Juridical and Political Framework

Landscaping Extraction Site

Ecoshape- Building with Nature
Project HK 2.1

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Summary and conclusions

This paper reports the assessment whether political and juridical realities will prevent or hinder attempts to landscape sandpits. This question is relevant for the Ecoshape-Building with Nature pilot experiment that is programmed for 2010 as well as for future attempts to landscape sandpits in the Dutch North Sea area.

The project strategy embraced several activities. The first step in the project strategy aimed at an inventory of the legal, policy and political considerations relevant for sand extraction in the North Sea in general, and within this overview, to focus upon the implications of the ambition to landscape a sandpit. Scanning formal, material and pseudo regulations led to a clear overview what is out of the question and what might be possible. This was done early 2009. The outcome was that *definitively could be concluded that embedding landscaping in the present system might be possible. However this 'yes it looks like it is possible' was surrounded by open ends.*

In the permitting procedures the hard constraints from regulations and the guidance from policy and planning documents is taken into account in order to decide whether a detailed plan, in our case a landscaped sandpit, can be licensed and under which conditions. The second step in the research strategy therefore was to review existing permits and to seek interaction with experts that represent the permitting authorities. This interaction was realized in an Atelier HK2.1 held on September 1 2009. A group of experts discussed among other this issue. Two situations had to be distinguished. First the situation in which a new permit has to be requested for new extraction activities. In general for the designated North Sea sand mining area landscaping sand pits is perceived incompliance with political and legal requirements and is thus not excluded. The details however have as mentioned above to be settled in the individual permitting procedure. The second situation distinguished concerned attaching landscaping to a sandpit that was already licensed without integrating landscaping. Given the fact that Ecoshape Building with Nature Programme ends 31 December 2012 attachment of landscaping to an already programmed and licensed sandpit is the only option for an actual and full experiment *pilot landscaped extraction site*. For instance the fact that the effects on ecology of landscaping has to be monitored extensively presents a substantial constraint.

The second situation, attaching landscaping to an already licensed sand extraction site, was assessed by a scan of sandpits in preparation and an assessment of the requirements in permits and interaction with experts representing the licensing authorities. It was concluded that this can be done by integrating the landscaping plans into the workplan that will be made for extraction of a licensed deep sandpit. As long as this stays within the general requirements of the permit there is no problem foreseen. Since the actual sandpit aimed at is of recent date it allows substantial deeper extraction compared to old permits. When the permit was assessed some ambiguous words led to confusion. At first sight the fact that depth was explicitly linked in the permit to a minimum (-10 meters) and a maximum (-20 meters) indicated that some flexibility for landscaping is there. However also the words 'average steady depth' (in Dutch: gemiddeld gelijkmatige diepte) were used. Confusion with regard to the word 'steady' in this setting was discussed in the workshop. An indication of 'average depth' should be interpreted as a global indication of, indeed, average depth while 'steady' refers to limitations set to the steepness of declination to avoid oxygen deficits in deeper parts of the pit. On the exact details follow up interaction is on its way between Ecoshape-Building with Nature, the contractors that have to develop and implement the executing workplan within the contours of the permit and the permitting authorities that have to agree upon this workplan.

Therefore this report concludes that *landscaping is possible in the context of discretional space in at least some contemporary permits for deep pits; and in principle will not be rejected for new sand extraction sites in the North Sea.*

In section 2 of this paper the *regulatory setting* (applicable formal, material and pseudo regulations) and the relation between regulations and permitting procedures are outlined.
In section 3 *essential requirements and constraints* are reported as they are derived from political and regulatory settings. These include:

- the topic of location (admissible locations are set in policy documents and plans that also focus upon minimizing transport);

- the issue of stricter regulations for sand pits in habitat areas (these locations are not alluring if not out of reach);
- the issue of the legal consequences of size and multiple extractions in a small area (EIA is often obligatory);
- the issue of depth and shape in relation to potential oxygen shortness (as being touched upon above);
- applicable licensing procedures and the issue of the scope of required analysis.

Content

1 Introduction

The Dutch Coast pilot case (HK) within the Ecoshape-Building with Nature program includes pilots and the development of a long term vision for the whole Dutch coast.

The central pilots are the so called sand-engine and the landscaped sand-pit as discussed in this report.

The sand-engine represents a mega suppletion as an alternative for coastal defense based on multiple small suppletions at or near the beach. Subsequently the hydrological and morphological processes allocate sand for coastal defense while at the same time this contributes to nature development and also offers other functions to society such as recreation.

For such a sand-engine sand has to be mined. With regard to this sandpit the Building with Nature efforts focus upon whether a richer eco-system can be created if the sandpit is landscaped. This paper reports the political and legal opportunities and threats for such an innovative sand mining approach.

2 Regulatory setting

In section 2.1 the direct applicable hard regulations are presented, followed by soft regulations that have to be taken into account in permitting procedures is presented in section 2.2.

2.1 Applicable regulations

Applicable regulations are neither many nor sizeable and have all been scanned in the context of this project.

The direct applicable regulations are the *Ontgrondingenwet* (OW), het *Rijksreglement Ontgrondingen* (RRO) en het *besluit Ontgrondingen*. The first document is the central formal law, the latter two pieces of regulation are related to the formal law. In most cases they specify general articles in the formal law. Often these kind of documents are referred to as material law. 'Material' legislation does not follow the integral comprehensive procedures for formal law. 'Material' legislation can be issued and changed by less time consuming procedures. Therefore often the practical issues such as 'how much', 'when' and 'what if' are dealt with in 'material' law. The mentioned regulations were revised very recently which makes short term revisions unlikely.

Next to these regulations pseudo-regulation is relevant such as plans and policy documents. These normally express intentions, interpretations and 'soft requirements', in this case with regard to extraction in the North Sea. The most prominent document is the Tweede Regionale Ontgrondingenplan Noordzee (RON2 - Regional Plan Extractions North-sea). This is a document from 2004 that is believed to be adjusted and refreshed every 5 years. This makes it realistic that preparations for revisions have already started. However it is unlikely that a RON3 will be issues that is comparable to RON3. Informed experts with inside information informed us

that RON2 probably will be succeeded by a guideline sand mining North Sea. Whether in this document the concept landscaping will be used is yet unclear. Informants told that the discussion is not whether landscaping should be forbidden, by no means, it is about the position for landscaping in the discussion in which ecological benefits are weighted against possible additional costs. On both the jury is still out and both (ecological effects and costs) are also under review in the Ecoshape Building with Nature pilot landscaped sandpit.

2.2 Essentials of licensing and applicable documents

In principle extractions of sand in Dutch North Sea territory is forbidden on the basis of the in section 2.2 numerated regulations. However there are a few very important exceptions.

The first important exception on the general ban is when actors have a license. In principle anyone can ask for a license to extract sand. The procedure of this will be explained in section 3. As core legislative goal the rules by law instruct the licenser to consider interests that are affected by sand extraction into account and deliberate and weight them before issuing a license. Secondly the licenser should consider specific requirements that might be included to protect certain interests.

Like in any other Dutch licensing procedures the licenser is instructed to consider hard constraints and guidance from law, material law and pseudo-regulations. The four documents especially focusing upon sand extraction in the North-Sea mentioned in section 2.1 have to be followed.

These four essential documents are linked in the licensing procedure to some documents in order to review interests that might be affected by sand mining when somebody asks for a permit. Among the most important are the *Integraal Beheerplan Noordzee 2015* (Integral Management Plan North-Sea 2015) that addresses all North-sea user rights and it considers among others zoning. It basically says in which areas extraction can be licensed. Furthermore in the *nota Ruimte* (a spatial planning policy document) some additional principles are suggested that normally are taken

into consideration. For extractions also the *Mijnwet*, the law with regard to extracting minerals, is relevant with regard to some details.

Also some international European Directives are relevant within the 12 miles zone. This concerns the European Bird-protection and Habitat Directives and Natura 2000 (biodiversity), these can play significant roles as they are implemented in the Dutch *Natuurbeschermingswet* and the *Flora and Fauna Faunawet*. International treaties such as the *OSPAR-treaty* (toxic substances) for protection of the marine environment and *MARPOL* (emissions by vessels) of course are relevant but are considered as business as usual.

In principle the licensing authority might choose not to comply to the instructions in the mentioned documents. However any stakeholder can raise objections and appeal to administrative court with regard to a concrete decision. Also in administrative court the deliberations and weighting of interests and arguments will be done largely on the basis arguments derived from identical documents that are also considered by a sensible licenser.

Next to the license there is a second category of exceptions from the general extraction ban. This is the legal impart or notification of planned extraction activities. This procedure applies to testing of minerals and research for mining possibilities. This notification (instead of a license) is sufficient if the distance requirements kept to objects is complied to and no more than 40.000 m3 is extracted in no more than ten vessel journeys. Obviously these volumes are by far insufficient to create a mega suppletion like aimed at in the sand-engine. Therefore the details of these procedures are out of scope of this paper.

3 Constraints to sand-extraction in the North Sea

All formal, material and pseudo-regulations enumerated in section 2 lead to the following landscape of requirements, opportunities, threats and developments with regard to the idea of landscaped sandpits. The issues dealt with are subsequently location, size, mining depth and shape and Capita Selecta.

3.1 Location

The policy in use allows only for sand-extractions from the -20 meters depth line seawards. And even between the –20 and –22 depth lines the area is reserved for future small extractions for coastal defense. It is also unlikely that sand-extraction is permitted outside the Dutch Territorial Sea (12 sea-miles zone). This Dutch Territorial Sea is part of the Dutch Continental Zone (identical to the Dutch Exclusive Economic Zone). For this Continental Zone the *Integraal Beheerplan Noordzee 2015* states that seawards from the 12 miles zone the priority will be on wind parks and not on sand-extraction. The argument for this spatial zoning is that inside this spatial contour the volume of sand that can be extracted is sufficient for a long period. And seawards it is supposed to be not efficient to extract sand. Given these zoning indications sand extraction is also not likely to be done within 1 kilometer from the coast. This is of relevance to mention since in this area close to the coast de-central governments have some authority; the Spatial Planning Law is applicable in this zone. And for an extraction license, the licenser has to embed spatial planning considerations in his decision, the *Ontgrondingenwet* prescribes this.

With regard to the requirements from the *European Bird-protection* and *Habitat Directives, Natura 2000* and the Dutch *Natuurbeschermingswet* en *Flora en Fauna wet* two scenario's have to be distinguished. The unlikely scenario is that a license is asked for sand-extraction within designated areas as special natural and ecological value. This is an unlikely scenario due to the fact that there is hardly any designated area that is located seawards from the -22 depth-line. And as far as there is, it is

unrewarding to choose this rare option: Getting such a license is only possible if the eco-system does not deteriorate in any way. This is hard to proof with certainty. Even if there are just minor effects sand extraction can only be licensed for reasons of major public interests (force major), and no alternatives are available and all compensatory measures must be taken. Such a choice easily attracts attention and legal appeal. Since there are alternatives no further effort will be spend on analyzing this scenario.

The more likely second scenario is to extract outside these designated areas. In this second scenario the question will be raised whether there is some influence on the quality of the eco-system within the designated areas. This also includes the recent protection-zone Voordelta that compensates the effects of constructing Maasvlakte 2 including the large scale sand-extraction for that. In the Voordelta the extraction of minerals is not likely to be licensed.

Additionally the nota Ruimte advocates that extraction should as much as possible be done in the same area as where the material will be used. In RON 2 preferred spatial locations for sand-extractions are indicated. These requirements taken together give guidance to the process of selecting potential locations. Given the location of the sand-engine this limits alternatives considerable.

3.2 Size

There are clear developments in the policy context that indicate that relative large scale extractions are preferred. The Nota Ruimte advocates efficient use of space and requires assessment whether sand pits can not only be used for extracting sand for surface elevation but at the same time can be a source for extraction of concrete sand and mason sand. In general this will lead to a tendency to license more substantial multi purpose sandpits. The Nota Ruimte also proclaims that extractions should as much as possible be designed contiguous and uninterrupted.

There are no hard constraints with regard to the amount of sand to be extracted. However size comes with legal consequences. An Environmental Impact Assesment

is required if an extraction or a series of nearby extractions taken together, exceed 500 hectares or exceed 10 million m3 sand to be extracted. Ten million m3 equals a surface of 500 hectares being extracted 2 meters.

At the time of *RON 2* (2004) the general idea was that deep sand-pits come with unacceptable risks and unknown effects.

3.3 Depth and shape

The legal and policy settings meanwhile make deep sandpits possible and desirable. During the preparations of *RON2* the needed Environmental Impact Assessment concluded that knowledge gaps with regard to deep sand pits were substantial. The effects on coastal defense, offshore infrastructure and ecology were believed not to be known sufficiently. Deep-pits were therefore not to be allowed easily and if such a license would be issued, it should be accompanied with monitoring requirements in order to fill the knowledge gaps as soon as possible. Location-wise an EIA should point out what the tolerable depth might be.

Nevertheless RON2 mentioned some requirements at forehand. The new sea bed sediments should not be very different from the original, ecological life should be conserved, oxygen shortness due to decreased exchange of water at near the sea bed in the pit is not to be tolerated, ecological recovery of the area must be possible in a reasonable period, 10 years was mentioned as example.

Later, among others, a deep 10 m pit was monitored and European research (EU Sandpit) showed policymakers that deep-sandpits not necessarily bring major ecological of morphological problems. However it became also clear that it might take centuries before a deep pit is filled. Also it was investigated whether large sandbanks could be extracted without weakening the coastal defense; this was found possible, although again recovery of the sandbanks would take centuries.

Meanwhile the enormous and rapidly increasing amounts of sand needed changed policy. Policy-actors learned that extracting 2 meters also comes with negative

consequences for ecology. For instance constructing Maasvlakte2 would lead to a sandpit of 10 x 30 kilometers by this requirement. For a long time it was thought that ecological recovery time for al 2 meter pit is about 6 years. For extreme large pits, it was learned, this is not true and the optimum for recovery time given the amount of sand needed might plea for deep pits. The sandpits for Maasvlakte 2 will be extracted 10-15 meters and are relatively close to the shore. A process of re-colonization will speed up ecological recovery; a smaller surface area is in this perspective an deciding advantage. The ecological recovery-time is expected to be years, not decades. The tide prevents the pit from oxygen problems. The pits are situated in areas where the (potential) turbidity level is relatively low, due to relatively small amounts of mud (on top of the sand).

The issue of underwater landscaping and the specific ifs and buts still has to be elaborated. The following information therefore should not be considered hard science nor having legal implications: The limited information found yet is that a larger depth compared to -15 meter is still thought of as potential problematic. In previous discussions on the subject of shape the talus a gradient of 7-11 degrees is sometimes suggested. This combines minimizing surface and avoiding oxygen problems as considerations, pushing this discussion is beyond the scope of this report. There is however already information that can be derived from recent MERs: Following the RON2 MER newer significant MERs (see references) are produced and on their way that contain analyses how to approach these issues.

This all leads to the conclusion that deep sand pits and underwater-landscaping are phenomena will be observed in the future more frequently. However the regulatory and policy framework communicates clearly the conditions that have to be optimized while opting for large scale multi purpose sand-pits. In this context the requirements for finishing the pit will probably be reviewed. Especially the issue whether new sea bed sediments should be the same more or less as the old ones seem out of date.

3.4 Licensing procedures and scope of analysis

For a license the most important additional requirements are a description of how the extracted materials are going to be used, the shipping distance and, if applicable, the harbor. A description of the water system is required and a description of the state the sea-bed will be in or willl be constructed once the extraction is finished.

The preparation of the license will be done in accordance to section 3.4 *Algemene Wet bestuursrecht* and section 13.2 *Wet milieubeheer*. These requirements, and those for making an EIA, are business as usual and therefore ignored in this report.

These rules for preparation do not apply for preparation for extractions -20 meter depth line seawards and not exceeding 2 meters extraction (and not extracted before). For these simple situations a condensed procedure for regular extractions that do not affect other interests or have negligible effects apply (article 10.6 OW and article 6 RRO). Submitting the request is followed by a period of 8.weeks for formulating the license and publishing it, afterwards there is a 6 weeks appeal period. If these extraction require and EIA (Besluit milieu-effectrapportage 1994) the comprehensive procedure has to be followed.

On request of the minister the potential licensee submits the outcomes of analysis and research necessary for weighting the involved interests and effects.

With regard to these analysis and research some topics are mentioned explicitly. For instance the effect of mud on the turbidity of water and emerging effects on the ecosystem have to be addressed. Because of the change of light in the North Sea, if multiple large extractions will take place, their will be an influence on the food chain since micro-organisms will be influenced. The sediment and organic material brought into suspension has to be addressed, sediment and organic material is transported by the flow and tide. Processes of erosion and sedimentation and the morphology of the sand-bed have to be addressed as their impacts on nature and ecology. Design parameters have to optimize the ecological effects in relation to the depth and shape

of the pit, the depths on which lack of oxygen emerge, whether stratification in levels of oxygen by depth and shape is likely to occur. The ecological recovery time has to be assessed in relation to relevant variables as well as the long term effects on sea-bed eco-systems.

3.5 Capita Selecta

The Dutch territorial sea is far from untouched upon. All kinds of constructions have been realized in the past such as pipes, oil and gas platforms and wind parks. Obviously there are requirements with regard to distance to objects. For mining up to 2 meter depth a distance of 500 meter is required. For extracting up to a more substantial mining depth the requirements will be set stricter. For wires that are no longer used, for instance out of use telecom wires, the distance constraint is not used.

For extraction in designated military areas the Nota Ruimte requires coordination with the ministry of Defense and their consent.

In principle also sand-extraction seawards from the ongoing –20 meter depth line is not always allowed. For instance shallow areas such as sand banks can be excluded for morphological and ecological reasons.

There are also some exceptions with regard to the ban on extraction from the –20 meter depth line inland, these are for extracting fairways (up to 5 meter), and with regard to spots for which can be proved that extraction leads to improvement of coastal defense.

If one wants to be more creative than getting a license for a traditional extraction site, for instance by placing an object or creating or changing a artificial work a license on the basis of the *Wet Beheer Rijkswaterstaatwerken* is required (Wbr) (1996 Stb. 645. 15/11/2000).

References

Algemene Wet bestuursrecht

Besluit milieu-effectrapportage 1994

Besluit Ontgrondingen

EU Sandpit

Flora and Fauna Faunawet

Integraal Beheerplan Noordzee 2015

MER Extraction suppletion sand 2008-2013 (Rijkswaterstaat Directie Noord-Holland)

MER La MER Extraction sand for surface-raisement 2008-2018'

MER Maasvlakte

Mijnwet

Natuurbeschermingswet

Nota Ruimte

Ontgrondingenwet (OW),

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Wet Beheer Rijkswaterstaatwerken

Wet milieubeheer.

Other sources:

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