

## **ATTACHMENT D1 – SITE INFRASTRUCTURE**

### **D1.a Site Security Arrangements**

Refer to Section 2.2.1 of Environmental Impact Statement

### **D1.b Design for Site Roads**

Refer to Section 2.2.2 of Environmental Impact Statement and Drawing No. D1.1

### **D1.c Design of Hardstanding Areas**

Refer to Section 2.2.3 of Environmental Impact Statement and Drawing No. D1.1

### **D1.d Plant**

Refer to Section 2.2.6 of Environmental Impact Statement and Drawing No. D1.1

### **D1.e Wheelwash**

Refer to Section 2.2.4 of Environmental Impact Statement

### **D1.f Laboratory Facilities**

Refer to Section 2.2.5 of Environmental Impact Statement

### **D1.g Design and Location of Fuel Storage Areas**

Refer to Section 2.2.6 of Environmental Impact Statement

### **D1.h Waste Quarantine Areas**

Refer to Section 2.2.7 of Environmental Impact Statement and Drawing No. D1.1

### **D1.i Waste Inspection Areas**

Refer to Section 2.2.7 of Environmental Impact Statement and Drawing No. D1.1

### **D1.j Traffic Control**

Refer to Section 2.2.8 of Environmental Impact Statement

### **D1.k Sewerage and Surface Water Drainage Infrastructure**

Refer to Section 2.2.9 of Environmental Impact Statement and Drawing No. D1.1

### **D1.l All Other Services**

Refer to Section 2.2.10 of Environmental Impact Statement and Drawing No. D1.2

### **D1.m Plant Sheds, Garages and Equipment Compound**

Refer to Section 2.2.11 of Environmental Impact Statement

### **D1.n Site Accommodation**

Refer to Section 2.2.12 of Environmental Impact Statement.1

### **D1.o Fire Control System, including water supply**

Refer to Section 2.2.10 of Environmental Impact Statement

**D1.p Civic Amenity Facilities**

Not Applicable

**D1.q Any Other Waste Recovery Infrastructure**

Refer to Section 2.2.13 of Environmental Impact Statement and Drawing No. D1.1

**D1.r Composting Infrastructure**

Not Applicable

**D1.s Construction and Demolition Waste Infrastructure**

Refer to Section 2.2.13 of Environmental Impact Statement and Drawing No. D1.1

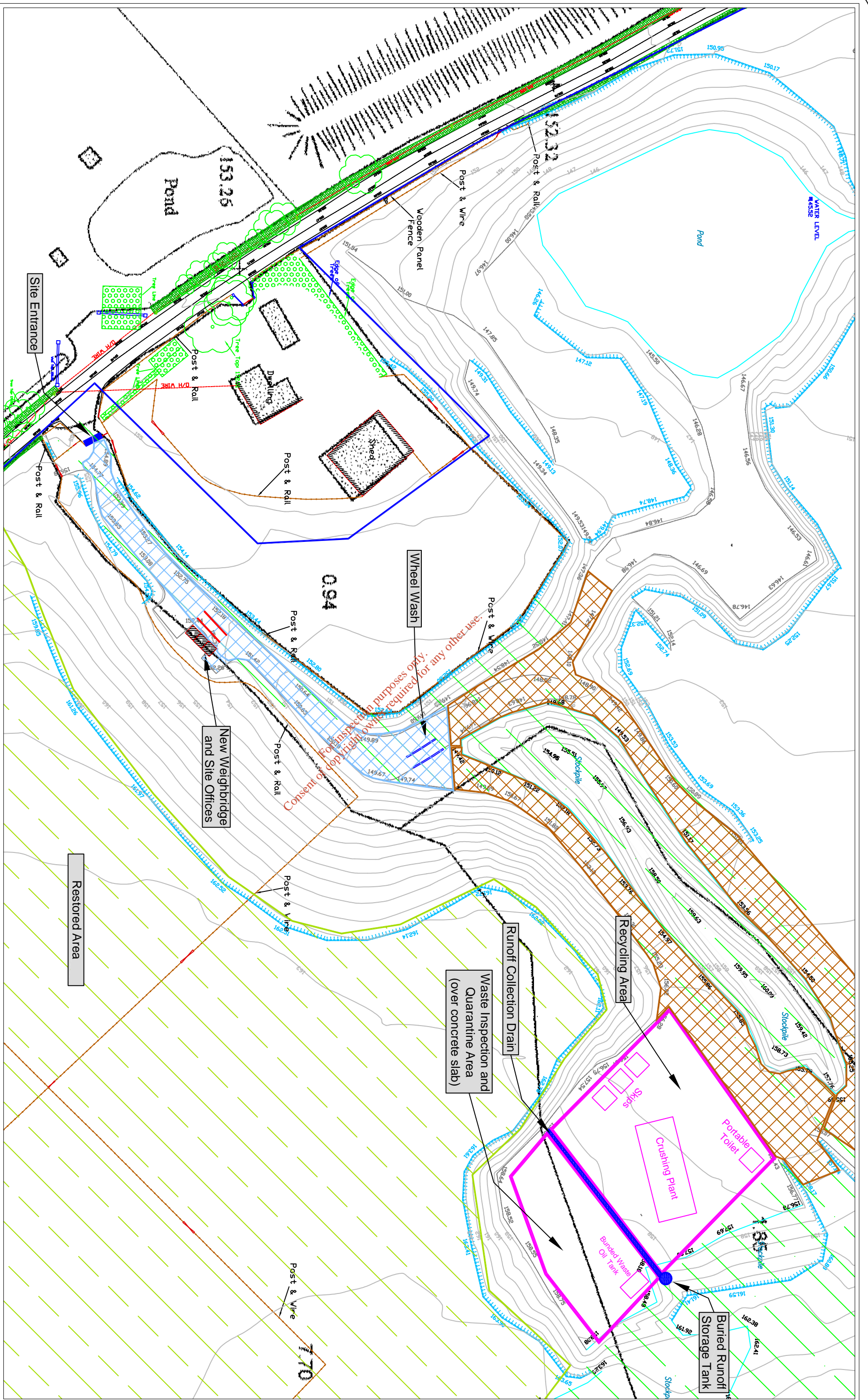
**D1.t Incineration Infrastructure**

Not Applicable

**D1.u Any Other Infrastructure**

Not Applicable

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



BEHANS LAND RESTORATION LTD.  
 BLACKHALL, PUNCHEDSTOWN  
 NAAS, CO. KILDARE

**JBA**  
 JOHN BARNETT & ASSOCIATES  
 7 DUNDRUM BUSINESS PARK  
 WINDY ARBOUR  
 DUBLIN 14

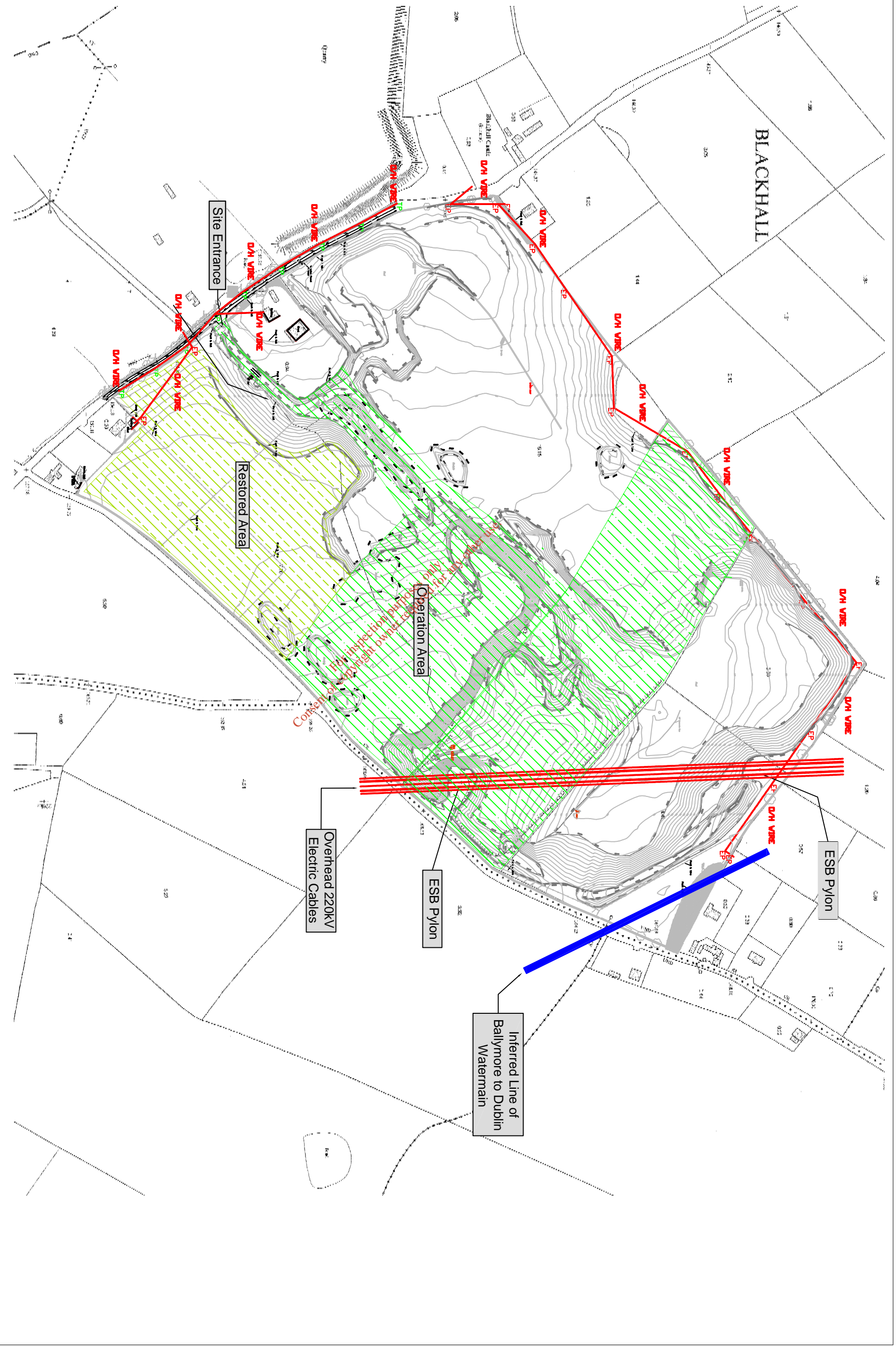
**LEGEND & NOTES:**

- Paved Access Track
- Unpaved Access Track
- Restored Area
- Hardstanding Area

Rev.	Date	By	Description
1	FEB 08	MK	
0	FEB 08	LMC	

Site:	LANDS AT BLACKHALL, CO. KILDARE
Project:	RESTORATION OF FORMER GRAVEL PIT
Title:	SITE INFRASTRUCTURE LAYOUT
Drawn:	MK
Scale:	1:1000
Job No.:	3746
Date:	March 2008

**FIGURE D1.1**



BLACKHALL

Restored Area

Operation Area

Site Entrance

Overhead 220kV  
Electric Cables

ESB Pylon

ESB Pylon

Inferred Line of  
Ballymore to Dublin  
Watermain

Contents of this drawing shall not be used for any other purpose without the written consent of the author.

BEHANS LAND RESTORATION LTD.  
BLACKHALL, PUNCHEDSTOWN  
NAAS, CO. KILDARE

**JBA**  
JOHN BARNETT & ASSOCIATES  
7 DUNDRUM BUSINESS PARK  
WINDY ARBOUR  
DUBLIN 14

**LEGEND & NOTES:**  
 EP ESB/Icon Pole and Cable  
 D/M VIRE Sewer Manhole and Details

Rev.	Date	By	Description
1	FEB 08	MK	
0	FEB 08	LMC	

Site:	LANDS AT BLACKHALL, CO. KILDARE
Project:	RESTORATION OF FORMER GRAVEL PIT
Title:	SITE UTILITIES LAYOUT
Drawn:	MK
Job. No.:	3746
Scale:	1:4000
Date:	March 2008

**FIGURE D1.2**

## **ATTACHMENT D2      OPERATION OF WASTE FACILITIES**

The proposed site restoration and waste recovery operations are described in the following sections of the Environmental Impact Statement :

Section 2.2	Site Infrastructure
Section 2.3	Restoration and Recovery Activities
Section 2.4	Waste Acceptance
Section 2.5	Environmental Nuisance Control
Section 2.6	Environmental Monitoring
Section 2.7	Restoration and Aftercare
Section 2.8	Outline Contingency Arrangements

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

#### **ATTACHMENT D4 – OFF-SITE WASTEWATER DISPOSAL**

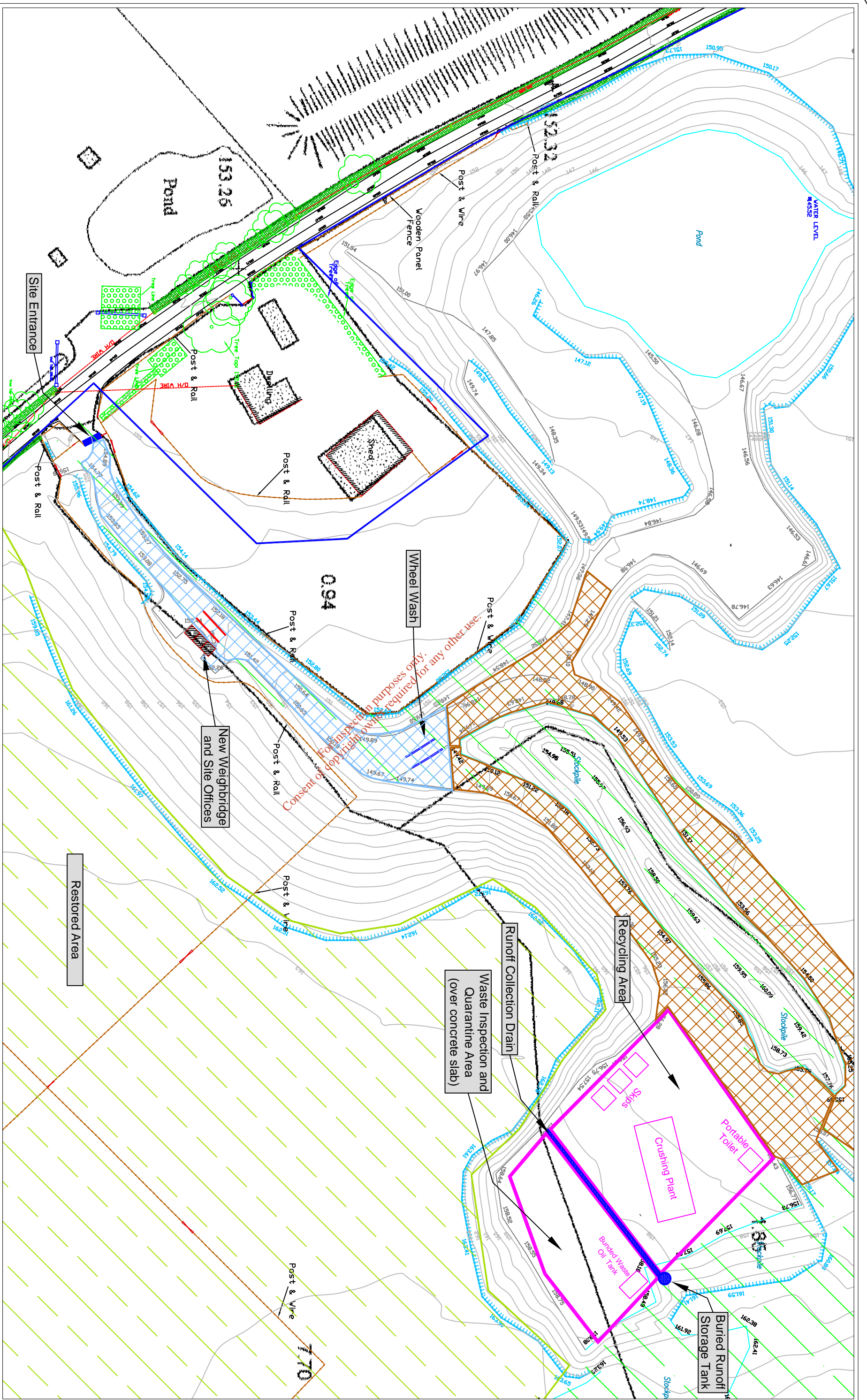
As part of this application, provision is made for construction of a temporary waste inspection and quarantine area adjacent to the waste recovery operations in the centre of the site. This area will comprised a 100mm thick reinforced concrete slab over 150mm of granular sub-base, bunded to a design storm volume.

Any surface water running over the surface of the concrete slab will be directed toward buried storage tanks with double skin protection located on the western side of the hardstanding area, as shown on Figure D4.1. Surface water will only be collected in the buried tanks when suspect waste consignments are stored at the quarantine facility. At all other times, surface water run-off the sealed slab will either percolate directly through the ground to the underlying groundwater table or will be directed over the existing ground surface to ponds in low lying areas, at which point it is effectively discharged to groundwater.

Should it be necessary to prevent high concentrations of suspended solids entering existing groundwater ponds, intermediate unlined temporary surface water ponds will be constructed as and where necessary to hold run-off and encourage settling out of suspended solids, prior to discharge to groundwater ponds at a lower level.

Any wastewater collected in the buried storage tanks will be emptied as and when required by licensed waste collectors and transferred to a collection tanker for disposal off-site at an approved wastewater treatment facility.

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



BEHANS LAND RESTORATION LTD.  
 BLACKHALL, PUNCHEDSTOWN  
 NAAS, CO. KILDARE

**JBA**  
 JOHN BARNETT & ASSOCIATES  
 7 DUNDRUM BUSINESS PARK  
 WINDY ARBOUR  
 DUBLIN 14

**LEGEND & NOTES:**

- Paved Access Track
- Unpaved Access Track
- Restored Area
- Hardstanding Area

Rev.	Date	By	Description
1	FEB 08	MK	
0	FEB 08	LMC	

Site:	LANDS AT BLACKHALL, CO. KILDARE
Project:	RESTORATION OF FORMER GRAVEL PIT
Title:	SITE INFRASTRUCTURE LAYOUT
Drawn:	MK
Scale:	1:1000
Job No.:	3746
Date:	March 2008

**FIGURE D4.1**

## **ATTACHMENT D6 – CAPPING SYSTEM**

### **D6.a Has the daily cover been specified?**

No. Not Applicable. This Waste Licence Application provides for backfilling of former quarry using only inert soils and inert recovered construction and demolition waste. As no biodegradable (organic) material will be used in backfilling the site, there is no requirement for any daily cover to control litter, bird, vermin and odour nuisances.

### **D6.b Has the intermediate cover been specified?**

No. Not Applicable. Refer to answer provided in D6a above.

### **D6.c Has the temporary capping been specified?**

No. Not Applicable. Refer to answer provided in D6a above.

### **D6.d Has the capping system been designed and does it meet the requirements of the Landfill Directive Annex 1?**

No. Not Applicable As this Waste Licence Application provides for backfilling of former quarry using only inert soils and inert recovered construction and demolition, there is no requirement to seal the ground surface to eliminate environmental hazards to ground and/or groundwater.

### **D6.e Does the capping include a flexible membrane liner?**

No. Not Applicable. This Waste Licence Application provides for backfilling of former quarry using only inert soils and inert recovered construction and demolition waste. As no biodegradable (organic) material will be used in backfilling the site, there is no requirement for a capping layer and/or flexible membrane to seal the ground surface.

### **D6.f Have all the capping materials been specified?**

No. Not Applicable. As this Waste Licence Application provides for backfilling of former quarry using only inert soils and inert recovered construction and demolition, there is no requirement to seal the ground surface to eliminate environmental hazards to ground and/or groundwater. Up to 1m of cover soils (comprising topsoil and subsoil) will be provided immediately below the final ground surface, refer to Section 2.3.14 of the Environmental Impact Statement.

### **D6.g Has a Method Statement for construction been produced?**

No. Not Applicable.

### **D6.h Has a Quality Control Plan been produced?**

No. Not Applicable.

### **D6.i Has a Quality Assurance Plan been produced?**

No. Not Applicable.

### **D5.j Has a programme for monitoring landfill stability been developed.**

Yes. Refer to Appendix 2.6.11 of the Environmental Impact Statement.

### **D6.k Has a programme for monitoring settlement been developed?**

Yes. Refer to Section 2.6.11 of the Environmental Impact Statement. The scope and extent of the topographical survey and position of survey points will be determined / agreed with Environmental Protection Agency on completion of each phase of restoration. A baseline topographical survey will be undertaken immediately following placement of cover soils and at annual intervals thereafter.