

ADAPTING TO CHANGE

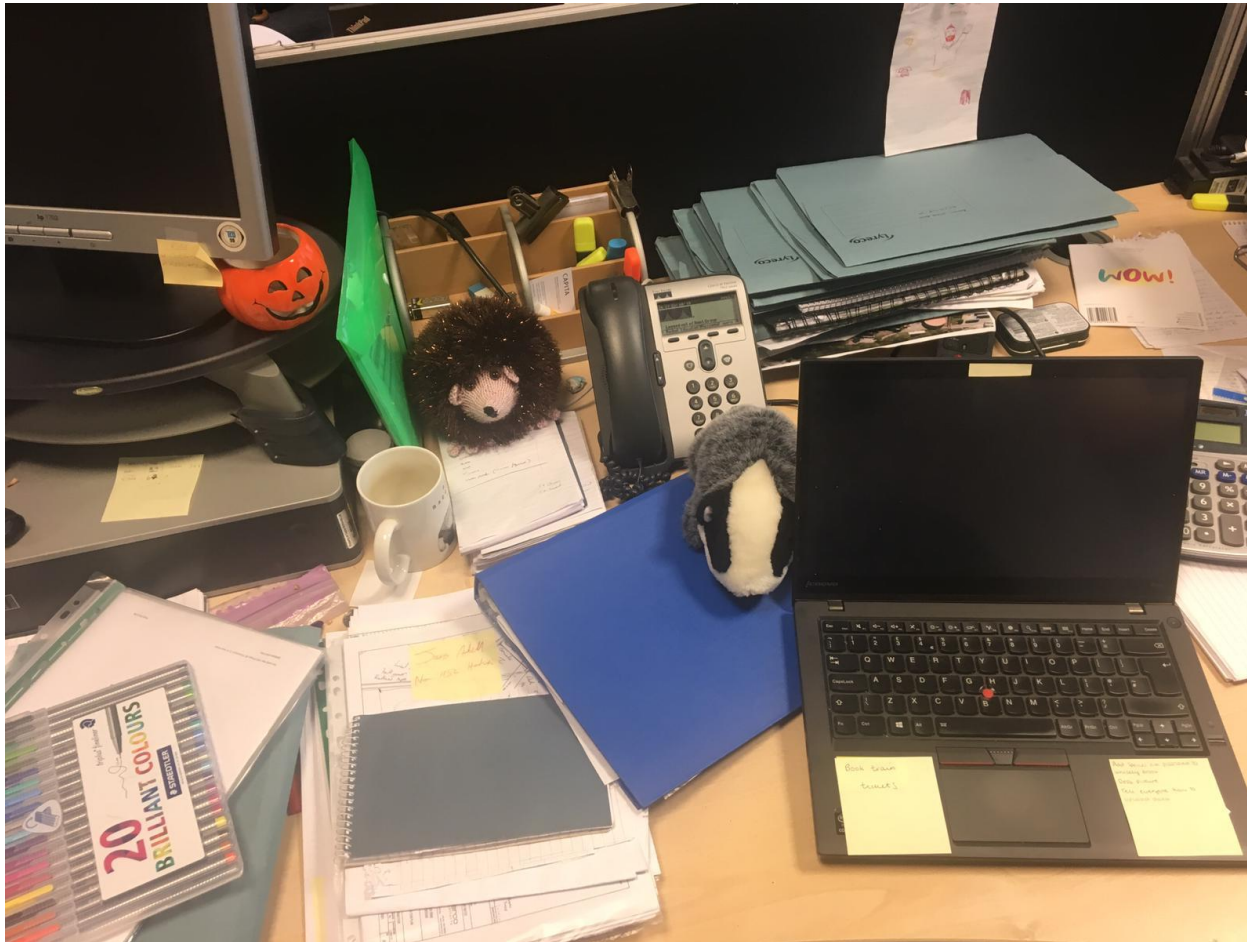
Arcadis' current and future plans relating to data collection

23/11/18

Our current data collection methods



Which results in....



What are we aiming for



What our survey forms look like

▼

Snakes

This section is a repeat. For each tin you find either a grass snake or adder under/on, could you please include the tin number and what was present. Then press the plus button after adds. This will allow you to record anything under another tin number. No need to record null results. if you see either of these species not under or top of a tin please put the tin number as 0. **Please remember to include tin number for each repeat**

Tin Number

▼ Grass Snake

Adult Female

-

×

+

Adult Male

-

×

+

Adult Unknown

-

×

+

Sub-adult

-

×

+

Juvenile

-

×

+

▼ Adder

Adult Female

-

×

+

Surveyors *

Survey Date *

9 November 2018

▼

×

StartTime *

16:00

▼

×

Location

51°27'N 2°35'W ± 1414 m

Survey Area *

Survey Visit

You can see how many previous visits were undertaken by either using collector or the inbox on survey123. If unsure, please leave blank.

Cloud *

☐ Clear (0-1/3)

☐ Patchy (1/3-2/3)

☐ Full (1)

Wind *

☐ Calm

☐ Light

☐ Breezy

Rain *

☐ Dry

☐ Drizzle

☐ Shower

Survey Data Output

- All the tablet data is output onto spreadsheets within excel

ObjectID	GlobalID	UniqueID	Tin Num	Grass sn	Grass sn	Grass sn	Grass sn	Grass sn	Adder	Adder	Adder	Adder	Adder	Adder	ParentGlobalID	Survey Area	Visit	CreationDate	Creator	EditDate	Editor		
1	42c11cdf	SA1aV1	1	0	1	0	2	0	0	0	0	0	1	0	5d5e3010-b5cc-431d-9622-f82badc0f1a	1a	1	07/02/2018 08:08	polly.tayl	07/02/2018 08:08	polly.tayler_arcadis		
2	54cfbbdf	SA1aV2	12	2	4	2	2	2	3	2	2	2	1	1	a781d129-0973-400f-85cf-af2588cb1a	1a	2	07/02/2018 09:44	hannah.t	07/02/2018 09:44	hannah.tracey_arcadis_uk		
3	c9401c9	SA1aV3	12	1	0	0	0	0	0	0	0	0	0	0	9ff63e62-9c9b-4393-a86d-8fd2acea5	1a	3	07/02/2018 09:44	polly.tayl	07/02/2018 09:44	polly.tayler_arcadis		
4	cc33b80	SA1aV3	4	0	0	0	0	0	0	0	1	0	0	0	9ff63e62-9c9b-4393-a86d-8fd2acea5	1a	3	07/02/2018 09:44	polly.tayl	07/02/2018 09:44	polly.tayler_arcadis		
5	ee338a5	SA1aV4	20	1	1	10	1	2	1	0	0	1	0	0	665f34be-0af9-4dfe-bd42-13c61856d1	1a	4	07/02/2018 09:44	polly.tayl	07/02/2018 09:44	polly.tayler_arcadis		
6	77cfe34	SA1aV4	21	2	0	0	0	0	0	0	0	0	0	0	665f34be-0af9-4dfe-bd42-13c61856d1	1a	4	07/02/2018 09:44	polly.tayl	07/02/2018 09:44	polly.tayler_arcadis		
7	9b62677	SA1aV4		0	0	0	0	0	0	0	0	0	0	0	665f34be-0af9-4dfe-bd42-13c61856d1	1a	4	07/02/2018 09:44	polly.tayl	07/02/2018 09:44	polly.tayler_arcadis		
8	8be16ca	SA1aV5	1	15	0	0	0	0	0	0	0	0	0	0	d4045602-5c3a-40af-97bd-0f0a729f	1a	5	07/02/2018 09:44	hannah.t	07/02/2018 09:44	hannah.tracey_arcadis_uk		
9	5d68ccb	SA1aV5	2	0	0	0	0	0	0	0	0	0	0	0	d4045602-5c3a-40af-97bd-0f0a729f	1a	5	07/02/2018 09:44	hannah.t	07/02/2018 09:44	hannah.tracey_arcadis_uk		
10	b4ccc67	SA1aV6	22	1	0	0	0	0	0	0	0	0	0	0	0e9adb7c-1334-4d14-8b40-cf2b5c62f1	1a	6	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
11	8932b67	SA1aV6	23	0	0	0	0	2	0	0	0	0	0	0	0e9adb7c-1334-4d14-8b40-cf2b5c62f1	1a	6	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
12	e00d4e1	SA1aV6	2	1	0	0	0	0	0	0	0	0	0	0	0e9adb7c-1334-4d14-8b40-cf2b5c62f1	1a	6	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
13	047a13c	SA1aV6	45	0	0	0	0	0	0	0	11	0	0	0	0e9adb7c-1334-4d14-8b40-cf2b5c62f1	1a	6	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
14	7a35b75	SA1aV6		0	0	0	0	0	0	0	0	0	0	0	0e9adb7c-1334-4d14-8b40-cf2b5c62f1	1a	6	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
15	a78f0e8	SA1aV7	1	1	0	0	0	0	0	0	0	1	0	0	b91a29da-4d0a-4e65-be0e-e6ae43cc	1a	7	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
16	3fb0ea1	SA1aV7	2	0	0	0	0	0	0	0	0	0	1	0	b91a29da-4d0a-4e65-be0e-e6ae43cc	1a	7	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
17	ad6aa4b	SA1aV7		0	0	0	0	0	0	0	0	0	0	0	b91a29da-4d0a-4e65-be0e-e6ae43cc	1a	7	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
18	030c67b	SA1aV7	3	0	0	0	0	0	0	0	0	0	0	0	b91a29da-4d0a-4e65-be0e-e6ae43cc	1a	7	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
19	ae31257	SA1bV3	5	1	0	0	0	0	0	0	0	0	0	0	0b1b0436-7384-4bd9-a478-a1447a1c	1b	3	07/02/2018 09:46	hannah.t	07/02/2018 09:46	hannah.tracey_arcadis_uk		
20	3b3c6ed	SA1bV3		0	0	0	0	0	0	0	0	0	0	0	0b1b0436-7384-4bd9-a478-a1447a1c	1b	3	07/02/2018 09:46	hannah.t	07/02/2018 09:46	hannah.tracey_arcadis_uk		
21	a089427	SA1bV4	1	0	1	0	2	0	3	0	0	0	0	0	41e683c5-e199-48ba-ba4a-65ae6d72	1b	4	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
22	b726b4c	SA1bV4		0	0	0	0	0	2	0	0	0	0	0	41e683c5-e199-48ba-ba4a-65ae6d72	1b	4	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
23	50dd8e1	SA1bV4		0	0	0	0	0	0	0	0	0	0	0	41e683c5-e199-48ba-ba4a-65ae6d72	1b	4	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
24	48f6f01	SA1bV5	1	1	0	0	0	0	0	0	0	0	0	0	7c3acd03-8813-44bd-902e-5bd3cdd1	1b	5	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
25	53145df	SA1bV5	3	0	1	0	0	0	0	0	0	0	0	0	7c3acd03-8813-44bd-902e-5bd3cdd1	1b	5	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
26	90a1b0b	SA1bV5	5	0	0	0	0	0	0	0	0	0	0	0	7c3acd03-8813-44bd-902e-5bd3cdd1	1b	5	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
27	c204134	SA1cV1	23	1	0	0	0	7	1	0	0	0	0	0	035fe025-236a-41ad-8420-d455efa41	1c	1	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
28	b43c773	SA1cV1		0	0	0	0	0	0	0	0	0	0	0	035fe025-236a-41ad-8420-d455efa41	1c	1	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
29	d79e084	SA1cV2	1	2	0	0	0	0	0	0	0	0	0	0	0a6a8ecf-b08d-49c0-9de9-4c079e6c	1c	2	07/02/2018 09:46	hannah.t	07/02/2018 09:46	hannah.tracey_arcadis_uk		
30	fae3557	SA1cV3	633	0	2	0	0	0	0	0	0	0	0	1	023de0a0-e36b-434d-bb99-79c358b1	1c	3	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
31	f00db5e	SA1cV4	1	0	0	0	0	0	0	0	0	1	0	0	86c7ec3c-7683-4f62-aca7-6c25b5ee	1c	4	07/02/2018 09:46	hannah.t	07/02/2018 09:46	hannah.tracey_arcadis_uk		

Where does the Darwin Core come in

- We have started to look at our current data collection methods and how we can subsequently distribute the data. This is where Darwin Core comes in
- *“Darwin Core is an extension of Dublin Core for biodiversity informatics. It is meant to provide a stable standard reference for sharing information on biological diversity”*

Darwin Core Output

What does the output of the Darwin Core look like

occurrenceID	scientificName	taxonID	eventDate	recordedBy	licence rightsHolder	coordinateUncertaintyInMeters	gridReference	decimalLatitude	decimalLongitude	datasetName
REPTTEST001	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7192729	-2.1915707	Arcadis 2018
REPTTEST002	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7193320	-2.1916563	Arcadis 2018
REPTTEST003	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7193414	-2.1916627	Arcadis 2018
REPTTEST004	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7193271	-2.1916757	Arcadis 2018
REPTTEST005	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7192642	-2.1915698	Arcadis 2018
REPTTEST006	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7193307	-2.1916539	Arcadis 2018
REPTTEST007	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7193553	-2.1916620	Arcadis 2018
REPTTEST008	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7193445	-2.1916629	Arcadis 2018
REPTTEST009	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7192804	-2.1915797	Arcadis 2018
REPTTEST010	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7209406	-2.1907782	Arcadis 2018
REPTTEST011	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7193128	-2.1914683	Arcadis 2018
REPTTEST012	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey, H Tayler, I	CC-BY Arcadis (UK) Ltd			51.7193485	-2.1917077	Arcadis 2018

datasetName	locality	basisOfRecord	identificationVerificationStatus	identifiedBy	individualCount	occurrenceStatus	occurrenceRemarks
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		1	Present	Adult male
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		2	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		8	Present	Adult males, sub adults
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		2	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		9	Present	Adult males, adult females, sub adults
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		5	Present	Adult male
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		1	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		4	Present	Adult males, sub adults
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		4	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		1	Present	Adult males, adult females, sub adults
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		5	Present	Adult male
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		1	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomt	HumanObservation	Accepted		7	Present	Adult males, sub adults

What is Different?

- The Darwin Core output requires each row to be an individual species where as our current output might have multiple species within the same row

					Grass sn.	Grass sn.	Grass sn.	Grass sn.	Grass sn.	Adder	Adder	Adder	Adder	Adder
ID	GlobalID	UniqueID	This sect	Tin Num	Adult Fer	Adult Mal	Adult Uni	Sub-adu	Juvenile	Adult Fer	Adult Mal	Adult Uni	Sub-adu	Juvenile
1	42c11odf	SA1aV1		1	0	1	0	2	0	0	0	0	1	0
2	54cfbbdf	SA1aV2		12	2	4	2	2	2	3	2	2	2	1
3	c9401c9	SA1aV3		12	1	0	0	0	0	0	0	0	0	0
4	cc33b80	SA1aV3		4	0	0	0	0	0	0	1	0	0	0
5	ee338a5	SA1aV4		20	1	1	10	1	2	1	0	0	1	0

scientificName	taxonID	recordedBy	licence	rightsHolder	coordinate decimalLatitude	coordinate decimalLongitude	basisOfRecord	identificationV	individualCount	occurrenceStatus	occurrenceRemarks
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71927291	-2.191570736	HumanObservation	Accepted	4	Present	Adult male
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71933203	-2.191656257	HumanObservation	Accepted	2	Present	Adult female
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71934138	-2.191662719	HumanObservation	Accepted	23	Present	Adult males,
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71932712	-2.191675665	HumanObservation	Accepted	4	Present	Adult female
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71926419	-2.19156978	HumanObservation	Accepted	12	Present	Adult males,
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71934309	-2.191651207	HumanObservation	Accepted	1	Present	Adult male
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71933307	-2.191653891	HumanObservation	Accepted	4	Present	Adult female
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71935528	-2.19166205	HumanObservation	Accepted	1	Present	Adult males,
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.72094062	-2.190778154	HumanObservation	Accepted	3	Present	Adult female
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71931278	-2.191468282	HumanObservation	Accepted	4	Present	Adult males,
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.7157103	-2.188463525	HumanObservation	Accepted	7	Present	Adult male
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71934847	-2.191707677	HumanObservation	Accepted	1	Present	Adult female
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71668729	-2.187509593	HumanObservation	Accepted	16	Present	Adult males,
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71858429	-2.190097756	HumanObservation	Accepted	3	Present	Adult female
Anguis fragilis	NBNORG0000008781	Tracey. H Tayler. I	CC-BY	Arcadis (UK) Ltd	51.71934882	-2.191618172	HumanObservation	Accepted	10	Present	Adult males,

- Additional columns include: Taxon ID, Licence, Rightsholder, coordinate Uncertainty In Metres, basis Of Record, identification Verification Status

What are the difficulties?

- Survey123 and Collector output is currently set as columns per species group rather than rows
- Each Survey123 or collector form is currently specific to a survey type
- We are not collecting the same data required by the Darwin Core
- Our data delivery – Clients own the data. This can affect what we can issue to NBN

What Next?

- We need to spend some time preparing new standardised survey forms to take out in the field to cut the time in office converting to Darwin Core
- We have currently only looked at compulsory fields, there is more in depth fields within Darwin Core that we could go into, to get a more detailed survey recording
- Start working closely with clients to allow us to provide the data to the NBN
- Become in a position whereby all our survey data is collected in Darwin Core format
- The ecology team to become 100% paperless!!

Thank you for listening and are there any questions?