

Development suggestion - Scotland	Justification
Being able to see the local authority / vice county boundaries on search maps (cf. Grab a Grid Reference)	To be able to check where a record comes from when close to the boundaries - especially useful in relation to LBAPS
Accuracy of phenology / climate change data [a record with a year date defaults to 1st January]	If old record only has a year on it, ie 2003, the record defaults to 1st January - there needs to be more explanation on the record itself otherwise it will show up as inaccurate - swifts flying on 1st January, arrivals of cuckoo, etc
Clarity over how spatial searches are working (eg using points / grids). Need to easily be able to find more info to understand data limitations, etc	If based on point view (eg 10km sq central / SW corner point) could exclude a lot of interesting records
Documentation explaining differences between point and grid views and their limitations	Initial distribution map on species page is point based and is probably as far as a member of public will go. Least likely to understand what the note about resolution means and assume a point means a point (eg zoom in to their house!)
Make the default display map positive records only. People needing to see negative records should be able to display them on request	Displaying absence records on the map, undistinguished from presence records, is confusing to everybody. An Atlas of species distributions should show you where the species is, not where it isn't.
Make it possible to customise the fields that you see when you are looking at a list of records. Some people need to see who the determiner was, the type of record (sighting/tracks/scat etc)	It would make accessing the information needs by different people for different purposes, without having to click on each record separately to get all the detail
For data providers to be able to share records at full resolution and named users to have full access to see and download data	Data providers can share data at full resolution with funders and partners (as required by funders and data agreements). Will save time responding to data requests. Prevents multiple copies circulating (version control). Concerns that people are not using current data because it is not so easily available.
NBN to pull in data as web services	Many organisations are now making spatial data available as web services. Once set up it will decrease overheads of maintaining data. All data will be kept automatically up to date.
Development of species distribution modelling (prioritise to conservation priorities)	Enable targetting of monitoring effort to understand presence / or why not of species. May be difficult to link species distribution to habitat requirements. Other software may be available. It may be beyond the capability of Atlas. Do we know enough about species?
Better capabilities of habitat and species association modelling or mapping	To quickly see spatially how species and habitats are associated for surveillance purposes, eg planning surveys
Easier to use data metrics to display number of records in NBN Atlas in each category (licence, resolution, data class etc) at UK or country level as pie charts / bar graphs etc	A regular requirement for country agencies and other statutory bodies as part of their biodiversity reporting
Better automatic record cleaning (eg preventing badgers in the sea)	There are currently records in the Atlas that are obviously wrong. It damages the credibility of all records
When uploading data in Darwin Core Format should be able to enter date ranges in separate StartDate / EndDate fields (as was the case in the NBN Exchange Format)	Start/End dates are normally recorded in separate columns in spreadsheets or databases. It is very laborious to have to combine a range of dates into a single field - the combined dates are not supported by Excel so are not searchable
Sensitive species access based on log-in	Ability for organisations to share high resolution data and for data to be used for consultants data requests if permission was given
An automated harvest	As a data provider need to make this as easy as possible.
Feedback on individual records, eg identify odd records	To allow a dialogue to discuss records
Add in for Recorder 6 for Darwin Core Export	Most LERCs in the UK use R6 for species record storage. R6 is old and being defunded, R7 is many years off (if ever). An add-in that would allow easier transfer to the Atlas would simplify data upload.
Invasive non-native species records brought into one place - like Wales [INNS portal for the Atlas]	Helpful for targetting conservation action; helpful for planning projects. Easy to do.
Citizen science functionality for transcription of records, verifications and analysis etc	Still massive quantities of analogue records need to be digitised and transcribed, eg BSBI, herbaria, museums. Functionality exists in ALA (DigiVol) and Belgium (DoeDat) NB - Herbaria at home is no longer funded.
Action data recording - knowing what action has been done and where (Difficulties in implementation!)	
recording intervention, eg habitat creation / restoration	
More marine records as currently under-represented	Not currently functioning for marine as well as terrestrial; could encourage more research; coastal developments; encourage citizen science. Do SNH have marine recorder data available? There is an increasing number of coastal community action groups in Scotland, eg Arran Seabed Trust.
Training courses to encourage greater uptake. Include examples of use from different sectors	Encourage greater use inc. data sharing; greater awareness in planning authorities
Educational tools similar to those in SEWeb, using the data in a series of case study projects	Engagement with the public to demonstrate relevance of the data and Atlas to society
Implement share file formats to include spatial data (site boundaries) for pulling out species/habitats lists	Landowners can pull out species / habitat list to compile within their management plans that directs their objectives and actions (biodiversity, conservation.....). But also consultants and LERCs.
National 'cookie cutter' in main NBN Atlas to enable users to filter on records from, eg Scotland, Wales, without having to go into separate country Atlases	Easier to use and interrogate data from across the UK (but does somewhat undermine the case for separate country Atlases).
Search results - common name - order of results	
Remote downloads / views to include purpose of access and under what licence and to ensure some re-iteration of Ts & Cs in Atlas accompanying any other map created from Atlas data streaming.	Lot of potential for accidental misuse of data (eg the Tom Bio QGIS tool where currently licence info and attribution does not follow the download)
Co-ordination of recording schemes and ease of field recording, eg Merlin, BirdTrack, iRecord, iSpot, etc	Encourage more recording, more user friendly / intuitive; better / easier data flow from making / submitting a record to seeing it on Atlas

Full integration with iRecord / iSpot / Indicia	There is a lot of duplication between systems. Why are we maintaining separate systems? Resources could be consolidated. The data would be available more quickly preventing the current backlog in data availability. At present too many records remain in iRecord for years (permanently?) without being shared on NBN. Sometimes only part of the record is transferred so valuable information is effectively lost - a loss to science and very discouraging to citizen scientists
App for direct field recording	
Mis-mapped data fields during import - caught by QC tools?	Improving data quality
Georeferencing tools automated and manual	Some large datasets are lacking lat / long or grid reference data which could be calculated from locality data. At a first sweep this could be automated but with a manual process added - being done in the USA
Habitats - EUNIS, NVC, Phase 1. Hierarchical [display]	no further information supplied
Vice-County block mapping	no further information supplied
Training programme to be developed	A regular suite of training would enable both new and more experienced users to learn more of the website's capabilities and receive regular (annual?) updates. This would ensure better use overall of the facilities and all sectors able to use the website (from citizen scientist recorders to professionals needing the data).
Automated feedback to recorders (à la BRC / CEH automated recorder text) [ie feedback when their records are downloaded]	To keep recorders engaged, motivated and valued
Language is too technical for eg filtering; trying to find presence/absence; organisation etc. Plain English needed. Some filters are in an odd place, eg 'sensitive' is under 'Location'	Makes it easier for people to use; they will use it more often if it was easier to use
Making the user interface more user friendly	While the Atlas interface is friendlier than the Gateway, it is still a little impenetrable. Clearer English, and simpler menus, would allow for a greater userbase for the portal
On filters could we have context- sensitive help (ie hover over)	To allow public access to the filters
Could specification of licence be made a requirement within any web service URL?	
Make it possible (or easier if it already exists) to make a species list (for a particular taxonomic group, or all groups) for a 10km square, tetrad, monad etc.	If you are going out to record it is useful to what has been recorded already and know where to target recording effort
Ability to filter on more than one feature for displaying and downloading records - ie multiple vice-counties, local authorities, habitats	Many counties (eg Perthshire, Lothians) comprise more than one vice county; many local / regional initiatives (such as Tayside Biodiversity Partnership) cover more than one local authority; researchers may wish to filter on records from more than one habitat at once (eg woodlands and grasslands)
Know age of the harvest rates	As a data provider need to make this as easy as possible.
More information captured from people downloading data - current info is very basic and single email address someone has registered with shown, when person could have multiple hats (eg member of public and consultant)	Only way of policing use of data is through user reports. Information it contains is insufficient to do this.
Automatic download notifications for data partners	The NBN Gateway used to send data partners download notifications, detailing who downloaded data, what they downloaded and why they download it. At the moment this can be provided monthly by Sophie Ratcliffe, but given the enforcement of CC-BY-NC licences, more active monitoring is required. Moving some of this burden on to data partners would free up NBN time.
Link with iSpot records, nature calendar, ancient tree hunt	The general public is more and more utilising this digital resource either to get species identified, share them with general public, etc. this would create more opportunities for citizen science to participate in recording and have their records shared
Signposting of deeper data sources.	Promote national monitoring schemes, eg NPMS, BBS; increase engagement; makes pages more relevant and useful; encourages and supports national and local groups and projects (this is the main benefit of separate atlases).
Ability to download spatial boundaries	Can use in internal systems or for extra analysis outside the NBN Atlas
Merge 3 different maps into one as confusing to go to which one and for what (if that is not possible have two tabs on a page, one behind the other)	Make the site easier to use for everybody.
Recording monitoring and survey effort	Identify gaps in recording; encourage partnership working - avoid duplication; encourage research into impacts of interventions; don't limit to NGOs - could government agencies also share effort, eg grant monitoring?
Identifying data needs (using negative records, databases that need updated) and helping signpost research / citizen science.	Helps allocate resource; informs future research strategies / plans; focuses effort. Negative records showing can be misleading
Make it easy to display a species density map within a taxonomic group for a chosen geographical area. This used to be possible on the Gateway but I have not found it in the Atlas.	Presenting summary information is essential for giving talks etc about a particular taxonomic group, or showing species diversity within a particular area
Allow ESRI shapefile upload for polygon searches	ESRI shapefiles are an industry standard, used by many people. WKT format is not supported by ArcGIS without advanced scripting
Draw together local / national resources - act as a one-stop-shop / shop window for recording related activities specific to Scotland / region, eg wildlife groups	Promote national monitoring schemes, eg NPMS, BBS; increase engagement; makes pages more relevant and useful; encourages and supports national and local groups and projects (this is the main benefit of separate atlases).