

Attachment D

Infrastructure & Operation



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D.1. Infrastructure


The following table contains details of the site infrastructure and appropriate documentation as necessary. The Information provided follows the sequence, and uses the headings, established in Table D.1 of the waste licence application form.

Appropriately scaled drawings ($\leq A3$) have also been provided showing the location and relevant details with respect to site infrastructure (Refer to Figures D.1.1 to D.1.8).

D.1.a	<p>Site security arrangements including gates and fencing</p> <p>The boundaries of the site are secure being established hedgerows, boundary walls and stock proof fencing.</p> <p>The site entrance gates will be locked outside of normal working hours and public warning notices are posted at appropriate locations along the site boundary. There is also CCTV at the site entrance. These measures are to ensure that there is no unauthorised dumping of unacceptable wastes outside of operating hours likely to give rise to nuisance.</p> <p>A daily site inspection including site boundaries adjoining public roads shall be carried out.</p>
D.1.b	<p>Designs for site roads</p> <p>The site will be accessed via an existing entrance off the Prosperous to Kilmeage road. The private access road has been surfaced with macadam. Temporary haul roads will be developed within the pit as necessary for access to restoration areas in the pit.</p> <p>All materials will be transported to the site using heavy goods vehicles (HGV's).</p> <p>The site access road between the site entrance and wheelwash has been provided with an asphalt surface. There is no evidence of mud and debris being carried out on to the public road.</p> <p>Imported clean construction and demolition waste (concrete and brick) will be used to construct internal haul roads as required.</p>
D.1.c	<p>Design of hardstanding areas</p> <p>Hard standing surfaced (asphalt & concrete) areas currently exist around the site office area. Sand and gravel, and/or recovered construction and demolition waste (previously imported to site under Waste Management Permit No. 126/2003) has also been used to provide hard standing areas within the existing site.</p> <p>Existing concrete hard standings (old aggregate storage bays) will be utilised for inspection/quarantine areas (i.e. temporary storage of any inappropriate materials discovered (e.g. glass, plastic, timber, steel, etc)). Skips will be provided for the temporary storage of any inappropriate materials discovered. The materials will be routinely removed by a licensed waste disposal contractor to an appropriate disposal facility. Surface water run-off from the quarantine area will be directed to a silt trap with discharge to ground via a Class I Full retention separator (Refer to Drawing D.1.7). Plant and machinery used on site will be parked on the hard standing outside of normal operating hours.</p>

<p>D.1.d</p>	<p>Plant</p> <p>Plant on site will comprise a bulldozer, excavator, tractor and bowser, road sweeper attachment. A loading shovel and crushing and screening plant will be utilised by the proposed C&D Recycling Facility.</p> <p>There is a weighbridge on site. Trucks entering the site are typically 4 axle 9 cu.m capacity rigid bodied tippers. Details with respect to truck loads and volume of inert materials received will be recorded electronically at the site inspection office.</p>
<p>D.1.e</p>	<p>Wheel-wash</p>  <p><i>Existing wheelwash facility</i></p> <p>The existing wheelwash facility will be maintained and continue to be operated for the duration of the development. The wheelwash was provided in compliance with condition No. 11 of planning permission P.A. Reg. Ref. No. 1773/03. All trucks are required to pass through leaving the site. A detail drawing of the existing wheel wash facility has been included (Refer to Drawing D.1.8).</p>
<p>D.1.f</p>	<p>Laboratory facilities</p> <p>Laboratory facilities on site will not be required as the services of an external accredited lab will be used as required.</p>
<p>D.1.g</p>	<p>Design and location of fuel storage areas</p>  <p><i>Typical Bunded Fuel Bowser (Example Photo)</i></p>

	<p>A mobile double skinned (integrated bunding) fuel bowser will be used to refuel mobile plant on site (Refer to EIS Section 2.4.4 - Fuel Storage Areas). The bowser will be provided with a spill tray and spill kit. The fuel bowser will be kept within an existing surfaced aggregate bay with surface runoff from the hard standing directed to a silt trap with discharge to ground via a Class I Full retention separator (Refer to Drawing D.1.7).</p> <p>No waste oil products are stored on site. Waste oils will be disposed of by a licensed waste contractor and removed off site (Refer also to EIS Section 3.7.4).</p> <p>All oil barrels and lubricants will be stored on spill pallets/ spill trays.</p> <p>Spill kits will be maintained on site and the Company will put in place an emergency response procedure for hydrocarbon spills and appropriate training of site staff in its implementation.</p>
D.1.h	<p>Waste quarantine areas</p> <p>The site will have a designated area for the quarantine of any inappropriate materials which may be found within loads accepted at the site. Skips will be provided within the designated quarantine area for the temporary storage of any inappropriate materials discovered (e.g. glass, plastic, timber, steel, etc). The materials will routinely be removed by a licensed waste disposal contractor to an appropriate disposal facility.</p> <p>Surface water run-off from the quarantine area will be directed to a silt trap with discharge to ground via a Class I Full retention separator (Refer to Drawing D.1.7).</p>
D.1.i	<p>Waste inspection areas</p> <p>All truck loads entering the site will be given a preliminary inspection on entering the site.</p> <p>Secondary inspection will be carried out after each load is tipped at the restoration infill area within the site. Should a load of material indicate contamination of non inert material on inspection, the material will be reloaded and the driver instructed to remove the load offsite to an approved facility.</p> <p>Construction and Demolition waste to be recovered as secondary aggregates will be tipped in a designated bay for inspection and characterisation. Accepted material will be directed to the appropriate stockpile for subsequent recovery/processing through the facility.</p> <p>Occasionally a load will contain minor contaminants (e.g. plastics, rebar, wood and paper). These items will be removed on inspection by a site operative and stored in a designated quarantine area pending removal offsite by a licensed waste disposal contractor to an appropriate disposal facility.</p>
D.1.j	<p>Traffic control</p> <p>Car parking including visitors parking is provided at the site entrance in front of the main office. Trucks entering the site will report to the site office where each load will be inspected as to its suitability to be recovered on site.</p> <p>An automatic barrier ensures there is no unauthorised entry to the site. The site entrance has also been designed to ensure that queuing for vehicles entering the site is accommodated within the curtailage of the site entrance.</p>

	<p>All trucks exiting the site leave through the existing wheelwash facility.</p> <p>Traffic direction signs, warning signs, speed limit signs are established throughout the site.</p> <p>Refer to EIS Sections 2.4.2 – Site Access Road and 3.6 – Traffic.</p> <p>Refer also to attached Drawing D.1.1 Site Infrastructure – Phase 1. Traffic Routing (In/out) is indicated.</p> <div data-bbox="794 439 976 613" style="text-align: center;">  </div> <p style="text-align: center;"><i>Examples of Existing Signage</i></p>
<p>D.1.k</p>	<p>Sewerage and surface water drainage infrastructure</p> <p>Existing temporary portacabin offices and toilet will be retained on site for the duration of the works. The portacabins will function as the site office and canteen for the duration of the operations.</p> <p>On site activities will not discharge to any sewerage system. It is proposed to continue using the existing toilet facility which discharges to a c. 2m diameter holding tank to the rear of the site office. The holding tank is periodically emptied and disposed of offsite by a licensed waste disposal contractor to an appropriate disposal facility. The location of the holding tank is shown on the attached Figure D.1.1.</p> <p>As only inert materials are to be imported to site there will be no source of possible contamination of surface waters. There are no surface water courses adjoining the site. Surface water-off within the site percolates to ground through the floor of the sand and gravel pit into the underlying bedrock.</p> <p>Surface water run-off from the quarantine and refueling area will be directed to a silt trap with discharge to ground via a Class I Full retention separator (Refer to Drawing D.1.7).</p> <p>Ground water quality monitoring can be carried out in accordance with any monitoring programme agreed with the EPA.</p>
<p>D.1.l</p>	<p>All other services</p> <p>The existing site office and washroom facility will be retained at the site entrance for the duration of the reclamation programme. An existing single phase underground electricity supply provides for lighting and heating of the office. An underground telephone line also serves the site office.</p> <p>The water supply for the wheelwash and sprinkler system is met by an existing borehole on site.</p> <p>The lighting for this development is that attached to any plant and machinery, the site office, aggregate batching plant and associated buildings. For the short periods when the operation will be working into darkness (i.e., over winter months), the operators will ensure that sufficient lighting is provided to ensure safe operations. As waste recovery activity will be screened from public view, light pollution from site activity will be minimal.</p>

D.1.m	<p>Plant sheds, garages and equipment compound</p> <p>Other structures on site to be utilised comprise of storage containers, stores, Aggregate storage bays (to be used for inspection/quarantine and material storage). No major vehicle servicing/repairs are carried out on site.</p> <p>Plant and machinery used on site will be parked on the hard standing at the site entrance outside of normal operating hours.</p>
D.1.n	<p>Site accommodation</p> <p>The temporary site office accommodation comprises of a large portacabin structure including canteen, washroom facilities, dispatch office and offices. This infrastructure will be removed immediately following the restoration of the pit.</p>  <p style="text-align: center;"><i>Existing Site Office at site entrance</i></p>
D.1.o	<p>A fire control system, including water supply</p> <p>In the event of a fire, the employee on the scene shall raise the alarm with all staff in the immediate area and confirm that all staff are present and accounted for. Assist in containing the fire using the appropriate extinguisher – only if it is safe and they are confident to do so. All personnel will have also undergone appropriate training and will be aware of potential hazards on site.</p> <p>In the event where a fire cannot be controlled the appropriate emergency services will be contacted either by dialling “999 or 112” and informing the operator of which service is required. An emergency contact list shall be maintained at the site office.</p> <p>The incident will also be reported immediately to the Site Foreman/Facility Manager.</p> <p>If the fire is located adjacent to explosive or further flammable materials the area should be vacated immediately and personnel should retreat a safe distance. Emergency services should be made aware of any potential hazards on site when they arrive.</p> <p>A water supply will be available from an on-site groundwater well.</p> <p>Fire hoses and extinguishers will be available on site.</p> <p>No burning of waste will be permitted on site.</p> <p>There will be no unauthorised people allowed access to the site.</p>

D.1.p	<p>Civic amenity facilities</p> <p>Not Applicable to this site.</p>
D.1.q	<p>Any other waste recovery infrastructure</p> <p>Refer to previous sections and the attached Site Infrastructure Plans D 1.1 to D.1.3.</p>
D.1.r	<p>Composting infrastructure</p> <p>Not Applicable to this site.</p>
D.1.s	<p>Construction and Demolition waste infrastructure</p> <p>Accepted material will be directed to the appropriate stockpile for subsequent recovery/processing through the facility. Recovery and recycling activities at the application site will involve tipping of previously stockpiled 'unprocessed' material into a mobile crushing & processing plant using a front-end loader. Material produced by the plant will then be transported by front-end loader to 'processed' stockpiles. Recycled material (subject to reaching end of waste status (Article 28)) will be used for internal haul roads and/or dispatched off-site.</p> <p>Depending on material type, it may undergo a combination of sorting, crushing, screening, and grading as part of the material recovery process.</p> <p>No sorting of materials other than separation of rebar from concrete will be undertaken on site as all material will be sorted and segregated at source before being brought to the application site. Rebar (reinforced steel) separated from concrete will be stored in the designated quarantine area awaiting removal off-site by a licensed scrap merchant.</p> <div data-bbox="564 1435 1214 1704" data-label="Image"> </div> <p style="text-align: center;"><i>Typical Primary Crusher</i></p>
D.1.t	<p>Incineration infrastructure (if applicable).</p> <p>Provide information to fulfil Article 4 (2) & (3) of the Incineration of Waste Directive</p> <p>Not Applicable to this site.</p>

D.1.u**Any other infrastructure*****Weighbridge***

Each truckload will be weighed on the weighbridge, characterised by material type and assigned an EWC code. These details along with the date, time, producer and haulier, vehicle number, site of origin will be recorded electronically and available to view on request.



Existing Weighbridge & Barriers

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D.2 Facility Operations

D.2.(a). Unit operations

The attached Site Infrastructure Plans (Refer to Figures D.1.1 to D.1.3) indicate the location of all activities and identifies all buildings and facilities at the Recovery Facility.

Refer also to EIS Sections 2.4.5 – Waste Inspection Areas, 2.4.6 – Waste Quarantine Areas and 2.5.5 – Waste Handling.

Delivery, Inspection & Acceptance

Materials to be recovered will only be accepted from approved Contractors who are aware of the need for and who undertake strict segregation and sorting of waste prior to transporting it to the application site.

The applicant will endeavour to visit the construction sites to ensure materials are being properly sorted and segregated at source.

Typically loads of up to 9 cu.m will be imported to site. Only hauliers with the appropriate Waste Collection Permits will be accepted.

All truck loads entering the site will be given a preliminary visual inspection on entering the site. If the material is not considered acceptable the haulier is refused entry and directed to an appropriate Waste Management Facility.

Any Contractor who persistently carries unacceptable waste to the application site will be denied further use of the facility.

Each truckload will be weighed on the weighbridge, characterised by material type and assigned an EWC code. These details along with the date, time, producer and haulier, vehicle number, site of origin will be recorded electronically and available to view on request.

A designated internal haul road will be maintained to direct site traffic to the tipping area.

Accepted materials will be subject to a second inspection after each load is tipped at the restoration infill area within the site. Should a load of material indicate contamination of non inert material on inspection, the material will be reloaded and the driver instructed to remove the load offsite to an approved facility.

Quarantine

Occasionally a load will contain minor contaminants (e.g. plastics, rebar, wood and paper). These items will be removed on inspection by a site operative and stored in a designated quarantine hardstand area (Refer to Figures D.1.1 to D.1.3) pending removal offsite by a licensed waste disposal contractor to an appropriate disposal facility.

Recovery of Soils

Following the second inspection the material will be accepted and placed within the restoration (placement by bulldozer/excavator) area or in the case of topsoil placed in temporary storage awaiting final placement.

Phasing of Restoration Works

Restoration of the sand and gravel pit is to be carried out in accordance with the scheme submitted under Planning Permission P.Ref. No. 1773/03.

The lands have undergone partial restoration under Waste Management Permit No. 126/2003. It is estimated that c. 440,000 tonnes of inert soil and stone and construction and demolition waste was imported to site under the terms of the previous waste permit.

The backfilling/restoration at Kilmeage is to be carried out in accordance with the agreed landscaping plan submitted to Kildare Co. Council. In accordance with Condition No. 33 of P.A. Reg. Ref. 03/1773, *“as soon as is practicable following completion of the in-filling activities, the site shall be seeded with grass. Prior to seeding, topsoil shall be spread evenly over the site to a minimum depth, after firming, of 150 -200 mm. The topsoil shall be good quality, and shall comply with BS 3882: 1991. The topsoil shall not be spread in wet conditions. The topsoil shall be adequately prepared for seeding by raking or harrowing and by rolling. Seed shall be spread at a minimum rate of 30 grams per square metre”*.

The phased scheme for final restoration of the area is shown by Figures D.1.1 to D.1.4.

The volume of material required to be imported to the site to complete the proposed restoration scheme has been calculated (using the Digital Terrain Modelling Software Package LSS) and is shown below.

Table D.1. Volume of Material to be Imported for Restoration Works at Kilmeage Pit

Phase	Void Space		Life Span		Depth of Fill		Comments
			345,000 tpa	250,000 tpa	Average ⁴	Maximum ⁵	
	m ³	tonnes ¹	Years ²	Years ³	m	m	
1A	11,907	23,814	0.1	0.1	5.2	15	Remedial works required to support the eastern boundary by banking of engineering fill material against the quarry face
1B	27,557	55,114	0.2	0.2	4.9	18	As above including infill of old access road to pit floor. A new access is to be constructed towards the centre of the site.
1C	50,609	101,218	0.3	0.4	8.2	17	As above.
1D	34,784	69,568	0.2	0.3	4.0	17	Infilling of area between new main internal access road and western boundary. Eastern boundary to be backfilled/graded to c. 1:2 slope.
2A	117,342	234,684	0.7	0.9	8.5	17	Backfilling of southeastern corner to final restoration profile.
2B	124,916	249,832	0.7	1.0	9.4	31	Backfilling of northern corner to final restoration profile.
3A	182,148	364,296	1.1	1.5	8.4	20	Backfilling of Bottom of pit floor to 114 mAOD.
3B	172,064	344,129	1	1.4	6.4	24	Backfilling to 122 mAOD.
4	262,409	524,817	1.5	2.1	5.6	32	Final Restoration
Totals	983,736	1,967,472	5.7	7.9	6.7	32	

Notes: 1. Assumes conversion factor of 2 tonnes/m³ for inert soils and stones (allowing for compaction and settlement). This is based on JSPE Ltd's experience and other operators in the sector.

2 Assumes 345,000 tonnes recovered per annum (subject to market conditions). This figure is based on the maximum limit of 50 truck loads per day permitted (Condition No. 38 P.A.Reg. ref. 03/1773).

3, it is considered that the average fill rate will be closer to 250,000 tonnes per annum.

4. Average fill depth for Phase of development.

5. Maximum overall fill depth for phase since commencement of operations

The lands are to be restored to forestry/agricultural use by importation and recovery of inert materials in accordance with a phased restoration scheme. It is the intention to develop them for agricultural/ forestry use. Each phase will be for a duration of about 1 to 2 years (Refer to Figures D.1.1 to D.1.4 and Table D.1). The above table also includes details with respect to the average and maximum depth of fill.

A bulldozer will be used to appropriately grade and compact the material to the desired profile as shown by the detailed plans and sections (Refer to Figures D.1.1 to D.1.6). Typically the soil will be placed in 2-3 metre lifts with fill slopes of a safe angle of repose of 1:2.

Good quality imported soil will be conserved wherever possible to provide the subsoil/top-soil capping. These topsoil's/subsoil's will be handled under dry conditions to minimise compaction. For the purpose of restoration to agricultural the restored soil profile (capping) shall comprise 300mm topsoil over 1200-1350mm of subsoil.

Progressive restoration involving grass seeding of restored areas shall be carried out on a staged basis to reduce the effects of soil erosion, windblown dust, to aid ground stabilisation and as an effective means of weed control.

Final restoration is dependent on the availability of good topsoil/subsoil and subject to suitable weather conditions.

In order to allow for continuity of operations it is necessary to have a certain overlap between phases. The final contours and topography for the site is shown by the Site Infrastructure – Final Restoration Plan Figure D.1.4 and Cross Sections D.1.5 & D.1.6.

In order to access the pit floor the haul roads shall be constructed using suitable imported material (i.e. brick, block, concrete and stone). The proper construction of the haul road will help minimise the amount of mud and dust generated by lorries entering and leaving the site.

The following detail measures relating to handling and placement of soils will also be observed. i.e.

- For the replacement of subsoil and topsoil, the machinery will work from the haulage track or the exposed subsoil surface and away from the reinstated part of the site.
- Topsoil and any subsoil should be stockpiled separately or when used directly should be placed separately to maintain the integrity of the soils.
- To ensure that damage to these materials is kept to a minimum placement of soils should take place during appropriate weather conditions and when the soils

are in the optimum condition. This optimum soil condition may be described as moist but friable. No soils should be moved when they are too dry or when there are unusually windy weather conditions.

- This will help to prevent erosion and any consequential creation of dust. Conversely, soils should not be handled in wet conditions or when the moisture content of the soils is too high. This will ensure that smearing of the soils does not take place and that the soil retains its structure.
- When any soils are placed in temporary storage, a final slope angle of no greater than 1:1.5 should be maintained. This angle is considered to be the maximum acceptable slope to ensure that no excessive erosion takes place.
- Topsoil shall be stored to a height not exceeding 3 metres to preserve organic constituents.
- Any temporary soil and overburden stockpiles should be seeded at the earliest appropriate season to stabilise the surface and further safeguard against erosion.
- Re-handling of soil materials should be kept to a minimum, or avoided if possible, in order to preserve the integrity of the topsoil material.
- Soil fertility can be restored where necessary by the application of lime and fertilizer once the soils have been replaced.

Phase 1

Remedial works required to support the eastern boundary by banking of engineering fill material against the quarry face are to be prioritised during phase 1 of the restoration works (Refer to Figure D.1.1). A new access is to be constructed towards the centre of the site so as to facilitate completion of these works. Infilling of area between the new main internal access road and western boundary will also be undertaken. Fill slopes will typically be backfilled/graded to c. 1:2 slope which is consistent with guidance with respect to suitable gradients related to various after uses as outlined in the Landfill Restoration and Aftercare Manual (1999) produced by the EPA.

A Method Statement and Risk Assessment with respect to the proposed works has also been prepared by applicants Health and Safety consultant (Refer to Attachment D.7).

Phase 2

This phase of the development will result in the completion of backfilling of southeastern and northern corners of the site to final restoration profile (Refer to Figure D.1.2).

Phase 3

Backfilling of bottom of pit floor will be undertaken in two main lifts to 114 mAOD and 122 mAOD (i.e. Phase 3A and 3B respectively; refer to Figure D.1.3). This phase of the development will also see the removal of all bagging and batching plant infrastructure on the pit floor.

Phase 4

This phase will see the completion of Final Restoration of the site in accordance with the scheme submitted under Planning Permission P.Ref. No. 1773/03 (Refer to Figure D.1.4).

Decommissioning

Redundant structures, plant equipment and stockpiles will be removed from site on cessation of site activity. Plant and machinery will either be utilised by the operators on other sites, or be sold as working machinery or scrap. The hard standing areas shall be broken up and the material recovered. The site access will be retained as agricultural access to the restored lands.

As part of the decommissioning process, all fuel and oil storage tanks will be removed from the site by a licensed waste contractor. The holding tank will also be removed from the site. Therefore, there will be no potential for fuel, oil or sewage to cause long-term water pollution following cessation of extraction activities.

Aftercare

An aftercare scheme will be implemented with the aim of bringing the restored soils (and hence land) into a condition which does not need to be treated differently from undisturbed land in the same use. The final restoration of the site will facilitate an agricultural after-use similar to that which existed prior to extraction works.

Recovery of Construction Materials

It is estimated that c. 20,000 tonnes per annum of construction and demolition waste will be imported to site. Due to relatively small volumes it is likely that a mobile crusher/screening unit will be mobilised to site on a campaign basis and/or 3 monthly intervals.

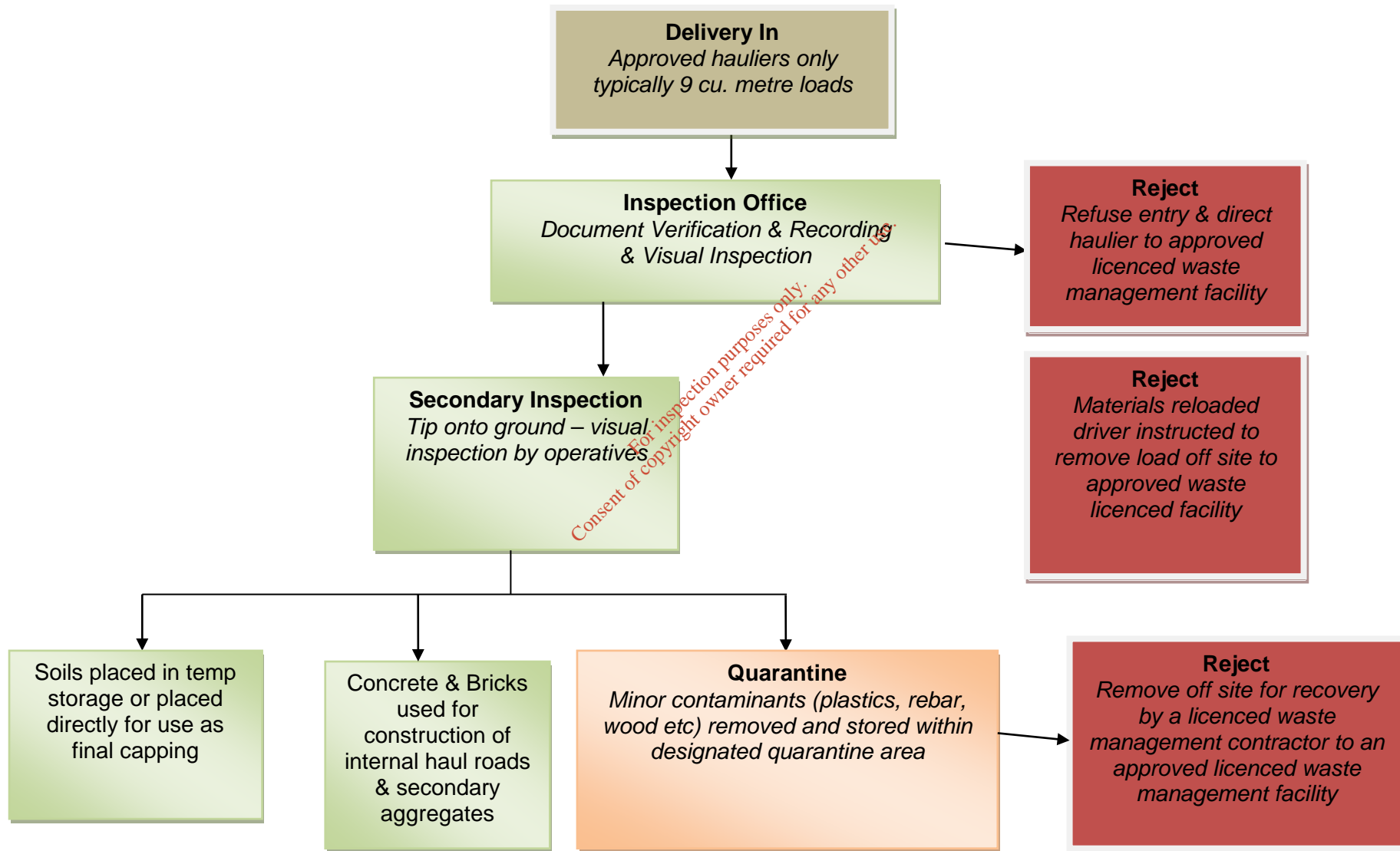
Accepted material will be directed to the appropriate stockpile for subsequent recovery/processing through the facility. Recovery and re-cycling activities at the application site will involve tipping of previously stockpiled 'unprocessed' material into a mobile crushing & processing plant using a front-end loader (Refer to Figures D.1.1 to

D.1.3). Material produced by the plant will then be transported by front-end loader to 'processed' stockpiles. Recycled material (subject to reaching end of waste status (Article 28) will be used for internal haul roads and/or dispatched offsite.

No sorting of materials other than separation of rebar from concrete will be undertaken on site as all material will be sorted and segregated at source before being brought to the application site. Rebar (reinforced steel) separated from concrete will be stored in the designated quarantine area awaiting removal off-site by a licensed scrap merchant.

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D.2.(b). Flow diagram of the whole process, along with a brief description (*italics*) detailing its management and maintenance plans.



D.2.(c). Aspects of the facility operation that can cause emissions to the environment during normal operation

The main potential sources of emissions from an inert waste recovery facility would be from noise or dust associated with the movement, handling and placement of materials. Possible other emissions to the atmosphere would be from machinery exhaust fumes and also possible emissions to groundwater in the event of a fuel spillage. Full descriptions of possible emissions, means of abatement and treatment measures are contained in Attachments E & F.

D.2.(d). Brief details of the activities carried on in laboratory facilities associated with the activity (if relevant).

A laboratory is not required on site as the facility will only accept inert material. Any laboratory analysis (e.g. soils, groundwater, dust) required will be carried out by an accredited laboratory off site.

D.2.(e). For Incineration facilities (if applicable), provide information to fulfil Article 6 of the Incineration of Waste Directive.

Not Applicable to the proposed site.

D.3 Liner System

No liner system is required as only inert material is being used to restore the lands.

D.4 Leachate Management

As only inert materials are being used to restore the lands, no leachate will be created and therefore no leachate management is required.

A groundwater monitoring programme will also be put in place to ensure that there is no impact on water quality as a result of the recovery operations.

D.5 Landfill Gas Management

As only inert materials are being used to restore the lands there will be no landfill gas generated as result of the recovery activity on site.

D.6 Capping System

It is proposed to reclaim the lands to a condition and profile suitable for agricultural use. For the purpose of restoration to agriculture the restored soil profile (capping) shall comprise 300mm topsoil over 1200-1350mm of subsoil.

The applicant is an experienced earthmoving contractor. Soils will be handled in accordance with accepted guidelines and good practice.

Good quality soil material for final capping will be placed in temporary storage areas. Topsoil and subsoil will be stockpiled separately to maintain the integrity of the soil.

To ensure that damage to these materials is kept to a minimum, movement and placement of topsoil and subsoil for final restoration will only take place during appropriate weather conditions and when the soils are in the optimum condition. This optimum soil condition may be described as moist but friable. No soils will be moved when they are too dry or when there are unusually windy weather conditions. This will help to prevent erosion and any consequential creation of dust. Conversely, soils will not be handled in wet conditions or when the moisture content of the soils is too high. This will ensure that smearing of the soils does not take place and that the soil retains its structure.

Progressive restoration involving grass seeding of restored area's will be carried out on a staged basis to reduce the effects of soil erosion, windblown dust, to aid ground stabilisation and as an effective means of weed control.

D.7

Method Statement and Risk Assessment

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Method Statement & Risk Assessment
















Contractor	Name: N & C Enterprises	Address: Blackhill House, Blackhill Kilmeage, Co. Kildare	Tel:045 860895
			E-mail: info@nandc.ie
Project No - Project Name:	Remediation Works - Grading of Quarry Face.		
Description of the Task/Activity	Grading of eastern quarry face to stop it encroaching on neighbouring lands due to natural erosion. Material shall be brought to site and positioned in front of the steep face, reducing its gradient and backing up the face to prevent further erosion. The face is currently a sheer vertical face with signs of underpinning and ongoing natural erosion. The materials will be brought to site using various hauliers and pushed into position by the on-site bulldozer and/or excavator. At no point will any personnel, machinery of off loading truck be permitted at the bottom of the face, due to the risk of collapse.		
Site Address/Location:	Kilmeage Co. Kildare	Start Date/Time:	March 2016
		Finish Date/Time	TBC
Personnel Involved	Name	Role/Trade	
	Clement Gavin	Project Supervisor	
		Dozer Operative/Excavator Operative	
		General Operatives	
	Various Hauliers		
Site Supervisor:	Clement Gavin	Tel No:	087 2591952
Safety Officer	Billy Mulcahy	Tel:	086 4127009
Key Plant & Tools	On – Site Bulldozer 360 Excavator Hauliers Truck/trailer units		
Key Materials	Filling Materials		
Other Essential Equipment:			

Method Statement & Risk Assessment

Specific Identified Residual Hazards: (or refer to the task specific risk assessment(s))	<p>Collapse of quarry face due to machinery activity</p> <p>Engulfment of machinery/personnel</p> <p>Inadequate Traffic Management</p> <p>Unauthorised personnel entering the work zone</p>
Specific Staff Training	Safe Pass, CSCS – Excavator/Dozer

Sequence of Operations: (include sketches if required)	<ul style="list-style-type: none"> • All direct personnel involved in works to read and sign off on this document, agreeing to follow all provisions detailed within. • All hauliers bringing material to site will be briefed on the basic safety requirements when they arrive on site for the first time. They will be briefed on the process i.e. weighing in/out, using the wheel wash, traffic routes to be followed, PPE requirements, off-load area(s), restricted access to quarry face etc. • The project supervisor will develop a traffic management plan. This will be a modified version of the already implemented version in place for the bagging plant access/egress. • Process plant traffic and grading works will be separated with only the main access and egress route being shared, which is well away from both processes. • The face to be re-graded is along the eastern side of the quarry. The proposed section of face to be regarded is approximately 75m long. Note the bagging plant is located in the southern corner of the site. • Prior to commencement the project supervisor will set up the traffic management for the face works. • All hauliers will be required to enter site and report to the office/weighbridge. From the weighbridge the truck will be directed to the quarry area via TMP signs and by the project supervisor and/or the machinery operative. • Off- load areas will be established and sign posted. Hauliers will not be permitted to access the bottom of the face due to the risk of collapse due to vehicle vibration/movement. • Truck operatives are not permitted to exit the cab when in the quarry area. They must remain in the cab at all times and take direction from the project supervisor/machine operative. • Once off loaded the 360 and/or the Dozer will push the material towards to face, without accessing the bottom of the vertical face. • No personnel or machinery will be permitted to access the face during the process. • The project supervisor will be on site to direct traffic as well as periodically inspecting (at a safe distance) the face itself and the top of the face for signs of movement, cracking etc. • An engineer on behalf of the Client will visit the site periodically to inspect the works. • All trucks must weigh out as they leave site and ensure all necessary documentation is in order prior to leaving site. • All trucks must pass through the wheel wash prior to existing site, as not to carry material onto the public road on the vehicle. • During the process the material will be gradually built up using the on-site machinery
--	---

Method Statement & Risk Assessment

	to reduce the overall gradient of the face, leaving a safe and stable face which will reduce the natural erosion process, thus eliminating the risk of further encroachment in neighbouring properties.							
Temporary Supports and Props needed to facilitate the works:	N/A							
Method of Access and Egress to the work area:	Machinery only permitted in the work areas. No access to the top or bottom of the face during works. The project supervisor may walk the general area periodically (with no machinery activity) to inspect the face itself.							
Fall Protection Measures: (Where work at height cannot be eliminated – consider both Personnel & Materials)	N/A							
Hazardous Substances: (Attach MSDS if required) Applicable:								
	Toxic/ Life Threatening	Harmful/ Irritant	Corrosive	Dangerous to the environment	Oxidising	Highly flammable	Serious long term effects	Explosives
	N	N	N	N	N	N	N	N
Storage Arrangements:	N/A							
Details of Permits to Work:	N/A							
SWL's:	N/A							
Required Personnel Protective Equipment:							Other: High Vis YES	
	Safety Boots To include Ankle support Y	Hard Hats N	Safety Gloves Y (as required)	Hearing Protection Y	Eye Protection N	Respiratory Protection N		
Emergency Procedures:	All personnel to follow the existing bagging plant specific evacuation procedures.							
	Name of On-Site First Aider:	N& C Enterprises First Aider on site.						
	First Aid Box Location:	First Aid Kit located in the main office area.						

Method Statement & Risk Assessment

	Location of Nearest Hospital:	Naas General Hospital Naas, Co Kildare 045 849500
Welfare Requirements	Existing Welfare facilities (Canteen, Toilets)	
Services to be supplied by Others	Various haulage companies to deliver all in-fill material	

All work will be undertaken by qualified competent persons with experience of the type of work described above, and in all cases in full accordance with safety procedures specified in the company's health and safety Policy.

Prepared by: Billy Mulcahy
Position: Health & Safety Advisor

Reviewed by: Clement Gavin

Position: Project Manager/Director Date:

RISK ASSESSMENTS

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Risk Rating Matrix

Numeric Rating	Likelihood	Severity
1	Very Unlikely	Very minor injuries
2	Unlikely	First aid minor injury/illness
3	Likely	"3 Day" injury/illness
4	Very Likely	Major injury/illness
5	Almost Certain	Permanently disabling injury /illness or fatality

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5	5	10	15	20	25
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5
	1	2	3	4	5

Likelihood

Method Statement & Risk Assessment

Numerical Value (Severity x Likelihood)	Descriptive Risk Rating	
13 - 25	High	Immediate action required. Activity should be stopped until control measures can be implemented to reduce risk to medium or low rating
6 - 12	Medium	Activity can proceed, but with caution, and ensuring control measures are maintained. Risk Assessment must be regularly rechecked and all reasonable efforts should be made to reduce risk rating to low.
1 - 5	Low	Activity can proceed. Control measures must be monitored and reviewed as required to ensure they remain suitable and sufficient.

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Method Statement & Risk Assessment

HAZARD	RISK	RISK RATING Pre Controls	CONTROL MEASURES	RISK RATING Post Controls
Collapse of Quarry Face during Works due to Machinery Activity	Engulfment of machinery/personnel during the regrading works.	4 X 5 20 (HIGH)	<ul style="list-style-type: none"> • Personnel or machinery will not be permitted directly beneath the quarry face under any circumstances. • The project supervisor/ machine operative shall direct all trucks into position. • Truck will enter the area and turn in the swing zone, they will then be directed to the off load area. • The trucks will be off loaded at a designated off-load area, located a safe distance from the face. • Drivers to remain within the cab of the truck during off loading (unless required to open the tailgate). If existing the truck, drivers to wear High visibility clothing. • Drivers are not permitted to enter the immediate area of the face under any circumstances. Any breach of this will result in immediate and permanent removal off site. • As the material is off loaded the dozer/excavator shall move the material as to create a safe build up. As with all others the on-site machinery will not be permitted directly beneath the vertical face. • The project supervisor will inspect the face periodically to look for signs of excessive movement or forming of cracks etc during the works to ensure the vibration of the machinery is not causing excessive damage to the already fragile face. • The face will also be checked following any adverse weather conditions that may affect the stability of the face surface. 	2 X 5 10 (MED)
Engulfment of Machinery /Personnel	Serious injury/fatalities	4 X 5	<ul style="list-style-type: none"> • Machinery will not be permitted in the immediate area beneath the vertical face. The fill will be off 	2 X 5

Method Statement & Risk Assessment

<p>Engulfment of Machinery /Personnel cont'd</p>		<p style="text-align: center;">20 (HIGH)</p>	<p>loaded at a distance and gradually pushed into position to create a mound from which more material will be pushed on.</p> <ul style="list-style-type: none"> • Personnel are not permitted unless permission has been give. No personnel are permitted beneath the face or along the top of the face during regrading works. • Any breach will lead to instant and permanent removal from site. • On-site machinery is not permitted to work or park beneath the face under any circumstances. • The machinery will only be operated by qualifies, experienced and competent personnel who are used to working and operating in such work locations and have a good understanding of the risks associated with such works. • The site is close off to restrict access of unauthoriesd personnel. If a unauthorised person is noted in the work zone all works will cease immediatly and the person will be removed from the location. 	<p style="text-align: center;">10 (MED)</p>
<p>Inadequate Traffic Management</p>	<ul style="list-style-type: none"> • Collision of vehicles • Injury to pedestrians • Excessive build up of traffic on the public road leading to site due to works. 	<p style="text-align: center;">4 X 4 16 (HIGH)</p>	<ul style="list-style-type: none"> • The site itself, which houses an office and bagging plant has existing traffic management in place. • All trucks are required to enter the site and pass through the weighbridge. All trucks are directed to do so. The weighbridge operatives will co-ordinate all traffic flow as not to cause disruption of the public road or to compromise the TM within the facility. • From the weighbridge the trucks will be directed to the regrading works area/turning area to the right. The bagging plant access is to the left so both activities shall not affect each other. • All personnel on site are aware of the risks associated with vehicle movement and are used to working in an area of high vehicle activity. 	<p style="text-align: center;">2 X 4 8 (MED)</p>

Method Statement & Risk Assessment

<p>Inadequate Traffic Management cont'd</p>			<p>Additionally all personnel are required to wear high-vis clothing during works.</p> <ul style="list-style-type: none"> • The project supervisors will co-ordinate the flow of traffic to and from the works area, as not to disrupt the flow of traffic off site. • As with normal traffic management for the general bagging plant, vehicles entering the plant will be give priority as not to cause excessive disruption to the public road. Vehicles will be held on site as required till the public road is clear. • All vehicles are required to drive through the wheel wash on exit to eliminate/reduce build up of materials/dirt on the road surface. Additionally a water sprinkler system is in place during dry weather to reduce dust due to vehicle activity. 	
<p>Driving Machinery on site</p>	<ul style="list-style-type: none"> • untrained personnel operating machinery and accidentally knocking personnel down, causing vehicle collision or property damage • safety devices not working on machinery therefore injuring other personnel in the work area • operators talking on mobile phones while operating resulting in vehicle collision or hitting pedestrians 	<p style="text-align: center;">4 X 4 16 (HIGH)</p>	<ul style="list-style-type: none"> • Operators shall hold their certificate of competency prior to operating that vehicle. • Only trained & competent personnel to operate machinery. • Machinery shall be fitted with reversing beeper, overhead flashing light and either reversing cameras or convex mirrors, these safety features to be maintained in operational order at all times. • Weekly inspection of the loaders shall be conducted to ensure they are maintained in good operating condition. Inspections shall be recorded on the safety form - Plant Safety Inspection Checklist'. • Operators to report any faults or damage to the vehicles to the project supervisor. • Operators shall ensure that machines are locked up and keys removed from the ignition every evening when work is finished. 	<p style="text-align: center;">2 X 4 8 (MED)</p>

Method Statement & Risk Assessment

Driving machinery on site cont'd			<ul style="list-style-type: none"> The machinery shall undergo a thorough examination test every 12 months (as appropriate). Personal stereo/headphone sets or hand held mobile phones are not permitted to be used while operating machinery. Operators shall be alert at all times and watch out for other machinery, trucks etc operating in their vicinity The company procedure for safe operation of company vehicles must also be followed at all times.
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Method Statement Briefing Record

Briefing delivered by:
 Position:
 Date:

We (the undersigned) have read and understood the attached method statement and will comply with the specified requirements and control measures. If the work activity changes or deviates from that originally envisaged, we will seek further advice and request an amended method statement.

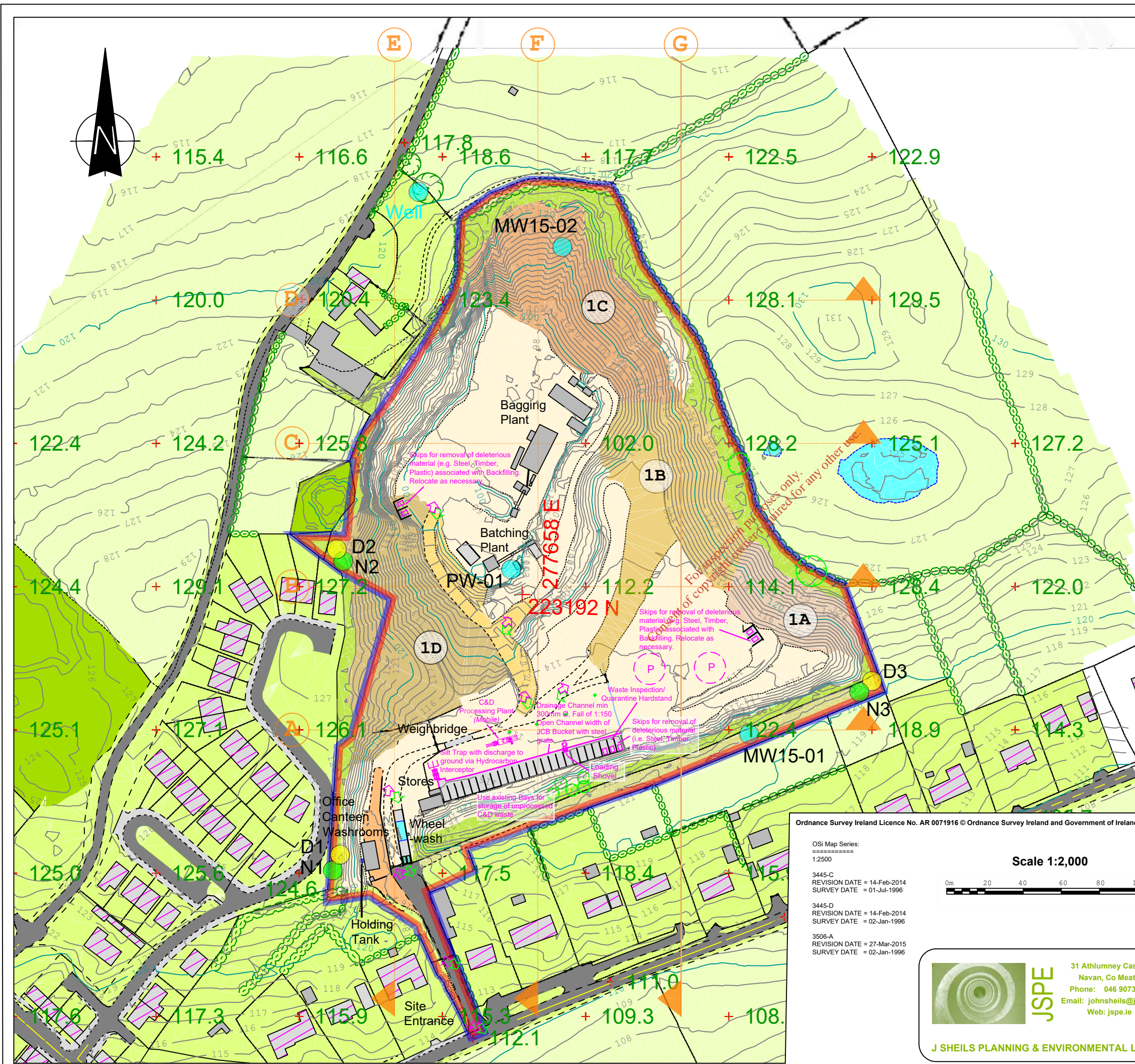
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Name (Print)	Signature	Date

FIGURES

- D.1.1 Site Infrastructure - Phase 1**
- D.1.2 Site Infrastructure – Phase 2**
- D.1.3 Site Infrastructure - Phase 3**
- D.1.4 Site Infrastructure – Final Restoration**
- D.1.5 Cross Sections A to D**
- D.1.6 Cross Sections E to G**
- D.1.7 Full Retention Interceptor**
- D.1.8 Wheel Wash**

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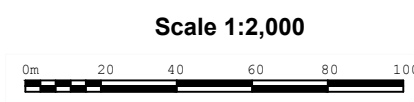
Legend

- Applicants Ownership (c.6.6 ha)
- Waste Licence Application Area (c. 6.6 ha) (Planning Permission Area (Ref. 03/1773 &12/373))
- Pit Area
- Scrubland
- Agricultural Land
- Residential Property (within 250m)
- Buildings/Structures
- Concrete Hardstanding
- Contours (mAOD)
- Spot Levels (mAOD)
- Tree
- D1 Dust Monitoring Points
- N1 Noise Monitoring Points
- Groundwater Monitoring Points & Wells
- Cross Sections (Refer to Drawings D.1.5 & D.1.6)
- Backfill Phasing
- Asphalt Surface
- Grass Track
- Traffic In
- Traffic Out
- Fence
- Gate
- Sprinkler
- Hedgerow
- Processed C&D Stockpiles. Relocate as necessary.

- NOTES:**
- All Dimensions in metres (m)
 - Elevation Levels - metres Above Ordnance Datum (mAOD)
 - For Planning Purposes Only. Do not scale for setting out.
 - Survey derived from point-cloud survey (06/11/15)
 - Waste Management Infrastructure to be provided shown in purple

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OSI Map Series:
1:2500
3445-C
REVISION DATE = 14-Feb-2014
SURVEY DATE = 01-Jul-1996
3445-D
REVISION DATE = 14-Feb-2014
SURVEY DATE = 02-Jan-1996
3506-A
REVISION DATE = 27-Mar-2015
SURVEY DATE = 02-Jan-1996

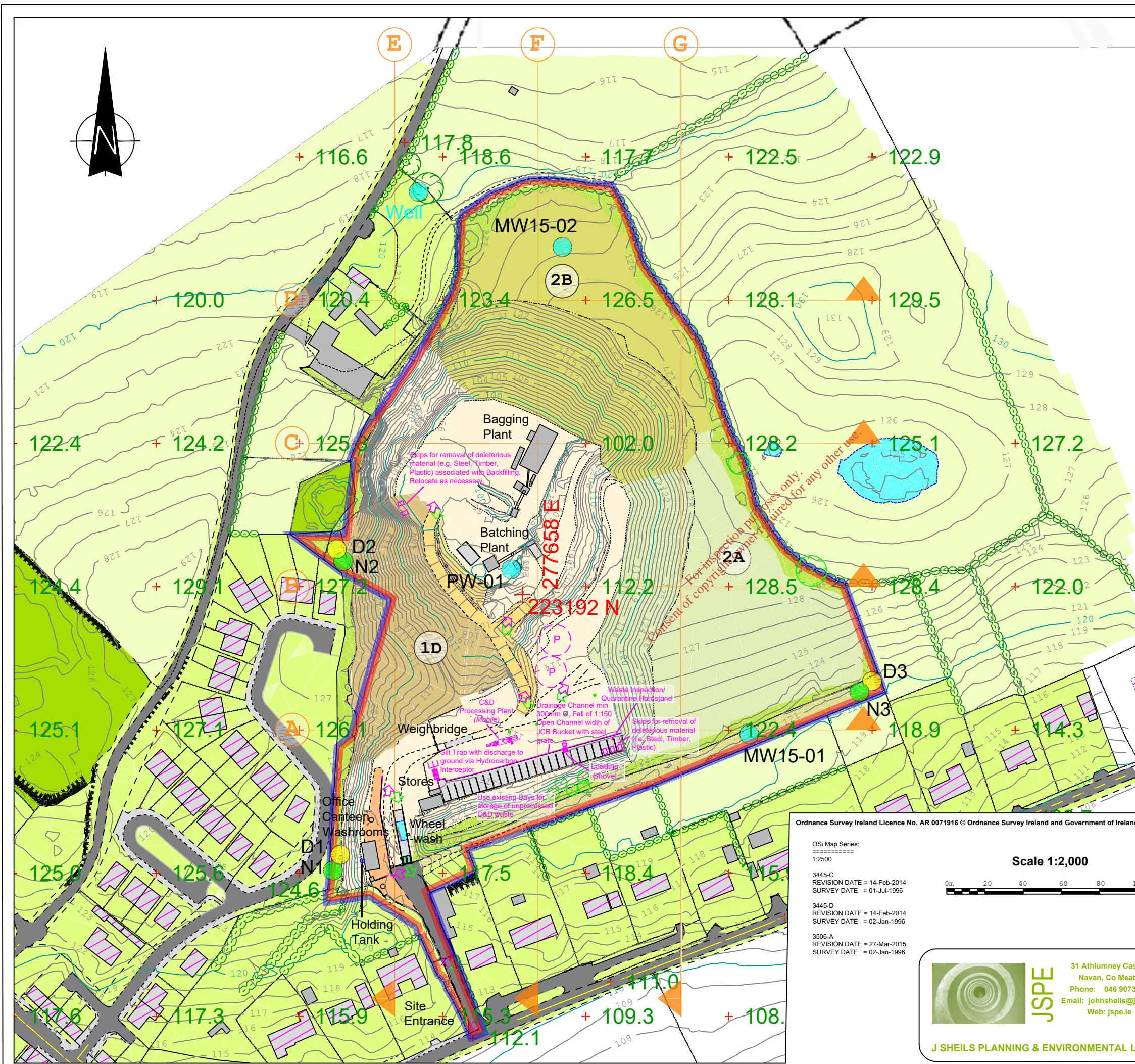


JSPE
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Phone: 046 9073997
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Web: jspe.ie

J SHEILS PLANNING & ENVIRONMENTAL LTD

CLIENT	N&C Enterprises Ltd	
DRAWING	Site Infrastructure - Phase 1	
LOCATION	Killmeage, Naas, Co. Kildare.	

Drawn by John Sheils	Scale 1: 2000
Checked by John Sheils	Job No. JSPE 236
Date 19/05/16	Figure No. D.1.1 Rev. 0



Legend

- Applicants Ownership (c.6.6 ha)
- Waste Licence Application Area (c. 6.6 ha) (Planning Permission Area (Ref. 03/1773 &12/373))
- Pit Area
- Scrubland
- Agricultural Land
- Residential Property (within 250m)
- Buildings/Structures
- Concrete Hardstanding
- Contours (mAOD)
- Spot Levels (mAOD)
- Tree
- D1 Dust Monitoring Points
- N1 Noise Monitoring Points
- GW/MW Groundwater Monitoring Points & Wells
- Cross Sections (Refer to Drawings D.1.5 & D.1.6)
- Backfill Phasing
- Asphalt Surface
- Grass Track
- Traffic In
- Traffic Out
- Fence
- Gate
- Sprinkler
- Hedgerow
- Processed C&D Stockpiles. Relocate as necessary.

- NOTES:**
- All Dimensions in metres (m)
 - Elevation Levels - metres Above Ordnance Datum (mAOD)
 - For Planning Purposes Only. Do not scale for setting out.
 - Survey derived from point-cloud survey (06/11/15)
 - Waste Management Infrastructure to be provided shown in purple

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0m 20 40 60 80 100

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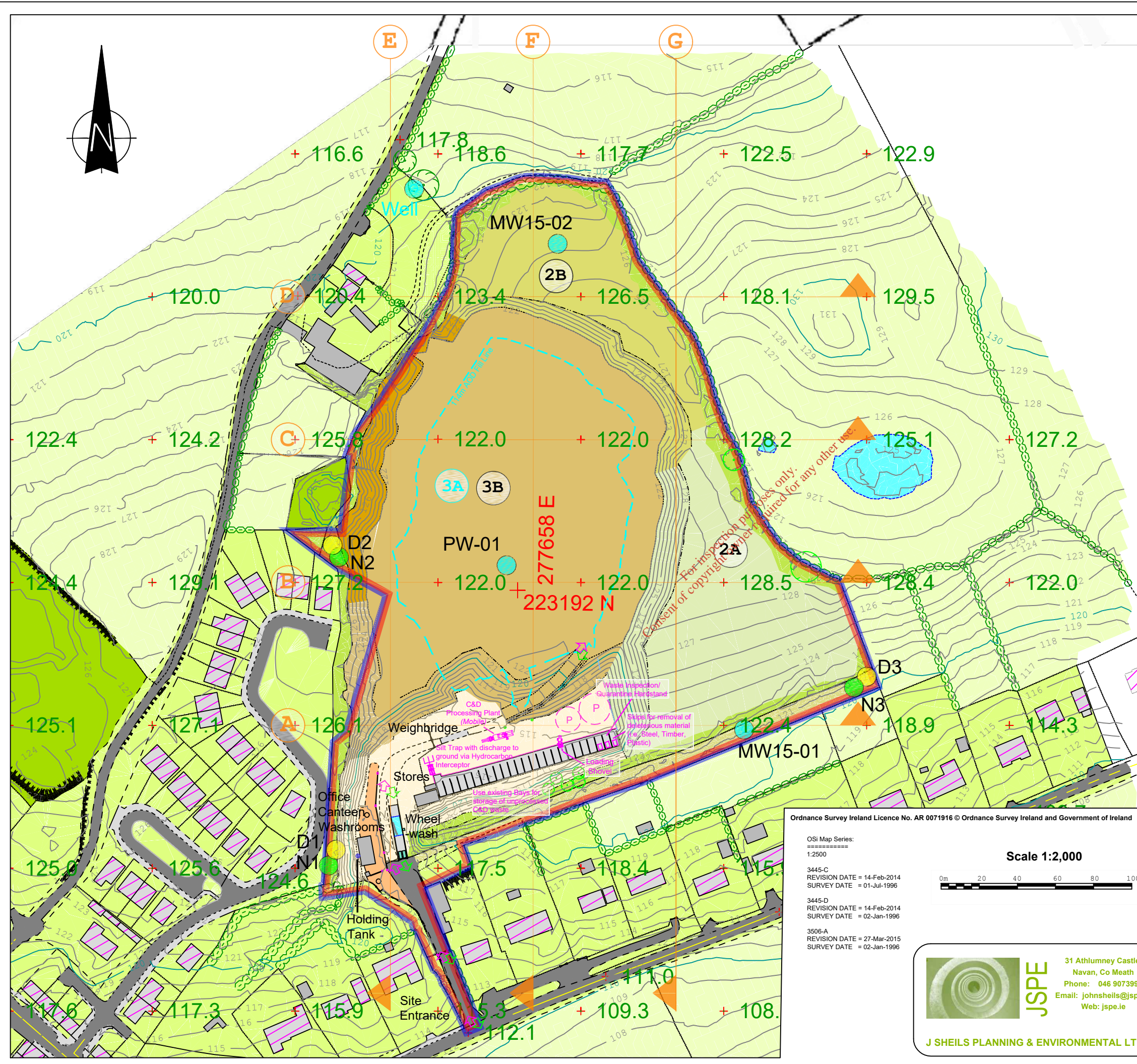
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CLIENT
N&C Enterprises Ltd

DRAWING
Site Infrastructure - Phase 2

LOCATION
**Killmeage,
Naas, Co. Kildare.**

Drawn by John Sheils	Scale 1: 2000
Checked by John Sheils	Job No. JSPE 236
Date 19/05/16	Figure No. D.1.2 Rev. 0



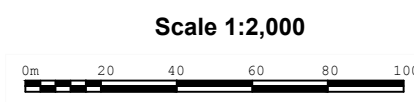
Legend

- Applicants Ownership (c.6.6 ha)
- Waste Licence Application Area (c. 6.6 ha) (Planning Permission Area (Ref. 03/1773 &12/373))
- Pit Area
- Scrubland
- Agricultural Land
- Residential Property (within 250m)
- Buildings/Structures
- Concrete Hardstanding
- Contours (mAOD)
- Spot Levels (mAOD)
- Tree
- D1 Dust Monitoring Points
- N1 Noise Monitoring Points
- GW/MW Groundwater Monitoring Points & Wells
- Cross Sections (Refer to Drawings D.1.5 & D.1.6)
- 3B Backfill Phasing
- Phase 3A 114mAOD Fill Line
- Asphalt Surface
- Grass Track
- Traffic In
- Traffic Out
- Fence
- Gate
- Sprinkler
- Hedgerow
- Processed C&D Stockpiles. Relocate as necessary.

- NOTES:**
- All Dimensions in metres (m)
 - Elevation Levels - metres Above Ordnance Datum (mAOD)
 - For Planning Purposes Only. Do not scale for setting out.
 - Survey derived from point-cloud survey (06/11/15)
 - Waste Management Infrastructure to be provided shown in purple

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 REVISION DATE = 27-Mar-2015
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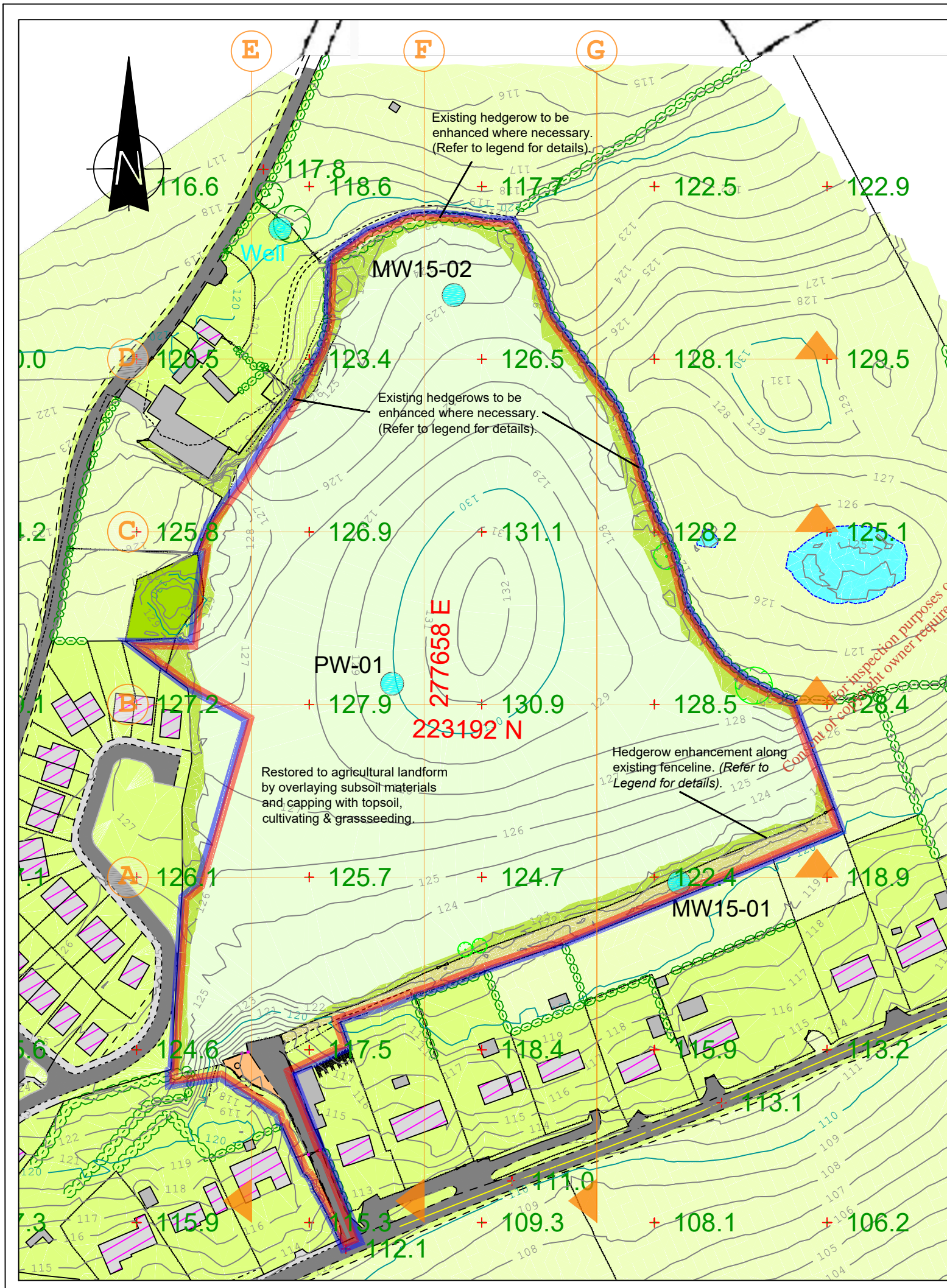


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CLIENT	N&C Enterprises Ltd	
DRAWING	Site Infrastructure - Phase 3	
LOCATION	Killmeage, Naas, Co. Kildare.	

Drawn by John Sheils	Scale 1: 2000
Checked by John Sheils	Job No. JSPE 236
Date 19/05/16	Figure No. D.1.3 Rev. 0



Legend

- Applicants Ownership (c.6.6 ha)
- Waste Licence Application Area (c. 6.6 ha) (Planning Permission Area (Ref. 03/1773 & 12/373))
- Scrubland
- Agricultural Land
- Residential Property (within 250m)
- Land Access
- Grass Track
- Buildings/Structures
- Contours (mAOD)
- Spot Levels (mAOD)
- Tree
- Groundwater Monitoring Points & Wells
- Fence
- Gate
- Hedgerow
- Cross Sections (Refer to Drawings D.1.5 & D.1.6)

Grass Areas:

Grazing Lands

Use Heavy land / Heavy graze mix as supplied by Drummonds Ltd. This is a general purpose mix particularly suited to heavy and reclaimed soils. Varieties are specially chosen to reduce poaching and to withstand high moisture levels.
 12.25kgs per acre:
 Ingredients per 12.25kgs:
 3.00kgs Portstewart, Late diploid perennial ryegrass
 2.95kgs Gilford, late diploid perennial ryegrass
 2.50kgs Speiga, intermediate diploid perennial ryegrass
 2.30kgs Dolphin, late tetraploid perennial ryegrass
 1.50kgs Pelleted Alice white clover

HEDGEROW ENHANCEMENT

- 7% - Ash *Fraxinus Excelsior*
- 7% - Beech *Fagus Sylvatica*
- 30% - Hawthorn *Crataegus Monogyna*
- 30% - Blackthorn *Prunus Spinosa*
- 10% - Dog Rose *Rosa Canina*
- 5% - Honeysuckle *Lonicera Dericlymenium*
- 11% - Mixture of Others

Note: Hedgerows will be planted at c. 500mm intervals.

RESTORATION

The reinstatement provides for agricultural use combined with localised opportunities for establishment of native species. The final land use of the site is proposed as agriculture and habitat creation for wildlife benefit.

The boundaries of the site are securely fenced with stock-proof fencing and hedgerows. The existing boundary fences and hedgerows will be maintained in a stock proof state of repair as part of the future agricultural land use.

The site is to be restored in a progressive manner. The final landform will be contoured as far as is practical to blend in with the existing environment. Topsoil material will then be placed on the restored areas as the final vegetation layer to a depth of c.300mm and the areas re-vegetated as quickly as possible to avoid erosion by air and water.

The lands will be sowed with a suitable grass mix for grazing lands. Grass is generally sown in the spring or in late summer, early autumn. Livestock should also be managed to minimise poaching of the land during wet weather. Weed and pest control may also be necessary from time to time.

The ground preparation and reseeding will be carried out to achieve the re-instatement of good agricultural grassland (GA1 Fossitt Code).

The landowner will be responsible for aftercare management of the lands including application of fertiliser as necessary, remediation of any localised areas of soil compaction and ponding of surface water as, and if, required.

Preparation:

The site is to be left in a good condition for the landscaping works.

Topsoil

- Topsoil shall be placed in areas that require topsoil to attain finished levels for grass and planted areas. It should be properly graded and levelled.
- The topsoil shall be free of subsoil, stones exceeding 50mm in diameter.
- It shall be free from rubbish, chemicals, pollutants or other injurious matter.
- It shall be free from or obnoxious weeds, couch grass, roots or top growth of trees and shrubs.
- Any compacted soil should be loosened after the topsoiling operation and the area protected from further compaction.

Once soil is spread leave area fallow for 6 - 8 weeks to allow weeds to emerge. Prior to planting, spray areas with 'Roundup' to Manufacturers instructions. Leave the ground fallow for the period of time recommended by the Manufacturer. Avoid contaminating ponds and water courses with weed killer.

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 3506-A REVISION DATE = 27-Mar-2015 SURVEY DATE = 02-Jan-1996

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NOTES:

1. All Dimensions in metres (m)
2. Elevation Levels - metres Above Ordnance Datum (mAOD)
3. For Planning Purposes Only. Do not scale for setting out.
4. Survey derived from point-cloud survey (06/11/15)

CLIENT	N&C Enterprises Ltd	
DRAWING	Final Restoration	
LOCATION	Killmeage, Naas, Co. Kildare.	

Drawn by	John Sheils	Scale	1: 2000
Checked by	John Sheils	Job No.	JSPE 236
Date	19/05/16	Figure No.	D.1.4
		Rev.	0

Legend

- Existing Ground Profile (mAOD)
- Phase 1 Profile(mAOD)
- Phase 2 Profile(mAOD)
- Phase 3 Profile(mAOD)
- Final Restoration Profile(mAOD)

Minimum Fill Depth <1m
 Maximum Fill Depth 32m
 Average Fill Depth 6.7m

Scale 1:1,500



Notes:

1. All Dimensions in metres(m)
2. Elevation Levels - metres Above Ordnance (Malin Head) Datum (mAOD)
3. Cross Sections A to D - **Centre Line (C/L)** offset distance from Long Section F (Refer to Drawing D.1.6).

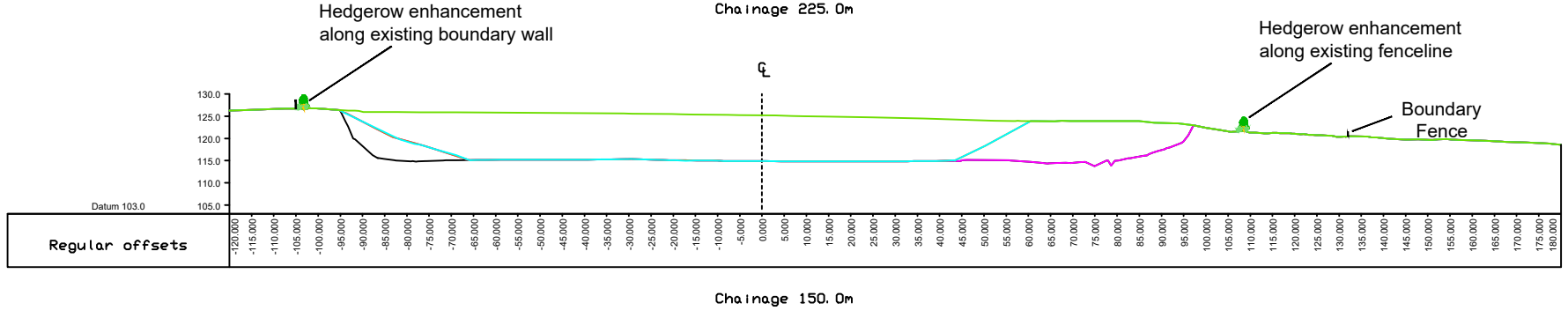
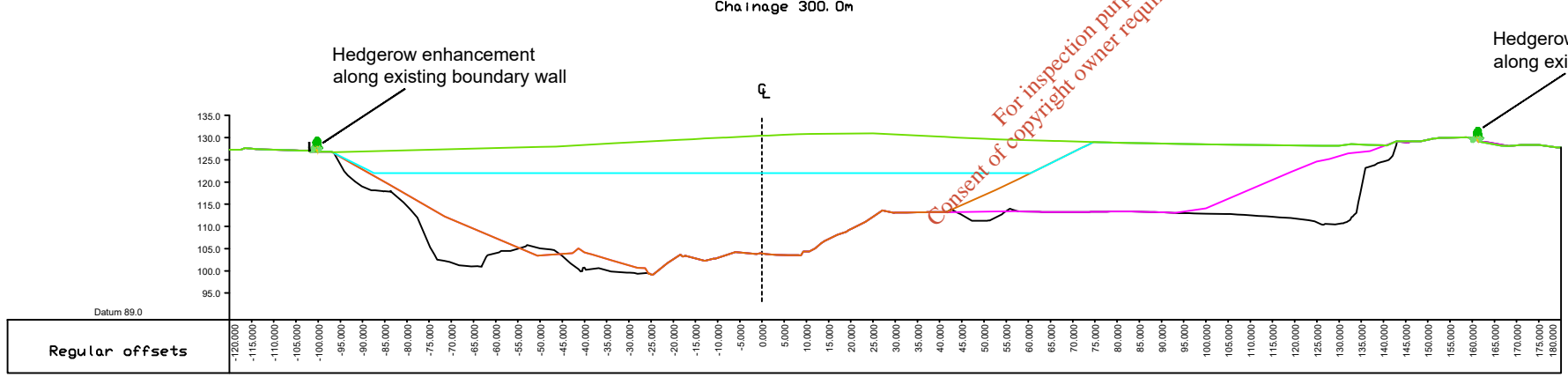
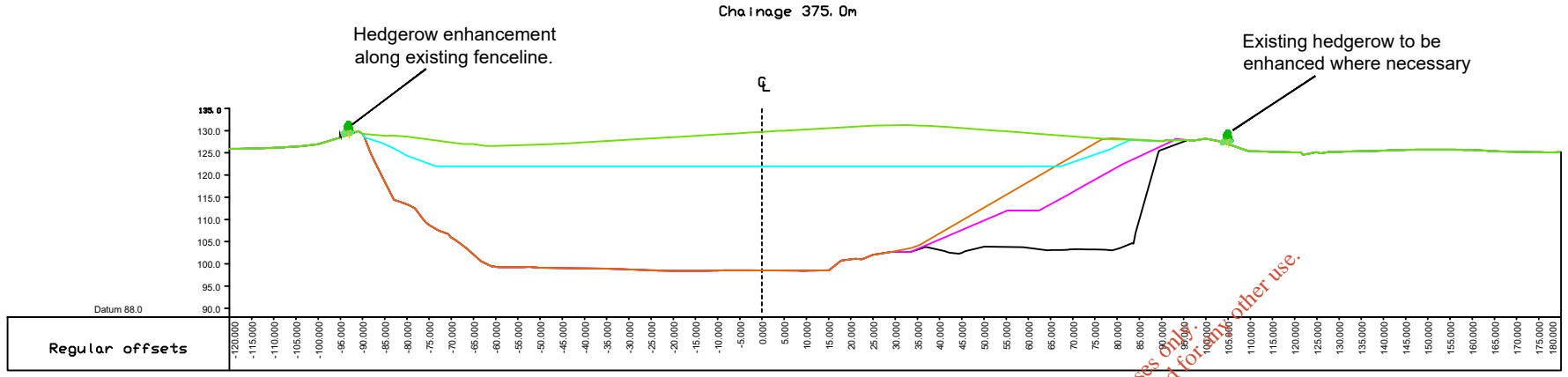
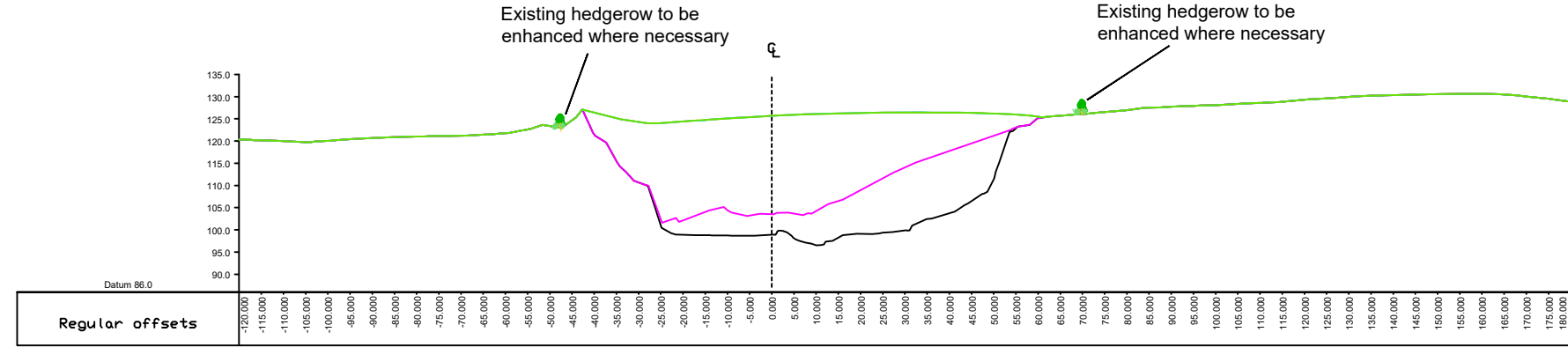


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J SHEILS PLANNING & ENVIRONMENTAL LTD

CLIENT	N&C Enterprises Ltd	
DRAWING	CROSS SECTIONS A to D	
LOCATION	Killmeage, Naas, Co. Kildare.	

Drawn by John Sheils	Scale 1 /1500
Checked by John Sheils	Job No. JSPE 236
Date 30/05/16	Figure No. D.1.5 Rev. 0



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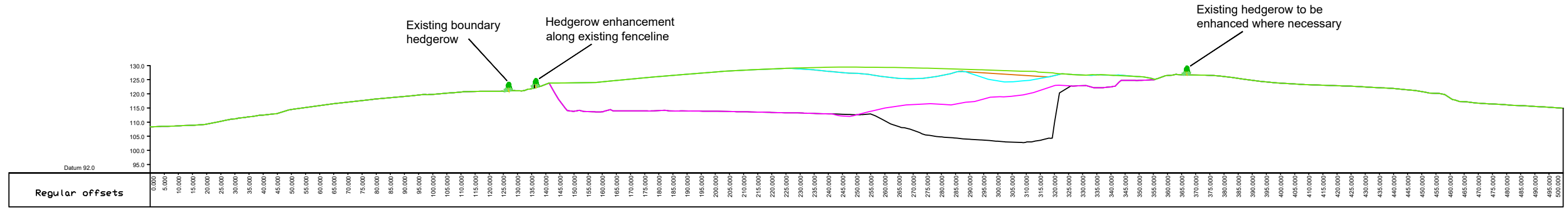
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C

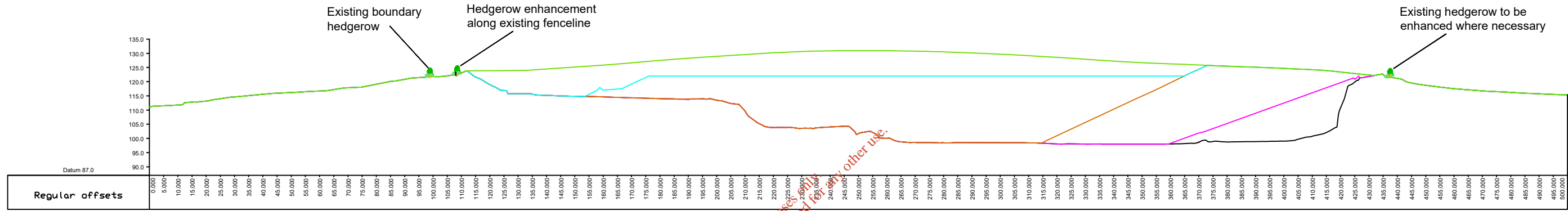
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A

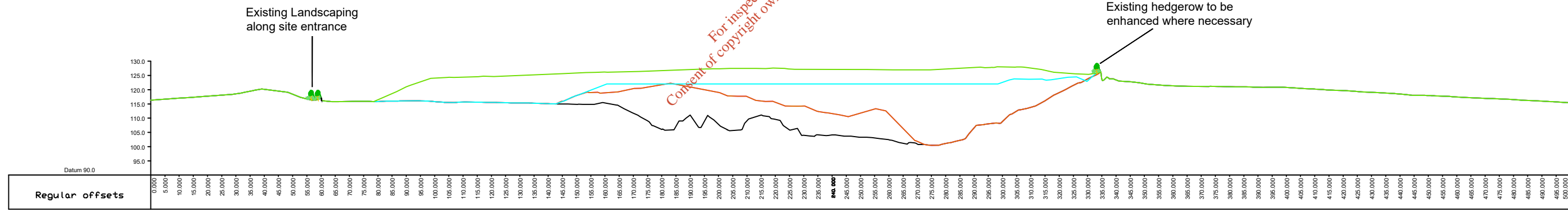
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F



E



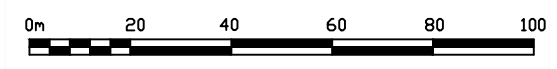
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Legend

- Existing Ground Profile (mAOD)
- Phase 1 Profile(mAOD)
- Phase 2 Profile(mAOD)
- Phase 3 Profile(mAOD)
- Final Restoration Profile(mAOD)

Minimum Fill Depth <1m
 Maximum Fill Depth 32m
 Average Fill Depth 6.7m

Scale 1:1,500



- Notes:
- All Dimensions in metres(m)
 - Elevation Levels - metres Above Ordnance (Malin Head) Datum (mAOD)

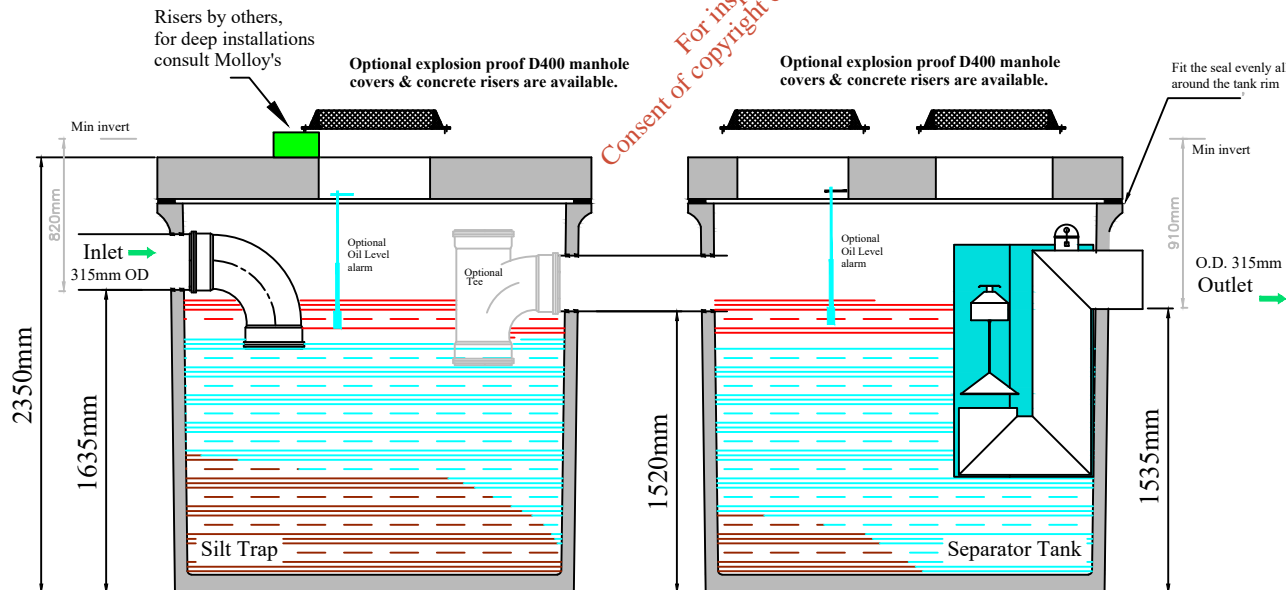
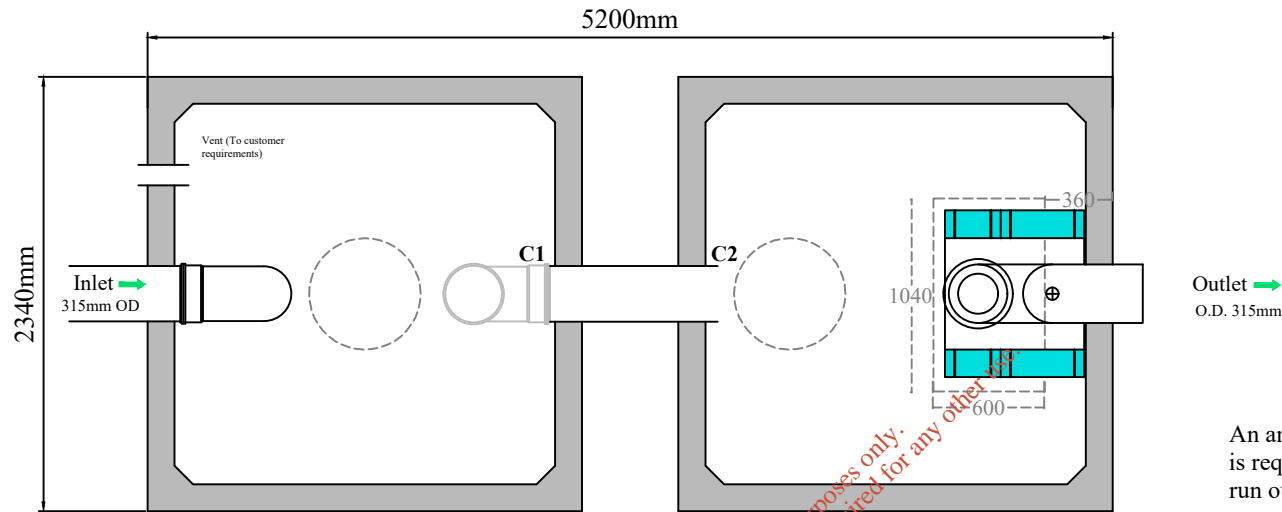
JSPE
 31 Athlumney Castle,
 Navan, Co Meath
 Phone/Fax: 046 9073997
 Mobile: John Sheils 087 / 273 0087
 Email: john.sheils@jspe.ie

J SHEILS PLANNING & ENVIRONMENTAL LTD

CLIENT	N&C Enterprises Ltd
DRAWING	CROSS SECTIONS E TO G
LOCATION	Killmeage, Naas, Co. Kildare.

Drawn by John Sheils	Scale 1 / 1500
Checked by John Sheils	Job No. JSPE 236
Date 30/05/16	Figure No. D.1.6
	Rev. 0

Full Retention Class 1 EN 858 Ortner FR-NS-40-CC Volume 16,000 lit



A good firm, rock free, perfectly level base is required. Soil conditions must be checked by the site engineer. See installation recommendations for guidance.



Notes:

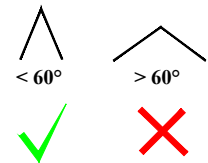
This drawing is ©. All rights reserved.
Note: Observe all safety regulations in regard to excavation and lifting requirements. Never leave opening uncovered or unattended at any time.
Note: Specify any specific requirements prior to ordering. All civil works by customer.
Note: Do not scale from this drawing. Only for illustration purposes.

Tank Type: 2C Full Retention Interceptor
Tank Size: 4900mm x 2340mm
Height: 2350mm
Volume: 16000 liters
Weight: 4500kg (Each, Ex. Lid)
 (Tank Dim: ± 20mm. Weight: ± 30Kg.)

**40 l/s nominal flow @
 65mm/hr rain intensity**
2,222m sq. coverage
5,000 lit. silt capacity
2,000 oil capacity
**4,000 lit. emergency
 oil retention.**

Accidental damage caused by incorrect lifting is the responsibility of the client.

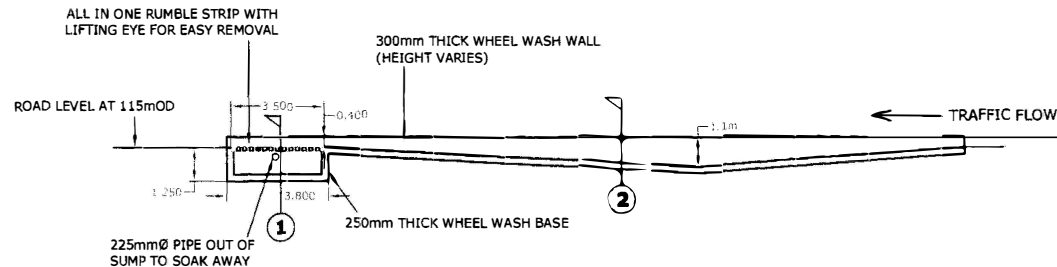
**Lifting limitations:
 Max Chain Angle < 60°**



C:\Users\valdost\coll\Working\Molloy Env Sys Inp FA.jpg

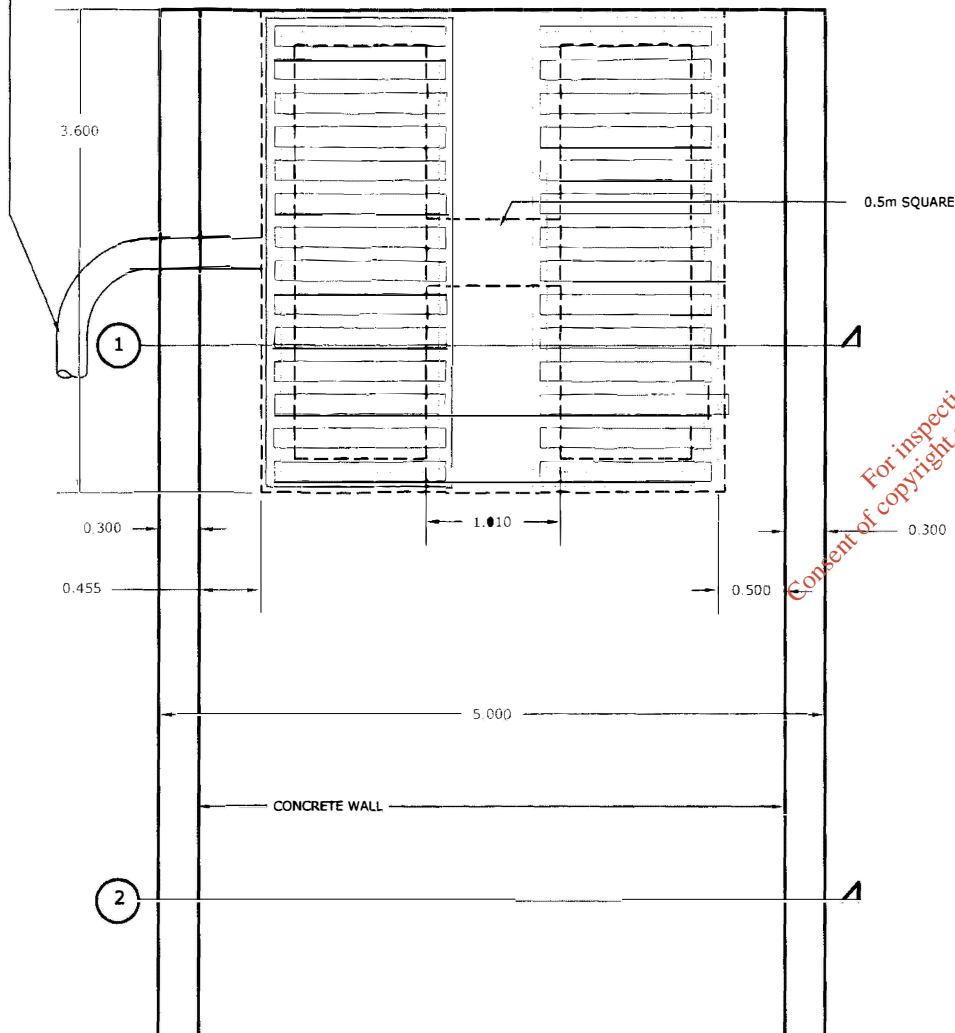
Clara Road, Tullamore, Co. Offaly, Ireland
 Tel: 057 9326000 info@molloyprecast.com
 Fax: 057 9326060 www.molloyprecast.com

Title: FR-NS-40-CC
Full Retention Interceptor
Date: Mar 2014
Drg. No.: FR-NS-40-2C-01 (D1.7)
Drawn By: MC

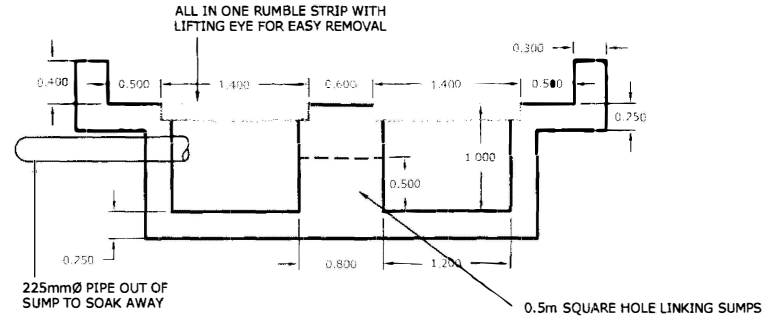


WHEEL WASH LONG SECTION
SCALE 1:100A1 1:200A3

225mmØ PIPE OUT OF SUMP TO SOAK AWAY VIA SILT TRAP/ OIL INTERCEPTOR



TYPICAL DETAIL FOR START AND END OF WHEEL WASH
SCALE 1:20A1 1:10A3



SECTION 1
SCALE 1:25A1 1:50A3

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SECTION 2
SCALE 1:25A1 1:50A3

- NOTES**
- RUMBLE STRIP COMPRISES**
 - *STEEL ANGLE FRAME 150mm x100mm.
 - *HOLLOW STEEL TUBE 150mm Ø OR STEEL ANGLE WELDED TO ANGLE FRAME.
 - *LIFTING EYES LOCATED ON ALL FOUR CORNERS OF ANGLE FRAME TO AID LIFTING.

Issue No.	Date	Description
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Surveyed by:

Client:
N&C ENTERPRISES LTD
BLACKHILL
KILL
Co. KILDARE

Project:
GAVIN'S PIT
KILMEAGE

Title of Dwg.
WHEEL WASH

Scale: AS SHOWN Dwg. No. 101 Rev. A

Drawn: CC Job No. 04.141

Approved: GP

Prepared by:
Environment & Resource Management Ltd.
NO. 3 TARA COURT, DUBLIN RD., NAAS, CO. DUB.
KILDARE TELEPHONE 045 774111 FAX 045 876540
E-MAIL: info@ermltd.com

Figure D.1.8
NTS