

NOTICE OF APPEAL UNDER SECTION 40(1) OF
FISHERIES (AMENDMENT) ACT 1997 (NO. 23)



Appeal Form

Please note that this form will only be accepted by REGISTERED POST
or handed in to the ALAB offices

Name of Appellant (block letters)	BioAtlantis Aquamarine Ltd		
Address of Appellant	Clash Industrial Estate, Tralee, Co. Kerry, Ireland.		
Phone:		Email:	
Mobile:	---	Fax:	---

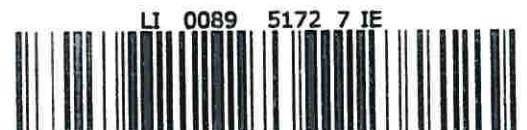


Fees

Fees must be received by the closing date for receipt of appeals	Amount	Tick
Appeal by licence applicant	€380.92	✓
Appeal by any other individual or organisation	€152.37	
Request for an Oral Hearing * (fee payable in addition to appeal fee) <small>* In the event that the Board decides not to hold an Oral Hearing the fee will not be refunded.</small>	€76.18	
(Cheques Payable to the Aquaculture Licences Appeals Board in accordance with the Aquaculture Licensing Appeals (Fees) Regulations, 1998 (S.I. No. 449 of 1998))		
Electronic Funds Transfer Details	IBAN: IE89AIBK93104704051067	BIC: AIBKIE2D

Subject Matter of the Appeal

BioAtlantis Aquamarine Ltd. recently applied for a license to grow mussels on longlines (ref: TO6/326A). As outlined in our application, the primary aim is to set up a system for growing mussel spat and their sale to inshore mussel growers. The area is located on a 27.4 hectare site that is not visible from the road and does not present any significant impacts on inshore fisheries, tourism or recreational aspects. The growing of mussel spat is seasonal in nature. It precludes activities in winter and involves removal of mussel socks and flotation devices during this time, thus preventing any impacts or damage associated with storm surge. Once the spat growing system is validated, it is planned to implement the growing of mussels over a longer period of approximately 1.5 years. This involves the use of head ropes that are positioned approximately 6 meters below the sea surface, sufficient to avoid storm swells that can reach 4.8 meters in the south west. This system allows for aquaculture to take place in a safe manner in exposed waters, whilst preventing any risks associated with storm swells in exposed areas. BioAtlantis has invested in a boat that will be available to install the system and will also be used to harvest the spat and mussels in a safe manner. This document represents an appeal to the decision to reject BioAtlantis' application. The appeal addresses the key issues raised by the decision makers. It also provides further information in relation to the methodology employed and the proposed system. We believe that this appeal provides sufficient grounds for overturning the initial decision, as many of the potential risks identified are mitigated against effectively or considered extremely low due to the seasonal aspects to the main activity.



Site Reference Number:- (as allocated by the Department of Agriculture, Food and the Marine)	TO6/326A
Appellant's particular interest in the outcome of the appeal:	
<p>BioAtlantis' application was made to diversify the company's activities and to drive the development of new technologies, products and markets. BioAtlantis is an important employer in the southwest of Ireland and consider this application as representing an important component of the company's strategy to expand, create new jobs and contribute to the development of a thriving economy in rural Ireland. It has recently been estimated that the Ocean Economy of Ireland is worth approximately €1.97B and employs over 32,500 (NUIG, 2018). BioAtlantis believe that it is in the public interest to develop the marine economy further, particularly in coastal areas where job opportunities are scarce and depopulation is becoming increasingly problematic. Our application to grow mussels in Kenmare Bay is in line with these objectives.</p>	
Outline the grounds of appeal (and, if necessary, on additional page(s) give full grounds of the appeal and the reasons, considerations and arguments on which they are based):	
<p>BioAtlantis' Aquaculture License application (TO6/326A) to grow mussels on longlines was recently rejected on the following grounds:</p> <ul style="list-style-type: none"> ▪ The site is exposed to south westerly swells from the Atlantic Ocean. ▪ The site is situated in significant water depths. ▪ The combination of these factors would allow severe swells to enter the proposed site. <p>BioAtlantis disagree with the conclusion that the proposed locations is not sustainable and wish to appeal the decision on the grounds outlined below.</p>	
<p>1. Spat collection is seasonal in nature, thereby avoiding storm swells:</p>	
<p>As outlined in our application, the primary activity will involve growing of mussel spat that will be collected by boat for sale to inshore mussel growers. The setting up of this system allows mussel spat to attach to droppers hanging from the head ropes and grow to a required size. This is a seasonal activity, with the spat accumulating on droppers in May to early June. From experience we know that they will have grown to 25mm by late July, at which time we intend to harvest them. Once the mussel spat is harvested in late July, the droppers and flotation devices are removed and all that is left are the anchor and head rope. BioAtlantis has invested in a boat that will be available to install the system. It will also be available to harvest the spat at the time of choosing, in a safe manner. Given the seasonal nature of this activity and the mitigation measures indicated (i.e. removal of droppers in Autumn), the impact of storm swells is likely to be negligible and will not result in damage to the installed aquaculture unit. As such, the system as it is designed overcomes the risks identified in the engineers report.</p>	
<p>2. The proposed method of operation mitigates against the effects of storm surge:</p>	
<p>We agree that the site is at moderate depths of approximately 30m and in a relatively exposed location. However, we believe that the new method (please see figure attached) of operation proposed mitigates against these factors. The system that was previously in place at the site was relatively inflexible, lacked sufficient capacity to move in accordance with wave action and the head ropes were positioned on the surface of the sea, thereby rendering it susceptible to storm surge. The previous system also had a connection and block design which further compounded these problems.</p>	
<p>The application outlined that we will grow full size mussels once the system is proven for spat production. In stark contrast to the previous method, the new design proposed involves a system and schedule that reduce risks and mitigates against the effects of wave action and storm surge. This is achieved by positioning the head ropes below the water at depths sufficient to avoid wave swells that can approach 4.8m in height. To achieve this, the head ropes will be positioned ~ 6 meters below the surface and well removed from storm swells. The mussel socks in this situation would reach approximately 13 meters in depth thus utilising the depth of the water to avoid the worst of the storms.</p>	

Buoyancy aids will be added in a timely manner to match the weight as the mussels grow. The new system also consists of individual longlines as opposed to a block design, which further mitigates against the risk of damage due to storms. As part of this proposal, BioAtlantis has a boat in place that will service the site effectively, thus removing any potential delays in reacting to storm damage. The proposed methodology covers the seasonal growing and collection of spat, whilst also allowing for the growing of mussels over a longer term period of approximately 1.5 years.

3. There are positive environmental aspects of aquaculture activities in exposed locations :

There are many advantages to undertaking aquaculture in deeper open waters, including the following:

- Benthic impacts are reduced and potentially eliminated when aquaculture takes place in exposed sites.
- Potentially negative interactions with migratory fish stocks are reduced.
- Significant visual impacts are minimised.
- Conditions in deeper waters are more conducive to the production of healthier stocks.
- Flushing rates in exposed sites are substantially higher than in sheltered locations. As such, exposed sites are less likely to accumulate large amounts of organic waste material during production, thus reducing the risk of affecting the marine environment, flora or fauna.
- Mussel farming improves marine water quality.

The benefits to deeper water aquaculture are outlined in a jointly commissioned report by An Bord Iascaigh Mhara and the Marine Institute (Ryan et al., 2004).

4. National and International precedents for deep water aquaculture in exposed locations:

• International precedents:

There are several international precedents for growing mussels and other shellfish in deep, exposed waters. Deep water aquaculture typically follows the model proposed by the Open Ocean Aquaculture research farm, University of New Hampshire (UNH), which involves the use of longlines that are submerged 6 to 12 meters below the water surface and anchored to the bottom (Hoagland, 2003). A case study of the UNH offshore aquaculture site is outlined in Buck et al. (2017). In New Zealand, mussels are grown in exposed, open-sea areas. In 2014, Whakatōhea Mussels Ōpōtiki Limited began the installation of an offshore mussel farm in the Eastern Bay of Plenty, at depths of approximately 45 meters using a submerged longline system, similar to the approach outlined by UNH (ref: Marine Notice, 2014). Open-sea aquaculture is continuing to expand in New Zealand with two sites off the east coast recently being approved off the shore of Opotiki in Bay of Plenty and in Pegasus Bay in Canterbury in 2017 (ref: Neal, 2017). Further sites have been proposed for the Bay of Plenty in New Zealand at depths between 30 to 50 meters. Assessment of the viability of aquaculture in this area demonstrates that wave heights are below 3m for 99% of the year, but can reach levels of 2 to 3 meters at certain times (Knight, et al., 2017). As such, the submerged longline technology being deployed in New Zealand incorporates factors such as increased depths, exposure and wave surge.

• National precedents:

The potential impact of storm swells on deep water aquaculture sites has also been considered in an Irish context. An Environmental Impact Statement (EIS) for a proposed salmon farm site at Shot Head, Bantry Bay, Co. Cork, demonstrates that a typical storm could give rise to long swell type waves between 2.5m to 3.3m in height in the area, whilst a 1 in 50 year storm could produce waves between 3.9m to 4.8m (Ref: Watermark Aqua-Environmental, 2011). Our plan would envisage the head rope being positioned 6m below the surface and below the worst storm effect, i.e. 4.8m. The proposed site ranges from 28-34 meters in depth.

• **Summary:**

Given the national and international precedents outlined above, Ireland should give serious consideration to the merits of growing mussels in deeper, exposed waters. The benefits of growing mussels offshore include a lower spatial overlap with fishing activities, recreational vessels and commercial traffic. Moreover, placing longlines well below the surface can avoid issues associated with wave swell due to storms. BioAtlantis' proposal was designed on this basis and incorporates best international practice for undertaking aquaculture in deep open water. BioAtlantis has the engineering expertise and capacity to undertake this work and are open to detailed discussions with the Department on how this can be planned and undertaken with best scientific knowledge and practice in mind.

5. Issues raised during consultation:

Issues raised by some locals are addressed as follows:

- **Access:** Access to the site will be by boat from Oyster Bed Pier. Gleesk Pier will not be used.
- **Tourism:** It is highly unlikely that the installation will have any effect on tourism, as the site is not visible from the public road.
- **Leisure activities:** We will not have any effect on leisure activities outside the site. The site area is small (27.4 hectares) and other activities will not be restricted from taking place.
- **Coral Beach:** We will not have any effects on Coral Beach, as mussel growing is entirely water borne and does not involve activities on the shore.
- **Inshore fishermen:** We will not have any effects on inshore fishermen outside the site. Data from the Marine Institute shows that there is no spatial overlap between the proposed site and inshore fisheries such as dredge fishing, line fishing, nets fishing and bottom trawl fishing (Ref: Ireland's Marine Atlantis). The spatial overlap (if any) between the proposed site and potting activities is extremely low and potting may continue uninterrupted outside of the proposed site.
- **Environmental aspects:** Deep water aquaculture in exposed sites has a low risk to the environment compared to aquaculture in sheltered areas. When assessing this application, the Marine Institute concluded that *"Considering the location, nature and scale of the proposed aquaculture activity....the Marine Institute is of the view that there will be no significant impacts on the marine environment and that the quality status of the area will not be adversely impacted"*.
- **Blue barrels:** There were claims that blue barrels were washed ashore from the previous site. This is incorrect as blue barrels were never used in that project.
- **Damage to the site due to storms:** Damage had arisen at the site previously due to a storm event. However, work has been undertaken to remove the damaged structures. The new method proposed in the current application is based on an internationally recognized system that allows for mussel farming in exposed waters and mitigates against wave action and storm surge.

6. Further point:

A 1 nautical mile light and float will be placed at each the four corners of the site, the coordinates of which are as follows:

- 066330, 062030 to Irish National Grid Reference point
- 066580, 061700 to Irish National Grid Reference point
- 066070, 061300 to Irish National Grid Reference point
- 065800, 061620 to the first mentioned point.

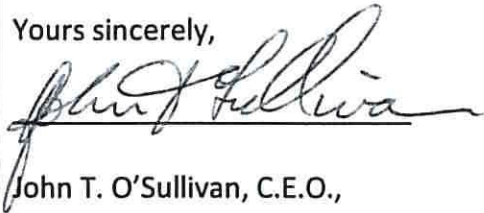
I would be grateful if you can please reconsider our application in light of:

- (a) The methodology involved which mitigates against potential effects of storms,
- (b) The environmental benefits to growing mussels in deep exposed waters,
- (c) The international precedents for this proposal and
- (d) Responses to other issues raised.

As described in this appeal, the new proposal has several key advantages. In particular, the use of individual longlines and the positioning of ropes 6 meters below the surface of the water represents an effective means in which to mitigate against the risk of storm damage. If successful, BioAtlantis' proposal would lead to further job creation in rural Ireland and would enhance the sustainability and development of the agri-food sector in coastal areas, where it is much needed. Moreover, BioAtlantis plan represents an excellent opportunity to assess how mussel farming can be successfully undertaken in an exposed location, thereby avoiding many of the negative effects associated with aquaculture in sheltered locations.

Should you have any technical questions or wish to discuss any aspect of this proposal, please do not hesitate to contact me.

Yours sincerely,



John T. O'Sullivan, C.E.O.,

BioAtlantis Aquamarine Ltd.

Clash Industrial Estate,

Tralee, Co. Kerry, Ireland.

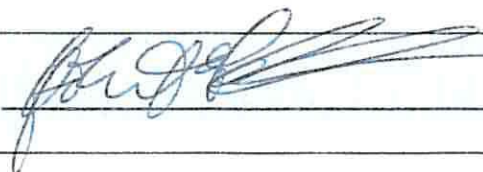
email:

phone:

References:

- **Buck, et al. (2017).** Aquaculture Perspective of Multi-Use Sites in the Open Ocean. www.springer.com/gp/book/9783319511573
- **Hoagland, et al., (2003).** Business planning handbook for the ocean aquaculture of blue mussels. www.researchgate.net/publication/253951313_Business_planning_handbook_for_the_ocean_aquaculture_of_blue_mussels
- **Ireland's Marine Atlas.** <https://atlas.marine.ie/>
- **Knight, et al. (2017).** Potential Aquaculture Expansion in The Eastern Bay of Plenty - A High-Level Scoping Study of Environmental Issues, Report No. 3056. www.boprc.govt.nz/media/670456/cawrpt_3056_bop-new-aquaculture-areas-evaluation.pdf
- **Marine Notice (2014).** Whakatohea Mussels Opotiki Limited. Notice to Mariners. Coastal Navigation Warning, Eastern Bay of Plenty. 03/09/2014. www.boprc.govt.nz/media/373928/wmo-notice-to-mariners-3-september-2014.pdf
- **Neal (2017).** Work begins to develop open-ocean marine farms. www.rnz.co.nz/news/business/322908/work-begins-to-develop-open-ocean-marine-farms
- **NUIG (2018).** Ireland is Riding the Ocean Economy Wave According to New Research from NUI Galway; Jun 28 2018 www.nuigalway.ie/about-us/news-and-events/news-archive/2018/june/ireland-is-riding-the-ocean-economy-wave-according-to-new-research-from-nui-galway.html
- **Ryan et al., (2004).** 'Farming the Deep Blue'. A report jointly commissioned by BIM (Bord Iascaigh Mhara - The Irish Sea Fisheries Board). www.bim.ie/media/bim/content/downloads/Farming_the_Deep_Blue.pdf
- **Watermark aqua-environmental (2011).** EIS for a proposed salmon farm site at Shot Head, Bantry Bay. Vol 1 of 3. <https://www.agriculture.gov.ie/media/migration/seafood/aquacultureforeshoremanagement/aquaculturelicensing/aquaculturelicencedecisions/cork/t5555supportingdocuments/Tab1EISVol1140915.pdf>

Signed by appellant:



Date:

31st October 2019

**Please note that this form will only be accepted by REGISTERED POST
or handed in to the ALAB offices**

Fees must be received by the closing date for receipt of appeals

This notice should be completed under each heading and duly signed by the appellant and be accompanied by such documents, particulars or information relating to the appeal as the appellant considers necessary or appropriate and specifies in the Notice.

DATA PROTECTION – the data collected for this purpose will be held by ALAB only as long as there is a business need to do so and may include publication on the ALAB website

Extracts from Act

40.—(1) A person aggrieved by a decision of the Minister on an application for an aquaculture licence or by the revocation or amendment of an aquaculture licence may, before the expiration of a period of one month beginning on the date of publication in accordance with this Act of that decision, or the notification to the person of the revocation or amendment, appeal to the Board against the decision, revocation or amendment, by serving on the Board a notice of appeal.

(2) A notice of appeal shall be served—

(a) by sending it by **registered post** to the Board,

(b) by **leaving it at the office of the Board**, during normal office hours, with a person who is apparently an employee of the Board, or

(c) by such other means as may be prescribed.

(3) The Board shall not consider an appeal notice of which is received by it later than the expiration of the period referred to in subsection (1)

41.—(1) For an appeal under *section 40* to be valid, the notice of appeal shall—

(a) be in writing,

(b) state the name and address of the appellant,

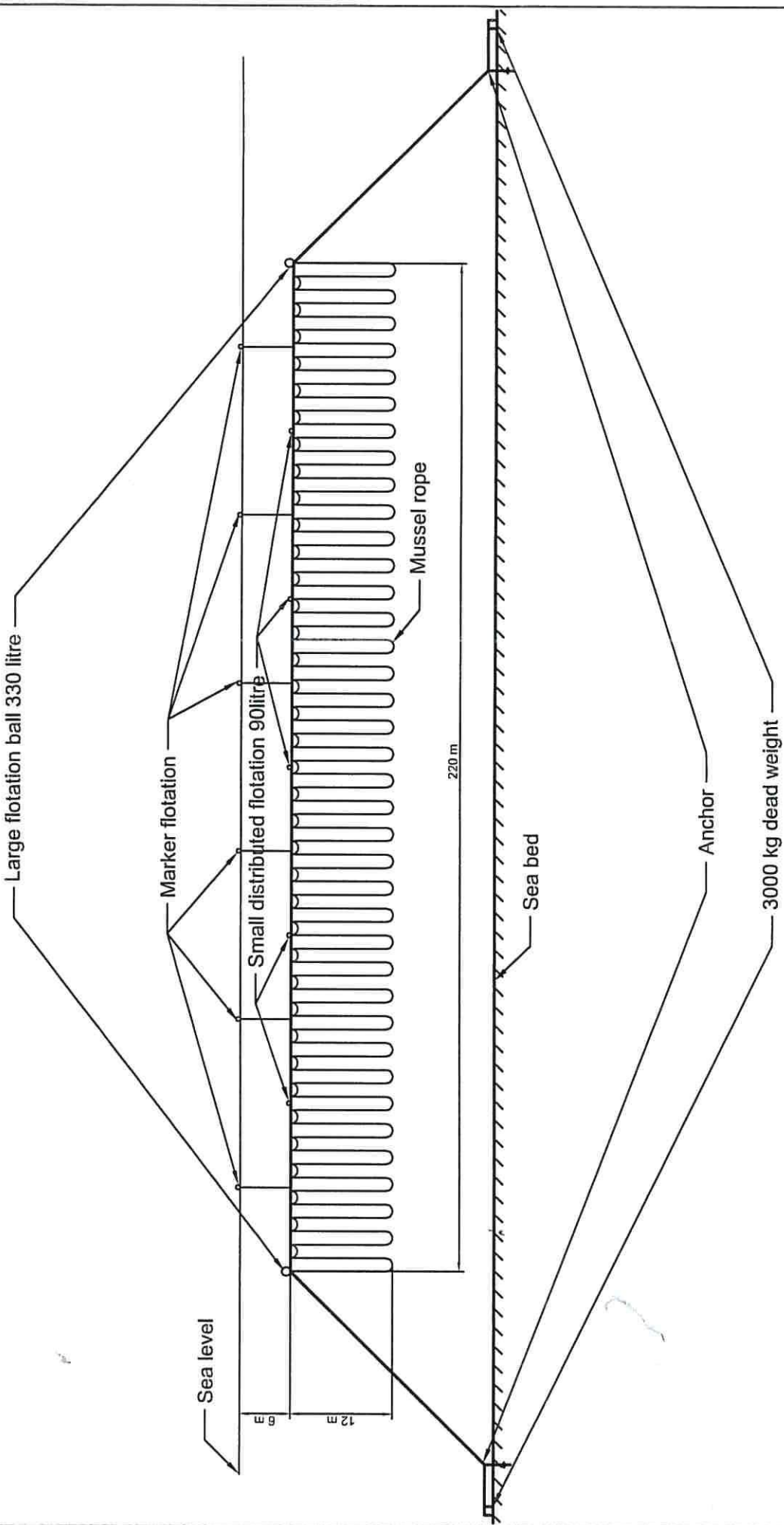
(c) state the subject matter of the appeal,

(d) state the appellant's particular interest in the outcome of the appeal,

(e) state in full the grounds of the appeal and the reasons, considerations and arguments on which they are based, and

(f) **be accompanied by such fee**, if any, as may be payable in respect of such an appeal in accordance with regulations under *section 63*, and

shall be accompanied by such documents, particulars or other information relating to the appeal as the appellant considers necessary or appropriate.



NO	REV	DESCRIPTION	REV BY	APP	DATE	DRAWN	DS	CHKD	SCALE	HTS
10										
9										
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3		General Tolances 4.20mm								
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TITLE	Mussel harvesting system									
PROJECT	Ref.: T06/326A									
DRAWING NUMBER	DR-AQM-001									
REV	J	I	H	G	F	E	D	C	B	A
REV BY	DS									
APP										
DATE	26/10/19									
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DATE	29/10/19									
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NO	NOTES
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