

**SECTION K – REMEDIATION, DECOMMISSIONING, RESTORATION & AFTERCARE**

<b>Sub-Section</b>	<b>Title</b>	<b>Location of Information</b>
K.1	Cessation of Activity	WLA p.37 and Attachment K.1 EIS Vol. 1 Section 2.10

<b>Figure No.</b>	<b>Title</b>	<b>Scale</b>	<b>Size</b>
K.1	Restoration Surface Contours and Drainage	1:2,500	A3
K.2	Cross Sections 1- 4	As Shown	A3

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

**ATTACHMENT K.1**  
**CESSATION OF ACTIVITY**

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

## **K.1 CESSATION OF ACTIVITY**

### **K.1.a Decommissioning and Restoration**

#### **K.1.b Overview**

The proposed C,D&E Facility will be a temporary development in operation for the lifetime of the restoration programme (estimated to be a ten year period) and is required to adhere to the requirements of the existing Waste Licence and planning permission. The outline plan presented below sets out the actions to be taken prior to closure of the facility. Successful decommissioning will only be complete when all buildings, equipment, materials wastes or any other materials, which could result in environmental pollution, are removed from the C,D&E Facility in accordance with the conditions of the planning permission, waste licence and other pertinent regulations.

The Decommissioning Plan is based on the following:

- A review of the types of activities to be carried out at the proposed C,D&E Facility, including waste handling and recovery options.
- Identification of potential hazards, including an evaluation of the waste products typically stored on-site and bund integrity.
- Identification of all items of plant and other materials, including buildings that may be decommissioned, rendered safe or removed from the C,D&E Facility for disposal or recovery in the event of closure of the facility.

The following areas will be dealt with during decommissioning.

#### **K.1.c Materials**

All residual materials and wastes present at the C,D&E Facility will be returned to the supplier, or recovered by a licensed waste contractor. This would include any fuel present in the storage tanks or any other materials required for the day to day running of the equipment.

#### **K.1.d C,D&E Waste**

All excess waste present in stockpiles will be recovered off-site by a licenced waste contractor. Any fill material will be removed and used for the capping.

---

### **K.1.e Equipment & Processes Materials**

The main equipment used during the process will include wheel loaders, excavators, crushers and screeners. This equipment will be either sold for operational use or as scrap at an approved waste disposal/ recovery facility. Cleaning of the majority of plant and equipment will be carried out at the Facility as it will not have accepted/processed hazardous material during the operation lifetime.

### **K.1.f Environmental Monitoring Results & Reports**

Environmental monitoring carried out as per any future waste licence will identify if any investigations or post closure monitoring is required to ensure that the facility poses no continuing risk to the environment. This will be reviewed based on monitoring data obtained during the operational period.

### **K.1.g Restoration Grading**

The ca. 2.2 ha. area of the proposed C,D&E Facility will be re-graded in accordance with a closure, restoration and aftercare plan (CRAMP) that will be agreed with the EPA under a condition of the Waste Licence. The restoration surface on the proposed C,D&E Facility site will blend into the adjoining restored lagoon/pond areas.

The waste lagoons and other lands currently within the IPPC Licenced site (and future waste Licence boundary) will be restored as required for beneficial after use on a phased basis. As shown on Figure D.1b the primary form of restoration will be capping with a layer of granular fill not less than ca. 2m thick. Prior to capping some of the in situ wastes will be moved to fill low areas and voids on other parts of the waste lagoon area as previously agreed with the Agency. Unfilled lagoons currently filled with water will be reclaimed by removing (pumping) the water and discharging it to either the IDA Sewer or the estuary depending on the quality of water at the time. The unfilled ponds will be reclaimed with imported materials meeting engineering specifications.

Wastes will not be deposited in the unfilled ponds.

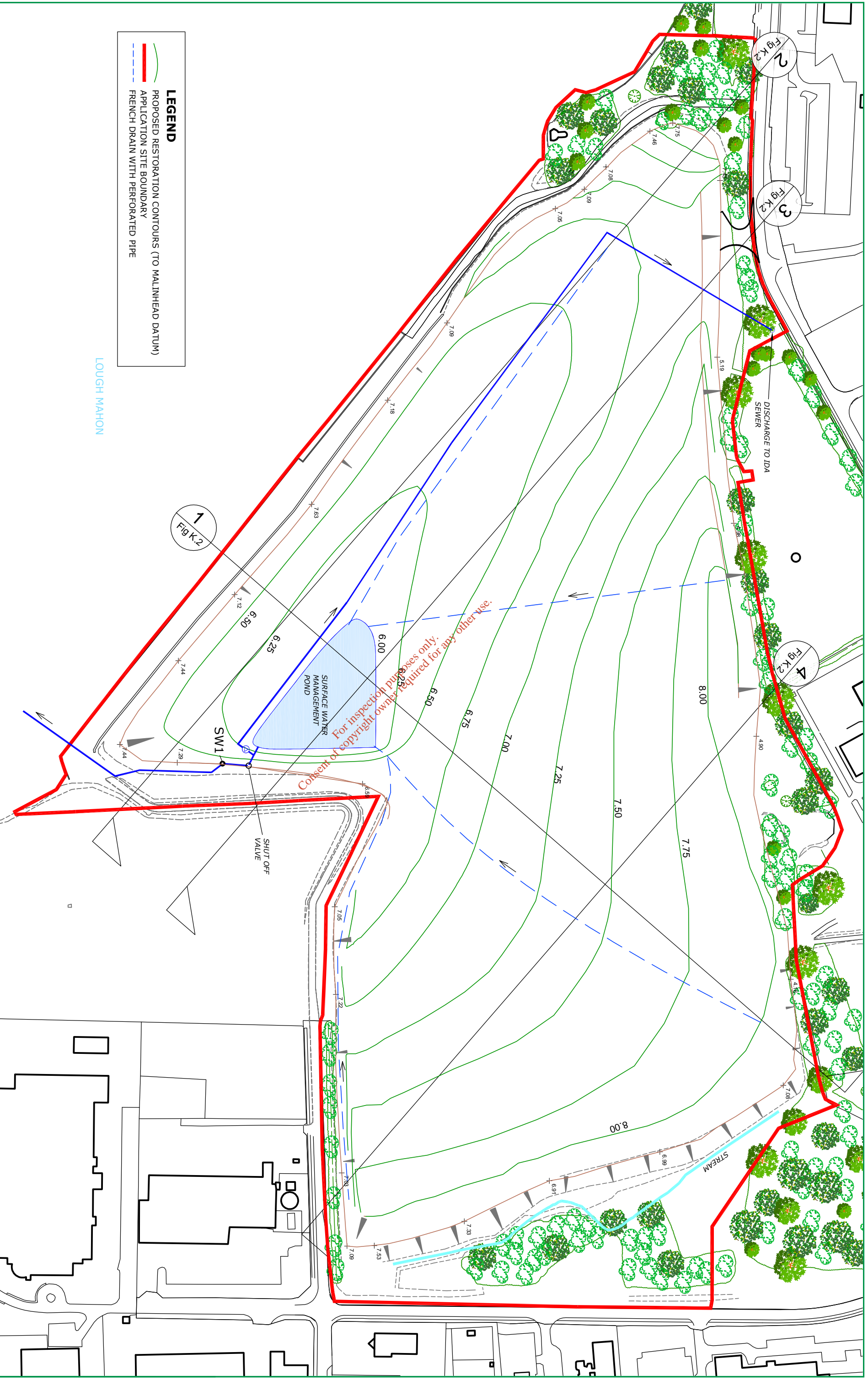
In summary, the restoration of the current IPPC Licensed site (future Waste Licence site) will be carried out in the following phases:

- 1) Undertake trial fills to provide further geotechnical data for the length of future ground improvement schemes;
- 2) Restore Cell 8 with a capping of granular fill;

- 3) Develop a C,D&E Waste Recovery Facility on the restored Cell 8 to produce engineered materials for capping and restoration of the rest of the site;
- 4) Remove standing water from the Lagoons on the waste surface;
- 5) Carry out cut and fill operations to move some of in-situ wastes, that have been placed above the containment bunds to low areas;
- 6) Place engineered products on the waste surface to form a granular cap;
- 7) Develop a Surface Water Management Pond and perimeter drainage works, contemporaneously with items No. 5 and No. 6;
- 8) Remove water from the unfilled ponds (cells 13 to 15) later in the restoration process and concurrently reclaim these areas with suitable engineering materials; and
- 9) Upon completion of all capping and restoration works, decommission the C,D&E Facility and regrade this area.

A conceptual plan of the restored Site and restoration levels is depicted in Figure K.1. Cross-sections through the restored Site are shown on Figure K.2.

Following on from the cessation of the waste recovery and restoration activities there will be a period of aftercare monitoring to ensure surface and groundwater water discharges are not adversely affecting the environment. In due course the licensee will seek to surrender the licence to allow beneficial use of the lands.

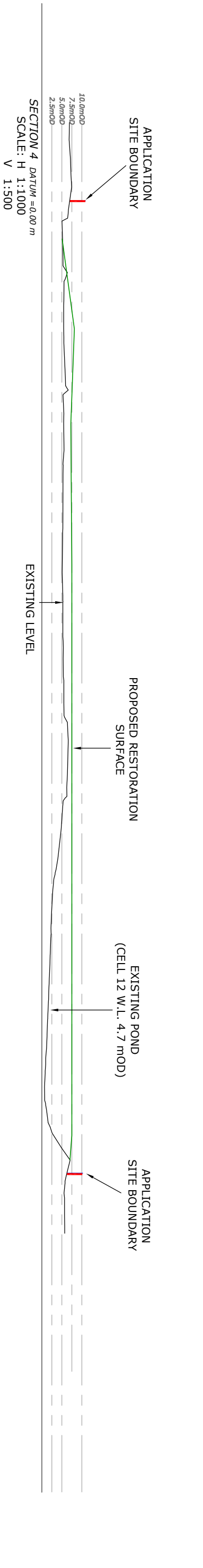
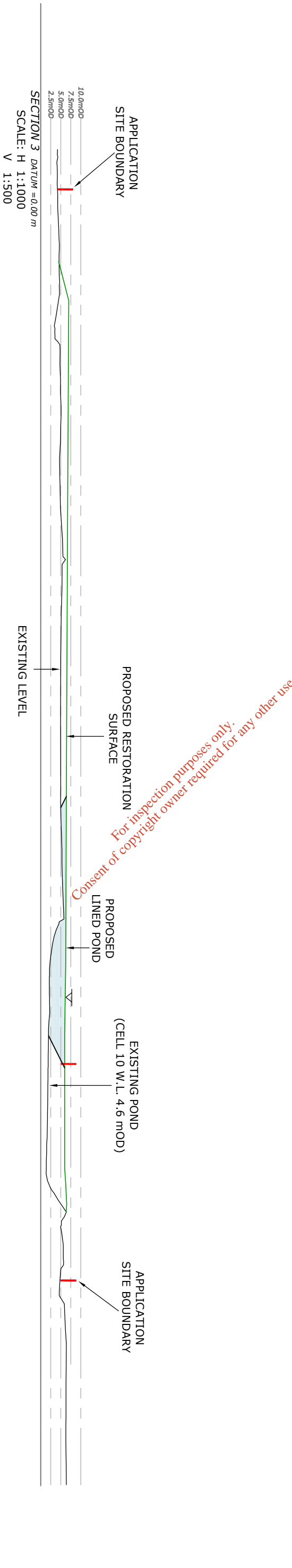
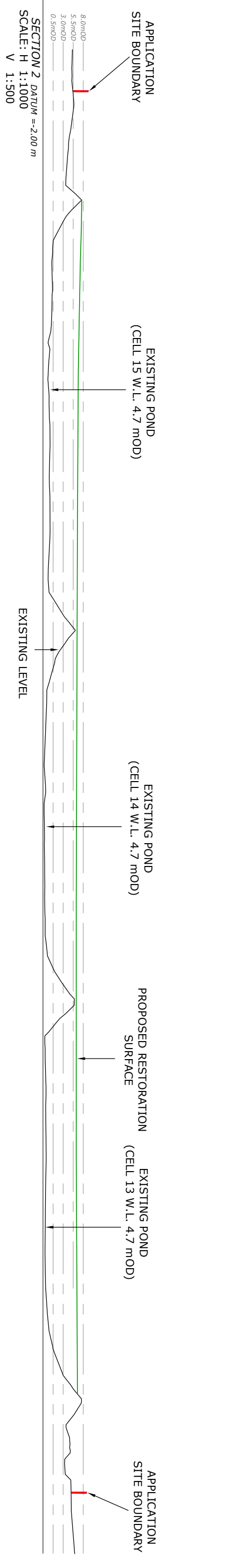
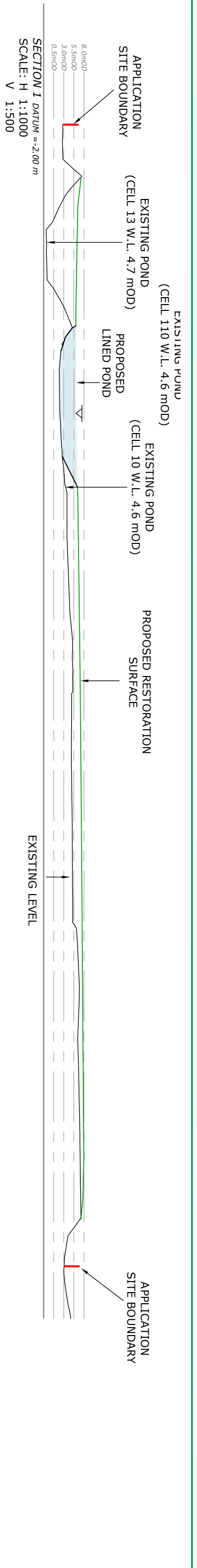


**LEGEND**


- PROPOSED RESTORATION CONTOURS (TO MALINHEAD DATUM)
- APPLICATION SITE BOUNDARY
- FRENCH DRAIN WITH PERFORATED PIPE

LOUGH MAHON

<p><b>Golder Associates</b></p> <p>TOWN CENTRE HOUSE, DUBLIN ROAD, MAAS, CO. KILDARE          TEL: 045 874411 - FAX: 045 874549 - WWW.GOLDER.COM</p>	Client:	<b>THORNBUSH HOLDINGS Ltd.</b>		Created by	CC	Issue to	ISSUE TO CLIENT	Date	MAY '08	Revision	A	Figure No.
	Location:	WALLINGSTOWN, LITTLE ISLAND, CO. CORK		Engineer	GP	Issue to	ISSUE TO EPA	Date	MAY '08	Revision	B	
Project:	WASTE LICENCE APPLICATION		File Location:	ORDNANCE SURVEY IRELAND LICENCE NUMBER		RESTORATION SURFACE CONTOURS AND DRAINAGE		Scale	1:1,250 A1 1:2,500 A3		<b>K.1</b>	
			THORNBUSH\WLA\K1 PLAN	AR0056008		Reviewed by		GP				



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

		<b>Client:</b> <b>THORNBUSH HOLDINGS Ltd.</b>		<b>Project number:</b> 07507120021		<b>Created by:</b> CC		<b>Issue to:</b> ISSUE TO CLIENT		<b>Date:</b> MAY '08		<b>Revision:</b> A		<b>Title:</b> <b>CROSS SECTIONS 1 TO 4</b>		<b>Figure No.:</b> <b>K.2</b>	
<b>Location:</b> WALLINGSTOWN, LITTLE ISLAND, CO. CORK		<b>File Location:</b> GRAPHICS\2 LAND DEVELOPMENT \AUTOCAD \ THORNBUSH \WLA\K1-2		<b>Engineer:</b> GP		<b>Engineer:</b> GP		<b>Issue to EPA:</b> ISSUE TO EPA		<b>Date:</b> MAY '08		<b>Revision:</b> B		<b>Scale:</b> AS SHOWN			
<b>Project:</b> WASTE LICENCE APPLICATION		<b>ORDNANCE SURVEY IRELAND LICENCE NUMBER:</b> AR0056008		<b>Reviewed by:</b> GP													
<b>TOWN CENTRE HOUSE, DUBLIN ROAD, MAAS, CO. KILDARE</b> TEL: 045 874411 - FAX: 045 874549 - WWW.GOLDER.COM																	