

Environmental Review



Velky Cetin Pig Production Farm Velky Cetin - Slovakia

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Introduction

The Velky Cetin Pig production farm is an existing pig production farm, which will be completely renovated for producing 80,000 finishers annually from 30 – 110 kg live weight.

The farm is located in Eastern part of Slovakia with 85 km to the capital Bratislava.

The farm is located on a 12 ha farm site without any crop production.

The Velky Cetin pig production farm and Vrable pig production farm located 10 km away is operated as one production unit together with a 4.100 ha crop farm located 15 km from Velky Cetin farm. The manure from the two pig farms will be applied on the crop farm and utilized as fertilizer.

The project documentation for the pig farm has been prepared, and preparation of detailed design of renovation of the pig farm has been launched.

Existing production buildings will be renovated. The old manure handling system and the channels inside and outside buildings will be changed during the renovation.

The feed for the pigs will be purchased from a local feed mill, and delivered to feed silos at the pig farm

It should be emphasised that elaboration of this Environmental Review will not be in interference with elaboration of Slovakian environmental assessments (IPPC and EIA) in compliance with Slovakian legislation.

The proposed scope and structure of this report is based on the OECD Updated Recommendations¹ and the Equator Principles² in force.

According to OECD recommendations annex 1, the farm is a category A level project, as pig production projects with more than 2,000 pig places or 750 sows are A level projects. This is the justification that Danish financing institutions have requested elaboration of the Environmental Review in accordance with international guidelines.

1. Executive summary

The farm is an existing pig production farm constructed as pig research farm in 1982 that will be totally renovated to 23.018 pig places with an annual production of 80,000 finishers from 30 – 110 kg.

¹ OECD Updated Recommendations on Common Approaches on Environment and Officially Supported Export Credits (25 February 2005) [http://webdomino1.oecd.org/olis/2005doc.nsf/Linkto/td-ecg\(2005\)3](http://webdomino1.oecd.org/olis/2005doc.nsf/Linkto/td-ecg(2005)3)

² Equator Principles <http://www.equator-principles.com/principles.shtml>

The renovation is planned to start ultimo 2010, and the farm will then gradually start production. It will take about one year from start of renovation until the farm is in fully renovated and in operation

The farm is located on a 12 ha farm site without crop production.

The Velky Cetin pig production farm and Vrable pig production farm located 10 km away is operated as one production unit together with a 4.100 ha crop farm located 15 km from Velky Cetin farm. The manure from the two pig farms is applied at the crop farm and utilized as fertilizer. The total harmony requirement from the two pig farms is 4.240 ha. Pig manure corresponding to the area requirement of 140 ha has to be disposed on another crop production farm, but it is the assessment that it should not be a problem because the livestock density in the region is quite low.

The farm has made agreement with a Slovakian environmental consulting company for preparation of the detailed design according to Slovakian regulations based on Danish outline design. This company is in the process of preparation of the required Slovakian environmental permits etc. for renovation and operation of the pig farm in compliance with Slovakian legislation. The company EKOCONSULT, from Bratislava, Slovakia has over the years worked for several local and foreign companies with larger animal production (www.ekoconsult.sk).

It is the overall assessment that the farm has the permits and approvals necessary at this early stage of project implementation, and that the farm has initiated obtaining the remaining permits and approvals.

The pig farm will be renovated in compliance with Slovakian and Danish environmental and animal welfare regulations.

The manure handling and application of manure on cultivated area will be in compliance with Slovakian and Danish regulations.

The farm will prepare a waste management plan for the pig farm.

Operation of the farm will not have negative noise impact at neighbours. There is no living house at the wine yard southeast from farm and the house 0.65 km from the pig farm buildings is not suitable for humans and is empty.

The farm is located 1.2 km to the nearest village Velky Cetin.

The distance to the nearest house is 0.65 km and a farm with vineyard is located 0.95 km from the farm. There is no settlement at the farm.

The location of the farm is in accordance with Slovakian Environmental regulations.

According to Danish odour standards there is only low risk of odour nuisance at the nearest village 1.2 km from the farm buildings. The required distance to the village is 0.94 km. The required distance to a single house is 0.49 km, and there will only be

low risk of odour nuisance at that location. The location of the farm is observing Danish odour nuisance regulations.

The foreign management will be one pig production manager. During the renovation period there will also be some technical managers responsible for renovation of the farm.

The farm will establish training programs for Slovakian employees, who will gain knowledge and skills in modern pig production methods according to newest management and production systems.

The farm will have a very positive social effect in the area because it creates employment in a rural area with limited alternative employment possibilities in the agricultural sector.

The pig production farm will start renovation and pig production in 2010 and when the pig farm is in full production the Slovakian employment will be 12 persons in the production. Additional staff will be needed for maintenance, administration, transport and other services so the total number of Slovakian employees for the entire farm will be 20 to 22 persons. In addition to this the farm will create secondary employment for the local community because the farm will purchase buildings materials and other commodities as well as purchase services such as transport of commodities to and from the farm.

The farm will employ a Slovakian veterinarian, which will report on veterinarian matters to the authorities. The farm will have the required inspection from Slovakian veterinarian authorities.

All employees will be trained in safety and provided with overalls and individual safety outfit.

2. Slovakian Legal framework

The farm has made agreement with EKOCONSULT in Bratislava for obtaining the necessary Slovakian permits and approvals for renovation and operation of the pig production farm. This includes the technical building permits based on the Danish outline design and the environmental permits. The farm and EKOCONSULT have launched this work.

The Slovakian authorities have stated that the farm has a valid IPPC (Integrated Pollution Protection Control) permission for sows and piglets, but not for finishers. An EIA (Environmental Impact Assessment) study and revised IPPC permission is requested.

The Slovakian EIA is required before the land using permits can be issued. The IPPC procedures deal with buildings permits, demolishing permits, trial operation permits and permanent operations permits. The duration for obtaining the Slovakian permits

are estimated to: EIA 4 months, land using 2 months, IPPC building permits 4 months, IPPC trial 2 months and IPPC permanent operation 3 months.

The EIA and IPPC procedures can be done in parallel, and this means that building renovation can start 6 to 8 months after the procedures have been launched in March 2010.

Part of the approval procedures is that both the Slovakian EIA and IPPC will be published in local media for comments and the EIA will also be published in the Web site of Ministry of Environment.

It should be emphasised that elaboration of this Environmental Review will not be in interference with elaboration of the Slovakian permits and environmental assessments (IPPC and EIA) which will be in compliance with Slovakian legislation.

It is the overall assessment that the farm has the permits and approvals necessary at this stage of project implementation, and that the farm has initiated obtaining the remaining permits and approvals.

4. Project Description

4.1. Baseline situation

The farm is located in an agricultural area with traditional crop production such as cereals, corn production and small scale wine production.

There is only limited livestock production in the area, and therefore there is appropriate distance to other pig production farms.

The pig farm was build as a pig research farm in 1982 with the capacity of 2,400 sows plus piglets, but without finishers.

The farm has been kept in good maintenance standard, but a total renovation of the production facilities and manure storage is required in order to be in compliance with Slovakian, Danish and international environmental and animal welfare regulations.

All buildings will be renovated and used for pig production, administration etc. New buildings will not be constructed.

The farm was in operation until 2007, and purchased by the present owners in 2008.

The public road system to the farm is suitable for operation of the farm, and the extent of farm operations will not be increased. The internal road system at the farm will be renovated.

The employment possibility at the rural sector is limited in the area because many of the livestock production facilities have closed down.

The farm will establish own heat power production at the pig farm based on straw from grain production at the crop farm.

The existing manure storage facility is outdated. There are 4 steel manure tanks that will be renovated as used as manure tanks, but the manure storage facilities need to be increased with new storage capacity.

The produced pig manure will be separated into a fibre fraction and a liquid fraction. The liquid fraction will be stored in renovated steel tanks and covered lagoons and later applied as fertilizer on agricultural land. The fibre fraction will be composted, and disposed of as fertiliser on agricultural land as well.

The manure handling system will introduce improved storage facilities for livestock manure to the region which will also secure improved utilisation of the nutrients in the manure. This has an environmental impact as the nutrients are not leaking to the environment and it reduces the need to use chemical fertilizer in the fields. The manure handling system will be in compliance with Slovakian, Danish and EU environmental requirements. New covered lagoons will be made.

The feed to the pigs will be produced at the local feed mill. The pigs will at finisher live weight of 110 kg be delivered to slaughterhouses in Slovakia. There is sufficient capacity to serve the pig farm.

4.2. Location and design of farm

The farm is located in eastern part of Slovakia 85 km east from the capital Bratislava.

The farm is located 1.2 km to the nearest village Velky Cetin with 1.700 inhabitants, 1.6 km to the river and 14 km to the city of Nitra.

The distance to the nearest house is 0.65 km and a farm with vineyard is located 0.95 km from the farm.

The location of the farm is in accordance with Slovakian environmental regulations.

According to Danish odour standards there is only low risk of odour nuisance at the nearest village 1.0 km from the farm buildings. The required distance to the village is 0.94 km. The required distance to a single house is 0.49 km, and there will only be low risk of odour nuisance at that location. The location of the farm is observing Danish odour nuisance regulations.

Table: Summary of Danish legislation and actual distances.

Location	DK legislation	Actual distance
City	1.550 meter	App. 10 km
Village	940 meter	1.200 meter
Single house in countryside	490 meter	(750 meter)

In Danish legislation a neighbour farm is not counting!!

Calculated as FMK (Foreningen af Miljø medarbejdere i Kommunerne), DK

The farm has its own reliable water supply with a water tower.

The electricity supply from the public grid is reliable, but diesel emergency generator will be installed.

The area can be characterized as farming area and scattered small forest areas.

The project will not cause resettlement, as it is renovation of an existing farm.

The project will not have effect on cultural heritage of the region.

There are no nature protection areas which will be affected by farm operations.

Based on assessment of the maps and site visit, it is the assessment that the chosen location is an appropriate location for the pig farm.

A map of the area with the pig farm is attached as Annex 2

4.3. Pig production

The pig production project is renovation of an existing pig farm. The buildings are in good maintenance standard.

The roof and insulation is in an acceptable standard and will not be replaced. Some maintenance is though required.

All pig farm equipment is outdated and will be removed, and new modern equipment will be installed.

The entire floor construction will be new with new manure channels covered by concrete drained and slatted floor.

New feed silos for readymade feed will be established at the pig production buildings.

The entire manure handling system will, besides 4 exiting steel manure tanks, be new, but manure handling is more detailed in the chapter dealing with manure.

The pig production complex will after renovation comprise 23,018 pig places for finishers equal to an annual production of 80,000 finishers with 3.5 rotations per year.

There are no sows and piglets on the farm and the piglets will be delivered to the farm at the weight of approximate 30 kg.

A draft overview lay out plan is attached as Annex 1

The pig production complex is as indicated placed in 8 buildings or locations of different size. The total building area will be 19,400 m². The pigs stay in same pen from they arrive and until they are sent to slaughterhouse.

The pig production unit will be totally isolated via metal fences to prevent access from intruding animals and humans. There is only one entrance for staff. All staff and visitors must shower and change into farm clothing before entering the pig production area. The staff will then proceed to pig production units and change footwear and change to working clothes.

For staff working at the pig production, service facilities with changing shower and toilet facilities will be established – existing facilities will be renovated.

The production complex comprises the following units

1. **Entrance**
2. **Service and administration**
3. **Pig Production**
4. **Delivery unit**
5. **Manure storage**

All incoming trucks and vehicles have to pass the entrance with disinfection pit.

However trucks transporting manure away will use a separate entrance only used for manure trucks. Trucks collecting dead pig will not have access to farm area, and the dead pigs will be brought to a fenced area with direct access for the truck collecting the dead pigs.

Pig production unit

The piglets are delivered to the farm at the weight of 30 kg. The pigs reach the live slaughter weight of 110 kg after 14 – 16 weeks, when they are sold to the slaughterhouse. In average 1,540 pigs are sold to slaughterhouses every week.

The total capacity of the finisher unit is 55 sections with total 677 pens. All pens have mostly the same size of 7.5 x 3.0 m equal to 22.5 m² (net area) and each pen with such dimension will have the capacity of 34 pigs. All pens is 7,5 meter deep, but varies in width from 3,0 to 3,22 meter.

One unit at the finisher unit will be used as a buffer unit, which will be used for the slow growing pigs, recreation for pigs requiring special care and in cases that additional capacity for finishers is needed for some reason.

Pen places, space allowance and flooring

Pig unit	Pig places	Pen size m ²	Pigs per Pen/stall	Area per pig, m ²	Flooring
					Proportion drained/slats
Finisher unit	23,018	22.5	34	0,65	1/3 - 2/3

The floor system will be 1/3 drained concrete slatted floor with 178 mm slats and 18 mm slots and 2/3 concrete slatted floor with 80 mm slats and 18 mm slots.

The production system in terms of area allowance per pig and flooring system is in compliance with Danish animal welfare regulations applicable for new farms.

The production system will be in compliance with Slovakian requirements for pig housing.

When the pigs reach the slaughter weight, they are brought from the pig production buildings to the delivery stable. The truck loads the pigs at the delivery stables and brings the pigs to the slaughterhouse. The truck will only have access to the delivery stable.

Equipment in the pig production unit

Feeding system

Automatic dry feeding will be installed in all production units.

The feed will be supplied from feed silos placed outside the pig production buildings.

Watering system

Automatic watering system will be installed in all pig production units.

Ventilation system

An automatic controlled ventilation system will be installed in all pig production buildings. The ventilation computer regulates the heating system and the cooling system. Ventilators will be placed at the ridge of the roof with open exhaust.

Heating system

The pig production units will be equipped with a water based heating system. The heat will be supplied from a new straw boiler unit.

Spray cooling system

A high pressure cooling system spraying system for cooling the pigs during summer periods will be installed in all pig production buildings.

Alarm system

Alarm system in compliance with Danish requirements will be installed in all pig production buildings. Part of the alarm system is emergency opening of the ventilation system in case of power failure.

Recreation pens

Pens for sick pigs and recreation pens will be established in compliance with Danish animal welfare regulations.

Production pigs

The farm will only have production pigs from 30 kg to 110 kg. There will be restricted access to pig production facilities. A production section for pigs will be completely emptied before a new batch of pigs is transferred to the section.

Pig Production Management system

All actions and operations regarding pig production will be weekly recorded in the Danish management software system “Win Pig”. This system is used for organizing, analysing, reporting production performance and managing all actions for groups of pigs. Thus, Win Pig is the most important management tool for the pig production.

All records will be made on the basis of notes and paper records in the production unit. The finishers are handled on a group basis.

4.4. Storage and utilization of pig manure

The main environmental issue related to pig production is related to storage, handling and application of the manure on agricultural land.

The overall environmental strategy of the farm is to utilize the pig manure as a product, which can be used as fertiliser on agricultural fields and not consider the manure as a waste product.

All pig production buildings will be renovated with completely new bottom and 20-60 cm deep manure canals will be established.

The canals are covered by concrete slatted floor, of which 1/3 will be drained floor and 2/3 slatted floor in compliance with both Slovakian and Danish animal welfare regulations. A new pull and plug piping system below the manure canals discharges the manure to two pumping station, and further to manure storage.

A screw separator will be installed and separate the manure into a liquid fraction which amounts 90 % of the manure and a fibre fraction which amounts 10 % of the manure.

Manure production at Velky Cetin

<i>Pig unit</i>	<i>Design of production facilities</i>	<i>Production capacity</i>	<i>Pig manure m³ / year</i>
Finisher	Concrete slatted and drained floor Pull and plug pipe system	80,000 produced per year	40,500

The manure production is calculated by a spread sheet from Danish Agricultural Advisory Service in accordance with the official Danish standards presented below including waste water from washing and drinking:

- 1 produced finisher 30 – 110 kg 0.506 m³

The annual manure production will then be 36,000 m³ liquid fraction and 4,450 tons fibre fraction.

At the farm there are 4 existing manure steel tanks, each with a capacity of 1,600 m³ equal to a capacity of 6,400 m³ in the steel tanks, which will be renovated and used. The manure steel tanks are checked by Slovakian authorities.

The farm will construct 2 covered manure lagoons each with a capacity of 12,000 m³ equal to a capacity of 24,000 m³. The lagoons will be constructed according to Danish regulations. (Landbrugets Byggeblad 103.04-30). The total storage capacity for liquid manure will be 30,400 m³.

The storage facilities for the fibre fraction will a concrete dung yard with discharge of liquid manure to the manure lagoon. The dung yard will be constructed according to Danish regulations for solid manure storage facilities.

The lagoons are lined with a double polymer membrane in the bottom including a security membrane and bottom membrane. Moreover, a cover membrane placed above the liquid manure surface reduces emission of odour, ammonia and other gasses. In addition, the lagoons have inspection wells for checking leakage.



The bottom and sides of the lagoon is lined with a membrane, which withstand frost, sun light and wind etc.

The storage capacity of the liquid fraction is equal to 10 months production, which fulfils the Danish requirement of 9 months.

The manure will be transported by truck from the farm to the fields

The manure will be used as fertilizer on the crop farm. The farm will use slurry tanker with drag-hose system for the liquid fraction, and the fibre fraction will be applied by tractor with manure spreader.

The general Danish and EU requirement for liquid manure application is to use drag-hose system.

For the application of manure on agricultural land the description of abatement measures should focus on harmony requirement (required agricultural area available for manure application). The standards to compare against are Danish and EU regulations concerning application of livestock manure on agricultural land

The Danish regulations are more limiting than EU regulations.

The Danish environmental legislation stipulates a maximum of 1.4 livestock unit per ha for application of animal waste. The EU requirement is 1.7 livestock units per ha. The number of animal units is calculated in accordance to Danish standards, using the spread sheet Calculation of Animal Units and Harmony area developed by Danish Agricultural Advisory service. The calculations is that 33.7 produced pig 30 – 110 kg is equal to one livestock unit

Animal units at Velky Cetin

<i>Production unit</i>	<i>Production</i>	<i>Animal units</i>
Finisher	80,000 per year 30 – 110 kg	2,374

The harmony requirement is 1,696 ha, based on the Danish calculation of 1.4 Animal Unit per ha. Due to Slovakian (and all UE except DK pig production) legislation calculation is based on 1.7 AU per ha., will require 1.397 ha.

The Velky Cetin pig production farm and Vrable pig production farm located 10 km away is operated as one production unit together with a 4.100 ha crop farm located 15 km from Velky Cetin farm. The manure from the two pig farms is applied at the crop farm and utilized as fertilizer. The total harmony requirement from the two pig farms is 4.240 ha. Pig manure corresponding to the area requirement of 140 ha has to be disposed on another crop production farm, but it is the assessment that it should not be a problem because the livestock density in the region is quite low.

Nutrient contents in the pig manure.

Manure fraction	Volume	N content	P content	K content
Total tonnes	40,458	227	43	113
Liquid fraction	89	89	84	89
% and tonnes	36,008	202	36	100
Fibre fraction	11	11	16	11
% and tonnes	4,450	25	7	13

4.5. Consumption

Feed for pigs

Annual consumption of pig feed is calculated to 18,600 tons, which will be purchased and delivered from a local feed mill.

Water

Annual consumption of water is estimated to 65,000 m³.

The farm has its own water supply with boreholes and new water collection tank. Water will be used for drinking for pigs, cleaning of pens, cooling system in pig barns and in service buildings.

Electricity

Annual consumption of electricity is estimated to 960,000 KWH to the pig production unit, and the total electricity consumption for the farm is estimated to 1,152,000 KWH

The electricity supply will be from existing public grid connection. An emergency diesel generator will be installed.

Electricity is used for lighting, operation of ventilation, feeding system, manure pumping etc. and in service buildings.

Fuel for heating

The farm will establish a new straw burning boiler using straw from the crop farm.

The new straw burner boiler will be established in accordance with Slovakian requirements for fire protection and air emissions.

Annual consumption of straw is estimated to 500 tons straw, which is equivalent to replacing 180,000 m³ of natural gas.

Heating is used in pig production buildings, administration and service buildings.

Oil for vehicles

Diesel for trucks and other vehicles will be stored in over ground steel tanks.

Lubrication oil for vehicles will be stored in drums in locked stores at the workshop

Cleaning, disinfection and hazardous materials

Disinfection materials will be used for cleaning and disinfection of pig barns.

The farm will use a very limited amount of material which can be categorized as hazardous materials. These materials are used for disinfection and chlorine for water cleaning. There will be prepared a manual for handling such chemicals in compliance with Slovakian legislation.

All materials will be stored in locked stores.

4.6. Air emission

Ventilation from pig barns is the main source of air emission, but all ventilation outlets will be placed at the ridge of pig production buildings.

The entire ventilation system will be new, and the system will be selected with focus on low energy consumption and low noise level.

There will only be limited periodic air emission of dust from filling the feed silos at the pig production buildings.

N emission from pig houses, storage and spreading of manure

The nitrogen emission from the pig farm will increase the nitrogen deposition around the pig farm, but the deposition will be less than 5 kg per ha per year, which has to be compared with the background deposition of 15 – 20 kg per ha per year and the application of nitrogen on cultivated fields of 100 – 150 kg nitrogen per ha per year.

The nitrogen emission from storage of liquid manure will be reduced by using covered manure lagoons. Only a limited part of the manure will be stored in the existing steel tanks.

Source of dust emission is from ventilation of pig barns. The dust will be released outdoor close to production buildings.

The source of odour is the outlet from the ventilation system. The odour from manure storage is very limited, because the main part of manure storage is closed lagoons.

Transport of manure from the pig farm to the fields will cause very limited periodic odour.

The transport vehicles will be a source of air emission.

Inside barns

CO₂: 600 – 3,500 ppm.- higher during winter with low ventilation rate

NH₃: 1 – 25 ppm. - higher during period with low ventilation rate.

4.7. Noise

The source of noise is ventilation of pig production buildings and periodic from transport.

The noise level from ventilation is low and the noise level from operation of the pig farm will not cause noise impact at the nearest house located 0.65 km from the pig production buildings and at the village 1.2 km from the pig production buildings.

Noise from internal transport and external transport with feed, pigs, manure, staff etc. are limited sources of periodic noise.

4.8. Waste products

The farm will elaborate a waste management plan for the pig production farm.

The farm will make written agreements with authorised companies to collect or receive waste from the farm. The farm will initiate establishing a recording system for delivery or collection of waste.

All waste will be sorted and stored separately. Written guidelines about sorting and storing waste will be prepared and all employees must be aware of the instructions to be followed.

The farm will draw specific attention to guidelines for storage of medicine and chemicals and disposal of medicine and chemical remnants and used packaging.

The dead animals and killed sick animals are collected daily from the farm units and brought to a cooling container for dead animals. The cooling container will be placed at a properly fenced and locked area.

The farm will establish an agreement with an authorised company to collect the dead pigs.

The amount of dead pigs is estimated at 182 tons calculated as 80,000 produced pigs per year with a mortality rate of 3.5 % and average weight of the dead pigs of 65 kg. Handling of dead pigs will be in compliance with Slovakian and Danish regulations.

Manure and water from cleaning the barns will be pumped to the manure lagoon, and later applied on agricultural land, as described in details in previous chapter. The amount of manure produced is estimated at 40,500 tons per year separated into a liquid fraction and a fibre fraction.

Waste water from staff facilities such as toilets, bath facilities and canteen, will be collected and treated in a waste water treatment plant. Establishment of waste water treatment facilities will be according to Slovakian regulations.

Rain water from roofs and roads etc will be discharged to ditches and a rain water collection system and further discharged to the river. It will be secured that neither pig manure nor waste water from staff facilities is discharged to the rain water system.

The farm will establish an efficient system for controlling pests such as flies, mice and rats all over the farm.

4.9. Transport

The supply of feed to the farm will be 18,600 ton annually, equal to 800 trucks each carrying 23 tons. The feed will be delivered to silos at the pig production buildings.

The supply of the 82,900 piglets of 30 kg will be equal to 138 trucks with 600 piglets on each truck.

The annual delivery of pigs to the slaughterhouse will be 80,000, equal to 400 trucks annually each carrying 200 pigs.

The farm produces 40,500 tons pig manure annually. The 36,000 tons will be liquid manure which will be transported from the farm to the fields by truck. This will be equal to 1.200 trucks annually each carrying 30 tons.

The farm produces annually 4,500 tons fibre fraction from manure separation. This will be transported to the field by truck. This will be equal to 180 trucks annually each carrying 25 tons.

Other transport to and from the farm will include transport of staff working at the farm, waste from the farm etc.

The transport will have minor periodic impact (odour, noise, vibrations, traffic security, traffic load) on the roads and in the villages.

4.10. Veterinarian aspects

The farm will employ a Slovakian veterinarian.

A Danish veterinarian will be attached to the farm as veterinarian consultant, and will visit the farm according to need.

The farm will in general only use medicine and vaccines allowed in Denmark and EU. Consequently the farm will not use growth promoters.

The farm will follow Slovakian veterinarian regulations. The farm will thus have the obligation to follow Slovakian vaccination programs although these might not be allowed in Denmark.

The farm will have periodic inspection from Slovakian veterinarian authorities

The farm will make recording on use of medicine and report to Slovakian veterinarian authorities.

4.11. Best Available Technology (BAT)

The benchmark for the Danish environmental and animal welfare legislation is EU directives dealing with these subjects and EU BREF note on Intensive rearing of poultry and pigs.

The manure handling system inside production buildings and construction of covered manure lagoons will be made in compliance with guidelines and BAT notes from Danish Agricultural Advisory Centre.

Danish legislation of flooring system, density of pig, housing systems are in compliance with EU directives.

The pig farm will be in compliance with Slovakian and Danish legislation on these issues.

Danish environmental legislation is more specific and limiting than IFC Environmental, Health and safety guidelines for Mammalian Livestock production, April 30, 2007.

The farm will be in compliance with IFC Environmental, Health and safety guidelines for Mammalian Livestock production, April 30, 2007.

5.0 Alternations

The pig farm is located appropriate in a rural area with the possibility to dispose and utilise the pig manure on a crop farm located just 15 km from the farm.

Local infrastructure such as road connection, power supply, water supply etc will be used after some renovation.

It is renovation of an existing farm and further assessment of alternative location of the farm is therefore not relevant.

6.0 Evaluation of environmental impacts

The farm is located 1.2 km to the nearest village Velky Cetin.

The distance to the nearest house is 0.65 km and a farm with vineyard is located 0.95 km from the farm.

The location of the farm is in accordance with Slovakian Environmental regulations.

Operation of the farm will not have negative noise impact at neighbours and at the village.

According to Danish odour standards there is only low risk of odour nuisance at the nearest village 1.0 km from the farm buildings. The required distance to the village is 0.94 km. The required distance to a single house is 0.49 km, and there will only be low risk of odour nuisance at that location. The location of the farm is observing Danish odour nuisance regulations.

Transport of piglets, feed, other commodities and staff and manure and pigs from the farm will have a minor impact (odour, noise, vibrations, traffic security, traffic load) on the local road system and in villages.

Operation of the farm will not have negative impact of air quality outside the distance of 1.0 km around the pig production buildings.

7.0 Evaluation of social impact

The pig production farm will start operation in 2011 and when the pig farm is in full production the Slovakian employment will be 12 persons in the production, and additional staff will be needed for maintenance, administration, transport and other services so the total number of Slovakian employees for the farm will be 20 to 22 persons. In addition to this the farm will create secondary employment for the local community because the farm will purchase building materials and other commodities as well as purchase services such as transport of commodities to and from the farm.

All Slovakian employees will have an employment contracts according to Slovakian regulations.

The farm will observe Slovakian occupational health and safety regulations. The farm will prepare written instructions for all work operations at the farm in order to reduce the risk of accidents and injuries. The instruction will be in compliance with both Slovakian and Danish regulations.

All employees will be trained in safety and provided with overalls and individual safety outfit according to Slovakian labour and safety requirements.

Service buildings will be established at the pig production unit and at the administration building. These service buildings will comprise canteens, toilets and shower facilities.

The foreign management will be a pig production manager. During the renovation period there will also be some technical managers responsible for renovation of the farm.

The farm will establish training programs for Slovakian employees, who will gain knowledge and skills in modern pig production methods according to newest management and production systems.

The farm will have a positive social effect in the area because it creates employment in an area with an unemployment rate of 11 % and limited alternative employment opportunities in the agricultural sector.

8.0 Public hearing and grievance mechanism

Renovation and operation of the farm requires a number Slovakian permits and environmental assessments. The farm has already some of the documents, and is in the process of preparation of the remaining.

The Slovakian authorities have stated that the farm has a valid IPPC (Integrated Pollution Protection Control) permission for sows and piglets, but no for finishers. An EIA (Environmental Impact Assessment) study and revised IPPC permission is therefore requested.

Part of the approval procedures is that both the Slovakian EIA and IPPC will be published in local media for comments and the EIA will also be published in the Web site of Ministry of Environment.

However, it should be emphasised that elaboration of this Environmental Review will not be in interference with elaboration of the Slovakian permits and environmental assessments (IPPC and EIA) which will be in compliance with Slovakian legislation.

This Environmental Review will be made public for 30 days at the farms website in both Slovakian and English language.

A short project description will be available on the website as well.

The website will include guidelines in case there should be any reason for grievance during the publication period and during operation of the farm.

9.0 Emergency plan

The farm will establish emergency plan in accordance with requirement from Slovakian authorities.

10.0 Environmental management plan

The farm will prepare an environmental management plan for the farm.

The farm will appoint a qualified person, who will be responsible for the environmental management.

The farm will prepare an annual report on environmental management including slurry handling, animal welfare, veterinarian and medication practice.

Annex 1. Lay out overview of Velky Cetin pig farm

Annex 01.1: Farm as it is today, sketch.

Annex 01.2: Farm after reconstruction, sketch of overview

Annex 01.3: Farm after renovation, Photo and sketch of overview

Annex 2. Map of area with farm

Annex 02: Map of the area from Slovakia with distance to village and house
See attached PDF file

Annex 01.1: Farm as it is today, sketch



Velky Cetin Farm

- 1. Entrance
- 2. 21 sections
- 3. 14 sections
- 4. 10 sections

- 5. 3 sections
- 6. 3 sections
- 7. 2 sections
- 8. 1 section



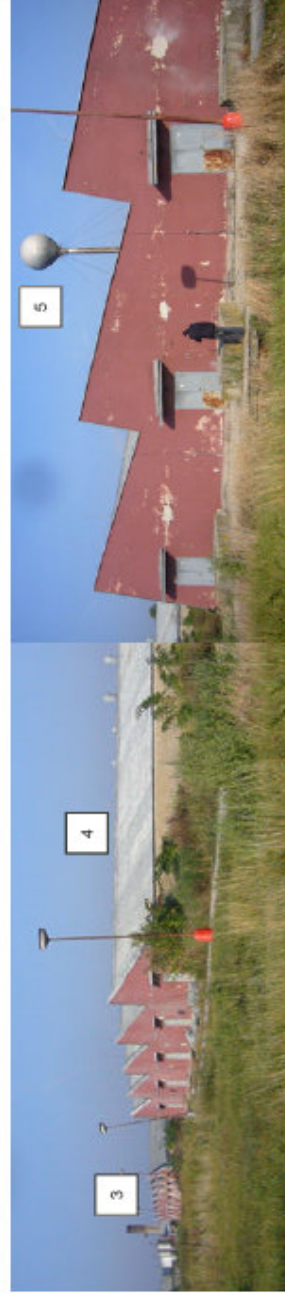
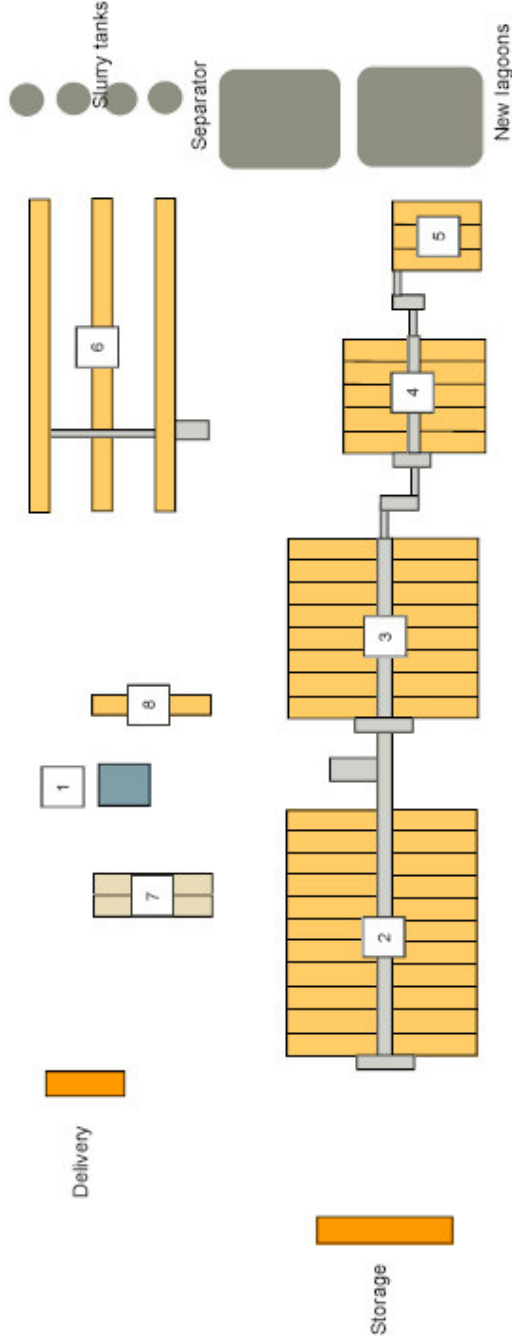
Hæstvej 46
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Proposal • version 3 • October 2009
Production units • existing

Annex 01.2: Farm after reconstruction, sketch of overview



Velky Certin Farm



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Proposal, version 3, October 2009
Production units 6

Annex 01.3: Farm after renovation, Photo and sketch of overview



Annex 02: Map of the area from Slovakia with distance to village and house
See attached PDF file

Annex 02
Map of area around Farm
Distances to village and
neighbours

