

2 Project Description

This Environmental Impact Assessment Report (EIAR) has been prepared to accompany an application under Section 37L of the Planning and Development Act 2000, as amended ('37L application').

The Proposed Project is the restoration of a disused quarry through import of clean, uncontaminated soil and stone (greenfield or equivalent greenfield). The proposed final ground levels in the fill area seek to tie in with the ground levels of surrounding lands. The restored lands will largely be returned to their pre-extraction agricultural land use with enhanced biodiversity provisions included in the restoration of the disused quarry.

The lands on which the Proposed Project is located (the 'Application Site' or 'Site') are within the townland of Coolsickin or Quinsborough, Co. Kildare (see Figure 2-1). The Application Site is situated approximately 9 km west of Kildare town and approximately 2.7 km northeast of Monasterevin.

The Application Site lies at the centre of an established landholding. All lands within the EIA Boundary and Application Site (shown in Figure 2-2) are within the ownership of the Applicant. The Application Site area of approximately 6.63 ha encompasses the proposed working areas, temporary site facilities, upgraded and realigned private access road, and the upgraded and relocated site entrance. The proposed fill area is approximately 6.05 ha. The Application Site is located entirely within the EIA Boundary¹ which extends to approximately 10.62 ha.

This EIAR has been prepared in tandem with a retrospective EIAR prepared to accompany an application for substitute consent for the existing quarry by the same Applicant, Bison Quarries Limited (BQL) ('the Applicant'). It is noted that the Applicant purchased the lands that are the subject of this EIAR in 2022, subsequent to the closure of the quarrying operation undertaken on the Site over 2000-2006. For clarity, the Applicant does not intend to undertake sand, gravel or rock extraction as part of this Proposed Project.

¹ Lands within the EIA Boundary are referred to as the EIAR unit.

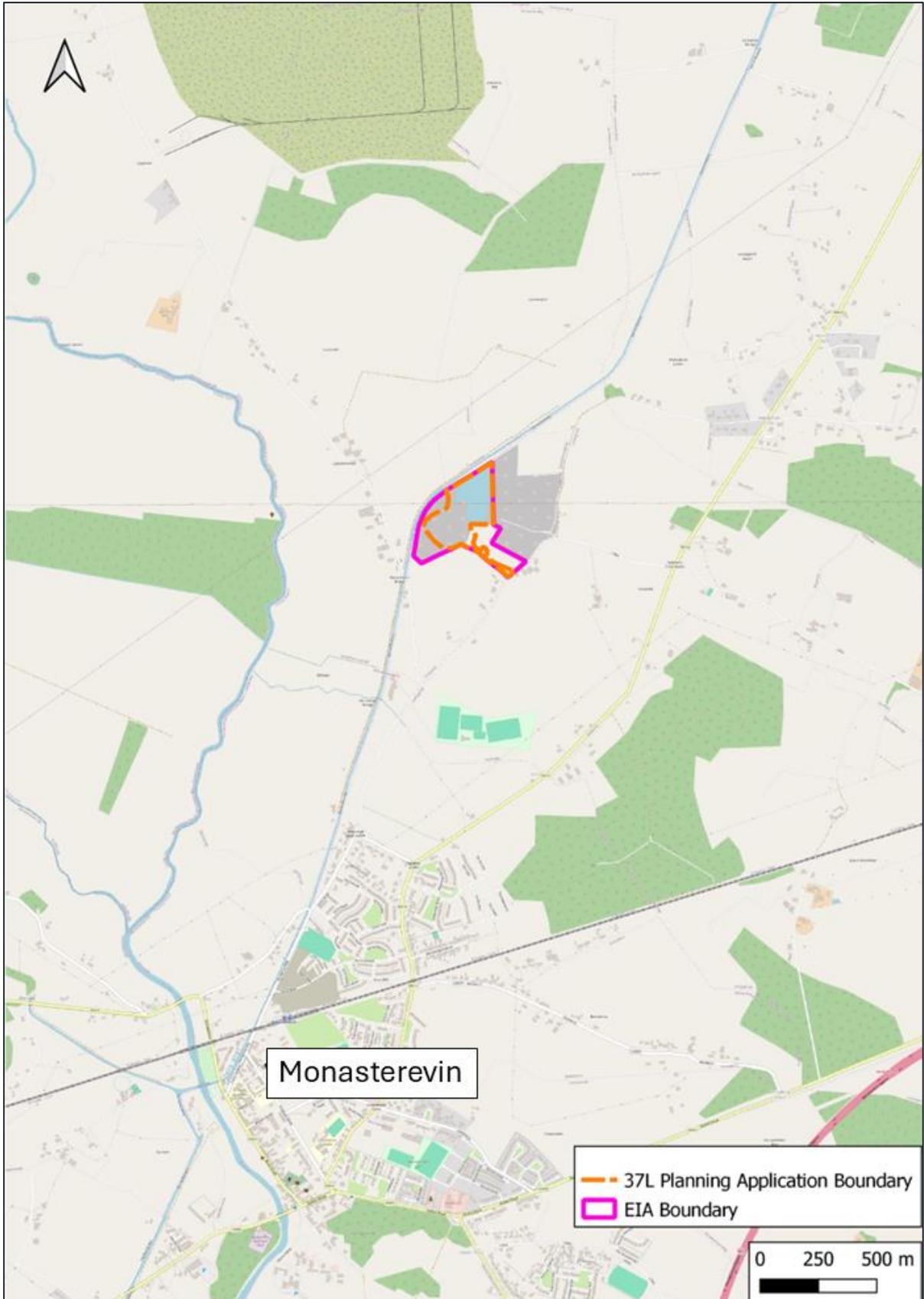


Figure 2-1 - Regional Site Location.



Figure 2-2 - 37L Planning Application Boundary² and EIAR Boundary overlain on Google Earth Imagery from September 2024.

2.1 Applicant and Landownership details

This EIAR has been prepared to support a Section 37L Application for further development as agricultural lands. The Applicant is BQL who will carry out the restoration of the quarry to agricultural use subject to planning consent. The Project is located entirely within lands within the ownership of the Applicant purchased in 2022.

2.2 Location of Subject Lands

The Application Site is located in the townlands of Coolsickin or Quinsborough, Co. Kildare, and is centred at ITM coordinates 663239, 713123. The Site is approximately 2.7 km northeast of Monasterevin (see Figure 2-1) and approximately 9 km west of Kildare town.

² For clarity, the term ‘Application Site’ refers to lands within the 37L Planning Application Boundary

2.3 Context and Landscape Character of Subject Lands

The Application Site is mainly bound by agricultural lands. The Grand Canal and its associated footpath³ are located broadly adjacent to the northern and north-western boundary of the Site. A disused quarry (on third-party lands) is located to the east of the Application Site. The L7049 road is located south of the Application Site, along with low density one off and ribbon type residential development along that road.

The Application Site is located primarily within the northern part of the wider EIAR unit and comprises the historical irregularly shaped quarry void and associated gravel tracks that were used as haul routes during the operational life of the quarry. Historical stockpiles of overburden material of low economic value are located adjacent to the south and south-west of the quarry void space. Following the closure of the quarry in 2006, this part of the Application Site has largely been recolonised by vegetation (see Figure 2-2).

The lands within the ownership of the Applicant that are located within the south part of the EIA unit are used for agricultural purposes (tillage). An approximately 0.4 km gravel access track that links the existing quarry site to the local road network via the L7049 is located on the west of these lands (see Figure 2-2).

The general character of the surrounding area is agricultural in nature with intermittent units of forestry and low density one off and ribbon type residential development along the local road network.

The following pieces of infrastructure are located within or proximate to the Application Site:

Roads - The Site is accessed from a single entry/exit point on the south of the EIA boundary located on the applicant's lands that leads to the L7049. This connects to the R414 to the northeast and the R424 in the southwest. The R414 is a regional road linking Monasterevin and Rathangan and the R424, also a regional road, linking Monasterevin to Portarlinton. At the junction with the access to the applicant's lands, the L7049 is a two-way single carriageway road.

Electricity - there is no existing infrastructure present onsite that requires a grid connection. ESB mapping (2024) indicates that no underground lines are present on the Site. A 110 kV overhead transmission line traverses the Site and 1 No. ESB double wood pole set associated with this is located within the Site boundary. A medium voltage overhead line supported by 1 no. ESB single pole is located within the Site boundary. A low voltage overhead line runs broadly parallel to the L7049 and an ESB pole is located opposite the existing Site entrance. Properties around the site are serviced by medium and low voltage overhead lines which traverse the area to the north, south, west and east. See Chapter 13 (Material Assets) for further detail.

³ This section of Grand Canal and associated pathway are part of the Barrow Line of the Grand Canal, and the Barrow Way National Waymarked Trail.

Water - There is no public mains connection services within the vicinity of the Application Site. Four groundwater boreholes present on the Site are used for groundwater monitoring purposed only (not abstraction). There is no abstraction from the water body within the quarry void space. No existing facilities are present onsite that require a water connection. Irish Water (2024) mapping indicates that they do not have infrastructure within the vicinity of the Site. No foul water infrastructure is recorded to be present on the Site. See Chapter 13 (Material Assets) for further detail.

Gas - Gas Networks Ireland mapping (2024) indicates that is no GSI no infrastructure located within the vicinity of the Application Site. See Chapter 13 (Material Assets) for further detail.

The following existing development is present on the Application Site:

- There is security fencing on sections of the Site fronting onto the public road network and the private access road. Hedgerow and/or security fencing, and a gate separates Application Site and the Applicant's land from adjacent lands;
- Access routes comprised of gravels (compacted aggregate);
- Historical stockpiles of overburden from the historical extraction activities;
- Quarry void space created by historical extraction of stone for aggregate.
- Four groundwater monitoring boreholes.

2.4 Site History and Planning Context

2.4.1 Site History

The Proposed Project makes use of topographical features remaining from historical quarry activities that took place on the Application Site from 2000-2006, primarily a quarry void located within the north-east of the Application Site. Historical extraction and associated works undertaken for that quarry project is the subject of a substitute consent application and rEIAR prepared broadly concurrent with this EIAR and 37L Application, and a detailed description of that project is provided therein.

All extraction activities carried out on the Site were undertaken by a third-party and extraction had ceased prior to the Applicant's purchase of the subject lands in 2022.

Publicly available historical aerial imagery⁴ indicates that the subject lands were predominately used for agricultural purpose (tillage) prior to development of a quarry. Extraction of sand, gravel and bedrock (Allenwood Formation) is estimated to have commenced in the year 2000 and has resulted in a quarry void in the north part of the Application Site. Stripped overburden of no economic value has been stockpiled to the south and southwest of the quarry void. Internal haul route comprised of gravel remain within the Site.

⁴ OSI aerial photographs, Google Satellite imagery, and GeoHive maps

Topographical survey of the Application Site carried out by Landmark Engineering & Land Surveying Consultants in 2024 indicate that the quarry void is approximately 2.3 ha in extent. Bathymetric surveys carried out within the quarry void by Murphys Geospatial in 2024 record the water level in the quarry void to be 63.9 mOD and the lowest ground level of the quarry void to be approximately 55 mOD.

The quarry is understood by ceased operations in the year 2006 following an undertaking by the owner/operator at that time. No rehabilitation of quarry lands was carried out within the Site and subsequently the quarry floor has been inundated with collected waters.

Following the cessation of quarrying activities vegetation has naturally colonised the section of the Application Site located to the north of the private access road. Vegetation is periodically cleared from some internal haul routes on the Site to maintain vehicular access. All clearance works are small-scale in nature and carried out in accordance with the Wildlife Act, 1976 (as amended).

An ariel image showing the Application Site in September 2024 is provided in Figure 2-2.

2.4.2 Planning History

The Site was acquired by the Applicant (BQL) in 2022 with the aim of returning the lands to agricultural use and to make safe the quarry void at the Site.

Quarrying at the Application Site is understood from local anecdotal information to have commenced around the year 2000 and ceased within the year 2006. A detailed review of the progression of the quarry project as provided in the rEIAR prepared to support an application for substitute consent.

Information pertaining to the quarry project at the Site is limited as that project was not subject to a valid planning permission (KCC, 2012) .

It is understood that the Site was assessed by Kildare County Council (KCC) under Section 261A of The Planning and Development Act, 2000 and assigned 261A quarry registration number QRA-21-002 under a Notice Pursuant to Section 261A(4)(a) of the Planning and Development Act 2000-2011 (as amended) dated 22 August 2012. This notice was issue to Michael Byrne who came into sole possession of lands within the Application Site in 2001 (Folio 15368). The site had not been operational for some time in 2012 when the notice was issued in 2012, and the Section 261A(4)(a) notice was not complied with. In 2012, Ireland was in the middle of an economic recession which resulted in many quarries not acting on Section 261A notices due to financial struggles and little or no construction activity occurring.

It is estimated that activities at the site included extraction of sand and gravel, limestone rock, and associated processing and temporary stockpiling of materials being stored prior to sale to market. The nature of extraction and associated works has been estimated from incomplete planning application for the Site from 2006. A review of the Kildare County Council (KCC) planning portal records indicates that three number incomplete or invalid

planning applications for the Site are on record for the year 2006. These applications as follows:

- Planning application reference no. 06/741 was received on the 18/04/06 from William Condren and Pat Kinahan for 'quarrying and extraction of rock etc'.
- Planning application reference no 06/855 was received on the 04/06/06 from Patrick Kinahan and William Condren for 'extraction of rock for the production of aggregates, the erection of one mobile portacabin, crusher and ancillary works'.
- Planning application reference no. 06/1155 was received on the 08/06/06 from Roadfill Ltd for 'extension to and existing rock quarry for 2.14 ha and for retention permission for 2.62 ha of rock quarry for development'.

As part of a 261A assessment process of the Planning and Development Acts 2000-2011 (as amended), completed on the 22nd of August 2012 by KCC, the development of the Site was considered to have required an EIA (being a post-1990 development) and an AA (being a post - 26th February 1997 development) to comply with the EIA and Habitats Directive. The operator was issued a notice under section 261A (4)(a) of the Act which determined that:

The quarry commenced operation on or after 1 October 1964 and no permission was granted in respect of the quarry under Part III of this Act or Part IV of the Act of 1963, or If applicable, the requirements in relation to registration under section 261 were not fulfilled.

The 261A assessment (KCC 2012) states that:

'The 2010 aerial photography suggests that the quarry is inactive and I have reviewed an unauthorised development files on the site, reference UD4203, which contained a report from Darren Hughes , Executive Engineer, dated 28th July 2006 confirming that the site had ceased works following an undertaking from the operator at the time Roadfill Ltd upon a pending court hearing. A court case was undertaken by Kildare County Council against the land owner and operator and a copy of the court order is attached to this file'.

Neither the report from Darren Hughes nor the court order were available from the planning files held by KCC as of 2024 at which time WSP reviewed the documents at KCC offices in Naas. No further information is available and it is understood that quarrying activities ceased in 2006 on foot of threatened enforcement proceedings.

In April 2025, the Applicant (BQL) submitted an application to An Bord Pleanála for substitute consent for the quarry under section 177E of the Planning and Development Act 2000, as amended (An Bord Pleanála case reference: SU09.322432).

2.5 Description of the Proposed Project

The Proposed Project includes for the infilling of an existing approximately 2.3 ha quarry void space and immediately surrounding lands by infilling with clean soils and stones with the benefit of improving the land for trafficability with agricultural machinery and to improve land quality within the application boundary for a wider range of agricultural activities and use.

The Proposed Project includes associated temporary operational facilities, and private access road and site entrance upgrades and realignment, required to facilitate the quarry restoration.

The Applicant proposes to import approximately 720,000 tonnes of clean soil and stone to fill the quarry void space and contour surrounding land to tie in with the existing topographical levels of surrounding lands (see section 2.5.5 for details).

The Site will accept less than 100,000 tonnes of clean soils and stones per annum. Based on a maximum 20 tonnes per load this indicates that the site will have an operation life of approximately 8 years (on the basis that site will operate 5.5 days per week and 50 weeks per year). However, it is likely that there will be quieter economic periods of construction over the proposed restoration period and as such importation rates may be significantly lower than 20 loads a day and therefore the facility's operational lifespan may be up to 10 years. Capacity and lifespan of the Proposed Project have been discussed further in Section 2.6.

A full drawing pack has been prepared to support the planning submission for the Proposed Project and this is available within the wider planning pack outside of this EIA document.

2.5.1 Method and Direction of Working

The proposed method of working is detailed below:

- Clean, uncontaminated soil and stone will be imported to the site from the greater Kildare and Dublin region.
- Material will be transported across site via existing internal haul routes (comprised of gravel) to the deposition areas.
- Granular material will be placed to the leading edge and pushed directly into void space via the existing bench on the northwest on the void.
- Infilling with granular material will generally continue in a south and southeast direction at a level above the water level.
- Infilling may be undertaken from various locations depending on site operational conditions.
- Soil will be placed on top of the granular type material and levelled.
- Soil placement will generally occur in a northwest to southeast direction.
- The rate of filling is not considered significant and will allow the water level to settle as the works progress.

2.5.2 Site infrastructure and facilities, and management

The following temporary facilities will be installed and maintained during the life of the Proposed Project:

- Office and fully serviced welfare facilities;
- Six parking bays;
- Weighbridge and associated portacabin;
- Wheel wash;
- Two waste inspection bays and one bunded waste quarantine area;
- Hardstanding area (vehicle movement and storage);
- Surface water drainage infrastructure from hard standing and discharge to ground, including two interceptors and two. soakaways.

The site entrance and private access road will be upgraded and realigned. These will be retained following to completion of the Proposed Project.

The proposed site facilities and upgrades to the private access road and site entrance are shown in Figure 2-3 are discussed in sections 2.5.2.1 to 2.5.2.12.

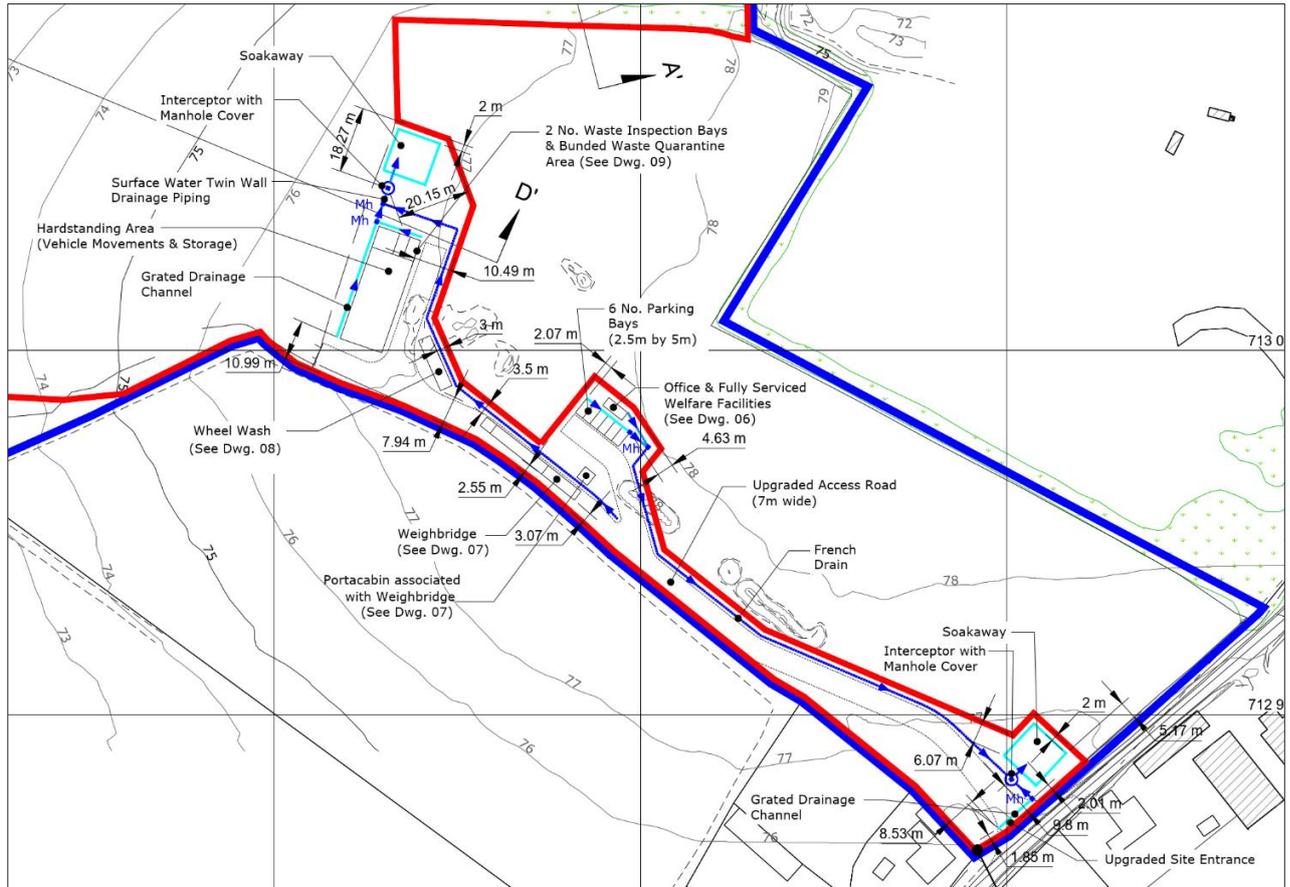


Figure 2-3 – Proposed Project facilities and access upgrades⁵.

2.5.2.1 Office and fully serviced welfare facilities

A site office and fully serviced welfare facilities will be constructed approximately 200 m northwest of the existing site entrance, adjacent to the access road. These include an office canteen, file store and toilet facilities. This building will be used for site management operation.

2.5.2.2 Weighbridge and associated portacabin

A weighbridge and associated portacabin will be installed adjacent to the site office and along the inbound lane of the access road into the site (see Figure 2-3). This will be used to track and record the amount of material entering the Application Site and all HGV traffic importing inert clean soils and stones to the proposed facility will be directed across the weighbridge. This will also allow weighing-out of vehicles and of any wastes which do not meet the acceptance criteria and are thus rejected and sent off-Site to other licensed facilities.

⁵ Note: This figure is reproduced from Drawing No. 04 provided in the drawing pack submitted within the Section 37L application for the Proposed Project. Drawing references within this figure refer to drawings provided as part of that drawing pack and are available therein. Further detail regarding the proposed site entrance upgrade is provided in Chapter 12 (Traffic and Transport).

2.5.2.3 Wheelwash

All trucks exiting the site will be required to pass through the wheel cleaning system that will be installed adjacent to the site facilities (see Figure 2-3). The wheel washing facility will be located upon concrete hardstanding which will be maintained for the duration of the Proposed Project. The wash water from the wheel wash will be recycled within a fully enclosed water recycling system.

2.5.2.4 Site Access, Roads, Parking and Hardstanding Areas

The bulk of the materials to be imported to the Site are expected to be sourced in the eastern region including Co. Laois, Dublin, and Kildare.

All trucks will access the site via the L7049 from/to the east and the junction with the R414. Trucks will not route along the L7049 to the west of the site entrance. Access to the M7 motorway is available at Junction 14, via the R445.

The private access road and site entrance will be upgraded and realigned to facilitate the movement of HGVs egressing/exiting the Site. It is proposed to construct a bell mouth entrance for safe entry and exit to the Site. A concrete apron will be installed at the site entrance to minimise the tracking of muds onto public roads. The internal access road from the Site entrance to the Project facilities will be paved/hardstanding.

The proposed entrance has been designed to ensure adequate sightlines in both directions. This will require a minor realignment of the southern section of the private access road located within the Application Site and the existing entrance connecting to the public road (see Chapter 12 Traffic and Transport for details).

A concrete hardstanding area for vehicle movements and material storage will be provided north of the weighbridge (see Figure 2-3). Waste inspection bays, quarantine area, and the wheel wash bays will be constructed from concrete.

Existing gravel haul roads within the north of the Application Site will be maintained to facilitate access around the Site from private access road to the depositional (infill) areas.

Queuing space has been provided for five trucks between the site entrance and the site office. There will be no queuing on the local road network prior to unloading of clean soils and stone.

A car park with six parking bays for private vehicles (three operatives / three visitors) will be constructed of hardstanding and located adjacent to the Site office (see Figure 2-3). The parking provision is sufficient for the number of staff working on site and site visitors.

Hardstanding will be installed with a typical thickness of 300mm but may vary depending on the specific work area/purpose.

2.5.2.5 Surface Water Drainage

All hard standings, including the paved private access road, will be drained to a surface water drainage system.

Run-off from hard-standings used for parking and marshalling of trucks and the main internal road will be directed to a shallow interceptor drain that will be constructed on site and ultimately discharged to ground via oil/water interceptor (see Figure 2-3). The two interceptors will be maintained by an appropriately qualified contractor. Wastes from the interceptors will be removed to an appropriately licenced facility.

At the site entrance, surface water run-off from the concrete apron will be directed into the site by a shallow interceptor drain that will be constructed on site and ultimately discharged to ground via oil/water interceptor(see Figure 2-3).

The interceptors to be installed onsite will be the same as (or similar to) the specifications as set out in Appendix 2A.

The soakaways will be installed to a depth of approximately 2 m and comprise 5-inch clean stone overlain by a suitable geotextile membrane overlain by 300m of suitable fill. The soakaway will connect to the interceptor by a pipe of suitable diameter (e.g. 150 mm) that is perforated only within the 5-inch clean stone section of the soakaway structure.

2.5.2.6 Water Supply

Considering the nature and scale of the facility, the water requirements are expected to be relatively low as the operations do not require significant volumes of water. During drier period the collected waters from the quarry void will provide water for road cleaning and dust suppression. Potable water will be provided through bottled water to the canteen.

2.5.2.7 Wastewater and Sewerage Infrastructure

The welfare facilities will be in the form of serviced portable toilets which will include sanitary facilities with high quality sanitary fittings. The facilities will be portable and will not have access to mains waste. They will be serviced by a suitable third-party provider with waste removed from site for disposal at an appropriately licenced treatment facility.

2.5.2.8 Power Supply

Approval will be sought for a power supply connection to the ESB Network to service the site office and welfare facilities.

Diesel generators will be used to power mobile lighting, if required.

2.5.2.9 Lighting

Deposition works will mainly take place during daylight hours and within the permitted hours of operation. During winter months, temporary mobile lighting will be provided, as required along access and haul roads; around the site entrance and facilities, and at the active working areas for health and safety reasons. This lighting will be directed and cowled onto



the relevant work area in order to avoid light spillage to offsite residential and ecological receptors.

2.5.2.10 Fuel, lubricant and Oil Storage

Fuel will not be stored onsite. It is anticipated that plant and machinery will be refuelled daily by a contracted fuel company who will attend Site for refuelling of vehicles.

Any refuelling of plant onsite will take place on the hardstanding area and drip traps will be used. Refuelling will be undertaken by a suitably responsible person.

Spill kits will be maintained on site to deal with all spills and leaks, and spill training will be provided to relevant staff members.

If small quantities of lubricants and hydraulic oil need to be stored on on-site, these will be stored on a bunded pallet. Disposal of spills / leaks collected in bunded areas will be to an appropriate licensed facility.

2.5.2.11 Equipment Storage and Plant Maintenance Areas

Parking for mobile plant will be provided for on hardstanding for overnight storage. Drip trays and mats will be placed under parked plant.

It is anticipated that equipment will be removed from site for maintenance. Minor maintenance to mobile plant will occur in the hardstanding areas with appropriate spill controls in place.

2.5.2.12 Material Inspection and Quarantine Facility

A bunded material quarantine area and two inspection bays will be provided onsite to temporarily store non-compliant materials pending removal from the Site to appropriate facilities. The quarantine area will be concrete hardstanding and will be located to the northwest of the weighbridge (see Figure 2-3).

As identified in Section 2.5.2.5, surface water runoff from this area will be routed through an interceptor.

2.5.3 Site Management

2.5.3.1 Traffic Control

As presented in Chapter 12 (Traffic and Transport), the total daily trips associated with the quarry operation for the importation of approximately 100,000 tonnes per annum accounts for 46 movements daily, 36 of which relate to HGV's (80%). These numbers have been broken down as follows:

- 36 daily truck movements enter and exit the site importing material, 18 inbound and 18 outbound;
- Six staff trips daily, three inbound and three outbound; and
- Four miscellaneous trips daily, two inbound and two outbound.

The Proposed Project will accept up to 18 loads per day on average (with up to a maximum of up to 25 loads per day based on supply and demand over short term periods⁶).

All materials entering the Site will to be transported along the upgraded private access road from the local road via the upgraded site entrance.

Traffic management measures will be used during the works phase, comprising:

- Signage identifying the Site and entrance will be erected and maintained on the northern and southern approaches to the site entrance.
- Where appropriate, and subject to agreement / approval from the KCC, roadside notices will be placed along the existing local road network in the vicinity of the Site to advise of HGV's turning in and out of the Site.
- A site identification sign and a restricted access notice will be placed at the site entrance.
- Site traffic will be limited to 10 kph inside the Site and key speed restriction signs will be repeated on the internal road.
- Signage will be erected along the site road to direct vehicles to appropriate areas and trucks will be directed by the weighbridge / reception clerk.
- All HGVs entering or exiting the Site will be required to pass over the proposed weighbridge.
- All HGVs leaving the Site will again be routed across the weighbridge on the outbound lane and through the proposed wheelwash.

2.5.3.2 People, Plant and Equipment

It is envisaged that there will be a minimum requirement for three staff at the site during the working phase, comprising one Site Manager, one weighbridge operator, and at least one machine operator. The proposed mobile plant on the site with comprise one bulldozer, one excavator, one tractor and water bowser. No fixed plant is proposed. Mobile tower lighting will be provided, as required.

2.5.3.3 Working Hours

The site will be open for the reception of HGVs from 07:30 to 18:00 Monday to Friday and from 08:00 to 14:00 on Saturday. Preparation works prior to daily opening will be carried out from 07:00 to 07:30 Monday to Friday and from 07:30 to 08:00 on Saturday. Processing and handling of received materials will be completed daily from 18:00 to 18:30 Monday to Friday and 14:00 to 14:30 on Saturday. The facility will be closed on Sundays and Public/Bank Holidays.

⁶ Exceptional circumstances are proposed to be 25 no. loads a day for up to 4 no. times a year for 1 no. week

2.5.3.4 Site Security

Currently, the Site boundary is secured by security fencing with signage at the quarry area entrance⁷, post and wire fencing and/or hedgerow and a pair of metal field gates at the Site entrance. Prior to commencement of the proposed infilling and restoration activities, a permanent security fencing system will be provided around the Site boundary where required to ensure access is restricted to the Site by:

- enhancing existing dense hedgerows;
- installing 1.8 m high post-and-wire fencing at each side of mouth of the site entrance and boundary with the Grand Canal footpath on the northern edge of the site; and
- erecting 1.2 m high post-and-wire fencing along the public road boundary.

A security gate will be located on the Site access road at its junction with the L7049.

The integrity of the fencing and gates leading into the Site will be checked monthly. Records of checking, maintenance and repairs to the fence and all gates to the Site will be identified in the EMS, and records will be maintained by the Site Manager.

The Site is presently well defined with fencing and hedgerows. These will be maintained and repaired as necessary to restrict access.

Visits to the Site will be monitored, logged in at the Site office, and supervised at all times including truck deliveries.

2.5.3.5 Removal of Vegetation Within the Fill Area

Removal of vegetation onsite will be carried out in line with the measures set out in Chapter 5 (Ecology and Biodiversity).

2.5.3.6 Topsoil Management and Storage

Proposed fill locations have largely been stripped of topsoil and limited topsoil is available on site for restoration purposes.

Where practicable, any existing topsoil in the footprint of the fill area external to the quarry void space will be stripped prior to fill emplacement and temporarily stored in stockpiles within the Application Site, away from the active infilling area and in such location and manner as not to create any temporary adverse visual impact or dust nuisance.

Topsoil will be stockpiled to such heights that there will be no deformation to the structure of the soil. This will allow for the topsoil to be reused during the land reinstatement maintaining the native seedbank for future use at the Site.

Where additional topsoil is required (e.g. the extent of the quarry void area), this will be imported to site and be managed until final surface restoration stage of the project.

⁷ Located at north end of existing private access road.

This topsoil will be placed to the final restoration surface as restoration progresses.

An **Invasive Species Management (IAS) Plan is provided in Appendix 2B** that proposes procedures for the identification, management and treatment of IAS in the event of accidental introduction on IAS to the Site via imported material (e.g. soil).

2.5.4 Soil And Stone Acceptance and Handling Procedures

2.5.4.1 Material Acceptance

Only clean, uncontaminated soils, stone and rock will be used in the filling operation. No contaminated soils will be accepted at the facility.

Material will only be accepted onto the site during the working hours set out in section 2.5.3.3.

The following acceptance procedures will be adhered to:

- 1) On arrival, HGV drivers will identify themselves to site-based staff at the site / weighbridge office (most likely the facility manager or an authorised assistant) before proceeding to the active infilling area or stockpile area (as appropriate). Staff will take a copy of the delivery docket, record the time and date of arrival, the nature, origin and weight of the imported waste (or by-product), the customer / client name, the truck licence plate number, and any further details required by an acceptance protocol for the Proposed Project. All records of material intake will be maintained on site for material tracking and auditing purposes. Only approved vehicles will be directed to the appropriate deposition area.
- 2) Any materials that are deemed to be unsuitable for acceptance onto the Site on the basis of a visual inspection at the weighbridge or inspection bays will be rejected and will be directed away from the Site to an appropriate disposal facility.
- 3) A site operative will be on duty at the deposition area to direct and control the deposition of the material. Material will be deposited in the active deposition area except where inclement weather or ground conditions would require that the material is temporarily stockpiled until conditions improve and the materials can then be deposited in the active deposition area.
- 4) As materials are tipped they will be given a visual inspection by the site operative. Should any non-conforming materials be tipped, the Site Manager will be informed. Any non-compliant material will be transferred to the material inspection bay and quarantine area for closer inspection and classification. Should subsequent testing indicate that the quarantined materials are non-inert and cannot be accepted and used for restoration purposes at the Site, they will be removed off-site by permitted waste collectors to an appropriate waste disposal facility.

Where possible, single sources of large volumes of soil imported to site for infilling purposes shall be identified in advance and subject to compliance with EPA requirements for soil by-product. The Site will require all soil and stones forwarded for infilling purposes to be free of

construction or demolition waste or any non-hazardous /hazardous domestic, commercial or industrial wastes and invasive species. The material acceptance methodology is presented in Table 2-1 and Section 2.5.4.2. below.

Table 2-1 - Material Acceptance Criteria (adapted from EPA 2020)

Material Type	Minimum Criteria
<p>Greenfield soil and Stone:-</p>	<p>The Environmental Protection Agency (EPA) have published ‘Draft National By-Product Criteria’ (BP-N002/2024) which details criteria for when greenfield soil and stone from undeveloped land can be used as a by-product and not as a waste with appropriate planning permission or exemption. Registration with the EPA of soil and stone by-product under the National Byproduct Criteria for soil and stone shall be completed as per the EPA guidance prior to acceptance to the Site.</p> <p>The registration requires that that for the site to be considered greenfield, a review of Ordnance survey historical imagery and google earth and other digital sources are consulted to demonstrate the source site has not previously been developed.</p> <p>The following must also be provided to the receiving facility:</p> <ul style="list-style-type: none"> • copy of the registration of greenfield soil and stone • A description of the source and nature of the soil and stone • The location of the source of the soil and stone (including a map showing the source site boundary) • A statement that material is suitable for use within the facility • A statement that material will not cause environmental pollution at the facility provided by an experienced environmental professional in this area. <p>There is no requirement for testing greenfield soil and stone, unless directed by the Agency or local authority.</p> <p>When the material arrives at the soil recovery facility, a visual check is required to verify that the material is greenfield soil and stone. A record of visual checks should be maintained</p>
<p>Non-Greenfield Soil and Stone:-</p>	<p>Prior to accepting material from each individual source site, the facility operator should obtain information on the past use of the site and should reject non-greenfield sites where significant soil or groundwater contamination has been identified or where there is an increased risk of contamination being present. Soil and stone should generally not be accepted from sites where activities in the past have involved the manufacture or storage of hazardous substances (e.g., chemical manufacturing facilities, oil storage facilities, retail filling stations) unless it is clear that the risk of contamination being present is low. Compliance testing and on-site verification should be undertaken. Contaminant concentrations within the soil and stone must comply with or soil trigger levels for the geological domain as per the EPS soil recovery guidance to demonstrate that the soil and stone meets equivalent greenfield status. All non-greenfield soils shall achieve equivalent greenfield testing as per EPA 2020.</p>

2.5.4.2 Material Handling

Soil and stone materials will be brought to the site in covered trucks to avoid the generation of windblown dust on the approach roads and within the Site.

Clean soils and stone will be deposited in the designated tipping area appropriate for the type of waste. Should temporary stockpiling of this material be required, stockpiles will be located near to the active tipping face for placement and compaction.

Materials designated for infilling will be moved from the stockpile to the active tipping face by dozer. Here it will be deposited, levelled and shaped to conform with a phased approach in line with the infill programme.

2.5.5 Material quantities required

The estimated total volume of material required to restore the quarry lands to contours similar to those that existed on the Site prior to extraction is approximately 400,100 m³. This volume corresponds to approximately 720,000 tonnes of clean soils and stone using a bulk conversion factor of 1.8 t/m³. The only material requirements in respect of the Proposed Project are the inert soil and stone to be used in infilling of the existing void and immediately adjacent lands and topsoil to complete the restoration surface and facilitate the establishment of a mixed grass pasture.

2.6 Capacity and lifespan

Approximately 720,000 tonnes of clean soils and stone will be required to be imported on to the Site to restore the lands.

The duration of infilling activities at the Site will largely be dictated by the rate at which externally sourced inert soil and stone is imported to the Site. There are many factors which will influence this, including, but not limited to the:

- availability of acceptable inert materials from development sites;
- economic climate and related construction industry output;
- proximity of development projects to the Site;
- planning and scheduling constraints at sites providing inert restoration materials; and
- physical site conditions relating to weather.

Taking into account the above factors, the intake rates and duration are a best estimate. Over the short-to-medium term (>5 years), it is likely significant quantities of inert soil could be sourced from mixed residential and commercial development in the greater Dublin and Kildare areas.

It is estimated that the rate of importation of inert materials to the void could reach a maximum intake of 90,000 tonnes per annum should large commercial developments or infrastructure works proceed within the surrounding catchment area at some point over its operational life.

Should the maximum importation rate be 90,000 tonnes per annum, the expected operational life of the facility would be approximately 8 years. If, however, the rate of infilling is less than anticipated, (e.g., due to a downturn in economic climate and development), the infilling rate could be less requiring the Project be operational for up to 10 years. It is proposed that a further 3 years would be required to fully reinstate the lands following completion of the infilling operations. This duration reflects the potential for slippage in the final restoration programme by reason of seasonality and weather/working conditions.

To confirm, permission is sought for a 10-year operation for the Project with a further 3 years to allow for full reinstatement of the lands. Therefore, this permission is sought for 13 years in total.

2.7 Phasing of land restoration and reinstatement

Phase 1- Enabling works

Phase 1 will largely include site clearance and enabling works. Topsoil striping of in situ topsoil for stockpiling to the north of the site will commence during Phase 1. All topsoil will be stored for use in the final restoration of the Site. Installation of upgraded internal access road and site entrance, and construction of the temporary facilities (e.g. site office, parking, wheel wash, weighbridge, hardstanding areas, and services) will be carried out during the Phase 1 enabling works.

Bat boxes, bird boxes, and invertebrate boxes will be established on the boundary with the Grand Canal towpath at locations as marked out in the restoration plan.

Phase 2A- Infilling works

It is not proposed to dewater the quarry void to facilitate infilling works.

Infilling of soil and stone to commence within the quarry void utilising the existing bench/ramp on the northwest section of the quarry void for trucks to tip clean soil and stone.

Fill will build out from the northwest of the void and extent eastwards across the north section of the void. This will extend the working floor for HGVs to deposit within the void. Fill will then continue south to extend across the void space.

During this phase fill levels will be from approximately 55 mOD to 65 mOD (approximately 63.9 mOD is the collected surface water level within the void space).

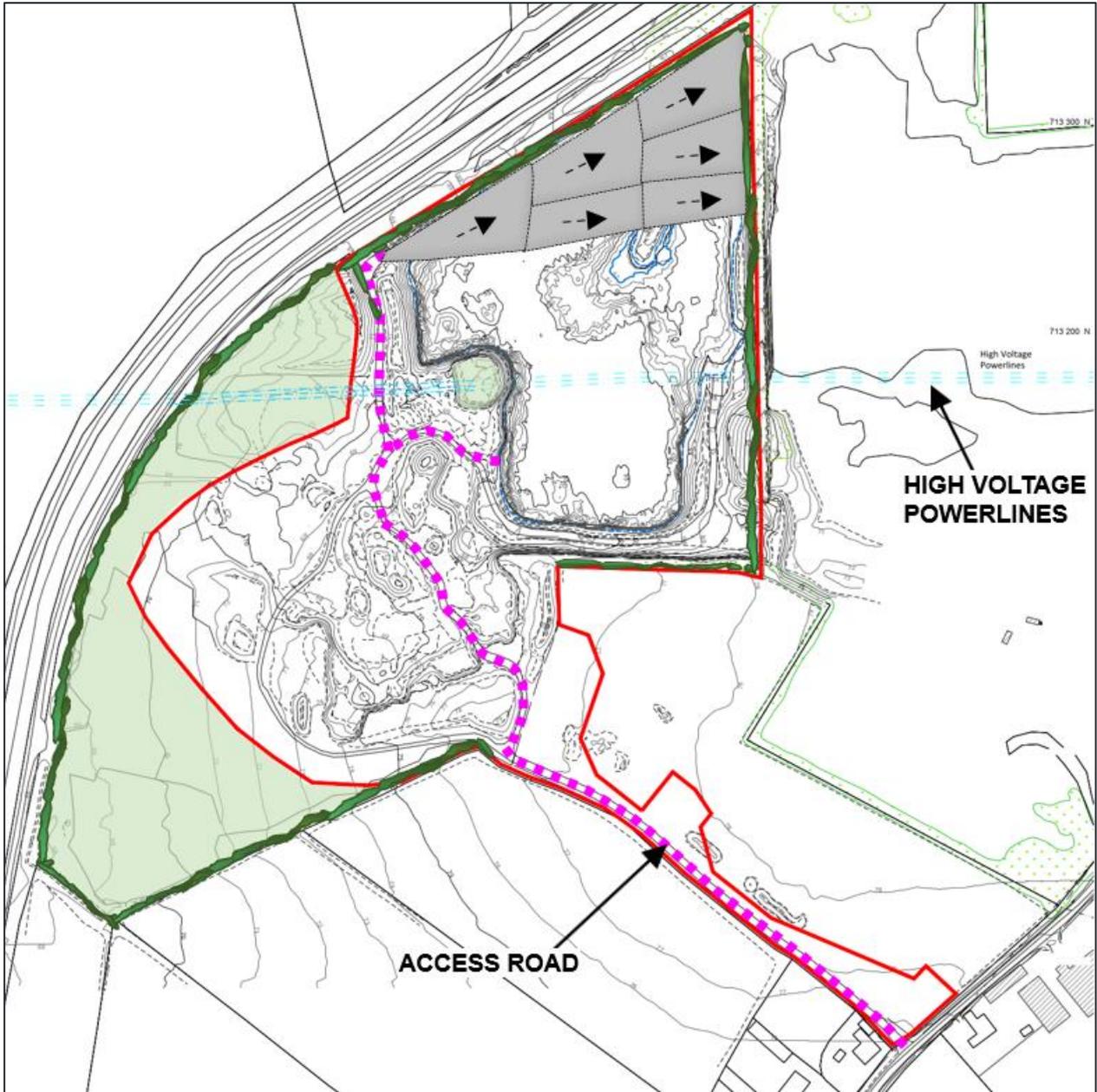


Figure 2-4 - Phase 2a commencement of fill within the quarry void space.

Phase 2B - Infilling works

Infilling works will continue to the maximum fill levels within the void space, extending towards the south. The maximum proposed fill level for this phase is within 0.3 m of the final restoration levels and therefore the maximum level is approximately 68.7 mOD in the southern section of the fill area.

The proposed working direction for emplacement of fill will be from the east wall of the void space to the proposed fill extent in the west/south west, and, as fill levels tie in with existing



ground contours, to the south. Existing haulage routes will be used to access working areas from the west.

Plant and tipper trucks will generally exit working areas in the northern section of the void space using the existing ramp in the northwest of the void space, however variations in routes may be required depending on working practices. Working areas in the southern section of the void will be exited using access created in the late stage of Phase 2A on the southern section of the western quarry face.

In areas outside of the void space, topsoil will be stripped and stored onsite for later reinstatement in working areas. Soil stripping will be carried out immediately prior to infilling in order to reduce the potential for windblown erosion of soils.

Clearing of vegetation, where required, will be undertaken in working areas prior to infilling. Clearing will be carried out in line with the Wildlife Act 1976, as amended, and the measures set out in Chapter 5 (Ecology and Biodiversity) of this EIAR.

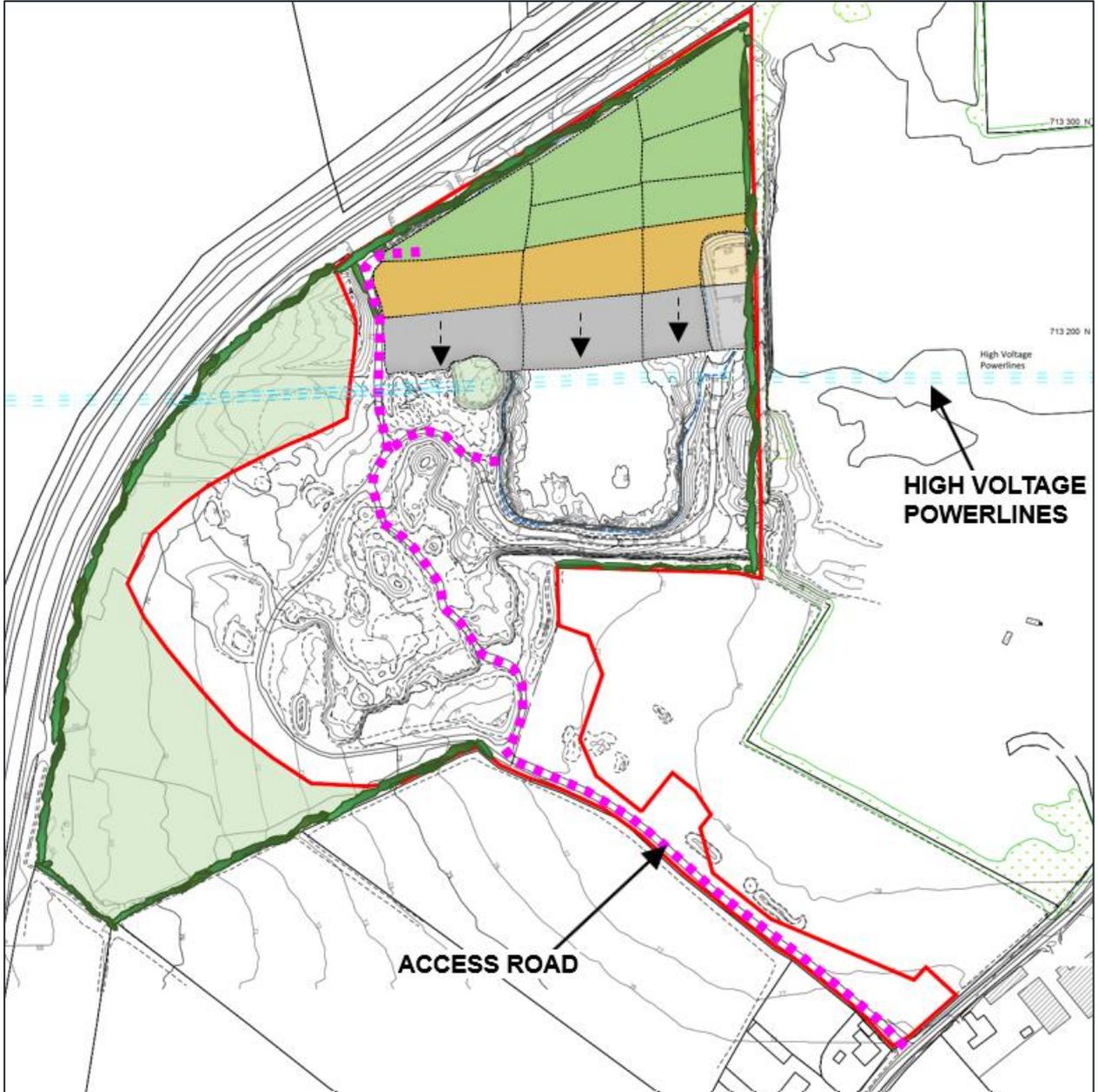


Figure 2-5 – Phase 2B. Continuation of filling activities southwards.

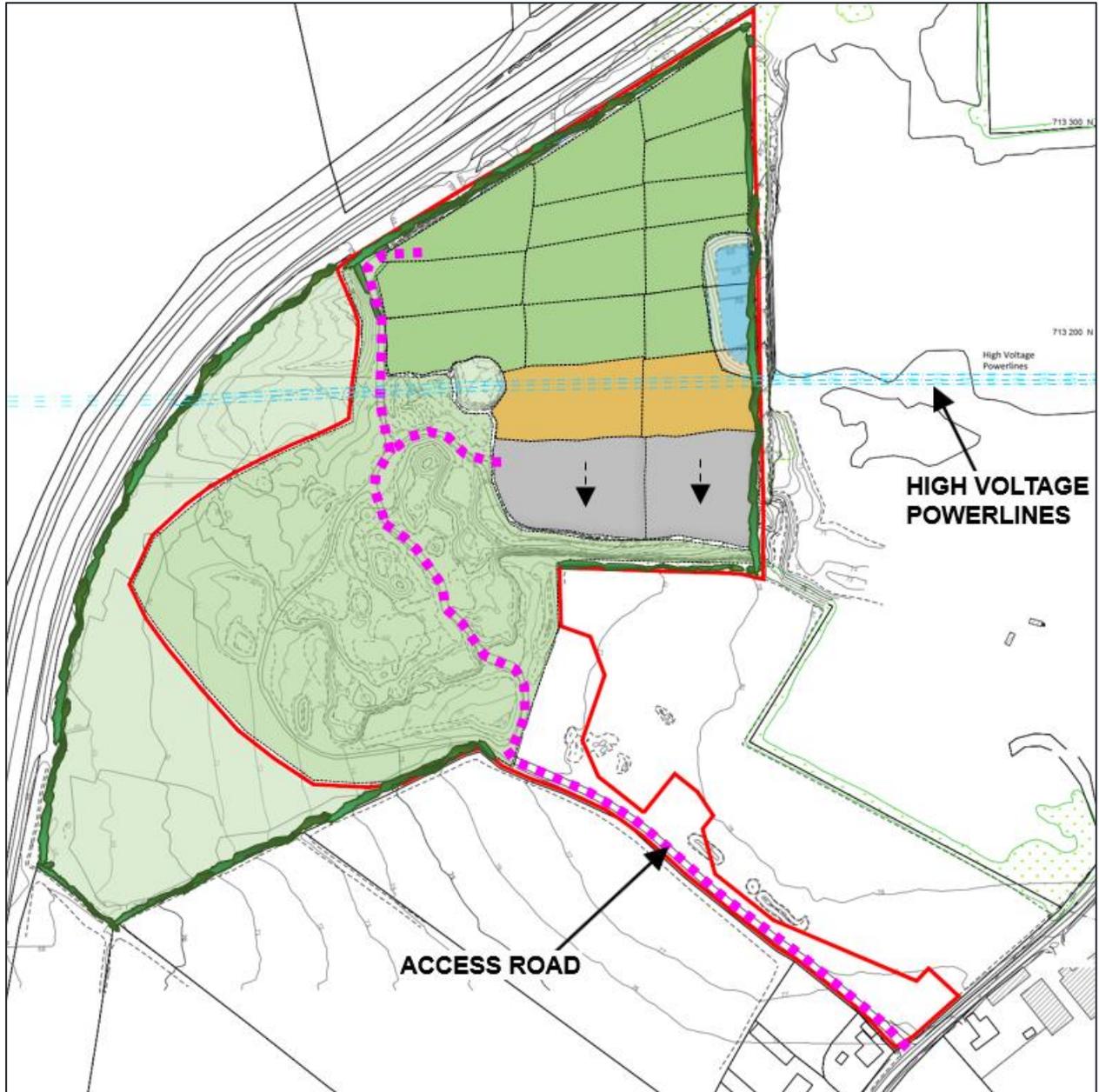


Figure 2-6 - Phase 2b. Continuation of filling activities southwards.

Phase 3 – Final restoration

Infilling of soil and stone will continue to within 0.3 m of the final restoration levels. Final restoration levels range from approximately 77 mOD to the south of the site sloping downwards to the north at an elevation of approximately 67 mOD. On completion of infilling works stored topsoil will be placed and spread across the restoration surface in preparation for final seeding. Final seeding will be carried out in appropriate growing conditions to allow adequate strike of the grass sward to ensure the restoration is successful.

Removal of the temporary site infrastructure will occur following the final restoration or aftercare phase, as required.

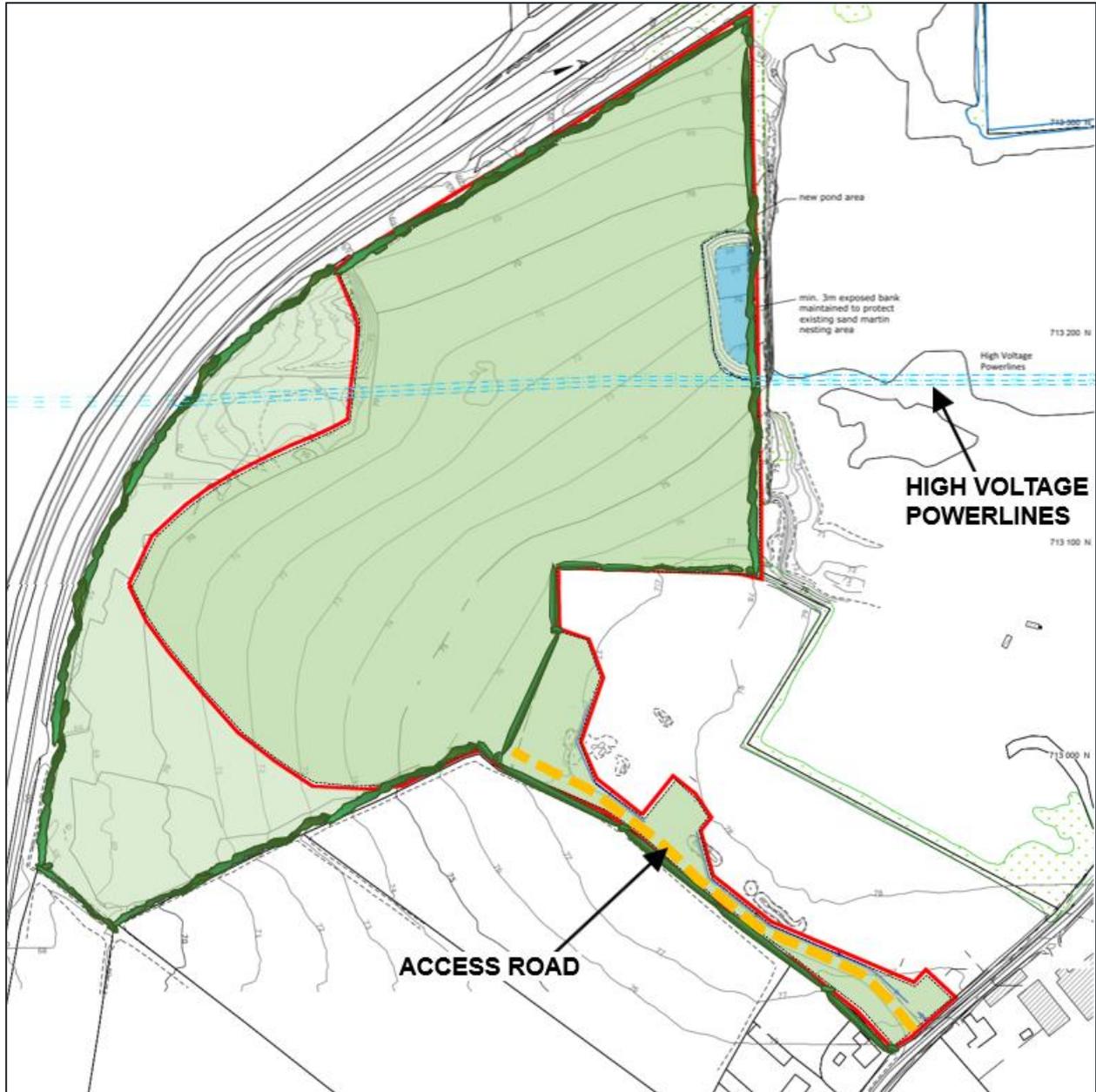


Figure 2-7 – Phase 2b. Continuation of filling activities southwards.

Phase 4 - Aftercare and maintenance

A 3-year period of aftercare and maintenance is proposed. The lands once restored will revert to agricultural use and management as part of the farm operation. The restoration surface will be monitored to ensure the grass strike has been successful. Where areas may not have successfully taken, these areas will be supplemented with additional grass seed and fertilizer as required. Once the aftercare period is completed, any access road left for the purpose of aftercare will be removed and the restoration considered complete.

A proposed restoration plan has been provided as a separate document within the wider section 37L application.

2.8 Major Accidents and Disasters

The EIA Directive (Directive 2011/92/EU, as amended by Directive 2014/52/EU) requires that an assessment is made of *‘the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned’*.

An assessment of major accidents and incidents is provided in Chapter 14 (Major Accidents and Disasters).

Works at the Site will be carried out in the line with the requirements set out in the Safety, Health and Welfare at Work Act 2005, and any relevant Codes of Practice.

2.9 Planning and Guidance Policy

2.9.1 Waste Policy

2.9.1.1 Waste Framework Directive

Waste Framework Directive 2008 (Directive 2008/98/EC), as amended by Directive 2018/851/E, is the key EU directive regulating management of waste. Its primary objectives are:

- the protection of human health and the environment.
- the conservation of raw materials and strengthening the economic value of waste.

The underlying objective of the Directive is to make the EU a recycling society that seeks to prevent waste and, where waste cannot be prevented, uses it as a resource. It sets out the following targets for EU Member States:

- by 2020, the preparing for re-use and the recycling of waste materials (such as paper, metal, plastic and glass) from households shall be increased to a minimum of overall 50 % by weight’.
- by 2020, the preparing for re-use, recycling and other material recovery, including infilling operations using waste to substitute other materials, of non-hazardous construction and demolition waste shall be increased to a minimum of 70 % by weight.
- by 2025, the preparing for re-use and the recycling of municipal waste shall be increased to a minimum of 55 %, 60 % and 65 % by weight by 2025, 2030 and 2035 respectively.

This waste hierarchy set out in Article 4(1) of the 2008 directive is to be treated as a priority order for waste management. The order of preference to follow in the development and implementation of waste management policy must be as follows:

- prevention,
- preparing for re-use,
- recycle,
- other recovery,
- disposal.

When applying the waste hierarchy, EU Member States are obligated to promote the options that deliver the best overall environmental outcomes. In particular, the Member States are required to take measures to promote re-use, recycling and recovery. The latter is defined as in the Directive as *‘any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy’*.

2.9.1.2 A Waste Action Plan for Circular Economy (Ireland’s National Waste Policy 2020–2025)

The Waste Action Plan for a Circular Economy sets out a range of aims and targets for the State and the measures by which these will be achieved, including increased regulation and measures across various waste areas such as Circular Economy, and Construction and Demolition. The policy document looks to:

- change the focus away from waste disposal and treatment (at the lowest tier of the waste hierarchy);
- promote waste avoidance and prevention (at the top of the waste hierarchy), particularly at earlier stages in the production cycle;
- develop a circular economy where waste is re-purposed as a resource; and,
- ensure that excess or previously unwanted materials or products remain in productive use for longer.

In Chapter 11, the policy addresses construction and demolition waste and states: *‘Project Ireland 2040 sets out the State’s ambition and vision in terms of development over the next 20 years. The plan includes a number of major construction projects which present huge potential in terms of preventing and recycling construction waste and a challenge in terms of ensuring we have the ability to manage the waste generated. If the State is to meet the targets as set out in the National Development Plan 2018-2027, it is vital that there is sufficient capacity for the recovery and/or disposal of the envisaged increased construction and demolition waste. From a broader circular economy perspective however, it is even more important that prevention and reuse is hardwired into construction activity.’*

The policy document identifies a number of specific challenges around the management of construction and demolition waste in the construction and development sector which need to be addressed and overcome, including the need to:

- Promote waste prevention in the first instance;
- Follow best available techniques;
- Expand the range and use of recycled products;
- Create a market demand for recycled products.

In Chapter 13, the policy addresses the delivery of indigenous waste management capacity and sets out the challenge as follows: *‘The primary objective here is to support the development – for environmental and economic reasons – of the adequate and appropriate treatment capacity at indigenous facilities to ensure that the full circularity and resource*

potential of materials is captured in Ireland. Adequate in this sense refers to volume, while appropriate here relates to where a treatment process sits in the waste hierarchy. While the move away from disposal and increased use of recovery has helped Ireland in realising our EU targets, we need to drive on and move up the waste hierarchy with reducing reliance on recovery over the medium term.'

2.9.1.3 National Waste Management Plan for a Circular Economy 2024–2030

This Plan sets out a framework for the prevention and management of waste in Ireland for the period 2024–2030.

This Plan includes 'a consumption related target for construction waste and materials and Focus Area 8 'Construction and Demolition' in Chapter 6 sets out the targeted policy base to enable a step change in the sector to facilitate waste prevention and support circular secondary materials'.

Targeted policies in Focus Area 8 of particular relevance for this application are:

TP8.1 'Prioritise waste prevention and circularity in the construction and demolition sector to reduce the resources that need to be captured as waste';

TP8.3 'Incorporation of the EPA Best Practice Guidelines for the preparation of Resource and Waste Management Plans for Construction and Demolition Projects and NWPS Soil and Spoil Action Plans and monitoring by Local Authorities of the application of these requirements.';

Priority Action (Responsibility) 8.3 (EPA / LAs) 'Develop and deliver training, with the EPA, to support national decisions on Article 27 by-products for road plannings and greenfield soil and stone; and support the implementation of a national decision on Article 28 end-of-waste for aggregates, which includes crushed concrete and prioritise the use of materials arising from national end-of-waste or by-product decisions.'

TP14.3 'Monitor Soil Recovery Facility capacity in the market to ensure adequate and appropriate authorisations are in place, in each region, to satisfy the need for soil recovery capacity.'

It is considered that the Proposed Project at Ballykelly Quarry supports the attainment of the goals and objectives identified in A Waste Action Plan for a Circular Economy and the National Waste Management Plan for a Circular Economy 2024-2030 in respect of the construction and development sector specifically, through

- supporting prevention of waste by providing an outlet for excess soil and stone (and other material) which is classified as (non-waste) by-product; and
- promoting better resource management and circularity whereby resources and materials are no longer discarded, but put to practical and beneficial use (the Proposed Project will achieve this by using them to infill and restore the former quarry); and,
- meeting emerging market demand for increased capacity within the circular economy, as described above.

2.9.1.4 National By-product Criteria

In August 2024, the EPA published National By-Product Criteria for Greenfield Soil and Stone. This established a legal framework whereby excess soil and stone from greenfield development sites can be more readily managed outside of the waste management regime by being classified as (non-waste) by-product.

The application of these by-product criteria by stakeholders in the construction and development sector is intended to:

- significantly reduce the volume of material which is generated and managed as waste across the State;
- ensure that these materials can be more readily re-used for productive purposes by freeing them of regulatory burden which would otherwise arise were they managed as waste;
- promote the best available option or outcome in the waste hierarchy (i.e. through prevention of waste); and,
- promote the development of the circular economy.

The Proposed Project will accept excess soil and stone from greenfield and greenfield equivalent development sites and therefore aligns with the States policy to manage clean soil and stone from C&D outside of the waste management regime.

2.9.2 National planning Framework (Project Ireland 2040) and National Development Plan 2018–2027

Project Ireland 2040 National Planning Framework (NPF), published in February 2018, acts as a guide for high-level strategic planning and development for Ireland over the next 20 years. The vision set out under this Framework is based on a set of values that will ensure Ireland's long term economic, environmental and social progress for all parts of the country. The NPF sets 10 National Strategic Outcomes and 75 National Policy Objectives, there is objective which recognises the importance of the Extractive Industry in supplying aggregates and construction materials and minerals to a variety of sectors, both domestically and internationally. This is set out in policy as follows:

- NPO 56 *Sustainably manage waste generation, invest in different types of waste treatment and support circular economy principles, prioritising prevention, reuse, recycling and recovery, to support a healthy environment, economy and society.*

2.9.3 Regional planning Guidance

2.9.3.1 Eastern and Midlands Regional Assembly Regional Spatial and Economic Strategy

The Eastern and Midlands Regional Assembly (EMRA) Regional Spatial and Economic Strategy (RSES) 2019-2031 sets out regional goals and objectives deriving from the NPF.

Under the title 'Enabling and Sustaining the Rural Economy' the RSES states that '*The rejuvenation of rural towns and villages requires that appropriate job creation can be supported in rural areas. Traditional sectors such as agriculture, tourism, extractive*

industries and forestry are complemented by diversification in [other] sectors’. There is an explicit recognition of the need to accommodate and maintain extractive industries in the countryside.

The RSES is required under the Planning and Development Act 2000 to address waste management and sustainable development. The Strategy supports the transition to a circular economy in order to preserve and better manage resources, and to help reduce carbon emissions. The Strategy outlines the need to increase material re-use and recycling in order to reduce waste disposal volumes. Regional Policy Objective 10.25 therein states that *‘Development plans shall identify how waste will be reduced, in line with the principles of the circular economy, facilitating the use of materials at their highest value for as long as possible and how remaining quantum’s of waste will be managed and shall promote the inclusion in developments of adequate and easily accessible storage space that supports the separate collection of dry recyclables and food and shall take account of the requirements of the Eastern and Midlands Region Waste Management Plan.’*

It is considered that the proposed development is fully aligned with the current RSES.

2.9.4 Kildare County Development Plan 2023–2029

The Kildare County Development Plan 2023–2029 (‘KCC CDP’) is the current development plan covering the application Site.

Chapter 9 (‘Our Rural Economy’) of the KCC CDP indicates that extractive industries require sensitive management. Although it is noted that Proposed Project at the Site does not include extraction, Section 9.9 of the KCC CDP sets out a number of policies and objectives specifically in respect of the **extractive industry and pit/quarry restoration**, of which the following have relevance to this assessment:

Policy RD P8 *‘Support and manage the appropriate future development of Kildare’s natural aggregate resources in appropriate locations to ensure adequate supplies are available to meet the future needs of the county and the region in line with the principles of sustainable development and environmental management and to require operators to appropriately manage extraction sites when extraction has ceased.’*

RD O44 requiring AA Screening; EIAR; EclA; detailed landscape plans indicating proposed screening for the operational life of the site; the predominant use of native plant species in proposed landscaping; detailed landscape and quarry restoration plans; habitats and species surveys will be carried out; comprehensive site restoration plan and /or after use strategy having regard to the principles of ‘Rehabilitation Ecology; and finally a transport impact assessment.

Objective RD O49 *‘Have regard to the following guidance documents (as may be amended, replaced, or supplemented) in the assessment of planning applications for quarries, ancillary services, restoration and after-use: - Environmental Management Guidelines – Environmental Management in the Extractive Industry (Non-Scheduled Minerals), EPA (2006). [...]*

Objective RD O50 *‘Ensure the satisfactory and sensitive re-instatement and/or re-use of disused quarries and extraction facilities, where active extraction use has ceased. Future uses should include amenity, recreation and biodiversity areas shall be informed by an assessment of the specific site/lands and shall be subject to an ecological impact assessment or other environmental assessments as appropriate. Where it is proposed to reclaim, regenerate, or rehabilitate old quarries by filling or re-grading with inert soil or similar material, or to use worked-out quarries as disposal locations for inert materials, the acceptability of the proposal shall be evaluated against the criteria set out in Section 15.9.6 of this Plan. The Council will resist development that would significantly or unnecessarily alter the natural landscape and topography, including land infilling/ reclamation projects or projects involving significant landscape remodelling, unless it can be demonstrated that the development would enhance the landscape and / or not give rise to adverse impacts.’*

Objective RD O51 *‘Require that quarry remediation plans provide for environmental benefit, biodiversity and re-wilding in all instances. The 80% requirement for environmental/biodiversity may be waived at sites closer to urban areas where a significant portion of the site is being provided for sports, recreation, and amenity.’*

The aforementioned Section 15.9.6 sets out the requirements for assessing planning applications under Section 261A of the PDA and in particular accordance with the previously cited guidelines as well as the requirements for impact assessment including the environmental baseline of the area in which extraction is imposed, the likely impacts and proposed mitigation measures in relation to: human health; groundwater; Natura 2000 sites, Natural Heritage Areas, proposed Natural Heritage Areas and other sites for environmental or ecological protection; flora and fauna; sensitive local receptors including residences, Areas of High Amenity, Landscape Sensitivity Areas, Key Scenic Views and Prospects, and Key Amenity Routes, all of which have been assessed in this application; landscaping, and screening proposals; local transport networks including haul routes, trip movements and articulated lorry heights; noise, vibration and dust emissions; and archaeological and architectural heritage of the area.

The after-use strategy and/or restoration plan for this project has been prepared cognisant of Section 9.9.1 of the KCC CDP 2023-2029 which sets out KCC’s after-use strategy for quarries post-closure.

It further states that *‘in developing any after-use strategy and/or restoration plan, there will be a requirement to prepare a detailed survey and assessment of the intrinsic ecological character first (by an appropriate ecologist), identifying the range and location of key species of flora and fauna on site.’* This is provided in Chapter 5 (Biodiversity and Ecology) of this EIAR.

It also states, *‘The rehabilitation plan should work around these habitats and species in a process known as Rehabilitation Ecology’*. It is noted that the proposed restoration plan seeks to strike balance between retaining ecologically valuable elements on the Site that have developed onsite following closure of the quarry, and the protection of human health.

Since the closure of the quarry and flooding of the quarry floor the site has been subject to trespass. Although fencing, security gates and appropriate signage is in place at the Site, trespassers access the disused quarry site illegally to exercise dogs and swim within the quarry void⁸. The quarry void poses a health and safety risk to trespassing members of the public and the infill of the void and return to agricultural lands is considered to remove that risk.

It is considered that the long-term protection of groundwater will be facilitated by the restoration of lands.

The proposed restoration seeks to return the lands to previous agricultural use which will support the local authority's policy to support the rural economy.

The section states '*It is a requirement, that quarry remediation plans provide for environmental benefit, biodiversity, and re-wilding in all instances. The 80% requirement for environmental/biodiversity may be waived at sites closer to urban areas where a significant portion of the site is being provided for sports, recreation and amenity uses.*'

Chapter 9 ('Infrastructure and Rural Services') of the CDP sets out a number of policies and objectives specifically in respect of **waste management, waste recovery and resource efficiency** as follows:

Policy IN P6 '*It is a policy of the Council to, Implement European Union, National and Regional waste related environmental policy, legislation, guidance, and codes of practice, in order to support the transition from a waste management economy towards a circular economy.*'

Objective IN 040 '*It is an objective of the Council to provide, promote, and facilitate high quality sustainable waste recovery and disposal infrastructure / technology in keeping with the EU waste hierarchy to cater for anticipated population growth and the business sector in the County.*'

Objective IN O44 '*It is an objective of the Council to encourage waste prevention, minimisation, re-use, recycling, and recovery as methods for managing waste.*'

Objective IN O46 '*It is an objective of the Council to ensure the provision of waste management facilities in the County (both public and private) are subject to the specific requirements of the Eastern-Midlands Region Waste Management Plan 2015-2021 (or as amended / updated)*⁹.'

The KCC CDP also sets out the technical requirements of planning applications including necessary details of the of the Proposed Project, all of which are provided in this application.

⁸ Site surveys have found litter including towels, drinks cans and evidence that barbeques/small fires have been lit out on the site.

⁹ It is noted that this plan has been superseded by the 'National Waste Management Plan for a Circular Economy' (see section 2.9.1.3 herein)

There are several **economic based policies** all of which support the Proposed Project.

RE P1 seeking to facilitate employment creation;

RE P2 supporting economic development in the county;

In terms of transport and access the following is noted by the applicants and assessed by their consultant team:

The CDP identifies the *R414 Monasterevin to Junction with R403 at via Rathangan* as a regional road identified for improvement.

In terms of local roads, the following is noted by the applicants and assessed by their consultant team:

TM O102 Minimise the extent of hedgerow removal in order to achieve adequate sightlines. However, where it has been satisfactorily demonstrated that there is no other suitable development site (for planning reasons) any removed hedgerow shall be replaced with native hedgerow species. Opportunities should be sought to translocate existing species rich hedgerows, where possible, and subject to proper biosecurity protocols.

In terms of biodiversity the subject proposal is consistent with the following biodiversity-based policies and objectives:

BI P1 requiring the protection and enhancement of biodiversity and landscape features by applying the mitigation hierarchy to potential adverse impacts on important ecological feature, where mitigation and/or compensation measures as appropriate. The applicant notes that opportunities for biodiversity net gain are encouraged.

BI O6 which applies the precautionary principle in relation to developments in environmentally sensitive areas, and which seeks to ensure that all potential impacts on a designated NHA or Natura 2000 site can be avoided, remedied or mitigated.

BI O7 seeking insofar as possible a biodiversity nett gain.

BI P2 seeking the maintaining or restoration of the conservation status of all designated or proposed designated sites.

BI O9 avoid development that would adversely affect the integrity of any Natura 2000 site.

BI O10 ensuring that Appropriate Assessment Screening is carried out to determine the likelihood of having any significant effect on a Natura 2000 site either individually or in combination with other plans or projects.

In respect of natural heritage areas, including Grand Canal Proposed pNHA and River Barrow and River Nore SAC, the Proposed Project is consistent with the following:

BI P3 ensuring that any proposal within or adjacent to any NHA is designed and sited to minimise its impact on the biodiversity, ecological, geological and landscape value of the site, particularly plant and animal species listed under the Wildlife Acts and the Habitats and Birds Directive including their habitats.

BI O12 requiring ecological impact assessment in accordance with the appropriate guidance by a suitably qualified for proposals within or adjacent to a NHA or proposed NHA to ensure that development is designed and sited to minimise impact on biodiversity, ecological, geological and landscape value of the site and particularly plant and animal species listed under the Wildlife Acts.

BI O14 minimising impact on ecological and landscape values on sites under National and European legislation and International Agreements.

In respect of **protected habitats and species** the Proposed Project accords with the following:

BI P4 ensuring development does not have a significant adverse impact, is not incapable of satisfactory mitigation on plant, animal or bird species which are protected by law.

BI O15 ensuring that there is no significant adverse impact on rare and threatened species.

BI O16 ensuring that appropriate species and habit avoidance and mitigation measures are incorporated into all new development proposals.

BI O17 requiring a derogation licence where necessary.

BI O18 requiring developments to identify, protect and sensitively enhance the most ecological features and habitats and incorporate these into the overall open space network and making provision of local diversity.

BI O22 identifying and protecting areas of high nature conservation value (including but not limited to SAC, SPA, pNHA) and supporting landscape features which act as ecological corridors/networks and stepping-stones such as river corridors, hedgerows etc so as to minimise loss of habitats and features of wider countryside which are of major importance for wild fauna and flora.

In respect of ecologically important sites the following policy requirements are met:

BI P8 ensuring that Kildare's wetlands and watercourses are retained.

BI O49 requiring that any development within the zone of influence of listed wetland sites should be subject to EcIA and where appropriate hydrological assessment.

BO O50 protecting and conserving wetlands and resisting development that would destroy, fragment or degrade any identified wetland in the county.

BI O52 requiring preparation and submission of a hydrological report/assessment for significant developments within and in close proximity to protected raised bogs and the assessment of impact on the integrity of peatland ecosystems.

BI O55 protecting conserving and managing the character and appearance of ecological and archaeological heritage.

BI O56 preventing impact on sensitive water habitats without mitigation measures.

Part of the applicant Site and the quarry void space assigned KWS Site Code: 170 and have been assigned a rank of 'D' which is classified as 'Moderate value, locally important' and defined using the following criteria:

- *Sites containing some semi-natural habitat or locally important for wildlife.*
- *Small water bodies with some coarse fisheries value or some potential salmonid habitat.*
- *Any water body with unpolluted water (Q-value rating 4-5).*

In the terms of geology, the Proposed Project complies with the following on geology as follows:

BI P10 maintaining and protecting the conservation of value of geological sites of national or local importance and seek sustainable management of the county's geological heritage resource.

BI O60 consulting with Geological Survey of Ireland regarding development likely to impact on Sites of Geological Importance.

BI O62 promoting, encouraging and supporting provision of access to geological and geomorphological features of interest in co-operation/consultation with landowners where practicable.

BI O63 Where appropriate support the restoration of Sites of Geological Importance (identified in Table 12.7).

BI O74 Strengthen ecological networks between urban areas to create greater linkages to Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional Green Infrastructure network.

In respect of **green infrastructure**, the Proposed Project is consistent with the following:

BI O77 which seeks to integrate nature-based solutions and climate change considerations into the design, planning and implementation of development proposals at the earliest possible stage of the design process.

BI O78 which actively promotes and encourages nature-based approaches and green infrastructure solutions as viable mitigation and adaptation measures to surface water management.

In terms of landscape character and landscape and visual impact the Site is located within an area of low landscape sensitivity.

The Proposed Project is consistent with the following:

LR P1 which seeks to protect and enhance the county's landscape.

LR 01: which seeks to ensure that consideration of landscape sensitivity is an important factor in determining development uses.

LR O2 which requires a landscape/visual impact assessment where proposals may affect landscape sensitivity factors or may affect a route or view contained within 500m of the site boundary.

LR O4 requiring retention of local landscape features.

LR O10 requiring recognition that the lowlands and the transitional area are made up of a variety of working landscapes, which are critical resources for sustaining the economic and social well-being of the county.

LR O26 which seeks to protect waterbodies and watercourses, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains, from inappropriate development.

In respect of assessing impact on designated high amenity areas the Proposed Project, although not within such a defined area, is consistent with the following:

LR P2 protecting High Amenity Areas from inappropriate development and reinforcement of their character, distinctiveness and sense of place in so far as this is a well-established use, and a key or determining feature of the existing and well-established landscape.

LR O17 controlling development that will adversely affect the visual integrity of Areas of High Amenity by restricting incongruous structures out of scale with the landscape within the Areas of High Amenity and where they will disrupt the open nature of these areas.

LRO30 facilitating the utilisation of existing structures taking account the visual absorption opportunities provided by existing topography and vegetation.

LR O30 considering the need for activities that have a functional and locational requirement to be situated on elevated sites where it can be explicitly demonstrated that residual adverse visual impacts are minimised or mitigated.

LR O31 having regard to potential for screening vegetation when evaluating proposals for development within Upland Character Areas including the East Kildare Uplands.

In respect of protected **views and prospects** the following policy requirements are met in this instance:

LR P3 protecting, sustaining and enhancing the established appearance and character of all important views and prospects.

LR O32 avoiding any development that could disrupt the vistas or have a disproportionate impact on the landscape character of the area, particularly upland views and listed views. Listed views that may be affected by the subject development are not affected.

LR O33 ensuring no disproportionate visual impact or significantly interfere with or detract from scenic upland vistas when viewed from nearby areas, scenic routes, viewpoints and settlements.

LR O35 encouraging appropriate landscaping and screen planting along scenic routes.



In terms of **recreation** the following is complied with:

LR P4 protecting and maintaining existing recreation infrastructure in the county and supporting diversification of the rural economy.

2.10 References

- Department of Communications, Climate Action and Environment, (2020), A Waste Action Plan for Circular Economy (Ireland's National Waste Policy 2020–2025)
- EPA, (2024), National by-product criteria for greenfield soil & stone BP-N002/2024
- GeoHive map viewer Imagery, (2024), Available at arcgis.com, Accessed October 2024
- Google Earth Satellite Imagery, (2024), Available at Google Earth, Accessed October 2024
- Kildare County Council, (undated), Unauthorised Development File QRA21-002 (archived), Available at Kildare County Council Planning Department, Accessed October 17th, 2024.
- Kildare County Council, (2012), Section 261A Quarry Assessment, reference number QRA-21-002..
- Local Government Ireland, (2024), National Waste Management Plan for a Circular Economy 2024–2030
- Waste Framework Directive 2008 (Directive 2008/98/EC), as amended by Directive 2018/851/E

Appendix 2A

Interceptor

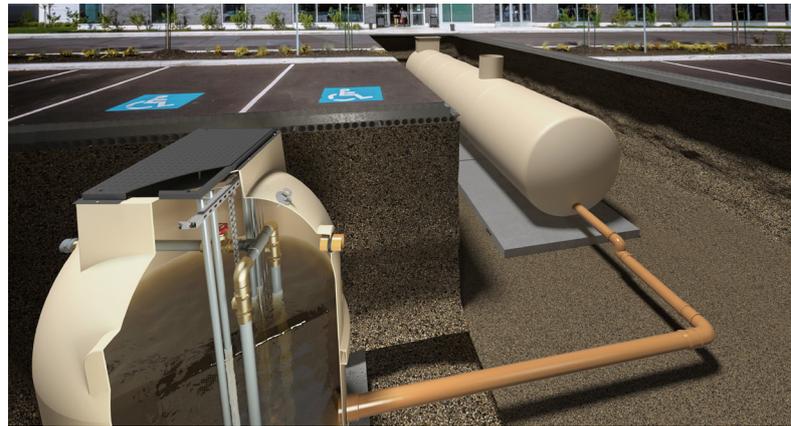


Water Management Solutions



AquaCore® Sustainable Drainage Systems

Reliable and trusted surface water management solutions



kingspan.co.uk/klargester



A fully supported SuDS treatment solution



Water is a precious resource. We must manage it responsibly. In order for your SuDS system to be eligible for adoption, you must align it to the Design and Construction Guidance*, from Sewerage Sector Guidance (appendix C) and CIRIA C753 The SuDS Manual.

*This guidance is for England only.
For Scotland refer to 'Sewers for Scotland'.
For Wales refer to 'Statutory SuDS Standards Wales'.

Kingspan Klargester have been pioneers in this field for decades, with 65 years experience in manufacturing innovative ways to treat, store and manage the flow of water.

We can design and build a full SuDS solution tailored to your exact needs. Our AquaCore® solutions are reliable and trusted and come with Kingspan's expert service, maintenance and smart monitoring package for your complete peace of mind.

Our UK based factory fitted solutions may reduce on-site time and cost, compared with other SuDS offerings in the market. With expertly designed individual components for each part of the SuDS management train, we can help you with any scale of commercial project.

Talk to our expert team today at klargester@kingspan.com

AquaCore[®] trusted SuDS solutions from the experts in Water Management

Our aim is to future-proof your SuDS solution in line with the Design and Construction Guidance, from Sewerage Sector Guidance (appendix C) and CIRIA C753 The SuDS Manual, whilst offering the following benefits:

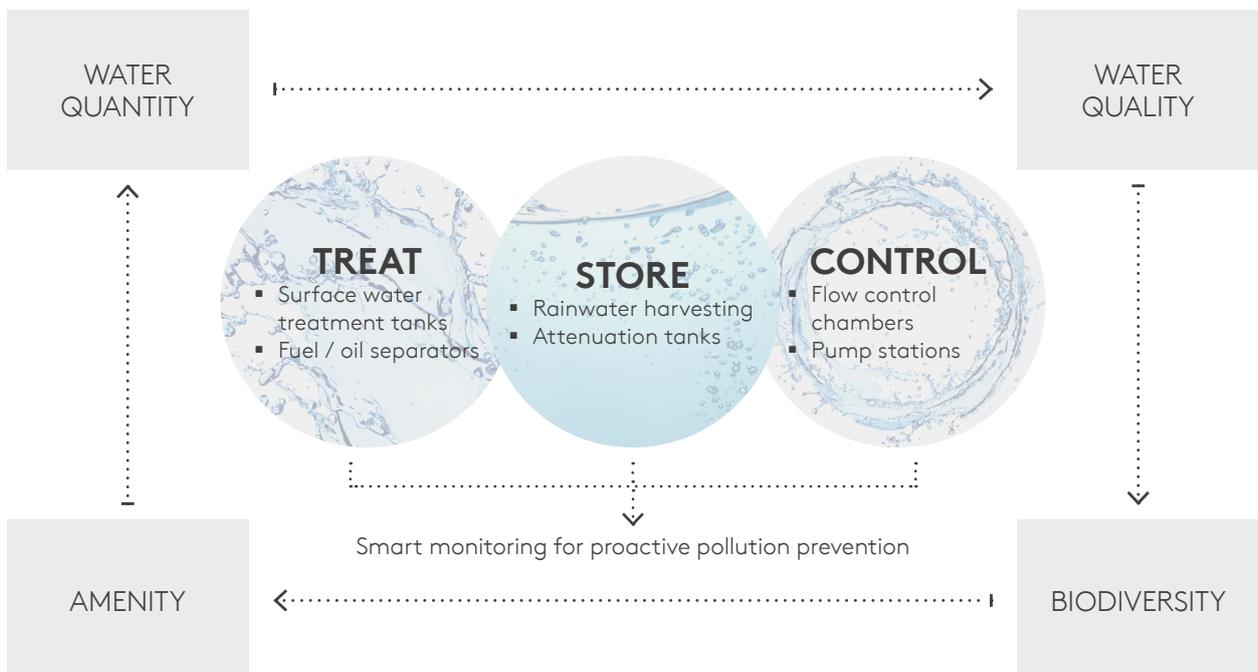
- Trusted solution from manufacturers with 65 years' industry experience
- UK factory fitted solutions which reduce on site time and cost
- Easy access for maintenance across all SuDS elements
- A fully managed solution including service and monitoring via Smart Serv Pro remote software (optional extra)

Find out more about our service and monitoring packages for SuDS, including our Smart Serv Pro remote monitoring solution

E: FMservices@kingspan.com
T: 0333 240 6868



Contact your local Klargester team today to discuss your project
E: klargester@kingspan.com | T: 01296 633033

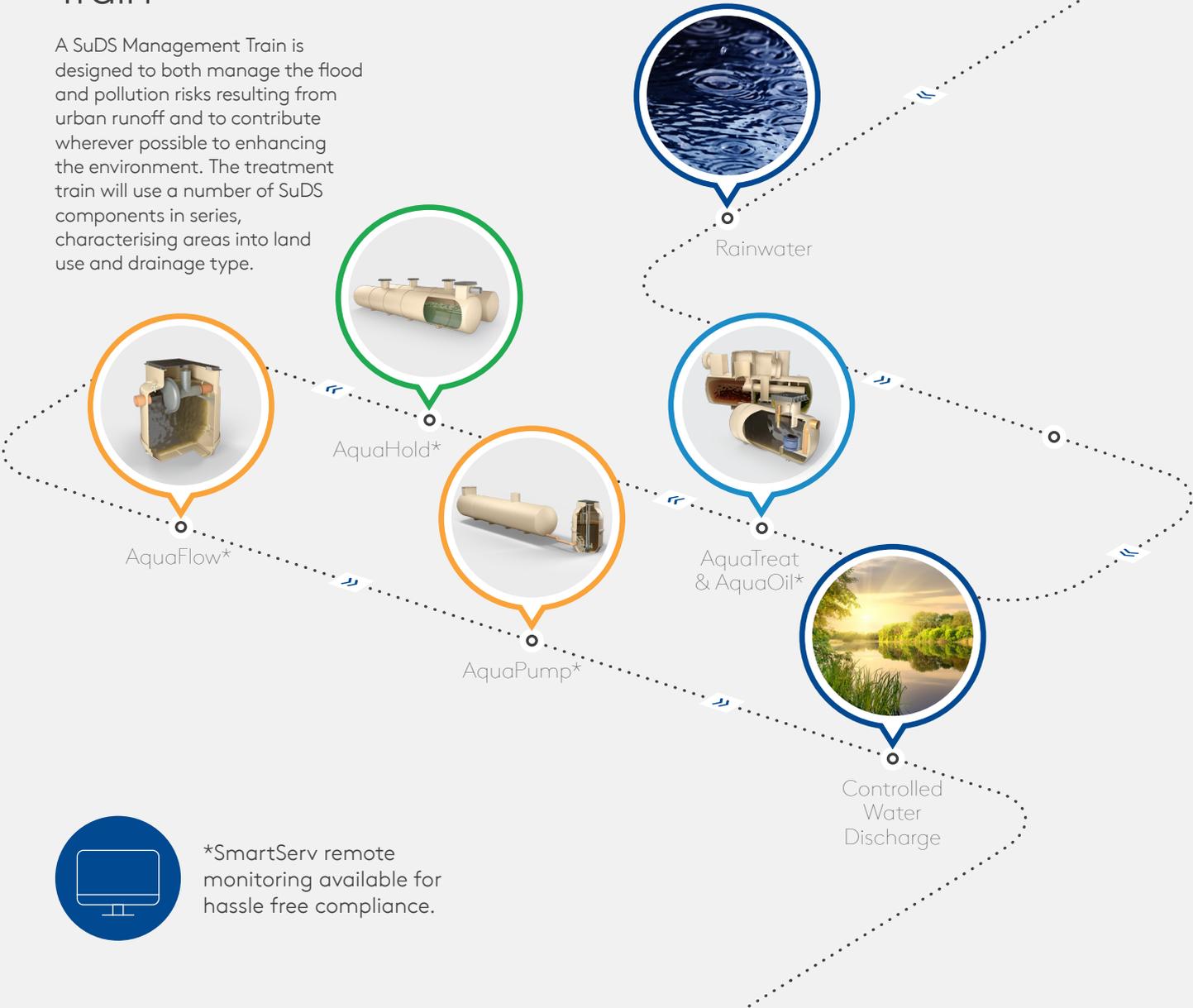


Supporting your SuDS Management Train

The twin forces of climate change and urbanisation have brought about a dramatic rethink in our approach to water management, including water quality, water quantity and biodiversity and amenities.

SuDS Management Train

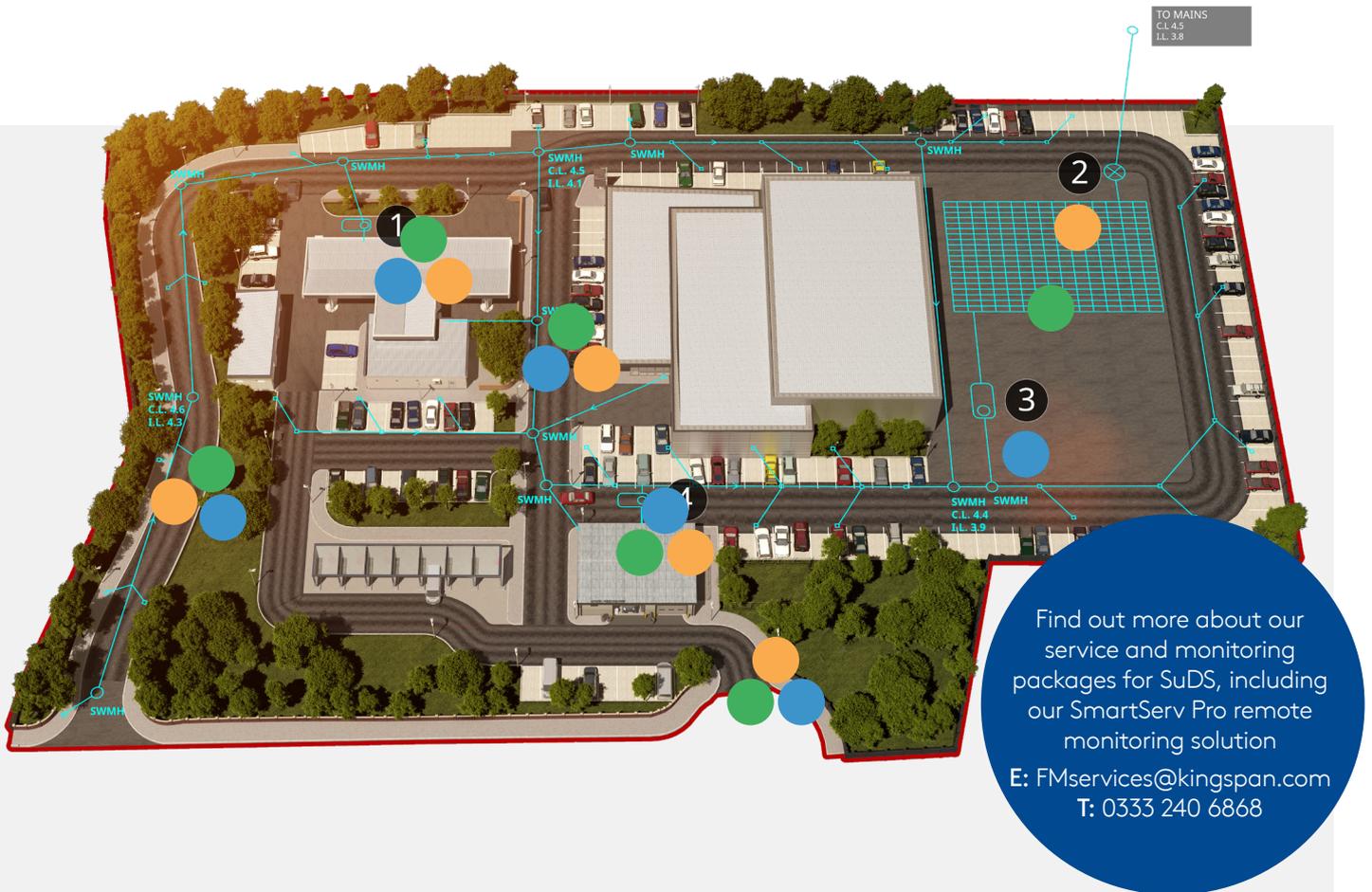
A SuDS Management Train is designed to both manage the flood and pollution risks resulting from urban runoff and to contribute wherever possible to enhancing the environment. The treatment train will use a number of SuDS components in series, characterising areas into land use and drainage type.



*SmartServ remote monitoring available for hassle free compliance.

Treat, Store and Control

Kingspan Klargesters's AquaCore® range is suitable for multiple applications, on and off-mains.



TREAT



AquaTreat
Full Retention
GRP Surface
Water Treatment
Separators



AquaOil
AquaOil full
retention MDPE
and GRP
separators/
bypass MDPE
and GRP separators

STORE



AquaHold
Master and
Storage Tanks

CONTROL



AquaFlow
SF Horizontal
Flow Control
and FC Vertical
Flow Control
solutions



AquaPump
PU vertical
and PC
horizontal
range

AquaTreat

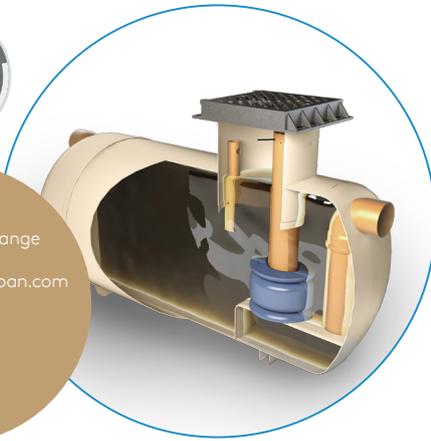
For more information including technical specifications, scan here



The Klargester AquaTreat Full Retention GRP Surface Water Treatment Separators range helps to reduce pollution in line with SuDS Mitigation Indices by removing metals, suspended solids and hydrocarbons from surface water.



Ask us about our range of flow rates
klargestinfo@kingspan.com



AquaTreat

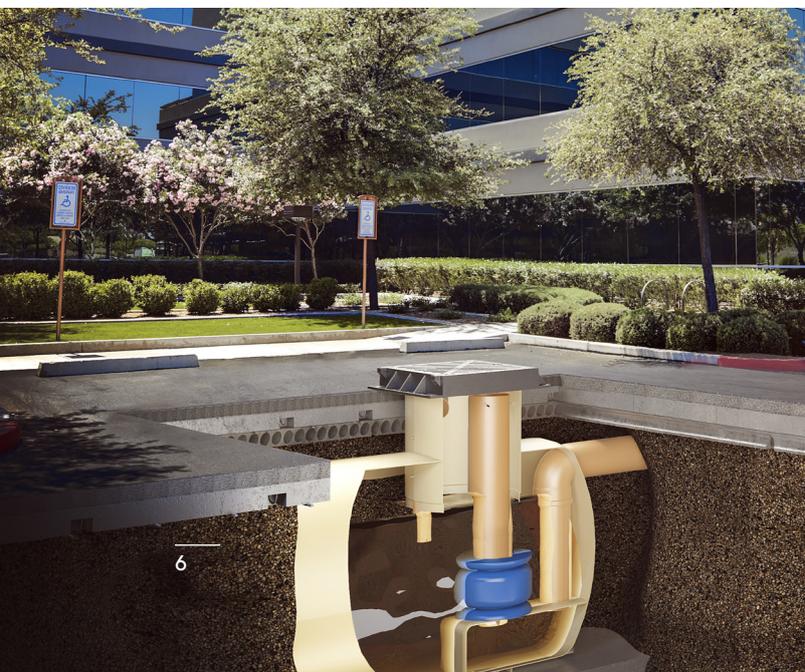
Full Retention GRP Surface Water Treatment Separators range

Our surface water treatment range is suitable for a wide range of SuDS schemes such as industrial estates, permitted sites and roadways.

Benefits

- Light and easy to install
- Easier servicing, with maintenance from ground level
- Vent points within necks
- SmartServ Pro remote monitoring available (as optional extra)
- Inclusive of silt storage
- Auto closure device included
- Deep inverts available for 2.6 diameter units

*View terms online at <https://www.kingspan.com/gb/en-gb/products/wastewater-management/warranty-terms>



3 year warranty when registered online and must be serviced by a Kingspan engineer or accredited service partner. Other terms and conditions apply*



Scan the QR code to register your warranty



Ask us about our Smart Commissioning package - FMservices@kingspan.com

Treat

Store

Control

AquaOil

For more information including technical specifications, scan here



3 year warranty when registered online and must be serviced by a Kingspan engineer or accredited service partner. Other terms and conditions apply*



Scan the QR code to register your warranty

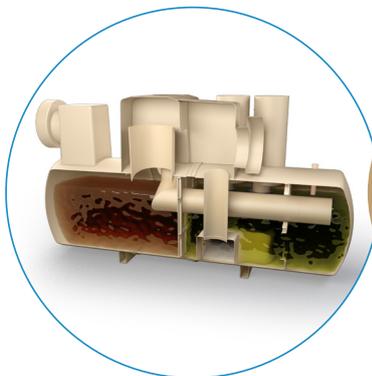


Ask us about our Smart Commissioning package - FMservices@kingspan.com

AquaOil full retention MDPE and GRP separators/bypass MDPE and GRP separators are classified as effective spill containment systems that meets the EN 858-1 Class I effluent targets at low flow rates.

Benefits

- GRP and rotomoulded models available
- Easier to service, with maintenance from ground level
- Inclusive of silt storage volume
- Fitted inlet and outlet connectors
- SmartServ Pro remote monitoring solution available (as optional extra)
- Vent points within necks
- Deep inverts available for 2.6 diameter units




170 – 69,444m²
 Available for flow rates up to 285 litres per second.



AquaOil

Full retention MDPE and GRP separators/
bypass MDPE and GRP separators

*View terms online at <https://www.kingspan.com/gb/en-gb/products/wastewater-management/warranty-terms>

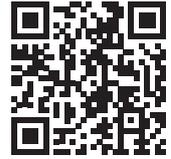
Treat

Store

Control

AquaHold

For more information including technical specifications, scan here



The AquaHold range of Master and Storage Tanks prevent a build up of silt and other debris, whilst allowing access for regular maintenance.



3 year warranty when registered online and must be serviced by a Kingspan engineer or accredited service partner. Other terms and conditions apply*



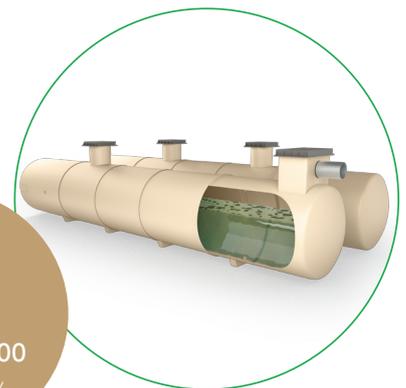
Scan the QR code to register your warranty



Ask us about our Smart Commissioning package - FMservices@kingspan.com

Klargester AquaHold tanks store increased runoff rates due to new developments and excess flows from storm events. Attenuation serves as a way to help mimic natural runoff rates that have been altered through developing sites.

The Klargester AquaHold range is available from 5,000–79,000 litres in a single tank installation, or larger modular solutions. Ask our team for details.



AquaHold
Master and Storage Tanks

Benefits

- Simple, robust solution
- Built from durable GRP material
- Suitable for small or large applications
- Easier to service
- Single or multiple tank installations available
- Full technical and servicing support available

*View terms online at <https://www.kingspan.com/gb/en-gb/products/wastewater-management/warranty-terms>

AquaFlow

For more information including technical specifications, scan here

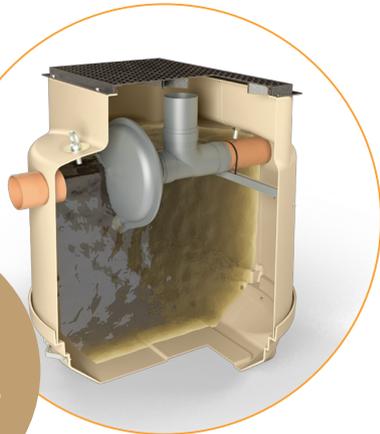


The Klargest AquaFlow SF Horizontal Flow Control and FC Vertical Flow Control solutions are offered in 3 different chamber model sizes, with a standard range of 0.5 l/s – 80 l/s available. Greater capacities available on request.

Our AquaFlow devices control the runoff rate entering a receiving watercourse/ network. Limiting flow rates help avoid flooding and damage to natural habitats downstream and receiving watercourse. We offer overflow or surface operated bypass options, with full technical support available for your project.

Benefits

- Full range available in 1.2, 1.8 and 2.6 model sizes
- Robust GRP constructed chambers
- Flexibility with variable inlet connection sizes available
- Large chamber to facilitate ladder access in emergency situations
- Standalone product, compatible with crate systems
- Full technical and servicing support available



0.5 – 80 litres per second*

*Flow rates

AquaFlow

SF Horizontal Flow Control and FC Vertical Flow Control solutions

*View terms online at <https://www.kingspan.com/gb/en-gb/products/wastewater-management/warranty-terms>



3 year warranty when registered online and must be serviced by a Kingspan engineer or accredited service partner. Other terms and conditions apply*



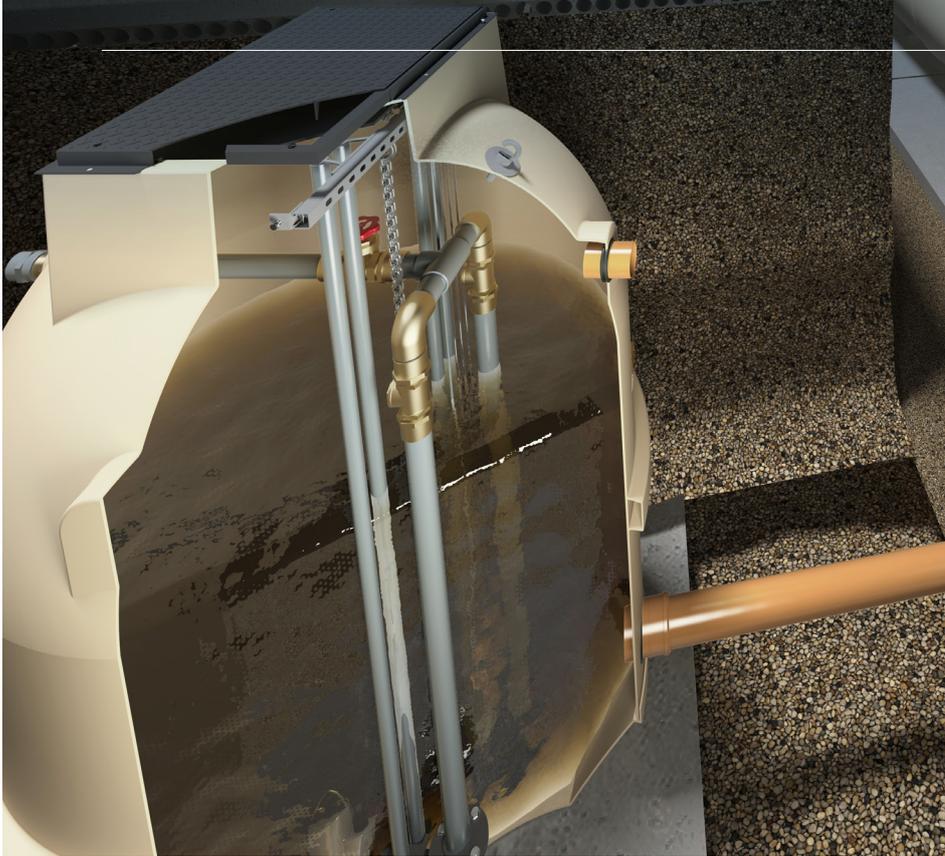
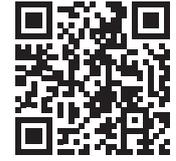
Scan the QR code to register your warranty



Ask us about our Smart Commissioning package - FMservices@kingspan.com

AquaPump

For more information including technical specifications, scan here



3 year warranty when registered online and must be serviced by a Kingspan engineer or accredited service partner. Other terms and conditions apply*



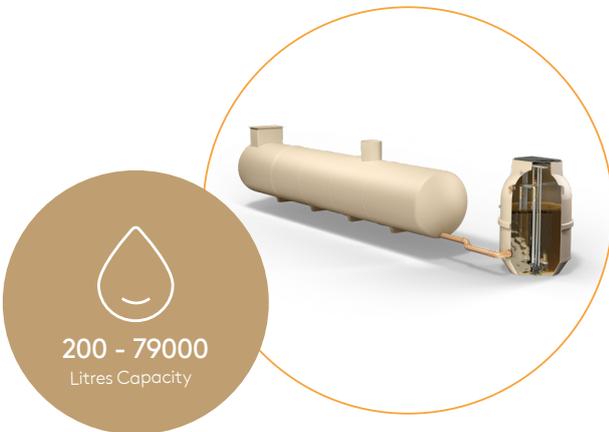
Scan the QR code to register your warranty



Ask us about our Smart Commissioning package - FMservices@kingspan.com

AquaPump PU vertical and PC horizontal range is for use when more than gravity is needed to control the release of water on an application.

With full technical support offered to ensure a bespoke pumping solution, our pump discharge ranges up to 70 litres per second.



AquaPump
PU vertical and PC horizontal range

Benefits

- Full range available in 0.6, 0.9, 1.0, 1.2, 1.8 & 2.6 model sizes
- Robust GRP constructed chambers
- Bespoke designs to suit difficult site layouts
- Chambers up to 4.5m deep, available as standard
- Discharge rates of 1 – 70 l/s with a variety of pump types
- Variable inlet connection sizes and orientations available
- Full technical and servicing support available

Contact Details

UK

Kingspan Water & Energy Ltd.
College Road North
Aston Clinton | Aylesbury
Buckinghamshire | HP22 5EW

T: 01296 633033

E: klargest@kingspan.com

We take every care to ensure that the information in this document is accurate at the point of publication. Specification may vary (within a small parameter) due to manufacturing process variations or environmental conditions. All images are for illustration purposes only and should not be taken as binding. The actual product may vary, and specification/ dimensions/ colour/ other attributes may differ.

To ensure you are viewing the most recent and accurate product information, please visit this link:

<https://www.kingspan.com/gb/en-gb/products/water-management/kingspan-klargest-aquacore>

©Kingspan and the Lion Device are Registered Trademarks of the Kingspan Group in the UK, Ireland and other countries.

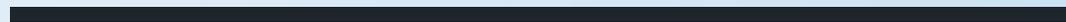
All rights reserved. Registered in Country No. NI017631. Registered Office:

180 Gifford Road, Portadown, Co. Armagh, BT635LF. VAT GB412 5124 03



Appendix 2B

Invasive Species Management Plan





Invasive Species Management Plan

INTRODUCTION

Report objectives

The purpose of this ISMP is to propose a strategy to be adopted during the works phase and restoration phase of the Proposed Development to manage and prevent the spread of IAPS into and from the Site.

This management plan is intended to be a working document and will be updated during the proposed treatment contract and the works contract, as well as throughout the operational phases as required.

The implementation of this ISMP will require a re-survey of IAPS annually by a suitably qualified person for the period from pre-works commencement, through the operational lifespan of the soil recovery facility (expected to be up to 10 years), and at least one year after completion of the restoration phase. As such this report will be updated on an annual basis.

This document will form part of the Environmental Management System (EMS) for the project.

Relevant legislation and policy

In Ireland, the control and management of invasive species is addressed in the Wildlife (Amendment) Act 2000 where it states that:

'Any person who— [...] plants or otherwise causes to grow in a wild state in any place in the State any species of flora, or the flowers, roots, seeds or spores of flora, [refers only to exotic species thereof][...] otherwise than under and in accordance with a licence granted in that behalf by the Minister shall be guilty of an offence.'

It is also prohibited to introduce and disperse species listed on the Third Schedule of the Birds and Natural Habitats Regulations 2011 (S.I. 477 of 2011), Section 49(2). It states that:

"any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow [...] shall be guilty of an offence."

Species which are listed in the Third Schedule of this Regulations (S.1.477 of 2011) are outlined in Table 2A-1 below.

Table 2A-1 – Invasive Alien Plant Species (As per Third Schedule of S.I. 477/2011)

Common Name	Scientific Name
American skunk-cabbage	<i>Lysichiton americanus</i>
A red alga	<i>Grateloupia doryphora</i>
Brazilian giant-rhubarb	<i>Gunnera manicata</i>

Common Name	Scientific Name
Broad-leaved rush	<i>Juncus planifolius</i>
Cape pondweed	<i>Aponogeton distachyos</i>
Cord-grasses	<i>Spartina (all species and hybrids)</i>
Curly waterweed	<i>Lagarosiphon major</i>
Dwarf eel-grass	<i>Zostera japonica</i>
Fanwort	<i>Cabomba caroliniana</i>
Floating pennywort	<i>Hydrocotyle ranunculoides</i>
Fringed water-lily	<i>Nymphoides peltata</i>
Giant hogweed	<i>Heracleum mantegazzianum</i>
Giant knotweed	<i>Fallopia sachalinensis</i>
Giant-rhubarb	<i>Gunnera tinctoria</i>
Giant salvinia	<i>Salvinia molesta</i>
Himalayan balsam	<i>Impatiens glandulifera</i>
Himalayan knotweed	<i>Persicaria wallichii</i>
Hottentot-fig	<i>Carpobrotus edulis</i>
Japanese knotweed	<i>Reynoutria japonica</i>
Large-flowered waterweed	<i>Egeria densa</i>
Mile-a-minute weed	<i>Persicaria perfoliata</i>
New Zealand pigmyweed	<i>Crassula helmsii</i>
Parrots feather	<i>Myriophyllum aquaticum</i>
Rhododendron	<i>Rhododendron ponticum</i>
Salmonberry	<i>Rubus spectabilis</i>
Sea-buckthorn	<i>Hippophae rhamnoides</i>
Spanish bluebell	<i>Hyacinthoides hispanica</i>



Common Name	Scientific Name
Three-cornered leek	<i>Allium triquetrum</i>
Wakame	<i>Undaria pinnatifida</i>
Water chestnut	<i>Trapa natans</i>
Water fern	<i>Azolla filiculoides</i>
Water lettuce	<i>Pistia stratiotes</i>
Water-primrose	<i>Ludwigia (all species)</i>
Waterweeds	<i>Elodea (all species)</i>
Wireweed	<i>Sargassum muticum</i>

Survey

No IAPS were identified during walkover surveys undertaken in 2024 by WSP. There are no NBDC records of legally designated invasive floral species within the Application Site (National Biodiversity Data Centre, 2024).

MANAGEMENT PLAN

Guidance

This report applies the most relevant and current guidance in relation to the treatment and management of IAPS in construction projects. The following literature was consulted in preparation of this report:

- Transport Infrastructure Ireland (TII) The Management of Invasive Alien Plant Species on National Roads – Standard, GE-ENV-01104 (2020);
- Transport Infrastructure Ireland (TII) The Management of Invasive Alien Plant Species on National Roads – Technical Guidance, GE-ENV-01105 (2020);
- National Roads Authority (NRA) Guidelines on The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (2010);
- Managing Japanese knotweed on development sites - The Knotweed Code of Practice - produced by the Environment Agency (2013);
- Managing Invasive Non-native Plants in or near Freshwater, Environment Agency (2010); and
- Best Practice Management Guidelines Japanese knotweed *Fallopia japonica*, Invasive Species Ireland (2015).

The unintentional spread of IAPS during the proposed works is a significant issue, and if not managed in the correct manner, species could spread to un-infested areas, which poses

public health and safety risks¹⁰, as well as risks to the diversity and favourable condition of natural habitats, flora and fauna.

The most common ways that these species can be spread are:

- Site and vegetation clearance, mowing, hedge-cutting or other landscaping activities;
- Spread of seeds or plant fragments during the movement or transport of soil;
- Spread of seeds or plant fragments through the local surface water and drainage network;
- Contamination of vehicles or equipment with seeds or plant fragments which are then transported to other areas; and
- Importation of soil from off-site sources contaminated with invasive species plant material.

General Biosecurity Measures

Maintaining biosecurity standards is essential to preventing the spread of IAPS. It is similarly essential where IAPS are not present on site but there is a risk of contaminated material being brought onto the site via site machinery or staff travelling between sites. Vehicles, equipment and footwear can be vectors for the spread of invasive species.

The following measures should be undertaken where applicable:

- Understand the possible extent of the underground rhizome/root system of different IAPS (particularly relevant for knotweed species);
- Fence off the infested areas prior to and during works where possible in order to avoid spreading seeds or plant fragments around or off the Site. In relation to knotweed plant species, allow for a 10m buffer around the area;
- Clearly identify and mark out infested areas. Erect signs to inform 3rd parties of the risk;
- Avoid, if possible, using tracked machinery in infested areas;
- Clearly identify and mark out areas where contaminated soil is to be stockpiled on site. This cannot be within 50m of any watercourse or within a flood zone;
- Create designated entry and exit points for operators on foot and for small mobile equipment. A delineated access track is to be established through the site to avoid the spread of IAPS by vehicles/machinery accessing the site;
- Installation of a vehicular wheel-wash facility, the runoff from which will be directed into a watertight sump;
- Installation of boot cleaners for site personnel at the Site entrance – to be used upon entry and exit if travelling around the Site on foot;
- Material gathered in dedicated in the wheel-wash sump will be transported offsite to an appropriately-authorized waste facility, along with any contaminated soil.
- Ensure all site users are aware of measures to be taken and alert them to the presence of this ISMP; and

¹⁰ IAPS can cause damage to buildings and built infrastructure.



- Erection of adequate site hygiene signage in relation to the management of IAPS.

Pre-Works and Mid-Works Monitoring

The implementation of this ISMP will require repeat surveys for IAPS within the boundaries of the Proposed Development, by a suitably-qualified professional with competency in IAPS identification, having regard to any seasonal constraints.

A pre-works survey should be carried out at least one month prior to commencement of works. It is anticipated that site preparatory works (i.e. installation of site infrastructure, including site entrance upgrades) will be temporary in terms of duration (i.e. less than one year) and therefore repeat surveys are not specified for this aspect of the works phase.

During the operation life of the project (works phase), repeat surveys should be carried out once per growing season (April-October). If, during any survey, new specimens are recorded, a photograph should be taken, and a GPS reference recorded. It should be cross-referenced with the site plans to ascertain whether any proposed works will overlap with the location of any specimens. Further steps are to be determined according to whether a specimen can be treated in situ, or whether it is essentially “in the way” and must be removed to facilitate the development. Potential treatment options are discussed below.

Post-Restoration Monitoring

After the restoration phase is completed, the Site will be re-surveyed for the presence of IAPS. The frequency and duration of surveys will depend on the detection of IAPS in the preceding surveys. Scenarios are outlined in the following sub-sections.

No IAPS Identified within 5 years of completion of Works

One survey during the growing season, at least one year after completion of works. If no IAPS are identified, then surveys may cease.

IAPS Identified within 5 years of completion of Works

Annual surveys during the growing season, until 5 consecutive years of surveys have been complete, during which no IAPS are identified. Thereafter, surveys may cease.

IAPS Identified during Post-Works Surveys

If IAPS are identified, appropriate measures will be implemented according to the species and its location(s). Following successful treatment, the Site will be surveyed annually for 5 years as described above, until 5 consecutive annual surveys have been completed without detection of IAPS.

TREATMENT METHODS

At the commencement of any excavation works and in advance of site clearance works, if any area is identified as requiring specific treatment for IAPS, it will be set out and the designated control measures will be implemented at the earliest possible stage to reduce

the risk of spread throughout the Site or beyond. The Applicant will be responsible for the procurement of a treatment specialist for the Proposed Project.

There is a number of management options that can be implemented to control and prevent the spread of IAPS, if they are identified at the Site.

The approach to controlling IAPS will depend on several factors including the species in question, the scale of infestation, the topography and terrain of the site, the proximity of watercourses or other sensitive receptors (such as protected flora) and the funds available. Control measures are usually limited to chemical means (i.e. herbicide) or a combination of physical and chemical means.

Usually when dealing with invasive species, priority is given to the use of physical control methods, such as excavation, hand-pulling or cutting as appropriate. The biomass is either removed from site or buried at depth. However, in the case of knotweed species, the use of physical methods alone is highly unlikely to be effective, due to the species' ability to propagate from small fragments of tissue. Chemical treatment, either on its own or in combination with physical treatment, will therefore be required to treat knotweed species.

Any required treatment of IAPS will be carried out by a suitably-qualified professional, as required.

The readers of this document are advised to consult the guidance cited within this appendix for species-specific treatment methodologies. These documents include measures to aid the identification of relevant species, with details for the timing, chemicals and methodology for chemical control, and for measures to avoid environmental damage during the use of herbicides.

The control or management of any IAPS should be undertaken in the four distinct phases outlined in the TIIs (2020a) guidance (see Figure 2A-2).

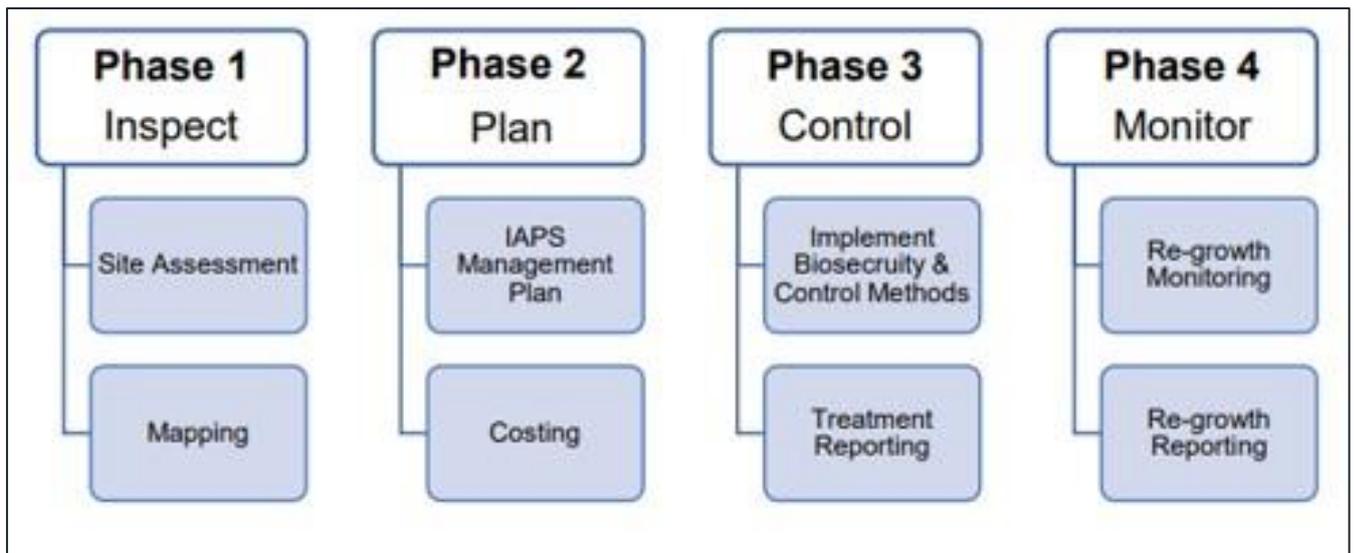


Figure 2A-2 - Phases Associated with IAPS Management (TII, 2020a)



CONCLUSIONS

There have been no IAPS reported at the Application Site to date. However, the importation of soil to Site does create the potential for invasive species to be imported to Site, especially considering the proposed lifespan for the Project.

As such, proposals for the monitoring of IAPS at the Site have been outlined in this appendix, along with recommendations for site biosecurity and broad approaches to treatment of IAPS, should they be identified. Considering that different approaches are required for each species, and considering that none have been identified at the Application Site to date, the reader is referred to guidance documentation that contains species-specific recommendations that can be consulted should the need arise.

REFERENCES

- Environment Agency (2010). Managing invasive non-native plants in or near fresh water.
- Environment Agency (2013). Managing Japanese knotweed on Development Sites (version 3, amended in 2013 and withdrawn in 2016): The Knotweed Code of Practice.
- INNSA (2017). Code of Practice, Managing Japanese Knotweed
- Invasive Species Ireland (2015). Best Practice Management Guidelines Japanese knotweed *Fallopia japonica*
- National Roads Authority (2008). Guidelines on the Management of Waste from National Road Construction Projects.
- National Roads Authority (2010). Guidelines on the Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads.
- NBDC (National Biodiversity Data Centre), Available at: National Biodiversity Data Centre A Heritage Council Programme, Documenting Ireland's Wildlife (biodiversityireland.ie)
- PCA (2018). Code of Practice for the Management of Japanese Knotweed
- RAPID (2015). Good Practice Management – Himalayan Balsam (*Impatiens glandulifera*).
- TII(2020a). The Management of Invasive Alien Plant Species on National Roads – Standard.
- TII(2020b). The Management of Invasive Alien Plant Species on National Roads – Technical Guidance.