Dublin City Council
Comhairle Cathrach Bhaile Átha Cliath

South Dublin County Council

Dún Laoghaire-Rathdown County Council Comhairle Contae Dhún Laoghaire-Ráth an Dúin

Fingal County Council
Comhairle Contae Fhine Gall

DUBLIN WASTE TO ENERGY PROJECT

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www.DUBLINWASTETOENERGY.IE

Response to An Bord Pleanála Request for Clarification Reference EF2022

November 2006

Elsam

NDP
NATIONAL DEVELOPMENT PLAN

EPA Export 25-07-2013:21:19:52

Waste to Energy Facility at Pigeon House Road, Poolbeg Peninsula, Dublin 4.
An Bord Pleanála Reference 29S.EF2022

November 2006

Following An Bord Pleanála's request for clarification (dated 20th October 2006), please find below details of relevant information presented in response to the above referenced correspondence.

…submit copies of plans and drawings of the proposed development drawn to a specified scale. Notation on the plans should be legible and the drawings should be on an A1 format or larger (3 copies of all drawings should be provided).

3 No. copies of all plans and drawings of the proposed development have been presented in Appendix 1 of this document. The attached plans and drawings have been drawn to specified scales and are presented on an A1 format.

In addition the Board notes the photographs used in the visual assessment section of the environmental impact statement (Chapter 6 and Appendix 6.1). In respect of same can you confirm the focal length of the camera used in the preparation of these photographs (it is noted that it is stated to be 50 mm in Appendix 6.1). Furthermore the Board hereby requires you under section 175(5)(a) of the Planning and Development Act, 2000 to submit to it the following further photographic information in relation to the effects on the environment of the proposed development:-
Photographs indicating the existing situation and photomontages indicating the views with the development in place should be prepared and submitted for viewpoints 7, 17, 18, 28, 29, 32, 33 and 36 (as indicated in Appendix 6.1) using a focal length of 70mm.

The focal length of the camera used in the preparation of the photographs presented in Chapter 6 and Appendix 6.1 is 50mm.

Photographs indicating the existing situation and photomontages indication the views with the development in place should be prepared and submitted for viewpoints 7, 17, 18, 28, 29, 32, 33 and 36 (as indicated in Appendix 6.1) using a focal length of 70mm are presented in Appendix 2 of this document.

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APPENDIX 1

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ELSAM A/S

DUBLIN WASTE TO ENERGY

DRAWING LIST

PROJ. NO. 13319

PREPARED BY KAS | REVISION DATE: 14.06.2006 | PRINTED DATE 14.06.2006

DRAWING NO.	REV.	TYPE	DRAWING DESCRIPTION	REVISION DATE:	CHECK.	APPR.
UZO/BE001	c	LAYOUT	CONSTRUCTION SITE	17.05.2006	KAS	CLN
UZT/BE002	f	LAYOUT	DEFINITION OF SITES	19.05.2006	KAS	CLN
UZT/BE003	c	LAYOUT	COOLING WATER LAYOUT PLAN	19.05.2006	KAS	CLN
UZT/BE005	d	LAYOUT	SITE VIEW	19.05.2006	KAS	CLN
UZT/BE007	c	LAYOUT	SUB SURFACE SERVICES	19.05.2006	KAS	CLN
UZT/BE008	d	LAYOUT	MONITORING & EMISSION POINTS	19.05.2006	KAS	CLN
UZT/BE040	a	LAYOUT	DRAINAGE AND SEWAGE PLAN	30.05.2006	KAS	CLN
UZT/BE041	a	LAYOUT	INLET COOLING WATER ELEVATIONS I	27.04.2006	CRP	CRP
UZT/BE042	a	LAYOUT	OUTLET COOLING WATER ELEVATIONS II	27.04.2006	CRP	CRP
UZT/BE101	d	LAYOUT	ELEVATIONS AND DISTANCES	19.05.2006	KAS	CLN
UZT/BH002	d	LAYOUT	ELEVATION EAST	22.05.2006	KAS	CLN
UZT/BH003	a	LAYOUT	ELEVATION WEST	19.05.2006	KAS	CLN
UZT/BH004	a	LAYOUT	ELEVATION NORTH	19.05.2006	KAS	CLN
UZT/BH005	a	LAYOUT	ELEVATION SOUTH	22.05.2006	KAS	CLN
U/BF001	a	ARCHITECTURAL PROPOSAL	SITE VIEW	26.05.2006	KAS	CLN
U/BF002	a	ARCHITECTURAL PROPOSAL	PLAN VIEW	26.05.2006	KAS	CLN
U/BF003	a	ARCHITECTURAL PROPOSAL	CROSS SECTION A-A B-B C-C D-D	26.05.2006	KAS	CLN
U/BF004	a	ARCHITECTURAL PROPOSAL	CROSS SECTION A-A B-B C-C D-D	26.05.2006	KAS	CLN
U/BF005	a	ARCHITECTURAL PROPOSAL	SERVICE BUILDING PLANS	26.05.2006	KAS	CLN
U/BF006	a	ARCHITECTURAL PROPOSAL	SERVICE BUILDING PLANS	26.05.2006	KAS	CLN
U/BF007	a	ARCHITECTURAL PROPOSAL	SERVICE BUILDING PLANS	26.05.2006	KAS	CLN
GD/MQ001	d	PID	WATER FLOW DIAGRAM	07.06.2006	KAS	CLN

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DEF. N

N

11.36gon

Mooring Posts
Crane Rails
HWM
LWM
LS
Coal Yard
Silo
Cement Works
Tank
Tanks
WB
ES
FB
BM 4.73
PIGEON HOUSE ROAD
SECONDARY CONSTRUCTION SITE ACCESS
CONSTRUCTION SITE ACCESS
TEMPORARY PARKING
back of path
Occupied
Undefined
Rubble
Open Space
Kerb
Double Gates
Post & wire fence
Fence of Fence
Grassed strip of ground
former access road to Egg installation
Entrance Vehicular Access
Irishtown 220kv Station
High Shielding
Verge
Face of Shed Shielding
Side Shielding
Corrugated
CONSTRUCTION COMPOUND
SHELLYBANKS ROAD
Footpath
Hard Surface
Verge – Vegetation (Overgrown)
Port post & wire fence / Port undefined on site
Post & wire fence
undefined on site
ELECTRICITY SUPPLY BOARD (E.S.B.)
E.S.B.
PITCH & PUTT COURSE
Vehicular Access ENTRANCE GATE
Y=233480.570
Registered boundary undefined on Site
MOUND
Undefined Registered boundary
Toe of mound
TEMPORARY STORAGE AREA
TEMPORARY CONSTRUCTION AREA
Tks
Car Park
Ramp
BM 4.48
EXISTING SLUDGE DRYING PLANT
4.2 TONNE SLUDGE DRYING PLANT
SLUDGE DIGESTER
GAS HOLDER
CHP BUILDING
Sedimentation Tanks
DUBLIN CITY COUNCIL
WASTE WATER
TREATMENT WORKS
Sewage Treatment Works
(Dublin City Council)
ENTRANCE
EXIT
Construction Site Boundary
For Information Purposes Only.
Not to be used for any other purpose.

NOTE:

PERMANENT FACILITY BOUNDARY

TEMPORARY POSSESSION BOUNDARY

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description
c	17.05.2006	KAS	CLN	GENERAL REVISION
b	03.05.2006	KAS	CLN	GENERAL REVISION

File name: UZO_BE001c						Format: A1	Draughtsman	19.04.2006	KAS
Distribute to	CLN	PEPO	PRP			Scale	Checked	20.04.2006	KAS
	JOS	HTF				1:1000	Approved	20.04.2006	PRP

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Elsam

EE13319

ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
CONSTRUCTION SITE

UZO /

BE001 c

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DEF. N

NATIONAL GRID COORDINATES		
POINT	EASTING (X)	NORTHING (Y)
1	319854.907	233429.497
2	319821.891	233489.689
3	319835.517	233557.459
4	319843.570	233597.507
5	319857.600	233667.284
6	319901.387	233741.780
7	320011.442	233725.300
8	320032.715	233733.818
9	320060.957	233937.942
10	319995.617	233529.108
I	319907.572	233746.319
N	319900.654	233723.243
Q	319868.972	233709.695
U	319809.579	233420.270
C	319966.556	233387.295
B	320033.468	233720.316
A	319865.343	233755.128
F	319858.428	233726.978
E	319845.829	233724.715
D	319785.656	233425.295
D1	319756.002	233277.812
C1	319937.156	233240.438
AA	320027.451	233721.562
BB	320038.330	233737.508
CC	320045.360	233772.814
DD	320042.472	233781.338
EE	320049.185	233783.613
FF	320057.200	233823.798
GG	320050.770	233846.698
HH	320047.881	233847.274
II	320068.228	233949.303
JJ	320076.521	233948.645
KK	320056.162	233846.559
LL	320062.427	233824.295
MM	320043.801	233730.897
NN	320032.176	233713.842

Coal Yard
Cement Works
Silo
Mooring Posts
Crane Rails
PIGEON HOUSE ROAD
ENTRANCE GATE
SECURITY BUILDING
MAIN ACCESS ROAD
CAR ACCESS
WEIGH BRIDGES
Car Park
Ramp
EXISTING SLUDGE DRYING PLANT
4.5 TONNE SLUDGE DRYING PLANT
SLUDGE DIGESTION
GAS HOLDER
CHP BUILDING
Sedimentation Tanks
DUBLIN CITY COUNCIL
WASTE WATER
TREATMENT WORKS
Sewage Treatment Works
(Dublin City Council)
SHELLYBANKS ROAD
REPAIR ENTRANCE
MAIN ENTRANCE
VISITOR PARKING
PARKING
TEMP. TRUCK PARKING
Vehicular Access ENTRANCE GATE
Entrance Vehicular Access
Irishtown 220kv Station
ELECTRICITY SUPPLY BOARD (E.S.B.)
E.S.B.
PITCH & PUTT COURSE
Tanks
Tank
MOUND
Undefined Registered boundary
Registered boundary undefined on Site
Undefined on site
Post & wire fence
Face of Fence
Verge – Vegetation (Overgrown)
Port post & wire fence / Port undefined on site
Hard Surface
Carriageway
Face of Steel Sheeting
Steel Sheeting
Rubble
Open Space
Kerb
Undefined
Occupied
former access road to Poolbeg Incinerator
Diseased strip of ground
Toe of mound
Y=233480.370
X=319999.879

NOTE:
- PERMANENT FACILITY BOUNDARY
- TEMPORARY POSSESSION BOUNDARY
- SITE NOTICE

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description
f	19.05.2006	KAS	CLN	GENERAL REVISION
e	04.05.2006	KAS	KAS	GENERAL REVISION
d	11.04.2006	KAS	PRP	GENERAL REVISION
c	03.03.2006	KAS	CLN	GENERAL REVISION
b	23.02.2006	KAS	CLN	NORTH COORDINATE POINT I CORRECTED

File name: UZT_BE002f					Format: A1	Draughtsman	31.10.2005	LU
Distribute to	CLN	PEPO	PRP			Scale	Checked	15.11.2005	PRP
	JOS	HTF				1:1000	Approved	15.11.2005	CLN

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
DEFINITION OF SITES

UZT /
BE002 f

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DEF. N

N

11.369°

Mooring Posts
Crane Rails
HWM
LS
Coal Yard
Silo
Cement Works
LWM
ES
WB
Tank
Tanks
PIGEON HOUSE ROAD
KERB
BM 4.73
BM 4.48
ENTRANCE GATE
SECURITY BUILDING
MAIN ACCESS ROAD
CAR ACCESS
WEIGH BRIDGES
DN 1200 COOLING WATER OUTLET
DN 1200 COOLING WATER INLET
EXISTING SLUDGE DRYING PLANT
4.5 TONNE SLUDGE DRYING PLANT
SLUDGE DIGESTERS
GAS HOLDER
CHP BUILDING
Car Park
Ramp
Tks
Tk
Sewage Treatment Works
(Dublin City Council)
Sedimentation Tanks
DUBLIN CITY COUNCIL
WASTE WATER
TREATMENT WORKS
Undefined
Occupied
Rubble
Open Space
Cloth
Double Gate
Post & wire fence
Face of Fence
Timber Sheeting
Diesued strip of ground former access road to ESB installation
Entrance Vehicular Access
Irishtown 220kv Station
Carriageway
Verge
Face of Steel Sheeting
Steel Sheeting
undefined on site
SHELLYBANKS ROAD
Verge - Vegetation (Overgrown)
Port post & wire fence / Port undefined on site
FF
TEMP. TRUCK PARKING
REPAIR ENTRANCE
MAIN ENTRANCE
VISITOR PARKING
PARKING
ELECTRICITY SUPPLY BOARD (E.S.B.)
E.S.B.
FB
PITCH & PUTT COURSE
Vehicular Access ENTRANCE GATE
Yard Surface
Registered boundary undefined on Site
Undefined Registered boundary
MOUND
Toe of mound
Undefined on site
Y=233480.570
X=318000.570
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NOTE

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description
c	19.05.2006	KAS	CLN	GENERAL REVISION
b	03.05.2006	KAS	PRP	

File name: UZT_BE003c			Format: A1	Draughtsman	27.04.2006 TGJ
Distribute to			Scale	Checked	27.04.2006 CRP
			1:1000	Approved	27.04.2006 CRP

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
COOLINGWATER LAYOUT PLAN

UZT /

BE003c

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DEF. N

N

11.36gr

Mooring Posts
Crane Rails
HWM
LWM
LS
Coal Yard
Silo
Cement Works
Tank
Tanks
WB
ES
FB
PIGEON HOUSE ROAD
KERB
BM 4.73
BM 4.48
FENCE
ENTRANCE GATE
SECURITY BUILDING
MAIN ACCESS ROAD
BARRIER
CAR ACCESS
WEIGH BRIDGES
Car Park
Ramp
Tks
Tk
EXISTING SLUDGE DRYING PLANT
4.5 TONNE SLUDGE DRYING PLANT
SLUDGE DIGESTER
GAS HOLDER
CHP BUILDING
Sedimentation Tanks
DUBLIN CITY COUNCIL
WASTE WATER
TREATMENT WORKS
Sewage Treatment Works
(Dublin City Council)
Post & wire fence
Grassed strip of ground
former access road to ESB installation
Face of Fence
Entrance Vehicular Access
Irishtown 220kv Station
Carriageway
Verge
undefined on site
Wedge
Undefined
Occupied
Rubble
Open Space
Kerb
Double Gate Stile
Post & wire fence / Port undefined on site
Verge – Vegetation (Overgrown)
Port post & wire fence
FF
ELECTRICITY SUPPLY BOARD (E.S.B.)
E.S.B.
PITCH & PUTT COURSE
SHELLYBANKS ROAD
HAUL/SERVICE ROAD
HAUL/SERVICE AREA
FUEL STORAGE (DIESEL)
TEMP. TRUCK PARKING
TRAFFIC LIGHT
ACCESS ROAD TO WASTE BUNKER
REPAIR ENTRANCE
MAIN ENTRANCE
CONTROLROOM ADMINISTRATION AMENITIES SHOWROOM BATHROOM
FUEL STORAGE (WASTE)
WASTE INSPECTION AREA
VISITOR PARKING
PARKING
bus parking
Vehicular Access ENTRANCE GATE
Registered boundary undefined on Site
MOUND
Undefined Registered boundary
Toe of mound
Undefined on site
Y=233480.370
X=310000.670

NOTE:

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description
d	19.05.2006	KAS	CLN	GENERAL REVISION
c	03.05.2006	KAS	CLN	UNDERGROUND SERVICES REMOVED
b	11.04.2006	KAS	PRP	GENERAL REVISION

File name: UZT_BE002d						Format: A1	Draughtsman	10.11.2005	LU
Distribute to	CLN	PEPO	PRP			Scale	Checked		
	JOS	HTF				1:1000	Approved		

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
SITE VIEW

UZT /

BE005 d

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DEF. N

N

11.36gr

Coal Yard

Silo

Cement Works

Mooring Posts

Crane Rails

HWM

LWM

LS

ES

WB

Tank

Tanks

1800MM (6FT) COMBINED SEWER

ABANDONED 2400MM (8FT)COMBINED SEWER

BM 4.73

PIGEON HOUSE ROAD

ENTRANCE GATE

FENCE

Post & wire fence

Hedge

Overhead cable on poles

Fac. Line Fence

Entrance Vehicular Access

Irishtown 220kv Station

TELECOMMUNICATION POWER SERVICE LINE

SEWAGE

DN 1200 COOLING WATER OUTLET

DN 1200 COOLING WATER INLET

Car Park

Ramp

BM 4.48

Tks

Tk

EXISTING SLUDGE DRYING PLANT

4.3 TONNE SLUDGE DRYING PLANT

SLUDGE DIGESTER

GAS HOLDER

CHP BUILDING

Sewage Treatment Works

(Dublin City Council)

Sedimentation Tanks

DUBLIN CITY COUNCIL

WASTE WATER

TREATMENT WORKS

ELECTRICITY SUPPLY BOARD (E.S.B.)

E.S.B.

FB

PITCH & PUTT COURSE

SHERRARD ROAD

Verge – Vegetation (Overgrown)

Port post & wire fence / Port undefined on site

Post & wire fence

110 KV

TWIN SYPHONS 2240MM

MOUND

Vehicular Access ENTRANCE GATE

Undefined Registered boundary

Undefined on site

Y=233480.570

X=310555.670

LEGEND:

- PERMANENT FACILITY BOUNDARY
- WAYLEAVES
- 220KV UNDERGROUND CABLES (EXISTING)
- 110KV UNDERGROUND CABLES (EXISTING)
- 38KV UNDERGROUND CABLES (EXISTING)
- GAS PIPE Ø 400 MM 19 BAR (EXISTING)
- GAS PIPE Ø 180 MM 4 BAR (EXISTING)
- WATER MAIN
- COOLING WATER

PRELIMINARY

Index	Date	Chck.	Appr.	Description
c	19.05.2006	KAS	CLN	GENERAL REVISION
b	05.05.2006	KAS	KAS	GENERAL REVISION

File name: UZT_BE007c							Format: A1	Draughtsman	09.04.2006	LU
Distribute to	CLN	PEPO	PRP				Scale	Checked	11.04.2006	KAS
	JOS	HTF					1:1000	Approved	11.04.2006	PRP

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
SUB SURFACE UTILITIES

UZT /

BE007 c

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NOT IN SCALE

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

EPA Export 25-07-2013:21:19:53

DEF. N

N

11.369°

Mooring Posts
Crane Rails
HWM
LWM
LS
Coal Yard
Silo
Cement Works
Tank
Tanks
ES
WB
PIGEON HOUSE ROAD
KERB
back of path
Undefined
Occupied
Rubble
Open Space
Kerb
Double Gate
Post & wire fence
Disused strip of ground
former access road to Fish Installation
Face of Fence
Low Shielding
Entrance Vehicular Access
Irishtown 220kv Station
Carriageway
Verge
Face of Steel Shielding
Steel Shielding
undefined on site
Verge - Vegetation (Overgrown)
Post post & wire fence / Post undefined on site
Post & wire fence
Face of Post & wire fence
TEMP. TRUCK PARKING
REPAIR ENTRANCE
MAIN ENTRANCE
ADD. PARKING
Hard Surface
SHELLYBANKS ROAD
ELECTRICITY SUPPLY BOARD (E.S.B.)
E.S.B.
FB
PITCH & PUTT COURSE
Vehicular Access ENTRANCE GATE
Registered boundary undefined on Site
Undefined on site
MOUND
Undefined Registered boundary
Toe of mound
ENTRANCE GATE
SECURITY BUILDING
MAIN ACCESS ROAD
CAR ACCESS
WEIGH BRIDGES
SE-1
SW-1
BM 4.73
BM 4.48
Car Park
Ramp
Tks
Tk
EXISTING SLUDGE DRYING PLANT
4.5 TONNE SLUDGE DRYING PLANT
SLUDGE DIGESTION
GAS HOLDER
CHP BUILDING
DUBLIN CITY COUNCIL
WASTE WATER
TREATMENT WORKS
Sedimentation Tanks
Sewage Treatment Works
(Dublin City Council)
M-A2-1
M-A2-2
M-A2-3
M-SW-1
AA-1
WEATHER STATION
VISITOR PARKING
PARKING
A2-1
A2-2
A2-3
Y=233480.279
X=319838.427

NOTE:

PERMANENT FACILITY BOUNDARY

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

NOT IN SCALE

PRELIMINARY

NATIONAL GRID COORDINATES

POINT	EASTING (X)	NORTHING (Y)	ID
A2-1	319961.384	233618.752	EMISSION POINT AIR
A2-2	319966.776	233617.668	EMISSION POINT AIR
A2-3	319869.994	233552.240	EMISSION POINT AIR
M-A2-1	319957.146	233598.198	MONITORING POINT AIR
M-A2-2	319962.538	233597114	MONITORING POINT AIR
M-A2-3	319892.666	233547.682	MONITORING POINT AIR
AA-1	319838.427	233457.961	MONITORING POINT WEATHER STATION
SE-1	319973.759	233733.970	EMISSION POINT DRAINAGE AND SEWAGE
SW1	320044.630	233782.085	EMISSION POINT COOLING WATER OUTLET
M-SW1	319952.431	233541.162	MONITORING POINT COOLING WATER OUTLET

Index	Date	Chck.	Appr.	Description
d	19.05.2006	KAS	CLN	GENERAL REVISION
c	04.05.2006	KAS	KAS	GENERAL REVISION
b	11.04.2006	KAS	PRP	GENERAL REVISION

File name: UZT_BE008d			Format: A1	Draughtsman	08.03.2006 LU
Distribute to			Scale 1:1000	Checked	08.03.2006 KAS
				Approved	08.03.2006 CLN

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
MONITORING & EMISSION POINTS

UZT /

BE008 d

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DEF. N

N

11.369°

Mooring Posts
Crane Rails
HWM
LWM
LS
Coal Yard
Silo
Cement Works
Tank
Tanks
WB
ES
FB
SW—1
BM 4.73
PIGEON HOUSE ROAD
4.6
3.8
3.9
3.5
3.4
4.2
KERB
MAIN HOOPS
back of path
Undefined
Occupied
Rubbish
Open Space
Kiosk
Double Gates
Post & wire fence
Face of Fence
Low Shearing
former access road to Fish Station
Disused strip of ground
Entrance Vehicular Access
Inishtown 220kv Station
ELECTRICITY SUPPLY BOARD (E.S.B.)
E.S.B.
Carriageway
Verge
Face of Steel Sheeting
Steel Sheeting
SHELLYBANKS ROAD
Verge – Vegetation (Overgrown)
Post & wire fence / Post undefined on site
Post post & wire fence / Port undefined on site
Face of Post & wire fence
TEMP. TRUCK PARKING
REPAIR ENTRANCE
MAIN ENTRANCE
PUBLIC PARKING
PITCH & PUTT COURSE
Vehicular Access ENTRANCE GATE
Hard Surface
Registered boundary undefined on Site
Undefined on site
MOUND
Undefined Registered boundary
Toe of mound
CONNECTION TO EXIST. MAIN SEWER
ENTRANCE GATE
SECURITY BUILDING
MAIN ACCESS ROAD
CAR ACCESS
WEIGH BRIDGES
SURFACE WATER FLOW METER
FROM RESERVOIR TECHNICAL WATER
TO RESERVOIR TECHNICAL WATER
GRIT TRAP
OIL SEPARATOR
ROOF SURFACE WATER RESERVOIR
OVER FLOW
Concrete Kerb
Concrete Upstand
EXISTING SLUDGE DRYING PLANT
4.3 TONNE SLUDGE DRYING PLANT
SLUDGE DIGESTION
GAS HOLDER
CHP BUILDING
Car Park
Ramp
Tks
Tk
Sewage Treatment Works
(Dublin City Council)
Sedimentation Tanks
DUBLIN CITY COUNCIL
WASTE WATER
TREATMENT WORKS
GAS ENGINE
DRYING PLANT
EXPLOSION
Y=233480.279
X=310000.679

NOTE:

PERMANENT FACILITY BOUNDARY

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

LEGEND:

SEWAGE
DRAINAGE
MAN HOLE
STREET GULLY / DOWN PIPE

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description

File name: UZT_BE040a			Format: A1	Draughtsman	19.05.2006	ISC
Distribute to			Scale	Checked	30.05.2006	KAS
			1:1000	Approved	30.05.2006	CLN

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
DRAINAGE AND SEWAGE SYSTEM

UZT /
BE040 a

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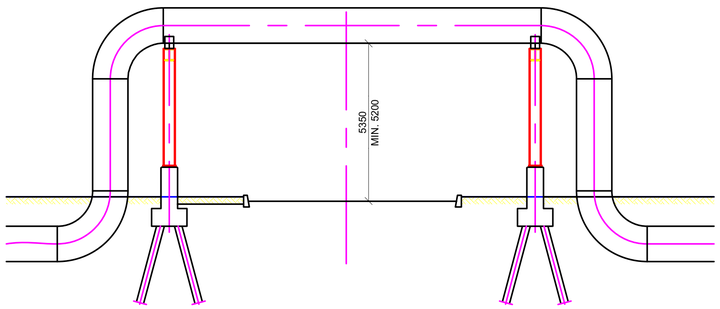
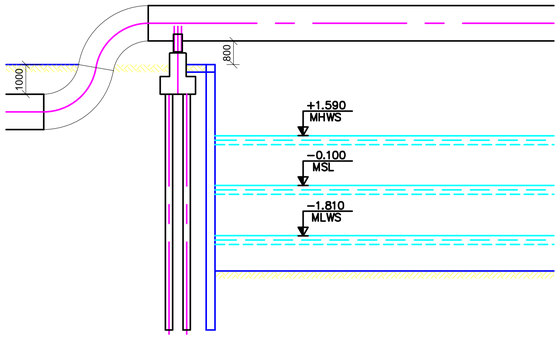


POINT 2–I, ROAD CROSSING
1:100



POINT 3–I, CANAL CROSSING
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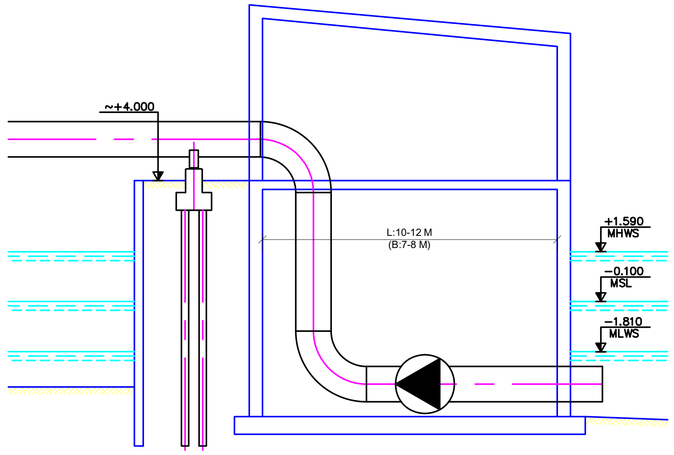

POINT 4–I, PUMP HOUSE
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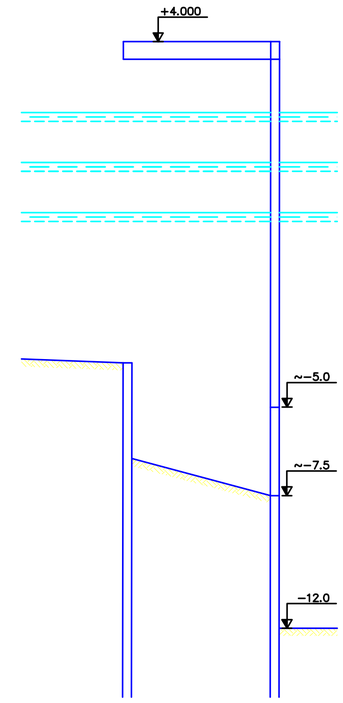
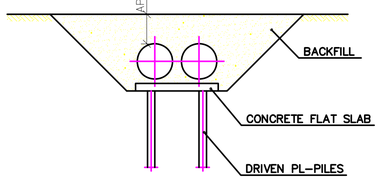


POINT 5–I, COOLING WATER INTAKE
1:100



TYPICAL CROSS SECTION
1:100

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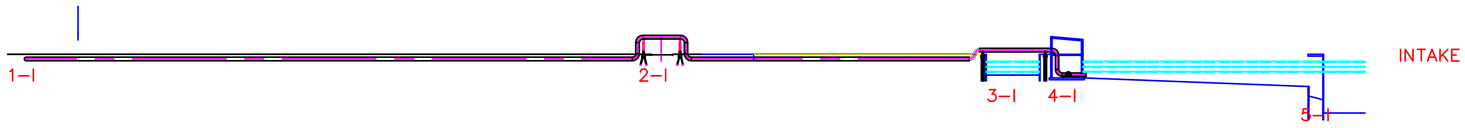
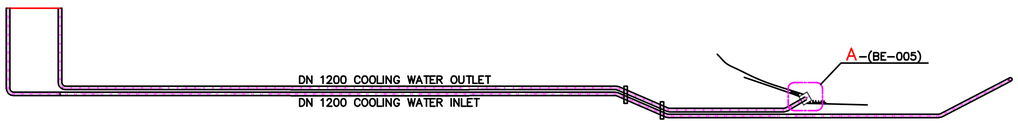


ELEVATIONS OF COOLING TRACE
1:1000



PLAN OF COOLING TRACE
1:1000

NOT IN SCALE

PRELIMINARY

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Distribute to					Scale	Checked	27.04.2006	CRP
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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT, INLET
COOLING WATER ELEVATIONS I

UZT /

BE041a

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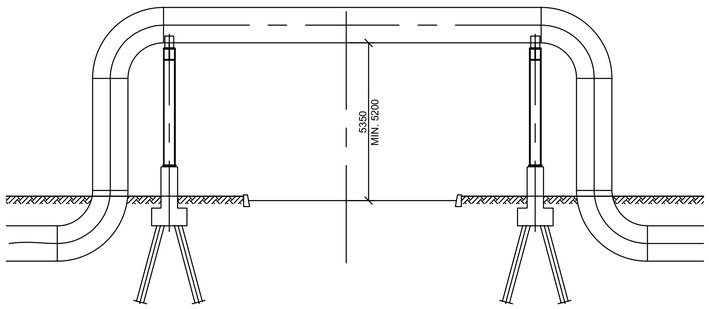

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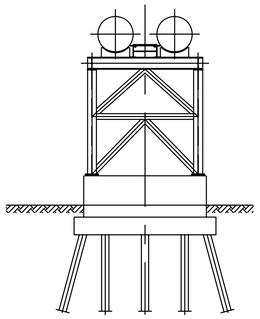

SECTION, ROAD CROSSING
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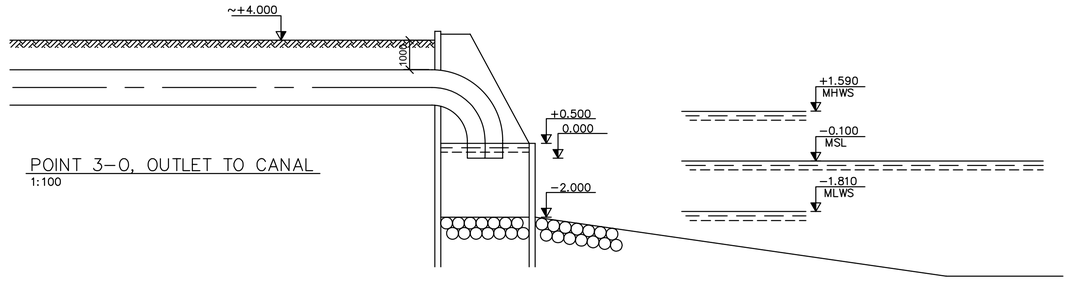

POINT 3–0, OUTLET TO CANAL
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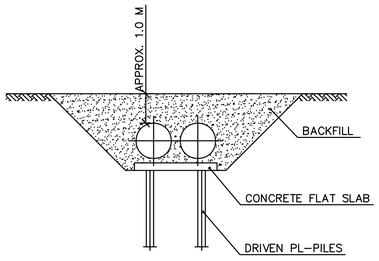

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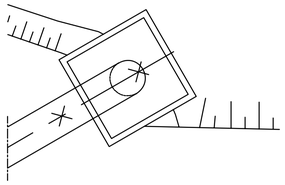

DETAIL A, POINT 3–0
1:100

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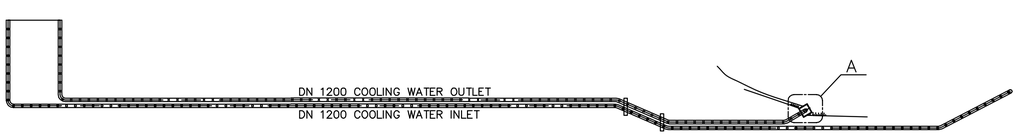
ELEVATIONS OF COOLING TRACE
1:1000



PLAN OF COOLING TRACE
1:1000

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description

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				Approved	27.04.2006 CRP

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT, OUTLET
COOLING WATER ELEVATIONS II

UZT /

BE042a

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DEF. N

N

11.36gr

Mooring Posts
Crane Rails
HWM
LWM
LS
Coal Yard
Silo
Cement Works
Tank
Tanks
WB
ES
FB
PIGEON HOUSE ROAD
KERB
BM 4.73
BM 4.48
Car Park
Ramp
Tks
Tk
Occupied
Undefined
Rubble
Open Space
Kerb
Double Gates
Post & wire fence
Face of Fence
Steel Sheeting
Diseased strip of ground
former access road to Eap installation
Entrance Vehicular Access
Irishtown 220kv Station
ELECTRICITY SUPPLY BOARD (E.S.B.)
E.S.B.
Verge
Corrugated
Face of Steel Sheeting
Face of Post & wire fence
Port post & wire fence / Port undefined on site
Verge - Vegetation (Overgrown)
SHELLYBANKS ROAD
PITCH & PUTT COURSE
Hard Surface
Vehicular Access ENTRANCE GATE
Registered boundary undefined on Site
Undefined on site
Undefined Registered boundary
MOUND
Toe of mound
Y=233480.370
117.3 m
36.1 m
28.7 m
17.7 m
26.0 m
26.8 m
13.8 m
X 5.00
X 9.00
X 12.00
Sewage Treatment Works
(Dublin City Council)
EXISTING SLUDGE DRYING PLANT
4.2 TONNE SLUDGE DRYING PLANT
SLUDGE DIGESTION
GAS HOLDER
CHP BUILDING
Sedimentation Tanks
DUBLIN CITY COUNCIL
WASTE WATER
TREATMENT WORKS
ENTRANCE
EXIT

NOTE:

PERMANENT FACILITY BOUNDARY

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

CONCRETE FLOOR LEVEL

CONCRETE FLOOR LEVEL

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description
d	19.05.2006	KAS	CLN	GENERAL REVISION
c	04.05.2006	KAS	CLN	GENERAL REVISION
b	11.04.2006	KAS	PRP	GENERAL REVISION

File name: UZT_BE101 d					Format: A1	Draughtsman	09.03.2006 LU
Distribute to	CLN	PEPO	PRP			Scale	Checked 09.03.2006 KAS
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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
ELEVATIONS AND DISTANCES

UZT /

BE101 d

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NOTE:

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Rev.	Date	Chck.	Appr.	Description
d	22.05.2006	KAS	CLN	GENERAL REVISION
c	03.05.2006	KAS	CLN	GENERAL REVISION
b	11.04.2006	KAS	PRP	GENERAL REVISION

File name: UZT_BH002d | Format: A0 | Draughtsman: | 08.11.2005
Distribute to: | Scale: 1:200 | Checked: | 08.03.2006 | d
Approved: | 08.03.2006 | d

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
ELEVATION EAST

UZT /

BH002 d

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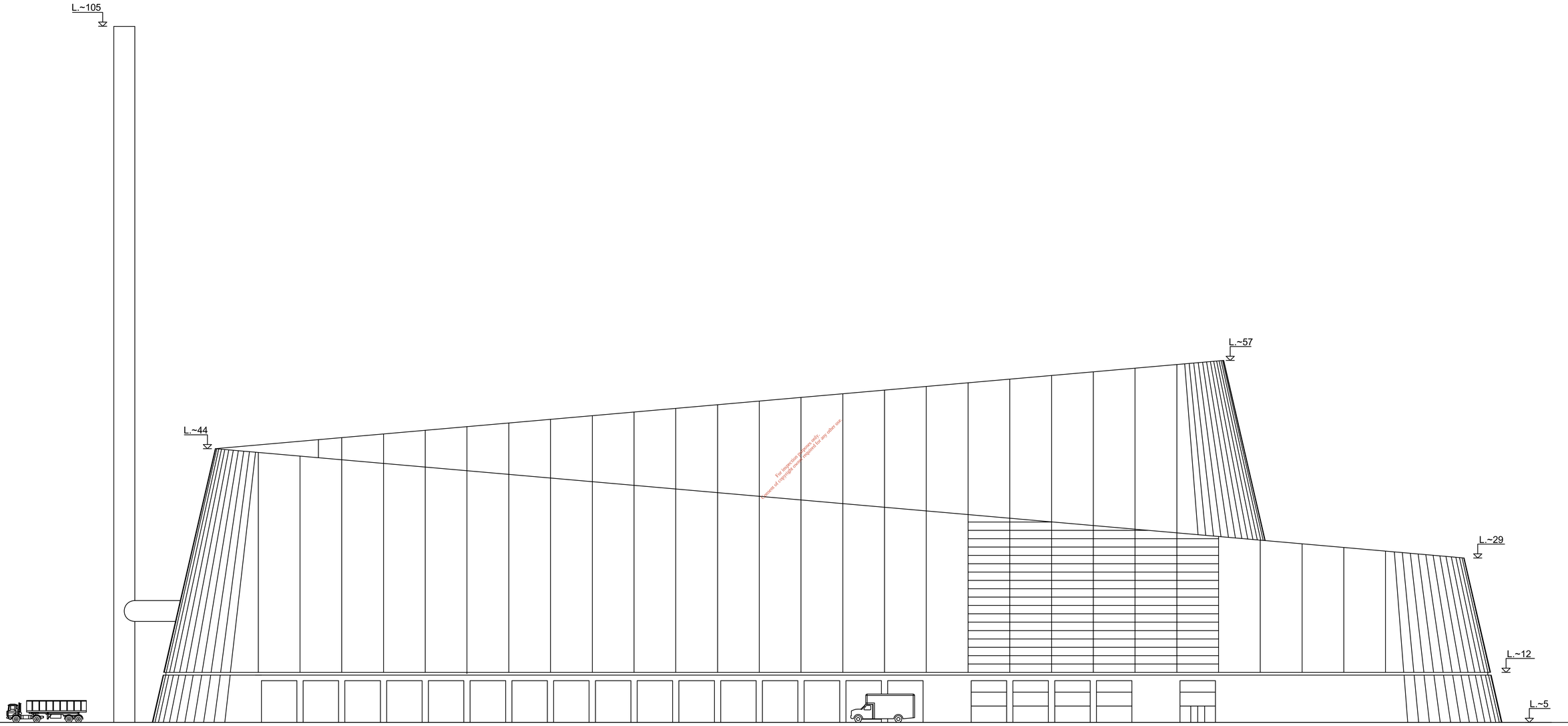

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PRELIMINARY

NOTE:

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

NOT IN SCALE

Index	Date	Chck	Appr	Description

File name: UZT_BH003a	Format: A0	Draughtsman	08.11.2005	
Distribute to	Scale	Checked	19.05.2006	I
	1:200	Approved	19.05.2006	I

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
ELEVATION WEST

UZT /

BH003 a

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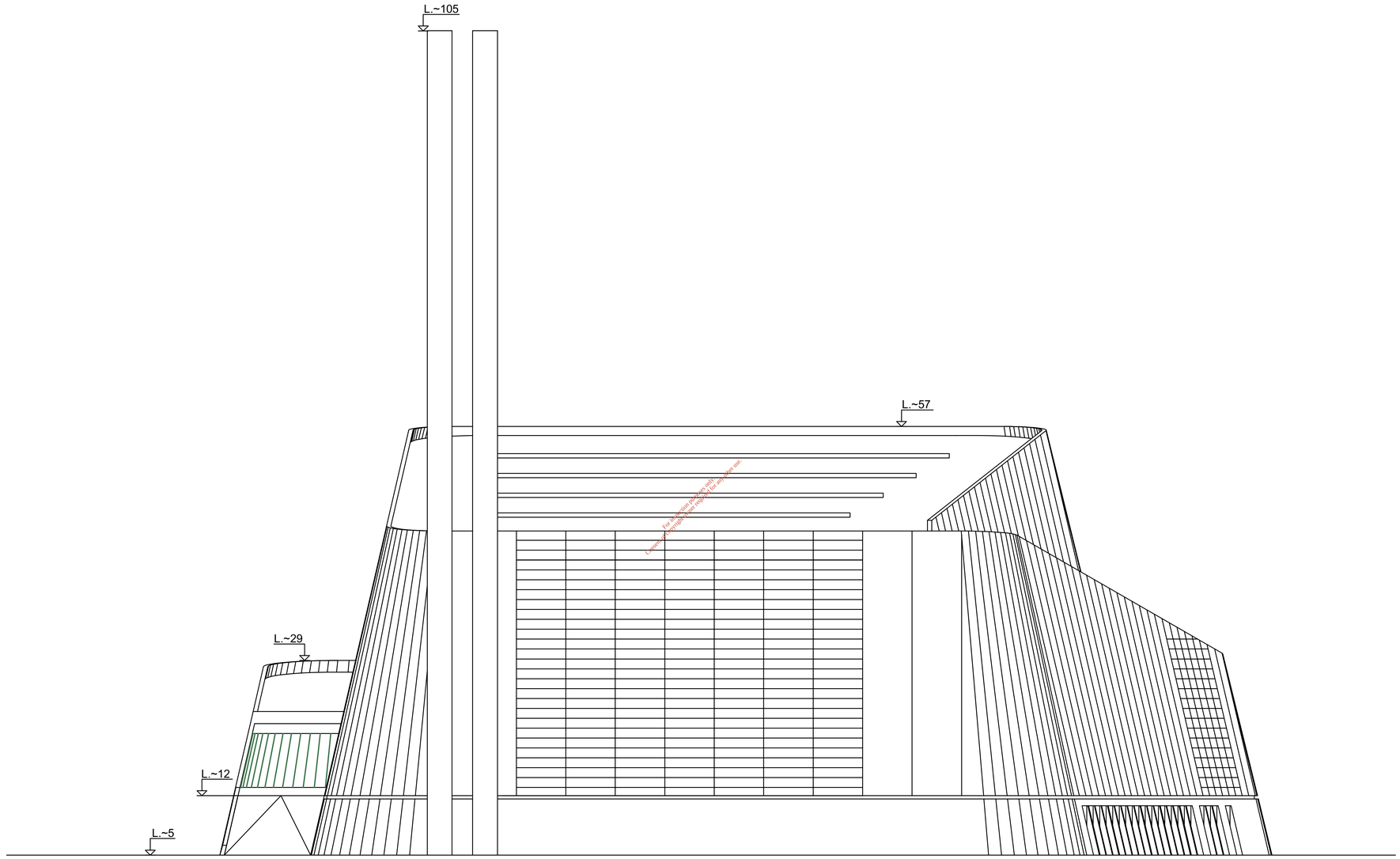

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DD CC BB AA Z Y X W V U T S R Q P O N M L K J I H

NOTE:

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

NOT IN SCALE

PRELIMINARY

Rev.	Date	Chck.	Appr.	Description

File name: UZT_BH004 | Format: A0 | Draughtsman: | 08.11.2005

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
ELEVATION NORTH

UZT /

BH004 a

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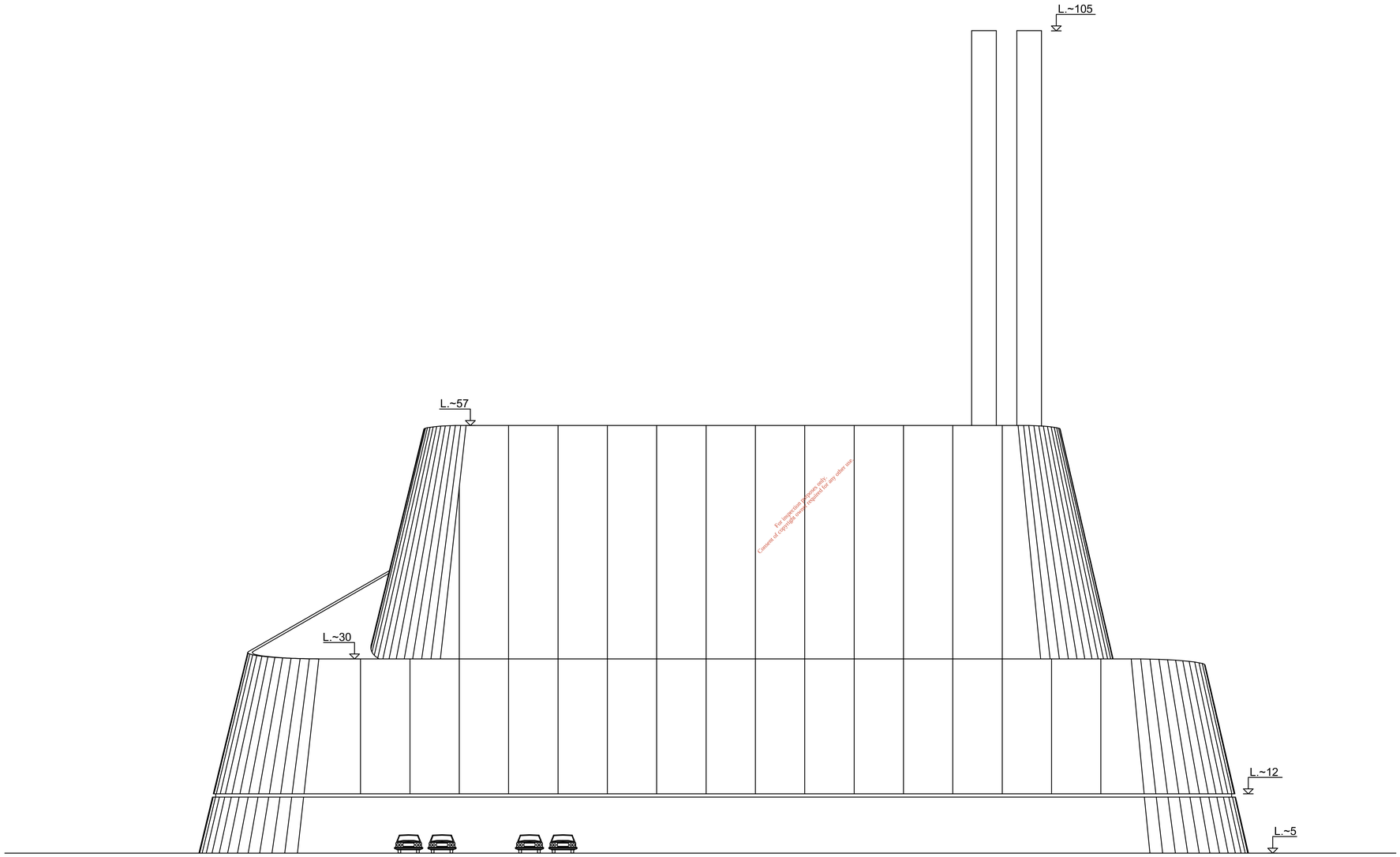

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G H I J K L M N O P Q R S T U V W X Y Z AA BB CC DD EE

NOTE:

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

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PRELIMINARY

Index	Date	Chck.	Appr.	Description

File name: UZT_BH005a	Format: A0	Draughtsman	08.11.2005
Distribute to:	Scale 1:200	Checked	22.05.2006
		Approved	22.05.2006

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ELSAM A/S
DUBLIN WASTE TO ENERGY
LAYOUT
ELEVATION SOUTH

UZT /

BH005 a

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Coal Yard

Silo

Cement Works

Mooring Posts

Crane Rails

HWM

LWM

LS

ES

WB

Tank

Tanks

PIGEON HOUSE ROAD

KERB

BM 4.73

BM 4.48

Sewage Treatment Works
(Dublin City Council)

Car Park

Ramp

Tks

Tk

EXISTING SLUDGE DRYING PLANT

4.2 TONNE SLUDGE DRYING PLANT

SLUDGE DIGESTION

GAS HOLDER

CHP BUILDING

Sedimentation Tanks

DUBLIN CITY COUNCIL
WASTE WATER
TREATMENT WORKS

Irishtown 220kv Station

Entrance Vehicular Access

Occupied

Rubble

Open Space

Double Gate

Fenced Fence

Post & wire fence

Grassed strip of ground

former access road to ESB Installation

Corrugated Fence

Carriageway

Verge

undefined on site

ELECTRICITY SUPPLY BOARD (E.S.B.)

FB

E.S.B.

Post & wire fence / Post undefined on site

Verge – Vegetation (Overgrown)

SHELLYBANKS ROAD

Post & wire fence

Verge – Vegetation (Overgrown)

PITCH & PUTT COURSE

Vehicular Access ENTRANCE GATE

Hard Surface

Vegetation

FIREVENTILATION 5% OF SURFACE AREA

VISITOR PARKING

PARKING

CAR ACCESS

WEIGH BRIDGES

ROAD SWEEPER

ROAD ARRIVAL

ROAD DEPARTURE

MOUND

Undefined Registered boundary

Registered boundary undefined on Site

Toe of mound

Undefined on site

Y=233480.270

X=319800.579

HWM

Shingle

NORTH

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description			
File name: U_BF001a				Scale: 1:1000	Draughtsman	22.05.2006	JF
Distribute to		CLN	KAS		Checked	26.05.2006	KAS
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FRIIS & MOLTKE

Elsam — EE 13319

DUBLIN WASTE TO ENERGY
ARCHITECTURAL PROPOSAL
SITE VIEW

U/

BF001a

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Kraftværksvej 53 7000 Fredericia Denmark Tel: +45 7923 3333 E-mail: mail@elsam-eng.com Web: www.elsam-eng.com

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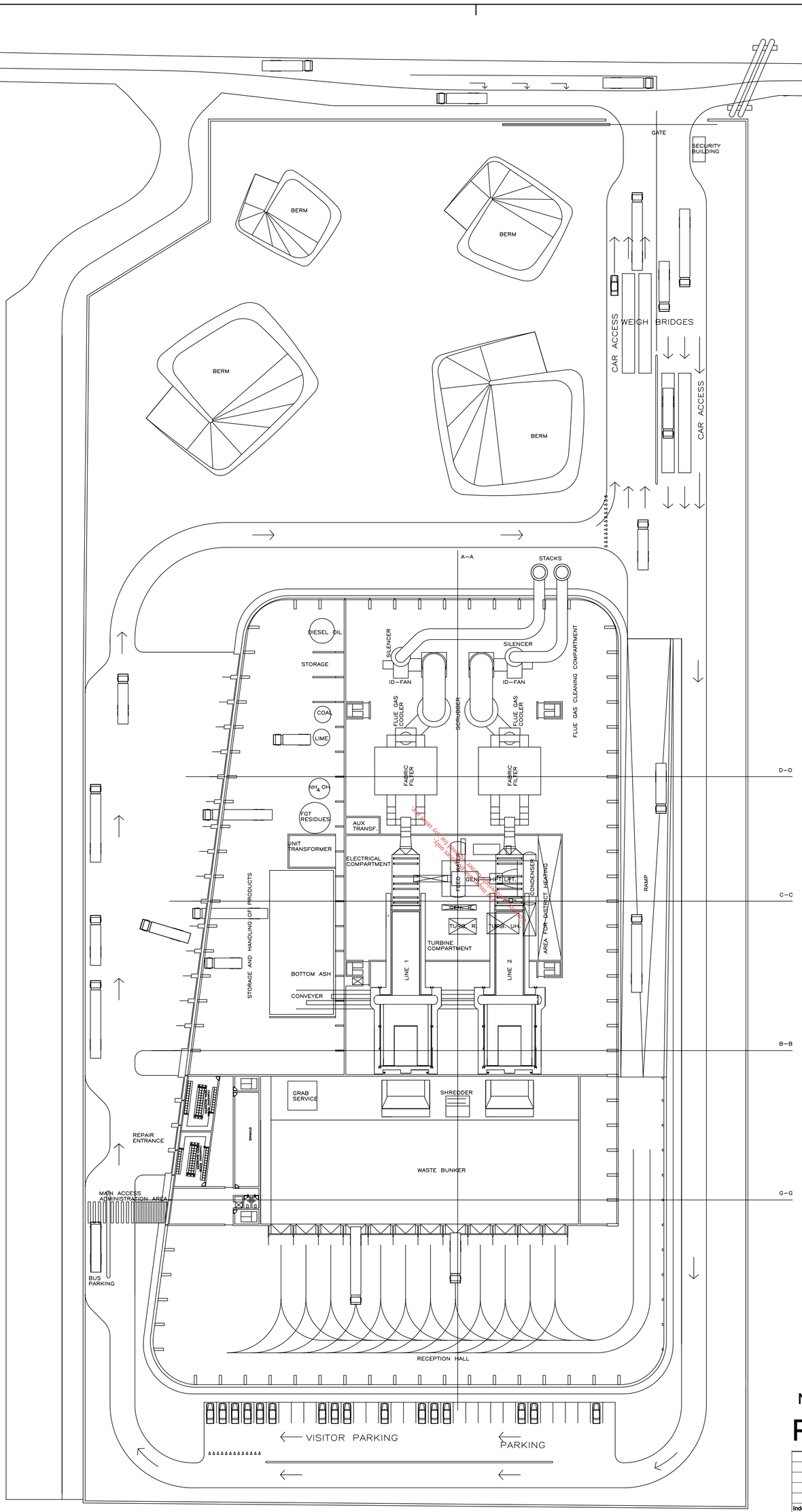

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		PRP				Approved	26.05.2006	CLN

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DUBLIN WASTE TO ENERGY
ARCHITECTURAL PROPOSAL
PLAN VIEW

U /

BF002a

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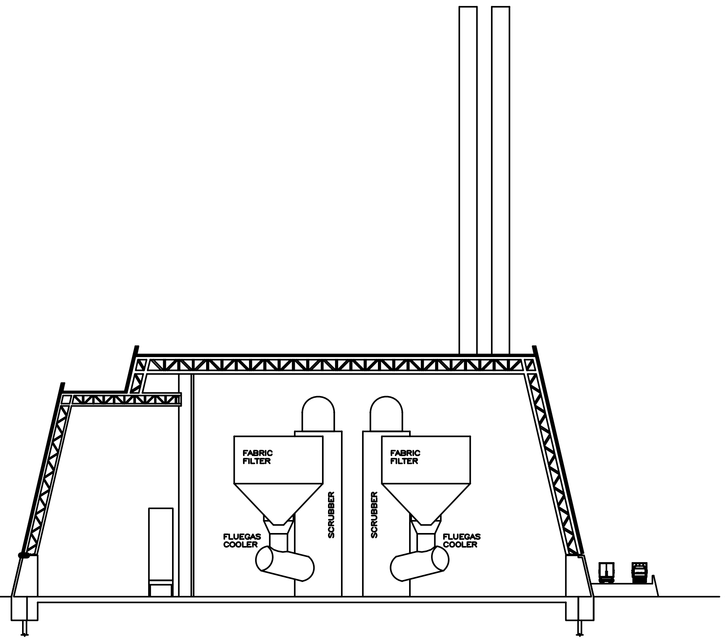
Kraftværksvej 53 7000 Fredericia Denmark Tel: +45 7923 3333 E-mail: mail@elsam-eng.com Web: www.elsam-eng.com



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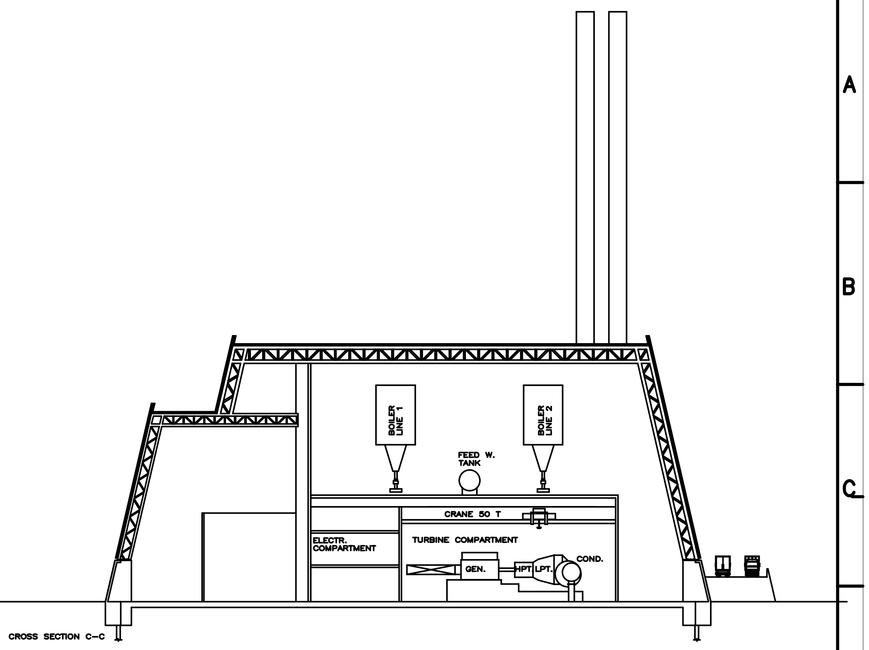

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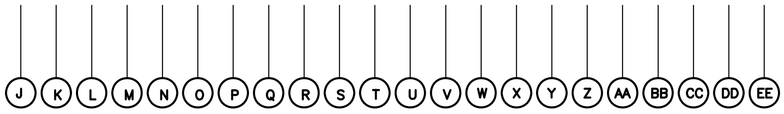

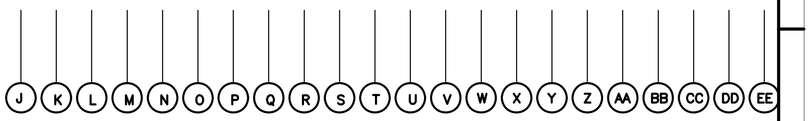

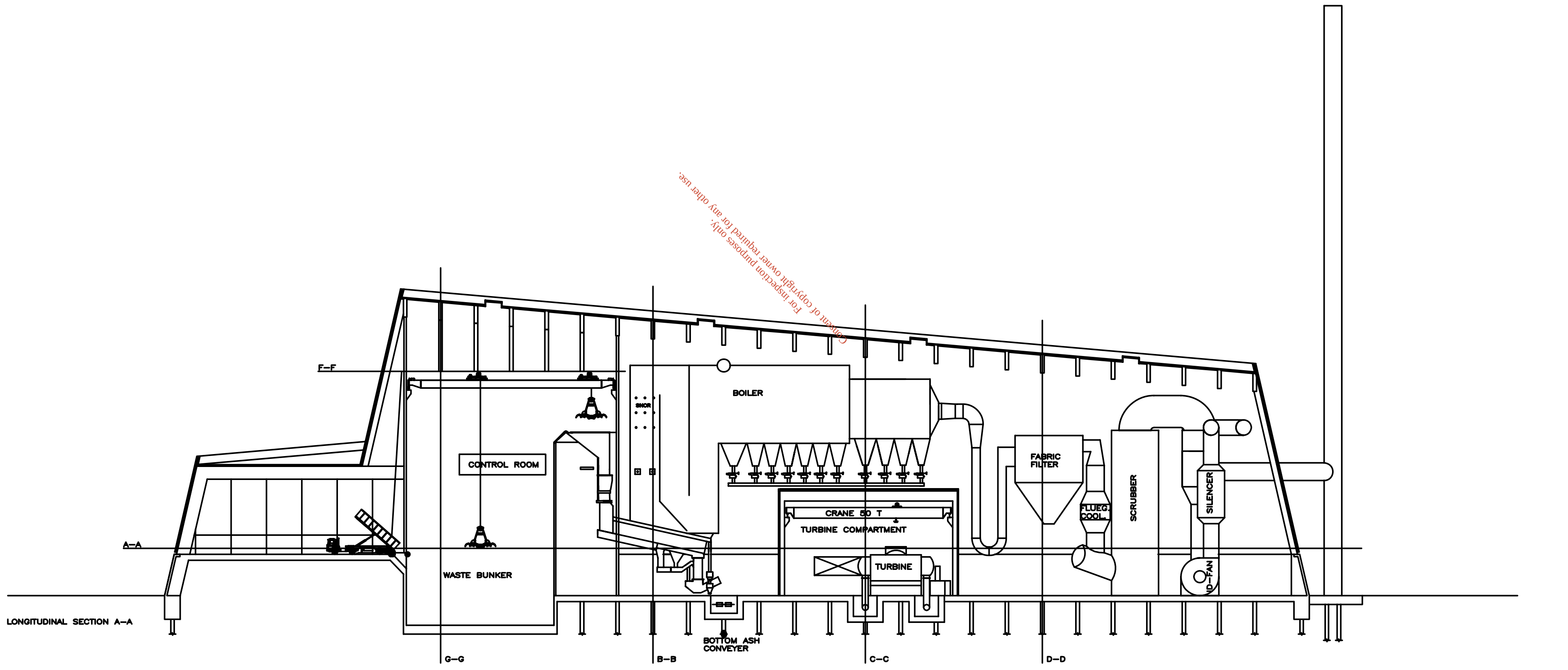

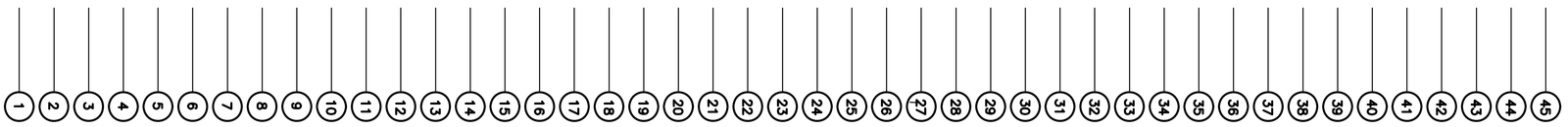

NOT IN SCALE

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		PRP			Approved	26.05.2006	CLN

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DUBLIN WASTE TO ENERGY
ARCHITECTURAL PROPOSAL
CROSS SECTION A-A B-B C-C D-D

U /

BF003 a

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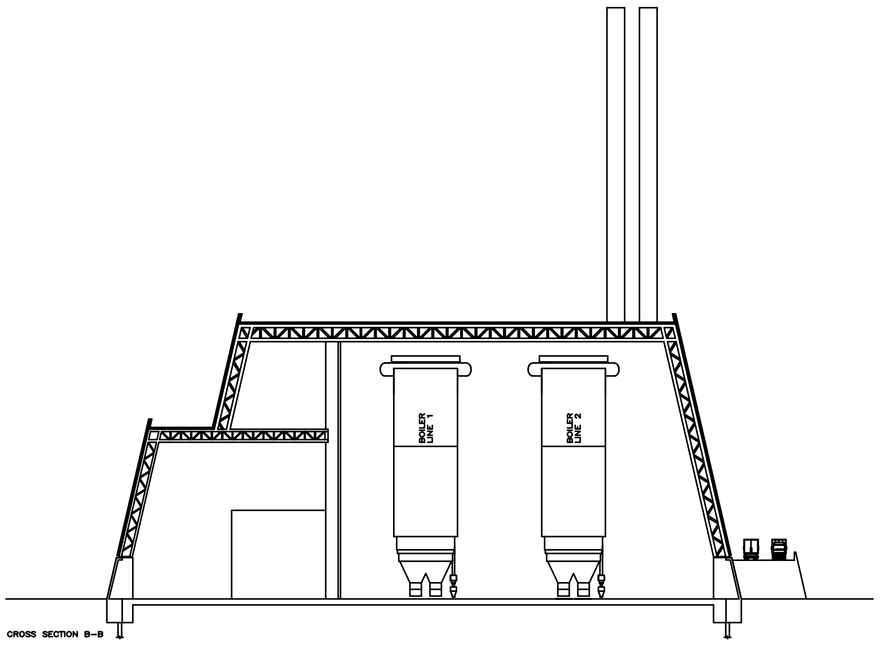
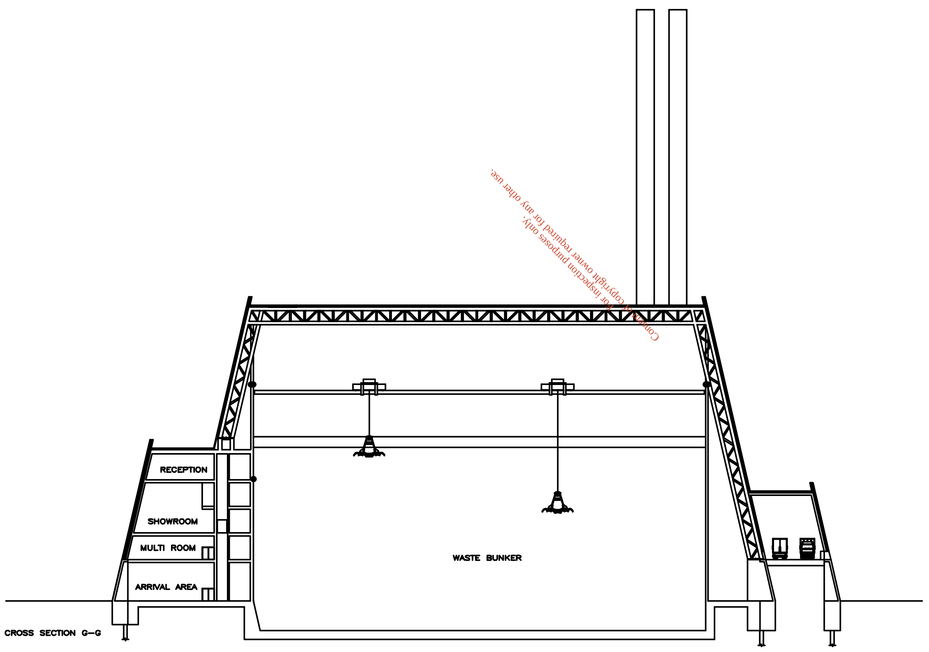


CROSS SECTION B–B

J K L M N O P Q R S T U V W X Y Z AA BB CC DD EE



CROSS SECTION G–G

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J K L M N O P Q R S T U V W X Y Z AA BB CC DD EE

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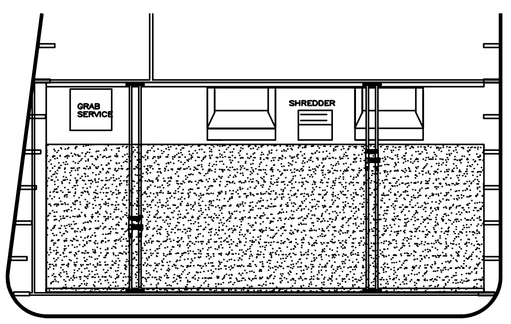

SECTION F–F
WORKING AREA FOR WASTE BUNKER CRANES

L M N O P Q R S T U V W X Y Z AA

NOT IN SCALE

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Distribute to		CLN	KAS		Checked	26.05.2006	KAS
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DUBLIN WASTE TO ENERGY
ARCHITECTURAL PROPOSAL
CROSS SECTION A-A B-B C-C D-D

U /

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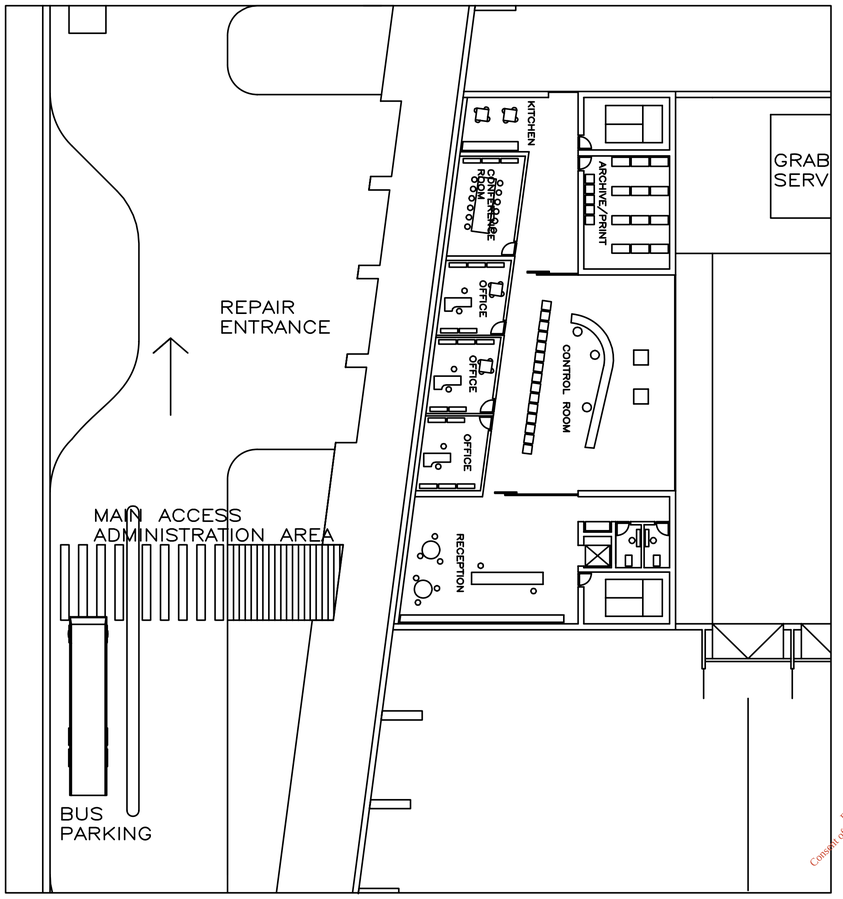

LEVEL 4 (~ +25)

NOTE:

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

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Index	Date	Chck.	Appr.	Description				
File nameU_BF005a				Scale: 1:200		Draughtsman	22.05.2006	JF
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DUBLIN WASTE TO ENERGY
ARCHITECTURAL PROPOSAL
SERVICE BUILDING - PLANS

U /

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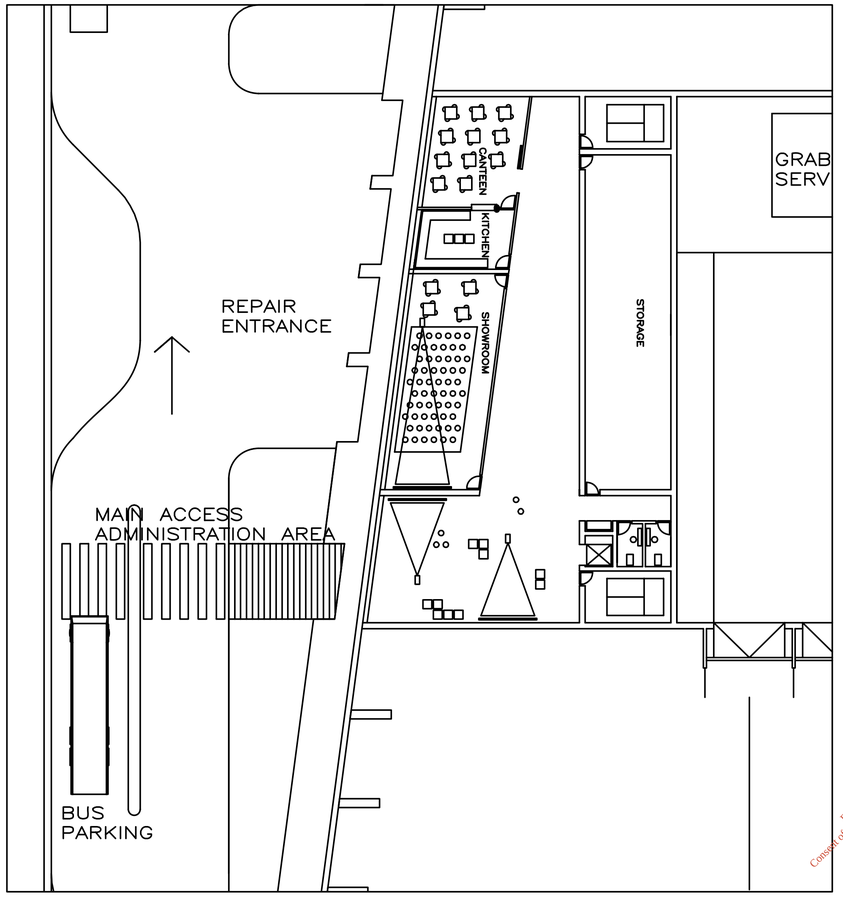

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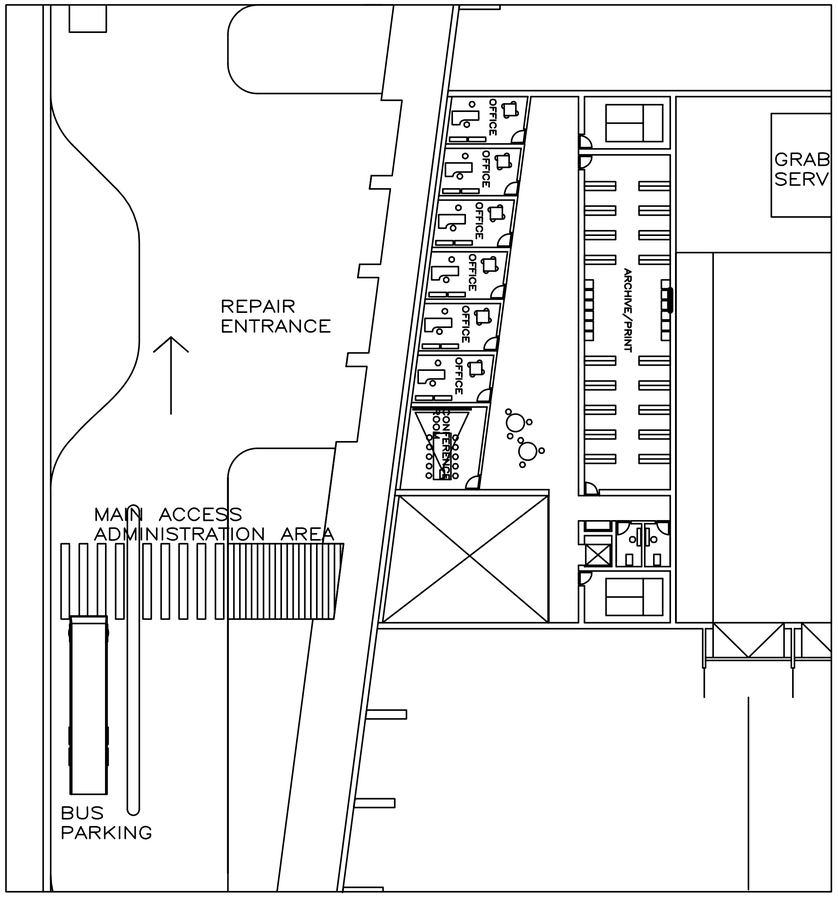

LEVEL 3 (~ +21)

NOTE:

LEVELS IN METER ACCORDING TO ORDNANCE SURVEY DATUM MALIN HEAD

NOT IN SCALE

PRELIMINARY

Index	Date	Chck.	Appr.	Description

File name: U_BF006a			Scale: 1:200			Draughtsman	22.05.2006	JF
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SERVICE BUILDING - PLANS

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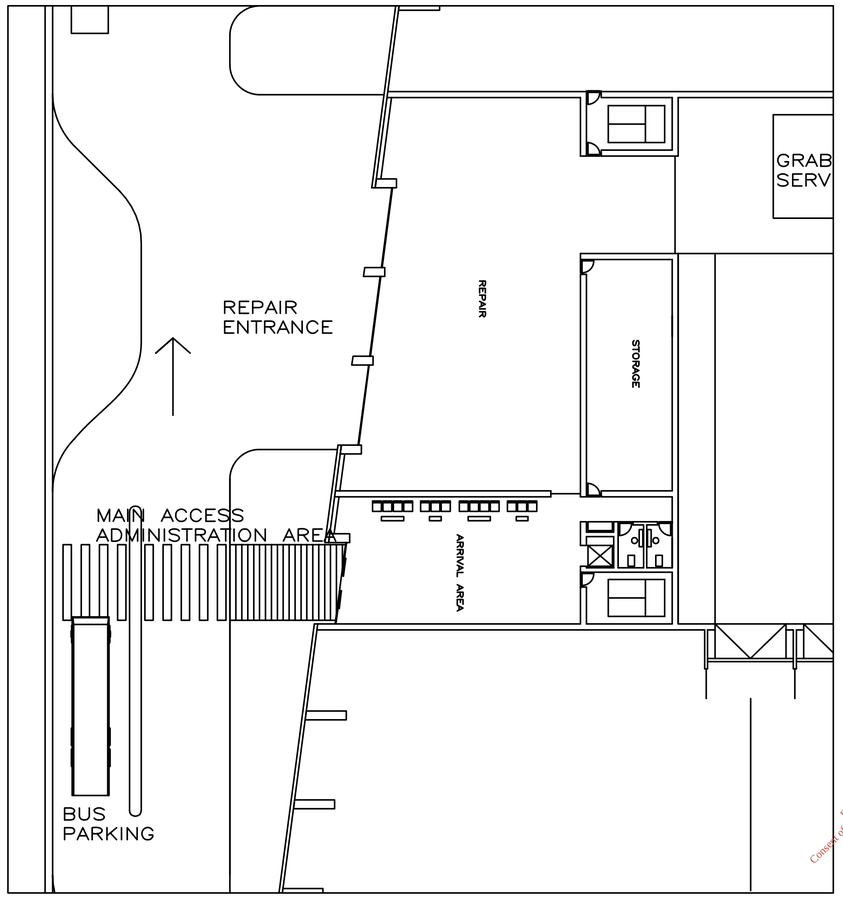

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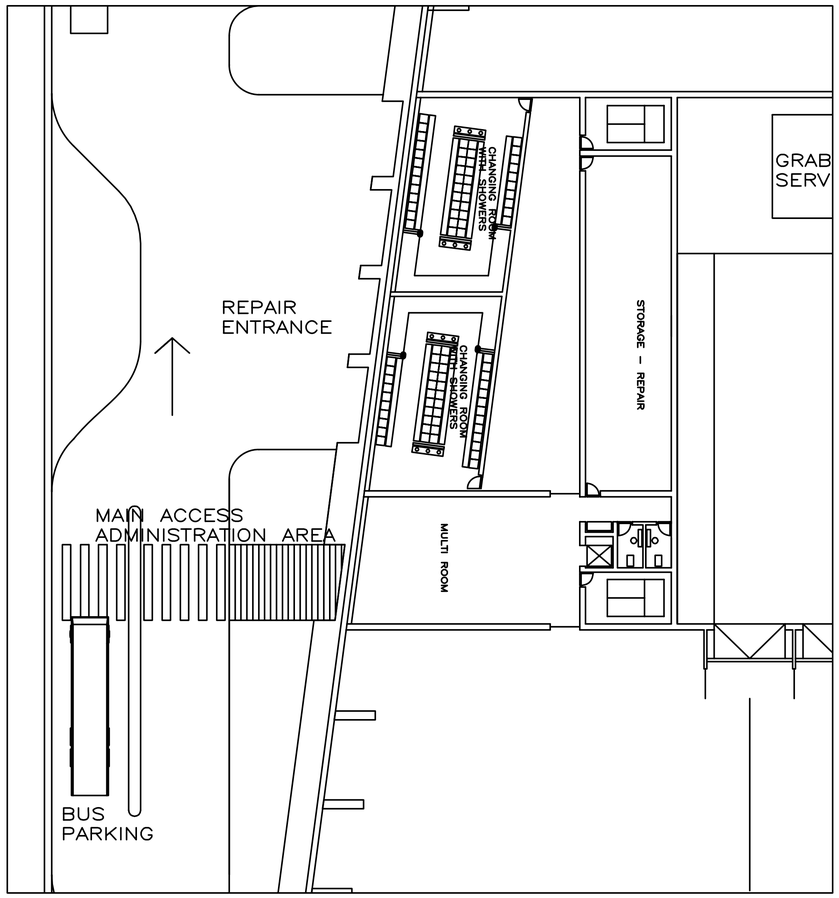

LEVEL 1 (~ +12)

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NOTE:

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PRELIMINARY

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ARCHITECTURAL PROPOSAL
SERVICE BUILDING - PLANS

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RAINFALL FROM ROOF

6.000 m³/y

RAINFALL FROM PAVED AREAS

16.000 m³/y

RAINFALL FROM GREEN AREAS (OPTION)

3.000 m³/y

GREY WATER FROM RINGSEND WASTE WATER TREATMENT WORKS (OPTION)

0-237.000 m³/y

POTABLE WATER

16.500-253.500 m³/y

POTABLE WATER FLOW METER

GRIT TRAP / OIL SEPARATOR

MONITORING ARRANGEMENT FOR PH-VALUES

RESERVOIR SURFACE WATER

APPROX. 750 m³

OVERFLOW

0-500 m³/y

SURFACE WATER FLOW METER

TECHNICAL WATER DRAIN PUMP

RAW WATER BYPASS

24.500-261.500 m³/y

0-237.000 m³/y

FLOOR DRAINS

11.500 m³/y

BOILER DRAIN MAINTENANCE

RESERVOIR TECHNICAL WATER

APPROX. 250 m³

FIRE FIGHTING WATER

FLUE GAS TREATMENT / FLUE GAS HUMIDIFICATION

201.500 m³/y

STACK

DRAIN FLUE GAS TREATMENT MAINTENANCE

TO A SUITABLE LICENSED WASTE FACILITY

SLAG HUMIDIFICATION / COOLING

26.500 m³/y

SLAG OUTLET

WATER TREATMENT, BOILERS

45.000 m³/y

BOILER

1800 MM DIA. STORM WATER / FOUL SEWER

5000-5.500 m³/y

FLUSHING WATER

11.500 m³/y

FLOOR DRAINS

11.500 m³/y

GRIT TRAP

FIRE WATER RETENTION

FIRE WATER RETENTION

WASTE BUNKER

POTABLE WATER FLOW METER

SANITATION

5.000 m³/y

WASTE WATER SANITATION

5.000 m³/y

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Index	Date	Chck.	Appr.	Description
d	07.06.2006	KAS	CLN	
c	29.05.2006	JO ISC		
b	23.02.2004			

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				Approved	02.02.2004 CLN

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ELSAM
DUBLIN WASTE TO ENERGY
WATER FLOW DIAGRAM

GD /

MQ001 d

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APPENDIX 2

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Nov. 2006

DUBLIN Waste to ENERGY

Selected images for photomontage with a 70 mm lens

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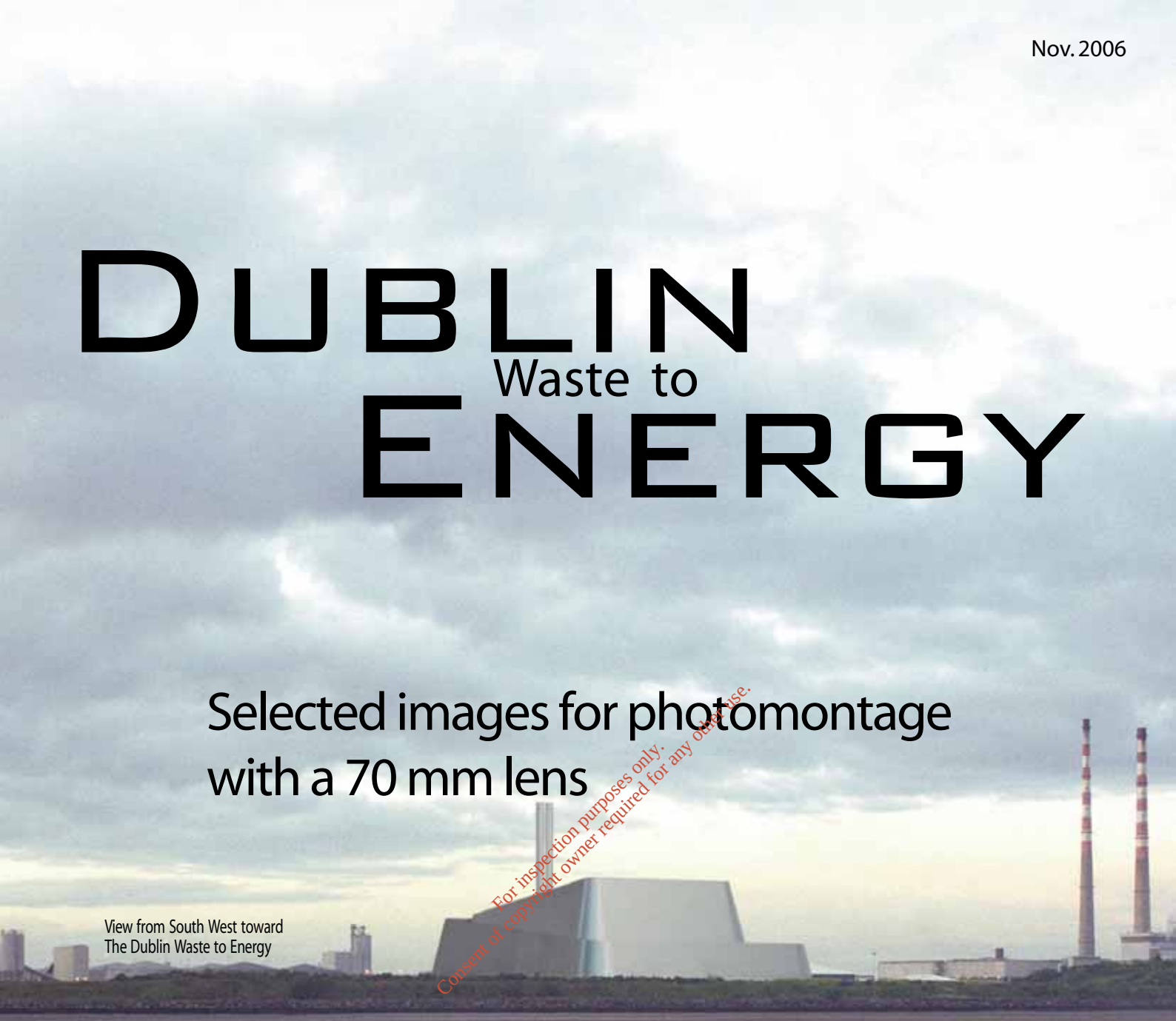

View from South West toward
The Dublin Waste to Energy

Photomontages - technical Background

Photomontages location

Photomontages - view 7, 17, 18, 28, 29, 32, 33 & 36

FRIIS & MOLTKE
ARCHITECTS - DENMARK

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Photomontages

Photography
All photographs were taken using a 50mm lens on a Hasselblad medium format camera. This lens has a horizontal field of vision of 57°. The camera height above ground was recorded along with the date and time the photograph was taken.

Reference points
The Poolbeg chimneys were used as primary reference points in the preparation of accurate photomontages. The plan position and level (Malin OD) of both chimneys was available in National Grid, and both chimneys were visible from all camera locations.

Survey Information
In most cases, the plan location of the camera was recorded using a Global Position System (GPS) working in National Grid. In the case of views closer to the site, the camera positions and levels were surveyed using a total station, and related back to the Ordnance Survey and/or the topographic survey of the site.

For each camera location, angular measurements were taken with a theodolite to a number of features visible from the camera position, including the two chimneys. For each view, the camera location was plotted and the camera level was calculated relative to the two chimneys, unless it had been recorded with a total station. The surveyed features as they appeared in the photograph were then marked on the photograph. The sight lines from the camera position to these features were then plotted, together with the outer edges of the field of vision. For each view, these sight lines were then taken and overlaid onto the map of the area, and positioned so as to align with the corresponding points on the map.

Photomontages Setup
The building and the surroundings are modelled in AutoCAD. For each photomontage location the collected data in 3d space are added to the model – the GPS camera position and angle and the reference points such as visible features and the two Poolbeg Generating Station Stacks. The file is then transferred to 3D Studio Max for final rendering with a virtual camera from the supplied references.

After final rendering the image is transferred into a corresponding Adobe Photoshop file “PSD” and fitted to the reference markers of the Poolbeg Generating Station Stacks and other relevant markers. The new building is then “masked out” in relation to elements in the foreground.

Presentation
Both the before and as proposed version of each view is provided/ As photography cannot present what the eye sees in reality, it is intended that the photomontages are used as a tool to aid visual assessment, and should be viewed on site and compared with the real scene.

Red outline in the Photomontage
Where the proposed WtE Facility is screened or obscured by foreground elements a red outline of the main structure has been provided so as to indicate its position within the view.

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Lens Angles - detailed description

General
Photographs can be taken using a variety of cameras and lenses, yielding images, which range from wide angle to telephoto, or “panorama” to “zoomed in”. The perspective resulting in a photograph from any given vantage point will remain the same, irrespective of what camera and lens is used, assuming the camera is centered on the same point in each case.

The angle of coverage is determined by both the focal length of the lens and the format of the camera. A 50mm lens on 35mm Single Lens Reflex camera and a 50mm lens on a 2¼ square medium format camera will result in horizontal angles of coverage of 40° and 57° respectively.

The focal length of the lens will determine which portion of the overall image is captured on the photograph. For any given camera format, a longer focal length will result in a narrower angle of coverage, and a shorter focal length will result in a wider angle of coverage.

Photomontages
The images used for the preparation of photomontages for this project were taken using a Hassleblad 2¼ square medium format camera with a 50mm lens. Together, this combination results in a horizontal angle of coverage of 57°.

Revised Photomontages
An Bord Pleanala has requested the submission of photomontages based on photographs taken with a 70mm lens. It does not however specify what format of camera should be used.

- A 70mm lens on a 2¼ square medium format camera would yield a horizontal angle of coverage of approximately 40°.
- A 70mm lens on a more common 35mm Single Lens Reflex camera would yield a horizontal angle of coverage of 28.8°.

It has been assumed that the request refers to a 70mm lens on a 35mm SLR camera. The only difference between this and what was submitted is the angle of coverage, and the Figure 1 below shows the geometrical relationship between the two lens and camera configurations. By calculation, D1 will be 211% of D2.

In the planning application, the images using the 57° configuration were presented side by side (before and after) on an A3 page, where each image was c. 187mm wide. In the revised submission, the original images have been enlarged to 211% of the original printed size, and are now presented at 396mm width.

The portion of the images which corresponds to an angle of coverage of 28.8° (or that of a 70mm lens on a 35mm SLR camera) is indicated by a black line. Coincidentally, this area measures 187mm in width – the same size as the images originally submitted.

As such, an observer can choose either the 70mm lens configuration as requested (by covering the area outside the black line), or consider this portion of the image in its wider context by viewing the overall image.

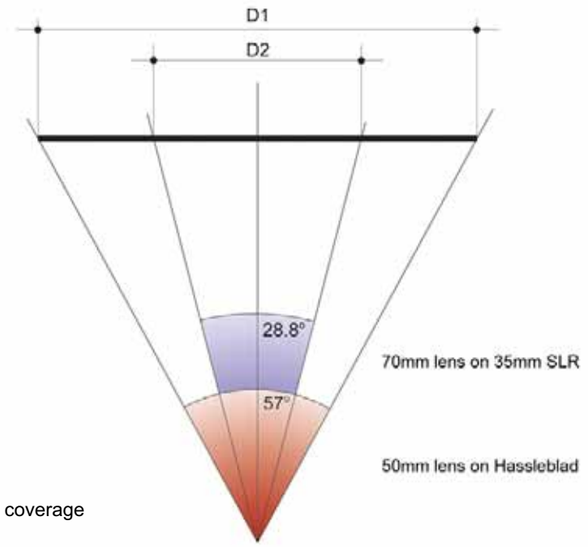

Figure 1: Comparison of horizontal angles of coverage for different lens/camera configurations

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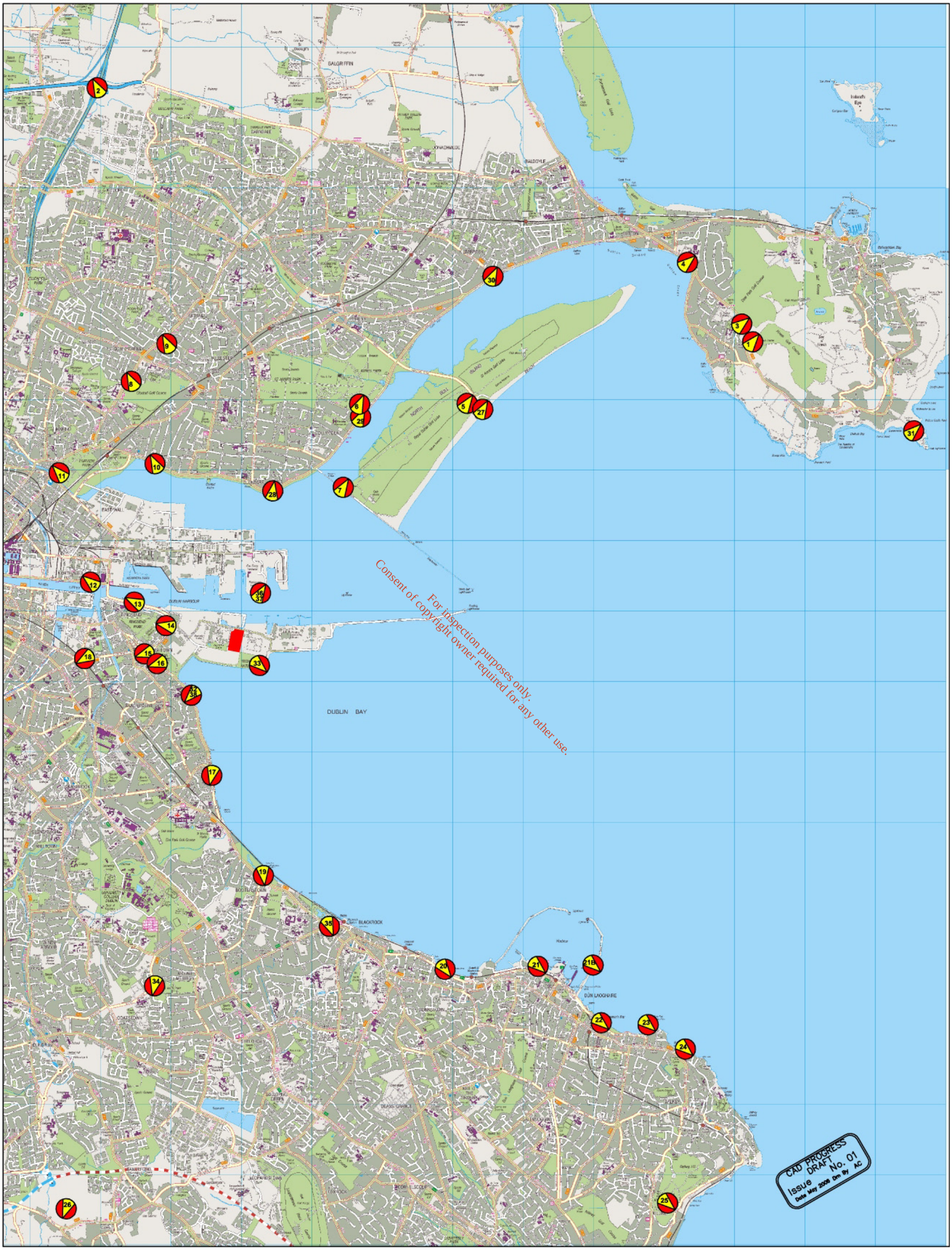

PHOTOMONTAGES LOCATION

Revision 1

Working Draft

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Viewpoint 7 – North Bull Wall - As existing

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

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Viewpoint 7 – North Bull Wall - As proposed

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

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Viewpoint 17 - Sandymount Strand - As existing

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

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Viewpoint 17 - Sandymount Strand - As proposed

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

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Viewpoint 18 - Bath Avenue, Irishtown - as existing

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

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Viewpoint 18 - Bath Avenue, Irishtown - As proposed

Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

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For inspection purposes only.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

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Viewpoint 28 – Clontarf Road, Clontarf Yacht Club - As existing

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57°	50°	40°	ANGLE OF VISION SCALE	40°	50°	57°

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Viewpoint 28 – Clontarf Road, Clontarf Yacht Club - As proposed

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57°	50°	40°	ANGLE OF VISION SCALE	40°	50°	57°

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Viewpoint 29 – Clontarf. At junction of Clontarf Road and Mount Prospect Avenue - As existing

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57°	50°	40°	ANGLE OF VISION SCALE	40°	50°	57°

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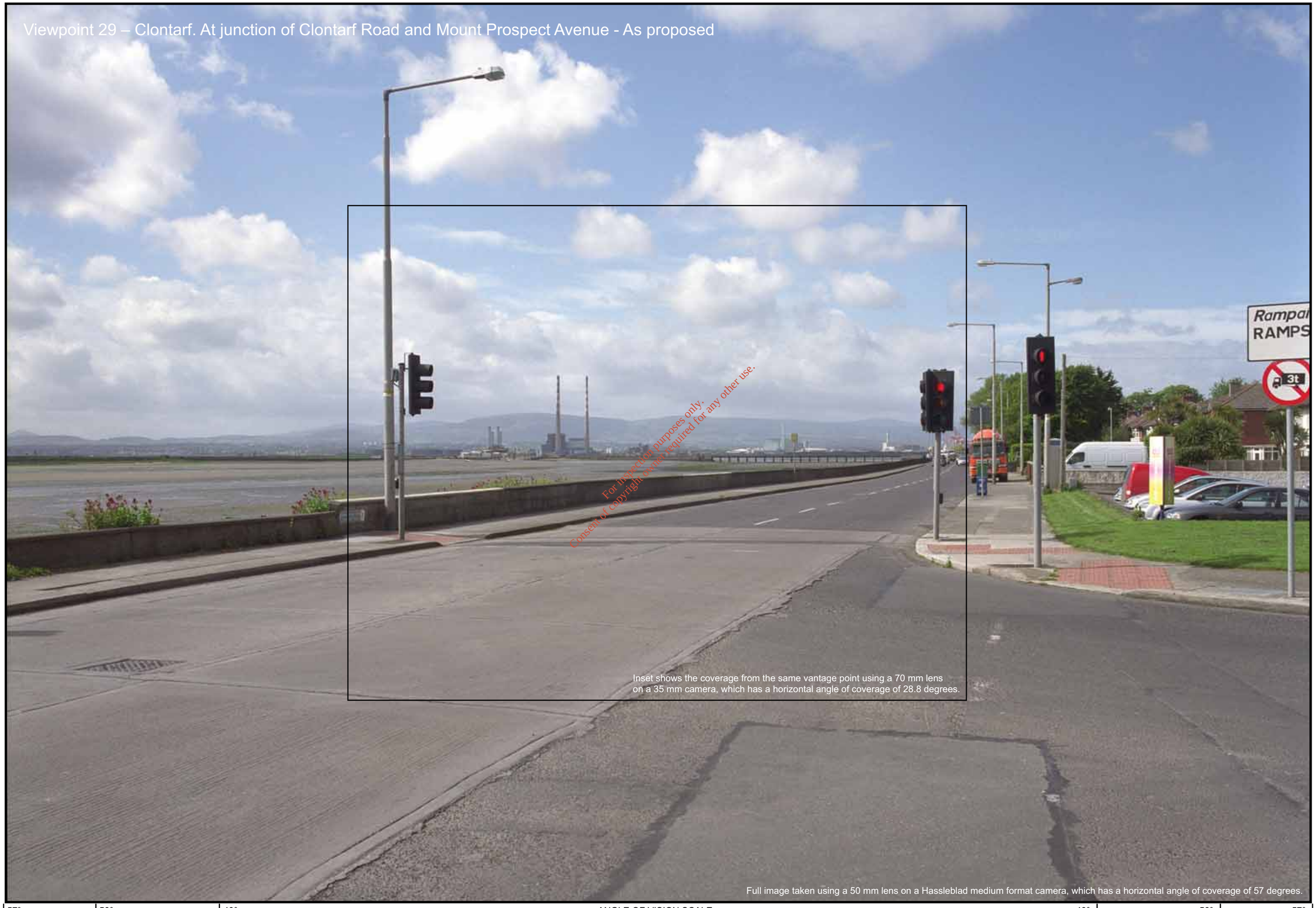
Viewpoint 29 – Clontarf. At junction of Clontarf Road and Mount Prospect Avenue - As proposed



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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

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Viewpoint 32 – Sandymount Starnd (Roslin Park College) Day-time - As existing

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Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

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Viewpoint 32 – Sandymount Starnd (Roslin Park College) Day-time - As proposed

For inspection purposes only.
Consent of copyright owner required for any other use.

Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° ANGLE OF VISION SCALE 40° | 50° | 57°

EPA Export 25-07-2013:21:19:57

Viewpoint 33 – Irishtown Nature Park - As existing

For inspection purposes only.
Consent of copyright owner required for any other use.

Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

EPA Export 25-07-2013:21:19:58

Viewpoint 33 – Irishtown Nature Park - As proposed

For inspection purposes only.
Consent of copyright owner required for any other use.

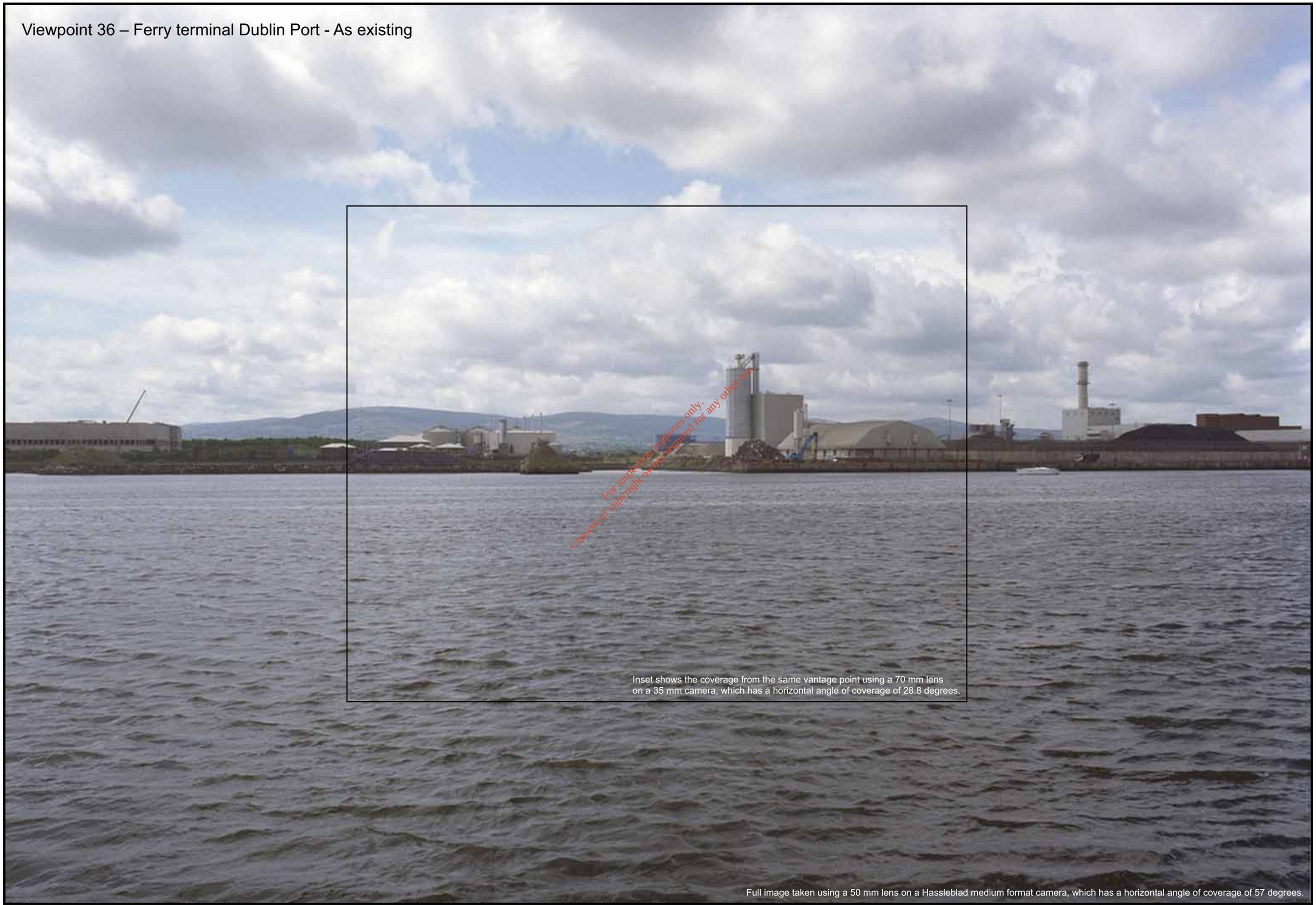
Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

EPA Export 25-07-2013:21:19:58

Viewpoint 36 – Ferry terminal Dublin Port - As existing



Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

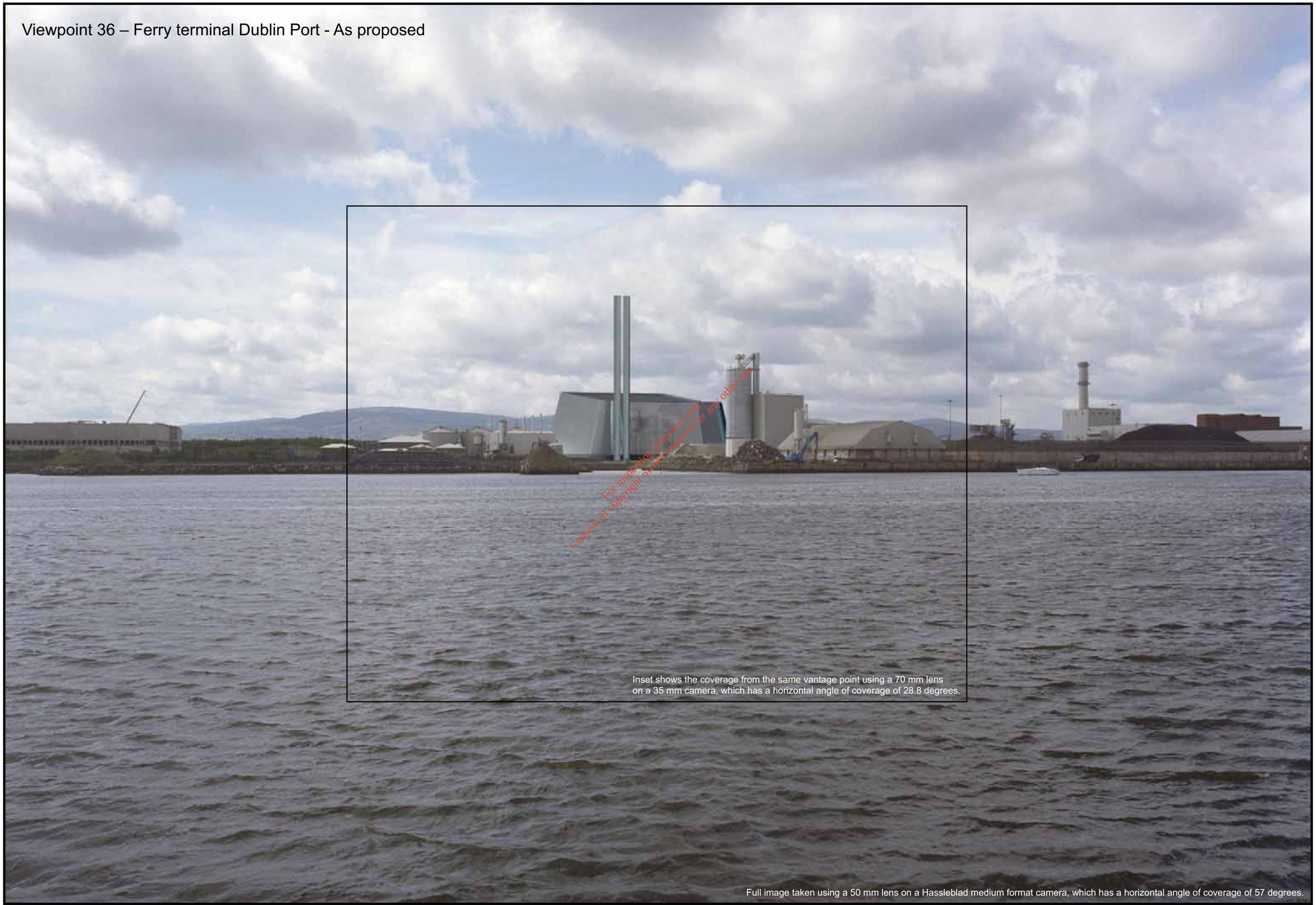
Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

For inspection purposes only.
Consent of copyright owner required for any other use.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

EPA Export 25-07-2013:21:19:58

Viewpoint 36 – Ferry terminal Dublin Port - As proposed



Inset shows the coverage from the same vantage point using a 70 mm lens on a 35 mm camera, which has a horizontal angle of coverage of 28.8 degrees.

Full image taken using a 50 mm lens on a Hassleblad medium format camera, which has a horizontal angle of coverage of 57 degrees.

57°	50°	40°	ANGLE OF VISION SCALE	40°	50°	57°

For inspection purposes only.
Consent of copyright owner required for any other use.

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