

Bio4Fuels Days 2017: Scientific Meeting



NORSKE SKOG SKOGEN

BIOKRAFT AS

Fiborgtangen is a peninsula and industrial site located along Trondheim Fjord in the village of **Skogn** in Nord-Trøndelag county. The 500-decare site hosts the paper mill **Norske Skog Skogn AS**, including the associated port used to ship newsprint away from the plant, and the new liquid biogas factory **Biokraft Skogn AS**.

Norske Skog Skogn is the largest producer of newsprint in Norway and one of the largest in Europe. It was founded in 1962. Serving demanding customers worldwide, the mill has its own port facilities, and operates a twice-a-week regular line to the UK and Continental Europe. The feedstocks are spruce wood, saw mill chip and recycled paper. Consumption of fossil fuels and emissions climate gas has been reduced to a minimum. The effluent from the paper production is being used as dewatered agri-fertilizer, but the N and P-content is low. The liquid part represents an energy problem. A collaboration with the new Biokraft biogas plant opens up for higher energy efficiency and smarter utilisation of N and P.

Biokraft Skogn AS is a liquid biogas (LBG) factory under construction. The full-scale start-up is scheduled to take place ultimo 2017. The feedstocks are waste streams from fish farming

in the region, sewage and sludge from the neighbour paper mill, Norske Skog Skogn. The biogas will be sold as fuel for public and private vehicles and distributed by Linde Group. The fuel production takes place in two steps. First, the feedstock is fermented to biogas which is refined to pure methane. Second, the methane is cooled to -160 °C, turning into liquid phase with high energy density. The LBG will be stored and transported to fuel stations in insulated tanks. The dewatered, solid part of the biorest will be used as compost, and the liquid part as N- and P- supply to Norske Skog's side stream processing, thus improving energy efficiency and nutrient utilisation. This defines the mutual beneficial link between the companies.

Bio4Fuels Days

Norwegian Centre for
Sustainable Bio-based Fuels and Energy

2 - 3rd November 2017

SCANDIC Hotel, HELL, Trondheim (Quote: UH-avtalen)

Registration by 11th October:

<https://form.nmbu.no/view.php?id=161721>

Bio4Fuels Day 1 – 2nd November

National and International Perspectives				Presenter
09:00	00:20	09:20	Welcome	Duncan Akporiaye, Centre leader
09:20	00:15	09:35	National Transport Plan	Sollie Ole Kristian, Vegvesen
09:35	00:25	10:00	International Advisory Board	Prof. Patricia Thornley, Univ. Manchester
10:00	00:25	10:25	International Advisory Board	Prof. Kristiina Kruus, VTT
10:25	00:25	10:50	International Advisory Board	Dr. David Dayton, RTI International
10:50	00:40	11:30		Coffee
Bio4Fuels Value Chain				Presenter
11:30	00:15	11:45	Status of Biofuels Research in Norway	Trond Værness, Research Council of Norway
11:45	00:20	12:05	Regional Development and planning	Cecilie Agnalt, Østfold fylkeskommune: On behalf of Østfold; Akershus; Hedmark; Oppland; Sør-Trøndelag;
12:05	00:20	12:25	New developments in enzymes research	Vincent Eijsink, NMBU
12:25	00:25	12:50	Biofuels End Use	Ingemar Magnusson, Volvo Group
12:50	00:25	13:15	Economics of two Biofuels Value Chains	Raf Roelant, PDC
13:15	01:15	14:30		Lunch
14:30	04:00	18:30	Site visit to Biokraft AS and Norske Skog Skogn	

Timeline for Site visit to Skogn

- 14:30 Buss from Værnes: Arrival Skogn 15:15
- 15:30 – 16:30 Technical Presentations
 - Norske Skog Skogn's papermill.
 - Biokrafts biogas unit.
- 16:30 – 18:30 Site Visit
 - Biokraft
 - Norske Skog Skogn
- 18:30 Bus return Værnes
- (20:00) Dinner Værnes

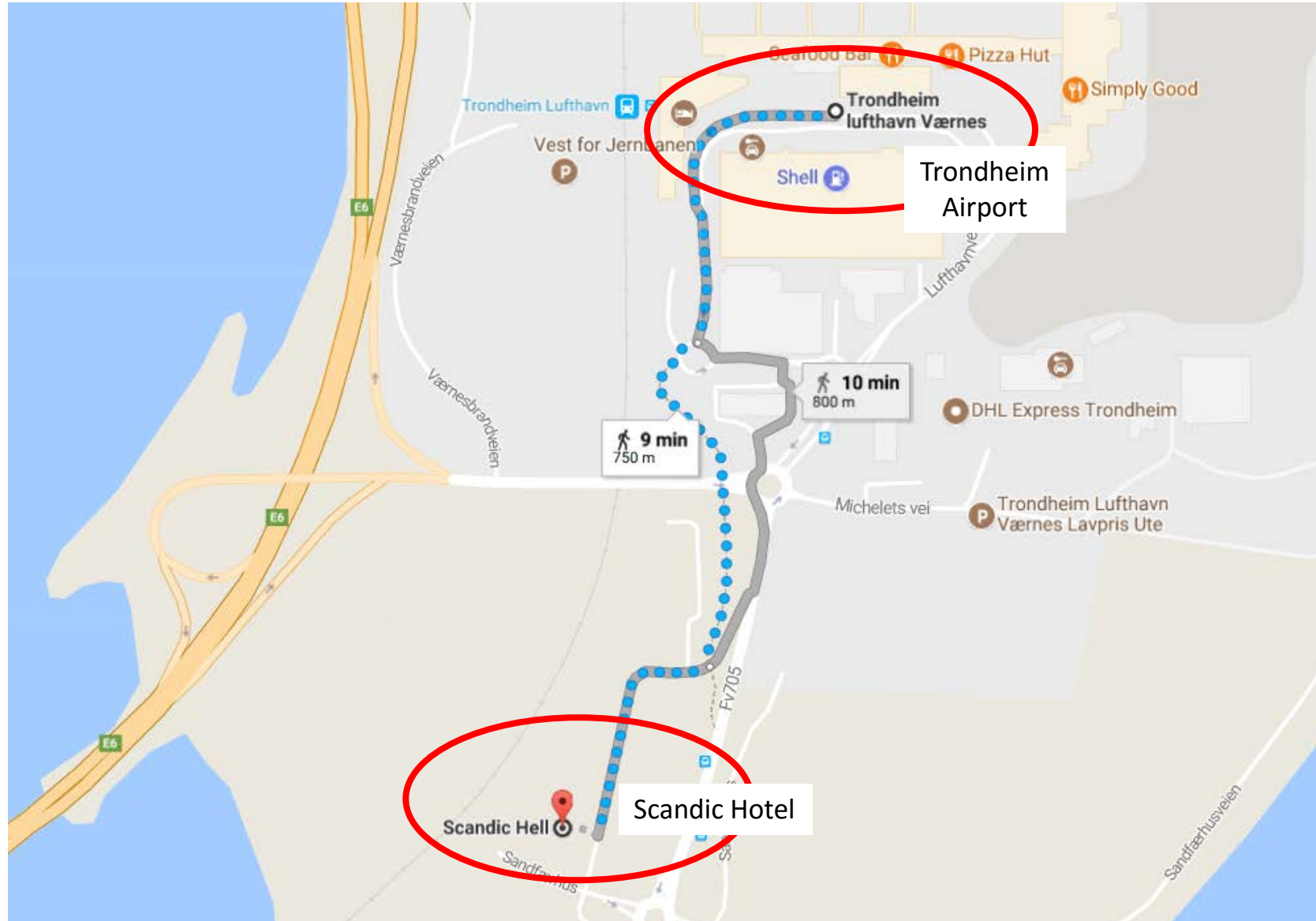
Bio4Fuels Day 2 – 3rd November

09:00	01:30	10:30	Development of Workplan 2018	
			Cluster 1: Biochemical Processing	Aniko Varnai
			Cluster 2: Thermochemical Processing	Per Carlsson
			Cluster 3: Sustainability and Process Design	Bernd Wittgens
			Cluster 4: Stakeholder Engagement	Odd Jarle Skjelhaugen
10:30	00:30	11:00		Coffee
11:00	01:30	12:30	Development of Workplan 2018	
			Cluster 1: Biochemical Processing	Tormod Briseid
			Cluster 2: Thermochemical Processing	Edd Anders Blekkan
			Cluster 3: Sustainability and Process Design	Francesco Cherubini
			Cluster 4: Stakeholder Engagement	Duncan Akporiaye
12:30	01:00	13:30		Lunch
13:30	01:00	14:30	Plenary presentation of draft workplan	
	15		Cluster 1: Biochemical Processing	
	15		Cluster 2: Thermochemical Processing	
	15		Cluster 3: Sustainability and Process Design	
	15		Cluster 4: Stakeholder Engagement	
14:30	00:20	14:50	Input from the International Advisory Group	
14:50	00:10	15:00	Closing remarks	

Getting to Scandic Hotel

- The location of the meeting is at Scandic Hotel, Hell, which is about 30 - 40 min by car from Trondheim City.
- For those coming from outside of Norway, the easiest route is to fly via Oslo, if you do not have a direct flight to Trondheim (Værnes Airport). There are regular flights from Oslo to Trondheim
- Scandic Hotel, Hell is only a 10 min walk from Trondheim airport – a map of the route is attached

Location of Scandic Hotel at Hell



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