintenance and specific defined criteria what is eligible for posting.

47. Another interactive layer that all groups supported was one that would track ongoing and completed LNRS projects, with links through to those projects. In order to populate this layer, users would need to send in maps of their proposals with their links, and this could go onto the LNRS projects layer. This would require ongoing maintenance. This layer would be helpful in later stages of the LNRS when Wiltshire Council will be required to report back on progress. This aspect of the website is not a LNRS requirement but would assist stakeholders in joining up projects and to make them aware of what other stakeholders are doing.

48. *It is recommended that two interactive layers be prepared if resources allow. These layers are not a requirement of the LNRS but would significantly increase stakeholder uptake and joint working. This work could be done after the LNRS content had been finalised.:*

    a) *A BNG opportunities layer;*
    b) *A LNRS projects layer.*

Overlapping layers

49. A few users asked questions about priorities where layers overlapped. The system must provide guidance on which measures take precedence over others where this is the case to avoid ambiguity and to focus resources where greatest impacts can be achieved.

50. As an example, if a user were to draw out his/her entire landowning with a polygon in a area of overlap, would they then be able to see which measures are applicable in the area for each field (e.g. It might be that woodland creation is a priority in one field but not another)?

51. *It is recommended that shortlisting addresses what to do in cases where there is an overlap in data layers with clear priorities expressed wherever possible.*

Mapping tools

52. There was overlap between the various user groups about that they wanted the system to look and feel like.

53. The most important usability issue was interaction with users' own maps. Most users also used maps and/or GIS. There was a very strong desire for the export of polygons from the LNRS for all types of layer (A-C). This should be in the form of a polygon (and perhaps also to include a buffer) with all associated metadata. This single feature would allow users to import the LNRS (and associated Types B and C layers) to develop their own projects in house without needing to re-draw all polygons and re-type metadata. Parish councils use Parish Online which is not ArcGIS and they would also like to be able to export data to import into that system.

54. It is likely that DEFRA will require export of layers and it is therefore necessary that the GIS design of the layers has no data ownership issues or constraints.

55. ***It is recommended that the GIS team consider how to allow export of polygons and associated metadata as a matter of priority.***

Search function

56. A second priority was for a search function. There would be many layers and users would like to be able to search to find them.

57. ***It is recommended that a search function be included across all aspects of the LNRS website/pages.***

Links

58. Most users expressed a wish to be able to link information in the LNRS to other websites. The attribute tables will only be able to show small amounts of text, but the information necessary to carry out measures will be complex. Users wanted to be able to follow links (that opened on new web pages and did not close the LNRS) to other websites, reports and contacts so that they could develop their ideas how to make the most of the LNRS and create good projects.

59. It would also be helpful to users if there was a separate page (perhaps organised by headings) in the LNRS that listed all links. This should be searchable.

60. The shortlisting will be an opportunity for collecting information on other organisations, their projects and their data.

61. ***It is recommended that:***

- ***the shortlisting exercises also ask participants to provide links to other websites and funders relevant to the priorities and measures they are proposing.***
- ***The measures attributes should include the links where appropriate.***
- ***A "library" of links could usefully be created on the LNRS website/pages that is searchable for users to find other relevant organisations and resources.***

System features

62. Suggestions were made for various features that would make the system easier to use:

    c) show a spinner when data is loading

    d) the many boxes on the screen are confusing. Can they all be put together on the left side of the screen?

    e) can there be a "hover menu" to show what each box is for?

    f) the landing page needs to give an indication of which story map is best for each potential user (which story to open?)

    g) there should be a snap function for polygons

    h) reminders on screen to users how to save/store data and doodles

    i) info on how to save, export and import shape files.

    j) measure in hectares (not sq. m.)

    k) attributes which indicate delivery against higher level priorities such as water quality/nn/BNG, etc.

    l) allow users to change colour scheme in case they were colour blind.

    m) radius around site is useful to assess a site in context.

    n) attribute on the quality of habitat (on a scale to identify which is better/worse)

    o) ability to make a polygon more transparent when using so that user can see other layers simultaneously

    p) search function to find a layer

    q) where there is uncertainty about a dataset, put in a "be aware" message with links to a contact/webpage where more up to date data might be available

    r) if links provided they should open a new page rather than close the current page

    s) be able to select multiple layers for export as a bundle

    t) be able to be viewed on a phone or tablet with a zoom in function

    u) search to find locations (postcode, grid reference)

    v) outputs should be able to be printed

    w) should be able to save a polygon

    x) Link in with Caba datasets https://data.catchmentbasedapproach.org/

63. *It is recommended that the GIS team adds the features listed above where possible. Some attributes will require additional data gathering, for instance where a dataset is uncertain, and this should be addressed during the shortlisting process.*

Supporting text

64. Most of the users were familiar with GIS and would be able to use the LNRS tool from the outset. However, other groups (particularly parish councils and community groups) might not be familiar with GIS. A user manual should be prepared to help new users and this should be displayed prominently on the LNRS pages. This should also explain key concepts such as the "duty" on local councils and BNG.

65. It should be possible to create a layperson's user manual, possibly complemented by an online training video.

66. *It is recommended that a user manual be prepared and posted prominently on the LNRS website/pages.*

Other suggestions

67. A number of other suggestions were made that might make the LNRS more user friendly. However, these are "nice to have" and not critical for usability. If there is time and resource, these features would be welcome t users:

   a) A glossary of terms and acronyms
   b) User training events on how to use the LNRS
   c) Advice on what to do if land is outside the priorities
   d) "use cases" to show examples of how the LNRS was utilised in a project
   e) LNRS targets (particularly for neighbourhood planners)
   f) Ability to import shape files into the LNRS as a new layer
   g) Climate vulnerability including advice on species would be a welcome feature to be included in measures and attributes.
   h) Showing the LNRS outside the county boundary (perhaps 2 Km).

68. *It is recommended that the steering group and GIS team consider how to add the other suggestions listed above.*

Appendix 1: Attendance at Usability Testing exercise

23.

13 February 2024, County Hall, Trowbridge

24. Session 1 – Farmers etc. (11 people)

25. National Farmers Union
26. Tilhill Forestry
27. Bremhill Vale Farmers Group
28. Nadder Valley Farmer Group
29. Pryor & Rickett Silviculture
30. 4 Barrows Cluster
31. 4 Barrows Cluster
32. Fountains Forestry
33. Wilton Farmer Cluster
34. Cotswolds National Landscape
35. Black Sheep Countryside Management
36. Pewsey Downs Farmers Group

37. Session 2 – Developers, Agents, Ecology Consultants (11 people)

38. Bluestone Planning
39. Ther Rural Planning Practice
40. Master Land and Planning
41. The Landmark Practice
42. The Landmark Practice
43. Ecosulis
44. Ecosulis
45. Willis & Co. Town Planning
46. Environment Bank
47. Environment Bank
48. LUC

49. Session 3 – Local Planning Authorities

50. Swindon Borough Council
51. Wiltshire Council

52. Session 1 – Public Bodies

53. Forestry Commission
54. Forestry Commission
55. Landmarc Support Services
56. National Highways
57. Forestry Commission
58. Environment Agency

59. Session 2 – Nature Groups and NGOs

60. FLOW CIC
61. Wiltshire Wildlife Trust
62. WHS Coordination Unit, Wiltshire Council
63. Great Bustard Group
64. Great Bustard Group
65. Bristol Avon Catchment Partnership
66. The British Association for Shooting and Conservation (BASC)
67. RSPB
68. RSPB
69. County Recorded – Wiltshire Mammal Group and Wiltshire Bat Group

70. Session 3 – Parish Councils and Community Groups

71. Trowbridge Town Council
72. Great Green Bedwyn
73. North Newnton Parish
74. Salisbury Area Greenspace Partnership
75. Salisbury City Council
76. Corsham Town Council
77. Highworth Town Council
78. Royal Wootton Bassett & Cricklade/ Broad Hinton
79. Calne Town Council
80. Chilmark Parish Council
81. Limpley Stoke Parish Council
    82.

Appendix 2: Unrefined results of usability testing sessions

83.

Farmers, foresters and other landowners

- Farmers already hold a lot of geographic data and would prefer to import aspects of LNRS onto their systems in support of grant applications and other business processes.
- Concern that the LNRS would be repeating "what is already out there".
- There was concern that some agricultural stakeholders (mainly public bodies) would not share data. The Rural Payments Agency (RPA) was mentioned in this regard.
- This group would prefer that the LNRS provided options but was not prescriptive.
- Farmers have their own data that they would wish to use alongside LNRS (preferably in their individual GIS systems).
- The RPA would require very precise boundaries for applications to be successful. Blurry edges on the LNRS would not be helpful therefore. Farmers would require very precise measurements down to the centimetre for RPA applications.
- The group discussed that the LNRS would be different from MAGIC maps (a synthesis of local knowledge and data).
- The group discussed that the LNRS would be useful in future funding applications. Natural England has promised to link their programmes to the LNRS. Funding streams will be aligned to the priorities and locations in the LNRS.
- The LNRS will be binary – yes/no on whether land is a priority.
- Funding will be greater for priority areas.
- Cross-county boundary issues might be problematic because farmers might need to check two different LNRS maps/approaches. The national database of LNRS maps should help with this.
- The LNRS will have statutory weight It is the first ever national and legal nature recovery strategy.
- The LNRS will not be varied until it is reviewed (probably in 5 years).
- There was a discussion of features that should be funded. The shortlisting process should address funding.
- The accuracy of the baseline data was critical.
- Farmers want land to be "at its best" all the time.
- The LNRS was vulnerable to becoming outdated since it would not be changed and updated for 5 years. The example of ash die-back was used: today there may be a wood but in 4 years it might be full of dead trees.
- There are already many maps that farmers and foresters use and this adds to that number. However, this augments national data with local knowledge.

- The Wiltshire and Swindon Biological Records Centre (whose data will be integral to the LNRS) is already regularly updated with local knowledge.
- Some areas are already good and should be maintained.
- The LNRS should be open to feed back so it can be updated.
- LAYER: Single Business Identifier -click on every parcel. Either import all SPI data as an overlay or allow for input of SPI onto the LNRS (would imply a working space), or export LNRS onto the farmer's system.
- LAYER: Sustainable Farming Incentive (SPI)
- LAYER: Wildlife corridors with buffers
- MAPPING TOOLS: link LNRS to grant providers and funding (but how would this be updated?)
- LAYER: satellite data
- WOULD LIKE to be able to download LNRS onto their systems so that they could developer their proposals in a confidential manner and work on a proposal over time. Do no like that the current system does not allow them to save their work or export it. Would like to be able to draw and export shape files onto their systems with associated metadata.
- They don't want duplication of maps or of data input. They want one system /unified platform where they can develop their ideas/strategies. Does this happen on the LNRS platform or on their own system?
- WOULD LIKE to be able to import shape files as view only data on the LNRS (not to be saved).
- WOULD LIKE to "tick" layers on LNRS to export to their own database.
- The LNRS cannot allow external change of attributes
- Small farmers don't do much mapping. How will they use the LNRS? Can farmer groups create "discussion maps" as an export?
- Can the LNRS provide email updates on changes to legislation and guidance?
- The text on the website must be up to date.
- The fact that the LNRS cannot be updated (except in a formal review) needs to be made clear on the website – it is not a "living" document.
- LAYER – BNG opportunities
- MAPPING TOOLS – where land is already serving an agricultural function, the LNRS does not need to provide a lot of data or explanation. Leave that to the farmers.
- Cotswold AONB included arable land for habitat improvement – management of boundaries, hedges, mixed farming.
- Arable land can also provide habitat.
- LAYER definitive locations for tree planting (to help avoid objections to tree planting). This could perhaps be Forestry Commission Low Risk Zones
- LAYER – areas that are already serving a positive function.
- How do we manage layer overlap?
- LAYER – the "big picture" for an area (landscape scale) to provide context for
- LAYER – where "do not" is expressed
- MAPPING TOOLS – snap polygons, snap to SFI/SPA boundaries, draw polygons with a buffer, PRINTABLE, save polygons, view arial photography, export polygons and metadata.
- How does this interact with/intersect the Defra maps?
- LAYER – commercial/conifer woodland

- MAPPING TOOLS – reminders on screen to users how to save/store data and doodles. How to save, export and import shape files.
- Needs to be up to date.
- LAYER – archaeology
- LAYER – constraints layer from MAGIC
- MAPPING TOOLS – constraints attribute table
- What do you do about conflicting priorities???
- How does the LNRS match field level interventions against landscape scale change?
- The system needs to be fast to load and use. Keep layers to a minimum.
- RECALL THE USABILITY GROUP AFTER SHORTLISTING TO CHECK AGAIN.

84.

Town planning professionals, developers, consultant ecologists, BNG providers and scheme developers

- MAPPING TOOLS measure in hectares (not sq m)
- Would like this to integrate seamlessly with WC and SBC planning maps at all layers
- LAYER land ownership boundaries
- LAYER – priority habitats
- LAYER – forestry, ancient woodland, WWT reserves, corridors, MAGIC map layers, bat strategies
- LAYER – neighbourhood plan environment policies (include local green spaces)
- LAYER – WC GBI strategy and similar for SBC if this exists
- LAYER – SHEELA sites
- MAPPING TOOLS – export to their own systems or reports
- LAYER – Landowners who wish to be involved in offsite BNG schemes. Would require a call for sites where landowners would agree to have their sites and contact details available for public view. It would be up to users to make contact for individual sites.
- WOULD LIKE if the contribution of one site/scheme could show its contribution into the wider LNRS.
- LAYER for delivered LNRS projects?
- LAYER on urban greening to inform landscape architects in the early stages of design to provide a more integrated approach to urban areas.
- WOULD LIKE advice on species though this may be difficult over time due to climate change.
- WOULD LIKE shortlisting to consider climate vulnerability
- MAPPING TOOLS – would like links to specific reports in the attributes where relevant. But this needs to be kept up to date.
- WOULD LIKE to be able to export a shape file to import into MAGIC
- The LNRS will help the end client tell a "good story" as a contribution to the LNRS to help demonstrate their environmental credentials
- MAPPING TOOLS – attributes which indicate delivery against higher level priorities such as water quality/nn/BNG etc. Can this be done at shortlisting?
- LAYER showing nutrient neutrality including projects that have already been delivered and also (perhaps a different layer) what the water companies are doing and the location of their outfalls.

- Look at Future Homes website. Landowners put their sites with contact details for follow on inquiries.
- Great crested newts – call for new ponds/credit system.
- LAYER on public access including public access land (definitive map, Forestry Commission, park and open space, etc. this is so that designers can put in buffers where it is necessary to keep people (and their pets) away from habitats and species.
- DATA Inaccurate data is not helpful. Data must be trustworthy. Better to be low-res and reliable than high-res and inaccurate.
- Forestry Commission and Natural England have open access databases. How will the LNRS integrate with these?
- The LNRS will assist in screening sites, pointing development in the right direction, identifying projects with strategic benefits.
- LAYER landscape character areas
- LOOK AT BUILDING WITH NATURE STANDARDS – can these be integrated in the LNRS?

Local Planning Authorities (Forward Planning and Development Management)

- The group discussed the proposal put by the developers (previous session) where the LNRS was integrated into the LPA GIS layers. The question was "who owns" the data if the two GIS products were combined? The general consensus was that the LNRS could be a layer on the LPA GIS whilst having its own existence on the Story Map LNRS portal.
- MAPPING TOOLS – allow users to change colour scheme in case they were colour blind.
- Don't overload the maps – keep them simple and clear.
- DATA explain how the buffers were created using "least cost modelling" in case the data is queried at a an inspection/planning inquiry
- DATA boundaries of LNRS must be accurate so that development management can safely refuse or require conditions. Must be clear and defensible. Must seek to avoid challenge in objections or at appeal.
- DATA must be accurate, defensible, transparent, defined. Where this is not possible, must have a "health warning" to indicate that the data cannot be relied on but must be offset with other data.
- MAPPING TOOLS must link layers to other strategies and policies
- MAPPING TOOLS – radius around site is useful to assess a site in context
- Will people interpret that everything not coloured is "fair game"?
- LAYER urban greening factor
- LNRS can feed into site assessments for local plan allocations
- LAYER final SHELAA sites
- DATA check licencing about what can be exported
- LAYER planning history
- LAYER allocated sites
- MAPPING TOOLS be able to export buffer outcomes as a table
- DATA need to make clear what is base data (what is currently on the ground) and what is strategy (priorities and measures). Base data will quickly become out of date.

- LNRS will start to knit together existing WC and SBC policies – needs to be a working partnership to delivery BNG on a strategic scale.
- DATA - LNRS will be useful to development management but the NPPF is prescriptive on corridors and stepping stones. It would therefore be useful to use terminology from NPPF.
- RECALL THE USABILITY GROUP AFTER SHORTLISTING TO CHECK AGAIN.

Government organisations and public bodies

- They would probably use the Developer story map
- The system needs to be easy to use at the county boundary. The buffer into other counties from Wilts should be wide enough to allow government bodies to plan across borders with confidence. This to be in addition to links to neighbouring LNRS maps.
- National Highways have a requirement for BNG and would like a search function in the LNRS for habitat types. Schemes like grassland that offer multi-functional benefits (e.g. flower margins plus agri-environment) are more cost effective and preferred than other schemes. National Highways very much looking for LNR improvements that deliver best financials.
- LAYER Local Authority Boundaries (i.e. Wilts and Swindon
- National Highways is a statutory consultee on highways proposals, local plans and large housing/commercial schemes. They need high level info for assessing proposals, such as motorway junctions.
- DATA Evidential basis for maps will be reall important and must be fact driven and verifiable. The LNRS needs a very clear methodology statement to be part of all consultations so that assumptions can be tested thoroughly before adoption.
- Species records must be accurate and appropriate.
- WOULD LIKE a feedback system to record errors in the data and suggested changes for next round
- LAYER commercial forestry
- LAYER soil maps
- MAP TOOL export not as critical for this user group who have their own maps.
- LAYER sensitivity maps (? Is this not just a constraints layer?)
- LAYER archaeology. Can Historic Environment Record be mapped
- Forestry Commission wants to use LNRS to prioritise and incentive schemes. They are working with the LANDAP which is similar to LNRS. (Can LNRS obtain data from Landap?)
- LAYER public sector land ownership
- MAPPING TOOL attribute on the quality of habitat (on a scale to identify which is better/worse)
- Environment Agency representative not sure how they would use LNRS.
- National Highways is always looking for LNRS schemes as BNG offset and also for their landholdings.
- How does LNRS sit alongside food production and account for stepping stones along margins?
- LNRS could inform better applications for Forestry Commission
- MAPPING TOOL embed links to other websites/research papers/advice into the attribute tables to allow users to get further information. Should open in a new window. Would also be useful to have a list of links on the story maps webpages

- LAYER Defence Estate (but need MOD approval)
- LAYER ancient woodland and veteran trees

Non-governmental organisations (NGOs) with an interest in environmental matters

- WOULD LIKE a list of local projects with links s that groups can learn about each other and joint up. However, this would need to be "live" because it will go out of date.
- LNRS needs to resolve conflicts between different habitat types and indicate what should happen when two layers overlap. Which measures take priority?
- WOULD LIKE a list of local organisations that work on specific types of projects (e.g. water quality/bats/birds)
- Link to MAGIC showing sites that area already good for nature NOW and be able to overlay over sites in LNRS that may be good for nature in the FUTURE
- WOULD LIKE attributes to signpost to other websites (that might be difficult to find)
- SURVEY – add new question about other websites and links.
- MAGIC has glitches and is not always up to date.
- WOULD LIKE the LNRS to be "phone friendly" so it can be used in the field.
- WOULD LIKE an interactive layer where groups can drop a pin with explanation of what they are doing.
- WOULD LIKE to have a live system where data can be updated.
- WOULD LIKE to be able to export. Request data from within a polygon.
- LAYER heritage sites, scheduled monuments
- LAYER farm cluster groups
- LAYER agricultural land use type
- Overlapping areas – need to really understand each area and how priorities and measures should be developed
- LAYER critical species
- LNRS should use data from "working with natural processes" mapping in shortlisting
- LAYER bird strike and aerodromes
- WWT projects are short term (up to 6 months) and would become out of date quickly.
- LAYER interactive layer showing current projects so that others can become partners
- LAYER of completed projects (also interactive, so not part of LNRS
- MAPPING TOOL ability to make a polygon more transparent when using so that user can see other layers simultaneously
- LAYER lighting (lux, location of poles, dark skies, light pollution)
- LAYERS of key species (group of layers for bats?)
- MAPPING TOOLS search function to find a layer
- WOULD LIKE links to other organisations/webpages
- LAYER full river floodplain reconnection
- WOULD LIKE a list of all organisations with links to their websites

- WOULD LIKE mention/links or layer of rewilding projects such as Wiltshire Small Rewilders Network who are not necessarily part of LNRS community
- LAYER rewilding projects
- WOULD LIKE information on who to contact in other organisations
- Is rewilding a priority or a catchphrase that will draw laypeople into the process?
- What do you do to help landowners outside the priority areas?
- MAPPING TOOLS explain how to use the polygons
- LAYER district level licencing (newts)
- WOULD LIKE text on what to do if your land is outside a priority area Who to contact.
- Need to set up two systems – LNRS (static) and other layers (living)
- MAPPING TOOLS if links provided they should open a new page rather than close the current page)
- MAPPING TOOLS where there is uncertainty about a dataset, put in a "be aware" message with links to a contact/webpage where more up to date data might be available
- Maps for "Joe Public" should be simple and easy to use
- Attribute tables should be simple and uncluttered
- Attributes for measures should link to more detail
- Explain how LNRS links to neighbouring LNRSs in other counties
- LAYER of weirs and river obstacles
- RECONVENE THE USER TESTING IN A FEW MONTHS

85.

Parish and Town Councils and community groups

- Would like it to feed through to MAGIC
- Want to be able to find out what is there NOW (not the future LNRS)
- LAYER agricultural land classifications
- MAPPING TOOLS show a spinner when data is loading
- LAYER soil types
- LAYER topography/ridgelines
- LAYER landscape character areas
- RECONVENE THE USER TESTING IN A FEW MONTHS
- WOULD LIKE user workshops/training events in how to use the LNRS. They are not experts so they need a lot of guidance how to use this.
- LAYER on best places to build and best places NOT to build
- LAYER parish boundaries
- DATA Ability to export to Parish Online
- Co-benefits
- MAPPING TOOLS attributes to show partnerships and major orgs (such as AONB)
- LAYER flood risk
- LAYER orchards
- LAYER meadowland
- LAYER water quality
- LAYER nutrient neutrality projects
- LAYER nitrate vulnerability
- LAYER farmer biodiversity zone

- WOULD LIKE website to show "use cases"
- LAYER bombs/ordnance
- MAPPING TOOLS they need to have an explanation how to use the layers and how to move from high level to site specific
- MAPPING TOOLS the many boxes on the screen are confusing. Can they all be put together on the left side of the screen?
- MAPPING TOOLS can there be a "hover menu" to show what each box is for?
- MAPPING TOOLS the landing page needs to give an indication of which story map is best for each potential user (which maps to parishes use?)
- MAPPING TOOL want a search function to find the right layers
- MAPPING TOOLS how to link to other groups
- MAPPING TOOLS glossary
- MAPPING TOOLS measure to also provide guidance on maintenance/management
- WOULD LIKE TO HAVE targets for LNRS coverage for individual parishes so that this can be part of their neighbourhood plans
- WOULD LIKE a parish council user guide for non-experts

Appendix 3: Layers suggested by participants in the usability testing sessions (Feb. 2024)

LAYER NAME	FARMER FORESTER	DEVELOPER	PLANNING AUTHORITY	PUBLIC BODY	NGO	PARISH AND COMMUNITY	ALREADY A WC ARC GIS
Borders and boundaries							
Local Authority Boundary				x			
Parish boundaries						x	Parish
Publicly available data							
Satellite data	x						
Land ownership		x					Property points
Public access land		x					
Public Sector land ownership				x			
Constraints							
Archaeology, scheduled monuments	x			x	x		Scheduled Monuments World Heritage Sites
Priority habitats		x					
Flood risk						x	
Constraints and opportunities	x			x			

layers from MAGIC (SSSI, SAC, SPA, RAMSAR, Local Nature Reserves, AONBs)							
English Heritage – World Heritage Site' layer				x			
Other WC layers							Conservation areas Listed buildings SSSI AONB
Local Authority layers including planning data							
Ancient woodland and veteran trees		x		x			Tree Preservation Orders
Green and Blue Infrastructure		x					
Definitive footpath map		x					Rights of way Protected routes of the Thames and Severy Protected route of the Wiltshire and Berksh
Landscape Character Areas		x				x	Special landscape areas
SHEELA sites		x	x				SHEELA
Allocated sites		x	x				Core Strategy Chippenham Site Allocations Plan WHSAP
Planning history		x	x				Planning applications

	Blue	Peach	Green	Pink	Orange	Yellow	Notes
Neighbourhood Plan designations		x	x				Neighbourhood plan policies
Nitrate vulnerability						x	
Nutrient Neutrality projects		x				x	
River catchments							River Test Catchment Lambourne Somerset Levels River Catchm
Farming, forestry							
Single Business Identifier	x						
Sustainable Farming Incentive	x						
Forestry Commission Low Risk Zones (where trees can be planted)	x						
Commercial and conifer woodland	x			x			
Soil maps				x		x	
Agricultural land classifications					x	x	

Farm Cluster Groups					x		
Farmer biodiversity zone						x	
Environmental layers							
Existing wildlife corridors with buffers	x						
Land that is already serving a positive function	x						
Areas where LNRS is not supported	x					x	
Critical species					x		
River floodplain reconnection					x		
Traditional orchards						x	
Meadowland						x	
District level licencing					x		
Priority river layer					x		priority river layer https://naturalengland-defra.opendata.arcgis.com/datasets/7e5d
Dynamic layers and local projects							
BNG and LNR opportunities and projects	x	x			x	x	
Local strategies		x			x		

Delivered LNRS projects		x					
Rewilding projects					x		
Other layers							
Urban greening factor		x	x				
Bird strike and aerodromes					x		
Wiers and river obstacles					x		
Typography and ridgelines						x	
Water quality							
Ordnance and unexploded bombs						x	
Solar farms							Full Solar PV farms

Appendix 4: notes and comments received after the events

Forestry Commission

Notes:

- Mapping will run over county boundaries, by 2km maybe.
- If areas are marked as strategically significant, would those biodiversity units become more expensive?
- Destructing/modifying habitats in 'strategically significant' areas would cost the developer more money. For this reason, people/landowners might not want their land to be marked out.
- What additional layers would users like to see in the map? I think it depends on what datasets have been used to inform the 'measures' map, or 'ACPIB' map.
- Need to incorporate land restrictions, eg archaeology, into mapping?
- There needs to be clear methodology of how the mapping was produced.
- We want to be wary to not end up duplicating MagicMaps. Is it also going to be duplicating LandApp?
- Can we link FC schemes/grants, other than EWCO (which will be incorporated in CS), with the LNRS?

 Technical questions on the interactive map:

If something is overlapping (i.e. a priority for woodland but also grassland), is it equally beneficial to create each of those habitat types?

What is the meaning of the priority species section? How does this link to on-the-ground action

Is looking at the 'overlapping habitats' layer the same as looking at each of the individual layers?

If you draw out your entire landowning with a polygon, can you then see which measures are applicable in your area? Is it easy to see where each of the opportunities/measures are? (eg. It might be that woodland creation is a priority in one field but not another)

Are the layers (base, measures) same for each user group? Or could there be a scenario where you would only see woodland opportunities, and not grassland (for example)?

Do we really need additional layers, other than the APIBs layer (SSSIs, irreplaceable habitats) and the ACPIBs layer (i.e. the measures and opportunities map)? Surely the purpose of the LNRS map is to show strategic opportunity areas. If you add detail, where do you end?

Parish Council

A few comments:
What is the "duty" on a parish council, and what exactly are Biodiversity Credits and how are they traded? Please define these two terms somewhere for the layperson.

As we are near the Avon I would like surface water drainage and other sewerage , including ditches, shown on the map.
How accurate is the bio data given on the map? Is a bio "survey" carried out in our Parish. What skilled support is available to capture this information? Or can training be made available for willing volunteers to assess and upload information for maps.
Is there a (mandatory?) forum or process where Parishes can engage landowners and developers on this specific topic?

Eg I am aware of an amazingly luminescent area of woodland (looks like a temperate rain forest to me!) just off a footpath in our area. Who would identify this and its potential significance?

Biological Records Centre

Foresters, Landowners

- Can landowners upload their own data (via SBi) onto LNRS ?
- Request from landowners themselves
- Import and Export as shapefiles for use in landowners own software - cut too or selection
- Snap to boundary / polygon
- Buffer tool
- Printable
- Save polygon
- Export and talk to DEFRA / RPA as part of your application
- Perhaps after LNRS
- Interactive feedback from landowners via the accounts
- Keep it simple
- Hate duplication
- Map oppertunities
- Map updates
- Look at oppertunities for the FARM CLUSTER
- Users made aware of new info / changes
- Visual queues and pop ups to remind to save/export...
- Be up to date - in its priorities
- Synthesise ecology / archaeological
- What other data layers would you like to see ?
- include arable ?
- Aerial
- Layer for possible tree planting - FC Low risk zone data ?
- Attribute table contents ?
- ID areas that are GOOD and important
- More or less info ?
- Opportunities to Conifer / commercial forestry ?
- Constraints
- different constraints for different things
- Speed of system
- Wiltshire and Swindon Planners

- Colour Blind Friendly colourschemes
- Changable symbology, use of hatchings in fills
- Defendable, transparent justification for buffer zones
- definitions of what the buffer / zone is and what its for
- Swindon
- Shelaa sites? Being able to upload
- Downloadable data pack
- WMS
- Roadshow / training NPs for Parish Councils
- MET Office Climate Change Data Pack for LA's ?

FLOW (local group)

1. I like the idea of making it work on a tablet, if so then a button to zoom into your current location would be helpful
2. Would be good to be able to search for postcode or NGR
3. As discussed, link in with Catchment Partnership pages
4. Link in with Caba datasets https://data.catchmentbasedapproach.org/, loads of useful layers here via ArcGIS online. River obstacles was one that was mentioned. Also things like WFD boundaries might be handy. All the datasets available are listed here if you are not familiar with it.
5. It would be useful to have a detailed watercourse layer as well as the main river later. There was talk of an EA version being made available which was digitised from OS Mastermap. If not, would there be budget to digitise a layer for Wiltshire? It might be useful for highlighting little headwater streams which presumably will want to be highlighted as strategically important areas for restoration. From a BNG perspective I think we really need to highlight these areas, as they can often get dismissed as 'ditches' with low strategic significance.
6. Presumably you already have the priority river layer https://naturalengland-defra.opendata.arcgis.com/datasets/7e5dd3c72f424fd5bc6f013d18dd770c/explore, any work to update this for Wiltshire and ensure the most natural watercourses are highlighted?
7. In terms of existing modelling for priority river interventions there are a few layers in the CABA package. But the guys at the Rivers Trust and Wilts Wildlife will be best placed to guide on that.
8. Having projects on there is good, even if they are historic. Saves talking to a landowner and finding out consultants did a big project on the same site 10 years ago.
9. Have an opportunity on the portal for community groups and organisations to add their own projects – they might be small, tree planting, meadow restoration or bat boxes but it would be good to see a map of this across the county.
10. Not sure how to do this but signpost people to existing citizen science platforms i.e. River Obstacles, INNS mapper

Defence Infrastructure Organisation

What DIO needs from the LNRS

- Ensuring that the LNRS is realistic in terms of what can be delivered on the training estate without compromising military requirements (e.g. the scope for hedgerow planting is likely to be limited within dry training areas)
- Detailed spatial mapping to guide us to the locations where nature recovery is delivered with maximum benefit (what habitat and where).
- Mapping and statement of priorities to include opportunities across Salisbury Plain Training Area, particularly focussed on areas outside the SSSI (non-statutorily designated land comprises approximately 50% of the Salisbury Plain Training Area)
- Presented in an interactive mapping format that we can manipulate and can also be used by our tenant farmers plus consultant ecologists working on defence development projects.
- We would intend to use the LNRS to drive our BNG requirements, particularly establishment of habitat banks
- In terms of the mapping, we would want to make sure that:
    - we understand the data lying behind the mapping and LNRS e.g. habitat, species records?;
    - we have opportunity to input our expert knowledge of the plain (we would want to review the mapping on our land prior to publication);
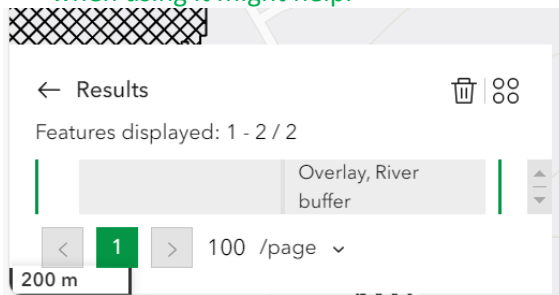   - there is an ongoing mechanism to keep the maps updated.

Data presentation

It's difficult to comment on the mapping presentation without having attended the workshop, however, what has been included on the slides looks great. We would prefer slightly blurry boundaries if possible as this gives us more flexibility in determining habitat restoration/ creation proposals. Boundary-wise, that's a tricky question for SPTA, but suspect boundaries based on soil data will be most useful. Exportable LNRS layers would be extremely useful for us to layer on our existing GIS.

Environment Agency (Fisheries, Biodiversity & Geomorphology

- Do you like the overall presentation?
    - Overall, I really like the initial layout. Each icon is laid out clearly and I like the straightforwardness of the map. It's quite intuitive.
- Have the audience segments been written well for you?
- How do you feel about the information we have included and is the tone right?
    - Yes, I do feel the tone is right – highlighting the importance of agriculture in the area but also the extent of our Chalk streams. Shows we need to strike the right balance.
- Is anything missing?
    - Is there a way of showing BNG within the mapping? For example – potential areas where BNG could be used for offsetting? (This may be too big of an ask for this tool).
    - Under LNRS Data layers – is there any way of distinguishing the overlapping priority habitats and what they are? Could they be listed under the Data Layers?
- What uses would you require a streamlined map for?

- - - To show a particular issue or potential project opportunity clearly. E.g.- Being able to show an area of land that isn't being fully utilised, 2 areas of habitat that would only need a small corridor to connect them etc.
    - To show the funding streams in an area – such a useful tool as it can be quite confusing as to what funding is out there.
  - What other layers would you like included for each map?
    SSSI, SAC, SPA, RAMSAR, Local Nature Reserves, AONBs. Could be a layer mapping all of these.
  - Would you prefer the LNRS layer to be cut to boundaries (field boundaries, soil boundaries, parish council areas)
    There can be some use in having parish council area and field boundaries – this would help when reaching out to communities or landowners.
  - Does the attribute table (it appears when you click on the LNRS layer) helpful, contain good information, well laid out, missing any information.
    Initially I find the attributes table too small and hard to look at. Could this be made to expand when looking at it? I realise you click on "view" and it opens on a new page but it feels very confined to start with. Perhaps being able to expand this box when using it might help.

  - Would an exportable (but likely without attribute table present) data set of the LNRS layer be helpful to you?
    Yes.
  - When you think about how the LNRS relates to your sector, what do you think it should do for you?
    Being able to identify areas where a project could help with connectivity, to show those with influence where small changes could make a massive difference.
    With other sectors also having this data available to them and in a way that they understand could create huge benefits.
    The LNRS could be so useful to so many.

  - Is our overall direction fit for purpose?
    Yes – I think the work you're doing is invaluable.

World Heritage Site Unesco

- It would be good to use WHS boundary ('English Heritage – World Heritage Site' layer on planning explorer) to indicate constraint with links to WHS Management Plan and WHS Woodland Strategy (needs updating) – or simply some blurb from me eg WHS is a sensitive area please consult with stonehengeandaveburywhs@wiltshire.gov.uk about your proposal.
- Good to use 'Historic England – Scheduled Monument' layer from planning explorer to indicate constraint that permission must be sought from Historic England on these areas (I will discuss with Historic England)

Wiltshire Council