Project:

Old Orchard LRD, Monaleen

Report Title

Outline Construction and Environmental Management Plan

Document Reference

25066-OSL-00-RP-C-0003

OSL·BUTLER CONSULTING ENGINEERS

Civil, Structural & Project Engineering Services
Unit 38 Eastgate Drive, Little Island, Cork T45 YO49

JUNE 2026

Document Control

Project	Old Orchard LRD, Monaleen		
Client	GLR Property Ltd.		
Document Title	Outline Construction and Environmental Management Plan		
File Ref	25066-OSL-00-RP-C-003	Rev	P03

Rev.	Status	Date	Description	Prepared	Reviewed	Approved
P01	S2 – For Information	29/10/25	For Information	BJM	DB	DB
P02	S2 – For Information	03/11/25	Issued for Section 32B	BJM	DB	DB
P03	S2 – For Information	05/06/26	For Planning	BJM	DB	DB

Disclaimer

This specification has been prepared for the exclusive use of our Client and unless otherwise agreed in writing by the Designer no other party may use, make use of or rely on the contents of this specification.

The specification has been compiled using the resources agreed with the Client and in accordance with the scope of work agreed with the Client. No liability is accepted by The Designerfor any use of this specification, other than the purpose for which it was prepared.

The Designer accepts no responsibility for any documents or information supplied to the Designer by others and no legal liability arising from the use by others of opinions or data contained in this specification. It is expressly stated that no independent verification of any documents or information supplied by others has been made.

The Designer has used reasonable skill, care and diligence in compiling this specification and no warranty is provided as to the report's accuracy.

CONTENTS

Document Control 2
1.0 Introduction 4
2.0 Compound Facilities/Parking 6
3.0 Traffic Management 8
3.1 Reductive/Mitigation Measures 8
4.0 Road Cleaning 10
5.0 Working Hours 11
6.0 Construction Methodology 12
6.1 Protection of Adjacent Areas 12
6.2 Excavations and Rock Breaking 12
6.3 Material Hoisting 12
6.4 Resource and Waste Management Plan 13
6.5 Construction Schedule 13
7.0 Noise and Vibration 15
7.1 Reductive/Mitigation Measures 16
8.0 Sediment and Water Pollution Control Plan 18
9.0 Biodiversity / Ecological Protection Measures 21
9.1 Lighting 21
9.2 Construction Phase Mitigation Measures 21
10.0 Surface Water Drainage Works 22
11.0 Air Quality and Dust Control 24
11.1 Site Management 24
11.2 Dust Control Measures 24
12.0 Conclusion 26

Appendix A – Construction Stage Management Plan

1.0 INTRODUCTION

OSL Butler Consulting Engineers (OSL) has prepared this Outline Construction and Environmental Management Plan (OCEMP) on behalf of GLR Property Ltd., for a proposed Residential Development at Newtown, Monaleen, County Limerick on a circa 3.6-hectare site.

Planning permission was previously granted for a residential development on this site comprising of 113no. residential dwellings and a creche under An Coimsiún Pleanála Reference *ABP 319009-24* (Limerick City and County Council Planning Reference 23/60842) and is currently under construction. A Construction and Environmental Management Plan was prepared and submitted by OSL as part of the original planning conditions (Condition 22) as granted under the aforementioned planning reference. This submission was deemed compliant by Limerick City and County Council on 10 September 2025.

This OCEMP's intent and overall strategy have remained the same as submitted to and as agreed with LCCC as part of the original planning application and relevant planning compliance submissions, with the exception of those revisions made to accommodate the change in site layout as proposed as part of this planning application. This OCEMP forms part of an amendment to the original permission, quoted before.

The site is located to the east of Limerick City Centre, centred at grid reference E: 562059, N: 655886 (ITM) as highlighted in Figure 1 below.



Figure 1: Site Location

To summarise;

'The proposed development comprises of the modification of the Large-Scale Residential Development granted under Application Ref. 23/60842 and Appeal Ref. ABP-319009-24. The proposed modifications comprise of:

1. *The replacement of 57 no. units comprising of;*
    - *06 no. 4 bed semi-detached houses (139.2 sq.m.)*

- *15 no. 3 bed semi-detached houses / townhouses (108 sq.m.)*
- *06 no. 1 and 2 bed apartments (Block A) (54.1 sq.m. – 114.1 sq.m.)*
- *14 no. 1 and 2 bed apartments (Block B)(54.1 sq.m. – 114.1 sq.m.)*
- *16 no. 1, 2, and 3 bed apartments (Block D)(50.2 – 123.2 sq.m.)*

With 59 no. units comprising of;

- *04 no. 4 bed semi-detached houses (134.0 sq.m.)*
- *22 no. 3 bed semi-detached houses (104.4 – 108.6 sq.m.)*
- *04 no. 3 bed semi-detached houses (115.8 sq.m.)*
- *08 no. 3 bed townhouses (109.8 sq.m.)*
- *06 no. 2 bed townhouses (80.2 sq.m.)*
- *15 no. 1 and 2 bed apartments (61.6 – 71.9 sq.m.)*

2. *The provision of 5no. additional townhouse units (2 no. 3 beds and 3 no. 2 beds).*
3. *The omission of the permitted childcare facility with capacity to accommodate 58no. children and the construction of a childcare facility on a site to the west with capacity to accommodate 102no. children.*

The development will also include the provision of private, communal, and public open spaces; internal roads and pathways; pedestrian and cyclist routes; hard and soft landscaping and boundary treatments; waste storage; plant; signage; public lighting; substations; all associated site development works; and all drainage and foul sewer infrastructure and network works including nature-based suds measures.'

The lands are bound to the north and west by the existing Ashfort neighbourhood, to the south by the existing Evanwood neighbourhood and to the east by the existing Kylemore neighbourhood.

The Vehicular and pedestrian access to the proposed site remains unchanged from that granted under Application Ref. 23/60842 and Appeal Ref. ABP-319009-24 via the School House Road which also serves the adjacent Ashfort Residential Development.

It is proposed to provide a vehicular access to the proposed creche via the Golf Links Road. No vehicular access is proposed via the Golf Links Road to serve the residential development. The Golf Links Road will serve the residential development for pedestrians and cyclists only.

This Outline CEMP addresses noise and vibration, traffic management, working hours, pollution control, dust control, road cleaning, compound/public health facilities and staff parking, all associated with the construction works.

The final CEMP, to be submitted and approved by the local authority prior to the commencement of construction, will include any requirements arising from the conditions attached to any permission granted and will make provision for and ensure adherence to any and all regulations and guidelines as is relevant at the time of submission.

2.0 COMPOUND FACILITIES/PARKING

The site will be securely fenced, and a construction compound will be established. The site compound will be developed, comprising of offices and welfare facilities for the contractors on site. Figure 2 below shows the site compound layout proposal, subject to minor changes and adjustment depending on local authority comments and/or requirements.

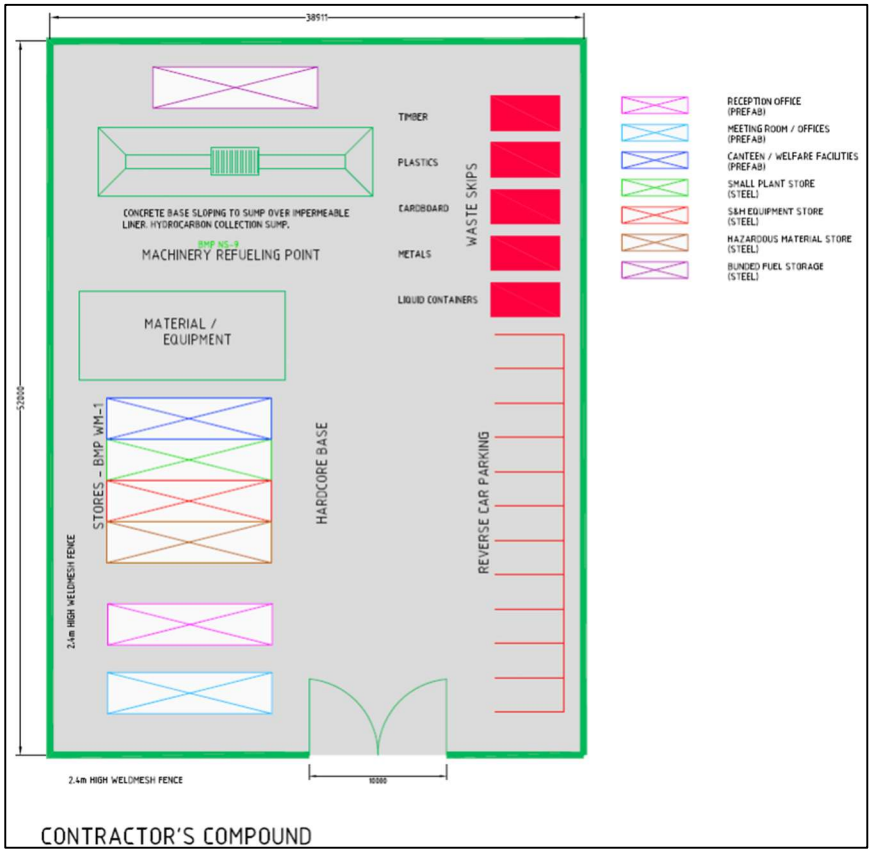


Figure 2: Proposed Phasing of Development

The compound shall be entirely within the site boundaries. Site accommodation to be provided will include suitable washing / dry room facilities for construction staff, canteen, sanitary facilities, first aid room, office accommodation etc. Access to the compound will be security controlled, and all site visitors will be required to sign in on arrival and sign out on departure.

The compound shall be constructed using a clean permeable stone finish and will be enclosed with security fencing. A permeable hardstand area will be provided for staff parking, and these areas will be separate from designated machinery/plant parking.

A material storage zone will also be provided in the compound area. This storage zone will include material recycling areas and facilities.

A series of 'way finding' signage will be provided to route staff / deliveries into the site and to designated compound / construction areas.

On completion of the works all construction materials, debris, temporary hardstands etc. from the site compound will be removed off site and sent for reuse as by-products or recovery at authorised facilities and the site compound area reinstated in full on completion of the works.

A Construction Stage Management Plan, 25066-OSL-10-DR-C-1002, has been included in Appendix A of this OCEMP.

3.0 TRAFFIC MANAGEMENT

As part of the Construction Stage Safety Plan for the works, a Traffic Management Plan will be prepared in accordance with the principles outlined below and shall comply at all times with the requirements of:

- Chapter 8 of the Department of Transport's Traffic Signs Manual, current edition, published by The Department of Transport (www.gov.ie/transport, www.trafficsigns.ie)
- Guidance for the Control and Management of Traffic at Road Works (June 2010) prepared by the Local Government Management Services Board
- Transport Infrastructure Ireland's Temporary Traffic Management Guidance Handbook (December 2020)
- Any additional requirements detailed in the Design Manual for Roads and Bridges & Design Manual for Urban Roads & Streets (DMURS)

As part of this planning application, an Outline Construction Traffic Management Plan (OCTMP), 25066-OSL-00-RP-C-0005 has been included under separate cover.

This OCTMP will form the basis of the Contractor's Construction Stage Construction Traffic Management Plan, the final details of which will be agreed with the local authority prior to the commencement of construction activities on site.

3.1 REDUCTIVE/MITIGATION MEASURES

In the absence of a contractor's final construction programme it is difficult to assess the exact impact during the construction period. Nevertheless; the following mitigation measures / estimates have been made in respect of the construction period impacts:

- A Construction Stage Construction Traffic Management Plan will be prepared for the construction works.
- The site is to be securely fenced off from adjacent properties, public footpaths and roads.
- Appropriate on-site parking and compounding will be provided to prevent overflow onto the local network. Parking in nearby residential estates shall be strictly prohibited.
- It is likely that some numbers of the construction team will be brought to/from the site in vans/minibuses, which will serve to reduce the trip generation potential.
- Delivery vehicles to and from the site to be spread across the course of the working day in order to reduce the number of HGV's travelling during the peak hours.
- Truck wheel washes will be installed at construction entrances and any specific recommendations regarding construction traffic management made by the local authority to be adhered to.
- Potential localised traffic disruptions during the construction phase will be mitigated through the implementation of industry standard traffic management measures. These traffic management measures shall be designed and implemented in accordance with the code of practices, guidelines and relevant legislation as set out above.
- Site entrance point/s from the public highway will be constructed with a bound, durable surface capable of withstanding heavy loads and with a sealed joint between the access and public highway. This durable bound surface will be constructed for a distance of 10m from the public highway
- Material storage zone will be established in the compound area and will include material recycling areas and facilities.
- 'Way finding' signage will be provided to route staff / deliveries into the site and to designated compound/construction areas.
- Dedicated construction haul routes will be identified and agreed with the local authority prior to commencement of activities on-site.

- On completion of the works, all construction materials, debris, temporary hardstands etc. form the site compound will be removed off-site and the site compound area reinstated in full on completion of the works.

4.0 ROAD CLEANING

A programme of street cleaning (at site frontage on Golf Links Road and School House Road) will be implemented. Provision will be made for the cleaning by road sweeper etc. of all access routes to and from the site during the works. Road cleaning shall be undertaken as required during the completion of the works. All road sweeping vacuum vehicles will be emptied off site at a suitably authorised facility.

5.0 WORKING HOURS

For the duration of the proposed works the maximum working hours shall be 07:00 to 19:00 Monday to Friday (excluding bank holidays) and 08:00 to 14:00 Saturdays, subject to the restrictions imposed by the planning authority. No working will be allowed on Sundays and Public Holidays.

6.0 CONSTRUCTION METHODOLOGY

6.1 PROTECTION OF ADJACENT AREAS

Work areas will be segregated from the adjacent public areas for the extent of the project by means of a suitable hoarding fence. All hoardings will be designed by a competent Structural Engineer to resist wind loads.

All materials being hoisted by crane or other means will be controlled using guide ropes where possible.

6.2 EXCAVATIONS AND ROCK BREAKING

A specialist ground works contractor will be appointed to carry out the excavation and rock breaking works. The appointed specialist contractor will carry out a full risk assessment prior to the commencement of work.

The ground works operation will be carried out in order to ensure that material removed from the ground is taken away at regular intervals in order to reduce the amount of material that can be stored on site.

As required by condition imposed by the local authority under the current planning permission, topsoil stripping associated with the proposed development will be monitored by a suitably qualified archaeologist, which will ensure the identification of any small archaeological features that may survive within the site. If any features of archaeological potential are discovered during the course of the works further archaeological mitigation will be required, such as preservation in-situ or by record. Any further mitigation will require approval from the National Monuments Service of the Department of Housing, Local Government and Heritage (DoHLGH).

Stripping of topsoil will be carried out in a controlled and carefully managed way and coordinated with the proposed staging for the development. At any given time, the extent of topsoil strip (and consequent exposure of subsoil) will be limited to the immediate vicinity of active work areas. Topsoil stockpiles will also be located so as not to necessitate double handling.

Disturbed subsoil layers will be stabilized as soon as practicable (e.g. backfill of service trenches, construction of road capping layers, construction of building foundations and completion of landscaping). The duration that subsoil layers are exposed is to be minimised in order to mitigate against weather effects.

Similar to the comments regarding stripped topsoil, stockpiles of excavated subsoil material will be protected for the duration of the works. Stockpiles of subsoil material will be located separately from topsoil stockpiles.

6.3 MATERIAL HOISTING

It is envisaged that mobile cranes will be erected to hoist materials on site in the construction of apartments and/or housing units. Should tower cranes be required, these will be designed by a specialist to free stand full height without the need to be connected to the structure. The crane details and number are yet to be confirmed, and these will be dictated by the main works contractor.

If required, the crane(s) is likely to be founded on a concrete base foundation. This foundation may be piled or ground bearing depending on the suitability of the ground conditions at the location where the crane is proposed. The geometry of this concrete base is envisaged to be 8m x 8m x 1m deep. It is intended that the tower crane will be erected and dismantled by a mobile crane from within the site boundary.

Careful consideration will be given to the recruitment of suitably qualified crane drivers and banksmen given the location of the site and the proximity of neighbouring properties.

In order to control the risks associated with lifting operations beside/adjacent to existing properties, an electronic limiting system will be fitted to the cranes. This system will prevent the crane operator from deviating from the previously agreed operating environment. At no point will load be permitted to overhang over existing properties.

6.4 RESOURCE AND WASTE MANAGEMENT PLAN

As required by condition imposed by the local authority under the current planning permission, a Construction Resource Waste Management Plan was prepared and submitted by OSL as part of the original planning conditions (Condition 21) as granted under the aforementioned planning reference. This submission was deemed compliant by Limerick City and County Council on 13 August 2025.

A detailed Construction Resource and Waste Management Plan pertaining to this planning application will be agreed with the local authority and put in place in order to manage any waste on site, promote the circular economy and increase segregation and minimise construction waste costs.

Waste arising from the site will be considered in relation to the waste management hierarchy of prevention, reduce, reuse, recycle, energy recovery and disposal. All materials capable of being re-used will be sent for re-use. The maximum possible materials will be categorised as by-products. All waste will be sent to appropriately authorised facilities.

Proposals for the minimisation, reuse and recycling of construction and demolition waste has been included within the Outline Construction Resource and Waste Management Plan, 25066-OSL-00-RP-C-0006, submitted as part of this planning application under separate cover.

The contractor will ensure that the measures as set out within the aforementioned report (OCRWMP) are followed in order to ensure that the relevant codes of practice, guidelines and legislation associated with construction and demolition waste are adhered to.

6.5 CONSTRUCTION SCHEDULE

It is proposed, upon receiving a successful application, that there will be possible number of phases of construction. The dwelling units will be developed on a sequential basis starting on the southern part of the site and generally moving sequentially. As mentioned previously, planning permission was previously granted for a residential development on this site comprising of 113no. residential dwellings and a creche under An Coimsiún Pleanála Reference *ABP 319009-24* (Limerick City and County Council Planning Reference 23/60842) and is currently under construction.

The development as proposed in this amendment to the original planning permission is proposed to commence work on site upon receiving a planning permission, starting with the site set up followed by the setting out and provision of services.

6.5.1 Phase 0a Site Set Up

This task will take up to three weeks to complete with approximately up to 4-8 staff employed. It will involve site clearance (given the lack of existing scrub/vegetation this will not be significant), set up of a site office, compound, secure the construction site and erection of signage for site security & safety purposes. The provision of temp foul and storm sewers will be provided for in the site office location and can connect directly in the existing foul network.

6.5.2 Phase 0b Setting Out of Sites and Provisions of Services

Given the degree of work involved in the provision of storm & foul services this stage will involve significant work and is estimated to take between 12 and 18 months with 8-50 staff employed. This will involve the laying of sewers mainly within the site, the provision of footpaths, lighting and roadways. As part of any works (i.e. provision of services) along

the public areas/roads in the vicinity of the site, it will be ensured that the surface of the roads/areas will be re-instated to a high standard and to the satisfaction of the local authority.

6.5.3 Phase 1 Construction of 28 Residential Units

Phase 1 is currently under construction as per the planning permission under An Coimsiún Pleanála Reference *ABP 319009-24* (Limerick City and County Council Planning Reference 23/60842).

6.5.4 Phase 2 Construction of 28 Residential Units

Phase 2 is currently under construction as per the planning permission under An Coimsiún Pleanála Reference *ABP 319009-24* (Limerick City and County Council Planning Reference 23/60842).

6.5.5 Phase 3 Construction of 36 Residential Units and 1 no Creche

The construction of the residential units will, to a certain degree respond to the demand/sale of the units involved, it is estimated that the Phase 1 of the development will be constructed/completed over a 12-month period. It will involve up to 100 No. construction staff (depending on the number of units being constructed at any one time).

6.5.6 Phase 4 Construction of 28 Residential Units

The construction of the residential units will, to a certain degree respond to the demand/sale of the units involved, it is estimated that the Phase 2 of the development will be constructed/completed over a 12-month period. It will involve up to 100 No. construction staff (depending on the number of units being constructed at any one time).

7.0 NOISE AND VIBRATION

During the construction of the works, the Contractor shall comply with:

- BS 5228: 2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites, Part 1 and Part 2.
- Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRS, Revision 1, 2004)
- Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration

The following acceptable levels (Table 1 below) are described in the Transport Infrastructure Ireland (TII) publication Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes, March 2014. These limits are applied during the construction of road infrastructure projects at the facades of NSRs.

Table 1: TII Acceptable Levels for Construction (Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes, March 2014)

Days and Times	Level dB [$L_{Aeq\ (1\text{-}hour)}$]	Level dB [$L_{pA(max),\ slow}$]
Monday to Friday 07:00 to 19:00 hrs	70	80
Monday to Friday 19:00 to 22:00 hrs	60*	65*
Saturday 08:00 to 16:30 hrs	65	75
Sundays and Bank Holidays 08:00 to 16:30 hrs	60*	65*

Note: * Construction activity at these times, other than emergency works, will normally require specific permission from the local authority

It is unlikely that there will be a requirement for night-time or evening (19:00 to 23:00 hrs) construction works. Accordingly, based on BS5228 and TII acceptable levels for construction and also the existing ambient sound environment, the following construction noise criteria are proposed:

- 65dB $L_{Aeq\ (1\text{-}hour)}$ Monday to Friday (07:00 to 19:00 hrs) and Saturday (07:00 to 13:00 hrs) at existing NSRs

Vibration impacts can typically potentially occur during site development and construction phases of development through the use of equipment such as rock breakers or piling. Vibration can affect both human beings and buildings (although most concern is with damage to buildings from site development and construction). Accordingly, there are separate criteria for both.

Guidance relevant to the protection of building structures is contained in the following documents:

- British Standard BS 7385: 1993: Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration, and
- British Standard BS 5228: 2009+A1 2014: Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration.

Both standards contain similar guidance relating to building damage criteria. The standards note that the risk of cosmetic damage to residential buildings starts at a Peak Particle Velocity (PPV) of 15mm/s at 4Hz increasing to 20mm/s at 15Hz

and 50mm/s at 40Hz and above for unreinforced or light framed structures. For reinforced or heavier commercial buildings, the standard notes that the risk of cosmetic damage commences at 50mm/sec at 4 Hz and above. This is for transient or intermittent vibrations which do not cause a resonant response in buildings. The criteria should be reduced by half for more sustained or continuous vibration which may occur during activities such as continuous piling.

Humans are particularly sensitive to vibration stimuli and responses typically occur well below the order of magnitude for building damage. BS5228-2 also provides the following range (Table 2 below) of vibration values and associated potential effects on humans:

Table 2: Vibration Criteria, Human Beings (BS5228-2)

Vibration Level (mm/s) PPV	Effect
0.14	Vibration might just be perceptible in the most sensitive situations for most vibration frequencies
0.3	Vibration might just be perceptible in residential environments
1	A vibration level of this magnitude is likely to cause complaint
10	Vibration is likely to be intolerable for any more than a very brief exposure to this level

7.1 REDUCTIVE/MITIGATION MEASURES

In general, the contractor shall implement the following mitigation measures during the proposed works;

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Keep internal haul roads well maintained and avoid steep gradients.
- Minimise drop height of materials.
- Start-up plant sequentially rather than all together

More specifically, the contractor shall ensure that;

- In accordance with Best Practicable Means, plant and activities to be employed on site are reviewed to ensure that they are the quietest available for the required purpose.
- Where required, improved sound reduction methods are used e.g. enclosures.
- Site equipment is located away from noise sensitive areas, as much as physically possible.
- Regular and effective maintenance by trained personnel is carried out to reduce noise and / or vibration from plant and machinery.
- Hours are limited during which site activities likely to create high levels of noise and vibration are carried out.

In the absence of a contractor's final construction programme it is difficult to assess the exact impact during the construction period. Nevertheless; the following mitigation measures / estimates have been made in respect of the construction period impacts:

- A site representative responsible for matters relating to noise and vibration will be appointed prior to construction on site. Any complaints received will be thoroughly investigated and a log kept.

- A noise and vibration monitoring specialist will be appointed to periodically carry out independent monitoring of noise and vibration during random intervals and at sensitive locations for comparison with limits and background levels. It is proposed that noise and vibration levels be maintained below those outlined above as part of these works.
- All vehicles and mechanical plant used for the purpose of the Works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order. In addition, all diesel engine powered plant shall be fitted with effective air intake silencers. All compressors shall be "sound reduced" models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use. All ancillary pneumatic percussive tools shall be fitted with mufflers or silences of the type recommended by the manufacturers, and where commercially available, dampened tools and accessories shall be used.
- All ancillary plant, such as generators and pumps, shall be positioned so as to cause minimum noise disturbance. If operating outside the normal working week acoustic enclosures shall be provided.
- Temporary acoustic screening shall be placed along the boundaries with NSRs where works take place close to the boundary. As a general rule of thumb, it is recommended that temporary screening break the "line of sight" from the sources to the affected windows of the nearest NSRs where possible. It is likely that screening will be required at NSR1 throughout the duration of the proposed works. The screening should be of sufficient surface density (minimum 10 kg/m2) to mitigate temporary noise impact associated with the construction phase.
- Local screening should be provided for stationary plant such as generators and compressors.
- An acoustically screened area should be provided on the site specifically for noisy operations such as grinding and cutting metal.
- A noise liaison officer should be appointed and charged with the responsibility of keeping people informed of progress and by setting down procedures for dealing with complaints.
- During the construction phase all equipment shall be required to comply with noise limits set out in EC Directive 2000/14/EC as amended by Directive 2005/88/EC on the approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors. The directive covers equipment such as compressors, welding generators, excavators, dozers, loaders and dump trucks.
- While piling is dictated by constraints such as ground conditions, the design and final method chosen shall ensure compliance with the threshold limits for noise and vibration as set out in within the relevant code of practice, guidelines and legislation quoted and referenced herein.
- Measures such as use of an acoustic shroud, damping of the hammer impact and enclosure of the hammer shall be considered for reducing noise impact if applicable to the final piling design.
- At the time of tender, the contractor will be obliged to review all systems taking noise and vibration into account in the choice of equipment. As noted in BS5228-1, "the construction industry is generally innovative and constantly developing, and there may be proprietary systems available at the time of tender that were not known or available at the planning stage."
- Vibration monitoring will be conducted when sources which potentially could cause vibration impact to buildings will be in use. Test monitoring will be conducted with the equipment on at low levels before increasing incrementally to operational levels if deemed necessary. Works will be ceased and mitigation measures implemented during the construction phase where monitoring detects vibration levels associated with the works above the relevant guidance values for building damage as set out in within the relevant code of practice, guidelines and legislation quoted and referenced herein.

8.0 SEDIMENT AND WATER POLLUTION CONTROL PLAN

All works carried out as part of these works will comply with all Statutory Legislation including the Local Government (Water Pollution) acts, 1977 and 1990. This standard is extremely strict, allowing any entry onto water of deleterious material or polluting matter is an offence. The contractor will co-operate in-full with the Environmental Department of the local authority.

As part of the overall construction methodology, the following issues will be addressed and have been identified as being of particular risk and/or concern to pollution.

Contamination of Watercourse / Groundwater

Although the proposed excavation works will temporarily increase the vulnerability of the underlying aquifer, the thickness of the low permeability subsoil and the shallow depths of excavation involved will minimise the risk to groundwater. There is a risk that ground water could become contaminated with lime from cement which subsequently finds its way into the local adjacent watercourses. The measures proposed to be put in place to mitigate any potential damage from the effluent of contaminated ground water would be to create an exclusion zone, as far as reasonably practicable. Concrete batching will take place off site and wash down and wash out of concrete trucks will take place off site (at authorized concrete batching plant in full compliance with relevant planning and environmental consents). Concrete trucks, cement mixers or drums/bins are only permitted to wash out in designated wash out area greater than 50m from sensitive receptors including drains and drainage ditches. Abstraction of water from watercourses will not be permitted. Discharge from any vehicle wheel wash areas is to be directed to on-site settlement ponds.

Sediment & Erosion

Similar to the above, adjacent watercourses/groundwater need to be protected from sedimentation and erosion due to direct surface water runoff generated onsite during the construction phase. To prevent this from occurring surface water discharge from the site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete. A temporary positive drainage system shall be installed prior to the commencement of the construction works to collect surface water runoff by the site during construction. A series of geotextile lined cascading, high level outfall, settling basins will be installed upstream of the agreed discharge point by the appointed contractor.

The temporary surface water management measures have been included on the Construction Stage Management Plan, 25040-OSL-10-DR-C-1002, that has been included in Appendix A of this CEMP. Figure 3 below illustrates the temporary surface water management proposal.

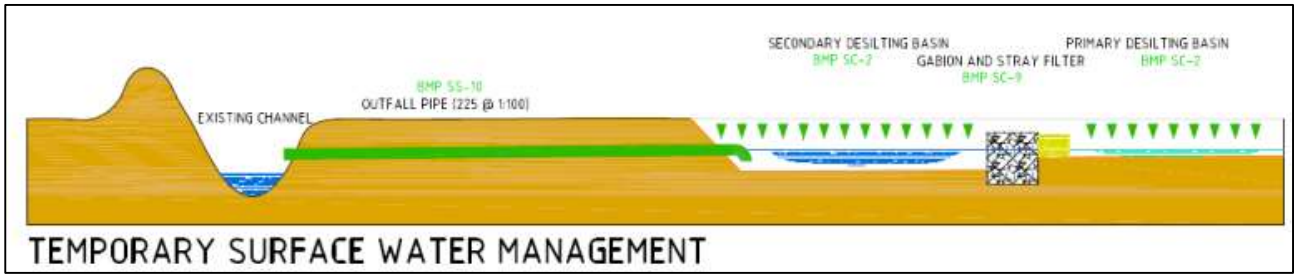


Figure 3: Temporary Surface Water Management

Alternatively, a 'siltbuster' silt control unit can be used on the outfall. This temporary surface water management facility will throttle runoff and allow suspended solids to be settled out and removed before water is discharged in a controlled manner to the agreed outfall. All inlets to the cascading settling basins will be riprapped to prevent scour and erosion in the vicinity of the inlet. There will be:

- Minimisation of site disturbance
- Implementation of sediment control (as outlined above)
- Minimisation of the potential for erosion
- Prevention of sediment-contaminated water leaving the site

Such measures shall be undertaken as part of the site's discharge licence. Temporary mounding and sediment control will be implemented to ensure silts do not enter the existing ditch during the construction stage.

Water quality monitoring

It is proposed to implement a programme for monitoring water quality at the outfall as part of the construction of this development, in agreement with the Planning Authority. Monitoring prior to, during and post construction works of surface water quality shall be undertaken to ensure minimum disturbance of water quality in the receiving environment. During the construction phase, the monitoring programme will include daily checks, weekly inspections and monthly audits. This programme and locations of sampling will be agreed with the local authority prior to the commencement of the proposed development.

Discharge Licences

It will not be permitted to discharge into any newly constructed storm water systems or watercourse without adhering to the conditions of the discharge licence and agreeing the same with the Site Manager and Local Authority Area Engineer for implementation.

Over Ground Oil / Diesel Storage

Appropriate safe storage of all by-product and waste materials shall be implemented during the construction works in accordance with this Outline Construction and Environmental Management Plan and the Resource and Waste Management Plan for the works. Only approved storage system for oil / diesel within the site will be permitted, (i.e. all oil / diesel storage to be located within a designated area placed furthest away from adjacent watercourses and contained within constructed bunded areas e.g. placed on 150mm concrete slab with the perimeter constructed with 225mm solid blockwork rendered internally). The bunded area will accommodate the relevant oil / diesel storage capacity in case of accidental spillage. Any accidental spillages will be dealt with immediately on site however minor by containment /removal form site. Surface water runoff from this bunded hardstanding area will discharge to a drain via a full retention petrol interceptor or to the on-site WWTP. Prior to the interceptor, a silt trap will be installed in order to remove the majority of suspended solids.

Disposal of Wastewater off Site

The construction compound will include adequate staff welfare facilities including foul drainage. Foul drainage discharge from the construction compound will be removed off site to a licensed facility until a connection to the public foul drainage network has been established. The Site Management Team will maintain a record of all receipts for the removal of toilet or interceptor waste off site to ensure its disposal in a traceable manner to an authorised facility. These will be available for inspection by the Environment Section of the local authority at all times.

Road Sweepers / Cleaning

The cleaning of public roads in and around the subject site will be undertaken to reduce environmental impacts and care will be taken to prevent any pollution of watercourses from this activity.

Waste Arisings

Appropriate safe storage of all by-product and waste materials shall be implemented during the construction works in accordance with this Outline Construction and Environmental Management Plan and the Resource and Waste Management Plan for the works.

Construction Stage Dewatering

Appropriate monitoring of groundwater levels during site works shall be undertaken. Standard construction phase filtering of surface water for suspended solids will be carried out. Unfiltered surface water discharges or runoff shall not be permitted from the site into the onsite watercourse during the works.

9.0 BIODIVERSITY / ECOLOGICAL PROTECTION MEASURES

All site clearance and landscaping works will comply with current legislative requirements and best practice. All retained trees that are within or close to the working wayleave of the proposed development will be protected in accordance with the requirements of British Standard BS5837:2012 Trees in Relation to Design, Demolition and Construction' – Recommendations, with protective fencing being installed around all trees to be retained, prior to commencement of development.

The planting plans and landscaping proposals will ensure that no invasive species are introduced, either deliberately or inadvertently, to the site from imported materials or other activities. Any licence necessary will be obtained if there could be a significant disturbance of any protected species.

9.1 LIGHTING

The primary mitigation which will be implemented for this project relates to bats, as these are considered the most sensitive species in relation to nighttime lighting. It is noted that the mitigation proposed will also lessen in the impact in relation other nocturnal species such as Hedgehog. Potentially lighting associated with the site works could cause disturbance/displacement of Bats and other nocturnal wildlife. If of sufficient severity and duration, there could be impacts on reproductive success. Lighting mitigation measures will follow Bats & Lighting Guidance Notes for: Planners, engineers, architects and developers (Bat Conservation Ireland, 2010). The following measures will be applied in relation to construction and operational lighting:

Lighting during construction

Site lighting will typically be provided by tower mounted temporary portable construction floodlights. The floodlights will be cowled and angled downwards to minimise spillage to surrounding properties. The following measures will be applied in relation to site lighting:

- Lighting will be provided with the minimum luminosity sufficient for safety and security purposes.
- Lights will be switched off when not in use; and
- Lighting will be positioned and directed so that it does not to unnecessarily intrude on adjacent ecological receptors i.e. treeline and woodland used by protected species...
- Works will primarily take place during hours of daylight to minimise disturbance to any nocturnal mammal species.

9.2 CONSTRUCTION PHASE MITIGATION MEASURES

All personnel involved with the project will receive an on-site induction relating to operations and the environmentally sensitive nature of nearby European sites and to re-emphasize the precautions that are required as well as the precautionary measures to be implemented. All staff and subcontractors have the responsibility to:

- Work to agreed plans, methods and procedures to eliminate and minimise environmental impacts,
- Understand the importance of avoiding pollution on-site, including noise and dust, and how to respond in the event of an incident to avoid or limit environmental impact;
- Respond in the event of an incident to avoid or limit environmental impact;
- Report all incidents immediately to their line manager;
- Monitor the workplace for potential environmental risks and alert the immediate line manager if any are observed; and
- Co-operate as required, with site inspections.

10.0 SURFACE WATER DRAINAGE WORKS

The drainage infrastructure will be constructed and protected through the following measures:

- Hoarding or fencing to be provided to cordon-off completed infrastructure works: As is standard practice on construction sites, elements of works may be completed on a phased basis. As works are completed and handed over within each phase, this area will be enclosed with hoarding or fencing offset a safe distance from the line of the existing infrastructure and no further excavation works will be allowed within this area unless agreed with site management.
- Contractor to produce as-built construction records of drainage infrastructure. These records will be submitted to the engineer for approval in advance of handover. The as-built records will be reviewed and will need to be approved by the engineer before practical completion can be certified. The as-builts will be used by site personnel as a working record of where drainage infrastructure is located. The locations of these will be recorded on the as-built and will be marked out on the ground in advance of any works commencing in later stages. This methodology will be formally incorporated into a method statement to be completed by the groundworks sub-contractor before excavations commence.
- Marker tape to be provided on top of sewers running through live areas of site: As part of the methodology laying of drainage pipes, drainage works will have marker tape placed at a depth of 300mm above the pipe to warn the excavator and banksman of the service below. It is noted that the placing of marker tape over drainage lines is not a standard construction detail. However, the vulnerability of live drainage infrastructure serving a previous area of development within the proposed site is noted and these measures will form part of the works.
- Site personnel to be informed of works already completed and commissioned: As part of the Safe System of Work Plan (SSWP), site personnel will be made aware of the drainage lines which are in operation. A site-specific method statement will be required in all cases where it is deemed that there is a risk of damaging such services. Those involved in direct management and supervision of site-based excavations require relevant competencies to deliver safety standards on site. They will have health and safety training in order to design safe systems of work that are appropriate to specific site conditions. They will need to prepare clear and simple safety method statements that can be used and understood by site workers. Ongoing checks will be carried out to ensure that appropriate equipment has been provided and is being used correctly.
- Monitoring of excavation and prevention of undermining of infrastructure: Special care will be taken when digging above or close to the lines of services. The locations of these will be marked out on the ground in advance of any excavation being undertaken. The general principles outlined in the Health and Safety Authority document: 'Code of Practice for Avoiding Danger from Underground Services' will be followed to ensure the safety of workers and to minimise the risk of damage to any existing pipelines or buildings.
- Water quality control of discharges to watercourse or drainage network: As detailed within the previous section, adjacent watercourses/groundwater need to be protected from sedimentation and erosion due to direct surface water runoff generated onsite during the construction phase. This includes preventing any sediment laden water from entering the surface water outfalls serving a previous phase of the development. To prevent this from occurring surface water discharge from the site will be managed and controlled as detailed above for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete. Any manholes will need to be securely covered and gullies fitted with a geotextile filter to allow protection of the surface water within the pipe. Surface water runoff from areas stripped of topsoil and surface water collected in excavations will be directed to on-site settlement ponds where measures will be implemented to capture and treat sediment laden runoff prior to discharge of surface water at a controlled rate.

- Protection of services from breakage or crushing: Where drainage infrastructure serving a previous section of the proposed development is located within the extents of the current works, the drainage infrastructure will have to be protected from breaking or crushing. Consideration will be given to areas where heavy plant is going to be tracked across the existing drainage infrastructure. This may require construction of temporary protective concrete slabs to bridge across the existing lines where haul roads are required.
- In order to reduce the risk of defective or leaking sewers, all new sewers should be laid in accordance with the relevant standards, pressure tested, and CCTV surveyed to ascertain any possible defects.
- Implement protection measures and proposed treatment of the OPW 5m Buffer Zone as illustrated within the Construction Stage Management Plan included within Appendix A of this report.

11.0 AIR QUALITY AND DUST CONTROL

The objective is to ensure that dust does not impact significantly at nearby receptors. Therefore, an Air Quality Dust Management Plan (DMP) will be formulated for the site, which will address the following;

- Specify a site policy on dust
- Identify site management of dust
- Develop documented systems for managing site practices and implementing management controls
- Outline how the DMP can be assessed

11.1 SITE MANAGEMENT

The following measure will be implemented:

- The siting of construction activities and storage piles will consider the location of sensitive receptors and prevailing wind conditions to minimise the potential dust nuisance.
- Site management will include the ability to respond to adverse weather conditions by either restricting operations on site or using effective control measure in a timely manner before potential for nuisance occurs.
- During working hours the site agent or another competent appointed member of staff shall monitor dust control methods.
- A register shall be kept on site logging all correspondence and telephone / verbal complaints regarding construction activities outlining remedial actions if any.
- A site representative responsible for matters relating to dust management will be appointed prior to construction on site.
- The site representative responsible for dust management shall ensure that dust management procedures are followed and ensure monitoring and assessment of same.

11.2 DUST CONTROL MEASURES

The following measures will be implemented:

- Apply a speed limit of at least 20km/hr for on-site vehicles
- Provide water bowsers during periods of dry weather to ensure unpaved areas are kept moist. Spray exposed site haul roads during dry and / or windy weather.
- Ensure paved roads are kept clean and free of mud and other materials. Sweep hard surface roads, inside and outside the site, to ensure roads are kept clear of debris, soil or other material.
- Restrict un-surfaced roads to essential site traffic.
- Provide water bowsers during periods of high winds and dry weather conditions to ensure moisture content is high to increase the stability of the soil.
- During the proposed works the following mitigation measures shall be implemented to minimise dust emissions:
    - Protect overburden material from exposure to wind by storing the material in sheltered regions of the site.
    - Regular watering of stockpiles during dry and windy periods.
    - Located any stockpiles away from sensitive receptors, (i.e. receptors sensitive to dust release).
    - Provide tarpaulins over all unacceptable excavated materials being carted off site.
    - Control vehicle speeds and impose speed restrictions, (speed can mobilise dust).
    - During dry spells and if deemed necessary monitoring of dust levels shall be carried out using the Bergerhoff Method i.e. analysis of dust collecting jars left on-site (German Standard VDI 2119, 1972). Results will be compared to the TA Luft guidelines (TA Luft, 1972). Should an exceedance of the TA

Luft limit occur during, additional mitigation measures, for example more regular spraying of water, shall be implemented.

- The excavating machines will be cleaned on a daily basis to ensure no excess grease and dust is left on the machine. This will be carried out at low level below the height of the hoarding to prevent any mud coming in contact with the public.

The Contractor will be required to produce an Air Quality and Dust Management Plan including Best Practice Measures to control dust and in particular, measures to prevent dust nuisance. The principal objective of the Air Quality and Dust Management Plan will be to ensure that dust emissions do not cause significant nuisance at receptors near the Proposed Project. A dust deposition monitoring programme will be implemented during the Construction Phase in order to verify the continued compliance with relevant standards and limits.

12.0 CONCLUSION

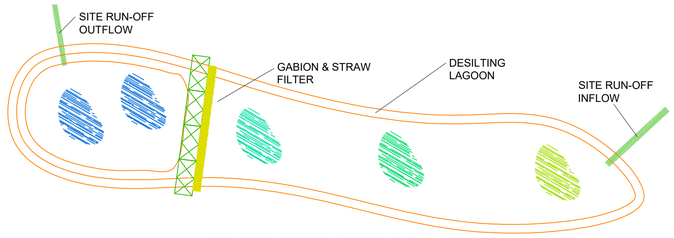
This Outline Construction and Environmental Management Plan addresses construction activities on site that may result in noise, air quality, water quality, biodiversity or waste management issues, should the plan not be put in place and implemented.

These include procedures for monitoring and tracking construction activities and ensuring construction personnel are trained and educated as necessary. This Outline Construction and Environmental Management Plan should be reviewed after planning conditions are imposed on any permission granted and as the construction phase progresses to accommodate any changes in activities on site.

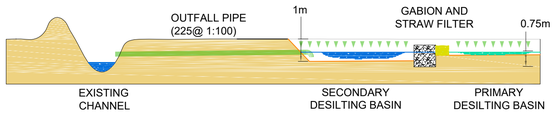
The final Construction Stage Construction and Environmental Management Plan, to be submitted and approved by the local authority prior to the commencement of construction, will make provision for and ensure adherence to any and all regulations and guidelines as is relevant at the time of submission.

APPENDIX A

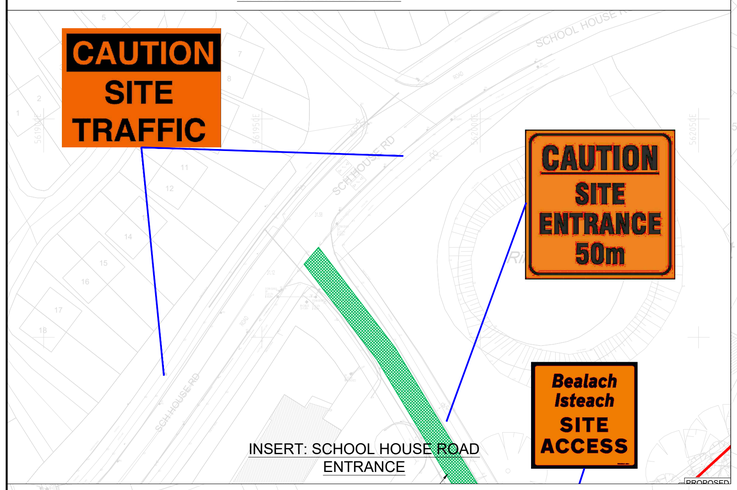
Construction Stage Management Plan



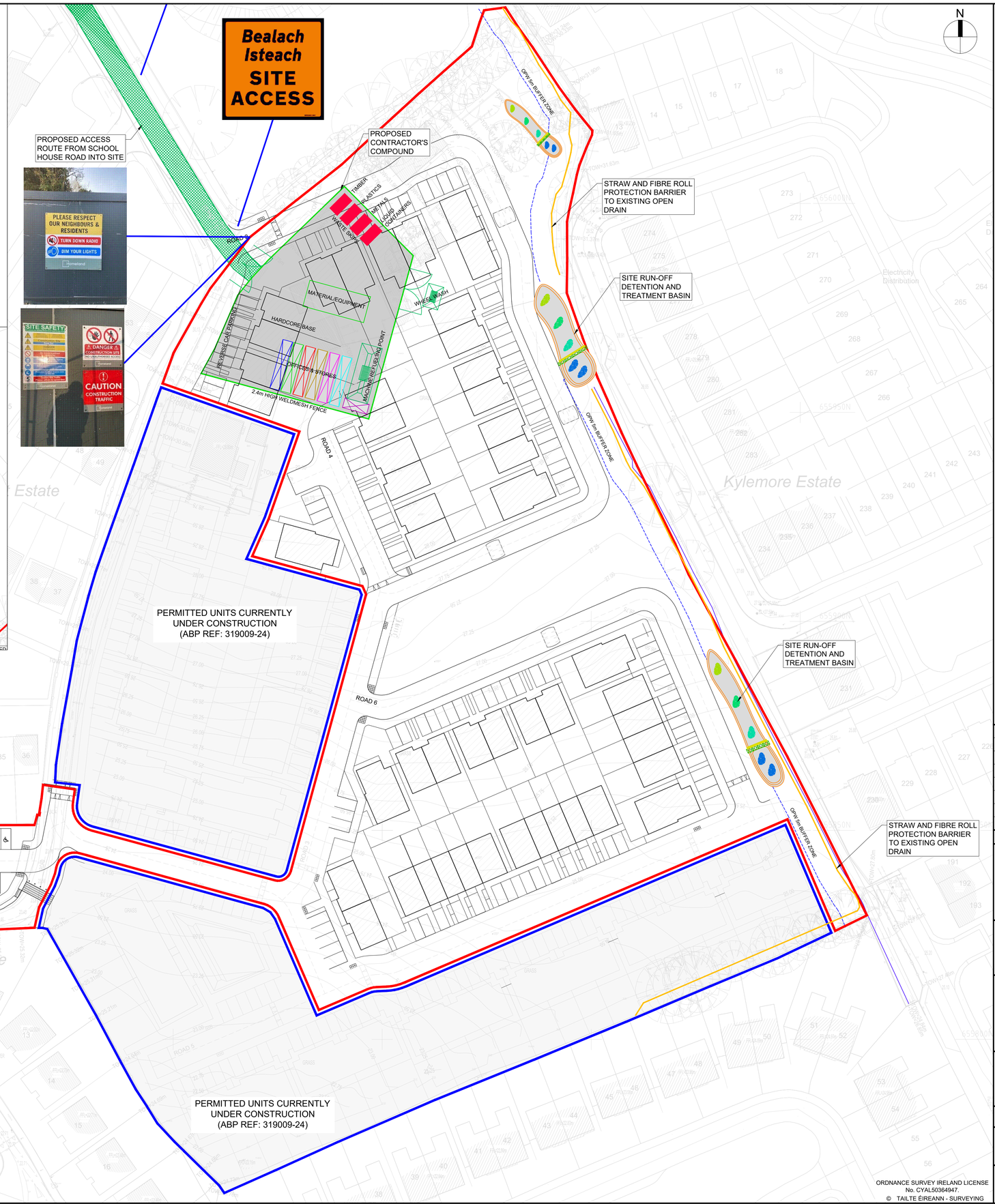
CONSTRUCTION STAGE SURFACE WATER MANAGEMENT



TEMPORARY SURFACE WATER MANAGEMENT DETAIL



INSERT: SCHOOL HOUSE ROAD ENTRANCE



GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE TO MALIN HEAD DATUM.
3. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS.
4. CONTRACTOR TO CHECK ALL DIMENSIONS ON SITE.
5. ALL COORDINATES ARE TO IRISH TRANSVERSE MERCATOR
6. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS.
7. COPYRIGHT OSL.

LEGEND:

- SITE RED LINE BOUNDARY
- RECEPTION OFFICE (PREFAB)
- MEETING ROOM / OFFICES (PREFAB)
- CANTEEN / WELFARE FACILITIES (PREFAB)
- SMALL PLANT STORE (STEEL)
- S&H EQUIPMENT STORE (STEEL)
- HAZARDOUS MATERIAL STORE (STEEL)
- BUNDED FUEL STORAGE (STEEL)
- WHEELWASH AND SUMP
- ACCESS ROAD FROM SCHOOL HOUSE ROAD

0 20.0m 40.0m

REV	DATE	DESCRIPTION	BY	CHK'D	AUTH
P03	29.05.26	ISSUED FOR PLANNING	BJM	DB	DB
P02	03.11.25	ISSUED FOR SECTION 32B	BJM	JT	DB
P01	28.10.25	ISSUED FOR INFORMATION	BJM	JT	DB

OSL·BUTLER CONSULTING ENGINEERS
Civil, Structural & Project Engineering Services
Unit 38 Eastgate Drive, Little Island, Cork T45 YO49
Tel: +353 21 4297572

CLIENT

GLR PROPERTY LTD.

PROJECT
PROPOSED LARGE-SCALE RESIDENTIAL DEVELOPMENT AT OLD ORCHARD, MONALEEN, LIMERICK, CO. LIMERICK

TITLE
PROPOSED CONSTRUCTION STAGE MANAGEMENT PLAN

PURPOSE: FOR PLANNING

ORIGINAL SCALE: A1 - 1:500

ORIGINAL ISSUE DATE: 28.10.2025

STATUS: S2

DRAWING NO: 25066-OSL-10-DR-C-1002

REV: P03

ORDNANCE SURVEY IRELAND LICENSE No. CYAL50364947.
© TAILTE EIREANN - SURVEYING