

GEN 1 General planning principle: The newly licenced sites will use existing longlines and infrastructure of a fallow mussel farm and as such add no further burden to the planning principles

GEN 2 Economic benefit: Algae cultivation is a new venture in this geographical area and as such inputs a new income to the local and national economy

GEN 3 Social benefit: The use of existing longlines and infrastructure to grow algae during fallow periods of mussel farming, allow a more sustainable employment to local workers who would otherwise struggle

GEN 4 Co-existence: As part of an existing network of aquaculture farms, this alga cultivation project sits comfortably with other developments in the area.

GEN 5 Climate change: Algae cultivation requires no more than clean water and sunshine to produce the crop. As such there is little more required beyond the seeding at the beginning and harvesting at the end that require fossil fuels. There are no feed or treatment inputs throughout the process. The carbon captured during the growing period is short term current carbon with little sequestration value.

GEN 6 Historic environment: As we will be using existing longlines and infrastructure, no additional impacts will be felt on the local environment

GEN 7 Landscape/seascape: As GEN 6

GEN 8 Coastal process and flooding: As GEN 6

GEN 9 Natural heritage: As GEN 6

GEN 10 Invasive non-native species: All vessels, equipment and personnel will strictly follow current Biosecurity plans already in place. The algae species being cultivated are native and are found locally on rocky foreshores and harbours.

GEN 11 Marine litter: Any waste generated from the project will be disposed of ashore through local, certified commercial waste disposal. There are no Special Waste requirement envisaged.

GEN 12 Water quality and resource: There are no fresh water needs or waste water created from the algae cultivation. Seawater around the growing area will improve as nutrient loading in the water is taken up by the plants.

GEN 13 Noise: We envisage no additional noise pollution from this project.

GEN 14 Air quality: We envisage no impact on local air quality from this project.

GEN 15 Planning alignment: The use of existing longlines and infrastructure means that there is no addition pressure on the local environment at the shore facilities or the local roads and villages. The deployment and harvest season is short (2 to 3 weeks in total) and will require only a few vehicles to move the harvest on to processing.

GEN 16 Planning alignment B: As GEN 15

GEN 17 Fairness: The algae cultivation will be a lower impact on other marine users than the previous shellfish cultivation.

GEN 18 Engagement: Local engagement will be undertaken from the beginning and throughout the project.

GEN 19 Sound evidence: This project is a scaled-up version of trials conducted through New Wave Foods (NWF) earlier this year, will retain NWF as partners and be conducted by staff with advanced scientific knowledge in this emerging field.

GEN 20 Adaptive management: Robust management of the project will be undertaken by staff with decades of Aquaculture experience.

GEN 21 Cumulative impacts: Algae cultivation amongst the existing Fin-fish Farms in the area will be seen an ecosystem benefit and may forward the ground breaking multi-trophic aquaculture ideals.

Coordinates – Walter Speirs Mussel Farms, Loch Etive

Maps in separate document

Compiled by Mark Steward – April 2014

SITE 1 – (AR2-29-21)

Planning area

	WGS84			OSGB36	
	Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
NW corner	56°27'21.18"N 5°18'33.48"W	56° 27.353N 005° 18.558W*	56.4559 -5.3093	NM9617934216	196179 734216
NE corner	56°27'21.18"N 5°18'27.96"W	56° 27.353N 005° 18.466W	56.4559 -5.3078	NM9627234212	196272 734212
SW corner	56°27'17.94"N 5°18'33.48"W	56° 27.299N 005° 18.558W	56.4550 -5.3093	NM9617434116	196174 734116
SE corner	56°27'17.94"N 5°18'27.96"W	56° 27.299N 005° 18.466W	56.4550 -5.3078	NM9626734112	196267 734112

*note that coordinate 4 (NW corner) of Crown Estate lease area is incorrect and has been corrected in the table above

Equipment

10, 10x10m mussel rafts

		WGS84			OSGB36	
		Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
Row 1 (5x1 rafts)	NW corner	56°27'20.264"N 5°18'32.294"W	56 27.33774 -5 18.538236	56.455629 -5.3089706	NM9619834185	196198 734185
	NE corner	56°27'20.279"N 5°18'29.373"W	56 27.33798 -5 18.489552	56.455633 -5.3081592	NM9624834183	196248 734183
	SE corner	56°27'19.955"N 5°18'29.345"W	56 27.33258 -5 18.489084	56.455543 -5.3081514	NM9624834173	196248 734173
	SW corner	56°27'19.94"N 5°18'32.266"W	56 27.33234 -5 18.537768	56.455539 -5.3089628	NM9619834175	196198 734175
Row 2 (5x1 rafts)	NW corner	56°27'19.296"N 5°18'32.268"W	56 27.3216 -5 18.537804	56.455360 -5.3089634	NM9619734155	196197 734155
	NE corner	56°27'19.307"N 5°18'29.347"W	56 27.32178 -5 18.48912	56.455363 -5.3081520	NM9624734153	196247 734153
	SE corner	56°27'18.95"N 5°18'29.375"W	56 27.31584 -5 18.489576	56.455264 -5.3081596	NM9624634142	196246 734142
	SW corner	56°27'18.94"N 5°18'32.296"W	56 27.31566 -5 18.53826	56.455261 -5.3089710	NM9619634144	196196 734144

Centre point of site

OSGB		WGS84 (lat/long)	
XY	Grid reference	Degrees, Decimal Minutes	Decimal Degrees
196221.97 734165.10	NM9622134165	56 27.3276 -5 18.51495	56.455460 -5.3085825

SITE 2 – (AR2-30-31)

Planning area

	WGS84			OSGB36	
	Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
NW corner	56°27'25.2"N 5°18'20.64"W	56° 27.420N 005° 18.344W	56.4570 -5.3057	NM9640734328	196407 734328
SE corner	56°27'23.76"N 5°18'0.78"W	56° 27.396N 005° 18.013W	56.4566 -5.3002	NM9674334267	196743 734267
SW corner	56°27'19.74"N 5°18'21.24"W	56° 27.329N 005° 18.354W	56.4555 -5.3059	NM9638634162	196386 734162

Equipment

5, 10x10m mussel rafts + 4, 200m longlines

		WGS84			OSGB36	
		Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
Block of rafts (5x1 config)	NW corner	56°27'19.588"N 5°18'14.058"W	56 27.32646 -5 18.2343	56.455441 -5.3039050	NM9650934149	196509.561 734149.162
	NE corner	56°27'21.031"N 5°18'10.794"W	56 27.35052 -5 18.179898	56.455842 -5.3029983	NM9656734191	196567.311 734191.105
	SE corner	56°27'20.750"N 5°18'10.419"W	56 27.34584 -5 18.173646	56.455764 -5.3028941	NM9657334182	196573.778 734182.662
	SW corner	56°27'19.303"N 5°18'13.683"W	56 27.32172 -5 18.228048	56.455362 -5.3038008	NM9651534140	196515.758 734140.45
Longline 1	W point	56°27'24.293"N 5°18'17.156"W	56 27.40488 -5 18.28593	56.456748 -5.3047655	NM9646334297	196463.298 734297.926
	E point	56°27'23.472"N 5°18'5.453"W	56 27.39120 -5 18.090888	56.456520 -5.3015148	NM9666234262	196662.835 734262.404
Longline 2	W point	56°27'23.641"N 5°18'17.275"W	56 27.39402 -5 18.28791	56.456567 -5.3047985	NM9646034277	196460.228 734277.753
	E point	56°27'22.820"N 5°18'5.572"W	56 27.38034 -5 18.092868	56.456339 -5.3015478	NM9665934242	196659.327 734242.231
Longline 3	W point	56°27'23.022"N 5°18'17.455"W	56 27.38370 -5 18.29091	56.456395 -5.3048485	NM9645634258	196456.939 734258.018
	E point	56°27'22.172"N 5°18'5.691"W	56 27.36954 -5 18.094848	56.456159 -5.3015808	NM9665634222	196656.038 734222.496
Longline 4	W point	56°27'22.306"N 5°18'17.626"W	56 27.37176 -5 18.293766	56.456196 -5.3048961	NM9645234236	196452.773 734236.749
	E point	56°27'21.488"N 5°18'5.865"W	56 27.35814 -5 18.097758	56.455969 -5.3016293	NM9665234201	196652.31 734201.446

Centre point of site

OSGB		WGS84 (lat/long)	
XY	Grid reference	Degrees, Decimal Minutes	Decimal Degrees
196545.887 734226.641	NM9654534226	56 27.36882 -5 18.202914	56.456147 -5.3033819

SITE 3 – (AR2-29-6)

Planning area

	WGS84			OSGB	
	Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
NW corner	56°27'23.28"N 5°17'58.14"W	56° 27.388N 005° 17.969W	56.4565 -5.2995	NM9678634254	196786 734254
NE corner	56°27'17.28"N 5°17'24.3"W	56° 27.288N 005° 17.405W	56.4548 -5.2901	NM9735634037	197356 734037
SE corner	56°27'14.7"N 5°17'28.98"W	56° 27.245N 005° 17.483W	56.4541 -5.2914	NM9727233963	197272 733963

Equipment

10, 10x10m rafts + 2, 200m longlines + 1, 300m longline

		WGS84			OSGB36	
		Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
Block of rafts (5x1 config)	NW corner	56°27'20.171"N 5°17'47.165"W	56 27.33618 -5 17.786082	56.455603 -5.2964347	NM9697034145	196970.595 734145.54
	NE corner	56°27'18.738"N 5°17'39.092"W	56 27.31230 -5 17.651526	56.455205 -5.2941921	NM9710634094	197106.109 734094.107
	SE corner	56°27'18.410"N 5°17'39.239"W	56 27.30684 -5 17.653980	56.455114 -5.2942330	NM9710334084	197103.128 734084.864
	SW corner	56°27'19.876"N 5°17'47.315"W	56 27.33126 -5 17.788578	56.455521 -5.2964763	NM9696734136	196967.167 734136.148
Longline 1 (300m)	W point	56°27'21.751"N 5°17'51.042"W	56 27.36252 -5 17.850708	56.456042 -5.2975118	NM9690634197	196906.181 734197.385
	E point	56°27'18.587"N 5°17'33.760"W	56 27.30978 -5 17.562672	56.455163 -5.2927112	NM9719734085	197197.778 734085.901
Longline 2 (200m)	W point	56°27'19.642"N 5°17'48.931"W	56 27.32736 -5 17.815512	56.455456 -5.2969252	NM9693934130	196939.108 734130.882
	E point	56°27'17.640"N 5°17'37.769"W	56 27.29400 -5 17.629488	56.454900 -5.2938248	NM9712734059	197127.128 734059.447
Longline 3 (200m)	W point	56°27'19.177"N 5°17'49.241"W	56 27.31962 -5 17.82069	56.455327 -5.2970115	NM9693334116	196933.891 734116.836
	E point	56°27'17.179"N 5°17'38.022"W	56 27.28632 -5 17.633694	56.454772 -5.2938949	NM9712234045	197122.312 734045.802

Centre point of site

OSGB		WGS84 (lat/long)	
XY	Grid reference	Degrees, Decimal Minutes	Decimal Degrees
197047.82 734068.349	NM9704734068	56 27.29676 -5 17.707656	56.454946 -5.2951276

SITE 4 – Muckairn (AR2-29-6)

Planning area

	WGS84			OSGB36	
	Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
NW corner	56°27'11.64"N 5°17'3.6"W	56° 27.194N 005° 17.060W	56.4532 -5.2843	NM9770533842	197705 733842
NE corner	56°27'10.14"N 5°16'44.04"W	56° 27.169N 005° 16.734W	56.4528 -5.2789	NM9803533781	198035 733781
SE corner	56°27'6.6"N 5°16'45.48"W	56° 27.110N 005° 16.758W	56.4518 -5.2793	NM9800533671	198005 733671
SW corner	56°27'8.1"N 5°17'4.74"W	56° 27.135N 005° 17.079W	56.4523 -5.2847	NM9767533743	197675 733743

Equipment

3, 200m longlines

		WGS84			OSGB36	
		Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
Longline 1	W point	56°27'10.393"N 5°16'59.797"W	56 27.17322 -5 16.996614	56.452887 -5.2832769	NM9776633804	197766.015 733804.557
	E point	56°27'9.432"N 5°16'48.376"W	56 27.1572 -5 16.80627	56.452620 -5.2801045	NM9796033765	197960.637 733765.045
Longline 2	W point	56°27'9.443"N 5°17'0.182"W	56 27.15738 -5 17.00304	56.452623 -5.2833840	NM9775833775	197758.178 733775.821
	E point	56°27'8.453"N 5°16'48.759"W	56 27.14088 -5 16.812648	56.452348 -5.2802108	NM9795233735	197952.147 733735.656
Longline 3	W point	56°27'8.496"N 5°17'0.626"W	56 27.1416 -5 17.010438	56.452360 -5.2835073	NM9774933746	197749.688 733746.106
	E point	56°27'7.47"N 5°16'49.142"W	56 27.1245 -5 16.819032	56.452075 -5.2803172	NM9794433705	197944.31 733705.94

Centre point of site

OSGB		WGS84 (lat/long)	
XY	Grid reference	Degrees, Decimal Minutes	Decimal Degrees
197850.10 733761.24	NM9785033761		

SITE 5 – Muckairn (AR2-29-15)

Planning area

	WGS84			OSGB36	
	Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
NW corner	56°27'31.86"N 5°18'46.02"W	56° 27.531N 005° 18.767W	56.4586 -5.3128	NM9597834527	195978 734527
NE corner	56°27'24.6"N 5°18'34.08"W	56° 27.410N 005° 18.568W	56.4568 -5.3095	NM9617234317	196172 734317
SE corner	56°27'20.22"N 5°18'42.54"W	56° 27.337N 005° 18.709W	56.4556 -5.3118	NM9602434190	196024 734190
SW corner	56°27'28.14"N 5°18'55.38"W	56° 27.469N 005° 18.923W	56.4578 -5.3154	NM9581434446	195814 734446

Equipment

12, 10x10m rafts

		WGS84			OSGB36	
		Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
Row 1 (6x1 rafts)	NW corner	56°27'28.505"N 5°18'42.539"W	56 27.47508 -5 18.708978	56.457918 -5.3118163	NM9630534448	196035.829 734448.037
	NE corner	56°27'26.561"N 5°18'38.979"W	56 27.44268 -5 18.649656	56.457378 -5.3108276	NM9609334385	196093.38 734385.877
	SE corner	56°27'26.32"N 5°18'39.426"W	56 27.43866 -5 18.657102	56.457311 -5.3109517	NM9608534378	196085.781 734378.901
	SW corner	56°27'28.235"N 5°18'42.925"W	56 27.47058 -5 18.71541	56.457843 -5.3119235	NM9602834440	196028.355 734440.937
Row 2 (6x1 rafts)	NW corner	56°27'27.925"N 5°18'43.541"W	56 27.46542 -5 18.725676	56.457757 -5.3120946	NM9601734431	196017.642 734431.594
	NE corner	56°27'26.014"N 5°18'39.984"W	56 27.43356 -5 18.666402	56.457226 -5.3111067	NM9607534369	196075.691 734369.434
	SE corner	56°27'25.776"N 5°18'40.373"W	56 27.4296 -5 18.672876	56.457160 -5.3112146	NM9606834362	196068.466 734362.832
	SW corner	56°27'27.688"N 5°18'43.929"W	56 27.46146 -5 18.73215	56.457691 -5.3122025	NM9601034424	196010.168 734424.618

Centre point of site

OSGB		WGS84 (lat/long)	
XY	Grid reference	Degrees, Decimal Minutes	Decimal Degrees
195997.95 734374.11	NM9599734374	56 27.43422 -5 18.74244	56.457237 -5.3123740

Millar P (Peter)

From: stevie jarron [REDACTED]
Sent: 27 September 2017 10:01
To: MS Marine Licensing
Cc: Walter Speirs
Subject: Muckairn Mussels seaweed consent application
Attachments: Muckairn Mussels Seaweed application - General planning principles.docx; Muckairn Mussels Seaweed application - Method Statement.docx; Site coordinates - Muckairn Mussels, Loch Etive (April 2014).pdf; Site maps - Muckairn Mussels (April 2014).pdf; Algae license application Muckairn Mussels.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Dear MS-LOT,

Please find attached the application and supporting documentation for the licensing of Muckairn Mussels to add algae cultivation to their consent.

Please send me details of the BACS payment details for the £56 licensing process fee and I will pay immediately.

Any issues with the application, please contact me directly at any time.

Regards Stevie

[REDACTED]
01852 300 056



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has been swept for the presence of computer viruses.

Millar P (Peter)

From: MS Marine Licensing
Sent: 03 October 2017 15:15
To: 'stevie jarron'
Cc: Walter Speirs
Subject: RE: Muckairn Mussels seaweed consent application

Follow Up Flag: Follow up
Flag Status: Completed

Dear Stevie,

Under Part 4, section 25(1) of The Marine (Scotland) Act 2010 (the Act), Scottish Ministers may require an application for a marine licence to be made in such form as they may determine. Under Part 4, section 25(3) of the Act, Scottish Ministers may require an applicant to supply such information and produce such articles as in their opinion may be necessary to enable them to determine the application. In addition under Part 4 section 25(6) of the Act, if an applicant fails to comply with a requirement made by the Scottish Ministers under this section, the Ministers may refuse to proceed with the application or refuse to proceed with it until the failure is remedied.

I refer to your application for a marine licence received 27 September 2017 in respect of the above proposal. Further to checking your application it is considered to be invalid for the reason listed below:

- One application form is not sufficient for all five sites

We require a separate application form for each of the five sites. The five sites detailed in the application have previously been granted separate marine licences therefore a new application is required to be submitted for each individual site. Please ensure each of the new application forms are signed and dated. In addition, please detail the specific number of longlines which will be present at each site. Please also note there will be a licence fee for each application submitted.

Link to our fee structure: <http://www.gov.scot/Topics/marine/Licensing/marine/feestructure>

If I do not hear from you within a period of 2 months from this email, I shall assume you no longer intend to proceed with your applications.

Kind Regards,

Sophia

Marine Scotland - Marine Planning & Policy

Scottish Government | Marine Laboratory | 375 Victoria Road | Aberdeen | AB11 9DB

General Queries: +44 (0)1224 295 579

General Email: MS.marinelicensing@gov.scot

Website: <http://www.gov.scot/Topics/marine/Licensing/marine>

Frequently
Asked
Questions

From: stevie jarron [REDACTED]
Sent: 27 September 2017 10:01
To: MS Marine Licensing
Cc: Walter Speirs
Subject: Muckairn Mussels seaweed consent application

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Please send me details of the BACS payment details for the £56 licensing process fee and I will pay immediately.

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Regards Stevie

[REDACTED]
01852 300 056



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Muckairn Mussels Seaweed application – General Planning Principles

GEN 1 General planning principle: The newly licenced sites will use existing longlines and infrastructure of a fallow mussel farm and as such add no further burden to the planning principles

GEN 2 Economic benefit: Algae cultivation is a new venture in this geographical area and as such inputs a new income to the local and national economy

GEN 3 Social benefit: The use of existing longlines and infrastructure to grow algae during fallow periods of mussel farming, allow a more sustainable employment to local workers who would otherwise struggle

GEN 4 Co-existence: As part of an existing network of aquaculture farms, this alga cultivation project sits comfortably with other developments in the area.

GEN 5 Climate change: Algae cultivation requires no more than clean water and sunshine to produce the crop. As such there is little more required beyond the seeding at the beginning and harvesting at the end that require fossil fuels. There are no feed or treatment inputs throughout the process. The carbon captured during the growing period is short term current carbon with little sequestration value.

GEN 6 Historic environment: As we will be using existing longlines and infrastructure, no additional impacts will be felt on the local environment

GEN 7 Landscape/seascape: As GEN 6

GEN 8 Coastal process and flooding: As GEN 6

GEN 9 Natural heritage: As GEN 6

GEN 10 Invasive non-native species: All vessels, equipment and personnel will strictly follow current Biosecurity plans already in place. The algae species being cultivated are native and are found locally on rocky foreshores and harbours.

GEN 11 Marine litter: Any waste generated from the project will be disposed of ashore through local, certified commercial waste disposal. There are no Special Waste requirement envisaged.

GEN 12 Water quality and resource: There are no fresh water needs or waste water created from the algae cultivation. Seawater around the growing area will improve as nutrient loading in the water is taken up by the plants.

GEN 13 Noise: We envisage no additional noise pollution from this project.

GEN 14 Air quality: We envisage no impact on local air quality from this project.

GEN 15 Planning alignment: The use of existing longlines and infrastructure means that there is no addition pressure on the local environment at the shore facilities or the local roads and villages. The deployment and harvest season is short (2 to 3 weeks in total) and will require only a few vehicles to move the harvest on to processing.

GEN 16 Planning alignment B: As GEN 15

GEN 17 Fairness: The algae cultivation will be a lower impact on other marine users than the previous shellfish cultivation.

GEN 18 Engagement: Local engagement will be undertaken from the beginning and throughout the project.

Muckairn Mussels Seaweed application – General Planning Principles

GEN 19 Sound evidence: This project is a scaled-up version of trials conducted through New Wave Foods (NWF) earlier this year, will retain NWF as partners and be conducted by staff with advanced scientific knowledge in this emerging field.

GEN 20 Adaptive management: Robust management of the project will be undertaken by staff with decades of Aquaculture experience.

GEN 21 Cumulative impacts: Algae cultivation amongst the existing Fin-fish Farms in the area will be seen an ecosystem benefit and may forward the ground breaking multi-trophic aquaculture ideals.

Muckairn Mussels Seaweed application – Method Statement

Introduction

Muckairn Mussels Ltd, intend to apply to Marine Scotland for licenses to set light lines seeded with algae (up to 4 species) on existing, licensed mussel farm in Loch Etive, Argyll and Bute. It is our intention to have the necessary consent in place to start seeding lines early in 2018.

The license application will have the critical information required and as much information we can get on the license currently held and any consultation responses received during the setup of the original mussel farm.

We hope that when MS-LOT approach the original statutory consultees you receive a reply of no contest from each and that Marine Scotland will be confident about consenting licences.

This Method Statement will be submitted along with the Algae License by the license holder and site owner's Agent and paid for immediately by BACS to begin the process.

The expected level of seaweed work is low as the work will primarily be done on a trial basis so cost of works expected are to be less than £2,500, so the marine licence application fee will be £56. At this time there are no plans for large scale commercial operations. The site will primarily be used as a test bed for seeding media and deployment and harvesting techniques. Should that situation change, MS-LOT will be informed via an FEP5 form.

The works will be bounded within the coordinates of 5 existing consented mussel farm arrays at the Muckairn site. Please see the attachments "Site map - All Sites, Muckairn Mussels, Loch Etive", as well as attachments with individual site coordinates and larger scaled maps.

In water equipment

We will use the same header floats, ropes and anchors, same type of headlines, rafts and same shore infrastructure as is already in place at the site of the established, charted mussel farm with appropriate special marks denoting their limits.

There are no chemical additions or treatments used for the seaweed growing process. The seeded stock is sourced from local shore sites and will be cultured onto growing medium at commercial hatcheries such as Scottish Association for Marine Science (SAMS) at Dunstaffnage or any of the other hatcheries that are emerging around Scotland. The harvest for seeding plants will be very small volumes (<10 wet kg) and by taking no more than around 25% in any given patch on a shore. The species to be farmed are all found locally at or near the farm sites.

The species planned for use are Dulse (*palmaria palmata*), Oarweed (*laminaria digitata*) and Sugar Kelp (*saccharina latissima*). We will also trial small amounts of Atlantic Wakame (*alaria esculenta*).

The lines will be deployed by existing mussel farm vessels. Regular monitoring will decide the optimum harvest periods. Harvesting will be a reversal of the process using the same vessels. We expect the usual pattern of deployment to be from October to February and the expected harvest period being April to June. We will undertake regular monitoring of seaweed growth and duty of care over lines.

SITE 1 – (AR2-29-21) – RAFTS

Planning area

	WGS84			OSGB36	
	Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
NW corner	56°27'21.18"N 5°18'33.48"W	56° 27.353N 005° 18.558W*	56.4559 -5.3093	NM9617934216	196179 734216
NE corner	56°27'21.18"N 5°18'27.96"W	56° 27.353N 005° 18.466W	56.4559 -5.3078	NM9627234212	196272 734212
SW corner	56°27'17.94"N 5°18'33.48"W	56° 27.299N 005° 18.558W	56.4550 -5.3093	NM9617434116	196174 734116
SE corner	56°27'17.94"N 5°18'27.96"W	56° 27.299N 005° 18.466W	56.4550 -5.3078	NM9626734112	196267 734112

*note that coordinate 4 (NW corner) of Crown Estate lease area is incorrect and has been corrected in the table above

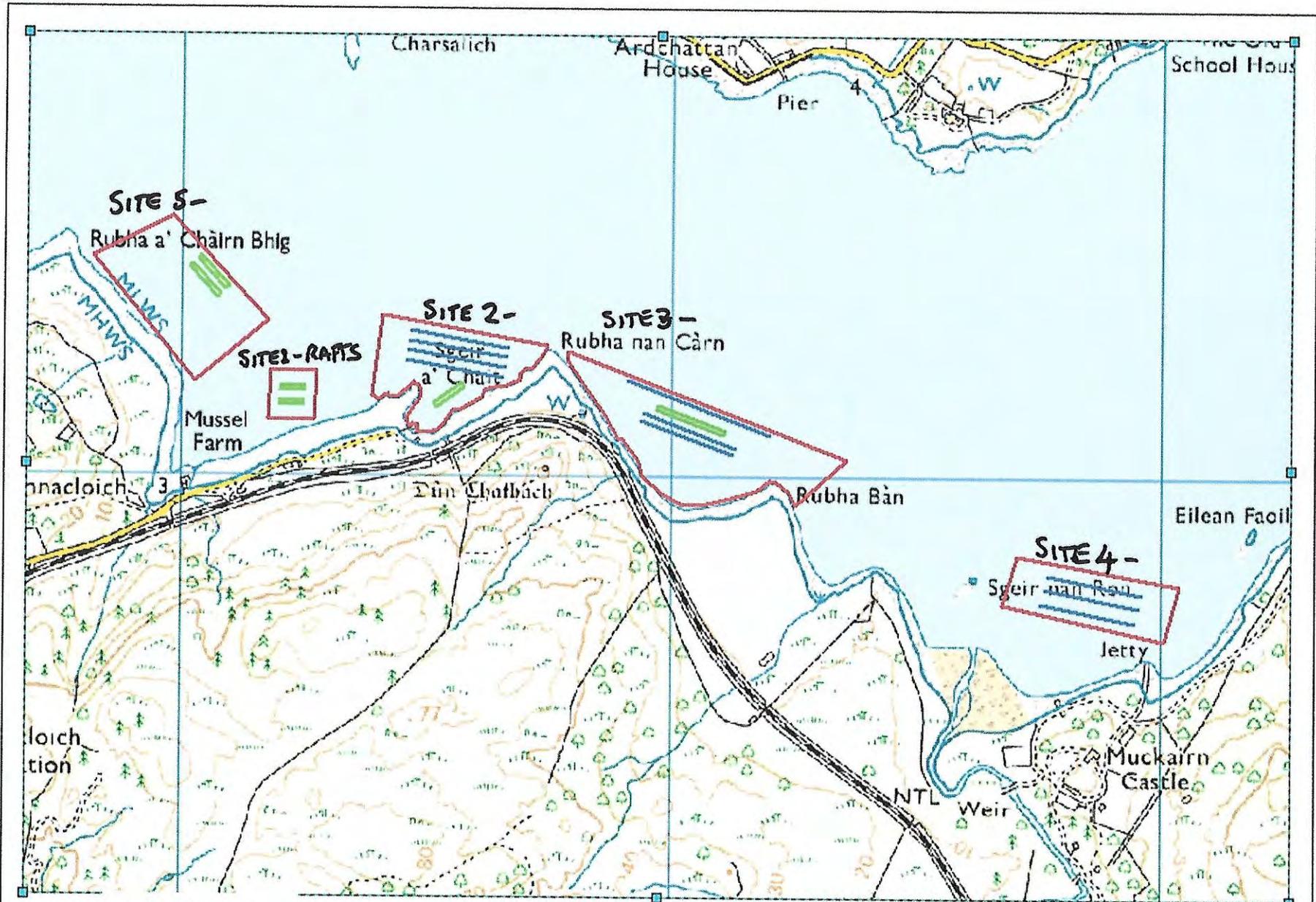
Equipment

10, 10x10m mussel rafts

		WGS84			OSGB36	
		Degrees, Minutes, Seconds	Degrees, Decimal Minutes	Decimal Degrees	Grid reference	XY
Row 1 (5x1 rafts)	NW corner	56°27'20.264"N 5°18'32.294"W	56 27.33774 -5 18.538236	56.455629 -5.3089706	NM9619834185	196198 734185
	NE corner	56°27'20.279"N 5°18'29.373"W	56 27.33798 -5 18.489552	56.455633 -5.3081592	NM9624834183	196248 734183
	SE corner	56°27'19.955"N 5°18'29.345"W	56 27.33258 -5 18.489084	56.455543 -5.3081514	NM9624834173	196248 734173
	SW corner	56°27'19.94"N 5°18'32.266"W	56 27.33234 -5 18.537768	56.455539 -5.3089628	NM9619834175	196198 734175
Row 2 (5x1 rafts)	NW corner	56°27'19.296"N 5°18'32.268"W	56 27.3216 -5 18.537804	56.455360 -5.3089634	NM9619734155	196197 734155
	NE corner	56°27'19.307"N 5°18'29.347"W	56 27.32178 -5 18.48912	56.455363 -5.3081520	NM9624734153	196247 734153
	SE corner	56°27'18.95"N 5°18'29.375"W	56 27.31584 -5 18.489576	56.455264 -5.3081596	NM9624634142	196246 734142
	SW corner	56°27'18.94"N 5°18'32.296"W	56 27.31566 -5 18.53826	56.455261 -5.3089710	NM9619634144	196196 734144

Centre point of site

OSGB		WGS84 (lat/long)	
XY	Grid reference	Degrees, Decimal Minutes	Decimal Degrees
196221.97 734165.10	NM9622134165	56 27.3276 -5 18.51495	56.455460 -5.3085825



ALL SITES



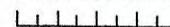
Planning area

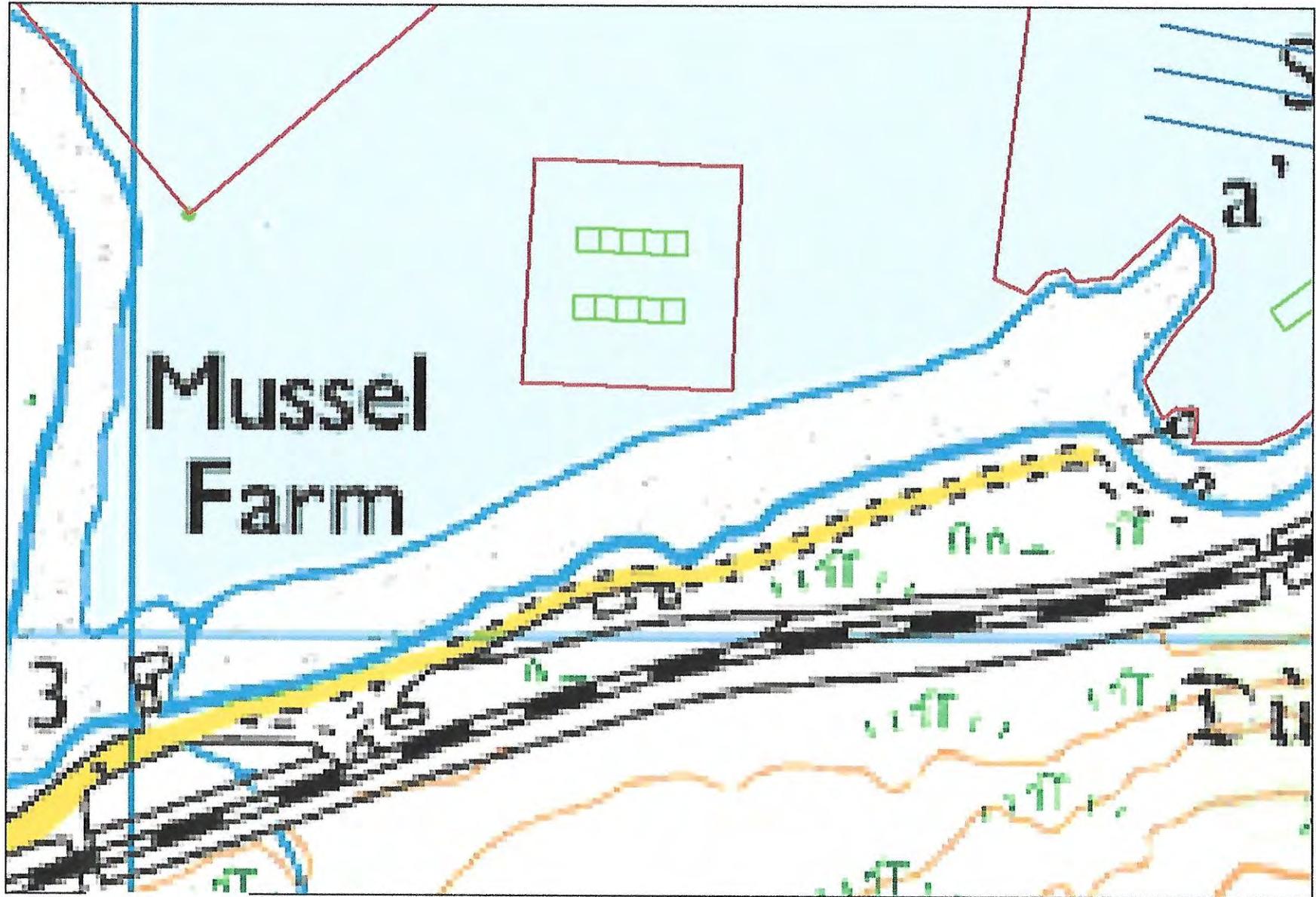
Longlines

rafts

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0300 120 180 240 Meters





Mussel Farm

SITE 1 - RAFTS



Planning area

Longlines

rafts

0 5 10 20 30 40 Meters

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N



Millar P (Peter)

From: stevie@argyllaquaculture.co.uk
Sent: 05 October 2017 17:32
To: MS Marine Licensing
Subject: Algae cultivation application - Muckairn - Site 1 - Rafts
Attachments: Algae application Muckairn - Site 1 (Rafts) - signed.pdf; Muckairn Mussels Seaweed application - General planning principles.pdf; Muckairn Mussels Seaweed application - Method Statement.pdf; Site coordinates - Site 1 - Rafts.pdf; Site map - All Sites, Muckairn Mussels, Loch Etive.pdf; Site map - Site 1 - Rafts.pdf

Dear MS-LOT,

Please find attached the signed application and additional information to license Algae Cultivation at Site 1 - Rafts - Muckairn Mussels, Loch Etive Argyll and Bute.

I am acting as agent for Muckairn Mussels. Please invoice me directly for BACS payment.

Any problems please contact me.

Many Thanks

Stevie Jarron
Operations Consultant
Argyll Aquaculture Resource Consultants
[REDACTED]
01852 300 056
stevie@argyllaquaculture.co.uk



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