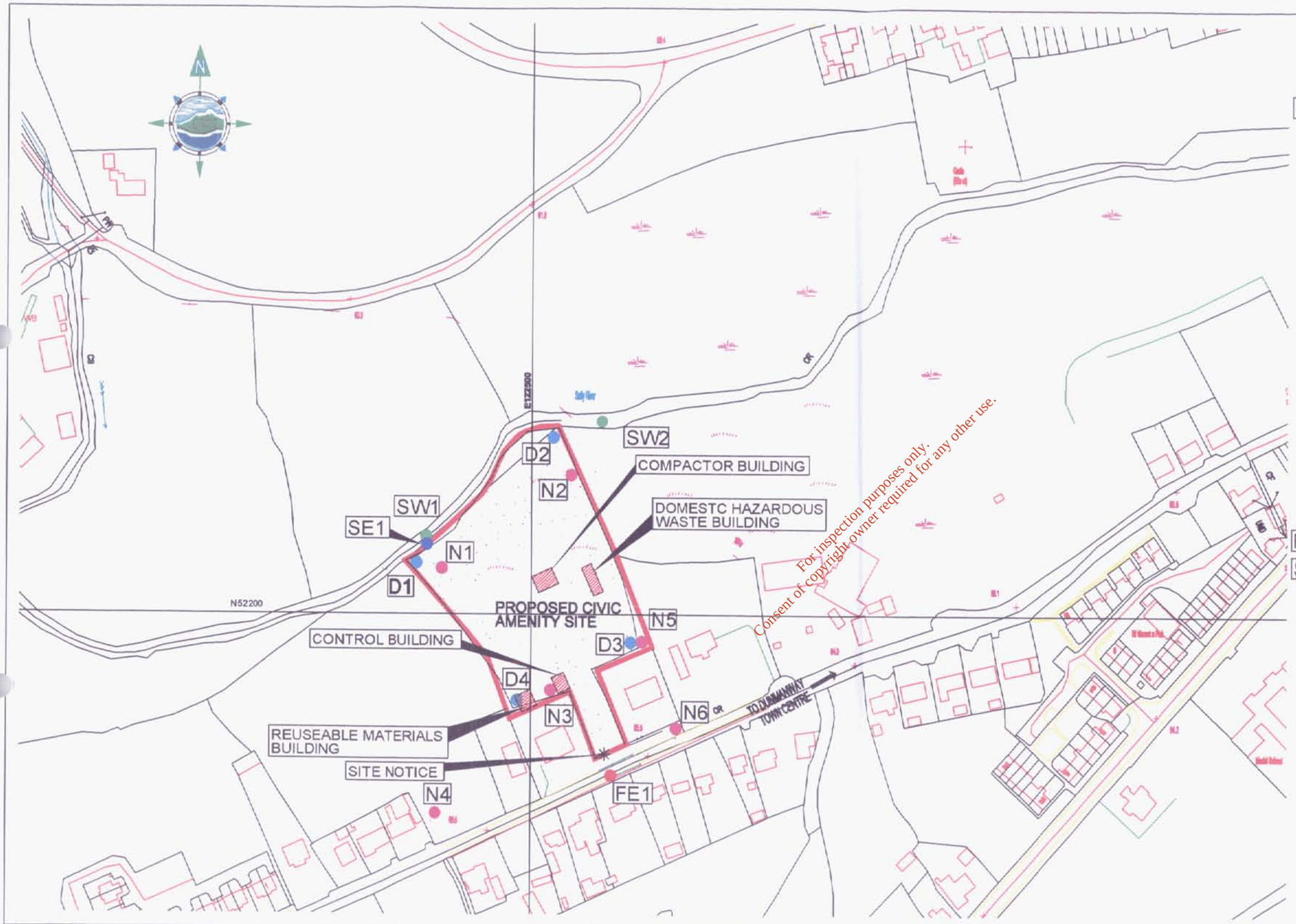

LEGEND

- N3 ● NOISE MONITORING POINTS
- SW1 ● SURFACE WATER MONITORING POINTS
- D2 ● DUST MONITORING POINTS

SURFACE WATER, NOISE AND DUST MONITORING		
SW1	122437 E	52245 N
SW2	122542 E	52303 N
N1	122446 E	52227 N
N2	122523 E	52281 N
N3	122512 E	52156 N
N4	122443 E	52085 N
N5	122566 E	52184 N
N6	122586 E	52134 N
D1	122431 E	52230 N
D2	122513 E	52302 N
D3	122559 E	52184 N
D4	122492 E	52150 N

- FE1 ● FOUL EMMISSION POINT
- SE1 ● SURFACE WATER EMMISSION POINT

SURFACE WATER AND FOUL EMMISSION POINTS		
SE1	122439 E	52240 N
FE1	122548 E	52107 N

NOTES

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2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES

Issue	Date	Description	By	Chkd.
A	JUNE '07	WASTE LICENCE APPLICATION	JO'B	OD

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

Title: WASTE LICENCE APPLICATION MONITORING POINT LOCATIONS

Prepared by: JO'B
Checked: OD
Date: JUNE '07
Project Director: B.DOWNES
Scale @ A3: 1:2,500

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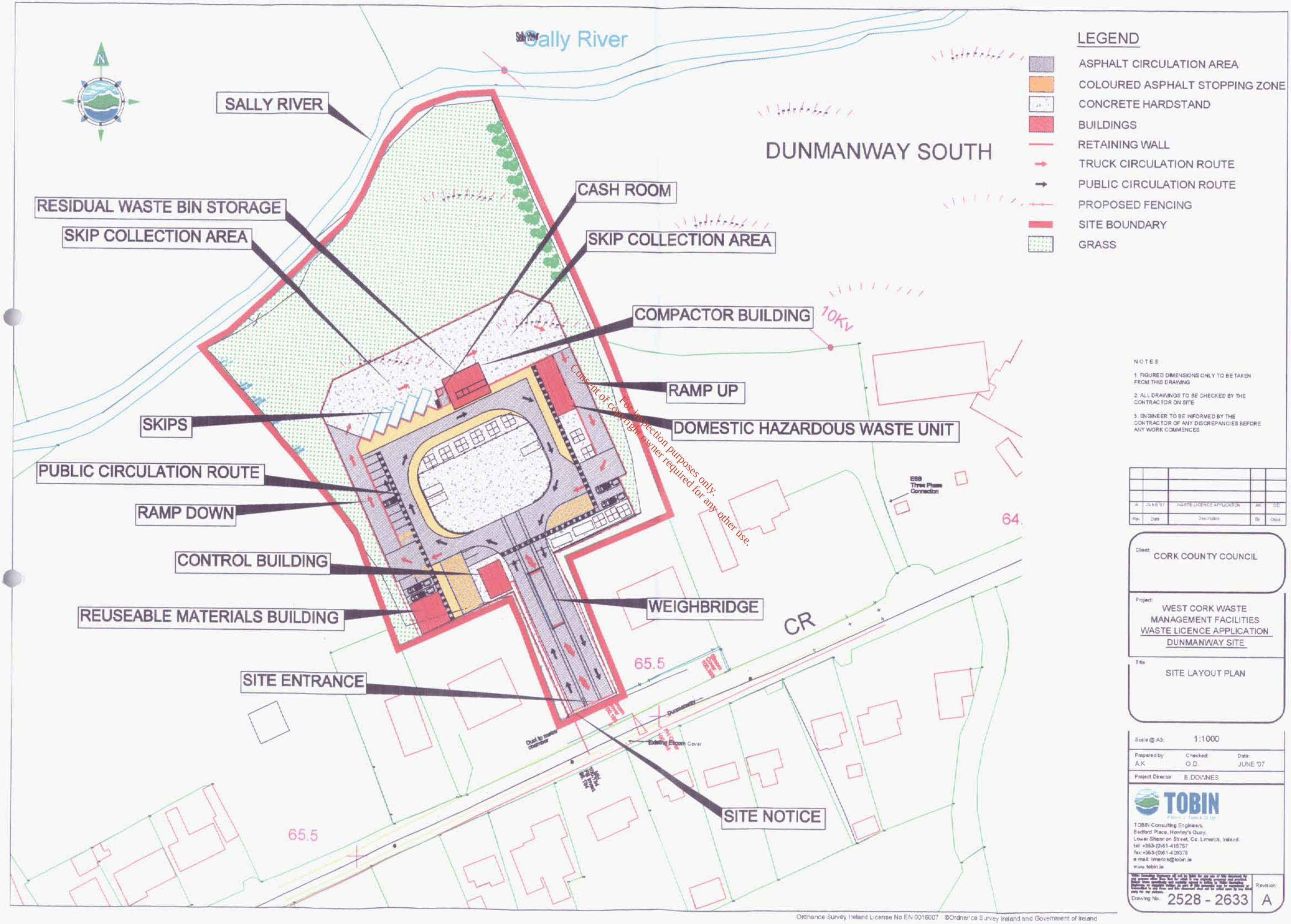
Drawing No.: 2528-2630

Issue: A



NOTES

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Rev.	Date	Description	By	Chkd
A	JUNE '07	WASTE LICENCE APPLICATION	AK	OD

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES
WASTE LICENCE APPLICATION
DUNMANWAY SITE

Title: SITE LAYOUT PLAN

Scale @ A3: 1:1000

Prepared by:	Checked:	Date:
A.K.	O.D.	JUNE '07

Project Director: B.DOWNES

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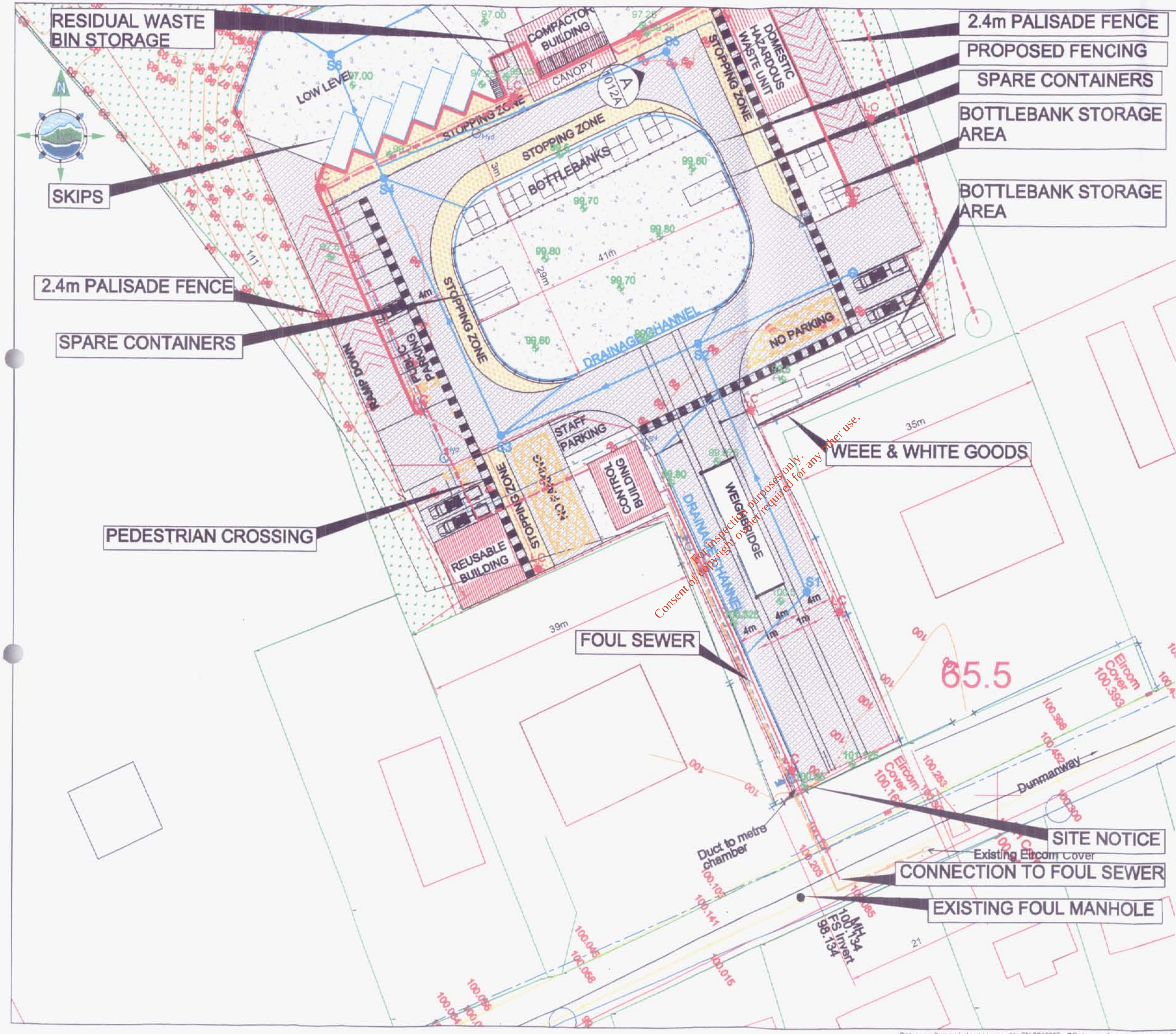
Drawing No. 2528 - 2633 Revision: A



LEGEND

- ASPHALT CIRCULATION AREA
- COLOURED ASPHALT STOPPING ZONE
- CONCRETE HARDSTAND
- BUILDINGS
- RETAINING WALL
- TRUCK CIRCULATION ROUTE
- PUBLIC CIRCULATION ROUTE
- TELEPHONE DUCTING
- ELECTRICAL DUCTING
- ELECTRICAL MINI PILLAR
- WATERMAIN
- HYDRANT
- WATER METER
- DRAINAGE CHANNELS
- SURFACE WATER DRAINAGE
- FOUL SEWERAGE
- 97.0 PROPOSED LEVELS
- EXISTING CONTOURS
- LC LIGHTING STANDARDS & DUCTING

NOTES

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3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE 07	WASTE LICENCE APPLICATION	A.K.	O.D.

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY SITE LAYOUT PLAN SHOWING SERVICES (SHEET 1 OF 2)

Scale @ A3: 1:500

Prepared by: A.K. Checked: O.D. Date: JUNE '07

Project Director: B.DOWNES

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www.tobin.ie

Drawing No.: 2528 - 2634 Revision: A

1.2m HIGH CHAINLINK FENCE SET BACK 6m FROM RIVER BANK

1.2m HIGH CHAINLINK FENCE SET BACK 6m FROM RIVER BANK

SALLY RIVER

Edge of River Bank

ALTERNATIVE CASH ROOM LOCATION

COMPACTOR BUILDING

4 NO. HATCHES FOR DRY RECYCLABLES

SURFACE WATER OUTFALL

CASH ROOM

STAIRS (STAFF ONLY)

PEDESTRIAN CROSSING

RESIDUAL WASTE BIN STORAGE

2.4m PALISADE FENCE

PROPOSED FENCING

SPARE CONTAINERS

BOTTLEBANK STORAGE AREA

SKIPS

BOTTLEBANK STORAGE AREA

2.4m PALISADE FENCE

SPARE CONTAINERS

LOW LEVEL

DRAINAGE CHANNEL

COMPACTOR BUILDING

CANOPY

DOMESTIC HAZARDOUS WASTE UNIT

STOPPING ZONE

BOTTLEBANKS

NO PARKING

41m

29m

3m

4m

120

141

111

LEGEND

- ASPHALT CIRCULATION AREA
- COLOURED ASPHALT STOPPING ZONE
- CONCRETE HARDSTAND
- BUILDINGS
- RETAINING WALL
- TRUCK CIRCULATION ROUTE
- PUBLIC CIRCULATION ROUTE
- TELEPHONE DUCTING
- ELECTRICAL DUCTING
- ELECTRICAL MINI PILLAR
- WATERMAIN
- HYDRANT
- WATER METER
- DRAINAGE CHANNELS
- SURFACE WATER DRAINAGE
- FOUL SEWERAGE
- PROPOSED LEVELS
- EXISTING CONTOURS
- LIGHTING STANDARDS & DUCTING

NOTES

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Rev	Date	Description	By	Chkd
A	JUNE 07	WASTE LICENCE APPLICATION	A.K	O.D

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY SITE LAYOUT PLAN SHOWING SERVICES (SHEET 2 OF 2)

Scale @ A3: 1:500

Prepared by:	Checked:	Date:
A.K	O.D.	JUNE 07

Project Director: B.DOWNES

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Drawing No. 2528 - 2635 | Revision A

10 km/h

ON BUILDING

500 × 300 — TIMBER — ON POLE

500 × 300 — SCRAP METAL — ON POLE

500 × 300 — GREEN WASTE — ON POLE

500 × 300 — PUBLIC CAR PARKING — ON RALINGS

500 × 300 — REUSEABLE MATERIALS BUILDING — ON BUILDING WALL

NO PUBLIC ENTRY — ON LIGHT POLE

520 — CAUTION CHILDREN CROSSING — ON LIGHT POLE

755 — STOP — ON ENTRY/ EXIT BARRIERS IN SITE

500 × 300 — PLASTIC BOTTLES — OVER CHUTE

500 × 300 — WRAPPING — OVER CHUTE

500 × 300 — RESIDUAL WASTE — OVER CHUTE

500 × 300 — PAPER — ON CHUTE

500 × 300 — CARDBOARD & TETRA PAKS — ON CHUTE

500 × 400 — NO CHILDREN OR PETS ALLOWED — ON BUILDING

500 × 400 — HAZARDOUS WASTE COMPOUND — PLEASE CONSULT WITH SITE STAFF — ON BUILDING

500 × 550 — CHILDREN MUST BE SUPERVISED AT ALL TIMES NO DOGS ALLOWED — ON BUILDING

500 × 300 — FLAT GLASS — ON CONTAINER

500 × 300 — WASTE ENGINE OIL — ON BUILDING WALL

500 × 300 — CAR BATTERIES — ON CONTAINER

600 × 450 — NO ENTRY — ON POLE

800 × 500 — WASTE ELECTRICAL & ELECTRONIC EQUIPMENT — ON CONTAINER

10 km/h — ON LIGHT POLE

COMPACTOR BUILDING

CANOPY

DOMESTIC HAZARDOUS WASTE UNIT

BOTTLEBANKS

3m

41m

29m

111

4m

PUBLIC PARKING

CONTROL BUILDING

REUSABLE BUILDING

35m

39m

4m

1m

65.5

Dunmar

N

LEGEND

- ASPHALT CIRCULATION AREA
- COLOURED ASPHALT STOPPING ZONE
- CONCRETE HARDSTAND
- BUILDINGS
- RETAINING WALL
- TRUCK CIRCULATION ROUTE
- PUBLIC CIRCULATION ROUTE
- PROPOSED FENCING
- SITE BOUNDARY

NOTES

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2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
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Rev	Date	Description	By	Chkd
A	JUNE '07	WASTE LICENCE APPLICATION	AK	OD

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY SITE SIGNAGE DETAILS

Scale @ A3: 1:1000

Prepared by: A.K. Checked: O.D. Date: JUNE '07

Project Director: B.DOWNES

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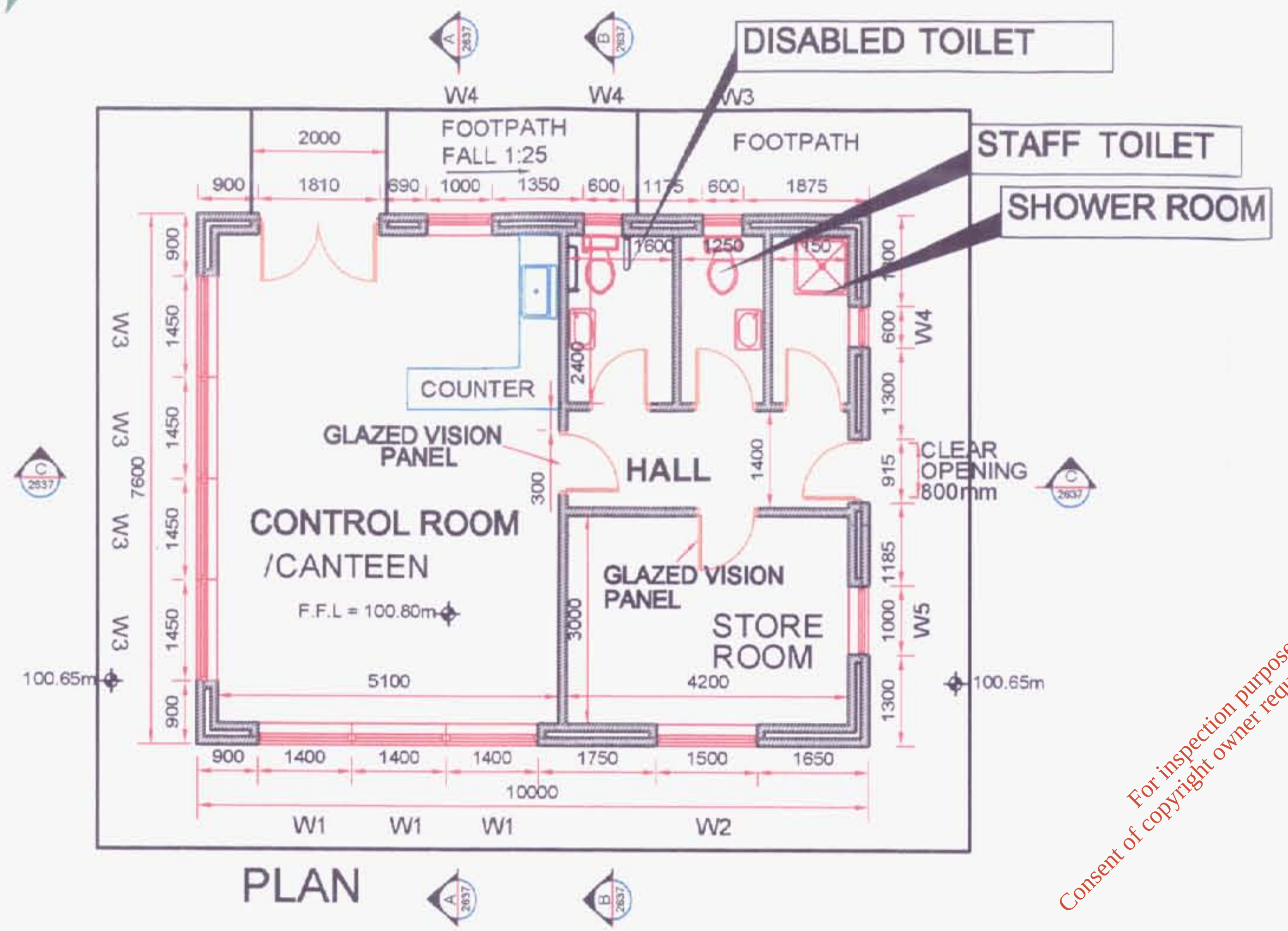
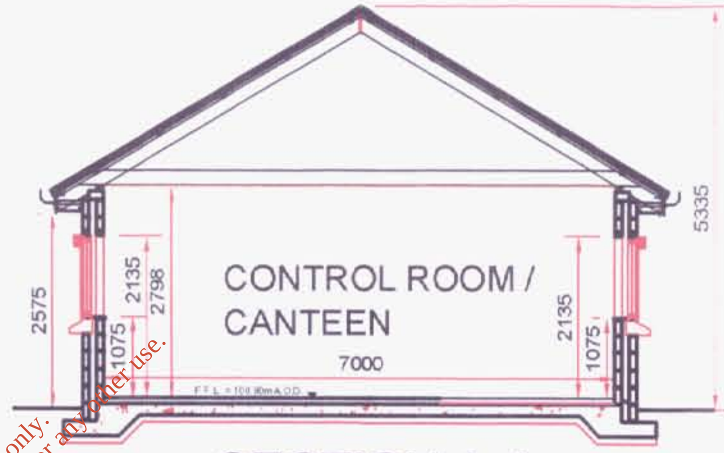
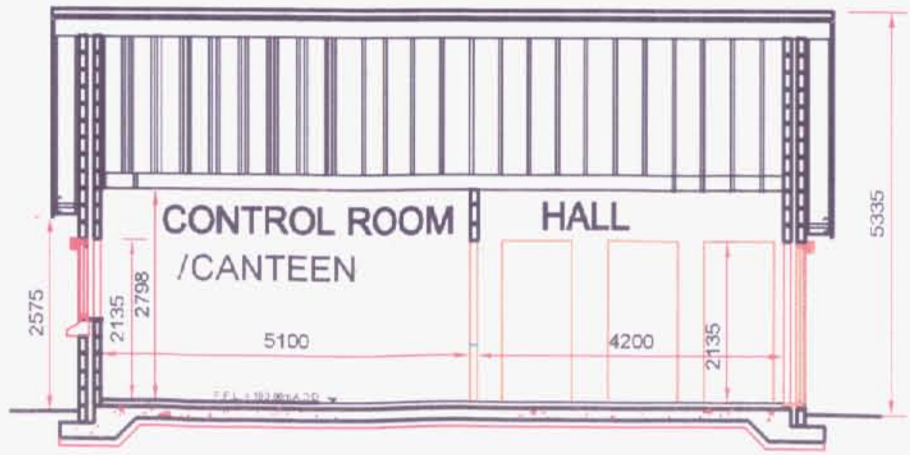
Drawing No.: 2528 - 2636 Revision: A



PLAN



SECTION A-A



SECTION C-C

SECTION B-B

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE'07	WASTE LICENCE APPLICATION	JO'B	O.D

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY CONTROL BUILDING PLAN & SECTIONS

Scale @ A3: 1:100

Prepared by: JO'B | Checked: O.D | Date: JUNE'07

Project Director: B.DOWNES

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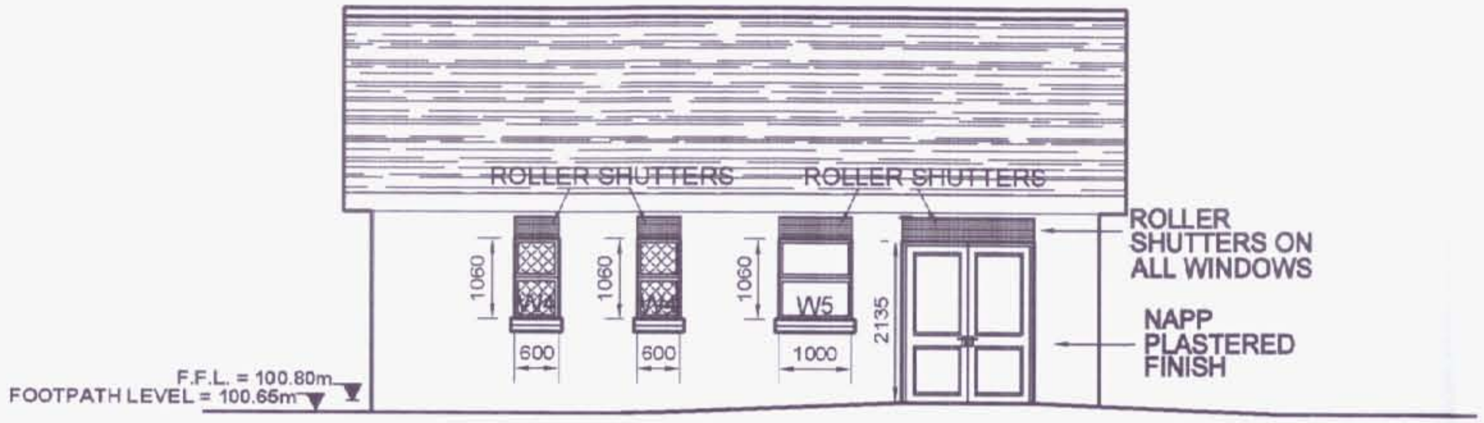
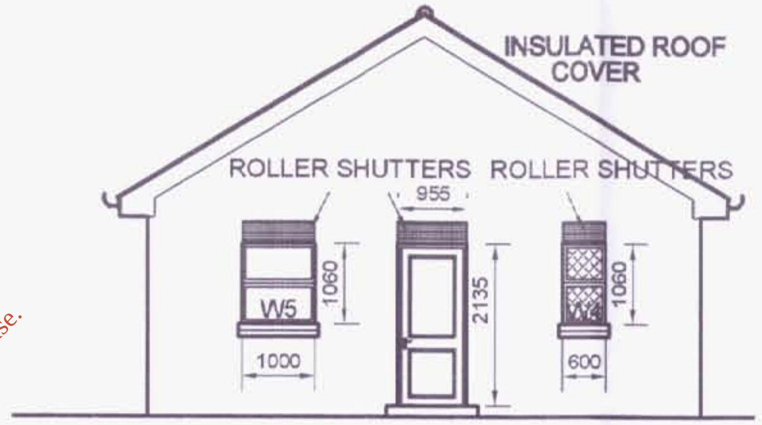
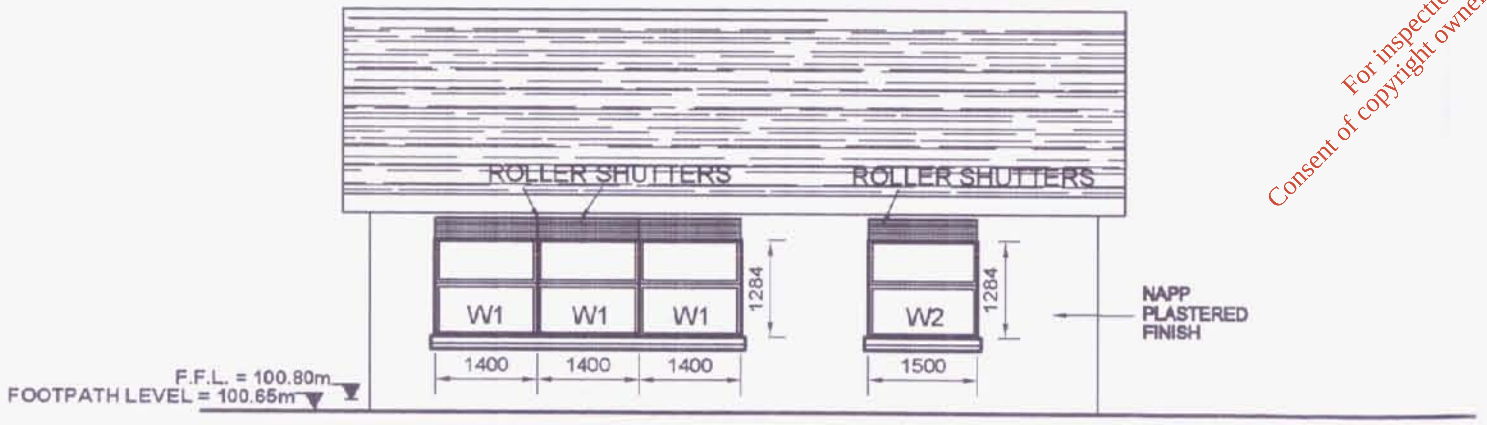
Drawing No.: 2528-2637 | Revision: A



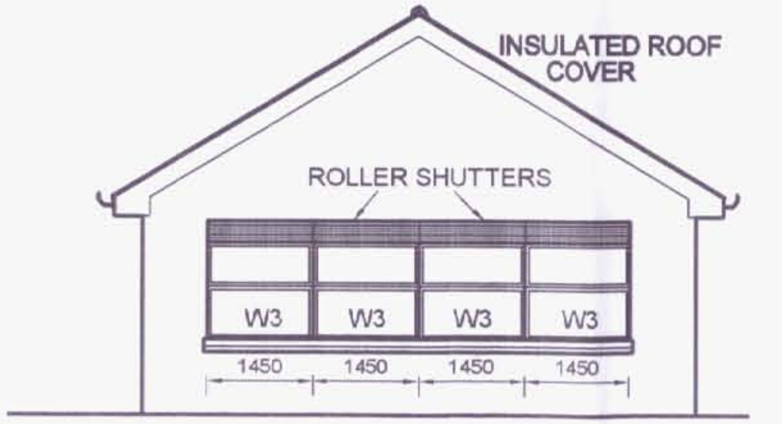
EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION



NORTH ELEVATION

NOTES

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3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES

4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE'07	WASTE LICENCE APPLICATION	A.K	O.D

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY CONTROL BUILDING ELEVATIONS

Scale @ A3: 1:100

Prepared by: A.K | Checked: O.D | Date: JUNE'07

Project Director: B.DOWNES

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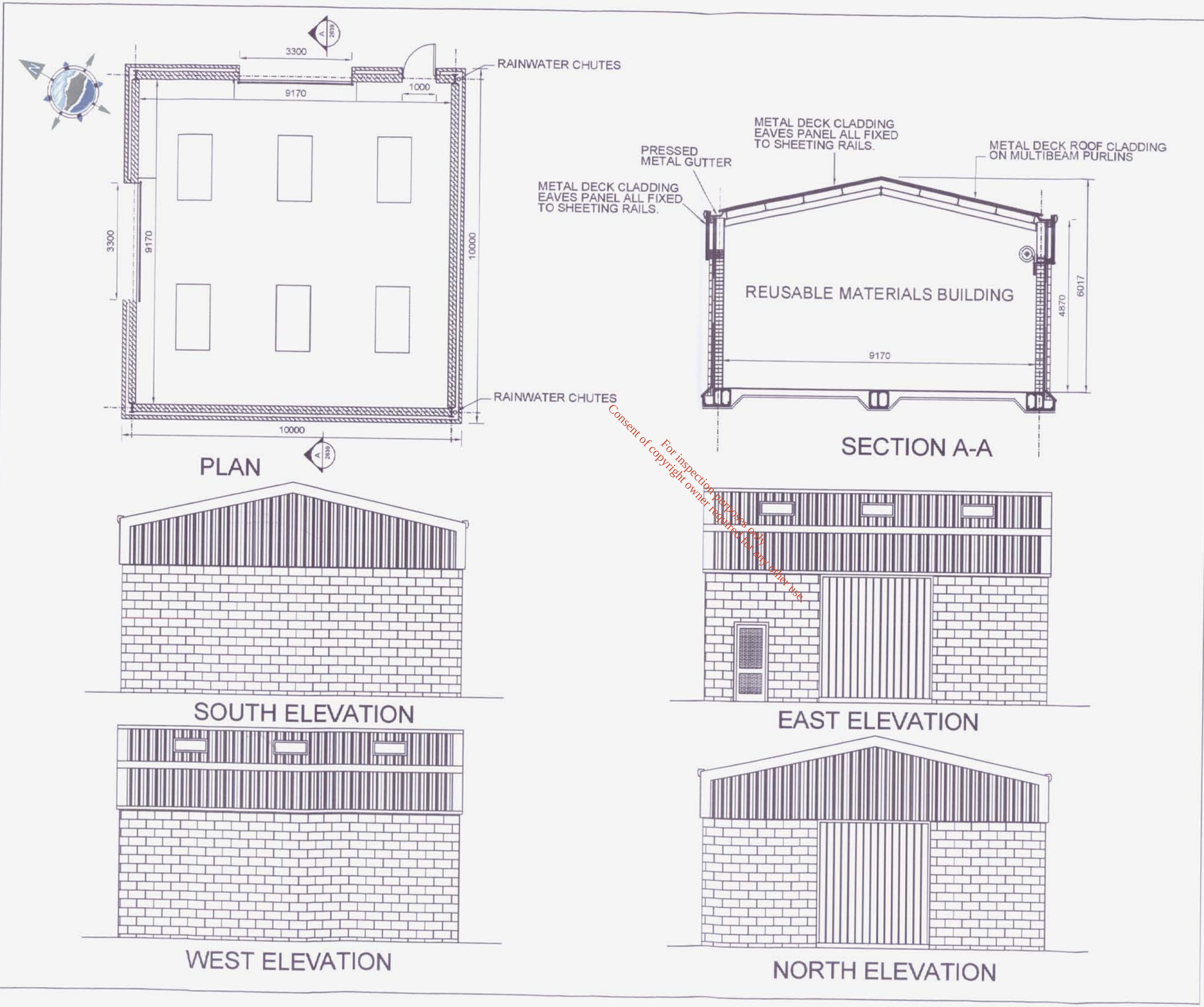
Drawing No.: 2528-2638

Revision: A



NOTES

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4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE'07	WASTE LICENCE APPLICATION	JO'B	O.D

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY
REUSABLE MATERIALS BUILDING
PLAN, SECTION
& ELEVATIONS

Scale @ A3: 1:100

Prepared by: JO'B | Checked: O.D | Date: JUNE'07

Project Director: B DOWNES

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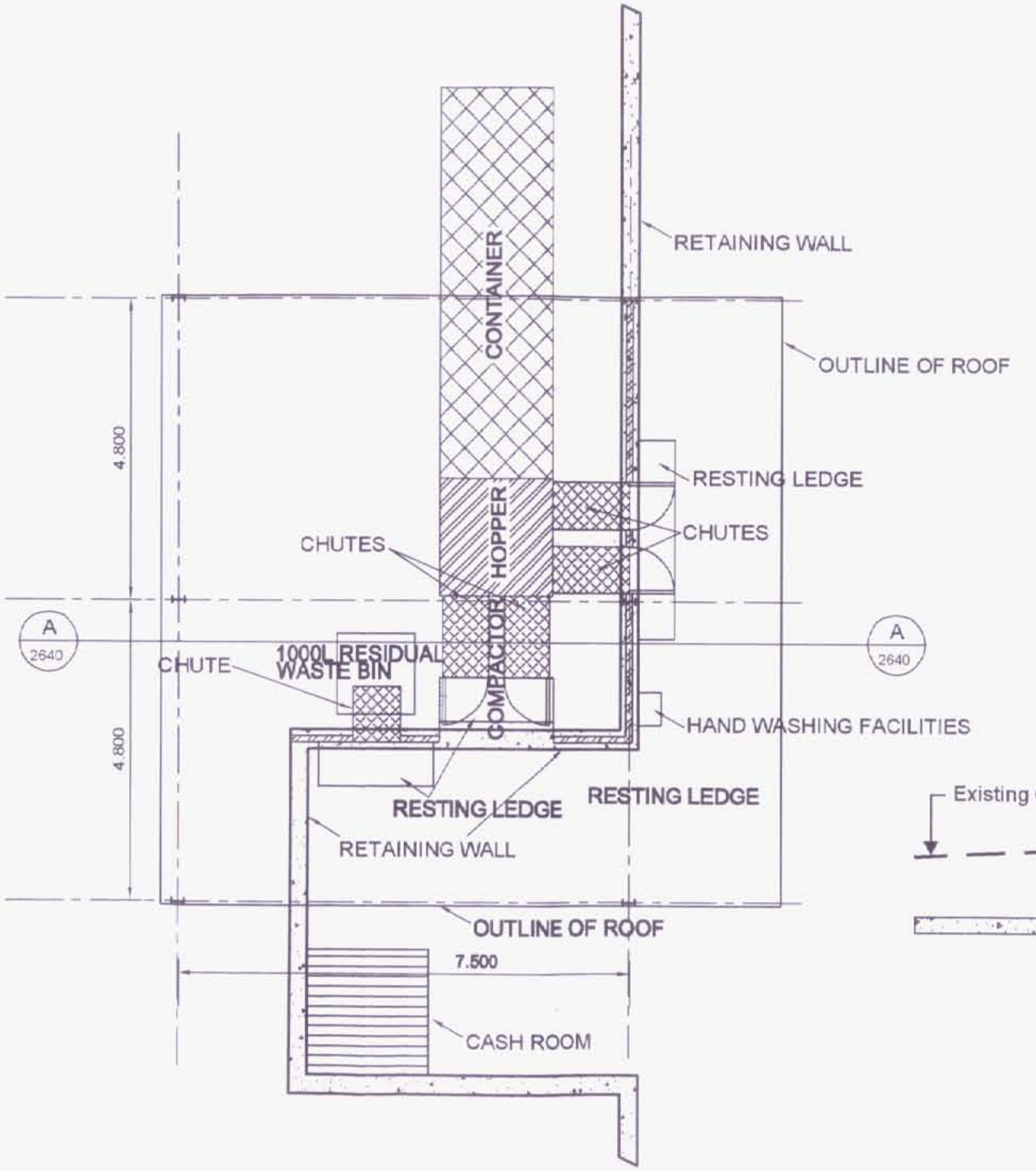
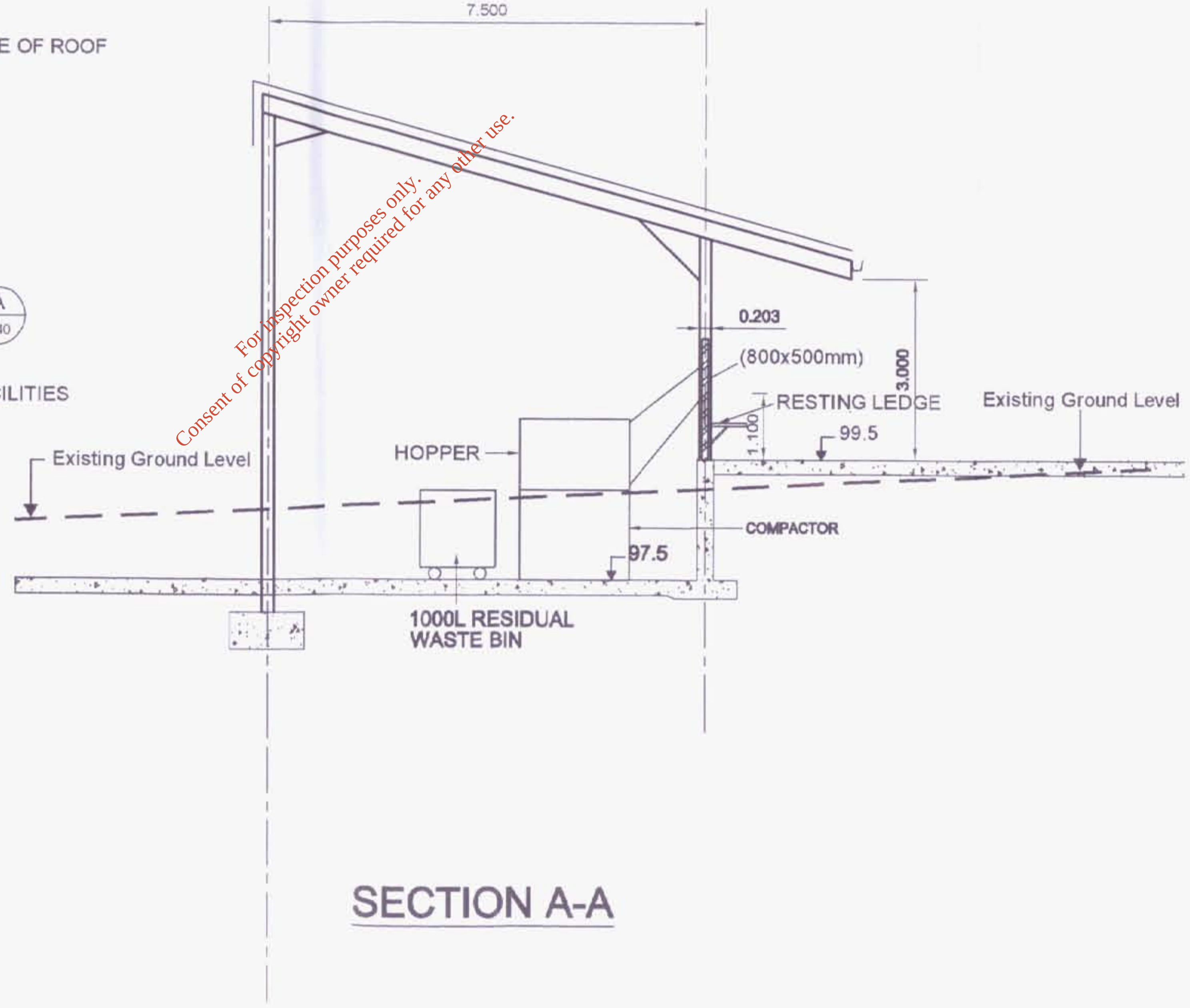
Drawing No.: 2528-2639 | Revision: A



COMPACTOR BUILDING PLAN



SECTION A-A

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
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Rev	Date	Description	By	Chkd
A	JUNE 07	WASTE LICENCE APPLICATION	JO'B	O.D

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY COMPACTOR BUILDING PLAN AND SECTION

Scale @ A3: 1:100

Prepared by: JO'B | Checked: O.D | Date: JUNE'07

Project Director: B.DOWNES

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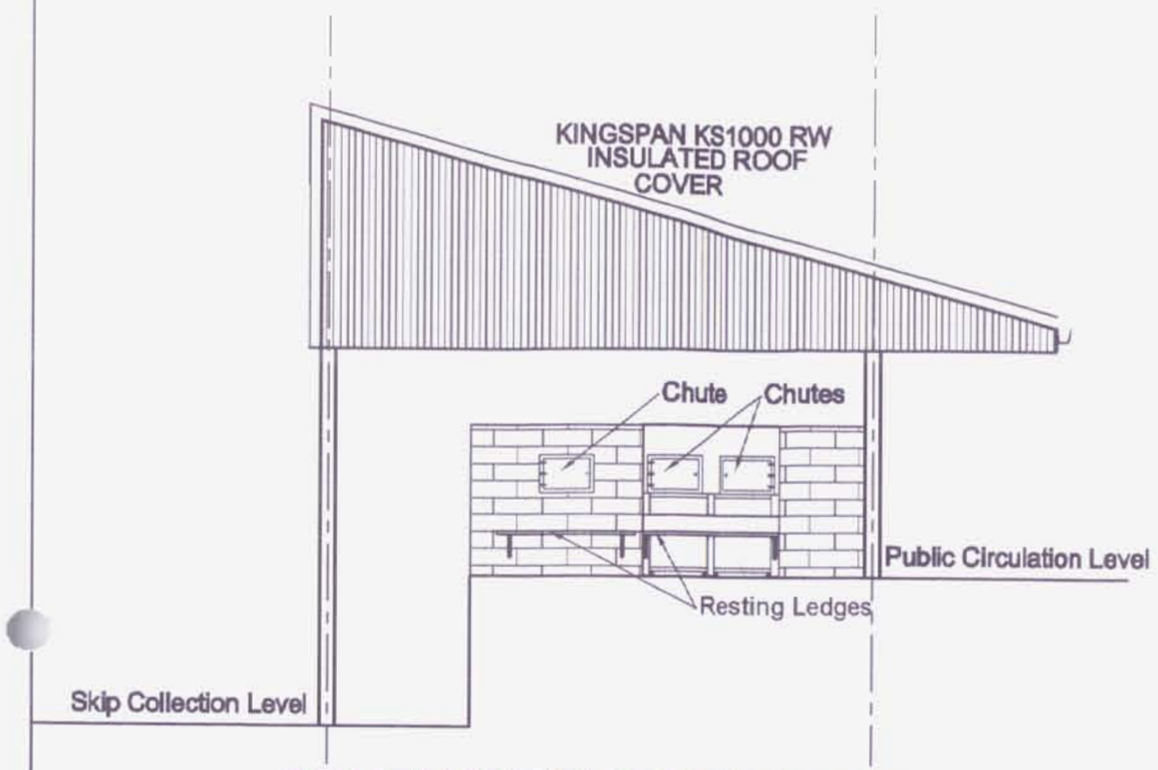
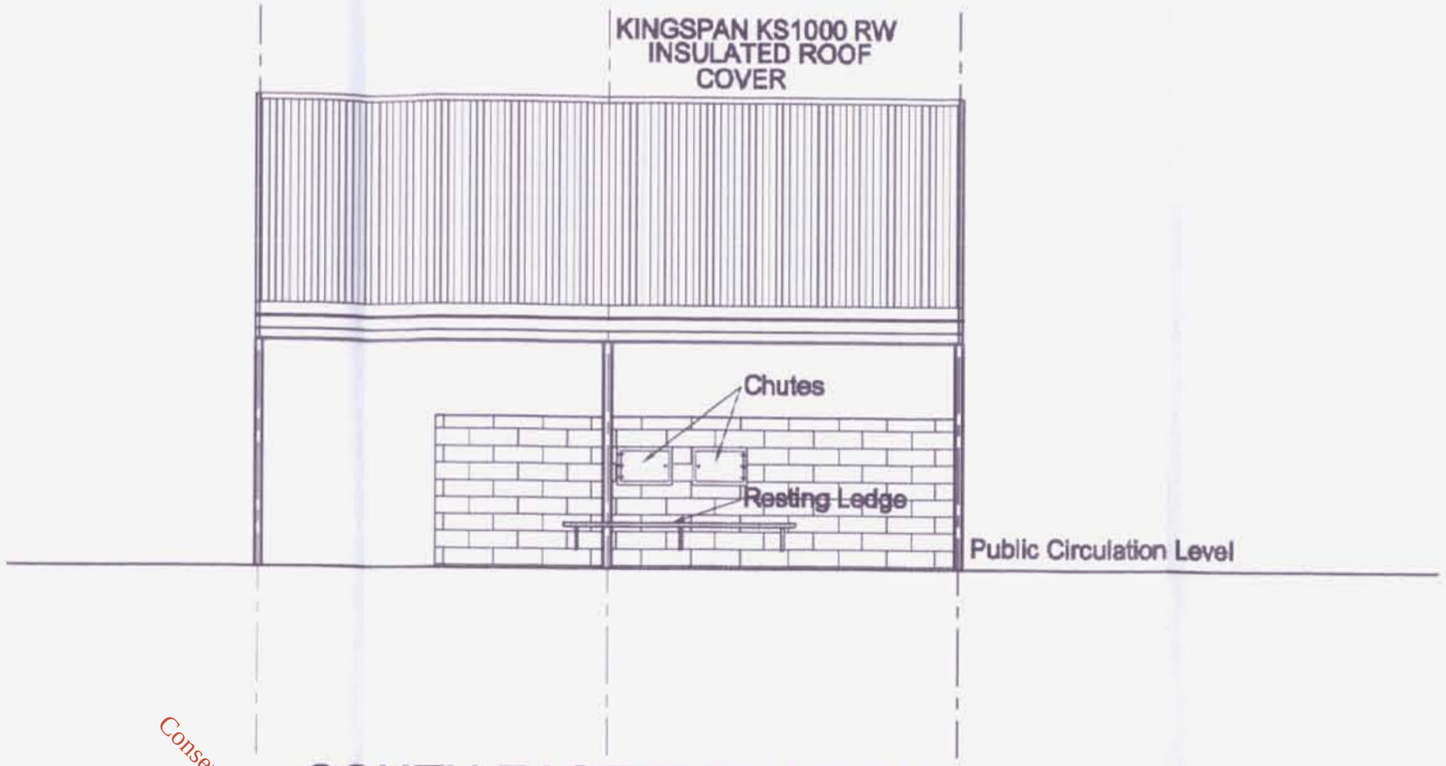
Drawing No. 2528-2640

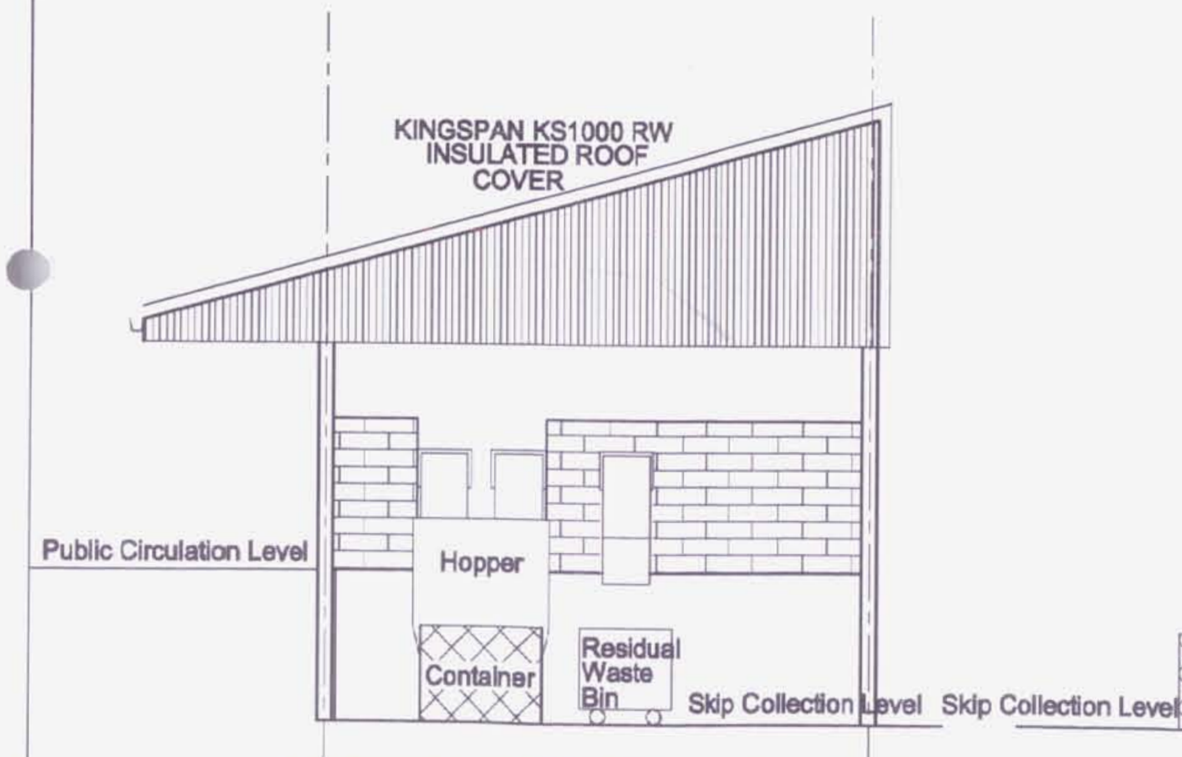
Revision A



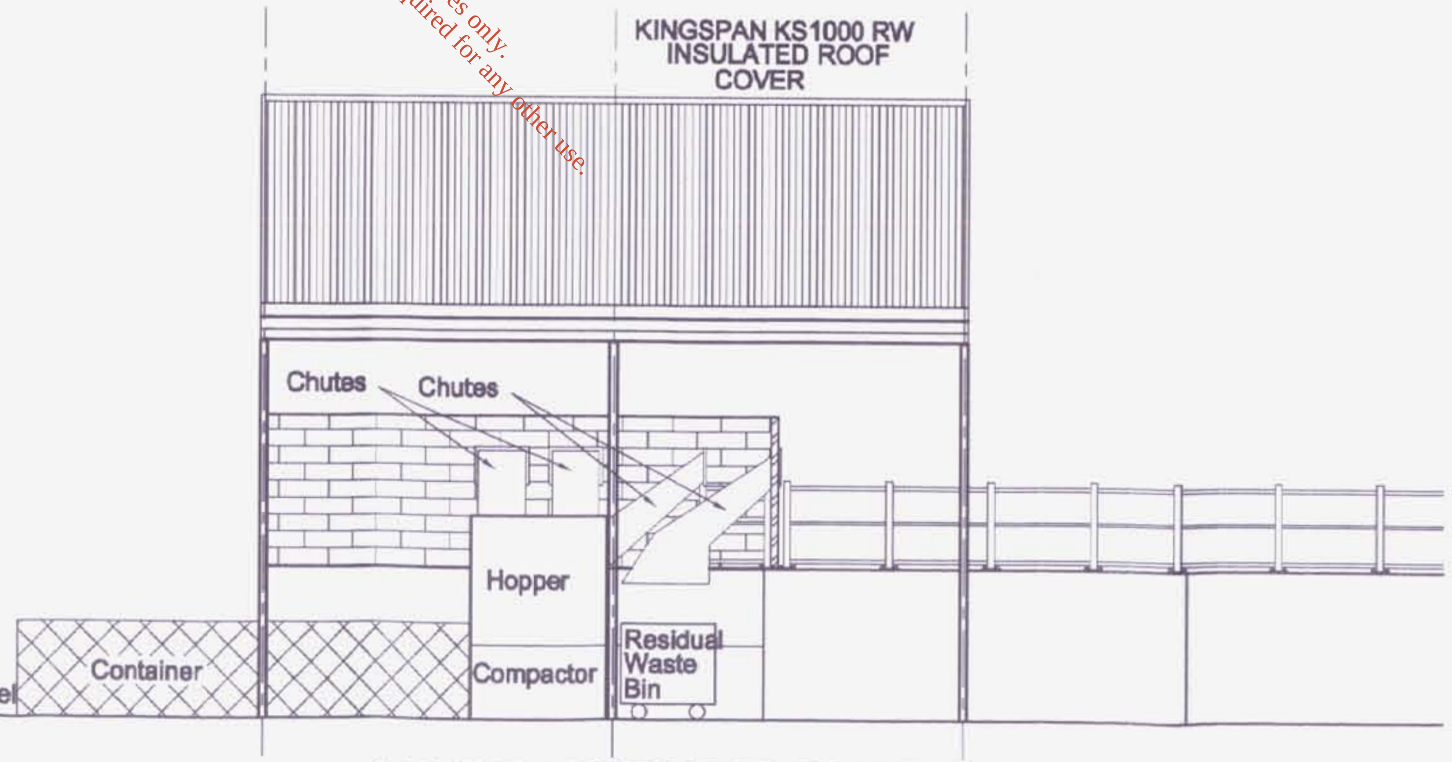
SOUTH WEST ELEVATION



SOUTH EAST ELEVATION



NORTH EAST ELEVATION



NORTH WEST ELEVATION

NOTES

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Rev	Date	Description	By	Chkd
A	JUNE'07	WASTE LICENCE APPLICATION	JOB	OD

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY COMPACTOR BUILDING ELEVATIONS

Scale @ A3: 1:100

Prepared by: JOB | Checked: OD | Date: JUNE'07

Project Director: B DOWNES

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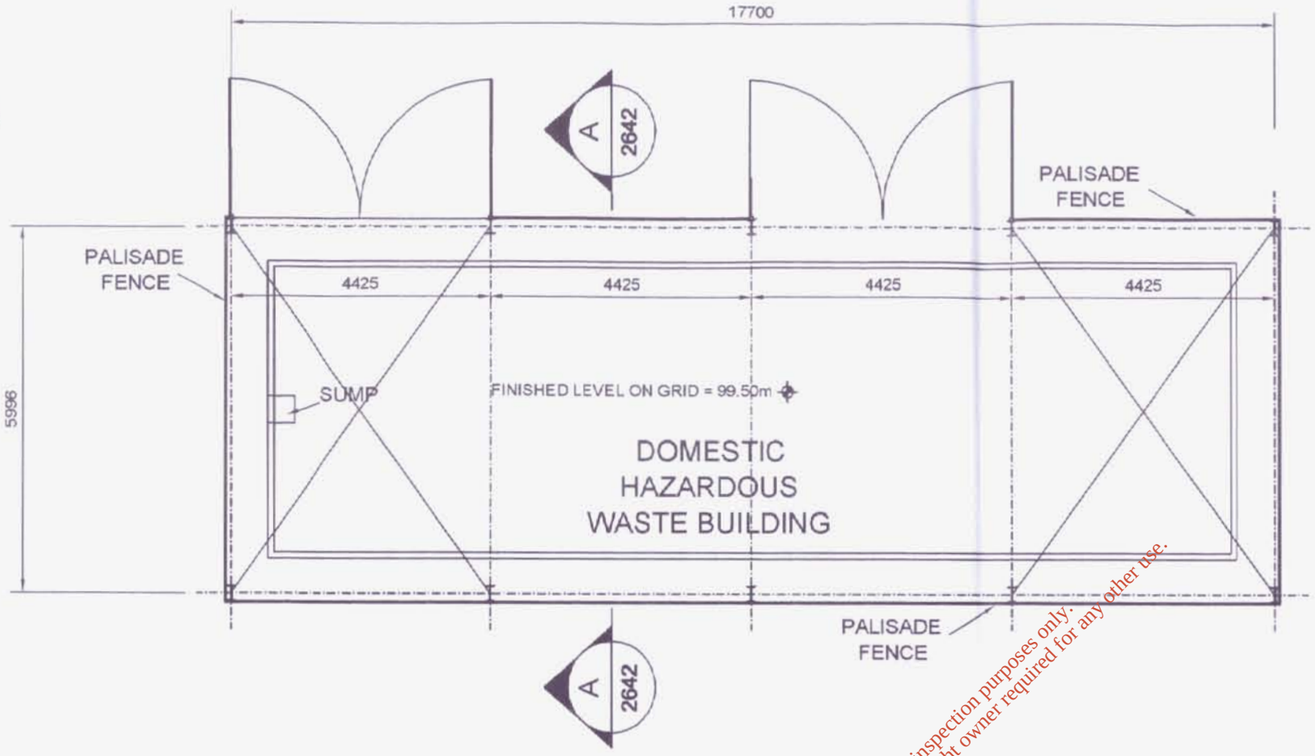
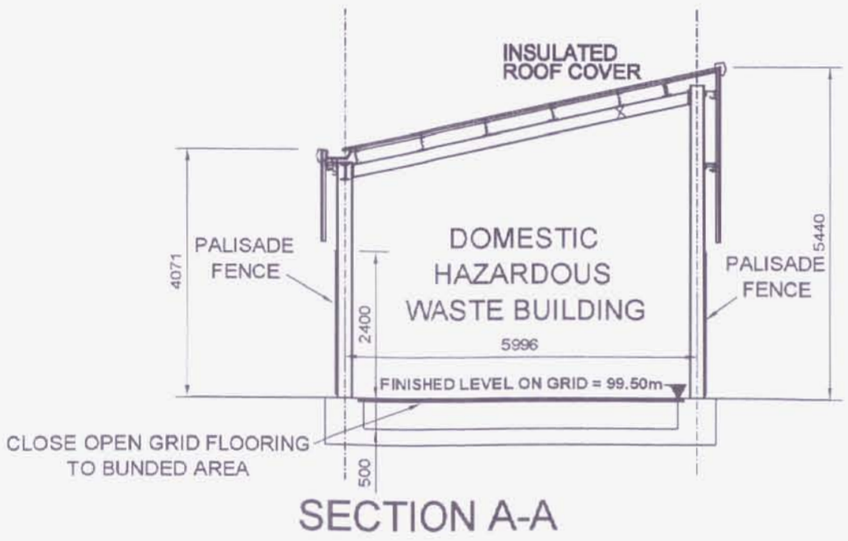
Drawing No: 2528-2641 | Revision: A



PLAN OF DOMESTIC HAZARDOUS WASTE BUILDING



SECTION A-A

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
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4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE'07	WASTE LICENCE APPLICATION	JOB	O.D

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY DOMESTIC HAZARDOUS WASTE BUILDING PLAN & SECTION

Scale @ A3: 1:100

Prepared by:	Checked:	Date:
JOB	O.D	JUNE'07

Project Director: B.DOWNES

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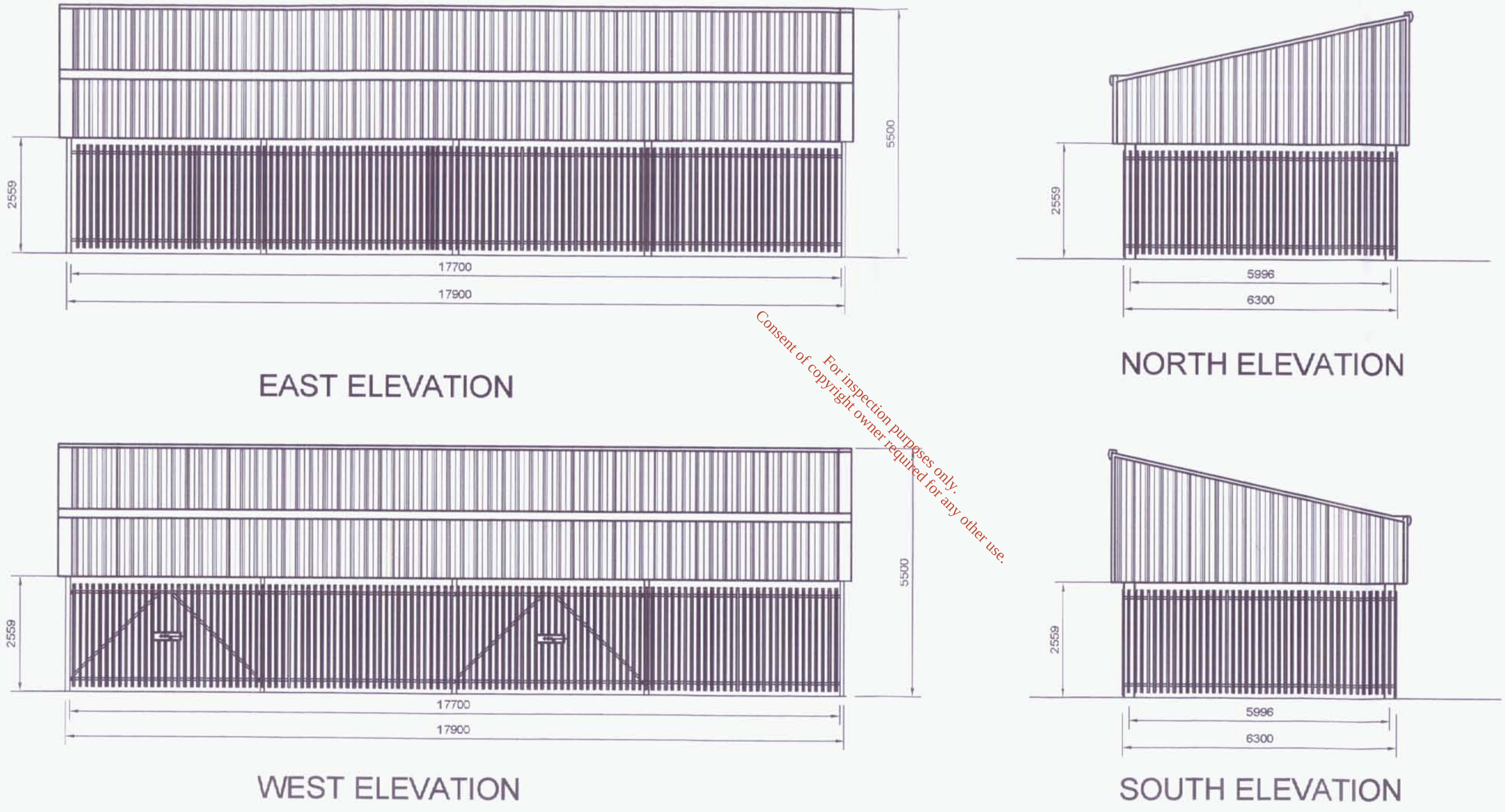
Drawing No.: 2528-2642 Revision: A



NOTES

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4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE'07	WASTE LICENCE APPLICATION	A.K	C.D

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY DOMESTIC HAZARDOUS WASTE BUILDING ELEVATIONS

Scale @ A3: 1:100

Prepared by: A.K | Checked: C.D | Date: JUNE'07

Project Director: B.DOWNES

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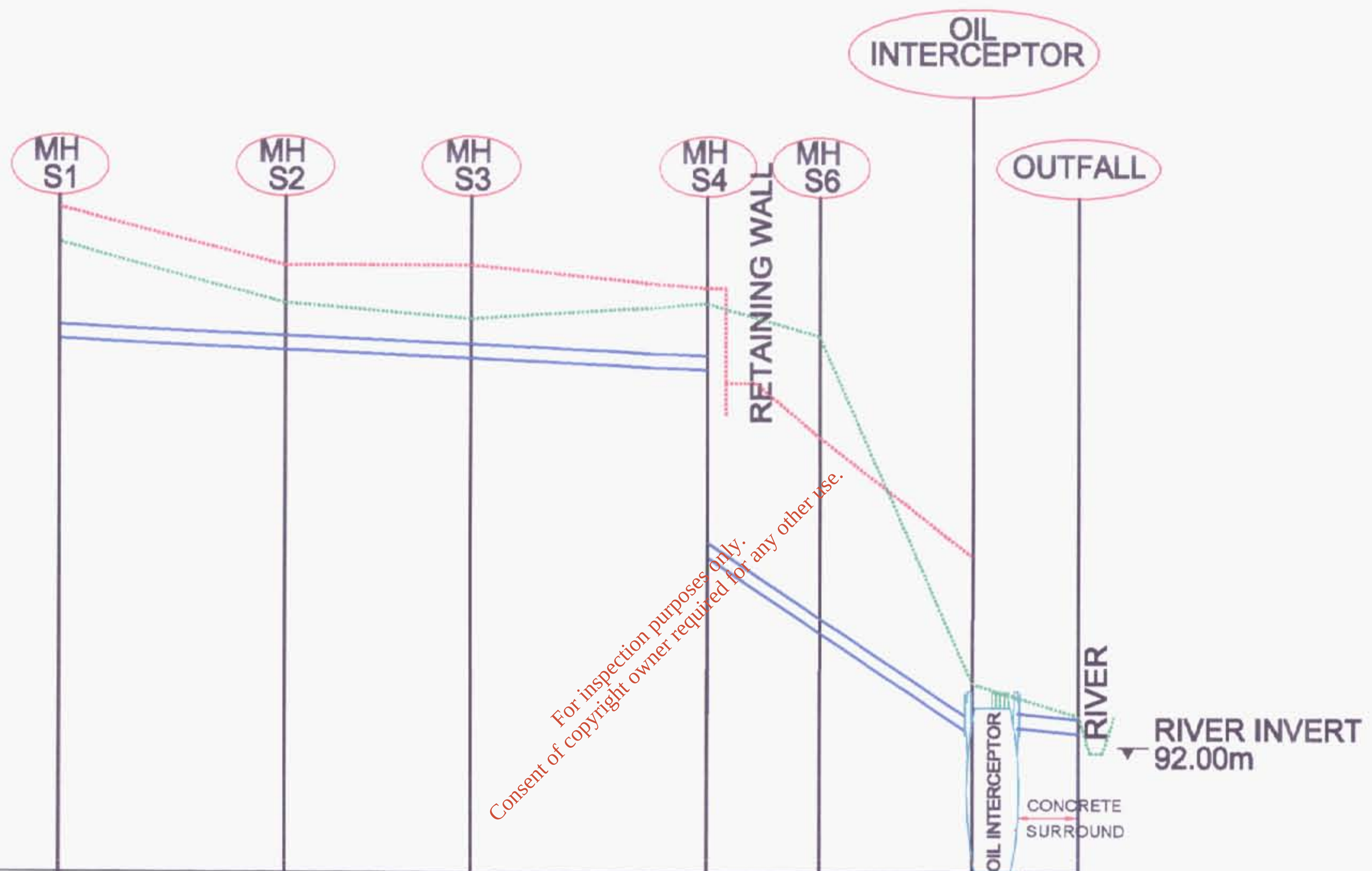
Drawing No.: 2528-2643

Revision: A

LEGEND

- EXISTING GROUND LEVEL
- PROPOSED GROUND LEVEL
- PROPOSED 225mm Ø SURFACE WATER GRAVITY DRAINAGE



DATUM 90.00m O.D.

EXISTING GROUND LEVEL	99.50	99.00	98.75	99.00	98.50	93.00	93.00		
PROPOSED GROUND LEVEL	100.50	99.60	99.60	99.250	96.90	95.00	95.00		
PROPOSED STORM INVERT LEVEL	98.425	98.261	98.122	97.953 95.000	93.81	92.141	92.31	92.21	92.000
CHAINAGE	0m	37m	67m	106m	125m	150m	158m	167m	
PIPE GRADIENT	1:225 STORM PIPE			1:20 STORM PIPE					
PIPE SIZE	225mm Ø uPVC STORM PIPE			225mm Ø uPVC STORM PIPE					

HORIZONTAL SCALE 1:1000, VERTICAL SCALE 1:100

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chk'd
A	JUNE'07	WASTE LICENCE APPLICATION	A.K.	O.D.

Client: CORK COUNTY COUNCIL

Project: WEST WORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY STORM WATER LONGITDUINAL SECTIONS (SHEET 1 OF 2)

Scale @ A3: 1:1000.1:100

Prepared by: A.K Checked: O.D. Date: JUNE'07

Project Director: B.DOWNES

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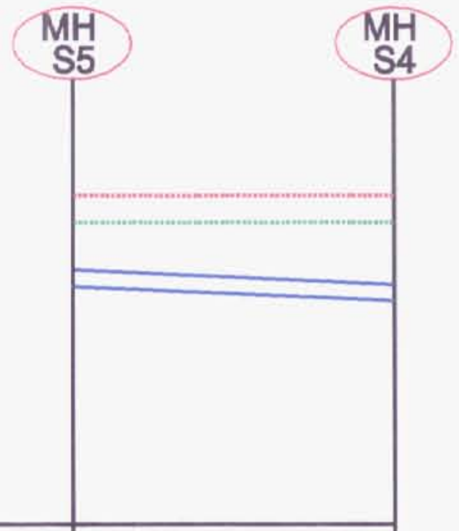
Drawing No.: 2528-2646 Revision: A

LEGEND

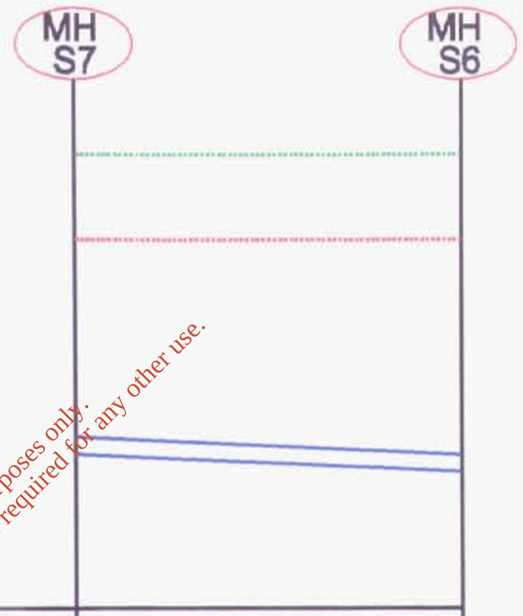
- EXISTING GROUND LEVEL
- PROPOSED GROUND LEVEL
- PROPOSED 225mm Ø SURFACE WATER GRAVITY DRAINAGE



DATUM 95.00m O.D.

EXISTING GROUND LEVEL	98.00	99.00
PROPOSED GROUND LEVEL	99.35	99.35
PROPOSED STORM INVERT LEVEL	98.149	97.953
CHAINAGE	0m	44m
PIPE GRADIENT	1:225 STORM PIPE	
PIPE SIZE	225mm Ø uPVC STORM PIPE	

HORIZONTAL SCALE 1:1000, VERTICAL SCALE 1:100



DATUM 92.00m O.D.

EXISTING GROUND LEVEL	98.00	98.00
PROPOSED GROUND LEVEL	96.875	96.875
PROPOSED STORM INVERT LEVEL	94.05	93.810
CHAINAGE	0m	53m
PIPE GRADIENT	1:225 STORM PIPE	
PIPE SIZE	225mm Ø uPVC STORM PIPE	

HORIZONTAL SCALE 1:1000, VERTICAL SCALE 1:100

NOTES

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3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE'07	WASTE LICENCE APPLICATION	AK	JOB

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY
STORM WATER
LONGITDUINAL SECTIONS
(SHEET 2 OF 2)

Scale @ A3: 1:1000, 1:100

Prepared by: AK | Checked: JOB | Date: JUNE'07

Project Director: B.DOWNES

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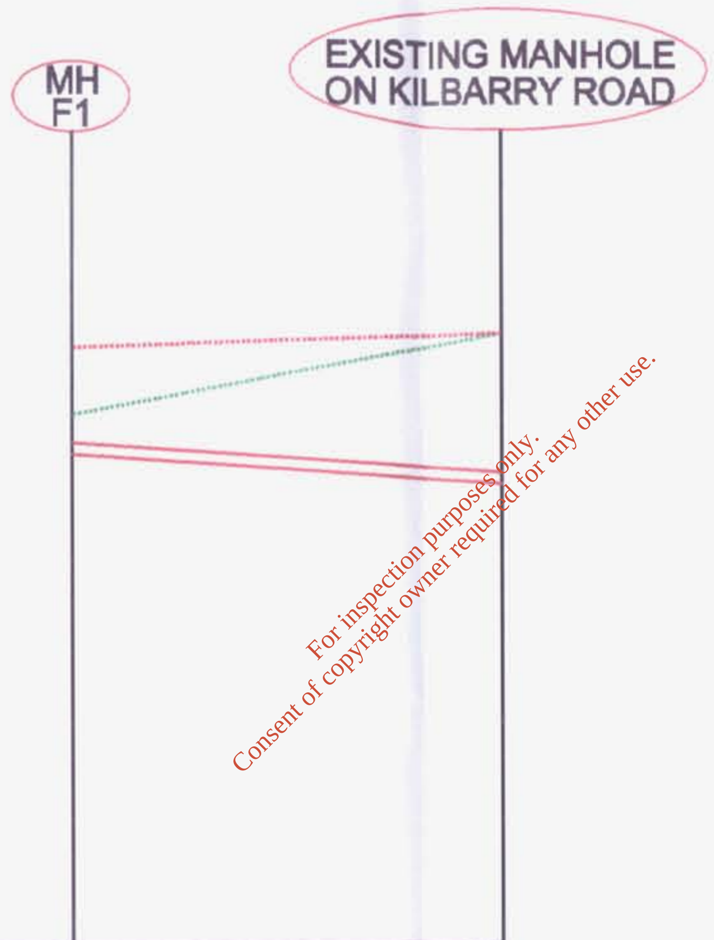
Drawing No: 2528-2647 | Revision: A



DATUM 92.00m O.D.

EXISTING GROUND LEVEL	99.00		100.085
PROPOSED GROUND LEVEL	99.90		100.085
PROPOSED FOUL INVERT LEVEL	98.481		98.094
CHAINAGE	0m		58m
PIPE GRADIENT	1:150 FOUL PIPE		
PIPE SIZE	150mm Ø uPVC STORM PIPE		

HORIZONTAL SCALE 1:1000, VERTICAL SCALE 1:100

LEGEND

- EXISTING GROUND LEVEL
- PROPOSED GROUND LEVEL
- PROPOSED 150mm Ø FOUL SEWER GRAVITY DRAINAGE

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
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4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE'07	WASTE LICENCE APPLICATION	A.K.	J.OB

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY FOUL SEWER LONGITUDINAL SECTION

Scale @ A3: 1:1000,1:100

Prepared by: A.K. Checked: J'OB Date: JUNE'07

Project Director: B.DOWNES

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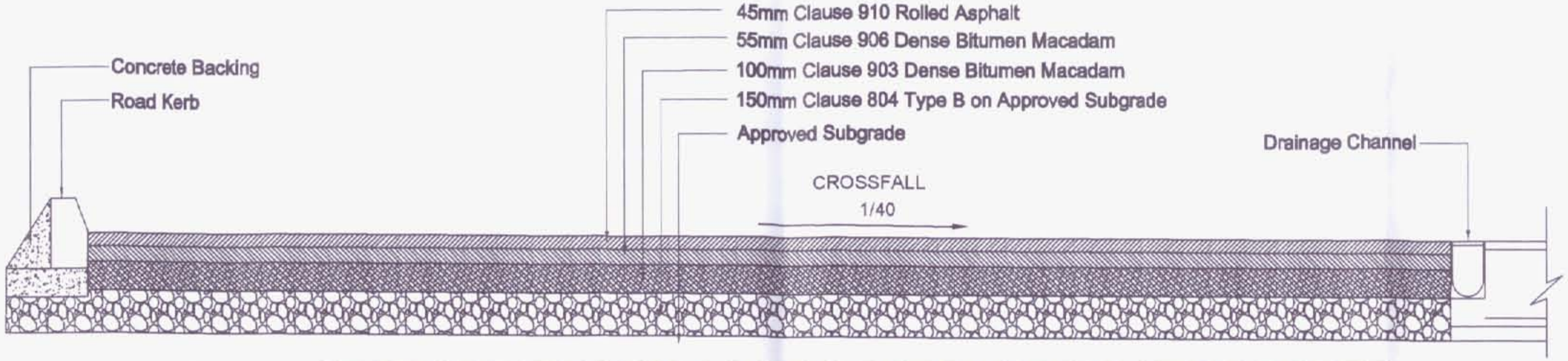
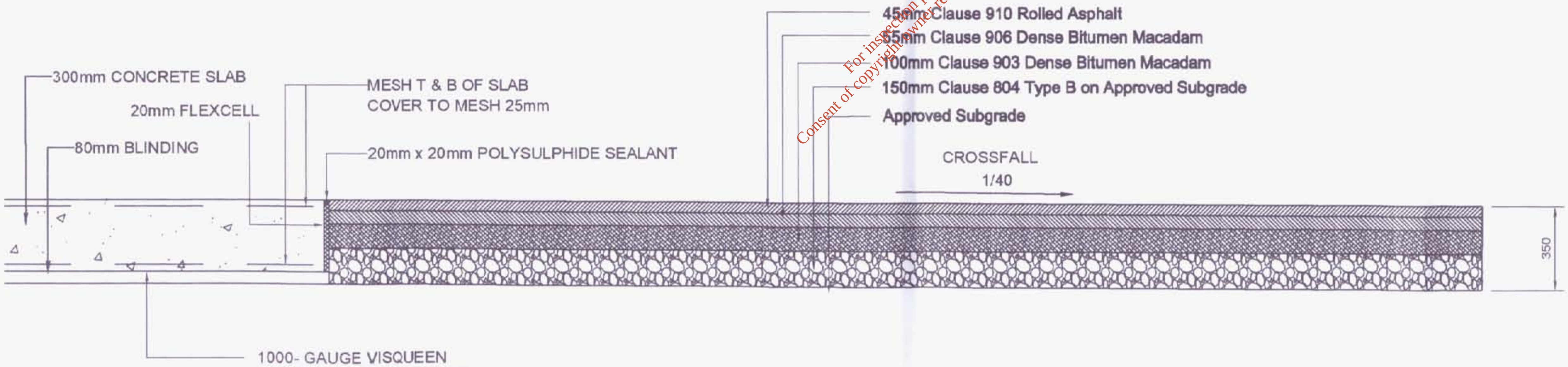
Drawing No.: 2528-2648 Revision: A



SECTION THROUGH ACCESS ROAD/ CIRCULATION ROUTE

SCALE 1 : 25



ISOLATION JOINT DETAIL

SCALE 1 : 25

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
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4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE 2007	WASTE LICENCE APPLICATION	JOB	CD

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY ROAD CONSTRUCTION DETAILS

Scale @ A3: 1:20

Prepared by: JO'B | Checked: C.D | Date: MAY 2007

Project Director: B. DOWNES

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Drawing No.: 2528-2649

Revision: A

Attachment E: Emissions

Contents

Attachment E.1: Emissions to Atmosphere

It is unlikely that there will be any emissions to air or generation of odours as a result of operations at the facility.

Waste received at the facility is unlikely to cause odours due to the following:

- municipal waste for disposal shall be deposited, through chutes, by the public and collected in 1100 litre bins.
- The Council refuse trucks will empty the bins regularly
- the waste will have undergone relatively little decomposition due to the quick turnaround times for removal of waste from the site.
- all municipal waste with the potential to cause odour nuisance, shall be removed from the facility within 48hrs of being deposited at the site, with the exception of Bank Holiday weekends, when a limit of 72hrs shall apply.
- construction and demolition waste, dry recyclable materials and wood shall not be stored on site for a period longer than 3 months.

Ambient dust monitoring has been carried out (See Attachment I.1(i)) and provides background data to assess the impact of operations at the facility. It shows that dust levels onsite range between 63 mg/m²/day (D2) to 128 mg/m²/day (D4), well below the EPA limit of 350 mg/m²/day. Further dust monitoring will be carried out annually.

These measures, together with good housekeeping practices and staff awareness will minimise dust emissions and odour generation, therefore it can be concluded that the emissions to atmosphere from operations at the facility will be minimal.

Attachment E.2: Emissions to Surface Waters

All storm water collected on site will pass through a full retention separator (Class I Oil Interceptor) prior to being discharged to a stream flowing to the north the site. All roads and hardstanding areas will be impermeable and at permeable areas, such as grass or landscaping adjacent to impermeable surfaces, there will be kerbing to prevent run-off from the impermeable surfaces onto this ground. The total area of the roof and other impervious areas drained to the collection system will be approximately 0.71ha. It expected that the maximum run off from the site during 15 min storm duration would be 25L/s.

The following good housekeeping measures will be observed onsite to minimise the possibility of contamination of surface water run-off:

- All waste will be stored in sealed containers
- All areas of hardstanding will be kept clean
- Absorbent material will be available to clean up and contain accidental spillages

Current climatological stations existing in County Cork are located in Glengariff, Sherkin Island and Balineen. Limited data exists for these stations and is not included in this application. The closest weather station with long-term data is Valentia Synoptic Weather Station and this station records meteorological elements on a daily basis.

Following commissioning, samples will be taken before and after the Oil Interceptor. These will be tested for the suite of parameters listed in Table F-3. Subsequently, samples from the discharge side of the interceptor will be taken and analysed twice a year, and results will be forwarded to the Agency.

All foul emissions will be discharged to the public foul sewer system.

Attachment E.3: Emissions to Sewer

All foul sewage generated on the site will be discharged to a municipal foul sewer for treatment at Dunmanway waste water treatment plant. It is estimated that the volume of foul effluent generated at the facility will be approximately 540 L/day. This is based on 4 no. staff (60 L/day/person) on site plus an allowance for a group of 30 visitors, i.e. school children (10 L/day/person). The quality of the foul sewage from the site will be of a domestic nature. A letter from Cork County Council Sanitary Section, granting permission to discharge is attached.

Attachment E.4: Emissions to Groundwater

There will be no emissions to groundwater from the facility due to the installation of hardstanding. Also, any area used for the storage of liquids or hazardous waste will be fully bunded according to the Agency Guidance, "IPC Guidance Note on Storage and Transfer of Materials for Scheduled Activities".

Attachment E.5: Noise Emissions

Noise emissions may arise from operational plant at the civic amenity as well as from traffic to and from the site. However, compaction operations will be housed in a partially enclosed building to minimise noise emission and traffic movements will be limited to normal opening hours and so operations at the facility will not be expected to have a significant impact on existing background noise levels.

The EPA "Guidance Note for Noise in Relation to Scheduled Activities" state that noise from onsite activities should not exceed the following:

Daytime (08:00-22:00)	55 dB(A) L_{Aeq} (30min)
Nightime (22:00-08:00)	45 dB(A) L_{Aeq} (30min)

A noise monitoring survey has been carried out to establish background noise levels at 4 no. monitoring points on the site of the proposed facility. This will allow a comparison to be done to assess the impact of noise at the facility once it is operational. Results from the noise survey range from 43.6 dB(A) L_{Aeq} (30min) to 55.4 dB(A) L_{Aeq} (30min). Noise at N4 was found to be slightly higher than the guidance specifies however, the dominant noise at this location was a nearby construction site and passing traffic. See Attachment I.6 for full report.

Further noise monitoring will be carried out annually.

Attachment E.6: Environmental Nuisances

Attachment E.6 (i) - Bird Control

Operations at the Civic Amenity Facility will not give rise to a nuisance due to birds. All mixed waste will be deposited into the 1100 litre bins and will be subsequently stored in the Compactor Building pending transfer to Clonakilty Landfill every 48 hours. Waste will not be exposed to the open air and therefore will not attract scavenging birds.

Attachment E.6 (ii) - Dust Control

Dust levels will be kept to a minimum on site as all areas are paved and high levels of housekeeping will be maintained. Only bagged waste will be accepted onsite and regular sweeping of access roads and all areas of hard-standing, in particular areas around the compactor and waste receptacles, will help maintain low dust levels.

Attachment E.6 (iii) - Fire Control

Fires will be treated as an accident/emergency situation and dealt with in accordance with the site emergency procedures (see Attachment J – Emergency Response Procedures).

The following measures will minimise the risk of fire:

- Site staff will be trained in the site emergency procedures in the event of fire
- Site visitors will be made aware of emergency procedures
- Appropriate fire fighting equipment will be available on site
- Storage of flammable liquids on site will be kept to a minimum
- Fire fighting equipment will be maintained and inspected regularly
- Fire alarms will be tested regularly

Attachment E.6 (iv) - Litter Control

Operational procedures at the facility will ensure that litter generation will be minimised at all times. Waste will be deposited directly into the appropriate storage containers and any waste that escapes will be immediately collected. The site caretaker will collect any loose litter that may occur on the site on a daily basis.

Attachment E.6 (v) - Traffic Control

All licensed vehicles entering the site will be weighed at the weighbridge. Their weight will be recorded on entry before proceeding to the relevant area for collection of waste or recyclables. Once loaded, the vehicle will be weighed at the weighbridge again and its weight recorded. Movement of all vehicles over the weighbridge and through the non-weighbridge area will be controlled using electric traffic control barriers operated from the site office building.

Vehicles disposing of waste or recyclables will not be weighed. Delivery of recyclables will be free of charge and bags of household waste will be weighed at the scales adjacent to the Compactor building.

All traffic will move in a one-way system, which will be clearly marked. Adequate parking for staff and visitors will be provided in close proximity to site office building. Signage will also be installed to include details of the facility.

Attachment E.6 (vi) - Vermin Control

As previously described, any litter accumulating on or around the site will be removed and disposed of on a regular basis. All household waste will be stored in closed 1100l bins and will be removed within 48 hours of arrival. For these reasons, the activities onsite will not attract vermin. Additionally, Cork County Council will employ a pest control specialist for vermin control.

These pest control specialists will visit the site on a monthly basis. A written record will be kept at the facility of the programme for the control and eradication of vermin. These records shall include the following:

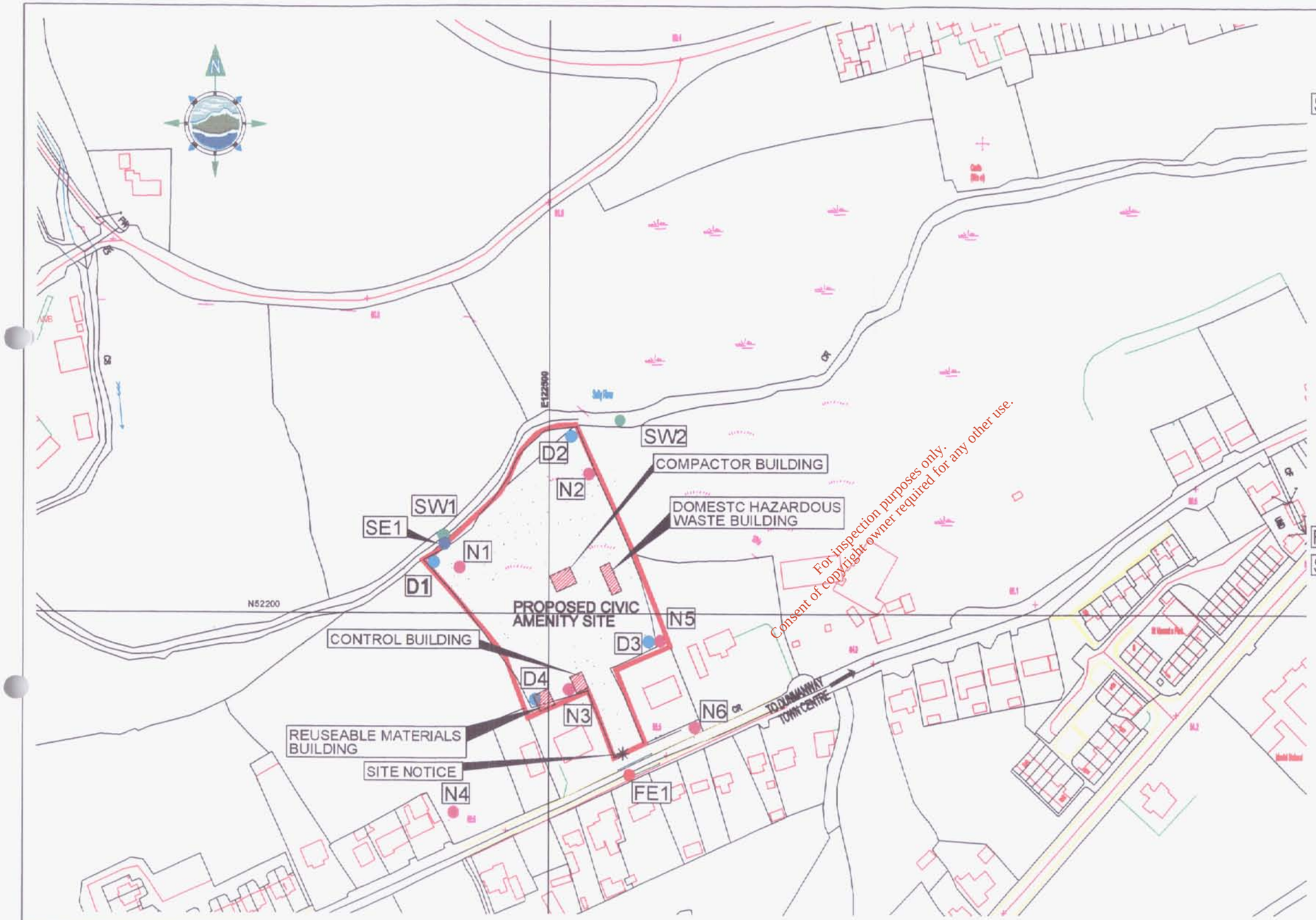
- Contractors details
- Contractors logs and site inspection reports
- Details of pesticides used
- Operator training details
- Details of any infestations
- Mode, frequency, location and quantity of application
- Measures to contain pesticides within the facility boundary

On the Civic Amenity Facility, good housekeeping measures will reduce the risk of attracting vermin and insects to the site.

Fly spraying will occur periodically if required.

Attachment E.6 (vii) - Road Cleansing

The site roads will be maintained in a clean and tidy state at all times. This will eliminate any potential for soiling of the public roads outside the site. In the unlikely event of public roads being soiled, Cork County Council road sweeper vehicles will be employed to rectify the situation.



LEGEND

- N3 ● NOISE MONITORING POINTS
- SW1 ● SURFACE WATER MONITORING POINTS
- D2 ● DUST MONITORING POINTS

SURFACE WATER, NOISE AND DUST MONITORING		
SW1	122437 E	52245 N
SW2	122542 E	52303 N
N1	122446 E	52227 N
N2	122523 E	52281 N
N3	122512 E	52156 N
N4	122443 E	52085 N
N5	122566 E	52184 N
N6	122586 E	52134 N
D1	122431 E	52230 N
D2	122513 E	52302 N
D3	122559 E	52184 N
D4	122492 E	52150 N

- FE1 ● FOUL EMMISSION POINT
- SE1 ● SURFACE WATER EMMISSION POINT

SURFACE WATER AND FOUL EMMISSION POINTS		
SE1	122439 E	52240 N
FE1	122548 E	52107 N

NOTES

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2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES

Issue	Date	Description	By	Chkd.
A	JUNE '07	WASTE LICENCE APPLICATION	JO'B	OD

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

Title: WASTE LICENCE APPLICATION MONITORING POINT LOCATIONS

Prepared by: JO'B
Checked: OD
Date: JUNE '07
Project Director: B.DOWNES
Scale @ A3: 1:2,500

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Drawing No.: 2528-2630

Issue: A

RESIDUAL WASTE BIN STORAGE

SKIPS

2.4m PALISADE FENCE

SPARE CONTAINERS

PEDESTRIAN CROSSING

2.4m PALISADE FENCE

PROPOSED FENCING

SPARE CONTAINERS

BOTTLEBANK STORAGE AREA

BOTTLEBANK STORAGE AREA

WEEE & WHITE GOODS

FOUL SEWER

SITE NOTICE

CONNECTION TO FOUL SEWER

EXISTING FOUL MANHOLE

COMPACTOR BUILDING

CANOPY

DOMESTIC HAZARDOUS WASTE UNIT

STOPPING ZONE

BOTTLEBANKS

DRAINAGE CHANNEL

RAMP DOWN

PUBLIC CAR PARKING

STAFF PARKING

NO PARKING

CONTROL BUILDING

WEIGH BRIDGE

REUSABLE BUILDING

Duct to metre chamber

Existing Eircom Cover

MH34
100.134
FS Invert
98.134

Eircom Cover 100.393

Eircom Cover 100.16

Dunmanway

65.5

LEGEND

- ASPHALT CIRCULATION AREA
- COLOURED ASPHALT STOPPING ZONE
- CONCRETE HARDSTAND
- BUILDINGS
- RETAINING WALL
- TRUCK CIRCULATION ROUTE
- PUBLIC CIRCULATION ROUTE
- TELEPHONE DUCTING
- ELECTRICAL DUCTING
- ELECTRICAL MINI PILLAR
- WATERMAIN
- HYDRANT
- WATER METER
- DRAINAGE CHANNELS
- SURFACE WATER DRAINAGE
- FOUL SEWERAGE
- PROPOSED LEVELS
- EXISTING CONTOURS
- LIGHTING STANDARDS & DUCTING

NOTES

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4. ALL LEVELS SHOWN RELATE TO LOCAL DATUM

Rev	Date	Description	By	Chkd
A	JUNE 07	WASTE LICENSE APPLICATION	A.K.	O.D.

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY SITE LAYOUT PLAN SHOWING SERVICES (SHEET 1 OF 2)

Scale @ A3: 1:500

Prepared by:	Checked:	Date:
A.K.	O.D.	JUNE '07

Project Director: B.DOWNES

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Drawing No.: 2528 - 2634 | Revision: A

1.2m HIGH CHAINLINK FENCE SET BACK 6m FROM RIVER BANK

1.2m HIGH CHAINLINK FENCE SET BACK 6m FROM RIVER BANK

SALLY RIVER

Edge of River Bank

ALTERNATIVE CASH ROOM LOCATION

COMPACTOR BUILDING

4 NO. HATCHES FOR DRY RECYCLABLES

SURFACE WATER OUTFALL

CASH ROOM

STAIRS (STAFF ONLY)

PEDESTRIAN CROSSING

RESIDUAL WASTE BIN STORAGE

2.4m PALISADE FENCE

PROPOSED FENCING

SPARE CONTAINERS

BOTTLEBANK STORAGE AREA

SKIPS

BOTTLEBANK STORAGE AREA

2.4m PALISADE FENCE

SPARE CONTAINERS

LOW LEVEL

DRAINAGE CHANNEL

COMPACTOR BUILDING

CANOPY

DOMESTIC HAZARDOUS WASTE UNIT

STOPPING ZONE

BOTTLEBANKS

NO PARKING

LEGEND

- ASPHALT CIRCULATION AREA
- COLOURED ASPHALT STOPPING ZONE
- CONCRETE HARDSTAND
- BUILDINGS
- RETAINING WALL
- TRUCK CIRCULATION ROUTE
- PUBLIC CIRCULATION ROUTE
- TELEPHONE DUCTING
- ELECTRICAL DUCTING
- ELECTRICAL MINI PILLAR
- WATERMAIN
- HYDRANT
- WATER METER
- DRAINAGE CHANNELS
- SURFACE WATER DRAINAGE
- FOUL SEWERAGE
- PROPOSED LEVELS
- EXISTING CONTOURS
- LIGHTING STANDARDS & DUCTING

NOTES

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Rev	Date	Description	By	Chkd
A	JUNE 07	WASTE LICENCE APPLICATION	A.K.	O.D.

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

WASTE LICENCE APPLICATION

Title: DUNMANWAY SITE LAYOUT PLAN SHOWING SERVICES (SHEET 2 OF 2)

Scale @ A3: 1:500		
Prepared by: A.K.	Checked: O.D.	Date: JUNE 07
Project Director: B.DOWNES		

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Drawing No: 2528 - 2635 | Revision: A

Attachment F: Control and Monitoring

Contents

Attachment F.1: Treatment, Abatement and Control Systems

Attachment F.1 (i) - To Atmosphere:

It is unlikely that there will be any emissions to air or generation of odours as a result of operations at the facility. Waste for disposal will be removed from the facility within 48hrs of being collected at the site (with the exception of Bank Holiday weekends). The impact of exhaust emissions on ambient air quality, from vehicles entering the site, is expected to be minimal.

The measures described above, together with good housekeeping practices and staff awareness will minimise dust emissions and odour generation and will ensure that emissions to atmosphere are controlled effectively.

Attachment F.1 (ii) - To Surface Water:

All surface water run-off from the site will be collected and diverted to a full retention Class I separator (oil interceptor) prior to being discharged to the river to the north of the site. This oil interceptor is designed to achieve a concentration of oil of 5mg/l in the effluent. The oil interceptor will be fitted with an oil probe and an oil level alarm to ensure the maximum storage volume is not exceeded. All foul emissions will be discharged to public foul sewer.

The total impermeable area within the site drained to the collection system will be 0.71ha. Permeable areas, such as grass or landscaping adjacent to impermeable surfaces, will be kerbed to prevent run-off from the impermeable surfaces onto the ground. Operational procedures will be implemented to minimise the risk of contamination of surface water run-off and will include:

- Storage of waste in sealed containers
- Use of good housekeeping measures such as sweeping of hard standing areas
- Use of absorbent material to clean up and contain accidental spillages

Attachment F.1 (iii) - To Sewer:

All foul sewage generated on the site will be discharged to a municipal foul sewer. It is estimated that the volume of foul effluent generated at the facility will be approximately 540 L/day. This is calculated based on 4 no. staff (60 L/day/person) on site plus an allowance for a group of 30 visitors, i.e. school children (10 L/day/person). The foul sewage produced on site is expected to be of domestic nature therefore no treatment will be required before discharge to the public system.

Attachment F.1 (iv) - To Groundwater:

There will be no emissions to groundwater from the facility due to the installation of hardstanding. Also, any area used for the storage of liquids or hazardous waste will be fully bunded according to the Agency Guidance, "IPC Guidance Note on Storage and Transfer of Materials for Scheduled Activities". For these reasons, there will be no need for treatment, abatement and control of discharges to groundwater.

Attachment F.2 – F.9: Monitoring and Sampling Points

The following sections describe the proposed monitoring programme at the Dunmanway Civic Amenity Facility. The primary aim of this programme will be to comply with legislation and the requirements of the Agency and to monitor the quality of the environment in the vicinity of the Civic Amenity Facility to identify any adverse impacts caused by the activities onsite.

An Annual Environmental Report (AER) will be submitted to the Agency on a yearly basis and will collate and report all monitoring data for the year. A comparative assessment will also be made with data from previous years.

Attachment F.2: Monitoring and Sampling of Air

Dust monitoring has been carried out at the site. Monitoring points were located at various points around the site boundary as seen on Drawing no. 2528-2630 A. Settleable dust was measured at the sites following the standard method recommended by the German Engineering Institute, to meet the T.A. Luft requirement. (VDI 2119 – Measurement of Dustfall: Determination of Dustfall using the Bergerhoff Instrument). The 4 no. dust monitoring points are shown on Drawing 2528-2630 A and their NGRs are listed below. Further monitoring of dust deposition will be conducted three time per year and results will be sent to the Agency.

Table F-1: Parameters to be tested in Dust

Parameter	Frequency
Settleable dust	3 time per year

Table F-2: NGR for Dust Monitoring Points

Monitoring Point	Easting	Northing
D1	122431	52229
D2	122512	52302
D3	122559	52184
D4	122492	52150

Odour emissions will be minimal as there will be a quick turnaround time for waste at the facility. There are therefore no plans to carry out routine odour monitoring onsite. Procedures for recording odour complaints will be included in the site operating procedures and will ensure that any incidents are recorded and dealt with quickly and efficiently.

Attachment F.3: Monitoring and Sampling of Surface Water

All storm water collected on site (approximately 0.71ha of impermeable hardstanding area) will pass through a full retention separator (Oil Interceptor) prior to being discharged to the river flowing to the north of the site. Following the installation and commissioning of the interceptor, samples will be taken from locations before and after the onsite interceptor to establish a baseline. Subsequently, samples will then be taken from the discharge side of the interceptor and sent for analysis twice a year. Results will be forwarded to the Agency. Additionally, surface water samples will be taken at 2 no. locations (one upstream and one downstream) twice a year and tested for the parameters listed in Table F-3. 2 no. surface water monitoring points are shown on Drawing 2528-2630 A and their NGRs are shown in Table F-4.

Table F-3: Parameters to be tested in Surface Water

Parameter	Frequency
Temperature	Biannually
pH	Biannually
BOD	Biannually
COD	Biannually
Suspended Solids	Biannually
Oils, Fats and greases	Biannually
Temperature	Biannually

Table F-4: NGR for Surface Water Monitoring Points

Monitoring Point	Easting	Northing
SW1	122437	52245
SW2	122542	52311

Attachment F.4: Monitoring and Sampling of Sewer Discharge

All foul sewage generated on the site (approximately 540 L/day) will be discharged to a municipal foul sewer. The foul sewage produced on site will be of a domestic nature therefore no monitoring and sampling will be required prior to discharge to the public system.

Attachment F.5: Monitoring and Sampling of Groundwater

There will be no emissions to groundwater from the facility due to the installation of hard standing. Also, any area used for the storage of liquids or hazardous waste will be fully bunded according to the Agency Guidance, "IPC Guidance Note on Storage and Transfer of Materials for Scheduled Activities". For this reason, no groundwater monitoring programme is proposed at this time.

Attachment F.6: Monitoring and Sampling of Noise

A noise monitoring survey has been carried out to establish background noise levels at 4 no. locations on the proposed site. This will provide background data with which to assess the impact of noise at the facility once it is operational. Further noise monitoring will be carried out annually for the parameters listed inTable F-5. The 4 no. noise monitoring points are shown on Drawing 2528-2604 and their NGRs are listed in Table F-6

Table F-5: Parameters to be tested for Noise

Parameter	Frequency
$L(A)_{EQ}$ [30 minutes]	Annually
$L(A)_{10}$ [30 minutes]	Annually
$L(A)_{90}$ [30 minutes]	Annually
Frequency Analysis (1/3 Octave band analysis)	Annually

Table F-6: NGR for Noise Monitoring Points

Monitoring Point	Easting	Northing
N1	122446	52226
N2	122523	52281
N3	122512	52156
N4	122443	52085
N5	122566	52184
N6	122587	52134

Attachment F.7: Meteorological Data

Activities at the proposed site will not have an impact on the local climatic conditions and therefore no meteorological monitoring programme is proposed at this time.

The closest weather station with long-term data is Valentia Synoptic Weather Station. This station records meteorological elements on a daily basis.

Attachment G: Resources Use and Energy Efficiency

Contents

Attachment G.1: Raw Materials, Substances, Preparations and Energy

The list of raw materials and intermediates that will be utilised at the proposed facility will be minimal. No packaging will be used as all waste will be deposited directly into containers.

Diesel fuel will be used to run the backhoe loader on site. This will be delivered as required rather than stored on site. It is envisaged that the loader will consume approximately 1000 litres of diesel per annum.

Pesticides and insecticides will be used for the control and eradication of vermin and fly infestations at the facility. A written record will be kept of the programme for the control and eradication. Further information on insecticides and pesticides that may be used at the facility is not currently available, as Cork County Council has not yet appointed a specialist contractor. Data and safety sheets will be forwarded to the Agency when available.

The compactor, lighting and all other ancillaries will consume electrical energy. An estimate of the quanities of material used and generated onsite is shown below. More accurate figures will be included in the AER once the facility is operating.

Table G-1: Raw Material and Substances used onsite

Fuel and Energy Utilised	Annual Usage	Quantity Stored onsite
Water	1,000m^3	
Electricity	21,200 kWh	
Diesel	38,000 litres	
Hydraulic Oil	100 litres	

Table G-2: Energy Consumption of Equipment

Equipment	Usage	Estimated Energy Consumption
Compactor	300 days @ 4 hours @ 7.5Kw/ hour	9,000Kw hours/ year

Attachment G.2: Energy Efficiency

Energy on site will be mostly consumed by the on site vehicle and the use of electricity for the compactor, site lighting and all other ancillaries. Once records are available, details of the annual consumption of energy will be forwarded to the Agency.

In the proposed Civic Amenity Facility, energy efficiency will be considered throughout the design process. Some measures considered will include:

- the use of energy saving opportunities in storage areas, control rooms and offices specific to the activity conducted. (PIR sensors, compact fluorescent lights).
- the installation of double-glazed low emmissivity glass windows
- the installation of low conductivity insulation
- The use of low energy light-fittings where possible
- the use of energy efficient equipment whenever possible
- the use of geothermal heat pump for space heating
- investigations into the use of solar panels for water heating
- rainwater harvesting

Further measures in the maintenance and operation of the facility will include

- Ensuring equipment will be serviced and maintained regularly
- Ensuring equipment will be switched off, if safe to do so, when not in use
- Investigating the possibility of using bio diesel as a fuel for site vehicles
- Performing an energy audit in accordance with the EPA Guidance document on Energy Audits within the first year of operation.

Attachment H: Materials Handling

Contents

Attachment H.1: Waste Types and Quantities

THIRD SCHEDULE: Waste Disposal Activities

Class 12: Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.

This activity relates to the deposition of waste into containers for disposal at another licensed waste facility

Class 13: Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced

Waste will be temporarily stored on site in containers prior to disposal off site at a licensed facility

FOURTH SCHEDULE: Waste Recovery Activities

Class 2: Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes)

Green waste, paper, timber and cardboard will be accepted at the facility for processing at another licensed facility

Class 3: Recycling or reclamation of metals and metal compounds

Food cans, aluminium cans and scrap metals will be accepted at the facility

Class 4: Recycling or reclamation of other inorganic materials

This facility will accept a range of inorganic materials for recycling/ recovery

Class 13: Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

This will be the Principal Activity at the site. Recyclable materials will be temporarily stored on site prior to transfer to licensed recycling facilities.

The facility will include an area for disposal of bags of household municipal waste as well as a Civic Amenity Facility for the disposal of the following wastes:

The recyclable waste accepted onsite will consist of:

- Paper and cardboard waste
- Tetrapaks
- Textiles
- Scrap Metals
- Timber
- Furniture
- Household construction and demolition
- Garden waste
- Electronic and electrical waste
- White goods
- Drink and Food cans
- Glass bottles and jars
- Aluminium cans
- Plastics

Domestic Hazardous waste will also be accepted onsite and will include the following:

- Edible oils and fats
- Hydraulic oils
- Engine, gear and lubricating oils
- Oil containers
- Oil filters
- Batteries
- Paints, inks
- Pesticides
- Solvents
- Fluorescent tubes
- Household gas cylinders

Attachment H.2: Waste Acceptance Procedures

At the Civic Amenity Facility, the public will dispose of recyclable waste, bulky waste (for example household construction and demolition waste, metals, timber, green waste) and residual mixed waste. Each type of waste will be disposed of into separate containers. Clear signage on site will indicate the use of each container.

Waste accepted at the site will consist of:

- Recyclable material
- Domestic waste from private individuals
- Household hazardous waste

Reusable items of furniture will also be accepted at the reusable materials building for removal be other members of the public.

The acceptance and throughput of waste at the Civic Amenity Facility will be managed by the presence of site staff, who will be present on site at all times during normal operating hours. A flow diagram of the site operations is shown in Attachment D.2.B.

- Private vehicles (cars, cars with small trailers and vans) will enter the site by the main entrance.
- If the site staff suspect that any bags of household waste may contain material that should not be disposed of on site, he/she may inspect the material.
- The site staff will have the responsibility of ensuring that only acceptable wastes are deposited at the Civic Amenity Facility and the original carrier will take any unacceptable waste off-site.
- In the case of bags of domestic waste, the site staff will charge the applicable fee and direct the individual to the waste chute.
- Where recyclable material is brought to the site, clear signage will direct the public to the recycling receptacles. There will be no charge for the disposal of recyclables
- Where domestic hazardous material is brought to the site signage will direct the public to the Domestic Hazardous Waste Building.
- All waste and recyclables will be stored onsite for a short period and collected by licensed collectors. Details and destinations of all materials will be recorded and kept onsite.

Attachment H.3: Waste Handling

Recyclable material, bags of domestic waste and household quantities of domestic hazardous waste will be accepted at this Civic Amenity Facility.

Mixed municipal waste will be deposited directly into an 1100l bin. Once the 1100l bin has reached its capacity, it will be moved aside. An empty bin will be put in its place. The Compactor Building will have space to store up to 4 no. bins. Every second day, the Local Authority refuse collection vehicle will collect the domestic waste. This waste will be brought to the Clonakilty Transfer Station. All waste will be weighed before leaving the Civic Amenity Facility and a service docket completed detailing the weight, type and destination of the waste.

Recyclable waste will be separated by the public directly into to the appropriate chute or container. Cardboard, clean plastic bags, paper, tetrapaks, magazines and plastic bottles will be deposited through chutes into the Compactor Building. Garden waste, scrap metal & timber will be deposited into hook and lift containers at a split level area of the site. Full containers of recyclable waste will be collected by licensed contractors and will be transferred off-site to an appropriate facility. All material will be weighed before leaving the Civic Amenity Facility and a service docket completed detailing the weight, type and destination of each load.

Donestic hazardous waste will also be separated directly by the public, deposited in appropriate containers and held in the domestic hazardous waste building. This building will be bunded. Batteries will be held in

closed bunded containers while plastic oil containers, oil filters, paint tins, varnishes, lacquers and fluorescent lamps will be stored in separate open containers. Finally, gas cylinders will be held in cages. A loader will drive into domestic hazardous waste unit and transport the containers directly to the vehicle of the licensed contractor who will remove the material off site for processing.

Attachment H.4: Waste Arisings

Any waste arising from the operation of the site such as domestic waste from the site office or recyclable material will be deposited into the appropriate recepticle on-site.

Attachment I: Existing Environment and Impact to the Facility

Contents

Attachment I.1: Atmospheric Emissions

I.1 (i) – Dust

Ambient air sampling was conducted in March 2007 (See Attachment I.1) and the level of dust deposition was determined at various locations around the site. Settleable dust was measured at the sites following the standard method recommended by the German Engineering Institute, to meet the T.A. Luft requirement. (VDI 2119 – Measurement of Dustfall: Determination of Dustfall using the Bergerhoff Instrument). The survey was conducted by Damian Brosnan on behalf of Dixon Brosnan.

Bergerhoff gauges were set up at each of the 4 no. monitoring locations at the start of the survey period. The locations of the monitoring points are shown on Drawing 2528-2630 A. The survey commenced on Wednesday 14/03/07. Collected dust samples were removed on Thursday 12/04/07 following an exposure period of 29 days. No evidence of tampering was evident at any of the stations.

The sample jars were sealed and stored overnight in chilled dark containers. All samples were dry on collection. They were delivered on Friday 15/03/07 to Bodycote Consultus Ltd. in Cork for measurement of gravimetric dust deposition. The results are shown in Table I-1.

Table I-1: Dust Deposition

	Gravimetric Dust (g)	Dust Deposition ($mg/m^2/day$)
D1	0.0183	101
D2	0.0114	63
D3	0.0186	103
D4	0.0231	128

The dust deposition recorded on site ranged from 63 $mg/m^2/day$ (D2) to 128 $mg/m^2/day$ (D4) and are all below the limit of 350 $mg/m^2/day$ usually set by the EPA. The full report prepared by Dixon Brosnan is attached.

It is not envisaged that operations on the site will lead to generation of dust emissions. Good housekeeping practices will be employed in order to minimise the potential for dust generation.

I.1 (ii) – Odours

Any waste has the potential for generating odours. However, this will be mitigated by fast turnaround of waste and good housekeeping measures. Waste received at the facility is unlikely to cause odours due to the implementation of the following measures:

- bags of municipal waste for disposal shall be deposited through chutes by the public into 1100 litre bins.
- the waste will have undergone relatively little decomposition due to the quick turnaround times for removal of the waste from the site.
- all household municipal waste with the potential to cause odour nuisance, shall be removed from the facility within 48hrs of being deposited at the site, with the exception of Bank Holiday weekends, when a limit of 72hrs shall apply.
- construction and demolition waste, dry recyclable materials and wood shall not be stored on site for a period longer than 3 months.

Due to the nature of the waste streams accepted on the site and with the implementation of efficient site operating procedures, it is unlikely that there will be any significant impacts on air quality from either dust or odour or any other main polluting substances (as defined in SI 394 of 2004) as a result of activities onsite.

Attachment I.2: Receiving Waters

All storm water collected on site will pass through a full retention separator (Oil Interceptor) prior to being discharged to the river flowing to the north of the site. Samples at 2 no. locations (SW1 and SW2 shown in Drawing 2528-2630 A) were taken from this river on the 15th March, 2006. Dissolved Oxygen, pH and Temperature were measured in the field at the time of sampling. The samples were couriered overnight and arrived at the analytical laboratory, ALcontrol Geochem of Dublin, in a satisfactory condition.

The resulting data is shown in Table I-2 and compared to the Maximum Allowable Concentrations (MAC) specified by S.I. 293 of 1988 (Quality of Salmonid Waters) and S.I. 294 of 1989 (Quality of Water intended for the abstraction of Drinking Water). The full laboratory report is attached.

Table I-2: Water Quality of River Dirty Adjacent to Site

Parameter	Units	SI 293 of 1988	SI 294 of 1989	SW1	SW2
BOD Unfiltered	mg/l	5	5	2	3
Dissolved Mercury Low Level	µg/l	-	1	<0.05	<0.05
Sodium	mg/l	-	-	9.5	9.5
Potassium	mg/l	-	-	1.5	1.5
Dissolved Cadmium Low Level	µg/l	-	5	<0.4	<0.4
Dissolved Calcium Low Level	µg/l	-	-	14130	13620
Dissolved Chromium Low Level	µg/l	-	50	3	2
Dissolved Copper Low Level	µg/l	5	50	<1	1
Dissolved Iron Low Level	µg/l	-	200	148	192
Dissolved Lead Low Level	µg/l		50	<1	<1
Dissolved Magnesium Low Level	µg/l		-	2083	2048
Dissolved Manganese Low Level	µg/l	-	50	5	7
Dissolved Nickel Low Level	µg/l	-	-	2	2
Dissolved Zinc Low Level	µg/l	30	3000	28	27
Total Organic Carbon	mg/l	-	-	3	2
Chloride	mg/l	-	250	19	17
Sulphate	mg/l	-	200	5	5
ortho Phosphate as PO4	mg/l	-	0.47	0.06	0.06
Nitrate as NO3	mg/l	-	50	9.6	9.6
Nitrite as NO2	mg/l	0.05	-	<0.05	<0.05
Total Oxidised Nitrogen as N	mg/l			2.2	2.2
Conductivity (at 25 deg. C)	µS/cm	-	1000	150	150
Dissolved Oxygen	mg/l	>9 (50% of time)	-	4.2	4.2
pH	pH Units	6.0<pH<9.0	5.5<pH<8.5	7.11	7.02
Ammoniacal Nitrogen as N	mg/l	0.78	0.16	<0.2	<0.2
COD Unfiltered	mg/l	-	40	<15	<15
Total Alkalinity as CaCO3	mg/l	-	-	30	33
Total Coliform	MPN/100mls	-	5000	980	816
Feacal Coliform	MPN/100mls	-	1000	<1	<1

Note: Values in **BOLD** indicate results above the MACs.

All the results are within the maximum allowable concentrations as listed above indicating that the water quality at these points is good.

The EPA monitors the River Dirty (River Code 20D01) at two locations near the proposed development; at the bridge upstream of River Bandon (Station No. 0100), approximately 1km downstream of the site, and at the bridge south west of Woodbrook (Station No. 0050), less than 1km upstream of the site. Chemical data for these locations is shown below in Table I-3.

Table I-3: Water Quality from EPA Surface Water Sampling

Parameter	Units	SI 293 of 1988	SI 294 of 1989	Minimum	Median	Maximum
		2001 to 2003				
Ortho-Phosphate	mg/ L	-	0.47	0.01	0.01	0.01
Oxidised Nitrogen	mg/ L	-	-	2.6	2.6	2.6
Total Ammonia	mg/ L	0.78	0.16	0.02	0.06	0.19
		1999 to 2000				
BOD	mg / L	5	5	0.7	1.2	5.9
Ortho-Phosphate	mg/ L	-	0.47	0.01	0.02	0.06
Oxidised Nitrogen	mg/ L	-	-	0.9	2.3	3.6
pH		6.0<pH<9.0	5.5<pH<8.5	7.0	7.3	7.8
Temperature	°C	21.5	25	5.5	9.0	16.6

Biological monitoring was also done at both locations. The Q-ratings are listed below in Table I-4.

Table I-4: Biological Water Quality from EPA Surface Water Sampling

Station No.	0100		0050	
YEAR	Q-Rating	Description	Q-Rating	Description
2003	4	Unpolluted	3-4	Slightly Polluted
2000	3-4	Slightly Polluted	4	Unpolluted
1997	4	Unpolluted	4	Unpolluted
1994	4	Unpolluted	4	Unpolluted
1989	3-4	Slightly Polluted	3	Moderately Polluted
1985	3-4	Slightly Polluted	3-4	Slightly Polluted
1982	3-4	Slightly Polluted	3-4	Slightly Polluted

Based on the data from water sampling conducted by TOBIN Consulting Engineers and by the EPA, the river Dirty is shown to be generally unpolluted at this location.

The discharge of storm water to surface water is not expected to adversely impact the river. The storm water will be discharged to the river following treatment through an oil interceptor. All areas used for the storage of containers will be covered in hardstanding. Permeable areas, such as grass or landscaping adjacent to impermeable surfaces, will be isolated using kerbing to prevent run-off from these surfaces onto the hardstanding.

Good housekeeping measures will be observed onsite to minimise the possibility of contamination of surface water run-off:

- All waste will be stored in sealed containers
- All areas of hardstanding will be kept clean
- Absorbent material will be available to clean up and contain accidental spillages

Due to the nature of the waste streams accepted on the site, the implementation of regular sampling and monitoring and the implementation of good housekeeping measures, it is unlikely that there will be any significant impacts on surface water quality as a result of activities onsite.

Attachment I.3: Sewer Discharge

Foul sewage produced on site will be discharged into the public sewer for treatment at the Dunmanway WWTP. It is estimated that on average 540 L/day of sewage will be discharged based on 4 no. staff (60 L/day/person) on site plus an allowance for a group of 30 visitors, i.e. school children (10 L/day/person). Emissions to the foul sewer will be of a domestic nature and wastewater quality is assumed to be as that set out in the Wastewater Treatment Manual "Treatment Systems for Single Houses", published by the Agency.

Due to the small volumes involved and the fact that the quality of the sewage produced on site will be of domestic nature, it is unlikely that there will be any significant impacts to the sewer as a result of operations at the facility.

Attachment I.4: Groundwater and Soil Emissions

The site is currently used as a bring centre for Cork County Council. There will be no emissions to groundwater from the proposed facility. Foul emissions will be discharged to sewer and storm water will be discharged to surface water. All exposed surfaces will be covered in hardstanding and storage areas for liquid wastes will be fully bunded according to the Agency Guidance, "IPC Guidance Note on Storage and Transfer of Materials for Scheduled Activities". There will be no impact to ground or groundwater from this facility.

Attachment I.5: Ground and/or Groundwater Contamination

Part of the proposed site for the Civic Amenity Facility in Dunmanway has been used as a bring centre since July 2006. The remaining part of the facility is used as a storage area for Cork County Council. All exposed areas in the bring centre are covered in hardstanding. It is therefore unlikely that there is any contamination to ground or groundwater from this site.

Attachment I.6: Noise

The facility is located on the Kilbarry road in Dunmanway. On either side of the site are located a Teagasc office and a Co-operative. There are also many residential properties located in the area of the site.

The Noise survey was carried out on the 18th April 2007. This survey provides background data with which to assess the impact of noise at the facility once it is operational. Further noise monitoring will be carried out annually.

Measurements were taken at 30-minute intervals at 4 no. monitoring points onsite. Drawing 2528-2630 A shows the location of the points. All noise monitoring was carried out in accordance with ISO 1996 Part 1 (Description and Measurement of Environmental Noise – Part 1: Basic Quantities and Procedures). All acoustic instrumentation was calibrated before and after the survey (calibration level 114 dB at 1000 Hz).

The EPA "Guidance Note for Noise in Relation to Scheduled Activities" state that noise from onsite activities should not exceed the following:

Daytime (08:00-22:00)	55 dB(A) L_{Aeq} (30min)
Nightime (22:00-08:00)	45 dB(A) L_{Aeq} (30min)

The results of the noise survey are shown in Table I-5. At each location the following data is recorded:

- $L_{(A)eq}$: Equivalent Continuous A-weighted Sound Level. The continuous steady noise level, which would have the same total A-weighted acoustic energy as the real fluctuating noise measured over the same period of time
- $L_{(A)10}$: The noise level that is equalled or exceeded for 10% of the measurement period
- $L_{(A)90}$: The noise level that is equalled or exceeded for 90% of the measurement period, also known as the 'background noise level'
- $L_{(A)max}$: The instantaneous maximum sound level recorded over the sample period
- $L_{(A)min}$: The instantaneous minimum sound level recorded over the sample period

Results from the noise survey range from 43.6 dB(A) L_{Aeq} (30min) at N2 to 55.4 dB(A) L_{Aeq} (30min) at N4. Background noise at N4 was found to be slightly higher than the guidance specifies however, the dominant

noise at this location was from a nearby construction site and passing traffic. The full report by TOBIN Consulting Engineers is attached subsequently.

Table I-5: Results of Background Noise Survey

Date	Location	Time	$L_{eq,30mins}$ dB(A)	$L_{90,30mins}$ dB(A)	$L_{10,30mins}$ dB(A)	$L_{min,30mins}$ dB(A)	$L_{max,30mins}$ dB(A)	Comments
19/04/07	N1	9.00	47.7	37.2	49.1	34.1	79.8	Dominant noise sources included machinery to south of site inside existing bring site, and traffic passing on adjacent road. Other noise sources included birdsong, machinery exiting the site, traffic to distant east in Dunmanway town and occasional dog barking.
	N2	9.35	43.6	35.1	46.0	33.4	70.9	Dominant noise sources included traffic passing on adjacent road to south of site, construction activity to the distant east and birdsong. Other noise sources included machinery entering / exiting the site and occasional traffic to the north.
	N3	10.51	51.4	35.9	51.4	32.7	73.5	Dominant noise source is from members of the public using the existing bring centre, vehicle movement within site and birdsong. Traffic passing on roads to the north and south of the site were audible and contributed to recorded noise levels.
	N4	12.08	55.4	43.0	58.2	38.3	80.6	The dominant noise source is a construction site opposite including vehicle movement, voices and a radio. Frequent passing traffic on the adjacent road and birdsong also contribute to noise levels.

Attachment I.7: Ecological Impacts and Mitigation Measures

Not Applicable

Document Amendment Record

Client:	**Cork County Council**
Project:	**West Cork Waste Management Facilities**
Title:	**Baseline Noise Surveys**

Project Number: 3127			**Document Ref:** 3127 Noise Report		
		AA	MMcK	DG	8-05-07
Revision	**Purpose / Description**	**Originated**	**Checked**	**Authorised**	**Date**
		TOBIN Patrick J. Tobin & Co. Ltd.			

Table of Contents

1 INTRODUCTION

Cork County Council is proposing to develop waste management facilities at 4 No. locations in West Cork. TOBIN Consulting Engineers have been commissioned by Cork County Council to carry out baseline noise monitoring at 4 No. Council premises to establish existing noise levels at these sites.

The site locations are described as follows:

- Existing waste recycling facility at Skibbereen
- Site adjacent to landfill and recycling facility at Derryconnell
- Greenfield site at Bantry
- Existing waste recycling facility at Dunmanway

This report details the results of all noise monitoring surveys that were carried out at the 4 No. Council premises.

2 NOISE MONITORING SURVEY

The noise surveys were completed between the 18th and 19th of April, 2007. Weather conditions during monitoring were dry with a calm to slight breeze. (The recorded wind speed at nearest Synoptic Station (Valentia Observatory) was 1.44m/s on 18/04/07 and 1.39m/s on the 19/04/07). The following conditions were adhered to in undertaking the survey:

- Measurement of noise levels from the works was undertaken using Type 1 instruments.
- Cognisance was taken of the EPA's 'Environmental Noise Survey Guidance Document' 2003.
- The survey was carried out in accordance with ISO 1996 Acoustics - Description and Measurement of Environmental Noise: Parts 1/2/3.

The noise monitoring locations at each site are described overleaf in Table 1.

Table 1 Noise monitoring Locations

Site	Location	Description
Skibbereen	SN –N1	Eastern site boundary
Skibbereen	SN –N2	North-western site boundary adjacent the site entrance
Skibbereen	SN –N3	South-western site boundary
Derryconnell	DL –N1	Eastern boundary of the proposed site
Derryconnell	DL –N2	South-eastern boundary of the proposed site
Derryconnell	DL –N3	Southern boundary of the proposed site
Derryconnell	DL –N4	At existing site entrance adjacent R592 road
Bantry	BY – N1	North-eastern boundary of proposed site
Bantry	BY – N2	South-eastern boundary of the proposed site
Bantry	BY – N3	Adjacent a residence to the south-western boundary of the proposed site
Bantry	BY – N4	Adjacent a residence to the south of the proposed site
Dunmanway	DY – N1	North-western boundary of the proposed site
Dunmanway	DY – N2	North-eastern boundary of the proposed site
Dunmanway	DY – N3	South-western boundary of the proposed site
Dunmanway	DY – N4	Adjacent a residence outside the site boundary to the southwest
Dunmanway	DY – N5	South-eastern boundary of the proposed site
Dunmanway	DY – N6	Adjacent a residence outside the site boundary to the southeast

Skibbereen
This site is located to the immediate north of Skibbereen town centre. It is an existing bring site open to the public. The noise surveys were carried out during operational hours.

Derryconnell
This site is located to the south west of Ballydehob town in the townland of Derryconnell. On these premises there is an existing operating landfill and a bring centre. The noise surveys were carried out during operational hours.

Bantry
This site is located to the immediate east of Bantry Enterprise Centre. It is currently poor agricultural ground with a newly built road running along the western boundary from the site entrance. This road is currently used by a local farmer to enter the adjacent farmland.

Dunmanway
This site is located to the east of Dunmanway town centre. It is located to the immediate north of the existing Dunmanway bring site which Cork County Council operate. The site is currently waste ground and used to store larger waste materials such as pipes and road signs. It is also used as a carpark for worker's vehicles and machinery.

3 INSTRUMENTATION USED

The following instrumentation was used in the baseline survey:

- One Larson Davis 824 Precision Integrating Sound Level Analyser/Data logger with *Real-Time* Frequency Analyser Facility
- Wind Shields Type: Larson Davis 2120 Windscreen
- Calibration Type: Larson Davis Precision Acoustic Calibrator Model CAL200.

4 MEASUREMENT PROCEDURE

Noise surveys were carried out between the 18th and 19th April 2007. Measurements were taken over 30 minute intervals at the each of the four locations (see Appendix 1). All the environmental noise analysers had data logging facilities set on real-time, the logged data was later downloaded via a personal computer using software.

At each noise measurement point the Sound Level Meter (SLM) was mounted on a tripod so that the microphone was maintained at 1.5 metres above ground level and at least 3.5 metres from any potential noise reflecting surfaces. All noise monitoring is carried out in accordance with ISO 1996 Part 1 (Description and Measurement of Environmental Noise – Part 1: Basic Quantities and Procedures). All acoustic instrumentation was calibrated

before and after the survey (calibration level 114 dB at 1000 Hz) and no drift calibration was observed.

The equipment was manned throughout the sampling intervals and comments were recorded in order to aid the interpretation of data.

At each site location the following data is recorded:

- $L_{(A)eq}$: Equivalent Continuous A-weighted Sound Level. The continuous steady noise level, which would have the same total A-weighted acoustic energy as the real fluctuating noise measured over the same period of time
- $L_{(A)10}$: The noise level that is equalled or exceeded for 10% of the measurement period
- $L_{(A)90}$: The noise level that is equalled or exceeded for 90% of the measurement period, also known as the 'background noise level'
- $L_{(A)max}$: The instantaneous maximum sound level recorded over the sample period
- $L_{(A)min}$: The instantaneous minimum sound level recorded over the sample period

5 RESULTS OF NOISE SURVEY

The results of the noise surveys are given in Tables 2-5. Monitoring locations are indicated on Drawing No. 2528-2616 A.

Table 2 Background Noise Monitoring Results at Skibbereen

Date	Location	Time	$L_{eq,30mins}$ dB(A)	$L_{90,30mins}$ dB(A)	$L_{10,30mins}$ dB(A)	L_{min} dB(A)	L_{max} dB(A)	Comments
18th April 07	SN- N1	8.04-8.34h	51.2	42.3	54.0	38.1	73.3	Dominant noise sources included traffic on the adjacent road to the west of the site and birdsong. Other noise sources included distant traffic to the east and north east of the site and occasional dog barking.
18th April 07	SN- N2	9.19-9.49h	62.3	45.4	66.2	40.6	84.2	Dominant noise sources included traffic on the adjacent road to the west and birdsong. Other noise sources included vehicles entering the site to use the waste facilities.
18th April 07	SN- N3	8.41-9.11h	63.7	46.3	68.4	41.5	79.4	Dominant noise sources included traffic on the adjacent road to the west, cars entering the site to use the waste facilities and birdsong. Other noise sources included occasional dog barking and vehicles at adjacent premises.

Table 3 Background Noise Monitoring Results at Derryconnell

Date	Location	Time	$L_{eq,30mins}$ dB(A)	$L_{90,30mins}$ dB(A)	$L_{10,30mins}$ dB(A)	L_{min}, dB(A)	L_{max}, dB(A)	Comments
18th April 07	DL-N1	10.45-11.15h	45.4	38.7	48.8	34.2	62.2	Dominant noise sources included landfill machinery and hovering birds above the landfill site. Other noise sources included passing traffic on the road to south (R592) and bird song.
18th April 07	DL-N2	11.22-11.52h	47.2	40.4	50.2	33.4	68.6	Dominant noise sources included hovering birds above the landfill site and traffic to south on adjacent road (R592). Other noise sources included landfill machinery and birdsong.
18th April 07	DL-N3	12.00-12.30h	46.7	40.5	49.7	35.1	64.0	Dominant noise sources included hovering birds above the landfill site and traffic to south on adjacent road (R592). Other noise sources included landfill machinery and birdsong. Activity within the existing amenity site was also audible at this location.
18th April 07	DL-N4	12.42-13.12h	69.4	40.4	72.4	33.0	92.5	Dominant noise sources included traffic on adjacent road (R592). Hovering birds above the landfill site were also audible.

Table 4 Background Noise Monitoring Results at Bantry

Date	Location	Time	$L_{eq,30mins}$ dB(A)	$L_{90,30mins}$ dB(A)	$L_{10,30mins}$ dB(A)	L_{min} dB(A)	L_{max} dB(A)	Comments
18th April 07	BY- N1	14.00-14.30h	40.9	32.6	45.2	31.7	54.9	Dominant noise sources included passing traffic on road to the south of the site and birdsong. Occasionally farm animals in adjacent fields and construction activity to the distant north were audible.
18th April 07	BY- N2	14.42-15.12h	47.0	33.3	51.0	31.9	64.9	Dominant noise sources included passing traffic on adjacent road to the south of the site and birdsong. Construction activity to the northeast and traffic was audible.
18th April 07	BY- N3	15.19-15.49h	54.7	34.0	56.4	31.7	77.3	Dominant noise sources included passing traffic on the adjacent road and traffic entering/exiting the Enterprise Centre. Birdsong in surrounding vegetation and a barking dog also contributed to noise levels.
18th April 07	BY- N4	15.57-16.27h	65.8	32.8	63.4	31.7	90.7	Dominant noise source was from passing traffic. Birdsong and human speech were also audible.

Table 5 Background Noise Monitoring Results at Dunmanway

Date	Location	Time	L_{eq}, dB(A)	L_{90}, dB(A)	L_{10}, dB(A)	L_{min} dB(A)	L_{max} dB(A)	Comments
19th April 07	DY- N1	9.00-9.30h	47.7	37.2	49.1	34.1	79.8	Dominant noise sources included machinery to south of site inside existing bring site, and traffic passing on adjacent road. Other noise sources included birdsong, machinery exiting the site, traffic to distant east in Dunmanway town and occasionally a dog barking.
19th April 07	DY- N2	9.35-10.05h	43.6	35.1	46.0	33.4	70.9	Dominant noise sources included traffic passing on adjacent road to south of site, construction activity to the distant east and birdsong. Other noise sources included machinery entering / exiting the site and occasional traffic to the north.
19th April 07	DY- N3	10.51-11.21h	51.3	35.9	51.4	32.7	73.5	Dominant noise source was from members of the public using the existing bring centre, vehicle movement within site and birdsong. Traffic passing on roads to the north and south of the site was audible and contributed to recorded noise levels.
19th April 07	DY- N4	12.08-12.38h	55.4	43.0	58.2	38.3	80.6	The dominant noise source was a construction site opposite the residence. Noise sources included vehicle movement, voices and a radio. Frequent passing traffic on the adjacent road and birdsong also contributed to noise levels.

Table 5 (continued) Background Noise Monitoring Results at Dunmanway

Date	Location	Time	$L_{eq,30mins}$ dB(A)	$L_{90,30mins}$ dB(A)	$L_{10,30mins}$ dB(A)	L_{min} dB(A)	L_{max} dB(A)	Comments
19th April 07	DY- N5	10.14-10.44h	42.6	37.1	45.1	34.8	65.1	The dominant noise sources included birdsong and an engine running to the east of the residence. Occasional traffic on the road to the south of site, vehicles entering / exiting the site and over-flying aircraft were also audible.
19th April 07	DY- N6	11.30-12.00h	62.6	38.7	61.9	35.4	87.3	The dominant source of noise was from passing traffic on the adjacent road. Bring centre activity, activity in surrounding premises and birdsong were also audible.

6 DISCUSSION OF RESULTS

6.1 SKIBBEREEN

Table 2 presents the results of the noise survey at Skibbereen. The noise monitoring locations are described in Table 1 and indicated on Drawing No. 2528-2670 A.

Noise Monitoring Location 1

At SN-N1 the Leq was 51.2 dB(A). The dominant source of noise was from passing traffic on the adjacent roads to the west and east. Site activities were occasionally audible due to members of the public using the bring centre facilities, i.e. vehicles entering and exiting the site. Other noise sources included constant birdsong and occasionally a dog barking. The background noise level (L_{A90}) recorded at SN-N1 was 42.3dB(A).

Noise Monitoring Location 2

The Leq at SN -N2 was 62.3 dB(A). The dominant noise source at SN -N2 was from passing traffic on the adjacent road to the west. Site activities were audible due to members of the public using the bring centre facilities, i.e. vehicles entering and exiting the site. The background noise level (L_{A90}) recorded at N2 was 45.4 dB(A).

Noise Monitoring Location 3

At SN -N3 the Leq was 63.7 dB(A). The dominant noise source was from passing traffic on the adjacent road to the west. Site activities were audible due to members of the public using the bring centre facilities, i.e. vehicles entering and exiting the site. The background noise level (L_{A90}) recorded at SN -N3 was 46.3 dB(A).

6.2 DERRYCONNELL

Table 3 presents the results of the noise survey at Derryconnell. The noise monitoring locations are described in Table 1 and indicated on Drawing No. 2528-2616 A.

Noise Monitoring Location 1

At DL-N1 the Leq was 45.4 dB(A). The dominant noise source at DL-N1 was from landfill activities to the north including hovering birds. Other sources of noise included passing traffic on the R592 and birdsong. The background noise level (L_{A90}) recorded at DL –N1 was 38.7dB(A).

Noise Monitoring Location 2

The Leq at DL-N2 was 47.2 dB(A). The dominant noise sources at this location were the

hovering birds above the landfill site and passing traffic on the R592. Landfill machinery and birdsong from within surrounding vegetation also contributed to noise levels. The background noise level (L_{A90}) recorded at DL –N2 was 40.4dB(A).

Noise Monitoring Location 3

At DL-N3 the Leq was 46.7 dB(A). The dominant noise sources at this location were the hovering birds above the landfill site and passing traffic on the R592. Birdsong from within the surrounding vegetation was also audible. At DL-N3 the existing bring centre facilities generated audible noise as members of the public disposed of their waste. At DL-N3 the background noise level (L_{A90}) recorded was 40.5 dB(A).

Noise Monitoring Location 4

At DL-N4 the Leq was 69.4 dB(A). The dominant noise source at this location was passing traffic on the R592 and 118 passing vehicles were recorded during this monitoring period. The hovering birds over the landfill site were also audible. At DL-N4 the background noise level (L_{A90}) recorded was 40.4 dB(A).

6.3 BANTRY

Table 3 presents the results of the noise survey at Bantry. The noise monitoring locations are described in Table 1 and indicated on Drawing No. 2528-2650 A.

Noise Monitoring Location 1

At BY-N1 the Leq was 40.9 dB(A). The dominant noise source at BY-N1 was from passing traffic on the adjacent road to the south. Occasional traffic at the Enterprise Centre, farm animals in the surrounding fields, birdsong and construction activity to the distant north were audible. At BY-N1 the background noise level (L_{A90}) recorded was 32.6 dB(A).

Noise Monitoring Location 2

The Leq at BY-N2 is 47.0 dB(A). The dominant noise source at BY-N2 was from passing traffic on the adjacent road to the south. Occasional traffic at the Enterprise Centre, birdsong and construction activity to the northeast were audible. At BY-N2 the background noise level (L_{A90}) recorded was 33.3dB(A).

Noise Monitoring Location 3

At BY-N3 the Leq was 54.7dB(A). The dominant noise source at this location was the passing traffic on the adjacent road and vehicles entering and exiting the Enterprise Centre. 19 vehicles were recorded entering and exiting the Enterprise Centre during the monitoring period. Other noise sources included a dog barking at the adjacent residence

and birdsong. At BY-N3 the background noise level (L_{A90}) recorded was 34.0dB(A).

Noise Monitoring Location 4

At BY-N4 the Leq was 65.8dB(A). The dominant noise source at this location was the passing traffic. 47 vehicles were recorded passing during this monitoring period. Birdsong and human speech contributed to noise levels. At BY-N4 the background noise levels (L_{A90}) recorded were 32.8 dB(A).

6.4 DUNMANWAY

Table 5 presents the results of the noise survey at Dunmanway. The noise monitoring locations are described in Table 1 and indicated on Drawing No. 2528-2630 A.

Noise Monitoring Location 1

At DY-N1 the Leq was 47.7dB(A). The dominant noise sources at this location were machinery movement within the site, traffic on the adjacent road to the south and traffic to the east in Dunmanway town centre. Other sources of noise included birdsong and occasionally a distant dog barking. At DY-N1 the background noise levels (L_{A90}) recorded were 37.2 dB(A).

Noise Monitoring Location 2

At DY-N2 the Leq was 43.6 dB(A). The dominant noise source at this location was the passing traffic on the adjacent road to the south, construction activity to the east and birdsong. Traffic passing on a road to the north of the site was also audible. At DY-N2 the background noise levels (L_{A90}) recorded were 35.1dB(A).

Noise Monitoring Location 3

At DY-N3 the Leq was 51.3dB(A). The dominant noise sources at this location were occasional machinery movement within the site and activity at the existing bring centre. Birdsong was also audible throughout the monitoring period. At DY-N3 the background noise levels (L_{A90}) recorded were 35.9 dB(A).

Noise Monitoring Location 4

At DY-N4 the Leq was 55.4 dB(A). DY-N4 is located in a field to the east of the residence. The dominant noise source at this location was from a construction site opposite the residence including vehicle movement, voices and a radio. Other audible noise sources included passing vehicles, occasional activity at the residence and birdsong. At DY-N4 the background noise levels (L_{A90}) recorded were 43.0 dB(A).

Noise Monitoring Location 5

At DY-N5 the Leq was 42.6 dB(A). DY-N5 is located to the southeast of the site at the closest point to the adjacent residence. A mature hedgerow forms the boundary between the site and the residence. The dominant noise sources at this location were from birdsong in the hedgerow and an engine running to the east of the residential premises. Other noise sources were vehicle movement within the site, vehicle movement within the adjacent premises and activity in the existing bring centre. At DY-N5 the background noise levels (L_{A90}) recorded were 37.1dB(A).

Noise Monitoring Location 6

At DY-N6 the Leq was 62.6 dB(A). DY-N6 is located outside the site boundary to the southeast of the site at the front of the adjacent residence. The dominant noise sources at this location were from passing traffic on the adjoining road. 56 vehicles were recorded passing during this monitoring period. Activity at the bring site and activity in the surrounding premises were also audible. At DY-N6 the background noise levels (L_{A90}) recorded were 38.7 dB(A).

7 CONCLUSION

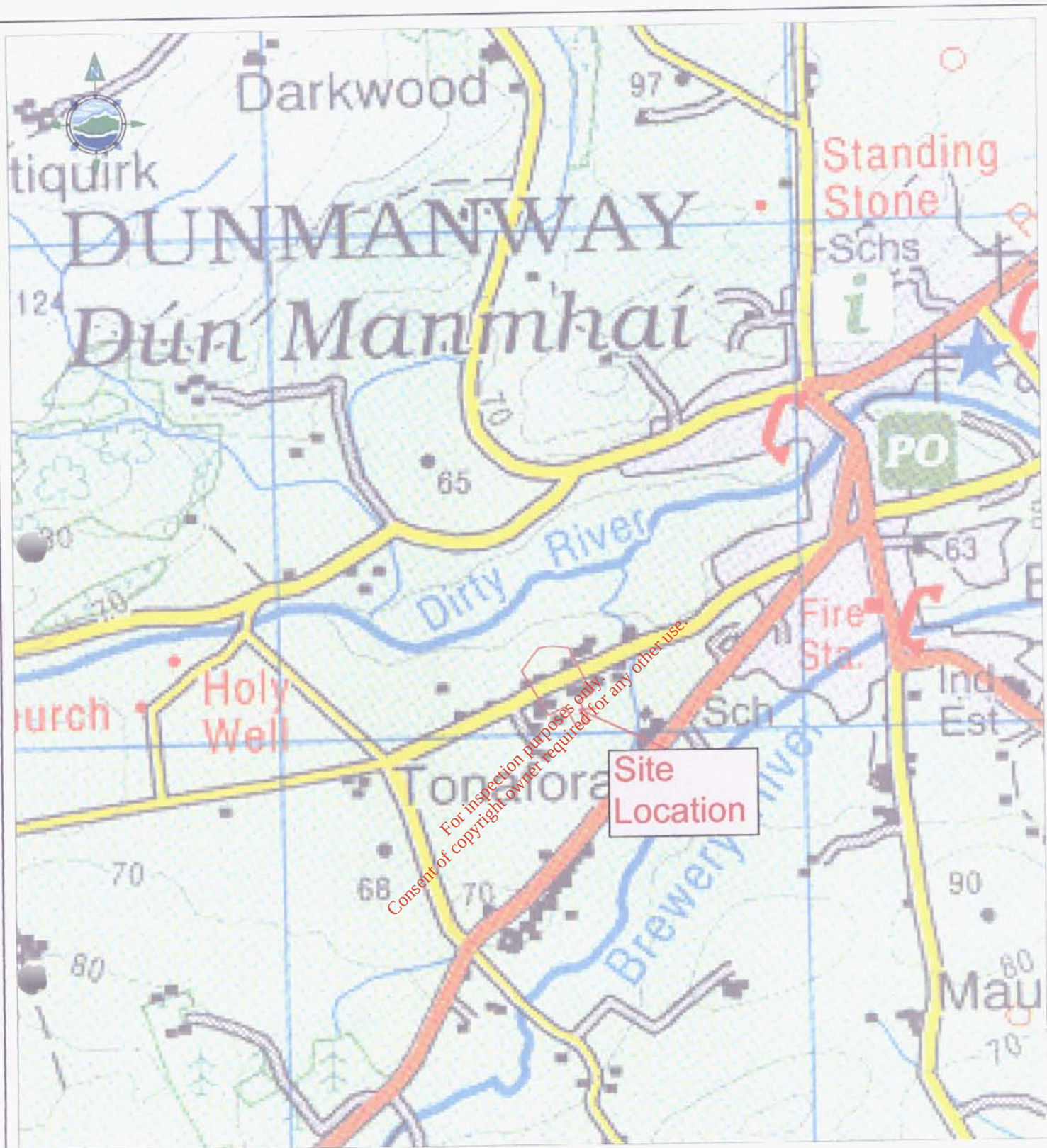
Noise monitoring was carried out at the proposed location of 4 No. waste management facilities in West Cork (Skibbereen, Derryconnell, Bantry and Dunmanway) on behalf of Cork County Council. Where existing facilities existed, monitoring was undertaken during operational hours. Noise monitoring was also undertaken at the nearest noise sensitive receptor to each site where appropriate.

At present there are no statutory limits for environmental noise levels, however, the EPA recommend that ideally, on sites of industrial nature or similar, if the total noise level from all sources is taken into account, the noise level at sensitive locations should be kept below an L(A)eq value of 55dB(A) by daytime (08.00 to 22.00) and 45 dB(A) at night-time (22.00 to 08.00).

The results of the noise surveys show that some of the monitoring locations have a higher L(A)eq value than 55dB(A) but these noise levels are predominantly influenced by external noise sources, specifically passing traffic.

At all monitoring locations background noise emissions (L_{A90}) are much lower than 55dB(A) and are typical of a rural to semi- urban setting with dominant noise sources including traffic, work activities and birdsong.

APPENDIX 1 – SITE LOCATION



Client: CORK COUNTY COUNCIL	Prepared by: JO'B	TOBIN Consulting Engineers, Bedford Place, Howley's Quay, Lower Shannon Street, Co. Limerick, Ireland. tel: +353-(0)61-415757 fax:+353-(0)61-409378 e-mail: info@tobin.ie www.tobin.ie	
Project: WEST CORK WASTE MANAGEMENT FACILITIES	Checked: C.D		
	Date: MAR '07		
Title: DUNMANWAY SITE LOCATION MAP	Project Director: B.DOWNES		
	Scale @ A4: NTS	Drawing No. 2528-2603	Issue: A

DixonBrosnan

environmental consultants

Project	
	Dust survey at 4 no. proposed waste management facilities in West Cork
Client	Tobin Consulting Engineers

Project ref	Report no	Client ref	Pages
07003	07003.1	John O'Brien	9

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Date	Rev	Status	Prepared by	Issued
26.04.07	0	Issue to client	Damian Brosnan	26.04.07

Contents

1. Introduction

1.1 DixonBrosnan Environmental Consultants were commissioned by Tobin Consulting Engineers (the client), on behalf of Cork County Council, to undertake a dust deposition survey at four sites in West Cork. The sites are located at Bantry, Derryconnell (Ballydehob), Dunmanway and Skibbereen. The site locations are indicated in appendix 2. Cork County Council proposes to develop a waste management facility at each site.

1.2 The objective of the survey was to record current background dust deposition rates at the sites, prior to development.

2. Survey locations

2.1 Four monitoring stations were specified by the client at each site, located around the boundaries. The stations are listed in table 1 and indicated in the drawings in appendix 2.

Table 1. Dust monitoring stations.

Site	Tobin ref.	Location	DixonBrosnan analysis ref.
Bantry	D1	SW boundary	07003.B1
	D2	N boundary	07003.B2
	D3	S boundary	07003.B3
	D4	E boundary	07003.B4
Derryconnell	D9	N point of development area	07003.L1
	D10	Existing civic amenity area, NE of development area	07003.L2
	D11	SE boundary of development area	07003.L3
	D12	S point of development area	07003.L4
Dunmanway	D1	NW corner	07003.D1
	D2	NE corner	07003.D2
	D3	SE corner	07003.D3
	D4	SW corner	07003.D4
Skibbereen	D1	NE corner	07003.S1
	D2	SE corner	07003.S2
	D3	NW corner	07003.S3
	D4	SW corner	07003.S4

3. Methodology

3.1 As specified by the client, monitoring was undertaken in accordance with *Standard Method VDI2119 Measurement of dustfall: Determination of dustfall using Bergerhoff Instrument (Standard method), German Engineering Institute (Technical Instructions on air quality control, TA Luft, 1986)*. The survey was conducted by Damian Brosnan on behalf of DixonBrosnan.

3.2 *Standard Method VDI2119* provides for the measurement of dust deposition by collection of dust in jars over approximately 30 days. The jars are supported 1.5-2.0 m above ground level by a 'Bergerhoff' gauge. A Bergerhoff gauge was set up at each of the 16 monitoring stations at the start of the survey period. Local conditions at each station are summarised in table 2.

Table 2. Local conditions are each site.

Site	Conditions
Bantry	Greenfield/brownfield site. No local obstacles.
Derryconnell	D9 close to existing landfill operations and directly adjacent to access track. D10 located adjacent to existing civic amenity site. D11 and D12 within 5 m of hedgerows.
Dunmanway	D1 and D2 exposed. D3 and D4 adjacent to existing Council yard. Obstacles present within 5 m, including vegetation.
Skibbereen	D1 and D3 within 5 m of walls/vegetation. All stations adjacent to chicken wire fencing.

3.3 The survey was commenced on Wednesday 14.03.07. Collected dust samples were removed on Thursday 12.04.07 following an exposure period of 29 days. Samples were recovered from all 16 locations. No evidence of tampering was evident at any of the stations.

3.4 On collections, the sample jars were sealed and stored overnight in chilled dark containers. All samples were dry on collection. The samples were delivered on Friday 15.03.07 to Bodycote Consultus Ltd. in Cork for measurement of gravimetric dust deposition.

4. Weather

4.1 The 2006-2007 winter period was exceptionally wet in Ireland. Precipitation levels began to reduce around mid-March. Towards the end of March, weather conditions began to improve. Dry and sunny conditions returned for the first time in 2007 in April. Thus the survey period coincided with the end of the wet spell and the onset of pleasant weather. Conditions throughout the survey period are summarised in table 3.

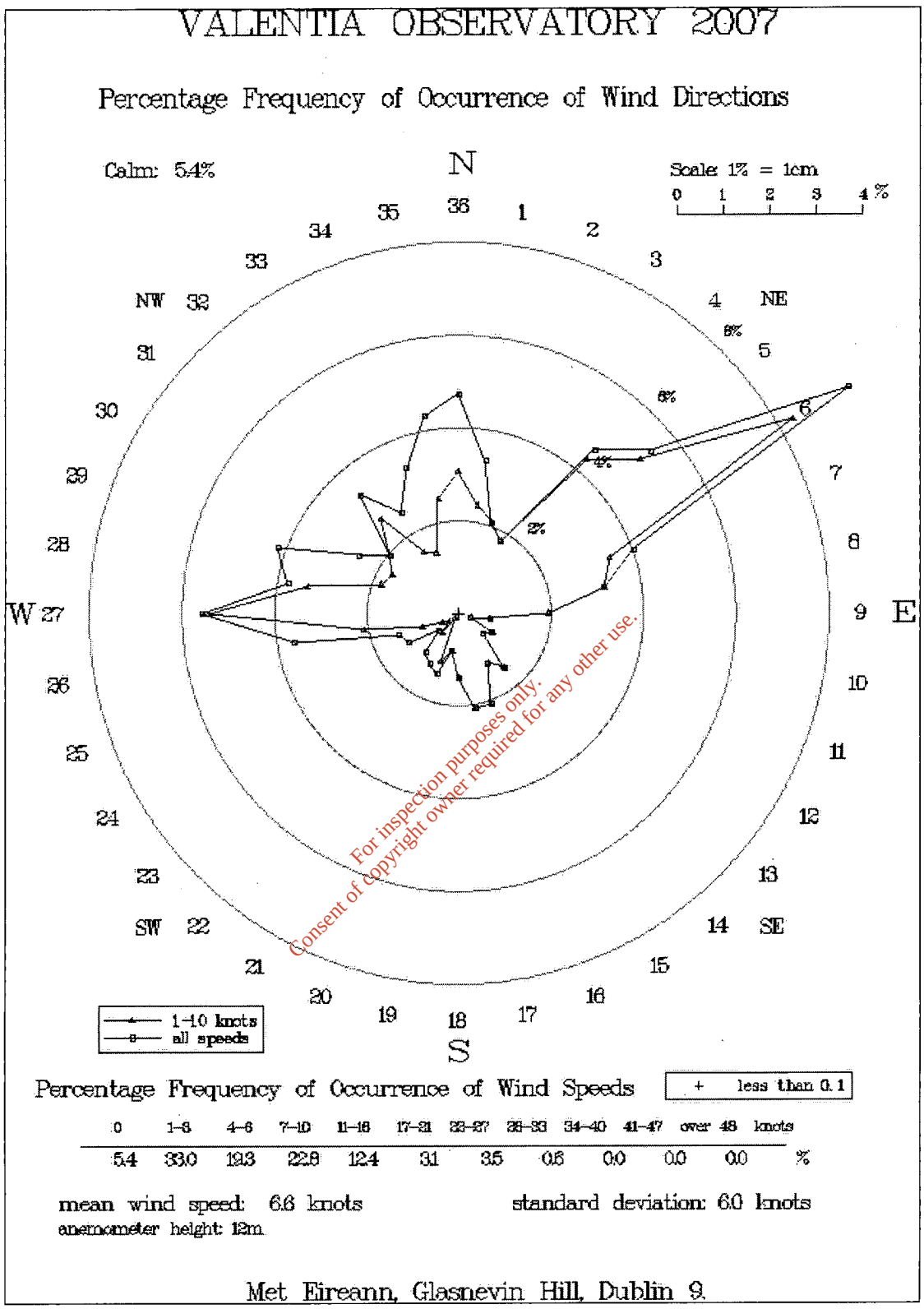
Table 3. Weather summary during survey period.

Week	Weather
March 12-17	Dry for most of week. SW breezes.
March 19-24	Rain at start of week. Dry thereafter. Fresh NW breezes throughout week.
March 26 – April 1	Light showers midweek. Dry otherwise. Light-moderate breezes all week, usually N or E.
April 2-8	Dry and sunny all week. NE breezes, often fresh.
April 9-15	Dry and sunny all week. Generally calm, with some light S/SW breezes.

4.2 Met Eireann maintains a number of synoptic weather stations throughout the country. While the closest station is located at Cork Airport, it is considered that weather data recorded at Valentia, Co. Kerry, provide a more representative assessment of conditions in West Cork due to their similar southwest coastal geography. Data obtained from the Valentia station indicate that there were 9 wet days (on which greater than 1 mm precipitation fell) during the survey period, all of which arose in March, chiefly during the first 10 days.

4.3 Wind conditions throughout the survey period are summarised by the wind rose recorded at Valentia (figure 1). The rose indicates that northeast breezes predominated during the survey period, with some westerly and northerly breezes on occasion.

Figure 1. Valentia Observatory wind rose 14.03.07 – 12.04.07.



5. Dust deposition results

5.1 The condition of the recovered samples, as noted in the field prior to sealing, is indicated in table 4. Results of analysis undertaken by Bodycote Consultus Ltd. is presented in table 5. Table 5 also includes the calculated daily dust deposition level. The Bodycote Consultus certificate of analysis is presented in appendix 1.

Table 4. Condition of samples on collection.

Site	Station	Condition
Bantry	D1	OK. Some small insects.
	D2	OK. Some small insects.
	D3	OK. Some small insects.
	D4	OK. Some small insects.
Derryconnell	D9	OK. V. high dust deposition on gauge and bottle. D1 adjacent to landfill entrance. Rotary drilling at 25 m at time of collection also generating some dust.
	D10	OK. Some insects.
	D11	OK.
	D12	OK.
Dunmanway	D1	OK
	D2	OK. Small insects in sample.
	D3	OK.
	D4	OK.
Skibbereen	D1	OK. Some small insects.
	D2	OK. Some small insects.
	D3	OK. Heavy dust deposition noted.
	D4	OK.

Table 5. Results of analysis and calculated dust deposition levels.

Site	Station	Analysis ref.	Gravimetric dust g	Dust deposition level* mg/m²/day
Bantry	D1	07003.B1	0.0263	146
	D2	07003.B2	0.0407	226
	D3	07003.B3	0.0201	111
	D4	07003.B4	0.0307	170
Derryconnell	D9	07003.L1	0.1054	585
	D10	07003.L2	0.0233	129
	D11	07003.L3	0.0224	124
	D12	07003.L4	0.0233	129
Dunmanway	D1	07003.D1	0.0183	101
	D2	07003.D2	0.0114	63
	D3	07003.D3	0.0186	103
	D4	07003.D4	0.0231	128
Skibbereen	D1	07003.S1	0.0279	155
	D2	07003.S2	0.0229	127
	D3	07003.S3	0.0565	313
	D4	07003.S4	0.0323	179

*Calculated as follows:

Dust deposition = Gravimetric dust / area of collection vessel opening / exposure period ◘ mg/m²/day

Internal diameter of collection vessel opening = 89 mm

Exposure period ◘ 29 days

6. Conclusions

6.1 Dust deposition levels recorded ranged from 63 mg/m²/day (site D2 Dunmanway) to 585 mg/m²/day (site D10 Derryconnell).

6.2 Generally values were within the expected range with the exception of the exceptionally low and high values noted above. It is noted that the value of 585 mg/m²/day detected at Derryconnell is significantly higher than the 350-mg/m²/day limit often specified by EPA licences for waste facilities. However the elevated result may be partially caused by rotary drilling in the vicinity of the monitoring station.

7. Appendices

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environmental consultants

Appendix 1: Bodycote Consultus Ltd. certificate of analysis

Bodycote CONSULTUS
Health Sciences
Bodycote Consultus Ltd, Glanmire Industrial Estate, Glanmire, Co.Cork, Ireland
Tel. +353 (0)21 48 222 88 Fax +353 (0)21 48 563 42 Email: info.consultus@bodycote.com

Customer ID : DB

MR DAMIAN BROSNAN
DIXON BROSNAN
SHRONAGREEHY
KEALKILL
BANTRY
CO CORK

No. Of Samples : 10
Sample Type : Dustfall
Order Number : N/A

Report No : 6324P
Date of Receipt : 13/04/07
Delivery Mode : Hand
Date testing Initiated : 17/04/07
Date of Report : 23/04/07
Sample Condn. on Receipt : Satisfactory

TEST REPORT

Sample No : 6324P1
Customer Ref. : 07003.B1

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0263	g	GER.ENG.IN.VDI2119

Sample No : 6324P2
Customer Ref. : 07003.B2

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0407	g	GER.ENG.IN.VDI2119

Sample No : 6324P3
Customer Ref. : 07003.B3

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0201	g	GER.ENG.IN.VDI2119

Sample No : 6324P4
Customer Ref. : 07003.B4

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0307	g	GER.ENG.IN.VDI2119

Sample No : 6324P5
Customer Ref. : 07003.D1

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0183	g	GER.ENG.IN.VDI2119

Continued

Bodycote CONSULTUS laboratories
Health Sciences
Bodycote Consultus Ltd, Glanmire Industrial Estate, Glanmire, Co.Cork, Ireland
Tel: +353 (0)21 48 222 88 Fax +353 (0)21 48 663 42 Email: info.consultus@bodycote.com

Customer ID : DB

MR DAMIAN BROSNAN
DIXON BROSNAN
SHRONAGREEHY
KEALKILL
BANTRY
CO CORK

No. Of Samples : 16
Sample Type : Dustfall
Order Number : N/A

Report No : 6324P
Date of Receipt : 13/04/07
Delivery Mode : Hand
Date testing Initiated : 17/04/07
Date of Report : 23/04/07
Sample Condn. on Receipt : Satisfactory

TEST REPORT

Sample No : 6324P6
Customer Ref. : 07003.D2

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0114	g	GER.ENG.IN.VDI2119

Sample No : 6324P7
Customer Ref. : 07003.D3

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0186	g	GER.ENG.IN.VDI2119

Sample No : 6324P8
Customer Ref. : 07003.D4

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0231	g	GER.ENG.IN.VDI2119

Sample No : 6324P9
Customer Ref. : 07003.L1

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.1054	g	GER.ENG.IN.VDI2119

Sample No : 6324P10
Customer Ref. : 07003.L2

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0233	g	GER.ENG.IN.VDI2119

Continued....

Bodycote CONSULTUS laboratories
Health Sciences www.healthsciences.bodycote.com www.bodycote.com
Bodycote Consultus Ltd, Glanmire Industrial Estate, Glanmire, Co.Cork, Ireland
Tel: +353 (0)21 48 222 88 Fax +353 (0)21 48 663 42 Email: info.consultus@bodycote.com

Customer ID : DB

MR DAMIAN BROSNAN
DIXON BROSNAN
SHRONAGREEHY
KEALKILL
BANTRY
CO CORK

No. Of Samples : 16
Sample Type : Dustfall
Order Number : N/A

Report No : 6324P
Date of Receipt : 13/04/07
Delivery Mode : Hand
Date testing Initiated : 17/04/07
Date of Report : 23/04/07
Sample Condn. on Receipt : Satisfactory

TEST REPORT

Sample No : 6324P11
Customer Ref. : 07003.L3

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0230	g	GER.ENG.IN.VDI2119

Sample No : 6324P12
Customer Ref. : 07003.L4

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0233	g	GER.ENG.IN.VDI2119

Sample No : 6324P13
Customer Ref. : 07003.S1

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0279	g	GER.ENG.IN.VDI2119

Sample No : 6324P14
Customer Ref. : 07003.S2

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0229	g	GER.ENG.IN.VDI2119

Sample No : 6324P15
Customer Ref. : 07003.S3

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0565	g	GER.ENG.IN.VDI2119

Continue

Bodycote CONSULTUS
Health Sciences
Bodycote's Consultus Ltd, Glanmire Industrial Estate, Glanmire, Co.Cork, Ireland
Tel: +353 (0)21 48 202 88 Fax +353 (0)21 48 663 42 Email: info.consultus@bodycote.com

Customer ID : DB

MR DAMIAN BROSNAN
DIXON,BROSNAN
SHRONADREEHY
KEALKILL
BANTRY
CO CORK

No. Of Samples : 16
Sample Type : Dustfall
Order Number : N/A

Report No : 6324P
Date of Receipt : 13/04/07
Delivery Mode : Hand
Date testing initiated : 17/04/07
Date of Report : 23/04/07
Sample Condn. on Receipt : Satisfactory

TEST REPORT

Sample No : 6324P16
Customer Ref. : 07003.S4

Test	Test Description	Test Result	Unit	Method
281	DUSTFALL VALUE (bergerhoff)	0.0323	g	GER.ENG.IN.VDI2119

Authorised By:

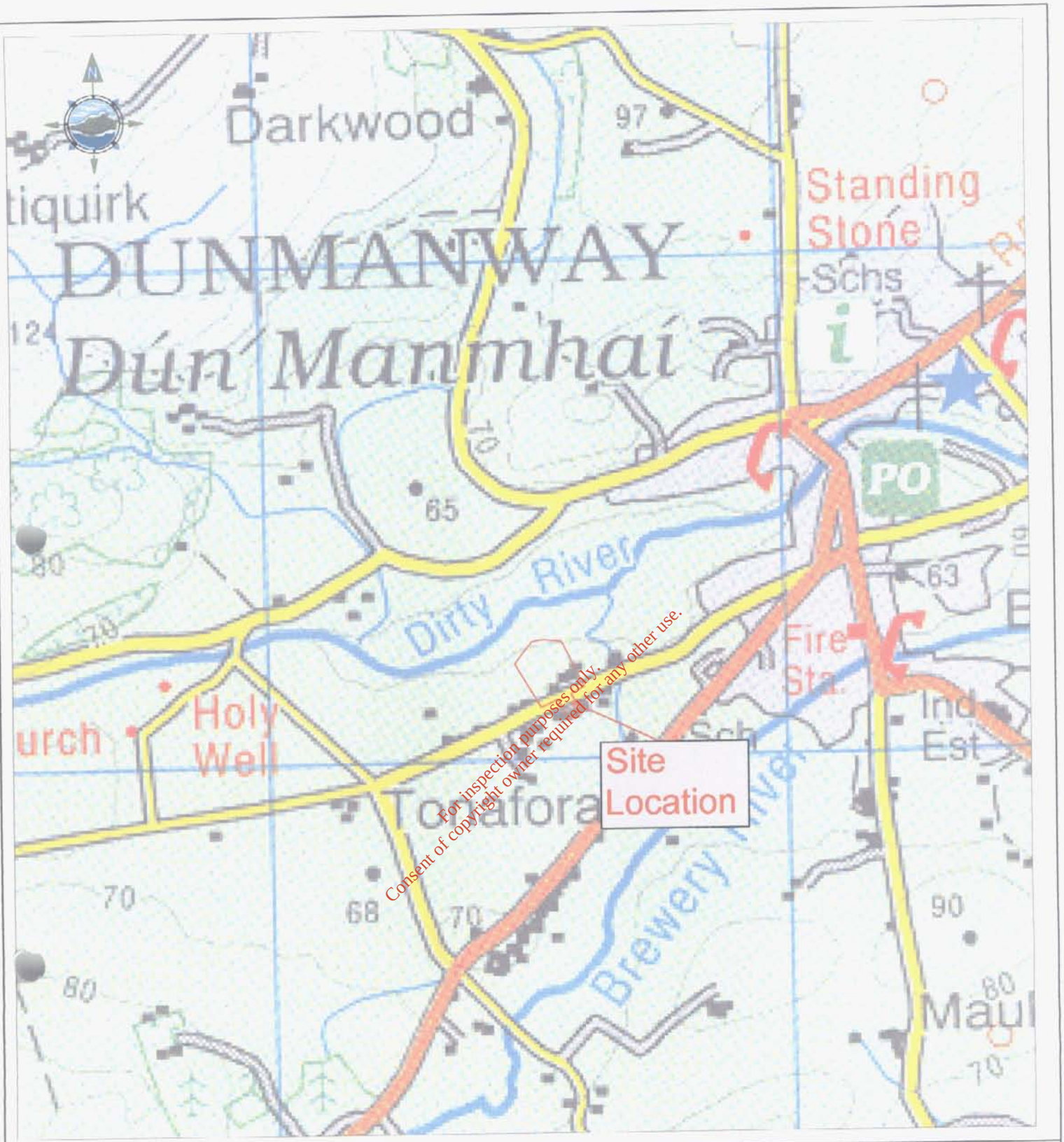
Dr Teresa Twomey
Manager Env. Services Div.

DixonBrosnan
environmental consultants

Appendix 2: Site location maps and drawings

List of drawings prepared by Tobin Consulting Engineers

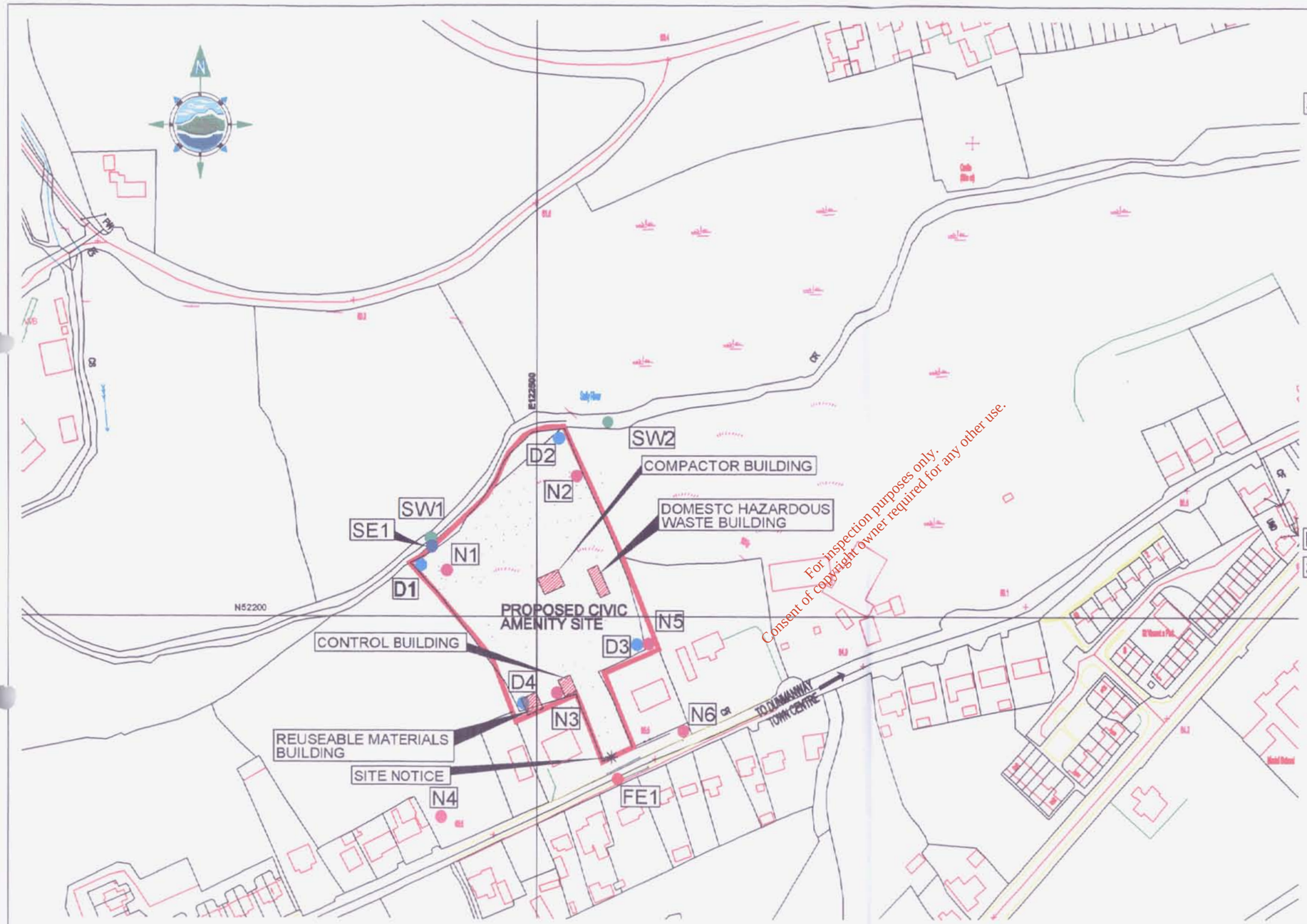
Drawing no.	Title
2528-2601	Bantry Site Location Map
2528-2650	Monitoring Point Locations
2528-2603	Dunmanway Site Location Map
2528-2630	Monitoring Point Locations
2528-2605	Derryconnell Site Location Map
2528-2616	Derryconnell Monitoring Point Locations
2528-2607	Skibbereen Site Location Map
2528-2670	Monitoring Point Locations



Client: CORK COUNTY COUNCIL	Prepared by: JO'B	TOBIN Consulting Engineers, Bedford Place, Howley's Quay, Lower Shannon Street, Co. Limerick, Ireland. tel: +353-(0)61-415757 fax:+353-(0)61-409378 e-mail: info@tobin.ie www.tobin.ie
Project: WEST CORK WASTE MANAGEMENT FACILITIES	Checked: C.D	
	Date: MAR '07	
Title: DUNMANWAY SITE LOCATION MAP	Project Director: B.DOWNES	
	Scale @ A4: NTS	

Drawing No. 2528-2603

Issue: A



LEGEND

- N3 ● NOISE MONITORING POINTS
- SW1 ● SURFACE WATER MONITORING POINTS
- D2 ● DUST MONITORING POINTS

SURFACE WATER, NOISE AND DUST MONITORING		
SW1	122437 E	52245 N
SW2	122542 E	52303 N
N1	122446 E	52227 N
N2	122523 E	52281 N
N3	122512 E	52156 N
N4	122443 E	52085 N
N5	122566 E	52184 N
N6	122586 E	52134 N
D1	122431 E	52230 N
D2	122513 E	52302 N
D3	122559 E	52184 N
D4	122492 E	52150 N

- FE1 ● FOUL EMMISSION POINT
- SE1 ● SURFACE WATER EMMISSION POINT

SURFACE WATER AND FOUL EMMISSION POINTS		
SE1	122439 E	52240 N
FE1	122548 E	52107 N

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES

Issue	Date	Description	By	Chkd.
A	JUNE '07	WASTE LICENCE APPLICATION	JO'B	OD

Client: CORK COUNTY COUNCIL

Project: WEST CORK WASTE MANAGEMENT FACILITIES

Title: WASTE LICENCE APPLICATION
MONITORING POINT LOCATIONS

Prepared by: JO'B
Checked: OD
Date: JUNE '07
Project Director: B.DOWNES
Scale @ A3: 1:2,500

TOBIN Consulting Engineers,
Bedford Place, Howley's Quay,
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tel: +353-(0)61-415757
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e-mail: info@tobin.ie www.tobin.ie

Drawing No.: 2528-2630

Issue: A

ALcontrol Laboratories (Dublin)

18a Rosemount Business Park,
Ballycoolin,
Dublin 11
Ireland
Tel: +353 (0) 1 8829893
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CERTIFICATE OF ANALYSIS

Client: Tobin Consulting Engineers (Cork)

Unit 4E
Northpoint House
Northpoint Business Park
New Mallow Road
Cork
Ireland

Attention: Renee O' Shea

Date: 30 March, 2007

Our Reference: 07-B01851/01

Your Reference: 2528

Location: Bantry / Dunmanway

A total of 4 samples was received for analysis on Thursday, 15 March 2007 and authorised on Friday, 30 March 2007. Accredited laboratory tests are defined in the log sheet, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation. We are pleased to enclose our final report, it was a pleasure to be of service to you, and we look forward to our continuing association.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Signed

Ken Scally

Ken Scally
General Manager, Ireland

Lorraine Mc Namara

Lorraine McNamara
Laboratory Technical Manager

Compiled By

Janne Juurikas

Janne Juurikas

UKAS TESTING
1291
GROUP

ALcontrol Laboratories Ireland

Test Schedule

Ref Number: 07-B01851/01

Client: Tobin Consulting Engineers (Cork)

Date of Receipt: 15/03/2007

Sample Type: WATER

Location: Bantry / Dunmanway

Client Contact: Renee O' Shea

Client Ref: 2528

Detection Method				5 DAY ATU	CV AA	FLAME PHOTO	FLAME PHOTO	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS
UKAS Accredited [Testing Laboratory] No. 1291				✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ALcontrol Reference	Sample Identity	Other ID	P / V	BOD Unfiltered	Dissolved Mercury Low Level	Potassium	Sodium	Dissolved Cadmium Low Level	Dissolved Calcium Low Level	Dissolved Chromium Low Level	Dissolved Copper Low Level	Dissolved Iron Low Level	Dissolved Lead Low Level	Dissolved Magnesium Low Level	Dissolved Manganese Low Level	Dissolved Nickel Low Level	Dissolved Zinc Low Level
07-B01851-S0001-A01	BSW1	15/03/07	Plastic Bottle	X	X	X	X	X	X	X	X	X	X	X	X	X	X
07-B01851-S0001-A12	BSW1	15/03/07	Glass Bottle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0001-A14	BSW1	15/03/07	100ml Plastic Anion Bottle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0001-A21	BSW1	15/03/07	Plastic Bottle + H2SO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0002-A01	BSW2	15/03/07	Plastic Bottle	X	X	X	X	X	X	X	X	X	X	X	X	X	X
07-B01851-S0002-A12	BSW2	15/03/07	Glass Bottle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0002-A14	BSW2	15/03/07	Plastic Bottle + H2SO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0002-A16	BSW2	15/03/07	100ml Plastic Anion Bottle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0003-A01	DSW1	15/03/07	Plastic Bottle	X	X	X	X	X	X	X	X	X	X	X	X	X	X
07-B01851-S0003-A12	DSW1	15/03/07	Glass Bottle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0003-A14	DSW1	15/03/07	100ml Plastic Anion Bottle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0003-A21	DSW1	15/03/07	Plastic Bottle + H2SO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0004-A01	DSW2	15/03/07	Plastic Bottle	X	X	X	X	X	X	X	X	X	X	X	X	X	X
07-B01851-S0004-A12	DSW2	15/03/07	Glass Bottle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0004-A14	DSW2	15/03/07	100ml Plastic Anion Bottle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-B01851-S0004-A21	DSW2	15/03/07	Plastic Bottle + H2SO4	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes : NUMERIC VALUES INDICATE ADDITIONAL SCHEDULING

* SUBCONTRACTED TO OTHER LABORATORY / ** SAMPLES ANALYSED AT THE CHESTER LABORATORY

ALcontrol Laboratories Ireland

Test Schedule

Ref Number: 07-B01851/01

Client: Tobin Consulting Engineers (Cork)

Date of Receipt: 15/03/2007

Sample Type: WATER

Location: Bantry / Dunmanway

Client Contact: Renee O' Shea

Client Ref: 2528

Detection Method				IR	KONE	KONE	KONE	KONE	KONE	KONE	METER	METER	METER	SPECTRO	SPECTRO	TITRATION	
UKAS Accredited [Testing Laboratory] No. 1291				✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
ALcontrol Reference	Sample Identity	Other ID	P / V	Total Organic Carbon	Chloride	Nitrate as NO3	Nitrite as NO2	ortho Phosphate	Sulphate	Total Oxidised Nitrogen	Conductivity	Dissolved Oxygen	pH (Liquid)	Ammoniacal Nitrogen	COD Unfiltered	Total Alkalinity	
07-B01851-S0001-A01	BSW1	15/03/07	Plastic Bottle	-	-	-	-	-	-	-	X	X	X	-	X	X	
07-B01851-S0001-A12	BSW1	15/03/07	Glass Bottle	X	-	-	-	-	-	-	-	-	-	-	-	-	
07-B01851-S0001-A14	BSW1	15/03/07	100ml Plastic Anion Bottle	-	X	X	X	X	X	X	-	-	-	-	-	-	
07-B01851-S0001-A21	BSW1	15/03/07	Plastic Bottle + H2SO4	-	-	-	-	-	-	-	-	-	-	X	-	-	
07-B01851-S0002-A01	BSW2	15/03/07	Plastic Bottle	-	-	-	-	-	-	-	X	X	X	-	X	X	
07-B01851-S0002-A12	BSW2	15/03/07	Glass Bottle	X	-	-	-	-	-	-	-	-	-	-	-	-	
07-B01851-S0002-A14	BSW2	15/03/07	Plastic Bottle + H2SO4	-	-	-	-	-	-	-	-	-	-	X	-	-	
07-B01851-S0002-A16	BSW2	15/03/07	100ml Plastic Anion Bottle	-	X	X	X	X	X	X	-	-	-	-	-	-	
07-B01851-S0003-A01	DSW1	15/03/07	Plastic Bottle	-	-	-	-	-	-	-	X	X	X	-	X	X	
07-B01851-S0003-A12	DSW1	15/03/07	Glass Bottle	X	-	-	-	-	-	-	-	-	-	-	-	-	
07-B01851-S0003-A14	DSW1	15/03/07	100ml Plastic Anion Bottle	-	X	X	X	X	X	X	-	-	-	-	-	-	
07-B01851-S0003-A21	DSW1	15/03/07	Plastic Bottle + H2SO4	-	-	-	-	-	-	-	-	-	-	X	-	-	
07-B01851-S0004-A01	DSW2	15/03/07	Plastic Bottle	-	-	-	-	-	-	-	X	X	X	-	X	X	
07-B01851-S0004-A12	DSW2	15/03/07	Glass Bottle	X	-	-	-	-	-	-	-	-	-	-	-	-	
07-B01851-S0004-A14	DSW2	15/03/07	100ml Plastic Anion Bottle	-	X	X	X	X	X	X	-	-	-	-	-	-	
07-B01851-S0004-A21	DSW2	15/03/07	Plastic Bottle + H2SO4	-	-	-	-	-	-	-	-	-	-	X	-	-	

Notes : NUMERIC VALUES INDICATE ADDITIONAL SCHEDULING

ALcontrol Laboratories Ireland

Test Schedule Summary

Ref Number: 07-B01851/01
Client: Tobin Consulting Engineers (Cork)
Date of Receipt: 15/03/2007

Sample Type: WATER
Location: Bantry / Dunmanway
Client Contact: Renee O' Shea
Client Ref: 2528

* SUBCONTRACTED TO OTHER LABORATORY / ** SAMPLES ANALYSED AT THE CHESTER LABORATORY

SCHEDULE	METHOD	TEST NAME	TOTAL
X	5 DAY ATU	BOD Unfiltered	4
X	CV AA	Dissolved Mercury Low Level	4
X	FLAME PHOTO	Potassium	4
X	FLAME PHOTO	Sodium	4
X	ICP MS	Dissolved Cadmium Low Level	4
X	ICP MS	Dissolved Calcium Low Level	4
X	ICP MS	Dissolved Chromium Low Level	4
X	ICP MS	Dissolved Copper Low Level	4
X	ICP MS	Dissolved Iron Low Level	4
X	ICP MS	Dissolved Lead Low Level	4
X	ICP MS	Dissolved Magnesium Low Level	4
X	ICP MS	Dissolved Manganese Low Level	4
X	ICP MS	Dissolved Nickel Low Level	4
X	ICP MS	Dissolved Zinc Low Level	4
X	IR	Total Organic Carbon	4
X	KONE	Chloride	4
X	KONE	Nitrate as NO3	4
X	KONE	Nitrite as NO2	4
X	KONE	ortho Phosphate	4
X	KONE	Sulphate	4
X	KONE	Total Oxidised Nitrogen	4
X	METER	Conductivity	4
X	METER	Dissolved Oxygen	4
X	METER	pH (Liquid)	4
X	SPECTRO	Ammoniacal Nitrogen	4
X	SPECTRO	COD Unfiltered	4
X	TITRATION	Total Alkalinity	4

☐ Interim
☑ Validated

ALcontrol Laboratories Ireland

Table Of Results

Ref Number: 07-B01851/01
Client: Tobin Consulting Engineers (Cork)
Date of Receipt: 15/03/2007
(of first sample)

Sample Type: WATER
Location: Bantry / Dunmanway
Client Contact: Renee O' Shea
Client Ref: 2528

	Detection Method	5 DAY ATU	CV AA	FLAME PHOTO	FLAME PHOTO	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	ICP MS	IR
	Method Detection Limit	<2mg/l	<0.05ug/l	<0.2mg/l	<0.2mg/l	<0.4ug/l	<120ug/l	<1ug/l	<1ug/l	<2ug/l	<1ug/l	<100ug/l	<1ug/l	<1ug/l	<1ug/l	<2mg/l
UKAS Accredited [Testing Laboratory] No. 1291		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

ALcontrol Reference	Sample Identity	Other ID	BOD Unfiltered	Dissolved Mercury Low Level	Sodium	Potassium	Dissolved Cadmium Low Level	Dissolved Calcium Low Level	Dissolved Chromium Low Level	Dissolved Copper Low Level	Dissolved Iron Low Level	Dissolved Lead Low Level	Dissolved Magnesium Low Level	Dissolved Manganese Low Level	Dissolved Nickel Low Level	Dissolved Zinc Low Level	Total Organic Carbon
			mg/l	ug/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	mg/l
07-B01851-S0001	BSW1	15/03/07	3	<0.05	10.5	0.7	<0.4	19010	2	<1	165	1	2151	<1	1	26	8
07-B01851-S0002	BSW2	15/03/07	4	<0.05	15.5	1.2	<0.4	26780	2	<1	381	<1	3363	55	2	26	6
07-B01851-S0003	DSW1	15/03/07	2	<0.05	9.5	1.5	<0.4	14130	3	<1	148	<1	2083	5	2	28	3
07-B01851-S0004	DSW2	15/03/07	3	<0.05	9.5	1.5	<0.4	13620	2	1	192	<1	2048	7	2	27	2

Notes : METHOD DETECTION LIMITS ARE NOT ALWAYS ACHIEVABLE DUE TO VARIOUS CIRCUMSTANCES BEYOND OUR CONTROL. **NDP** = NO DETERMINATION POSSIBLE

Checked By : Janne Juurikas

Printed at 09:09 on 02/04/2007

* SUBCONTRACTED TO OTHER LABORATORY / ** SAMPLES ANALYSED AT THE CHESTER LABORATORY

☐ Interim
☑ Validated

ALcontrol Laboratories Ireland

Table Of Results

Ref Number: 07-B01851/01
Client: Tobin Consulting Engineers (Cork)
Date of Receipt: 15/03/2007
(of first sample)

Sample Type: WATER
Location: Bantry / Dunmanway
Client Contact: Renee O' Shea
Client Ref: 2528

	Detection Method	KONE	KONE	KONE	KONE	KONE	KONE	METER	METER	METER	SPECTRO	SPECTRO	TITRATION			
	Method Detection Limit	<1mg/l	<3mg/l	<0.03mg/l	<0.3mg/l	<0.05mg/l	<0.3mg/l	<0.014mS/cm	<0.1mg/l	napH Units	<0.2mg/l	<15mg/l	<1mg/l			
UKAS Accredited [Testing Laboratory] No. 1291		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			
ALcontrol Reference	Sample Identity	Other ID	Chloride	Sulphate	ortho Phosphate as PO4	Nitrate as NO3	Nitrite as NO2	Total Oxidised Nitrogen as N	Conductivity (at 25 deg. C)	Dissolved Oxygen	pH	Ammoniacal Nitrogen as N	COD Unfiltered	Total Alkalinity as CaCO3			
			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mS/cm	mg/l	pH Units	mg/l	mg/l	mg/l			
07-B01851-S0001	BSW1	15/03/07	21	<3	0.05	<0.3	<0.05	<0.3	0.183	4.1	7.74	<0.2	<15	63			
07-B01851-S0002	BSW2	15/03/07	27	4	0.05	0.3	<0.05	<0.3	0.258	4.3	7.30	0.4	<15	110			
07-B01851-S0003	DSW1	15/03/07	19	5	0.06	9.6	<0.05	2.2	0.150	4.2	7.11	<0.2	<15	30			
07-B01851-S0004	DSW2	15/03/07	17	5	0.06	9.6	<0.05	2.2	0.150	4.2	7.02	<0.2	<15	33			

Notes : METHOD DETECTION LIMITS ARE NOT ALWAYS ACHIEVABLE DUE TO VARIOUS CIRCUMSTANCES BEYOND OUR CONTROL.

NDP = NO DETERMINATION POSSIBLE

Checked By : Janne Juurikas

Printed at 09:09 on 02/04/2007

* SUBCONTRACTED TO OTHER LABORATORY / ** SAMPLES ANALYSED AT THE CHESTER LABORATORY

APPENDIX

APPENDIX

1. Results are expressed as mg/kg dry weight (dried at 30°C) on all soil analyses except for the following: NRA Leach tests, flash point, and ammoniacal N_2 by the BRE method, VOC, PRO, Cyanide, Acid Soluble Sulphide, SVOC, DRO, PAH, PCB, TPH CWG ,TPH by IR, OFGs and SEM.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. A sub sample of all samples received will be retained free of charge for one month for soils and one month for waters (sample size permitting), but may then be discarded unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, an asbestos screen is done in-house on soils and if no fibres are found will be reported as NFD – no fibres detected. If fibres are detected, then identification and quantification is carried out by ALcontrol Technichem or Alcontrol Shutlers in the UK . If a sample is suspected of containing asbestos, then drying and crushing will be suspended on that sample until the asbestos results are known. If asbestos is present, then no analysis requiring dry sample are undertaken.

7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample – similarly, if a headspace is present in the volatile sample.

8. NDP – No Determination Possible due to insufficient/unsuitable sample.

9. Metals in water are performed on a filtered sample, and therefore represent dissolved metals – total metals must be requested separately.

10. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.

Last updated February 2005

Bodycote Health Sciences
CONSULTUS laboratories
www.healthsciences.bodycote.com www.bodycote.com
Bodycote Consultus Ltd, Glanmire Industrial Estate, Glanmire, Co.Cork, Ireland
Tel: +353 (0)21 48 222 88 Fax +353 (0)21 48 663 42 Email: info.consultus@bodycote.com

IVNAB ISO 17025 ACCREDITED TESTING DETAILED IN SCOPE REG NO. 183T

Customer ID : TOBN

MS RENEE O'SHEA
PATRICK J. TOBIN & CO LTD.
CONSULTING ENGINEERS
NORTH POINT BUSINESS PARK
NORTH POINT HOUSE
NEW MALLOW ROAD
CORK

No. Of Samples : 4
Sample Type : Water or Wastewater
Order Number :

Report No : 4951P
Date of Receipt : 15/03/07
Delivery Mode : Hand
Date testing Initiated : 15/03/07
Date of Report : 16/03/07
Sample Condn. on Receipt : Satisfactory

TEST REPORT

Sample No : 4951P1
Customer Ref. : BSW1

Test	Test Description	Test Result	Unit	Method
C12	TOTAL COLIFORM COUNT- Colilert	205	MPN/100mls	MT C121
C13	E.COLI COUNT - Colilert	<1	MPN/100mls	MT C121

Sample No : 4951P2
Customer Ref. : BSW2

Test	Test Description	Test Result	Unit	Method
C12	TOTAL COLIFORM COUNT- Colilert	165	MPN/100mls	MT C121
C13	E.COLI COUNT - Colilert	<1	MPN/100mls	MT C121

Sample No : 4951P3
Customer Ref. : DSW1

Test	Test Description	Test Result	Unit	Method
C12	TOTAL COLIFORM COUNT- Colilert	980	MPN/100mls	MT C121
C13	E.COLI COUNT - Colilert	<1	MPN/100mls	MT C121

Sample No : 4951P4
Customer Ref. : DSW2

Test	Test Description	Test Result	Unit	Method
C12	TOTAL COLIFORM COUNT- Colilert	816	MPN/100mls	MT C121
C13	E.COLI COUNT - Colilert	<1	MPN/100mls	MT C121

Authorised By:
Peter Piggott
Dep. Manager Microbiology Div.

Attachment J: Accident Prevention and Emergency Response

Contents

Attachment J.1: Accident Prevention and Emergency Response

Attachment J.1(i): Emergency Response Procedures

Fire in an incoming vehicle

A vehicle delivering waste to the site may be a source of fire therefore any waste that appears to smoulder will not be accepted at the facility. If there is evidence of a fire on a vehicle, the driver will be asked to remove the vehicle from the site and the fire services will be called to deal with the fire on the vehicle. On arrival of fire services the site manager will liaise with the fire officer and follow his instructions.

Fire or explosion on site

In the event of a fire within the site boundary or in a waste container, the following, measures will be taken:

- The facility manager will be alerted
- Fire services will be contacted immediately
- The facility will be closed to the public
- Where appropriate site staff will deal with the fire either with foam or water as appropriate
- On arrival of fire services, the site manager will liaise with the fire officer and follow his instructions
- Firewater will be contained where possible
- Records of information about the accident will be taken
- The EPA will be notified as soon as possible after the incident

Spillage of oil or fuel

If a vehicle is leaking fuel or oil, it will be prohibited entry to the site. In the event of oil or fuel spillage on site from any vehicle, booms and oil absorbent on site will be used to contain the spillage. The used absorbents will be disposed of at an appropriate licensed facility. The spilled liquids will be collected in the storm water collection system and treated in the full retention oil interceptor prior to discharge to surface water.

Spillage of dangerous or hazardous liquid

The risk of spills from dangerous or hazardous liquids is low due to the fact that all household hazardous materials will be stored in a bunded area in accordance with EPA requirements. In the event of a spill, the nature of the discharging liquid or gas will be determined and booms and chemical absorbent will be used to contain any chemical spillages. If dangerous or hazardous liquids or fumes are being released, the facility will be closed and all persons evacuated to a safe distance. If necessary, the County Council Safety Officer will be contacted. Any liquid recovered will be disposed of at an appropriate licensed facility.

Incident posing significant threat to the environment

Storm water drains will be visually inspected weekly and foul water discharges will be monitored biannually. If the visual inspection indicates an exceedance in any of the parameters specified in the licence, the following measures will be taken:

- The source of the discharge will be identified immediately
- The facility manager will be contacted and a sample of the discharge will be tested.
- If the analysis of a sample indicating that emission limits have been exceeded, the EPA will be notified.
- The source of the pollution will be identified and remedial action will be initiated.

If the monitoring procedures indicate an exceedence of any of the parameters specified in the licence, the following measures will be taken:

- The source of the problem will be identified immediately
- The EPA will be notified
- Remedial action will be initiated

Incident posing a significant threat to the health and safety of any persons

In the event of an accident or an incident causing injury to an individual on site, the following procedures should be carried out as appropriate:

- The facility manager will be alerted
- the Ambulance Services will be contacted
- the Fire Brigade will be contacted if any person is trapped in a vehicle/machine, vehicles are involved in the accident or if a vehicle is in a dangerous state
- the facility will be closed to the public
- the Gardaí will be contacted if any person is injured or thought to be injured by a vehicle
- Cork County Council Safety Officer will be contacted
- records of all injuries and as much information about the accident will be taken
- oil absorbent material and booms will be used if there is an oil spillage
- absorbent material will be used in the event of a chemical spill
- Any injured person will not be moved unless there is an immediate danger to that person
- the incident will be reported to the EPA and the Health and Safety Authority as soon as possible

Attachment J.1(ii): Responsibility

The Site Manager will be responsible for any Emergency Response Procedure

Attachment J.1(iii): Notification

In the event of an emergency, the following are to be notified if required:

- Fire Services
- Ambulance Services
- Gardaí
- Cork County Council
- Environmental Protection Agency
- South Western Fisheries Board

Attachment J.1(iv): Records

Records of all emergencies and actions taken will be maintained at the facility. An emergency report form and site incident log will be completed and a copy maintained at the site office.

Attachment J.i(v): Communications

All parties involved in the Emergency Response Procedure will be issued with a draft proposal of the procedure. Any recommendations by the Agency will be adhered to and a final copy of the approved procedure will be circulated to all parties. A copy of the procedures will be issued to all site staff and will be displayed within easy access in the facility office.

A list of relevant telephone numbers of persons contactable in the event of an emergency is outlined in Table J.5.1. This table will be displayed in the facility office.

Table J-1:Phone Numbers of Personnel who can be contacted in the event of an Emergency

Position	Name	Phone Number
Senior Executive Engineer	Paudie Hegarty	023 58812
Executive Engineer	Mairead Hales	023 58812
Senior Executive Officer of Environmental Services	Jerome O'Sullivan	023 58812
Dunmanway Area Engineer	Kevin Morey	02345209
Sanitary Services Area Engineer	Kevin Morey	02345209
Emergency Services	Fire Brigade, Ambulance, Gardai	999 or 112
Cork County Council	Head Office	021 4276891
Cork County Council	West Cork Area Office	023 33328
Chief Fire Officer	Cormac Daly	027 50058
Emergency Pollution	Emergency out of Hours Contact Number	021 4503222

Attachment J.1 (vi) – Training

Site staff will receive necessary training from the Fire Officer, in dealing with fire on site. The Senior Executive Engineer will instruct site staff on this procedure.

Attachment J.1(vii) – Accidental emissions and emergency situations outside of normal working hours

In the event of accidental emissions and emergency situation that may occur outside of normal working hours, the emergency number will be displayed on the notice board at the site entrance.

Attachment J.1 (viii) – Public Liability insurance

Cork County Council have public liability insurance in place.

Attachment K: Remediation, Decommissioning, Restoration and Aftercare

Contents

Attachment K.1: Remediation, Decommissioning, Restoration and Aftercare

K.1 (i) – Decommissioning

In the event of cessation of activities at the Civic Amenity Facility, Cork County Council proposes the following closure and restoration measures:

- The equipment used at the site will be removed by Cork County Council
- Portable structures, such as recycling receptacles, will be removed from the site
- Street sweeper vehicles will be used to clean the site
- Office equipment will be removed
- Cork County Council will provide the EPA with at least six months written notice of any intention to close the facility.

K.1 (ii) – Residual Management Plan

There are no plans to decommission the Civic Amenity Facility in the foreseeable future. A Residual Management Plan has therefore not been prepared. Activities at the site are unlikely to result in either groundwater or land contamination and permanent storage of waste on the site will not occur. In the event of decommissioning of the facility, the site would not require a special Residual Management Plan.

Attachment L: Statutory Requirements

Contents

Attachment L.1: Section 40(4) WMA

To comply with the requirements of the Waste Management Act 1996 as amended, the activity concerned must comply with Section 40(4)(a) to 40(a)(i).

Section 40(4)(a) of the Waste management Act, 1996 requires that any emissions from the recovery activity in question will not result in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any other enactment.

A range of management, abatement, treatment and control, in accordance with BAT Guidance Notes for the Waste Sector: Transfer Activities (Draft, November 2004) will be implemented to eliminate or reduce emissions from the facility.

Noise: Noise emissions may arise from operational plant as well as traffic to and from the site. Compaction operations and traffic movements to and from the site will be limited to normal opening hours and so operations at the facility will not be expected to have a significant impact on existing background noise levels. The standards applicable for noise emissions at the site are as follows: BS5228 (1984 and 1987) 'Noise Control on Construction and Open Sites' Part 1. A noise emission limit of 55 dB(A)L (daytime) and 45 dB(A)L (night time) at locations on the boundary will be used. Monitoring results will be compared against these standards.

A noise monitoring survey has been carried out to establish background noise levels at the site of the proposed facility. Results indicate that noise levels are generally below the EPA recommended levels except for N4 which is located adjacent to a construction site and a road. This provides background data with which to assess the impact of noise at the facility once it is operational. Further noise monitoring will be carried out annually

Odour: It is unlikely that there will be any emissions to air or generation of odours as a result of operations at the facility.

Dust: Ambient dust monitoring has been carried out (See Attachment F) and will provide background data to assess the impact of operations at the facility. A 30-day average dust deposition rate of 350 mg/m^2/day is recommended by the TA Luft requirement at the boundary of the site. Results from regular dust monitoring will be compared against these standards. Further dust monitoring will be carried out annually.

The impact of exhaust emissions on ambient air quality, from vehicles entering the site, is expected to be minimal. The dust deposition recorded on site ranged from 63 mg/m^2/day (D2) to 128 mg/m^2/day (D4) and are all well below the limit of 350 mg/m^2/day usually set by the EPA.

Surface Water: Surface water run-off from the facility will be collected in the surface water drainage system and diverted via a Class 1 full retention interceptor to the River Dirty.

Samples were taken at 2 no. locations on the River Dirty and were analysed. Based on the data from water sampling conducted by TOBIN Consulting Engineers and by the EPA, the river Dirty is shown to be generally unpolluted at this location.

All roads and hard standing areas will be impermeable. At permeable areas, such as grass or landscaping adjacent to impermeable surfaces, there will be kerbing to prevent run-off from the impermeable surfaces onto this ground.

The storage of waste in sealed containers will minimise the potential for leachate generation at the site. Samples will be taken from the interceptor as well as upstream and downstream of the discharge point and sent for analysis twice a year. Results will be forwarded to the Agency.

Sewer: Foul sewage generated at the facility will be discharged to public foul sewer.

Section 40(4)(b) of the Waste management Act, 1996 requires that the activity concerned will not cause environmental pollution, which is defined as:

"The holding, transport, recovery and disposal of waste in the manner which would to a significant extend endanger human health or harm the environment, and in particular:

a) *create a risk to waters, the atmosphere, land, soil, plants or animals*
b) *create a nuisance through noise, odours or litter*
c) *adversely affect the Countryside or places of special interest."*

Monitoring of surface water, noise and dust emissions have been considered within the scope of this application. No significant environmental impacts were identified, therefore the requirements of Section 40(4)(b) of the Waste Management Act 1996 are deemed to be satisfied.

Section 40(4)(bb) of the Waste management Act, 1996 as amended in 2003 requires that the activity comply with Council Directive 1999/31/EC of the landfill of waste

Not applicable – the activity does not involve the landfilling of waste.

Section 40(4)(c) of the Waste management Act, 1996 requires that the BATNEEC (best available technology not entailing excessive costs) will be implemented to minimise the risk of potential emissions from the activity concerned.

- Technologies to be used at the facility will be state-of-the-art for the waste industry. BATNEEC will be incorporated in the detailed design throughout the facility.

Section 40(4)(cc) of the Waste management Act, 1996 as amended in 2003 requires that the activity concerned is consistent with the objectives of the relevant waste management plan and will not prejudice measures taken or to be taken by the relevant local authority or authorities for the purpose of the implementation of any such plan.

The proposed site is consistent with the Cork Waste Management Plan prepared in accordance with the Waste Management Act 1996 and The Waste Management (Planning) Regulations 1997. This Waste Management Plan, adopted in 2001, sets out the proposed plan for the following 25 years.

The policy sets out the national targets, which will apply to waste management by local authorities. Included in the new waste recycling targets are:

- Diversion of 50% of overall household waste away from landfill
- Minimum of 65% reduction in biodegradable waste consigned to landfill
- Recycling of at least 35% of municipal waste

These national targets are to be achieved within fifteen years of development of The Waste Management Plan, and are intended to fulfil our obligations under EU legislation. According to Cork County's Waste Management Plan, the average household recycling rate for the Cork County in 2003 was only 11.4%. However, the introduction of a new Recycling Centre, such as the proposed Dunmanway Civic Amenity Facility, will help to achieve the above targets.

Section 40(4)(d) of the Waste management Act, 1996 requires that if the applicant is not a local authority, the corporation of a borough that is not a county borough, or the council of an urban district, subject to subsection (8), he or she is a fit and proper person to hold a waste licence.

Not applicable as the applicant is a local authority

Section 40(4)(e) of the Waste management Act, 1996 requires that financial provisions are provided for the facility.

Cork County Council will provide funding to operate the Civic Amenity Facility in accordance with legislation. The necessary personnel will be employed and trained to manage the facility in compliance with legislation.

Section 40(4)(f) of the Waste management Act, 1996 as amended in 2003 requires that energy will be used efficiently in the carrying on of the activity concerned.

In the proposed Civic Amenity Facility, energy efficiency will be considered throughout the design, maintenance and operation of the facility. In the design, all energy saving opportunities in storage areas,

control rooms and offices will be considered. This will include the use of energy efficient windows and insulation as well as the use of solar water heating and a heat pump for space heating. Further measures in the maintenance and operation of the facility will include;

- Ensuring equipment is serviced and maintained regularly
- Ensuring equipment is switched off, if safe to do so, when not in use
- Perform energy audit in accordance with the EPA Guidance document on Energy Audits within first year of operation

Section 40(4)(g) of the Waste management Act, 1996 as amended in 2003 requires that any noise from the activity concerned will comply with, or will not result in the contravention of, any regulations under section 106 of the Act of 1992.

Noise standards from the facility of 55 dB(A)L_{Aeq} (daytime) and 45 dB(A)L_{Aeq} (night time) at locations along the boundary will be observed. Consistent monitoring will be conducted and compared to these standards.

Section 40(4)(h) of the Waste Management Act, 1996 as amended in 2003 requires that necessary measures will be taken to prevent accidents in the carrying on of the activity concerned and, where an accident occurs, to limit its consequences for the environment.

An Environmental Management System will be prepared and implemented at the facility to include environmental management and operational procedures and emergency response procedures. The local fire authority will be consulted with regards to fire fighting procedures for the facility and onsite equipment required. Fire drills will be undertaken. Site personnel will be trained in first aid and appropriate equipment provided on site. Spill kits will be provided on site. Emergency response procedure will include a management structure for dealing with all emergencies on site.

Section 40(4)(i) of the Waste management Act, 1996 as amended in 2003 requires that necessary measures be taken upon the permanent cessation of the activity concerned (including such a cessation resulting from the abandonment of the activity) to avoid any risk of environmental pollution and return the site of the activity to a satisfactory state.

In the event of cessation of activities at the Civic Amenity Facility, Cork County Council proposes the following closure and restoration measures:

- The equipment used at the site will be removed by Cork County Council
- Portable structures, such as recycling receptacles, will be removed from the site
- Street sweeper vehicles will be used to clean the site
- Office equipment will be removed
- Cork County Council will provide the EPA with at least six months written notice of any intention to close the facility.

There are no plans to decommission the Civic Amenity Facility in the foreseeable future.

Attachment L.2: Fit and Proper Person

This section is not applicable as the applicant, Cork County Council, is a local authority.