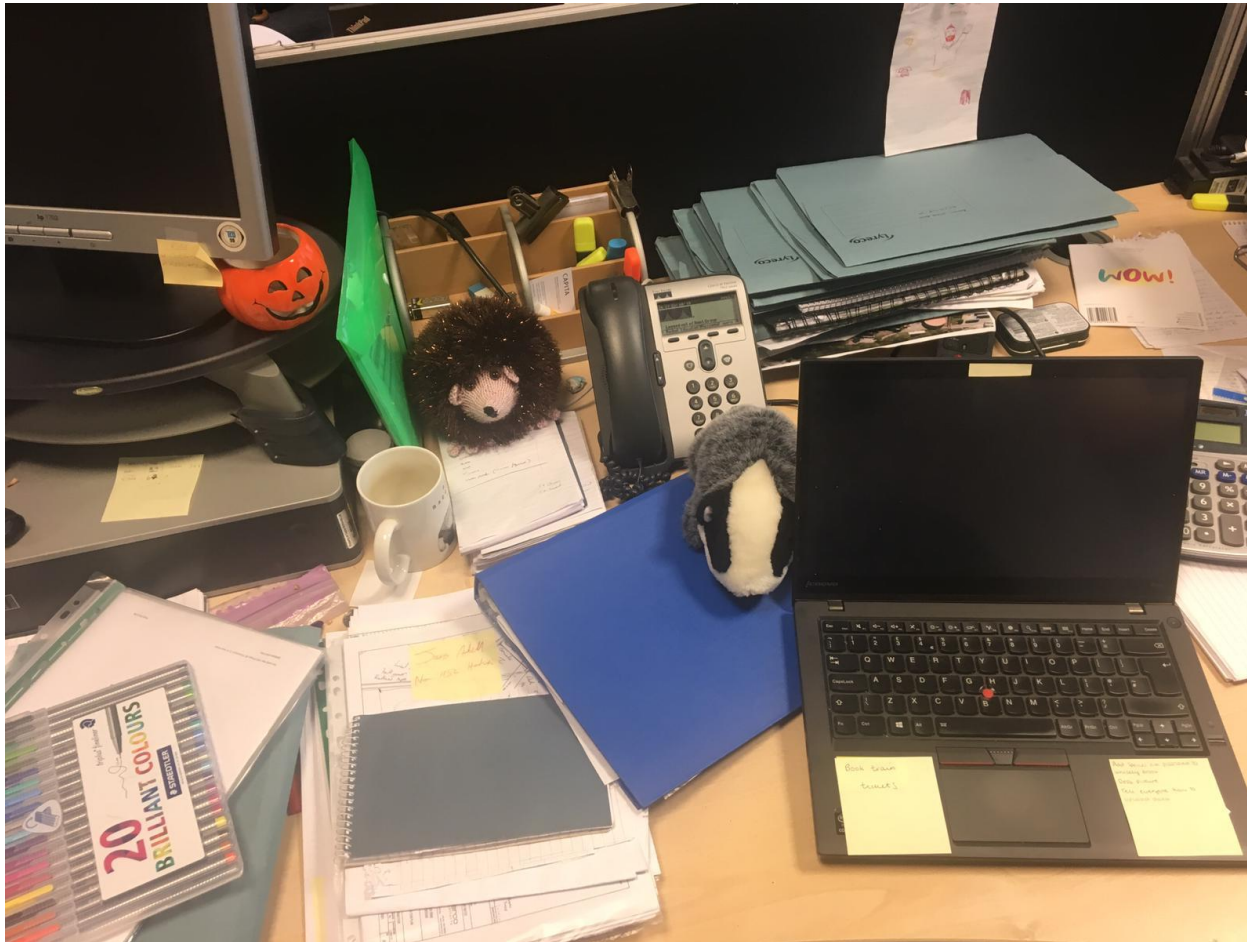# ADAPTING TO CHANGE

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

© Arcadis 2018

Survey Data Output

- All the tablet data is output onto spreadsheets within excel

ObjectID	GlobalID	UniqueID	Tin Numb	Grass sn Adult Fer	Grass sn Adult Mal	Grass sn Adult Unl	Grass sn Sub-adu	Grass sn Juvenile	Adder Adult Fer	Adder Adult Mal	Adder Adult Unl	Adder Sub-adu	Adder Juvenile	ParentGlobalID	Survey Area	Visit	CreationDate	Creator	EditDate	Editor		
1	42c11cdf	SA1aV1	1	0	1	0	2	0	0	0	0	1	0	5dde3010-b5cc-43fd-9622-f82badc08	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	a781df29-0973-400f-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	9ff63e62-9c9b-4393-a86d-8fd2acea9	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	1	0	0	0	9ff63e62-9c9b-4393-a86d-8fd2acea9	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	665f34be-0af9-4dfe-bd42-13c61856d	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	665f34be-0af9-4dfe-bd42-13c61856d	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	665f34be-0af9-4dfe-bd42-13c61856d	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	d	d4045602-5c3a-40af-97bd-0f10a7295	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	d	d4045602-5c3a-40af-97bd-0f10a7295	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	0e9adb7c-1934-4d14-8b40-cf2b5c626	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	0e9adb7c-1934-4d14-8b40-cf2b5c626	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	0e9adb7c-1934-4d14-8b40-cf2b5c626	1a	6	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
13	047a31c	SA1aV6	45	0	0	0	0	0	0	11	0	0	0	0e9adb7c-1934-4d14-8b40-cf2b5c626	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	0e9adb7c-1934-4d14-8b40-cf2b5c626	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	1	0	b	b91a29da-4d0a-4e65-be0e-e6ae43cc	1a	7	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
16	3fb0ea13	SA1aV7	2	0	0	0	0	0	0	0	0	1	b	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	b	b91a29da-4d0a-4e65-be0e-e6ae43cc	1a	7	07/02/2018 09:45	polly.tayl	07/02/2018 09:45	polly.tayler_arcadis		
18	030c676	SA1aV7	3	0	0	0	0	0	0	0	0	0	b	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	3	3b1b0436-7384-4bd3-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	3	3b1b0436-7384-4bd3-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	41e683c5-ef99-48ba-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	41e683c5-ef99-48ba-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	41e683c5-ef99-48ba-ba4a-65ae6d72	1b	4	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
24	481f6f01	SA1bV5	1	1	0	0	0	0	0	0	0	0	7	7c3acd03-8813-44bd-902e-5bd3cdb1	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	7	7c3acd03-8813-44bd-902e-5bd3cdb1	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	7	7c3acd03-8813-44bd-902e-5bd3cdb1	1b	5	07/02/2018 09:46	polly.tayl	07/02/2018 09:46	polly.tayler_arcadis		
27	c20f434	SA1cV1	23	1	0	0	0	7	1	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	b49c773	SA1cV1		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	0a6a8ecf-b08d-49c0-9de9-4c079e6	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	1	023de0a0-e36b-434d-bb99-79e358b	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	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	coordinateUncertaintyInMete	gridReferenc	decimalLatitud	decimalLongitud	datasetNam
REPTEST001	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7192729	-2.1915707	Arcadis 2018
REPTEST002	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7193320	-2.1916563	Arcadis 2018
REPTEST003	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7193414	-2.1916627	Arcadis 2018
REPTEST004	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7193271	-2.1916757	Arcadis 2018
REPTEST005	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7192642	-2.1915698	Arcadis 2018
REPTEST006	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7193307	-2.1916539	Arcadis 2018
REPTEST007	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7193553	-2.1916620	Arcadis 2018
REPTEST008	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7193445	-2.1916629	Arcadis 2018
REPTEST009	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7192804	-2.1915797	Arcadis 2018
REPTEST010	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7209406	-2.1907782	Arcadis 2018
REPTEST011	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7193128	-2.1914683	Arcadis 2018
REPTEST012	Zootoca vivipara	NBNORG0000086972	2018-02-07	Tracey. H	Tayler. I	CC-BY	Arcadis (UK) Ltd			51.7193485	-2.1917077	Arcadis 2018

d datasetName	locality	basisOfRecord	identificationVerificationStatu	identifiedB	individualCoun	occurrenceStat	occurrenceRemarks
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		1	Present	Adult male
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		2	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		8	Present	Adult males, sub adults
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		2	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		9	Present	Adult males, adult females, sub adul
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		5	Present	Adult male
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		1	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		4	Present	Adult males, sub adults
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		4	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		1	Present	Adult males, adult females, sub adul
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		5	Present	Adult male
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	Accepted		1	Present	Adult female
Arcadis 2018 training reptile tes	Brimscomb	HumanObservatic	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

- 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?