



Netherlands Enterprise Agency

Site Studies Wind Farm Zone Borssele

Lessons Learned Register

Session NWEA/RVO

May 28th, 2015

Participants:	D. Elsevier van Griethuysen	NWEA
	G. Nijsten	NWEA
	G. Hommel	NWEA
	R. van Leeuwen	NWEA
	G. Harder	NWEA
	E. Janzen	NWEA
	F. van Erp	RVO
	R. de Wolff	BLIX
	B. Burger	BLIX
	D. de Wijs	RVO/minutes

Note: Some lessons are marked as 'defined by NWEA-participant'. This means they are added afterwards by an individual NWEA participant.



Lessons Learned: Description and Response

Project	Nr	Defined by	Key Stakeholder	Work packages	Description - Lesson Learned 28th May 2015	Response 26th October 2015
SDB	1	NWEA	WOZ_PROG	General pm	Data collected in the site investigations in the BWfZ should be used as input in other governmental workstreams, for instance in the maximum tender price calculation by ECN. Further data required for other workstreams should be included in the site investigations, e.g.: -Mean wind speed distribution at lower tip height to calculate losses due to operational restrictions related to bat migration enforced in the permit. -Measurements related to bird/bat migration	For the wind farm zones Hollandse Kust all work streams use the same starting points (see attached document) and base map. EZ, Tennet, I&M, RWS and RVO meet bi weekly to discuss interfaces.
SDB	2	NWEA	WOZ_PROG	General pm	Sometimes it's unclear where to find/get the required information; there are multiple governmental sources of information and websites and all are governmental. It is recommended to coordinate/govern in this matter. All information to be provided out of one single point of information.	An overview where to find which information is included in the Project and Site Description
SDB	3	NWEA	WOZ_PROG	General pm	Given that the objective is to achieve the lowest possible tender bid it would help if the government would take away as many risks as possible.	Noted.
SDB	4	NWEA	WOZ_PROG	General pm	The quality/experience of the consultant, contractors and supplier selected for the management and execution of the site investigations and desk studies have helped significantly in gaining confidence in the information provided. It is recommended to have similar parties executing future studies and investigations.	Quality remains a priority in selecting contractors.
SDB	5	NWEA	WOZ_PROG	General pm	The SDE tender Base Amount is set, without taking into account possible results from ongoing site investigations. For BFWZ 3 & 4 it is recommended to anticipate on site investigations outcomes when determining the SDE Base Amount.	Cap prices for all WFZ's are announced and set.
SDB	6	NWEA	RVO	General pm	Information exchange should be possible and be institutionalised after completion of a study section/part. This in addition to existing process for Q&A's.	General workshops will be continued. RVO started with webinars. We now planned to continue with webinars for presenting, Q&A's and discussions on results of studies.
SDB	7	NWEA	RVO	General pm	It would have been beneficial if the wind data from the Belgium wind farms had been considered in the wind resource assessment or was made available.	RVO does not have access to this data. This data is not publicly available.
SDB	8	NWEA	RVO	General pm	It is advised to provide clarity on the expected development of new Belgian wind farms and describe/consider its impact (eg wakes).	For the yield assessment for the SDE tender RVO.nl will specify which Belgium wind farms have to be taken into account for wake losses. For own calculations you may find the information on the website of MUMM.
SDB	9	NWEA	RVO	General pm	NWEA confirms the RVO consultation process was sufficient/efficient and could be similar for future sites.	Noted.
SDB	10	NWEA-participant	RVO	General pm	The designated areas should already exclude all hard constraint areas (e.g. NE side of Borssele I).	Has been done
SDB	11	NWEA	RVO	General pm	It is suggested it could be helpful to consider turbine configurations in the planning of the investigations. After discussion it is agreed that RVO should not anticipate on specific turbine configurations and leave maximum flexibility to leave this to the developers.	Noted.
SDB	12	NWEA	WOZ_PROG	General pm	It is suggested that it might be more practical to organise the workshops (Werkateliers) on a smaller scale. At present workshops there are a lot of people present. This serves as a good base for meeting people but is poor in two-way exchange of know how. After discussion it is agreed that the current workshops are effective and can continue to be held for providing information/updates by the government (one way). But it would be beneficial to have consultations in smaller settings to collect input from the market (As now already done e.g. by Tennet, RVO and EZ), with about 10 people present.	General workshops will be continued. RVO started with webinars. We now planned to continue with webinars for presenting, Q&A's and discussions on results of studies.
SDB	13	NWEA	RVO	General pm	Making public (for instance) lessons learned, and present them at the workshop can assure the input of non-NWEA members.	done
SDB	14	NWEA	RVO	General pm	HK South & North: how to handle all data which is already available. Is there a policy on making the data of earlier project developments available?	RVO discusses this with the developers
SDB	15	NWEA	RVO	General pm	RVO enquires how to cope with possible differences between outcomes of reports (for instance wind resource assessment and Metocean study)? Advice: publish the clarification clearly and extensively. An update of reports is not necessary.	Verification proces dealt with this issue and agrees with this approach.



Lessons Learned: Description and Response

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SDB	16	NWEA	RVO	General pm	Detailed feedback on studies published to date discussed. Overall impression on quality and scope is good but participants inform that they have not yet collected detailed feedback from their team on the different reports published and will issue detailed feedback on this report and other reports via email.	RVO provided webinars and revision and Q&A logs on the website.
SDB	17	NWEA	RVO	General pm	The Project and Site Description is considered a useful document and it is advised to issue new updates more frequently if critical new information becomes available.	Version 3 BWFS I&II foreseen in december 2015. For other sites number of versions depending on available updates.
SDB	18	NWEA	RVO	General pm	An investigation would be advised regarding possible conflicting activities in HK area; eg a desk study mapping all business developments in the area. Including eg mining activities	Will be part of the investigations port folio.
SDB	19	NWEA	RVO	General pm	It would be good to institutionalise these lessons learned meetings.	Noted.
SDB	20	NWEA-participant	RVO	General pm	Maps: Clear definition of when the constraints refer to distance from the turbine foundation or the tip of the blade.	Clarified in the Wind Farm Site Decisions
SDB	21	NWEA	RVO	General pm	Compliments for initiating this meeting; very useful.	Noted.
SDB	22	NWEA-participant	RVO	Metocean	Additional Metocean measurement campaign to be conducted in 3 & 4	RVO asked DNVGL to update the assessment (http://offshorewind.rvo.nl/file/view/31040402/assessment-wind-measurement-program-north-sea-dnv-gl)
SDB	23	NWEA-participant	RVO	Metocean	Additional model validation study to be conducted based upon measurements collected, in order to confirm values presented in the Deltares metocean study.	To be discussed
SDB	24	NWEA-participant	RVO	Metocean	It might be worthwhile to consider an extension of bathymetric survey on the back geophysics to areas a little way beyond the zone extents, to ensure that the quality of bathymetry used in the Deltares model is correct.	In consideration
SDB	25	NWEA-participant	RVO	Wind meas.	Desk top studies: The wind resource assessment should also be performed for HK because of its large distance from Borssele.	This is planned.
SDB	26	NWEA-participant	RVO	Wind meas.	Measurements: No change in the scope is requirement for the wind measurements. Note: the latest scope one is aware of is the one described in the floating LiDAR tender documents.	RVO asked DNVGL to update the assessment (http://offshorewind.rvo.nl/file/view/31040402/assessment-wind-measurement-program-north-sea-dnv-gl)
SDB	27	NWEA-participant	RVO	Wind meas.	The planning of the measurements should already take into account possible objections to the warding (e.g. 2 additional months to the overall planning).	Please clarify question
SDB	28	NWEA	RVO	Wind meas.	It is enquired whether wind measurements will be carried out for HK. (RVO:) DNV-GL has performed a cost benefit analysis on how and where additional measured should be performed and advised not to carry out any measurements in HK considering existing nearby available measurements.	RVO asked DNVGL to update the assessment (http://offshorewind.rvo.nl/file/view/31040402/assessment-wind-measurement-program-north-sea-dnv-gl)
SDB	29	NWEA	RVO	Wind meas.	It was not clear enough whether windconditions were part of the desk studies.	Yes. Wind conditions were reported in the wind resource assessment (Ecofys) and the Metocean desk study (Deltares)
SDB	30	NWEA-participant	RVO	Wind data	Clearly defined data sources for all GIS data would be a real advantage. Data sources are not always made clear, which means it is difficult to be 100% confident in the data we are using. As a minimum each GIS shapefile should contain metadata stating the source, date and a brief abstract detailing what the data show.	RVO.nl has provided a set of metadata requirements to all contractors. Existing GIS deliverables will be updated accordingly. These requirements will be used for future investigations and part of the general starting points.
SDB	31	NWEA	RVO	Wind data	It is appreciated when the results of metocean measurements would become available as soon as possible; it is an essential parameter to prepare the business case.	Data is available at windopzee.net. These data have been Quality Checked by Fugro and Quality Approved by ECN.
SDB	32	NWEA	RVO	UXO	Which party is responsible (and has to pay) for the removal of UXO's? The government or the developer? This should be clarified in the UXO desk studies (to be checked if this is done for the Borssele UXO desk study).	This has been addressed in the Project and Site Description. If an UXO needs to be removed, you need to report this to the Dutch Coastguard. The Dutch navy will remove the UXO. No costs will be charged to the wind farm developer.
SDB	33	NWEA	RVO	Certification	Where applicable, certification of reports is as done with Borssele I&II is preferred. It is acknowledged this will take extra time before publication, but will benefit the process in preparing a competitive bid. Scope of certification was sufficient, to be double checked if also certification of the wind resource assessment is possible.	The DNVGL issued a Statement of Compliance for the wind resource assessment.