

**GENERAL LEGEND**

ACTIVITY BOUNDARY	
PROPOSED CHAINLINK FENCE	
PROPOSED ROAD	
PROPOSED HARDSTAND	
PROPOSED ATTENUATION POND	
PROPOSED GREEN AREA	
PROPOSED BUILDINGS	
FINISHED ROAD LEVEL	FRL +159.5
FINISHED FLOOR LEVEL	FFL +149.85
PROPOSED LANDSCAPED SCREENING BERM	

- NOTES:**
- FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
  - ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE.
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  - ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD.

Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:  
**BORD NA MÓNA**

Project:  
**DREHID MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title:  
**SITE LAYOUT PLAN**

Scale @ A3: **1:2,500**

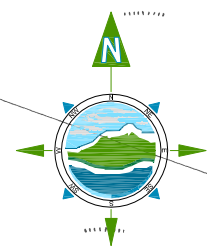
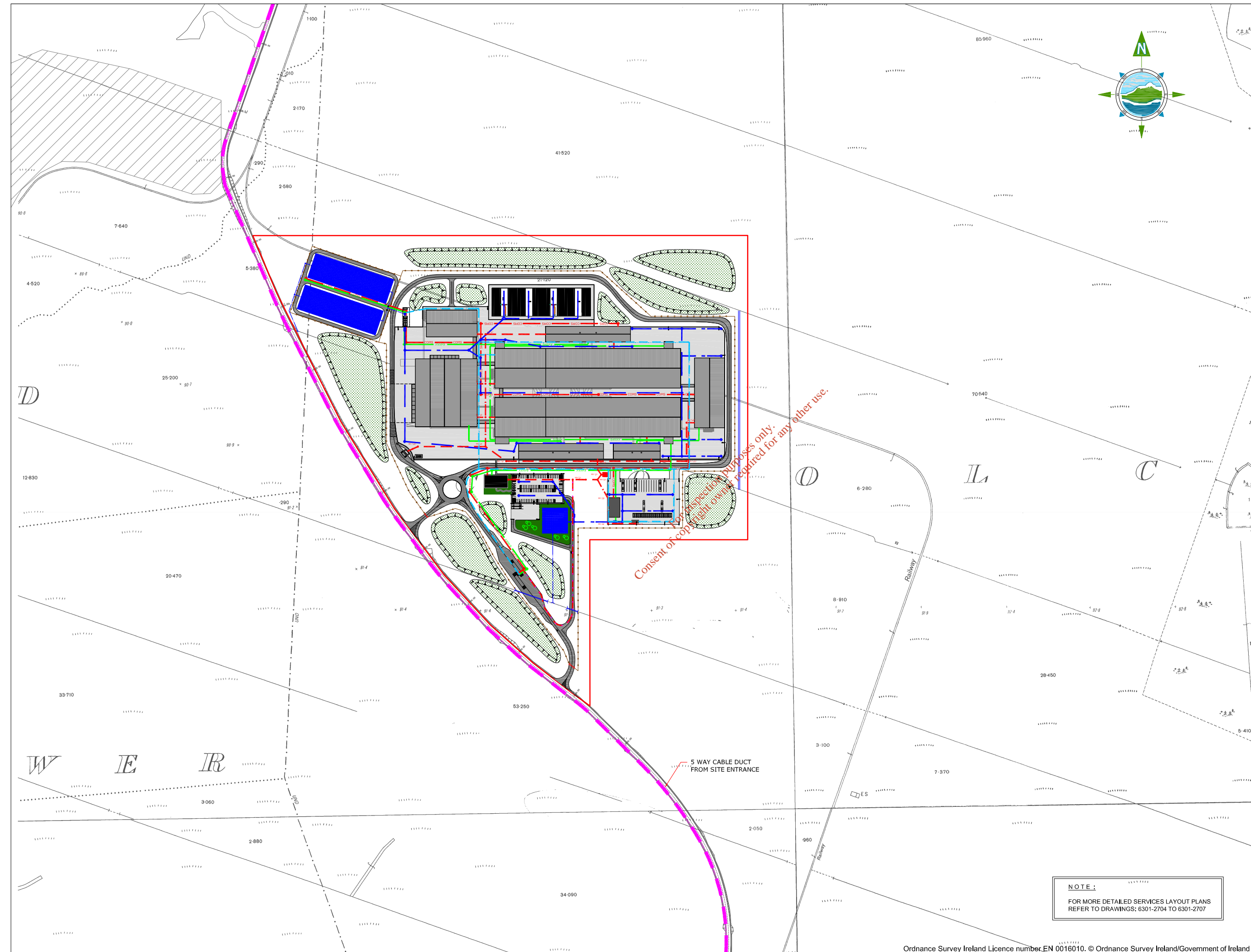
Prepared by:	Checked:	Date:
M. Nolan	D. Conneran	May 2012

Project Director: **D. Grehan**

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Drawing No.: **6301-2702** Issue: **A**



**GENERAL LEGEND**

ACTIVITY BOUNDARY	
PROPOSED ROAD	
PROPOSED HARDSTAND	
PROPOSED ATTENUATION POND	
PROPOSED GREEN AREA	
PROPOSED BUILDINGS	
PROPOSED POWER SUPPLY DUCTING	
PROPOSED COMMS DUCTING	
PROPOSED SURFACE WATER DRAINAGE	
PROPOSED FOUL WATER DRAINAGE	
PROPOSED WATERMAIN	
EXISTING DUCTING FROM SITE ENTRANCE	

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Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

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5 WAY CABLE DUCT FROM SITE ENTRANCE

**NOTE:**  
FOR MORE DETAILED SERVICES LAYOUT PLANS  
REFER TO DRAWINGS: 6301-2704 TO 6301-2707

Client:  
**BORD NA MÓNA**

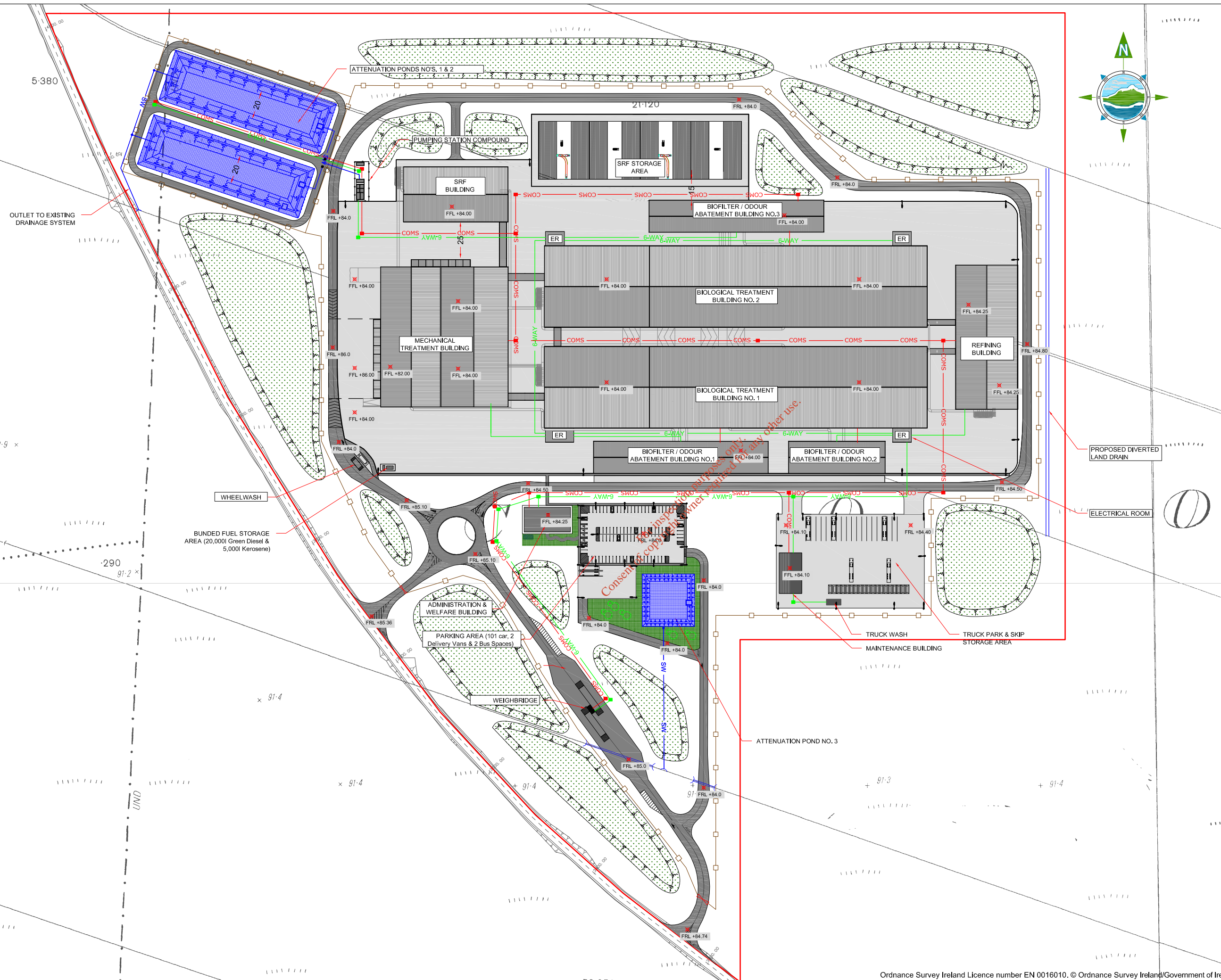
Project:  
**DREHID  
MECHANICAL  
TREATMENT (MBT) FACILITY**

Title:  
**SERVICES PLAN**

Scale @ A3: **1:5,000**  
Prepared by: **M. Nolan** Checked: **D. Conneran** Date: **May 2012**  
Project Director: **D. Grehan**

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Issue:  
Drawing No.: **6301-2703** **A**



**GENERAL LEGEND**

ACTIVITY BOUNDARY	
PROPOSED ROAD	
PROPOSED HARDSTAND	
PROPOSED ATTENUATION POND	
PROPOSED GREEN AREA	
PROPOSED BUILDINGS	
PROPOSED LANDSCAPED SCREENING BERM	
PROPOSED POWER SUPPLY DUCTING	
PROPOSED COMMS DUCTING	
FINISHED ROAD LEVEL	
FINISHED FLOOR LEVEL	
PROPOSED STREET LIGHTING	
PROPOSED LANDSCAPED SCREENING BERM	

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Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:

Project:  
**DREHID MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title:  
**FACILITY INFRASTRUCTURE & SERVICES GENERAL ARRANGEMENT**

Scale @ A3: **1:2,500**

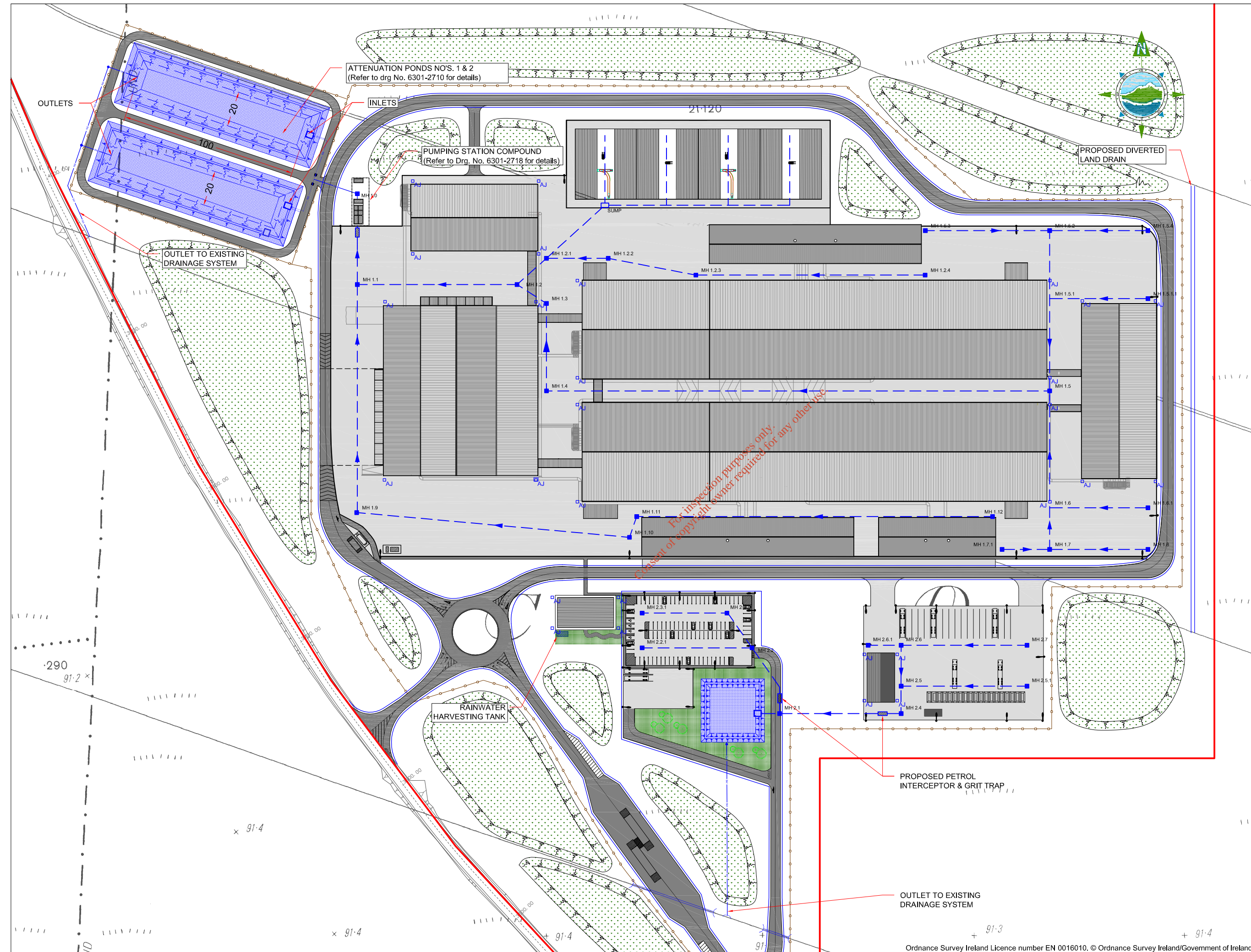
Prepared by:	Checked:	Date:
M. Nolan	D. Conneran	May 2012

Project Director: **D. Grehan**

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Drawing No.: **6301-2704** **A**



- GENERAL LEGEND**
- ACTIVITY BOUNDARY
  - PROPOSED ROAD
  - PROPOSED HARDSTAND
  - PROPOSED ATTENUATION POND
  - PROPOSED GREEN AREA
  - PROPOSED BUILDINGS
  - PROPOSED LANDSCAPED SCREENING BERM
- DRAINAGE LEGEND**
- PROPOSED SURFACE WATER DRAIN
  - PROPOSED FRENCH DRAIN
  - PROPOSED ATTENUATION POND
  - PROPOSED SURFACE WATER MH
  - PROPOSED DIVERTED DRAINAGE DITCH
  - AJ'S FOR DRAINAGE OF BUILDING ROOFS

- NOTES:**
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Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:

**BORD NA MÓNA**

Project:

**DREHID  
MECHANICAL BIOLOGICAL  
TREATMENT (MBT) FACILITY**

Title:

**SURFACE WATER  
LAYOUT PLAN**

Scale @ A3: **1:2,000**

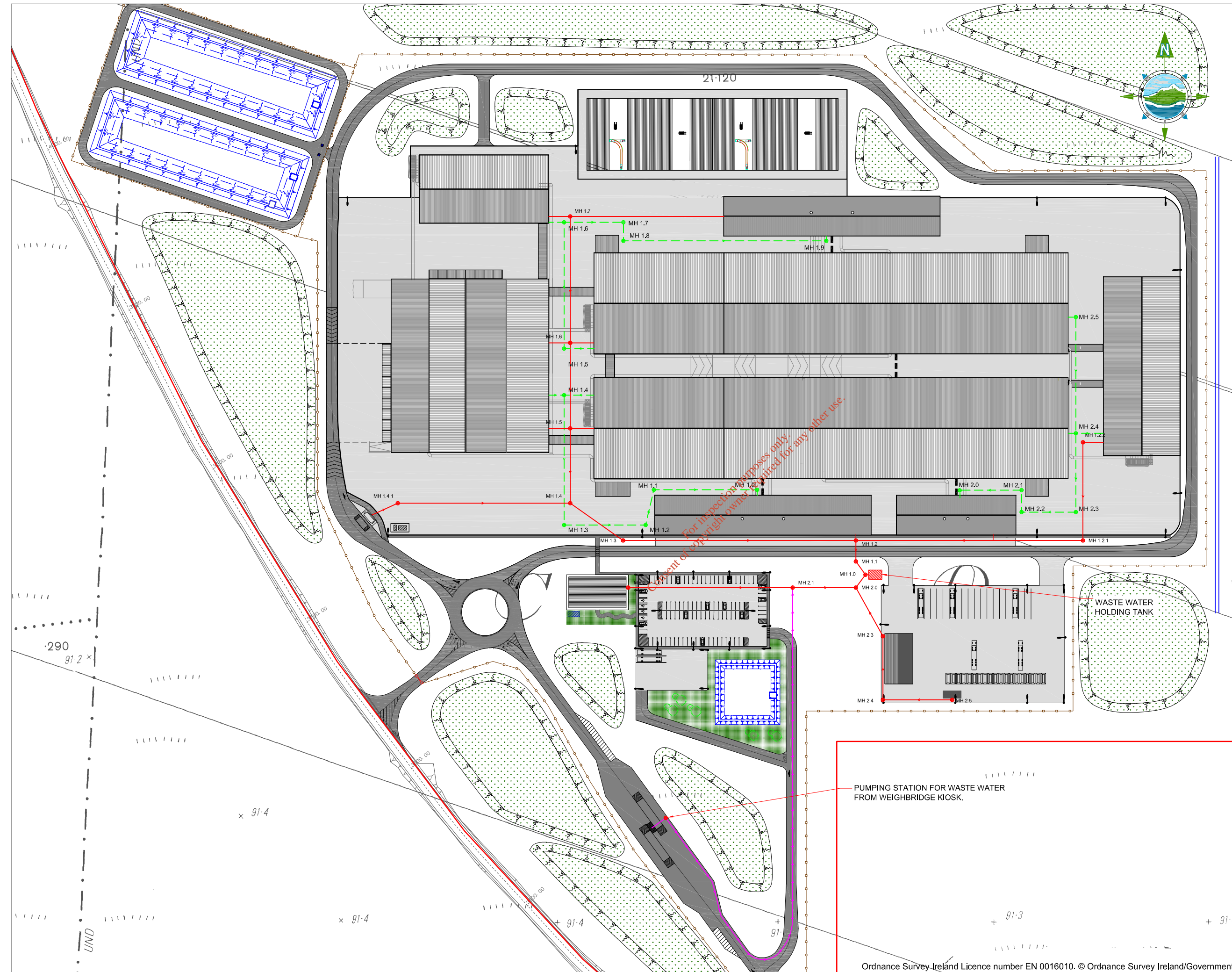
Prepared by: M. Nolan      Checked: D. Conneran      Date: May 2012

Project Director: D. Grehan

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Drawing No.: **6301-2705**      Issue: **A**



**GENERAL LEGEND**

- ACTIVITY BOUNDARY: [Red line]
- PROPOSED ROAD: [Grey line]
- PROPOSED HARDSTAND: [Grey hatched area]
- PROPOSED ATTENUATION POND: [Blue hatched area]
- PROPOSED GREEN AREA: [Green hatched area]
- PROPOSED BUILDINGS: [Grey hatched area]

**DRAINAGE LEGEND**

- PROPOSED FOUL DRAIN: [Red line]
- PROPOSED FOUL MH: [Red circle]
- PROPOSED WASTE WATER COLLECTION: [Green dashed line]
- PROPOSED RISING MAIN: [Purple dashed line]
- RETURNED PROCESS WATER: [Black dashed line]

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Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:  
**BORD NA MÓNA**

Project:  
**DREHID MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title:  
**FOUL & PROCESS WATER DRAINAGE LAYOUT PLAN**

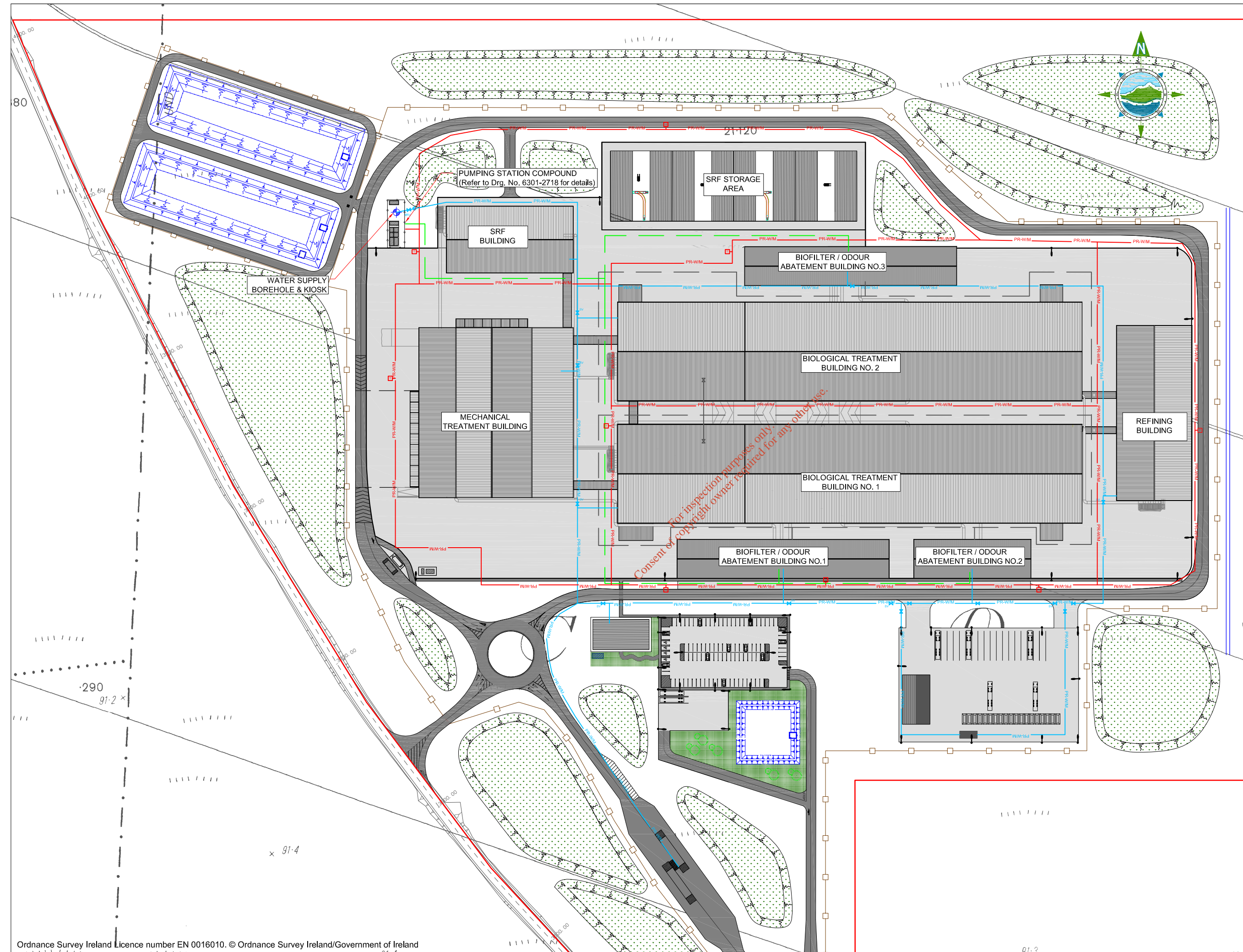
Scale @ A3: **1:2,000**

Prepared by:	Checked:	Date:
M. Nolan	D. Conneran	February 2012

Project Director: **D. Grehan**

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Drawing No.: **6301-2706** Issue: **A**



**GENERAL LEGEND**

- ACTIVITY BOUNDARY ———
- PROPOSED ROAD
- PROPOSED ATTENUATION POND
- PROPOSED GREEN AREA
- PROPOSED BUILDINGS
- PROPOSED PROCESS WATER TOP UP - - - - -
- PROCESS WATER SUPPLY - - - - -
- PROPOSED FIREMAIN - - - - - PR-WM
- PROPOSED WATERMAIN - - - - - PR-WM
- PROPOSED SLUICE VALVE SV NRV
- PROPOSED NON RETURN VALVE NRV
- PROPOSED FLOW METER M H
- PROPOSED HYDRANT H

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Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client: **BORD NA MÓNA**

Project: **DREHID MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title: **WATERMAIN LAYOUT PLAN**

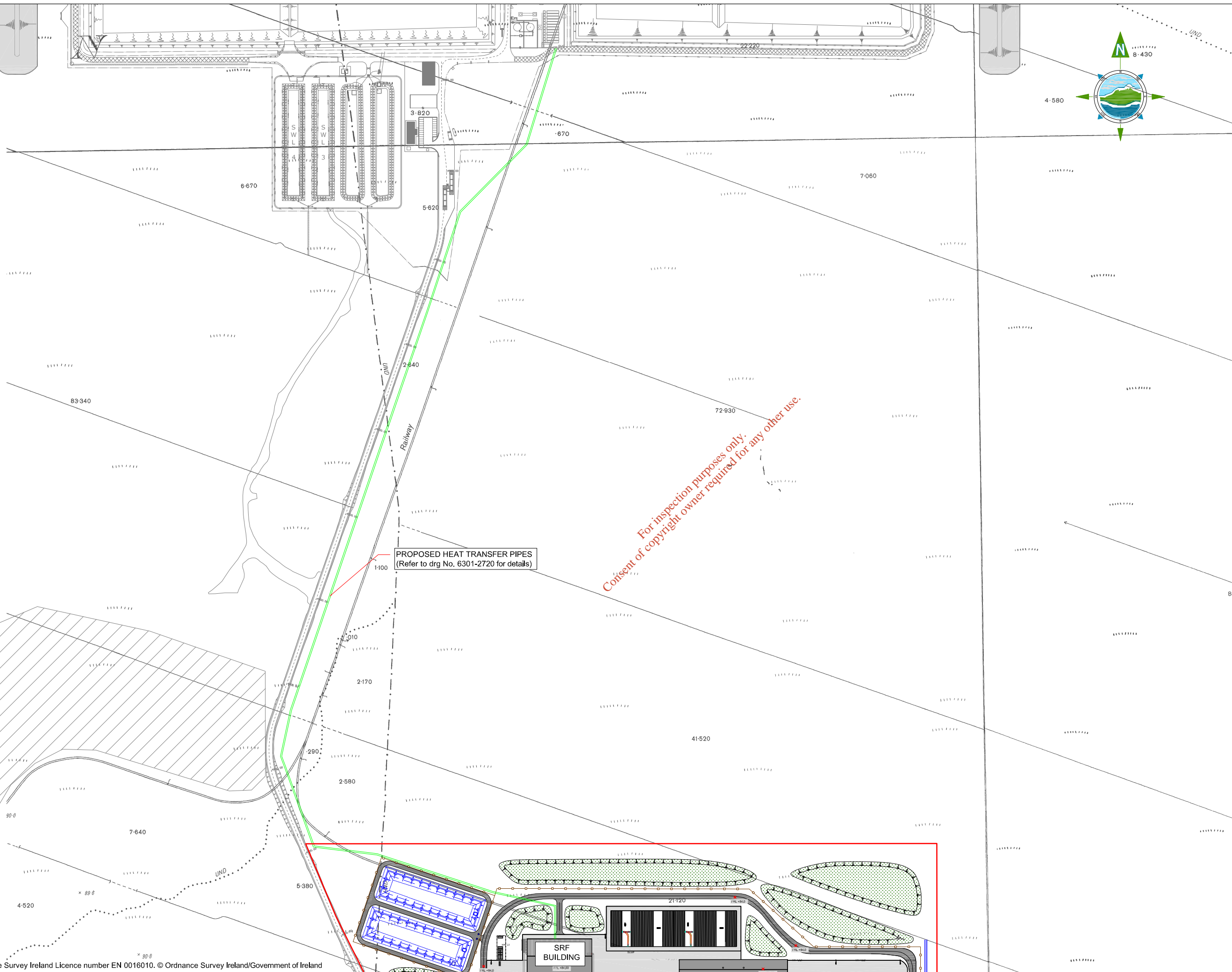
Scale @ A3: **1:2,000**

Prepared by: **M. Nolan**      Checked: **D. Conneran**      Date: **May 2012**

Project Director: **D. Grehan**

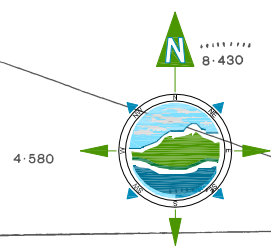
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Drawing No.: **6301-2707**      Issue: **A**



**GENERAL LEGEND**

ACTIVITY BOUNDARY	
HEAT TRANSFER PIPES	



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Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:

**BORD NA MÓNA**

Project:

**DREHID  
MECHANICAL BIOLOGICAL  
TREATMENT (MBT) FACILITY**

Title:

**PROPOSED HEAT  
TRANSFER PIPES**

Scale @ A3: **1:4,000**

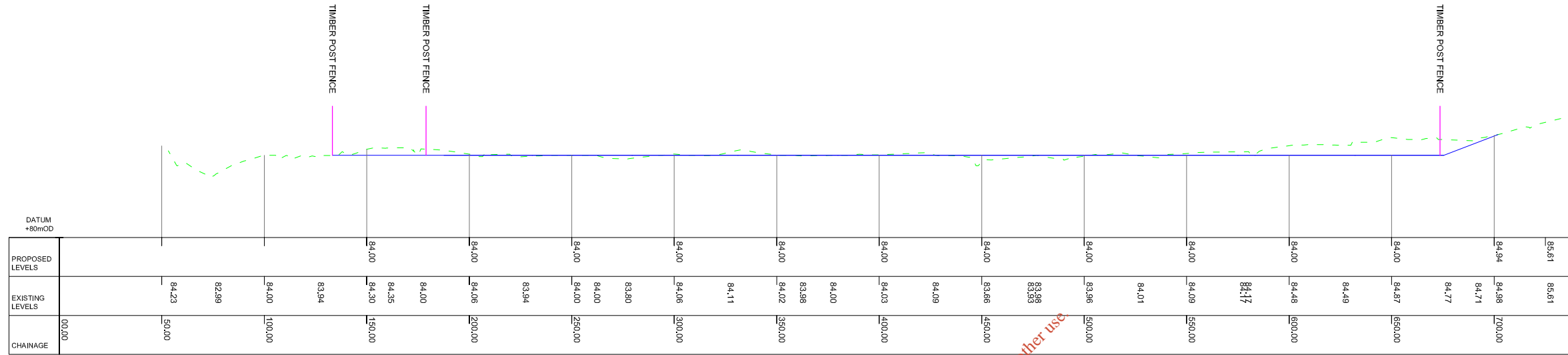
Prepared by: M. Nolan      Checked: D. Conneran      Date: May 2012

Project Director: D. Grehan

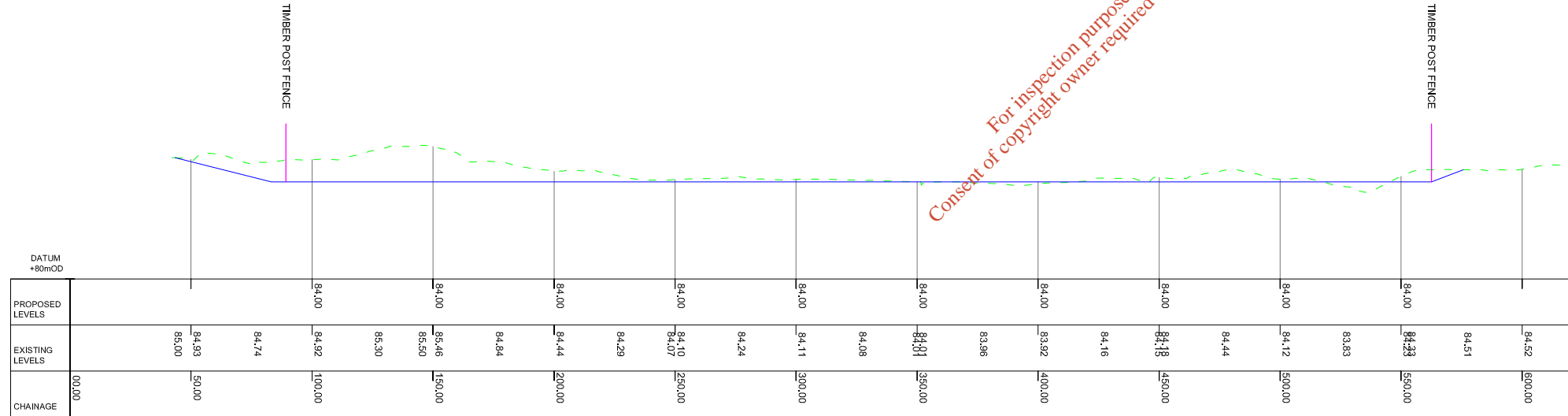
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Drawing No.: **6301-2708**      Issue: **A**



**SECTION 1-1**



**SECTION 2-2**

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**LEGEND:**

PROPOSED GROUND PROFILE ——  
EXISTING GROUND PROFILE - - - -

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Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:



Project:

**DREHID  
MECHANICAL  
TREATMENT (MBT) FACILITY**

Title:

**EXISTING & PROPOSED  
CROSS SECTIONS**

Scale @ A3: H: 1:2,500 / V: 1:250

Prepared by: M. Nolan  
Checked: D. Conneran  
Date: March 2012

Project Director: D. Grehan

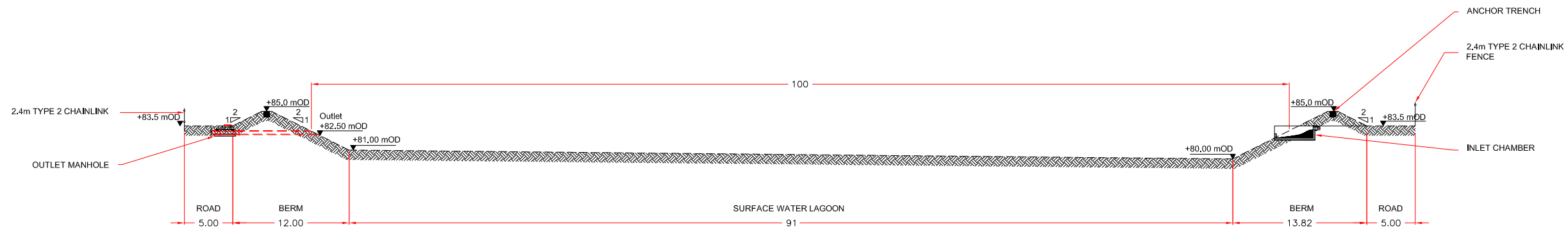


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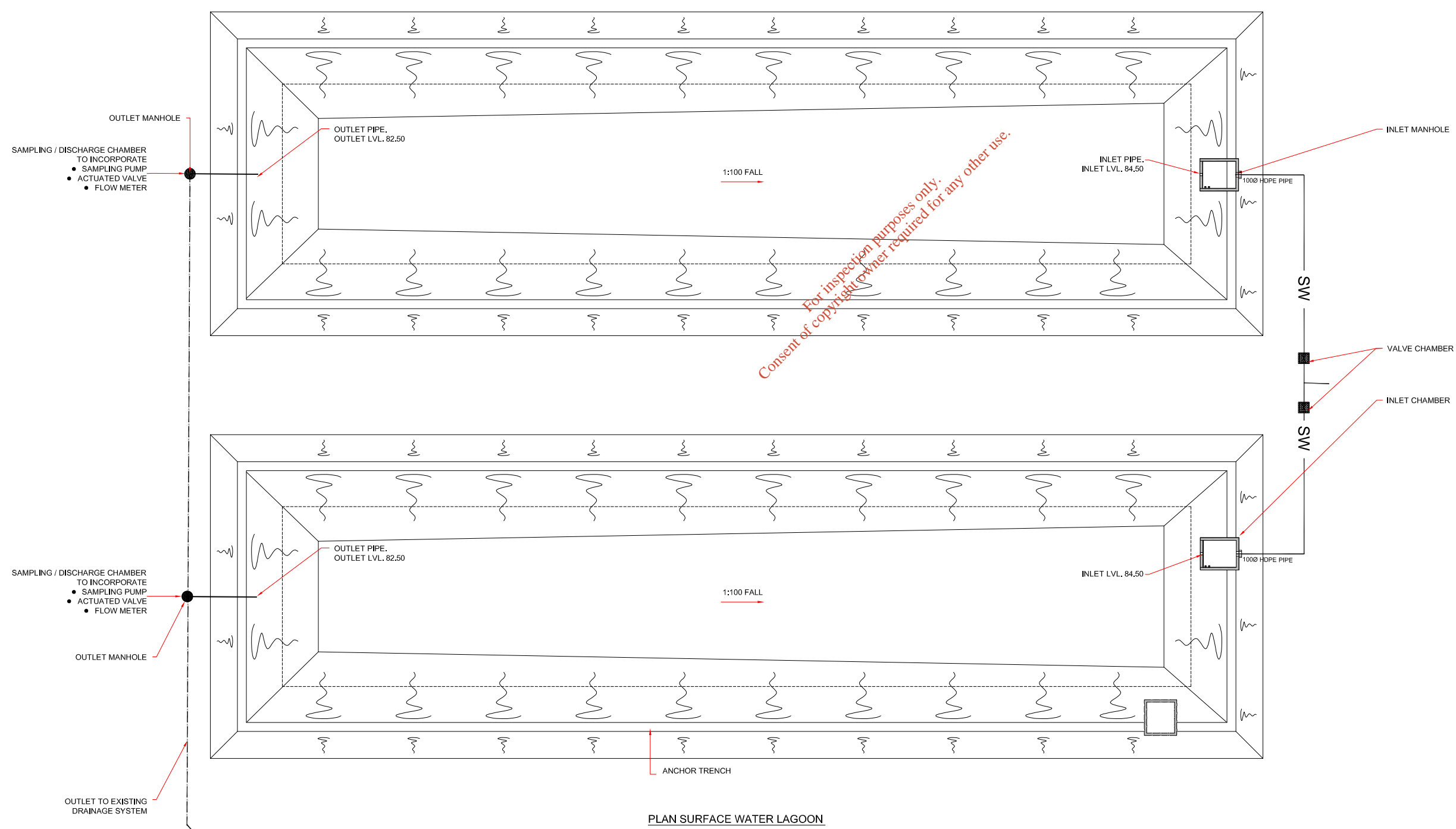
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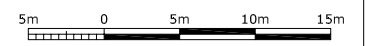


SECTION THROUGH SURFACE WATER LAGOON



PLAN SURFACE WATER LAGOON

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Rev	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	MN	DC

Client:  
**BORD NA MÓNA**

Project:  
**DREHID MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title:  
**ATTENUATION LAGOONS 1 & 2 GENERAL ARRANGEMENT & SECTION**

Scale @ A3: 1:500

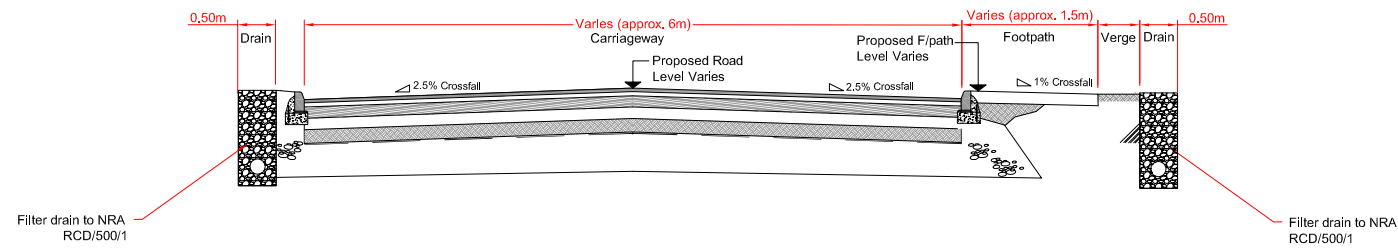
Prepared by:	Checked:	Date:
M. Nolan	D. Conneran	March 2012
Project Director:	D. Grehan	
Drawing Status:	Waste Licence	

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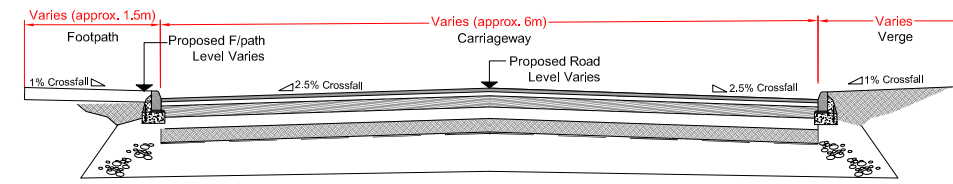
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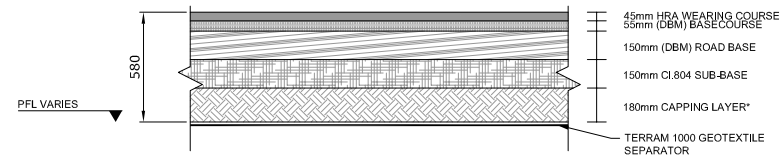
Drawing No.: **6301-2710** Revision: **A**



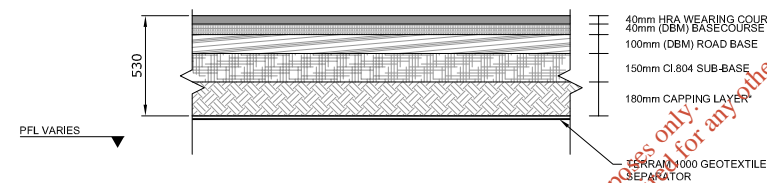
**TYPICAL ROAD CROSS SECTION WITH FILTER DRAIN**  
SCALE 1:100



**TYPICAL ROAD CROSS-SECTION**  
SCALE 1:100

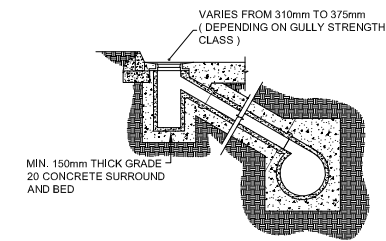


**A TYPICAL ROAD CONSTRUCTION**  
SCALE 1:40



**B TYPICAL CARPARK CONSTRUCTION**  
SCALE 1:40

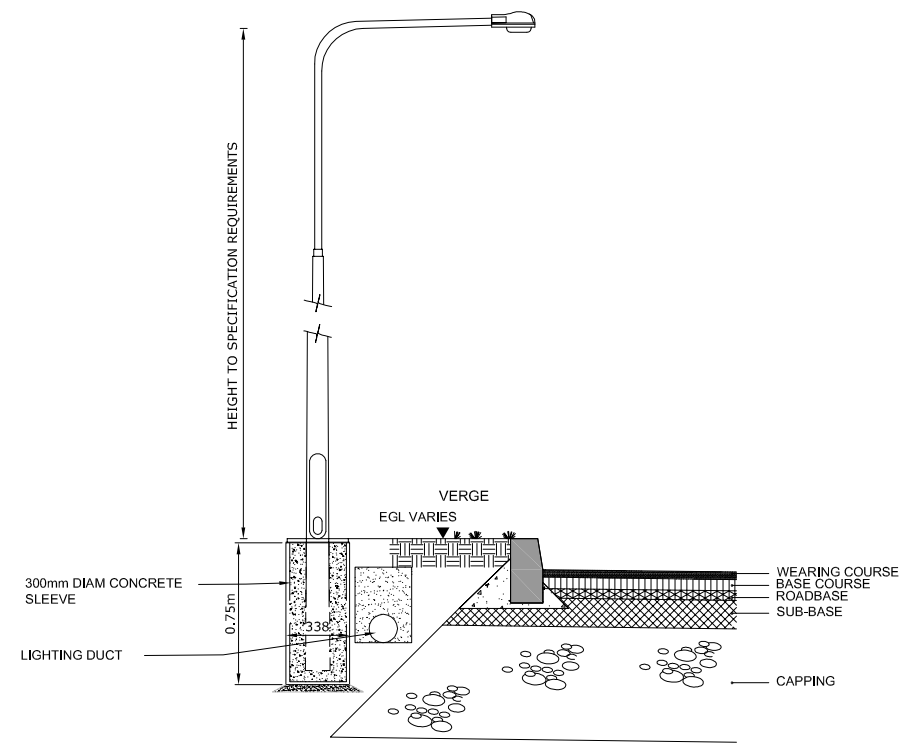
\*NOTE: CAPPING LAYER IS DEPENDENT ON CBR TESTS.



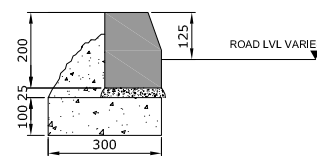
NOTE 1 : TRAPPED GULLIES TO BE USED WHERE CONNECTED TO A COMBINED SEWER  
NOTE 2 : FOR STRENGTH CLASS OF GULLY REFER TO EN 124 : 1994, CLAUSE 5

**C TYPICAL GULLY CONSTRUCTION**  
SCALE 1:40

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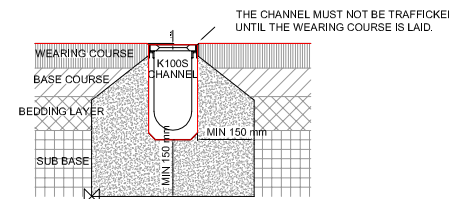


**TYPICAL LIGHTING COLUMN**  
SCALE 1:40

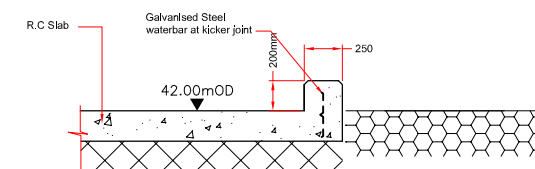


**TYPE 2 - EDGE RESTRAINT CARPARK/LIGHT VEHICLES**

**TYPICAL EDGE RESTRAINT DETAILS**  
SCALE 1:20



**INSTALLATION EXAMPLE FLEXIBLE PAVEMENT**  
SCALE 1:20



**BUND WALL DETAIL SURROUNDING HARDSTAND & SRF STORAGE AREA**  
Scale 1:25

**NOTES:**

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Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:  
**BORD NA MÓNA**

Project:  
**DREHID MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title:  
**TYPICAL ROAD & CARPARK CONSTRUCTION DETAILS**

Scale @ A3: **AS SHOWN**

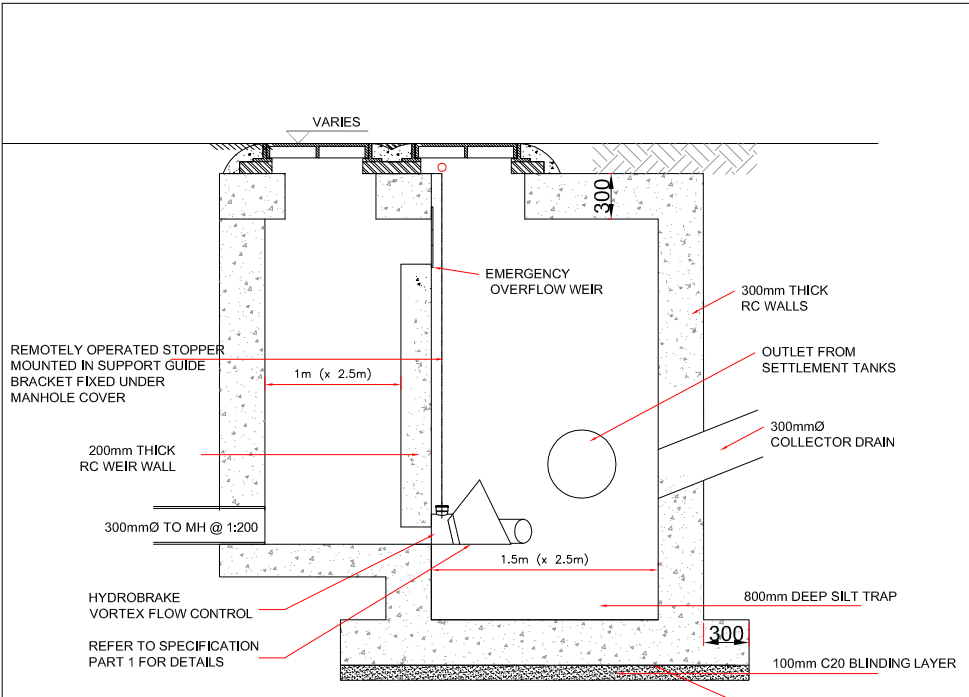
Prepared by: **M. Nolan** Checked: **D. Conneran** Date: **May 2012**

Project Director: **D. Grehan**

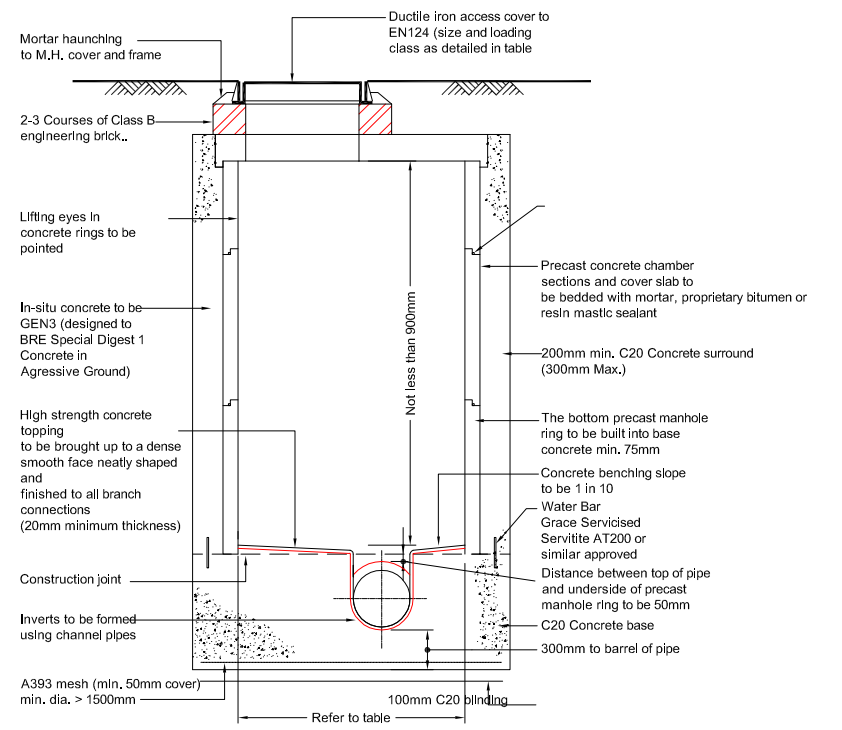
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Drawing No.: **6301-2711** Issue: **A**



**SURFACE WATER FLOW CONTROL CHAMBER SW 1 - MANHOLE TYPE F**



**TYPICAL PRECAST MANHOLE DETAIL - TYPE B**  
Maximum depth from cover level to soffit of pipe 3.0m

TYPE OF ACCESS	DEPTH FROM SOFFIT TO COVER LEVEL (m)	DN LARGEST PIPE IN MANHOLE / MEANS OF DESCENT INTO SHAFT	MINIMUM INTERNAL DIMENSIONS	MINIMUM ACCESS SIZE		REMARKS
				RECTANGULAR	CIRCULAR	
MANHOLE C	1.0 - 1.5	≤ 150mmØ	1000mmØ	750 x 750 C	600Ø	Generally in accordance with safe work in confined spaces - Health and safety commission  Larger opening size is required for manholes at shallower depths to permit standing / crouching  Cover loading class C250 in fields and D400 in roads / road margins
		225mmØ	1200mmØ	750 x 600 E	750Ø	
		300mmØ	1200mmØ	750 x 600 E	750Ø	
		375mmØ to 450mmØ	1350mmØ	1200 x 675 C	750Ø	
		500mmØ to 700mmØ	1500mmØ	1200 x 675 C	750Ø	
> 900mmØ	1800mmØ	1200 x 675 C	750Ø			
MANHOLE B	1.5 - 3.0	≥ 225mmØ	1200mmØ	750 x 600 E	700Ø	Where a ladder is provided, a larger size may be needed  Cover loading class C250 in fields and D400 in roads / road margins & footpaths
		300mmØ	1200mmØ	750 x 600 E	700Ø	
		375mmØ to 450mmØ	1350mmØ	750 x 600 E	700Ø	
		500mmØ to 700mmØ	1500mmØ	750 x 600 E	700Ø	
		750mmØ to 900mmØ	1800mmØ	750 x 600 E	700Ø	
> 900mmØ	The larger of 1800 or (DN + 450)	The larger of 1800 or (DN + 450)	700Ø			

- I. These sizes apply to straight-through pipes; larger sizes may be required for turning chambers or chambers with several side branches or where specific maintenance requirements are necessary, e.g. disconnecting traps.
- II. Minimum height of chamber in shafted manhole 2m from benching to underside of reducing slab.
- III. May be reduced to 600 x 600 or 600Ø where the configuration of the manhole chamber permits a safe system of work.
- IV. C denotes central.
- V. E denotes eccentric.
- VI. All Manholes / Chambers to include ladder / rung access as per details.

- NOTES:**
- FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
  - ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
  - ENGINEER/EMPLOYERS REPRESENTATIVE, AS APPROPRIATE, TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
  - THE CONTRACTOR SHALL UNDERTAKE A THOROUGH CHECK FOR THE ACTUAL LOCATION OF ALL SERVICES/UTILITIES, ABOVE AND BELOW GROUND, BEFORE ANY WORK COMMENCES
  - ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:  
**BORD NA MÓNA**

Project:  
**DREHID MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title:  
**TYPICAL MANHOLE DETAILS**

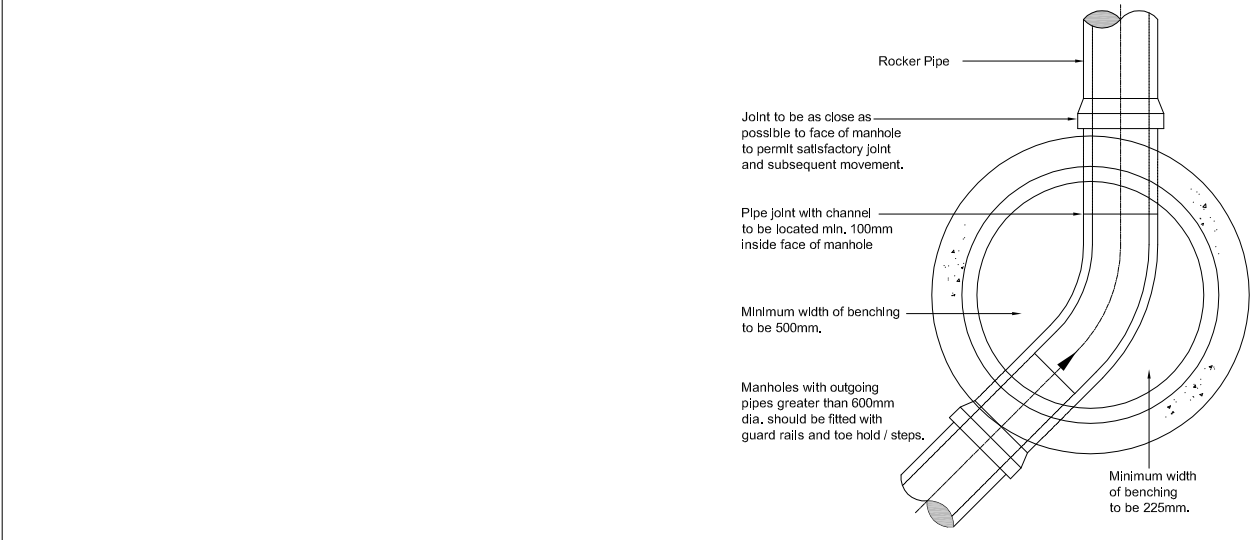
Scale @ A3: **1:25**

Prepared by: **M. Nolan**      Checked: **D. Conneran**      Date: **May 2012**

Project Director: **D. Grehan**

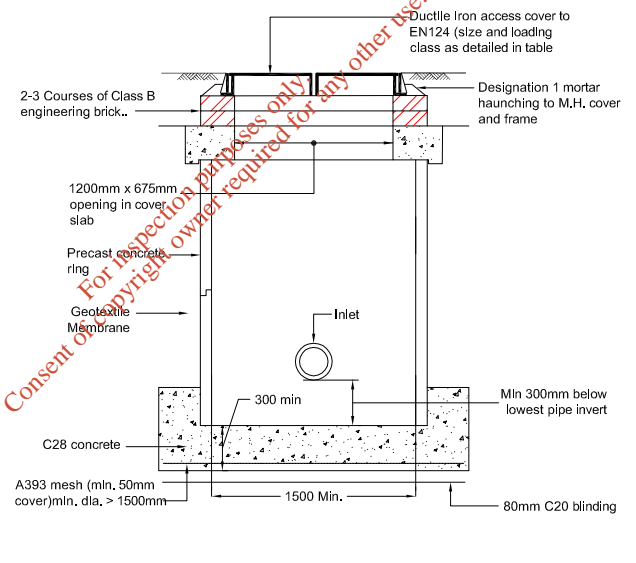
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Drawing No.: **6301-2712**      **A**

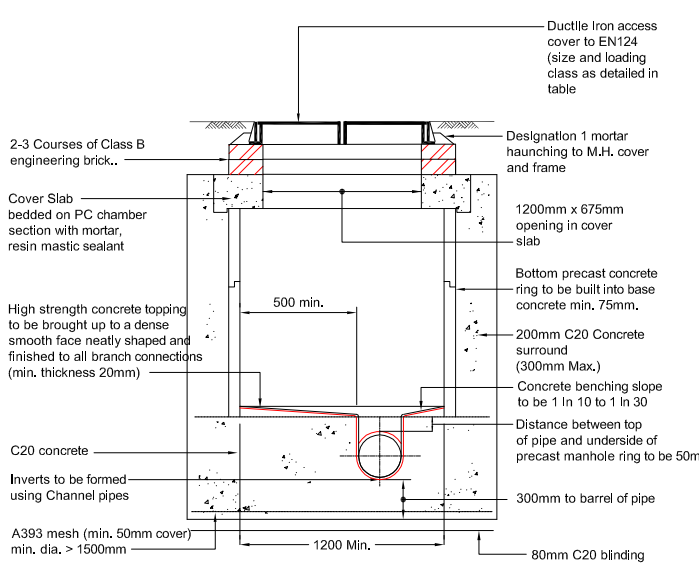


**PLAN ON MANHOLE TYPE D**

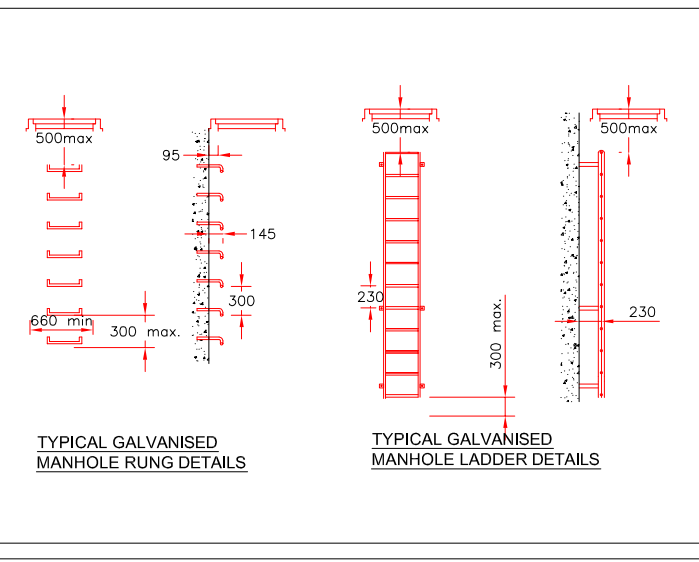
**PLAN ON MANHOLE TYPE B**



**TYPICAL PRECAST MANHOLE DETAIL - TYPE E**  
Depth from ground level to soffit of pipe 1 - 1.5m

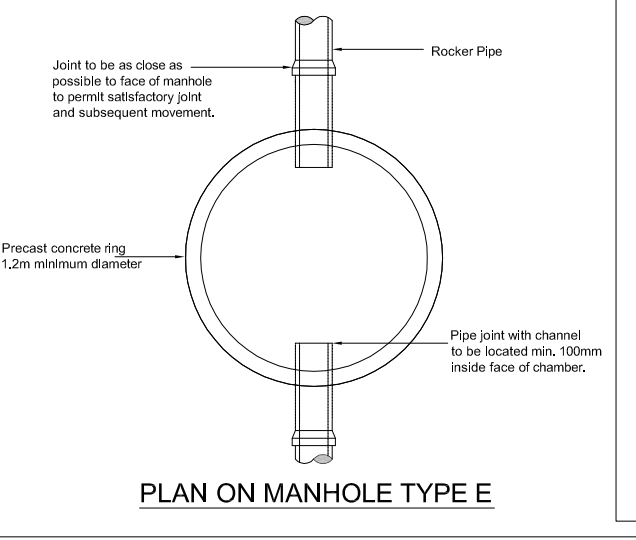


**TYPICAL PRECAST MANHOLE DETAIL - TYPE C**  
Depth from ground level to soffit of pipe 1.0 - 1.45m

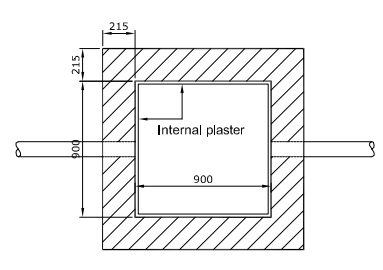


**TYPICAL GALVANISED MANHOLE RUNG DETAILS**

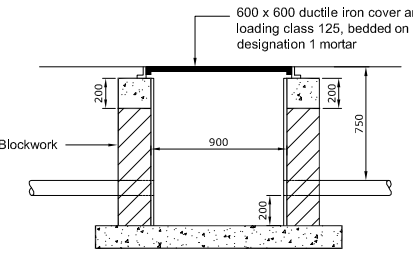
**TYPICAL GALVANISED MANHOLE LADDER DETAILS**



**PLAN ON MANHOLE TYPE E**



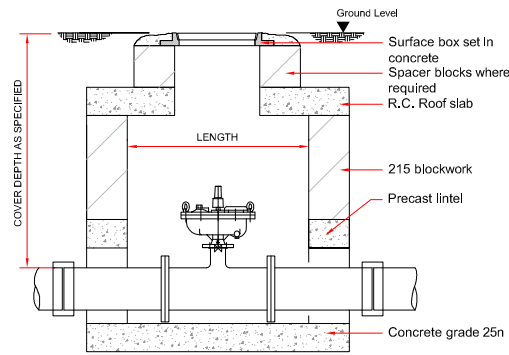
**PLAN**



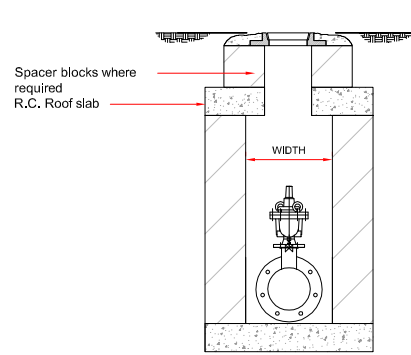
**SECTION**

Note:  
Duct chamber consisting of grade 25:20 base and roof slab 200mm thick, 215mm thick blockwork walls and heavy duty ductile iron cover as specified.

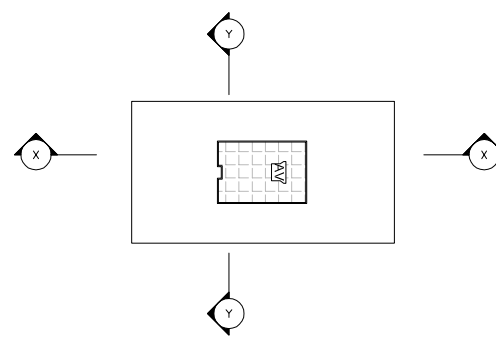
**TYPICAL DUCT CHAMBER DETAIL**



SECTION X-X



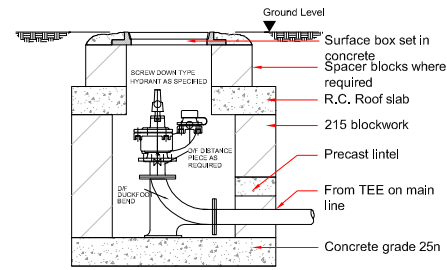
SECTION Y-Y



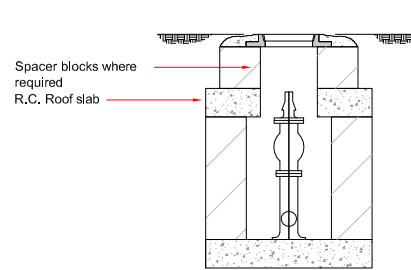
PLAN ON COVER SLAB

AIR VALVE CHAMBER

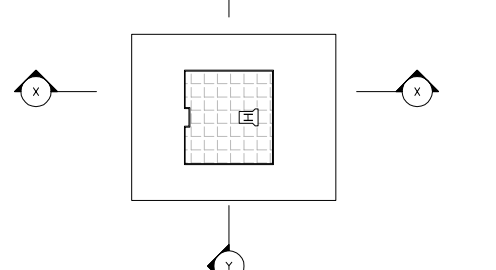
AIR VALVE CHAMBER DIMENSIONS			
PIPE DIA (mm)	CHAMBER WIDTH (W)	CHAMBER LENGTH (L)	DEPTH OF COVER TO PIPE (H)
150	510	690	900
250	510	690	900
300	600	720	1050
400	800	800	1050
450	800	800	1050
500	1000	1000	1050
600	1200	1200	1300



SECTION X-X



SECTION Y-Y



PLAN ON COVER SLAB

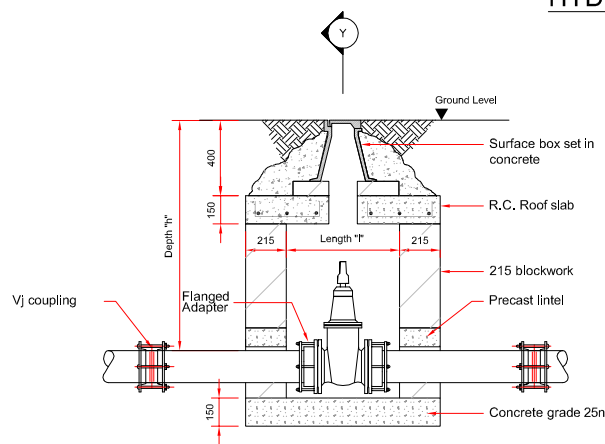
HYDRANT CHAMBER

HYDRANT CHAMBER DIMENSIONS				
VALVE DIA. (mm)	CHAMBER WIDTH (W)	CHAMBER LENGTH (L)	DEPTH OF COVER TO PIPE (H)	CLEAR OPE. SURFACE BOX (mm)
50	390	720	900	375x225
80	460	960	900	575x300
100	460	960	900	575x300
150	920	1500	900	900x600

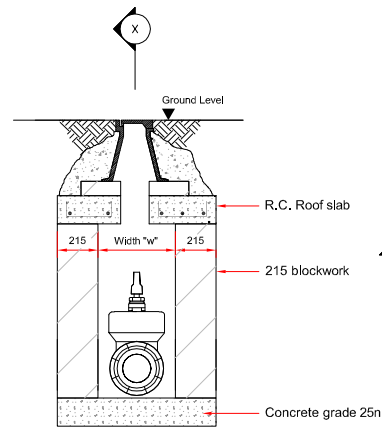
NOTES

1. Figured dimensions only to be taken from this drawing.
2. All drawings to be checked by The Contractor on site.
3. The Engineer to be informed by The Contractor of any discrepancies before any work commences.
4. All levels shown relate to ordnance survey datum at Malin Head.

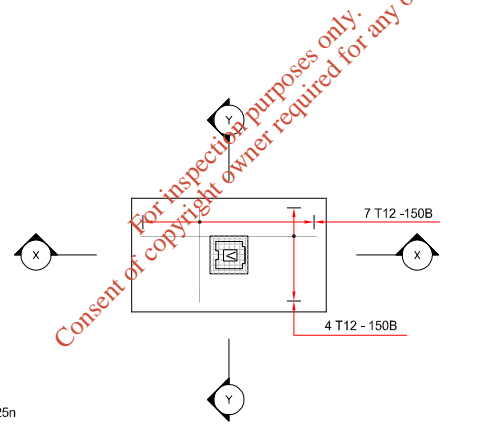
Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.



SECTION X-X



SECTION Y-Y

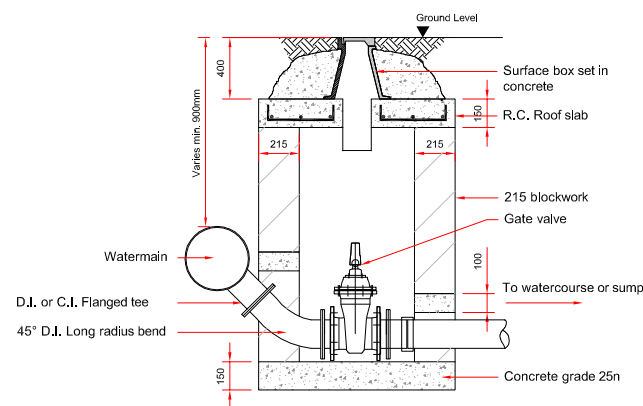


PLAN ON COVER SLAB

PLAN ON SLUICE VALVE CHAMBER

SLUICE VALVE CHAMBER DIMENSIONS			
VALVE DIA. (mm)	CHAMBER WIDTH (W)	CHAMBER LENGTH (L)	DEPTH OF COVER TO PIPE (H)
80	280	560	900
100	310	560	900
150	410	610	900
200	460	610	900
250	510	690	900
300	600	720	1060
400	800	800	1060

Note  
Concrete floor to chamber not to be provided when Class 1 watermains are used.



TYPE 1 SCOUR CHAMBER

(TO BE USED WHERE THERE IS A NEARBY LOW LEVEL STREAM/DRAIN)

Client:  
**BORD NA MÓNA**

Project:  
**MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title:  
**TYPICAL WATERMAIN DETAILS**

Scale @ A3: 1:40

Prepared by: M. Nolan      Checked: D. Conneran      Date: March 2012

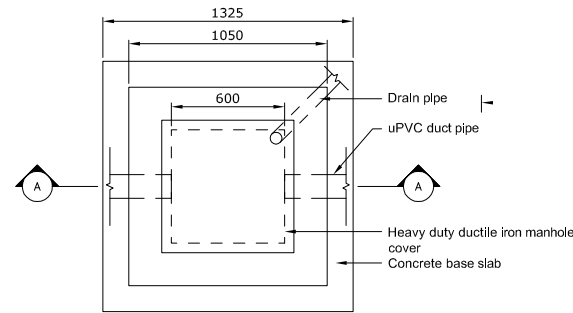
Project Director: D. Grehan

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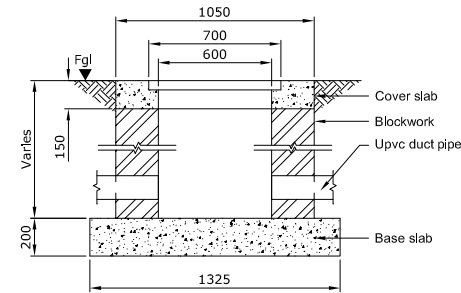
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Drawing No.: **6301-2713**      Issue: **A**

TRENCH WIDTHS (for details see Spec. Cl.)		
NOMINAL PIPE DIA (mm)	MIN. TRENCH WIDTH (mm)	MAX. TRENCH WIDTH (mm)
100	430	630
150	490	690
225	580	780
300	680	880
375	950	1150
450	1030	1230
525	1120	1320
600	1240	1440
675	1330	1530
750	1400	1600
900	1920	2120
1050	2100	2300



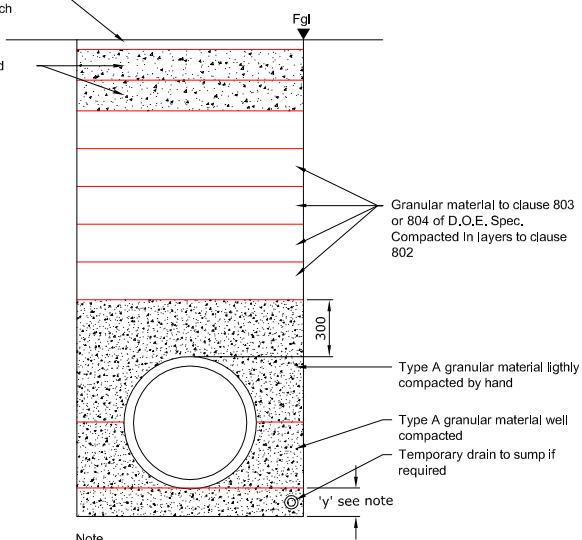
PLAN ON DUCT CHAMBER



SECTION A-A

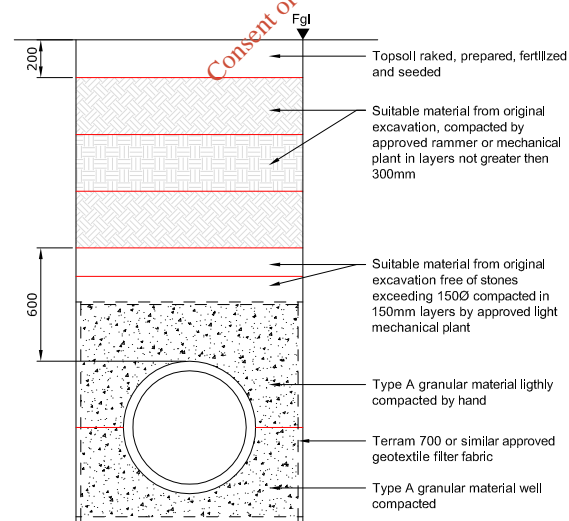
For road margins (a) granular material to be continued to road surface and blinded with fines or (b) 150mm topsoil to be placed raked, prepared, fertilized and seeded to match original surface

Granular material to clause 804 of D.O.E. Spec. For road work compacted in 2 layers to clause 802

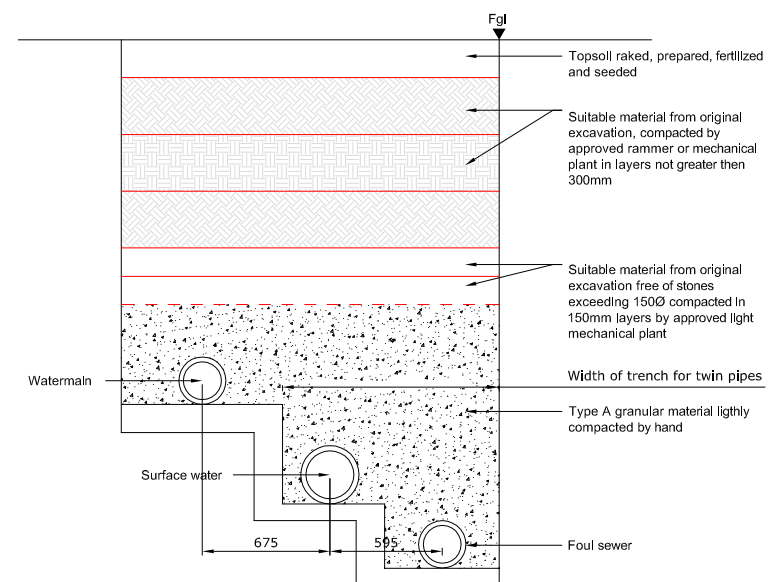


Note  
 'y'=150 for pipes up to 300Ø  
 'y'=200 for pipes from 375Ø to 1200Ø  
 in rock or mixed soils containing boulders or hard spots dimension 'y' shall be increased by 100

TRENCH IN ROAD AND ROAD MARGINS



FIELDS  
 (where required by poor ground conditions)



COMBINED TRENCH

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- NOTES
- FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
  - ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
  - ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
  - ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Issue	Date	Description	By	Chkd.
A	27.06.12	ISSUED FOR WASTE LICENCE	M.N.	D.C.

Client:  
**BORD NA MÓNA**

Project:  
**DREHID MECHANICAL BIOLOGICAL TREATMENT (MBT) FACILITY**

Title:  
**TRENCH BEDDING DETAILS**

Scale @ A3: **1:40**

Prepared by: **M. Nolan**    Checked: **D. Conneran**    Date: **March 2012**

Project Director: **D. Grehan**

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Drawing No.: **6301-2714**    Issue: **A**