R1/3

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MFV *Rambling Rose*

Cruise 1109H

REPORT

12-31 May 2009

Ports

Loading: 12 May, Toberonochy Quay, Isle of Luing.
Half landing: Cullipool, Isle of Luing.
Unloading: 31 May, Toberonochy Quay, Isle of Luing.

Personnel

T Howell (SIC) 12 – 31 May 2009

Fishing Gear: Scallop dredges

Costs to Project: 20 days MF02Q

Objectives

- To scallop dredge at least 3 sub-sites immediately outside the Firth of Lorn SAC using a commercial charter vessel.

- To collect sediment from predetermined areas for the purposes of particle size analysis.

Narrative

The scientist joined *Rambling Rose* at Toberonochy Quay on 12 May. During the morning and early afternoon scientific equipment was loaded, the grabbing wire spooled onto a crane mounted winch, and the day grab attached. *Rambling Rose* then steamed to Cullipool and the operation of the grab tested and adjusted on route. Grab sampling started the following day: 10 grab samples were taken from the Garvelachs on behalf of the Fishing Technology & Fish Behaviour group, along with samples taken from potential sites for the experiments. Over the course of the following days *Rambling Rose*'s activities were coordinated by *Alba na Mara* which carried out a concurrent survey of potential experiment sites using digital imaging equipment (see Programme/Report 0809A). Once the experiment sites were established by *Alba na Mara, Rambling Rose* carried out a program of grab sampling of the sub-sites or scallop dredging of the impact sub-sites according to a pre-determined sampling protocol. The benthic samples were taken ashore each evening at the pontoon at Cullipool and transported to a secure dedicated store for later collection and subsequent analysis back at the Laboratory. Before dredging took place grab sampling of the first impact sub-site, and the adjacent control sub-site was carried out 14-16 May. Dredging of the first impact sub-site was

carried out between 17 – 19 May, prior to the half landing on 20 May. Thereafter dredging of the other impact sub-sites took place on 21 – 22 May and 25 – 26 May; further grab sampling took place on 22 – 24, and 27 – 30 May. After the last samples were taken on Saturday 30 May *Rambling Rose* returned to Cullipool pontoon where light items of equipment were unloaded and the scientist disembarked in order to reach the mainland that day – their being no Sunday sailings of the Luing car ferry. Unloading of the large items of equipment and their transportation to the lockable storage facility was carried out on 31 May by the crew. Collection of the sampling equipment and benthic samples from the storage facility on Luing was carried out by the transport group on 4 June.

Results

Each of the three main sites were split into 3 sub-sites according to experimental treatment: a sub-site to be impacted by dredging, and un-dredged control sub-sites inside and outside the SAC are shown in **Figure 1**. Note that site 2 in this report is equivalent to site 4 in the 0809A cruise report. For site 1 additional benthic samples were collected. They were taken from each sediment sample position on the control sub site 1.2 and from the sediment sample positions before and after impact on sub-site 1.1. The site code, date, sediment sample code, and position for all the samples are shown in **Table 1**. An asterisk in the first column of this table denotes that a benthic sample was also taken; the suffix "a" in the first part of the site code denotes samples taken after impact. The haul code, shooting position, hauling position, and date for the impact site dredge hauls are shown in **Table 2.**

Submitted:
T Howell
30 July 2009.

Approved:
I Gibb
10 August 2009.

Table 1

Site Code	Date	Sediment Code	Lat	Lon
*FoL 1.1/001	14-May	3261 SED2009	56.113157	-5.807369
*FoL 1.1/002	14-May	3262 SED2009	56.113612	-5.807046
*FoL 1.1/003	14-May	3263 SED2009	56.113487	-5.806931
*FoL 1.1/004	14-May	3264 SED2009	56.113477	-5.806904
*FoL 1.1/005	14-May	3265 SED2009	56.114002	-5.807004
*FoL 1.1/006	14-May	3266 SED2009	56.114016	-5.805787
*FoL 1.1/007	14-May	3267 SED2009	56.114860	-5.805982
*FoL 1.1/008	14-May	3268 SED2009	56.115604	-5.804923
*FoL 1.1/009	14-May	3269 SED2009	56.114940	-5.804200
*FoL 1.1/010	14-May	3270 SED2009	56.115083	-5.804748
*FoL 1.1/011	14-May	3271 SED2009	56.115474	-5.804195
*FoL 1.1/012	14-May	3272 SED2009	56.115835	-5.803846
*FoL 1.1/013	14-May	3273 SED2009	56.115950	-5.804335
*FoL 1.1/014	14-May	3274 SED2009	56.116219	-5.803900
*FoL 1.1/015	14-May	3275 SED2009	56.116199	-5.803300
*FoL 1.1/016	14-May	3276 SED2009	56.116253	-5.803282
*FoL 1.1/017	14-May	3277 SED2009	56.116241	-5.802435
*FoL 1.1/018	15-May	3278 SED2009	56.119449	-5.797773
*FoL 1.1/019	15-May	3279 SED2009	56.119411	-5.797701

FoL 1.1/020	15-May	3280 SED2009	56.119402	-5.798085
*FoL 1.1/021	15-May	3281 SED2009	56.119302	-5.798290
*FoL 1.1/022	15-May	3282 SED2009	56.119097	-5.798560
*FoL 1.1/023	15-May	3283 SED2009	56.118624	-5.797749
*FoL 1.1/024	15-May	3284 SED2009	56.119263	-5.798814
*FoL 1.1/025	15-May	3285 SED2009	56.118846	-5.798268
*FoL 1.1/026	15-May	3286 SED2009	56.118888	-5.798473
*FoL 1.1/027	15-May	3287 SED2009	56.118186	-5.798993
*FoL 1.1/028	15-May	3288 SED2009	56.118165	-5.798644
*FoL 1.1/029	15-May	3289 SED2009	56.118419	-5.799447
*FoL 1.1/030	15-May	3290 SED2009	56.118443	-5.800335
*FoL 1.1/031	15-May	3291 SED2009	56.117471	-5.800403
*FoL 1.1/032	15-May	3292 SED2009	56.117919	-5.801342
*FoL 1.1/033	15-May	3293 SED2009	56.117524	-5.801209
*FoL 1.1/034	15-May	3294 SED2009	56.117556	-5.801519
*FoL 1.1/035	15-May	3295 SED2009	56.116995	-5.801323
*FoL 1.1/036	15-May	3296 SED2009	56.117173	-5.801308
*FoL 1.1/037	15-May	3297 SED2009	56.117135	-5.801153
*FoL 1.1/038	15-May	3298 SED2009	56.117124	-5.801392
*FoL 1.1/039	15-May	3299 SED2009	56.116442	-5.803131
*FoL 1.1/040	15-May	3300 SED2009	56.116734	-5.802630
*FoL 1.2/001	16-May	3301 SED2009	56.11861	-5.79675
*FoL 1.2/002	16-May	3302 SED2009	56.11797	-5.79762
*FoL 1.2/003	16-May	3303 SED2009	56.11747	-5.79617
*FoL 1.2/004	16-May	3304 SED2009	56.11795	-5.79647
*FoL 1.2/005	16-May	3305 SED2009	56.11794	-5.79796
*FoL 1.2/006	16-May	3306 SED2009	56.11801	-5.79784
*FoL 1.2/007	16-May	3307 SED2009	56.11742	-5.79816
*FoL 1.2/008	16-May	3308 SED2009	56.11728	-5.79779
*FoL 1.2/009	16-May	3309 SED2009	56.11750	-5.79741
*FoL 1.2/010	16-May	3310 SED2009	56.11695	-5.79896
*FoL 1.2/011	16-May	3311 SED2009	56.11685	-5.79931
*FoL 1.2/012	16-May	3312 SED2009	56.11662	-5.79895
*FoL 1.2/013	16-May	3313 SED2009	56.11592	-5.79935
*FoL 1.2/014	16-May	3314 SED2009	56.11592	-5.79935
*FoL 1.2/015	16-May	3315 SED2009	56.11248	-5.80535
*FoL 1.2/016	16-May	3316 SED2009	56.11273	-5.80602
*FoL 1.2/017	16-May	3317 SED2009	56.11297	-5.80529
*FoL 1.2/018	16-May	3318 SED2009	56.11306	-5.80480
*FoL 1.2/019	16-May	3319 SED2009	56.11408	-5.80499
*FoL 1.2/020	16-May	3320 SED2009	56.11358	-5.80365
*FoL 1.2/021	16-May	3321 SED2009	56.11373	-5.80402
*FoL 1.2/022	16-May	3322 SED2009	56.11365	-5.80358
*FoL 1.2/023	16-May	3323 SED2009	56.11438	-5.80376
*FoL 1.2/024	16-May	3324 SED2009	56.11440	-5.80417
*FoL 1.2/025	16-May	3325 SED2009	56.11453	-5.80359
*FoL 1.2/026	16-May	3326 SED2009	56.11405	-5.80317
*FoL 1.2/027	16-May	3327 SED2009	56.11558	-5.80032
*FoL 1.2/028	22-May	3328 SED2009	56.114466	-5.801131
*FoL 1.2/029	22-May	3329 SED2009	56.114996	-5.800555
*FoL 1.2/030	22-May	3330 SED2009	56.116384	-5.799644
*FoL 1.2/031	22-May	3331 SED2009	56.116458	-5.800118
*FoL 1.2/032	22-May	3332 SED2009	56.116217	-5.800727
*FoL 1.2/033	22-May	3333 SED2009	56.116237	-5.800724
*FoL 1.2/034	22-May	3334 SED2009	56.116010	-5.800465
*FoL 1.2/035	22-May	3335 SED2009	56.114570	-5.803373
*FoL 1.2/036	22-May	3336 SED2009	56.115433	-5.800472
*FoL 1.2/037	22-May	3337 SED2009	56.117424	-5.796646
*FoL 1.2/038	22-May	3338 SED2009	56.117600	-5.797850
*FoL 1.1a/041	23-May	3339 SED2009	56.113202	-5.807354
*FoL 1.1a/042	23-May	3340 SED2009	56.113336	-5.807578

*FoL 1.1a/043	23-May	3341 SED2009	56.113347	-5.807665
*FoL 1.1a/044	23-May	3342 SED2009	56.113494	-5.807059
*FoL 1.1a/045	23-May	3343 SED2009	56.113750	-5.806891
*FoL 1.1a/046	23-May	3344 SED2009	56.113929	-5.806798
*FoL 1.1a/047	23-May	3345 SED2009	56.114113	-5.805832
*FoL 1.1a/048	23-May	3346 SED2009	56.114607	-5.805146
*FoL 1.1a/049	23-May	3347 SED2009	56.114787	-5.806413
*FoL 1.1a/050	23-May	3348 SED2009	56.115114	-5.805518
*FoL 1.1a/051	23-May	3349 SED2009	56.114390	-5.804753
*FoL 1.1a/052	23-May	3350 SED2009	56.114850	-5.804806
*FoL 1.1a/053	23-May	3351 SED2009	56.115094	-5.804914
*FoL 1.1a/054	23-May	3352 SED2009	56.115520	-5.804717
*FoL 1.1a/055	23-May	3353 SED2009	56.115389	-5.803351
*FoL 1.1a/056	23-May	3354 SED2009	56.115226	-5.803670
*FoL 1.1a/057	23-May	3355 SED2009	56.115161	-5.803535
*FoL 1.1a/058	23-May	3356 SED2009	56.116545	-5.801248
*FoL 1.1a/059	23-May	3357 SED2009	56.116510	-5.802067
*FoL 1.1a/060	23-May	3358 SED2009	56.116776	-5.801756
*FoL 1.1a/061	24-May	3359 SED2009	56.118024	-5.800220
*FoL 1.1a/062	24-May	3360 SED2009	56.116995	-5.801917
*FoL 1.1a/063	24-May	3361 SED2009	56.117070	-5.801885
*FoL 1.1a/064	24-May	3362 SED2009	56.116697	-5.801793
*FoL 1.1a/065	24-May	3363 SED2009	56.116361	-5.802609
*FoL 1.1a/066	24-May	3364 SED2009	56.116416	-5.802475
*FoL 1.1a/067	24-May	3365 SED2009	56.116830	-5.802836
*FoL 1.1a/068	24-May	3366 SED2009	56.116638	-5.802792
*FoL 1.1a/069	24-May	3367 SED2009	56.117337	-5.800828
*FoL 1.1a/070	24-May	3368 SED2009	56.117404	-5.801501
*FoL 1.1a/071	24-May	3369 SED2009	56.117363	-5.800287
*FoL 1.1a/072	24-May	3370 SED2009	56.118830	-5.799238
*FoL 1.1a/073	24-May	3371 SED2009	56.119261	-5.798784
*FoL 1.1a/074	24-May	3372 SED2009	56.119530	-5.797757
*FoL 1.1a/075	24-May	3373 SED2009	56.119649	-5.797700
*FoL 1.1a/076	27-May	3374 SED2009	56.117509	-5.79967
*FoL 1.1a/077	27-May	3375 SED2009	56.117653	-5.79999
*FoL 1.1a/078	27-May	3376 SED2009	56.118168	-5.79929
*FoL 1.1a/079	27-May	3377 SED2009	56.119414	-5.79682
*FoL 1.1a/080	27-May	3378 SED2009	56.118269	-5.79938
*FoL 1.2/039	27-May	3379 SED2009	56.11619	-5.79907
*FoL 1.2/040	27-May	3380 SED2009	56.11610	-5.79895
FoL 1.3/001	27-May	3381 SED2009	56.126198	-5.78331
FoL 1.3/002	27-May	3382 SED2009	56.123653	-5.78813
FoL 1.3/003	27-May	3383 SED2009	56.122109	-5.78984
FoL 1.3/004	27-May	3384 SED2009	56.120603	-5.79332
FoL 1.3/005	27-May	3385 SED2009	56.120378	-5.79412
FoL 1.3/006	27-May	3386 SED2009	56.122022	-5.79145
Fol 3.2/001	28-May	3387 SED2009	56.233409	-5.90663
Fol 3.2/002	28-May	3388 SED2009	56.233547	-5.90712
Fol 2.1/001	28-May	3389 SED2009	56.210175	-5.755874
Fol 2.1/002	28-May	3390 SED2009	56.210820	-5.755394
Fol 2.1/003	28-May	3391 SED2009	56.211663	-5.754734
Fol 2.1/004	28-May	3392 SED2009	56.212052	-5.753369
Fol 2.1/005	28-May	3393 SED2009	56.212743	-5.752040
Fol 2.1/006	28-May	3394 SED2009	56.213729	-5.752645
Fol 2.1/007	28-May	3395 SED2009	56.214408	-5.751182
Fol 2.1/008	28-May	3396 SED2009	56.215215	-5.749592
Fol 2.1/009	28-May	3397 SED2009	56.216064	-5.749105
Fol 2.1/010	28-May	3398 SED2009	56.215442	-5.750445
Fol 2.1/011	28-May	3399 SED2009	56.214042	-5.751050
Fol 2.1/012	28-May	3400 SED2009	56.212759	-5.753485
Fol 2.3/001	28-May	3401 SED2009	56.222615	-5.735641

Fol 2.3/002	28-May	3402 SED2009	56.222633	-5.735711
Fol 2.3/003	28-May	3403 SED2009	56.222962	-5.734529
Fol 2.3/004	28-May	3404 SED2009	56.224829	-5.729963
Fol 2.3/005	28-May	3405 SED2009	56.224838	-5.727991
Fol 2.3/006	28-May	3406 SED2009	56.223337	-5.731957
Fol 2.3/007	28-May	3407 SED2009	56.222401	-5.734999
Fol 2.3/008	28-May	3408 SED2009	56.224217	-5.730998
Fol 2.3/009	28-May	3409 SED2009	56.222013	-5.735998
Fol 2.3/010	28-May	3410 SED2009	56.223583	-5.733413
Fol 2.3/011	28-May	3411 SED2009	56.222312	-5.737038
Fol 2.3/012	28-May	3412 SED2009	56.221730	-5.737823
Fol 2.2/001	28-May	3413 SED2009	56.212150	-5.757562
Fol 2.2/002	28-May	3414 SED2009	56.213319	-5.756668
Fol 2.2/003	28-May	3415 SED2009	56.217531	-5.753495
Fol 2.2/004	28-May	3416 SED2009	56.218290	-5.754455
Fol 2.2/005	28-May	3417 SED2009	56.217213	-5.755345
Fol 2.2/006	28-May	3418 SED2009	56.216300	-5.754846
Fol 2.2/007	28-May	3419 SED2009	56.214783	-5.756469
Fol 2.2/008	28-May	3420 SED2009	56.214168	-5.757443
Fol 2.2/009	28-May	3421 SED2009	56.213571	-5.757714
Fol 2.2/010	28-May	3422 SED2009	56.212572	-5.757120
Fol 2.2/011	28-May	3423 SED2009	56.212816	-5.757886
Fol 2.2/012	28-May	3424 SED2009	56.215760	-5.755996
Fol 3.2/003	29-May	3425 SED2009	56.231313	-5.903442
Fol 3.2/004	29-May	3426 SED2009	56.231305	-5.903154
Fol 3.2/005	29-May	3427 SED2009	56.232101	-5.904674
Fol 3.2/006	29-May	3428 SED2009	56.233079	-5.906155
Fol 3.2/007	29-May	3429 SED2009	56.231764	-5.903759
Fol 3.2/008	29-May	3430 SED2009	56.231129	-5.903222
Fol 3.2/009	29-May	3431 SED2009	56.232715	-5.905065
Fol 3.1/001	29-May	3432 SED2009	56.228415	-5.899887
Fol 3.1/002	29-May	3433 SED2009	56.229292	-5.900689
Fol 3.1/003	29-May	3434 SED2009	56.229348	-5.901487
Fol 3.1/004	29-May	3435 SED2009	56.229991	-5.902435
Fol 3.1/005	29-May	3436 SED2009	56.229638	-5.903062
Fol 3.1/006	29-May	3437 SED2009	56.229205	-5.900459
Fol 3.1/007	29-May	3438 SED2009	56.228478	-5.899531
Fol 3.1/008	29-May	3439 SED2009	56.229316	-5.901127
Fol 3.1/009	29-May	3440 SED2009	56.230178	-5.902332
Fol 3.1/010	29-May	3441 SED2009	56.230236	-5.904181
Fol 3.1/011	29-May	3442 SED2009	56.228213	-5.899801
Fol 3.1/012	29-May	3443 SED2009	56.228593	-5.899324
Fol 3.3/001	29-May	3444 SED2009	56.227347	-5.890308
Fol 3.3/002	29-May	3445 SED2009	56.227295	-5.891010
Fol 3.3/003	29-May	3446 SED2009	56.227418	-5.892363
Fol 3.3/004	29-May	3447 SED2009	56.227086	-5.888600
Fol 3.3/005	29-May	3448 SED2009	56.227739	-5.891243
Fol 3.3/006	29-May	3449 SED2009	56.227137	-5.891763
Fol 3.3/007	29-May	3450 SED2009	56.227700	-5.890556
Fol 3.3/008	29-May	3451 SED2009	56.227993	-5.897495
Fol 3.3/009	29-May	3452 SED2009	56.227925	-5.897719
Fol 3.3/010	29-May	3453 SED2009	56.227312	-5.890225
Fol 3.3/011	29-May	3454 SED2009	56.227138	-5.889369
Fol 3.3/012	29-May	3455 SED2009	56.227197	-5.892397
Fol 3.2/010	29-May	3456 SED2009	56.233584	-5.907527
Fol 3.2/011	29-May	3457 SED2009	56.233263	-5.906756
Fol 3.2/012	29-May	3458 SED2009	56.232959	-5.906284
FoL 1.3/007	30-May	3459 SED2009	56.119887	-5.793580
FoL 1.3/008	30-May	3460 SED2009	56.122828	-5.790451
FoL 1.3/009	30-May	3461 SED2009	56.121549	-5.790333
FoL 1.3/010	30-May	3462 SED2009	56.122852	-5.789609

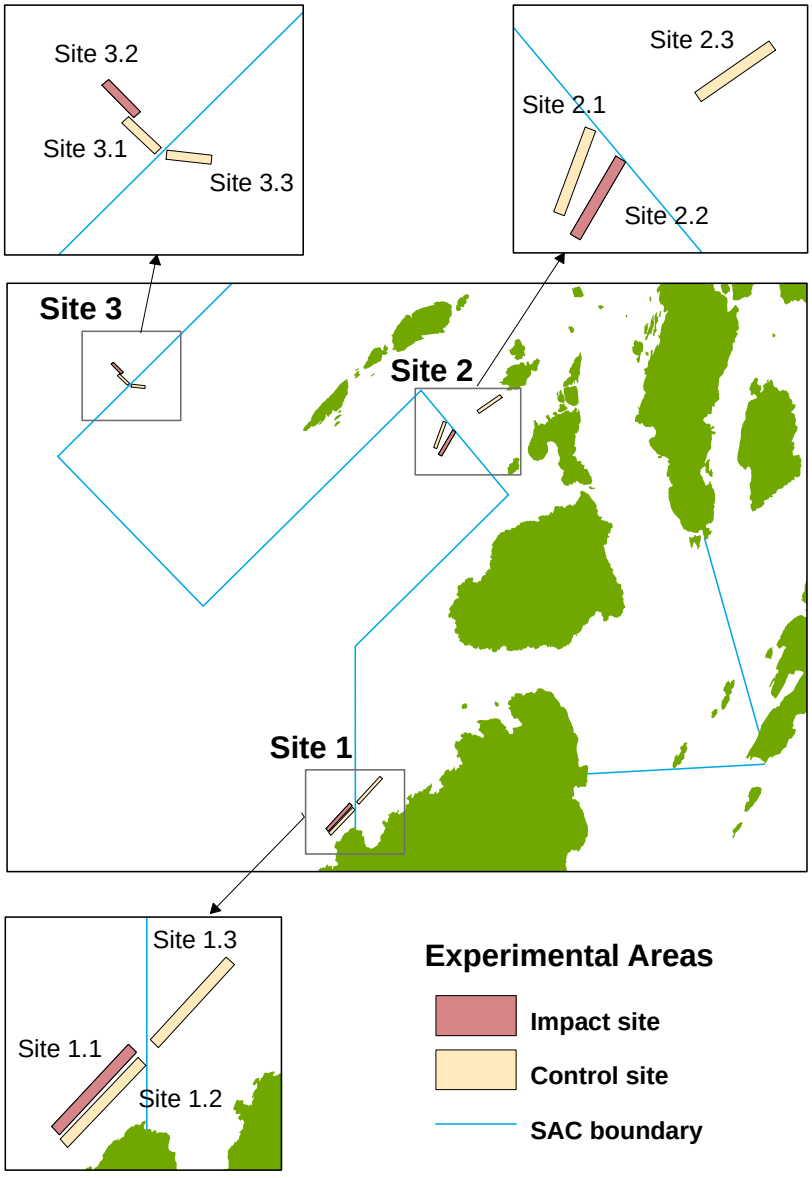
FoL 1.3/011	30-May	3463 SED2009	56.122255	-5.789001
FoL 1.3/012	30-May	3464 SED2009	56.124281	-5.787731

Table 2

Haul Code	Shooting position		Hauling position		Date
	Latitude	Longitude	Latitude	Longitude	
Impact/1.1.01	56.114251	-5.806445	56.119952	-5.797401	17-May
Impact/1.1.02	56.113022	-5.807887	56.120003	-5.797062	17-May
Impact/1.1.03	56.112751	-5.807553	56.120021	-5.796920	17-May
Impact/1.1.04	56.112871	-5.807512	56.119884	-5.796778	17-May
Impact/1.1.05	56.113443	-5.808325	56.119511	-5.796342	17-May
Impact/1.1.06	56.113502	-5.807644	56.119608	-5.796549	17-May
Impact/1.1.07	56.113264	-5.808454	56.119590	-5.796370	17-May
Impact/1.1.08	56.112849	-5.807907	56.119804	-5.796590	17-May
Impact/1.1.09	56.113222	-5.808321	56.119751	-5.796478	17-May
Impact/1.1.10	56.113364	-5.808468	56.120043	-5.797059	18-May
Impact/1.1.11	56.113265	-5.808147	56.119993	-5.796953	18-May
Impact/1.1.12	56.113182	-5.808027	56.119911	-5.796732	18-May
Impact/1.1.13	56.113139	-5.807851	56.119899	-5.796539	18-May
Impact/1.1.14	56.113062	-5.807739	56.119816	-5.796398	18-May
Impact/1.1.15	56.113040	-5.807556	56.119695	-5.796309	18-May
Impact/1.1.16	56.112787	-5.807697	56.119435	-5.796410	18-May
Impact/1.1.17	56.112690	-5.807617	56.119730	-5.796417	18-May
Impact/1.1.18	56.113442	-5.808184	56.120194	-5.796911	18-May
Impact/1.1.19	56.113229	-5.808233	56.120136	-5.796265	18-May
Impact/1.1.20	56.112777	-5.807587	56.119457	-5.796174	19-May
Impact/1.1.21	56.112919	-5.807487	56.119704	-5.796279	19-May
Impact/1.1.22	56.112966	-5.807720	56.119800	-5.796343	19-May
Impact/1.1.23	56.113035	-5.807937	56.119895	-5.796416	19-May
Impact/1.1.24	56.113051	-5.808056	56.120117	-5.796280	19-May
Impact/1.1.25	56.113227	-5.808138	56.119996	-5.796750	19-May
Impact/1.1.26	56.113157	-5.808435	56.120086	-5.796851	19-May
Impact/3.2.01	56.23123	-5.90236	56.233901	-5.907309	21-May
Impact/3.2.02	56.2312	-5.902798	56.233837	-5.907329	21-May
Impact/3.2.03	56.23102	-5.902826	56.233774	-5.907509	21-May
Impact/3.2.04	56.23135	-5.902353	56.234109	-5.907158	21-May
Impact/3.2.05	56.23137	-5.902463	56.234116	-5.907311	21-May
Impact/3.2.06	56.23105	-5.90306	56.23364	-5.907604	21-May
Impact/3.2.07	56.2315	-5.902359	56.233811	-5.907351	21-May
Impact/3.2.08	56.23122	-5.902629	56.233874	-5.907491	21-May
Impact/3.2.09	56.23113	-5.902699	56.233672	-5.907842	21-May
Impact/3.2.10	56.23129	-5.902208	56.234141	-5.907065	21-May
Impact/3.2.11	56.23127	-5.902608	56.233927	-5.907436	21-May
Impact/3.2.12	56.2311	-5.902766	56.234229	-5.907028	21-May
Impact/3.2.13	56.23105	-5.90295	56.233911	-5.90778	21-May
Impact/3.2.14	56.23122	-5.902419	56.234212	-5.906981	21-May
Impact/3.2.15	56.23112	-5.902792	56.23421	-5.907043	21-May
Impact/3.2.16	56.23103	-5.902714	56.233877	-5.907519	22-May
Impact/3.2.17	56.23112	-5.902529	56.233909	-5.907256	22-May
Impact/3.2.18	56.23095	-5.903018	56.233614	-5.908013	22-May
Impact/3.2.19	56.23105	-5.902606	56.233757	-5.90758	22-May
Impact/3.2.20	56.23108	-5.902763	56.233838	-5.907518	22-May
Impact/3.2.21	56.2314	-5.90229	56.233788	-5.907816	22-May
Impact/3.2.22	56.23111	-5.90243	56.233832	-5.907675	22-May
Impact/2.1.01	56.21612	-5.74869	56.20956	-5.75550	25-May
Impact/2.1.02	56.21623	-5.74903	56.20968	-5.75561	25-May
Impact/2.1.03	56.21625	-5.74956	56.20980	-5.75592	25-May
Impact/2.1.04	56.21628	-5.74928	56.20999	-5.75653	25-May

Impact/2.1.05	56.21633	-5.74959	56.20997	-5.75627	25-May
Impact/2.1.06	56.21676	-5.74946	56.21000	-5.75642	25-May
Impact/2.1.07	56.21638	-5.74908	56.20982	-5.75569	25-May
Impact/2.1.08	56.21639	-5.74950	56.20973	-5.75543	25-May
Impact/2.1.09	56.21640	-5.74927	56.20989	-5.75603	25-May
Impact/2.1.10	56.21626	-5.74911	56.20974	-5.75555	25-May
Impact/2.1.11	56.21627	-5.74879	56.20991	-5.75614	25-May
Impact/2.1.12	56.21652	-5.74995	56.20977	-5.75608	25-May
Impact/2.1.13	56.21648	-5.74991	56.21001	-5.75666	26-May
Impact/2.1.14	56.21641	-5.74963	56.21014	-5.75633	26-May
Impact/2.1.15	56.21635	-5.74927	56.20989	-5.75604	26-May
Impact/2.1.16	56.21631	-5.74920	56.20978	-5.75595	26-May
Impact/2.1.17	56.21633	-5.74911	56.20976	-5.75543	26-May
Impact/2.1.18	56.21620	-5.74900	56.20947	-5.75538	26-May
Impact/2.1.19	56.21600	-5.74884	56.20975	-5.75577	26-May
Impact/2.1.20	56.21617	-5.74857	56.20969	-5.75563	26-May
Impact/2.1.21	56.21641	-5.74971	56.20963	-5.75533	26-May
Impact/2.1.22	56.21648	-5.74996	56.20989	-5.75574	26-May
Impact/2.1.23	56.21652	-5.74981	56.20999	-5.75616	26-May
Impact/2.1.24	56.21659	-5.74915	56.20979	-5.75574	26-May
Impact/2.1.25	56.21648	-5.74914	56.20981	-5.75577	26-May
Impact/2.1.26	56.21640	-5.74999	56.20989	-5.75548	26-May

Figure 1


Site 3.2
Site 3.1
Site 3.3
Site 2.3
Site 2.1
Site 2.2
Site 3
Site 2
Site 1
Site 1.3
Site 1.1
Site 1.2
Experimental Areas
Impact site
Control site
SAC boundary