2 PROJECT DESCRIPTION

2.1 INTRODUCTION

This Environmental Impact Assessment Report (EIAR) has been prepared to accompany an application for permission for further development of a quarry as a quarry at Hempstown Commons, Co. Kildare.

This EIAR has been prepared in tandem with an rEIAR to accompany an application for substitute consent for that existing quarry by the same applicant, Shillelagh Quarries Ltd ('SQL').

The further development of the quarry is proposed over areas directly adjacent to the operational lands where extraction has occurred as well as within the existing quarry for the purpose of recovering the economic reserve that remains in the existing void. The proposed development site (application site), lies within an established landholding wholly located within the townland of Hempstown Commons.

The lands, the subject of this EIAR extend to 10.03 ha. and are located within the EIA project boundary for the EIAR (18.45 ha). The north-east boundary of the application Site lies adjacent to the Kildare-Wicklow county border. The EIA project boundary includes and encloses current workings and proposed future workings. It also reflects the previous planning permission held for quarrying operations on the application site (Planning Reg. Ref.: 07/443; ABP Ref. PL09.233338).

The application site includes the established extraction area of the quarry and a proposed northeastern extension. The existing void extent is approximately 5.1 ha in area. The quarry extension design extent (Appendix 2A) provides for an extraction area of approximately 1.89 ha lateral extension of the quarry extent to the northeast of the existing void space (see Figure 2-4).

The reserve at this quarry is greywacke rock currently worked in the existing quarry to a maximum depth of 210 mOD. The final elevation for extraction in the proposed quarry extension is ca. 213 mOD.

The rock reserve is traditionally excavated by blasting and mechanical means, primarily processed by mobile plant at the working face and quarry floor with 1 no. mobile crusher and 1 no. mobile screen operating off the quarry floor. Blast rock from periodic blasting is crushed and screened onsite.

Figure 2-1 shows the regional location of the Site, whilst Figure 2-2 provides a depiction of the application area and the EIA project boundary.

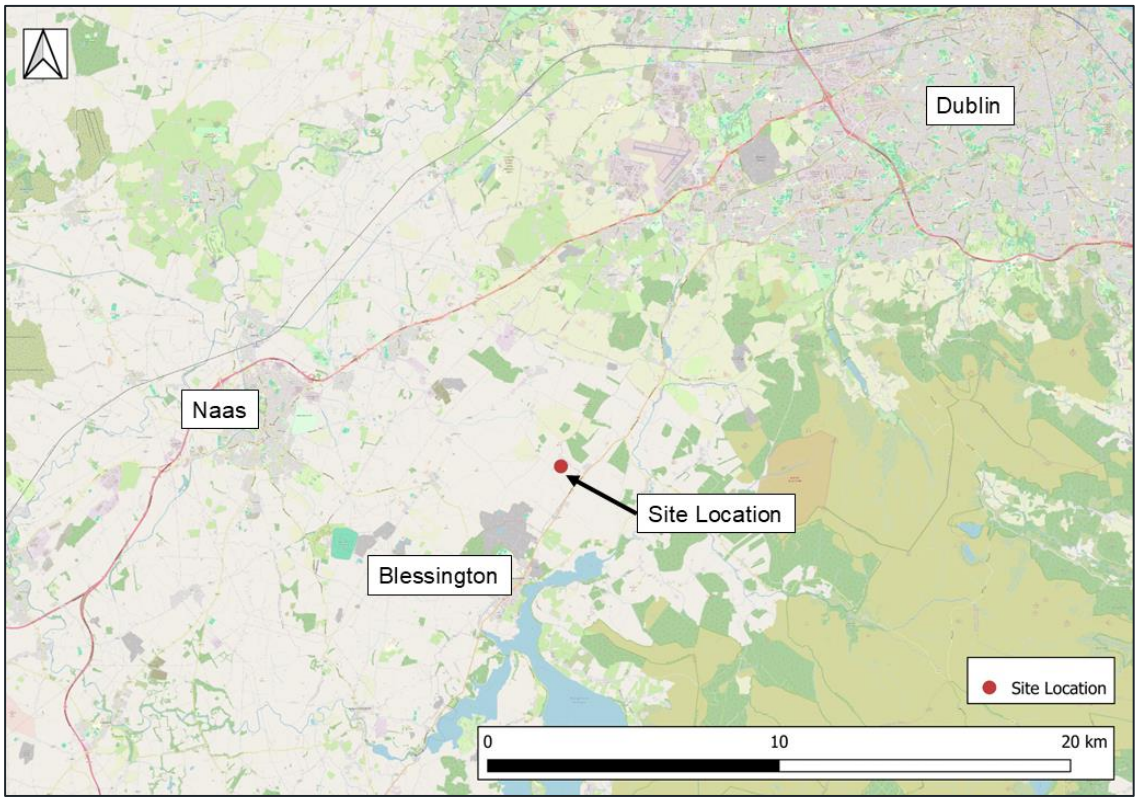


Figure 2-1 - Regional site location

Figure 2-2 – 37L application area and EIA Boundary overlain on October 2024 aerial.

The Site is accessed via a privately-owned lane-way connecting to a local road, the L6030 which itself connects to the N81, national road. The town of Blessington is located ca. 4 km south-west of the Site along the N81 (Figure 2-1). The undulating land surrounding the Site slopes upwards in a north-westerly direction to the north of the Application Site, and away in a south-easterly direction to the south of the Application Site. The north-east boundary of the Application Site lies adjacent to the Kildare-Wicklow county border.

The already extracted area is located within the north-west of the EIA boundary (see Figure 2-2). Existing stockpile areas are located to the southwest and west of the quarry void space. At the south-west of the current quarry area is the weighbridge and weighbridge office, wheelwash and associated tank and supply borehole, along with staff private vehicle and visitor parking area. The site entrance is located further west.

The SQL operation is located adjacent to other quarry and associated land uses operated by unrelated parties.

2.2 LOCATION OF SUBJECT LANDS

The EIAR project unit is located in the townlands of Hempstown Commons, Co. Kildare centered at ITM coordinates 53°12'27.4"N 6°30'43.6"W.

The lands are located approximately 1.1 km north-west of the N81. The town of Blessington is located ca. 4 km south-west of the Site along the N81. The Site is bound to the north-east by the Kildare / Wicklow border, see Figure 2-2, above.

The lands contiguous to the boundaries of the Site are in generally in agricultural use, predominantly pasture lands with light industrial use consisting of a precast concrete manufacturing facility (Stresslite Floors Ltd) immediately adjacent to the west of the Application Site. A rock quarry is located immediately adjacent to the northern boundary of the Application Site. There are scattered residential properties in the vicinity of the Site with primarily ribbon type development concentrated along the Local Road L6030. The boundaries of the lands owned comprise hedgerows with areas of scrub.

The lands surrounding the Site can largely be characterised as rural in nature, with land uses in the area being agricultural, industrial, forestry and single-house residential. In this way, the immediate character of the lands is rural in nature with low density, one off roadside housing and agricultural activities. Moving more south of the lands towards the town of Blessington, the landscape becomes predominantly peri-urban in nature.

The Site is located within a wider area of historical quarrying activities with a number of other aggregate companies operating sand and gravel pits and stone quarries in the wider Blessington area which are a major source of aggregates used in the production of construction products and infrastructure in the Greater Dublin and Mid Leinster regions.

The subject lands have been used for quarrying since the mid 1940’s. As such, the quarry and associated uses are an established feature of the landscape and the main feature of the EIA project lands.

The quarry operation is accessed from a single entry/exit point of the west of the EIAR boundary (to a private lane). SQL share land ownership of the private site entrance with the adjacent landowner, Stresslite Precast Ltd since 21 June 2021. A short section of the northern part of the access road located north of the site entrance is owned by an adjacent landowner (Michael Murphy). SQL have an existing right of way agreement in place with that landowner. A small triangular folio (ref 28880F) within the existing access road is in the ownership of Stresslite Precast Ltd and SQL have an existing right of way agreement in place with that landowner.

The remainder of the access road into the Site and the quarried lands, including SQL owned property on the Site, are entirely within the ownership of SQL. Private vehicle parking is currently on lands owned by a third-party (Michael Murphy) under an existing access agreement. The wheel wash tank currently onsite is on lands owned by SQL.

The existing quarry has a roughly rectangular shape with a north-east – south-west axis of approximately 260 meters in length, and a north-west – south-east axis of an average of 200 meters in length. That quarry is the subject of a concurrent application for substitute consent with rEIAR. It is proposed to further developer this quarry by lateral extension of the current void extending that void to the north-east within a total Application Site area of 10.03 ha.

2.3 PROPOSED DEVELOPMENT SITE ALREADY PART OF AN OPERATIONAL QUARRY

As noted the proposed development is the further development of a quarry as a quarry. The existing quarry is the subject of a concurrent application for substitute consent and rEIAR.

2.3.1 PLANNING HISTORY

The planning history of the application site is set out in this section of the EIAR.

The existing quarry at the site has been operational since pre-1964. The quarry has been registered in accordance with Section 261, Planning & Development Act 2000 with Quarry Ref. No. QR39. Planning permission was granted to Stresslite Tanks Ltd to continue the quarrying activities at the site under Kildare County Council (KCC) Planning Reference Number. 07/443; ABP Ref. PL09.233338. Under this planning grant, fifty-one planning conditions[1] were imposed by KCC on 2 October 2009. Condition No. 4 stated that "*[t]his permission is for a period of 10 years from the date of this decision unless at the end of this period a further period has been granted for its continuance on the site*".

On 21 December 2018 an application was made to the KCC by Stresslite Tanks Limited to extend the duration of the planning permission and on 22 February 2019, KCC made an Order refusing to extend the duration of the Planning Permission (planning register number 18/1584). The reasons for such refusal provided was that it would materially contravene Condition 4 of the planning permission and that such an application was precluded by s.40 of the 2000 Act. 2. Pursuant to the terms of the

planning permission and s.251 of the Planning and Development Act 2000 (as amended), the period provided for under condition 4 of the planning permission expired on 29 December 2019.

The site has been operated by Shillelagh Quarries Ltd since 2018 and they subsequently purchased the site from Stresslite Precast Ltd in June 2019 and undertook development on the lands pursuant to the planning permission.

Planning application Reg. Ref: 07/443; ABP Ref. PL09.233338 expired on 29 December 2019, which is a period of 10 years from the grant of permission in 2009. Prior to the expiry of this permission, SQL applied for permission for the continuation of use and expansion of the quarry on 23 December 2019 (KCC Reg. Ref.: 19/1438).

A warning letter was issued to Stresslite Floors Ltd on 10 January 2019 regarding non-compliance with conditions No. 1,2,3,12,13,15,19,21,29,31,34,39,47 and 48 of planning Reg. Ref.: 07/443; ABP Ref. PL09.233338. Quarry Plan Ltd on behalf of Stresslite floors Ltd responded to the warning letter on the 21 February 2019. It is understood that non-compliances from this letter were resolved.

Further information was requested by KCC in relation to the planning application (KCC Reg. Ref.: 19/1438) submitted and this information was submitted to KCC on 24 November 2020. The application was subsequently invalidated on 26 January 2021 for the following reasons:

'The application for the continuance of use of an extraction facility located within the townland of Hempstown Commons, Blessington, Co. Kildare, which is accompanied by an EIAR and NIS (Reg. Ref.:19/1438), cannot be considered by the planning authority as it includes the retention of unauthorised development(s) which would have required one or more of the following:

a) an environmental impact assessment,
b) a determination as to whether an environmental impact assessment (EIA) is required,
- *Or*

c) an appropriate assessment.

- *'As impacts to Red Bog Special Area of Conservation cannot be excluded on the basis of objective scientific information, an Appropriate Assessment is required to outline compensatory measures protecting the integrity of conservation objectives at the site.*
- *In this regard the provisions of Section 34(12) of the Planning and Development Act 2000 (as amended) apply which states:*
- *"A planning authority shall refuse to consider an application to retain unauthorised development of land where the authority decides that if an application for permission has been made in respect of the development concerned before it was commenced the application would have required that one or more of the following was carried out –*

a) an environmental impact assessment
b) a determination as to whether an environmental impact assessment (EIA) is required,
- *Or*

c) an appropriate assessment."

- *'Development at the site, comprising continuance of use of an existing extraction facility, is unauthorised and retention permission is required for the following reason:*

a) Development, including specifically extractive operations including rock blasting, 2 no. mobile crushing plants, mobile screen, settlement lagoon, continued on site in breach of a number of conditions set out in Reg. Ref. 07/443, namely condition no. 4 which

requires all activities associated with Reg. Ref. 07/443 to cease following expiry of the appropriate period on 29 December 2019.'

Subsequently, SQL successfully sought a Judicial Review to challenge the planning authority's decision under Section 50 of the Planning and Development Act, 2000, on a number of grounds. Notably that the conclusion of the planning authority that the 2019 application included the retention of unauthorised development was irrational and erroneous in circumstances where the planning application that was made to the planning authority was not made pursuant to s.34(12) of the 2000 Act and the application was made for continued operation of the quarry and not for the purpose of retrospectively regularising any unauthorised development.

A settlement was reached between SQP and the planning authority on 17 January 2023 with the following terms:

1. *Applicant agrees to an Order withdrawing the within proceedings.*
2. *Applicant undertakes to the Court to bring an application pursuant to S.177C of the Planning and Development Act, 2000, as amended, for leave to apply for substitute consent in respect of all development carried out on the lands, since the expiration of planning permission register reference 07/443 ABP ref.PL09253338 on the 29th December, 2019, other than the remediation works carried out pursuant to Condition 6A thereof, within 6 months of today's date.*
3. *The Respondent shall be at liberty to bring, if it so deems necessary, s.160 proceedings, pursuant to the PDA 2000, in respect of any unauthorised development carried out on the lands, the subject matter of the within proceedings.*
4. *For the avoidance of doubt, in the event that the Council commences s.160 Injunction proceedings referenced at paragraph 3 herein, the Respondent confirms that it will adopt a neutral position to any application by the Applicant to adjourn such s.160 proceedings commenced against the Applicant pending determination by the Bord of its application for leave to apply for Substitute consent, conditional upon the Applicant limiting any further extraction to the extraction area outlined in the Applicant's letter dated 16th November, 2020.*
5. *Liberty to apply.*
6. *Legislative references herein shall be deemed to include any successor legislative provisions.*

The court order (dated 31 January 2023, Record No: 2021/228JR) and states:

'*The Court notes the undertaking given on behalf of the Applicant*[2]*, that the Applicant will make an application to An Bord Pleanala, for leave to apply for substitute consent pursuant to section 177C of the Planning and Development Act 2000 (as amended), within 6 months of today's date in respect of all development carried out on the lands, the subject matter of the within proceedings, since the expiry of planning permission register reference 07/443 ABP ref. Pl09253338 on 29th December*

[2] Applicant refers to SQL.

2019, other than remediation works carried out pursuant to Condition 6A of the said planning permission.'

SQL subsequently submitted an application to the An Board Pleanála ('the board') for leave to apply for substitute consent pursuant to section 177C of the Planning and Development Act 2000 (as amended) on 25 July 2023 (Bord Pleanála Case reference: LS09.317649).

A decision on the application had not been made by the board by the 16 December 2023, which was the date that Planning and Development, Maritime and Valuation (Amendment) Act 2022 (Commencement of Certain Provisions) (No.2) Order 2023 (S.I. 645 of 2023) came into effect. This Act include provisions which provide for a single-stage application process for substitute consent and so removed the requirement for SQL to seek leave to apply for substitute consent from An Bord Pleanála (ABP). ABP returned SQL's application for leave to apply for substitute consent and deemed it withdrawn on 15 January 2024.

On 20 December 2024, SQL submitted an application to the board for substitute consent for the quarry under section 177E of the Planning and Development Act 2000, as amended. The board's reference for that case is ABP-321578-25.

2.4 DESCRIPTION OF SUBJECT LANDS

2.4.1 SUMMARY OF PROGRESSION OF EXTRACTION OPERATIONS TO CURRENT TIME

Following the expiry of the KCC planning authorisation: 07/443 on 29 December 2019, extraction activities at the Application Site continued[3].

Between June 2020 and March 2022 the quarried area increased by approximately 0.4 ha. This increase in area is associated with expansion to the south east and south west of the existing quarry. Between March 2022 and September 2023 the quarried area mainly steady as expansion to the north east of the existing quarry involved the removal of an existing bench located on north east face of the quarry. Between September 2023 and October 2024 extraction did not significantly alter the existing quarried area extents. The current quarry extent is approximately 5.1 ha (see Figure 2-3).

Detailed elevation data from within the quarry indicates that the deepest part of the quarry was at approximately 235 mAOD in July 2019 and at 210 mAOD in September 2023.

It is estimated that an average of ca. 115,650 tonnes of rock was excavated from the Site each year over 2020-2024 . However, extraction and process rates have fluctuated in line with market demand over that time. Extraction rates have fallen in recent years as extraction has been limited to reserves within the approximately 5 ha agreed high court boundary (see section 2.3.1) and that resource has decreased over time.

[3] To retrospectively build a narrative of the development of the subject lands over the period of 29 December 2019 to the present day WSP have reviewed and rely upon publicly available resources; mapping and photography; SQL business records; and monitoring records. Full details are provided in the Substitute Consent Application rEAIR (ABP case ref ABP-321578-25.)

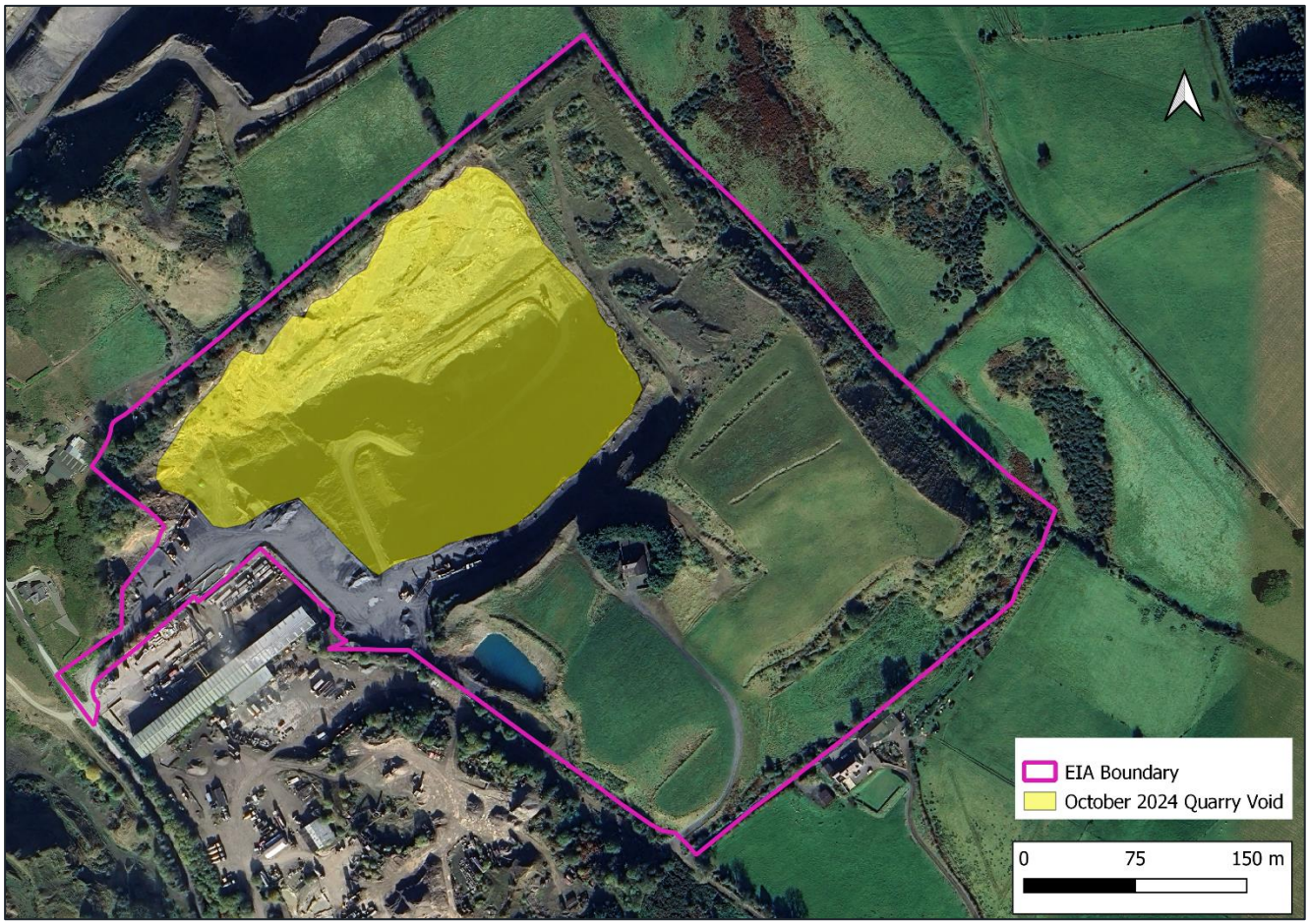


Figure 2-3 – Existing quarry area extent as of October 2024 (Google Earth Imagery)

In terms of the general operation of the existing quarry since quarrying commenced, rock has been extracted within a quarry area of ca. 5 ha through drilling, blasting, and mechanical breaking of greywacke (and shale) rock (Pollaphuca Formation). Mechanically broken and blast rock is processed through mobile crushing, and screening of the rock into specific aggregate sizes using dry processes. Screened aggregate is temporarily stockpiled in an area to the south and west of the quarry void space. Stockpiled aggregate materials are loaded onto road trucks for sale and distribution.

Collected waters on the quarry floor are currently pumped from the quarry void space to soakaways located within the south of the Site. The soakaways onsite comprise 1 no primary soakaway and 1 no smaller soakaway used to manage overflow of surface water from the primary soakaway as required.

There is periodic extraction of groundwater from an abstraction borehole to provide water for the closed-loop system wheelwash recycling tank and the mobile bowser.

2.5 FUTURE EXTRACTION AND RESTORATION

2.5.1 QUANTITIES OF ROCK RESOURCE

The proposed development of further extraction is to be in the existing void area with lateral extension of the void proposed in a north-easterly direction (Figure 2-4). The rates of extraction predicted as part of that application has regard to the historical rates at the site. Quantities of the rock resource to be extracted are presented in Table 2-1. The quantities presented in Table 2-1 have been determined by SLR Consulting (see drawings 01 ref SLR project '501.065616.00001' in Appendix 2A).

Figure 2-4 - Proposed Pit Extension Area overlain on October 2024 aerial.

Table 2-1 – Quantities of rock resource

Area	Volume (m3)	Tonne (t)*
Within existing quarry	226,000	565,000
Extension area	477,000	1,192,500
TOTAL	**703,000**	**1,757,500**

*Using a conversion factor of 2.5

2.5.2 ANNUAL EXTRACTION

A 5.5 day working week operating for 50 weeks a year and a production rate of ca. 2,929 tonnes per week for rock, provides an estimated annual extraction tonnage of ca. 146,458 tonnes per year, giving a life of operations of ca. 12 years (depending on market conditions). This 12 year life-of-quarry requirement is based on an average production rate. Actual annual extraction rates will vary in relation to external market effects and volatility in the construction industry will affect.

2.5.3 RESTORATION

A restoration proposal is included in this EIAR that is entirely within the EIA boundary and is intended to be implemented once extraction proposed is complete. This restoration summarily consists of minor rounding of the benches with a pond to be maintained in the base of the void. A combination of native species planting and natural recolonisation of bare ground is proposed in accordance with advice from the ecology team for this EIAR. The restoration proposal is detailed in Appendix 2B. It is anticipated that progressive restoration will require 24 months for plant and building removal, regrading and planting works and first planting season inspection.

Where practicable, overburden, and materials not suitable for sale (i.e., generated from the processing of the aggregate) will be used in the restoration of worked-out areas and/or minor landscape works within the application site (see proposed Restoration Plan in Appendix 2B).

2.5.4 OPERATIONAL TIMELINE REQUESTED

For the avoidance of doubt, the period for which planning is sought by the Applicant is for 12 years of extraction operations, followed by 2 years to conduct the final restoration.

2.6 DESCRIPTION OF THE PROJECT

2.6.1 EXTRACTION

The activity at the existing quarry currently involves the extraction of rock (greywacke) by periodic drilling and blasting undertaken by a third-party contractor is used as a means to initially extract rock. Secondary rock breaking is used to reduce the blasted rock to a more manageable size prior to crushing. Blast rock is processed by mobile crushers (primary crusher, secondary crusher, and until late 2022, a tertiary crusher) and mobile screens to produce aggregates.

It is proposed to extend the existing quarry in a north-easterly direction for the extraction rock.

The extraction of rock at the Application Site will involve the following:

- Continuation of excavation of rock using a variety of methods, including drilling and blasting, and rock-breaking;
- Continuation of mobile crushing, and screening of the rock into stockpiles of specific fragment sizes. It is proposed that initial extraction in the extension area will require continued use of 1 no. mobile crusher and 1 no. screen off the quarry floor. However, as excavation progresses, space will be generated with in the void space and processing plant will be moved to the quarry floor;
- Loading of material onto road going trucks for sale and distribution to market; and,
- Trucks passing through a weighbridge and wheelwash before travelling onto the N81.

It is considered that the recovery of the valuable aggregate resources from within the Application Site will be a more environmentally sustainable option than recovering aggregates from a greenfield site elsewhere.

Approximately 95,000 m^3 of overburden[4] present in the proposed quarry lateral extension area will be progressively stripped to allow for the extraction of the underlying rock resource. This material comprises clean soil, sand and stone and will be stored onsite during the operational life of the proposed quarry development. It is proposed that the landform for this stored material will comprise a series of benches along the north-west wall of the existing quarry void (see Figure 2-5).

It is proposed to extend the existing quarry void in a phased manner. This will allow time for stripping and storage of topsoil and overburden; and the blending of material types depending on the extent of variation in the quality of the materials within the deposit at any given time.

2.6.2 OPERATIONAL FACILITIES/STRUCTURES

SQL proposed to relocate the existing office container, wheel wash and tank, weighbridge within the Application site to provide space for realignment of the private access lane on SQL lands and to develop dedicated carparking facilities for the quarry operation on SQL owned lands.

The proposed car parking facilities will provide parking for HGVs and private vehicles, including guest parking.

The Proposed Development provides for HGV and car parking facilities on SQL owned lands in order to provide dedicated parking facilities onsite for SQL operations. It is noted that the introduction of dedicated carparking facilities is intended to avoid reliance on the third-party parking facilities currently used. The proposed development envisages that all SQL and visitor parking will take place at parking facilities within SQL owned lands only.

SQL propose to decommission the existing abstraction borehole located off the access road to facilitate the road realignment on their own lands. SQL propose to undertake periodic extraction of groundwater from an abstraction borehole located on Stresslite Precast Ltd to provide water for SQL's closed-loop system wheelwash recycling tank and the mobile bowser.

There will be no direct discharge to surface or groundwater from the quarry operations. Collected waters from the base of the quarry void will continue to be pumped to the primary soakaway (which is connected to an overflow soakaway). It is proposed that the collect waters will pass through a bypass separator prior to discharge to the primary soakaway. It is proposed to extend the existing sump on the quarry floor to provide additional temporary holding capacity for collected waters, if required.

Fuel and chemical storage does not take place on the Site. Vehicles and plant are refuelled by third-party suppliers using tankers bought to site for the purpose of refuelling. Materials required for blasting are provided by the third-party supplier on the day blasting activities are carried and no chemicals associated with this process are stored onsite. In addition, spill kits will be maintained on site to deal with all spills and leaks, and spill training will be provided to relevant staff members.

[4] Determined using a bulk conversion factor of 1.8 t/m^3 and assuming an insitu overburden approximate depth of 5.5 m.

The proposed operational phases to be undertaken at the Application Site are presented below. Aspects of the proposed Phases may be required to be altered in line with market demands for aggregate products, and site circumstances including the quality of resources identified upon extraction of particular areas

The proposed site layout is shown in Figure 2-5 and Figure 2-6 (overleaf).

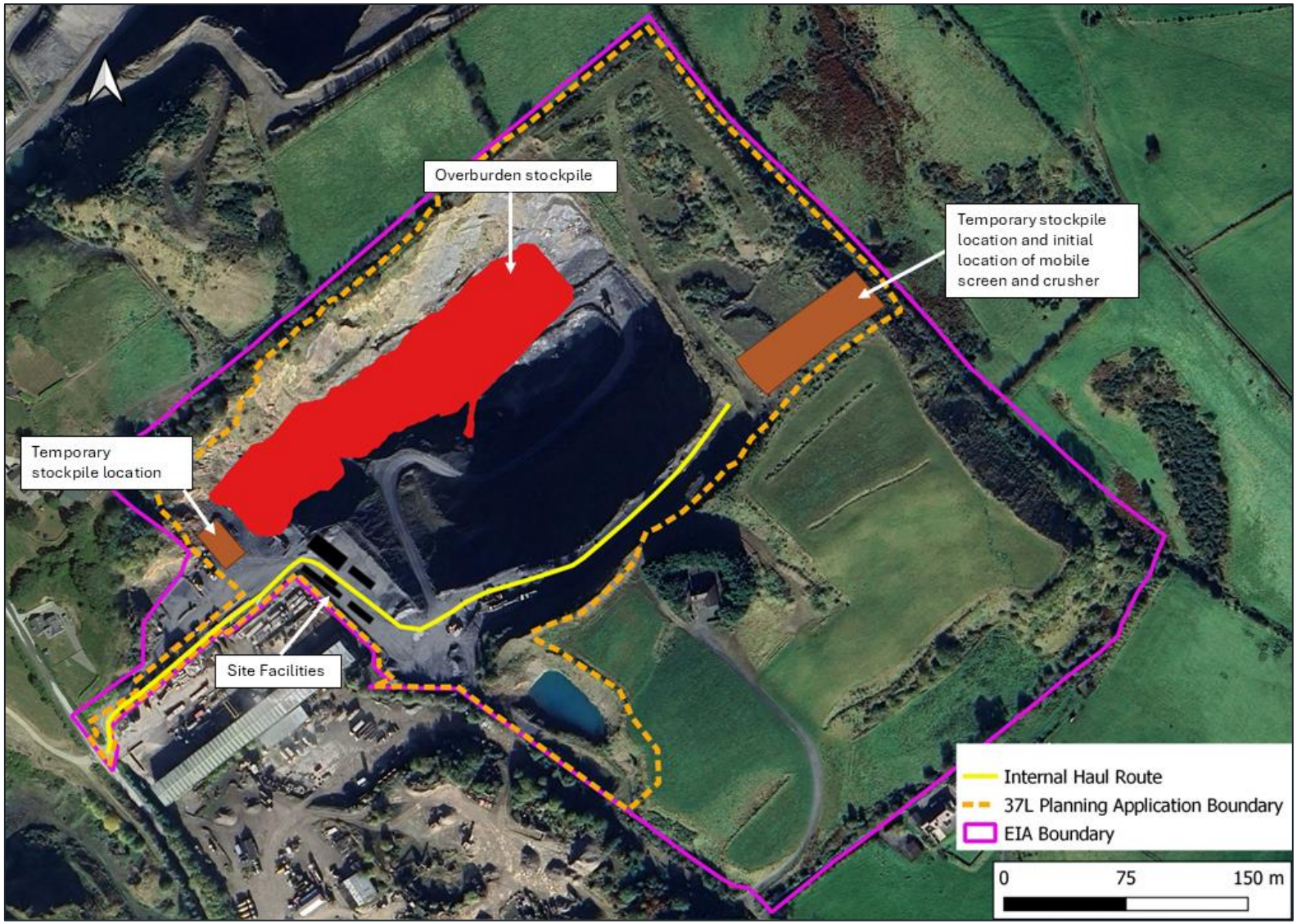


Figure 2-5 - Proposed site layout

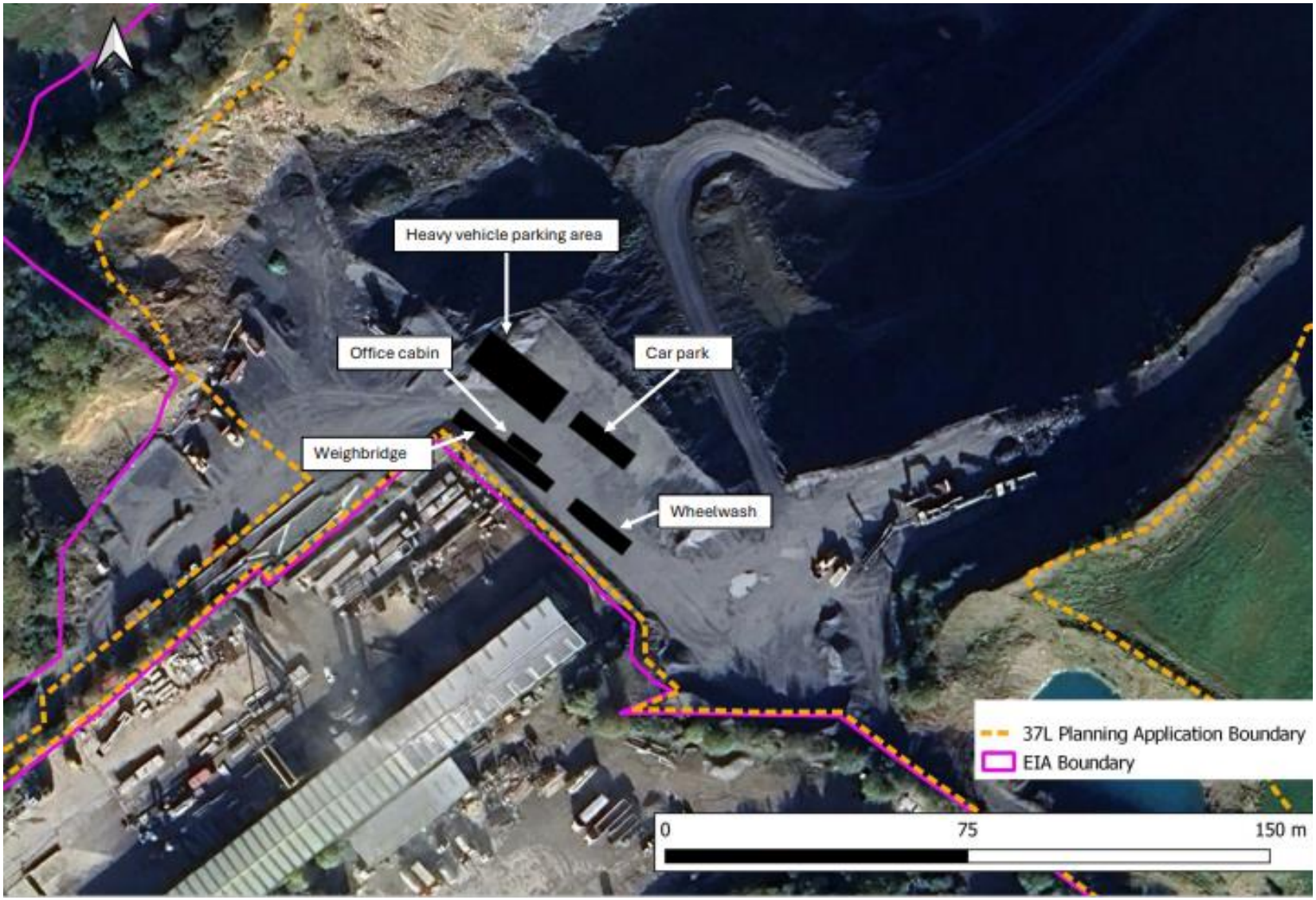


Figure 2-6 - Proposed site layout (site facilities) and private access lane.

2.6.2.1 Operational Plan - Phase 1

It is proposed to maintain the existing fence along the north-west and north-east sides of the Application Site boundary and to maintain native hedging inside the fence.

Relocation of office container, weighbridge, wheel wash and tank and development of carparks with 0.75m high safety berm on perimeter will be undertaken at the start of this phase (see Figure 2-6 for proposed new location). Existing temporally stockpiles on the south and south west of the quarry void will be relocated to facilitate the construction of the proposed layout and provide access to the existing internal haul route parallel to the south east face, as required. The existing mobile screen and mobile crusher will be relocated from the south if the south-east quarry face to the north east of same face[5] (see Figure 2-5) Space for temporary stockpiles will also be provided for in the north-east and west of the Application Site (see Figure 2-5).

Signage will be erected onsite to advise users of the change of road layout. Signage will be erected to manage traffic flow and pedestrian crossing areas throughout the operational life of the quarry, as required.

SQL will decommission the existing abstraction borehole located off the access road to facilitate the road realignment on their own lands. SQL propose to undertake periodic extraction of groundwater from an abstraction borehole located on Stresslite Precast Ltd to provide water for SQL's relocated closed-loop system wheelwash recycling tank and the mobile bowser.

The proposed development includes for realignment of short adjoining sections of the private access lane on SQL owned lands by reducing the topographical level of the lands and extending the trackable land surface to the south side of the existing road.

The works comprise:

- regrading of SQL lands to reduce levels to tie in with a slope to the south of the road to make create trackable surface levels.
- Removal of low value trees and scrub on SQL lands to the south of the existing track to accommodate the realignment

No re-grading works are proposed on land in the ownership third-partly landowner. SQL will continue to abide by the existing rights of way agreements and the proposed development ensures that third-party landowners will continue to have access to lands in their ownership.

The realignment will improve surface water drainage on the private access track by directing access road runoff from the realigned sections back into SQL-owned lands and therefore reducing run off towards the site entrance. The existing informal soakaway area northeast of the site entrance and to the south of the private access lane will be retained to manage surface water run off at this location.

A bypass separator will be installed between the sump on the quarry floor and the primary soakaway (see specifications in Appendix 2C). Collected waters from the quarry void will be passed through a bypass separator prior to discharge to the primary soakaway

[5] Plant will move into the quarry void as space is created as extraction progresses.

The existing sump will be extended within the quarry void to provide additional capacity to temporarily store collected waters within the quarry void space during periods of elevated rates of water runoff (e.g. winter). Temporarily stored and collected waters will be pumped to the primary soakaway, as required.

It is anticipated that the above works will be carried out within 1 to 4 weeks.

2.6.2.2 Operational Plan - Phase 2

Phased stripping of topsoil and overburden over 25 m sections will be carried out in the extension area in a north-west direction from the south-east.

Topsoil and overburden stripped from the proposed extraction area will be stockpiled against the northwest quarry wall in engineered benches.

Overburden from the quarry extension area will be transported along the existing haul route parallel to the south-east quarry face and onto the quarry floor via the existing haul route into the void located at the south side of the south-east face. Based on extraction rates set out in section 2.6.1 It is anticipated that the progressive stripping and stockpiling over overburden would be completed with 24 months

Some stripped material will be used to construct safety berms in appropriate locations around the site. Stripped topsoil will be stockpiled and retained for final landscaping works during restoration phase.

Progressive extraction of the rock resource within the existing quarry and within the extension area will be carried out in accordance with the quarry design prepared by SLR Consulting Ltd (see Appendix A1).

As further space within the quarry void becomes available during the progressive extraction of the extension area, the 1 No. Crusher and 1 No. Screen temporarily positioned in the northeast of the Application Site will be relocated onto the quarry floor.

It is expected that extraction and onsite processing of the 1,757,500t rock resource to produce aggregate at the Application Site will be completed within the 12 year operational life of the quarry.

2.6.2.3 Restoration - Phase 3

A concept restoration plan is provided in Appendix 2B. It is expected that the final restoration will be completed within 2 years following the cessation of extraction activities. All plant, equipment and temporary structures shall be decommissioned and removed from the Site and scheduled planting will be undertaken.

2.6.3 TRAFFIC CONTROL

All traffic occurring within the Site is internal traffic using internal short informal haul routes. Excavated rock leaves the quarried faces and is transported off-site post processing. As noted in section 2.4.1, rock is extracted and processed in separate methods on/off the quarry floor depending on extraction rates which vary over time.

Sorted aggregate is stored in stockpiles and loaded onto road trucks for export from the site.

Material transported into the public realm is by the only operational entrance / exit to the quarry site located off the L6030, which itself connects to the N81. It is of note that this is the primary entrance for the development and thus caters for all employees, visitors and movement of aggregate products and materials (import/export). The proposed development will continue using this single entrance for all Site related traffic.

HGVs are required to enter / exit via the weighbridge and wheelwash. No quarry access is utilised through other minor access roads. Internal traffic speed limits are also posted to maintain vehicular speeds below 10 kmph.

The proposed development provides for changes to the realignment of the access road within SQL lands and relocation of the office container (including weighbridge control room), weighbridge and, wheelwash and tank within SQL owner lands, as described in section 2.6.2 .

The Traffic section of this EIAR sets down a description of the existing traffic environment of the site and the predicted impact of the proposed continuation of the average annual traffic from the Site for the operational years where upon traffic generation for the quarry will cease with ad hoc traffic generation from restoration implementation. Operations at the Application Site will remain relatively consistent with previous production rates.

As presented in Chapter 12 (Traffic and Transportation), the total daily trips associated with the quarry operation for the exportation of ca. 146,458 tonnes per annum accounts for 56 movements daily, 40 of which relate to HGV's (71.42%). These numbers have been broken down as follows:

- 40 daily truck movements enter and exit the site importing material, 20 inbound and 20 outbound;
- 12 staff trips daily, 6 inbound and 6 outbound; and
- 4 miscellaneous trips daily, 2 inbound and 2 outbound.

All materials leaving the Application Site will to be transported along the realigned internal access land existing onto the local road via the existing site entrance.

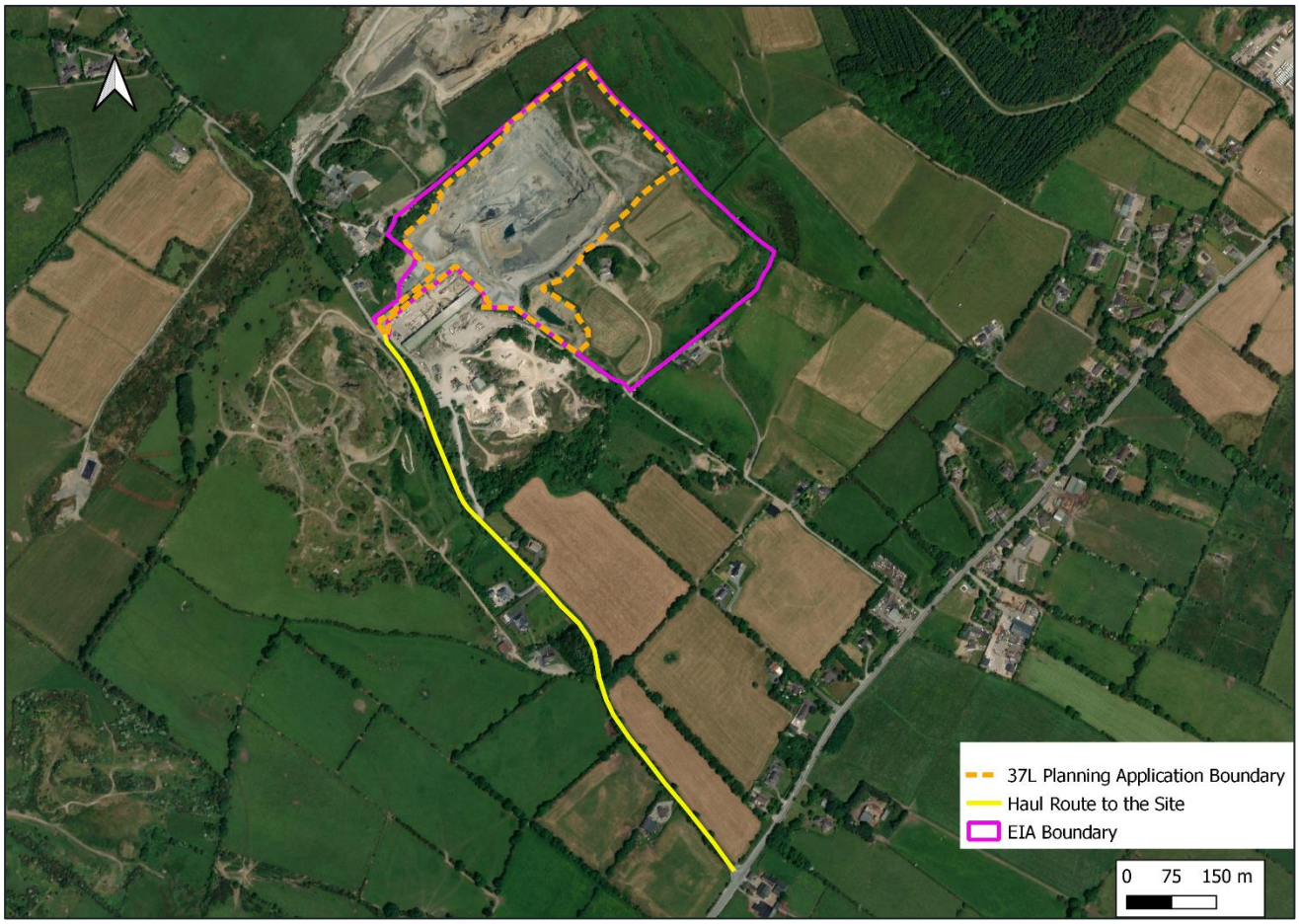


Figure 2-7 - Existing haul route from the Site to N81

2.6.4 HOURS OF OPERATION

The proposed hours of operation are a continuation of those prescribed in KCC Planning Reference Number. 07/443; ABP Ref. PL09.233338, which are:

'*Excavation and processing of material shall be carried out between 0800 hours and 1800 hours, Monday to Friday and between 0800 hours and 1400 hours on Saturdays. However, loading and transporting of processed material may be carried out between 0700 hours and 1800 hours, Monday to Friday and between 0700 hours and 1400 hours on Saturdays. No activities shall be permitted on Sundays or public holidays'.*

2.6.5 EMPLOYMENT

Direct and indirect employment levels vary in accordance with market demand and associated extraction and processing requirements. Direct employment is in the categories of plant operators (4 No.), and administrative staff at the weighbridge (2 No.).

SQL appoint third-party contractors to undertake drilling and blasting of rock on a periodic basis, to service machinery, and to service the welfare facilities at the Site.

The operations on site are part of a family business, established and led by the owners' / operators' family who have worked on the site since the 2016.

2.6.6 SAFETY AND SECURITY

The subject site and operations are required to meet conditions of permissions and certain statues.

In particular, the relevant Health & Safety legislation (Safety, Health & Welfare at Work Act, 2005, the Mines and Quarries Act, 1965) and subsequent Quarries Regulations relating to health and safety, training, appropriate site management etc. will be complied with. Amongst these regulatory requirements are the need to keep on site and up to date Health and Safety File which records safe procedures, deviations from those procedures and accident reports.

Compliance with these requirements will persist during the proposed further development of the quarry. The operator maintains a Health and Safety File and facilitates site inspections by the health and Safety Authority (HSA) and audits.

A perimeter stockproof fence is maintained along the length of the Application Site boundary adjacent to native hedging. A security gate is located at the site entrance to the quarry access road.

The only vehicular entrance in operation is through the shared access land which is gated. As noted in section 2.6.3 this traffic management arrangement is to persist for the proposed further development of the quarry. The realignment of short adjoining sections of the access track will facilitate HGV movement on SQLs own lands and improve surface water drainage on the access track by road runoff being directed back into SQL-owned lands.

There is no requirement for lighting outside of the subject lands but within the lands, certain working hours (before sunrise and after dark in winter periods) necessitate lighting that is extinguished during daylight and when the site is closed thus no external light spill occurs. This situation is to remain in the proposed development which does not require additional lighting.

2.6.7 FUEL AND CHEMICAL STORAGE

Fuel and chemical storage does not take place on the Site. Vehicles and plant are refuelled by third-party suppliers using tankers bought to site for the purpose of refuelling. Materials required for blasting are provided by the third-party supplier on the day blasting activities are carried and no chemicals associated with this process are stored onsite.

2.6.8 WASTE MANAGEMENT

Domestic waste facilities will be located at the office container[6] and serviced by a licenced waste removal contractor. Occasional metal scrap wastes produced will be disposed of by SQL at suitably licenced waste facilities.

2.6.9 WATER

2.6.9.1 Waste Water

Limited wastewater is produced on the Site. See the section below for details.

[6] For clarity, an office container (labelled to as 'office cabin' in the drawings provided to support this Section 37L planning application) contains the welfare facilities and the weighbridge control room, and site office.

2.6.9.2 Potable, surface water and groundwater

Welfare facilities

Welfare facilities are fully serviced by an authorised third party.

Wheelwash

A wheelwash is used on the site for cleaning outward bound HGVs and plant. Water is recycled through the concrete lined holding tank. SQL propose to decommission the existing wheelwash and tank and to construct a closed-loop wheel wash and concrete lined holding tank in a new location onsite. The relocation of the wheelwash is proposed to facilitate the realignment of the access road on SQL owned lands.

Water for the proposed wheelwash will be periodically sourced from an extraction borehole located on adjacent Stresslite Precast Ltd lands and in agreement with that third-party.

Processing Plant Water Management

Dry processes are used in the processing of blast rock on the Site, therefore no process plant water management is required.

SQL proposed to continue to periodically pump collected waters from the quarry floor to the existing soakaway(s) located on the south of the Site. A bypass separator will be installed in the line feeding to the primary soakaway (specifications are provided in Appendix 2C). The bypass will be installed and maintained in accordance with the manufacturer instructions.

2.6.9.3 Dust suppression

A mobile water tank is used for dust suppression on haul roads, stockpile areas and on the quarry floor, when required.

Water for the proposed bowser will be periodically sourced from an extraction borehole located on adjacent Stresslite Precast Ltd lands and in agreement with that third-party.

2.6.10 POWER SUPPLY AND TELECOMMUNICATIONS

Power will be supplied to the site facilities (office container) by fixed ESB connection.

The pump (model: Xylem Flygt BIBO 2870 50hz) located on the quarry floor is powered by diesel generator (model: FG Wilson XP150E).

A landline telephone will be available at the office container.

2.7 PLANNING AND GUIDANCE POLICY

2.7.1 NATIONAL PLANNING FRAMEWORK (PROJECT IRELAND 2040) AND NATIONAL DEVELOPMENT PLAN 2018-2027

These joint documents set out a vision for the future development of the State and support the sustainable development of rural areas by encouraging growth. National Policy Objective 23 seeks to *'Facilitate the development of the rural economy through supporting, amongst other sectors, a sustainable and economically efficient extractive industry sector, whilst at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.'*

On page 78 under the heading 'Aggregates and Minerals' the importance of the aggregates and minerals sector to the Irish economy and to development in general is recognised where it stated in the NPF that:

'Extractive industries are important for the supply of aggregates and construction materials and minerals to a variety of sectors, for both domestic requirements and for export. The planning process will play a key role in realising the potential of the extractive industries sector by identifying and protecting important reserves of aggregates and minerals from development that might prejudice their utilisation.

Aggregates and minerals extraction will continue to be enabled where this is compatible with the protection of the environment in terms of air and water quality, natural and cultural heritage, the quality of life of residents in the vicinity, and provides for appropriate site rehabilitation.'

2.7.2 QUARRIES AND ANCILLARY ACTIVITIES GUIDELINES FOR PLANNING AUTHORITIES 2004

In light of the commencement of Section 261 of the Planning and Development Act 2000 the Department of the Environment, Heritage and Local Government (DoEHLG) published the Quarries and Ancillary Activities Guidelines for Planning Authorities (2004). The Guidelines are intended as a practical guide to the implementation of Section 261 and to offer guidance to planning authorities in determining applications for planning permission for quarrying and ancillary activities and to land use strategies for same.

Section 1.3 of the Guidelines states that:

'aggregates are an essential input to the construction industry, worth about €20 billion to the Irish Economy each year' and 'there will be a continuing need for some new or expanded aggregate quarrying operations on land to meet regional and local requirements'.

The Guidelines further recognise that there is a:

'continuing need for some new or expanded aggregate quarrying operations on land to meet regional and local requirements. There is thus a need to identify and protect aggregate resource areas through the planning system, to ensure an adequate supply of aggregates to meet the likely scale of future demand, while at the same time protecting Irelands natural and cultural heritage.'

The Guidelines set out the potential environmental effects of quarries and, sand and gravel pits thereby providing guidance on appropriate mitigation measures for each identified effect. Guidance is also provided on matters such as restoration and after-use. It is the intention of this EIAR document to meet these Guidelines where practicable.

2.7.3 ENVIRONMENTAL MANAGEMENT GUIDELINES – ENVIRONMENTAL MANAGEMENT IN THE EXTRACTIVE INDUSTRY (NON – SCHEDULED MINERALS) 2006

These guidelines were published by the Environmental Protection Agency (EPA) and are intended to further compliment the Guidelines which were published by the DoEHLG.

The EPA Guidelines go further than those of the DoEHLG in that they identify, in so far as is possible, all potential environmental effects of extractive industries and suggest mitigation measures for these effects. Suggestions on mitigation measures include advice on monitoring limits and methods of identifying and measuring environmental effects. These guidelines are aimed at practitioners and officers of the Council alike as they outline best practice measures and are considered in Chapters 3 to 13 of this EIAR. It is the intention of this EIAR document to demonstrate that the development accords with the best practice environmental management set down in these Guidelines.

2.7.4 REGIONAL PLANNING GUIDANCE

2.7.4.1 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.

Regional Policy Objective 6.7 also encourages extractive industry development where it states that the regional authority will:

'Support local authorities to develop sustainable and economically efficient rural economies through initiatives to enhance sectors such as agricultural and food, forestry, fishing and aquaculture, energy and extractive industries, the bioeconomy, tourism, and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage.'

The need to reconcile rural based employment and activity with the needs of tourism and protecting the environment is recognised in these guidelines such as building on strengths to sustain a strong economy and support the creation of jobs and to ensure a good standard of living for all.

It is interesting to note that page 94 of the RSES indicates that Blessington is one of those towns recording the highest growth rate in the country over the 10 years prior to the adoption of the RSES at >32% but with lower levels of employment provision.

2.7.5 KILDARE COUNTY DEVELOPMENT PLAN 2023 – 2029

This is the current development plan covering the application Site. Chapter 9 of the Kildare County Development Plan 2023-2029 indicates that extractive industries require sensitive management. Section 9.9 (Mineral Resources and Extractive Industry) identifies the following:

- The extractive industry can only be developed where the required resources occur;
- Residential and natural amenities will be protected, pollution will be prevented, and aquifers and ground water safeguarded;
- Principles of sustainable development and environmental management;
- Aggregate resources are important to the general economy;
- The industry provides a valuable source of employment in some areas of the county;

- Environmental and landscape impact must be managed or minimised insofar as siting is based on resource locations, and the Council will protect high amenity/special/unique sensitivity areas and limit new and/or extending existing extractive industries in this area;
- Rehabilitating ecology and biodiversity and restoration plans will provide for a mosaic of habitats. Infilling may be considered preferable to reverting to agricultural grassland for ecological and biodiversity purposes.

The proposal is consistent with Policy RD P8 which supports and manages appropriate future development of Kildare's natural aggregate resources in appropriate locations to ensure that there are adequate supplies to meet future needs of the county and the region consistent with the principles of sustainable development and environmental management.

The following **extractive industry specific objectives** are met:

RD O42 which seeks to ensure that there is no significant impact on any Designated Site;

RD O43 that there shall be no impact on any site of Geological Importance and that the planning authority shall consult with the Geological Survey of Ireland;

RD O44 requiring AA Screening; EIAR; EcIA; 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 ad 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.

RD O45 submission of a bond (cash deposit, bond from an insurance company or other security acceptable to the planning authority) to ensure satisfactory completion and restoration of the site.

RD O46 requiring road re-instatement work to be on-going during operations in the interests of road and traffic safety;

RD O47 protecting and safeguarding the county's natural aggregate resources from inappropriate development;

RD O48 managing the finite aggregate resources being mined to supply the future needs of the region while working to reach climate change targets;

RD 049 be consistent with the Guidelines on Quarries and Ancillary Activities; Environmental Management Guidelines, Environment Management in the Extractive Industry (non-schedules minerals); the Archaeological Code of Practice between the DEHLG and ICF; Geological Heritage Guidelines for the Extractive Industry; and Wildlife, Habitats and the Extractive Industry Guidelines for the protection of biodiversity within the extractive industry.

RD O50 ensuring the satisfactory and sensitive re-instatement and/or re-use of disused quarries and extraction facilities where extraction has ceased and seeking consistency with the criteria set out in Section 15.9.6 of that CDP and where there is no significant or unnecessary alteration of the natural landscape and topography unless it can be demonstrated that significant landscape remodelling would enhance the landscape and/or not give rise to adverse impacts.

RD O51 requiring that quarry remediation plans provide for environmental benefit, biodiversity and re-wilding in all instances. It is noted that 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, berms and screening proposals; local transport networks including haul routes, trip movements and articulated lorry heights; noise, vibration and dust emissions; and archaeological an architectural heritage of the area.

The current CDP also sets out the technical requirements of planning applications including necessary details of the of the subject development, all of which are provided in this application.

There are several **economic based policies** all of which support the subject development as an existing quarry.

RE P1 seeking to facilitate employment creation;

RE P2 supporting economic development in the county;

In terms of access and transport the following is noted by the applicants:

Objective TM A24 which seeks to upgrade the N81 National Secondary Road.

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 ether individually or in combination with other plans or projects.

In respect of natural heritage areas, including Red Bog NHA, and Poulaphouca Reservoir, the subject development 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 subject development

lines up 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.

In the terms of geology the subject development 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 062 promoting, encouraging and supporting provision of access to geological and geo-*morphological 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 subject development 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 subject site is located within an area of high landscape sensitivity where extraction of sand, gravel and rock is shown of medium appropriateness and is 'likely to be compatible with great care.

The subject development is consistent with the following:

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

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 O7 restricting the quarrying of sensitive sites within Landscape Character Areas and protecting and conserving ecological, archaeological, biodiversity and visual amenity surrounding quarry.

LR O8 requiring all quarrying activities and projects associated with the extractive industry comply with the relevant guidelines and legislation.

LR O12 requiring appropriate environmental assessment for any development that may impact on boglands.

LR O14 maintaining the visual integrity of the Eastern Transition Lands which have retained an upland character.

LR O15 continuing to facilitate appropriate development in the Eastern Transition Lands in an incremental and clustered manner, where feasible, that respects the scale, character and sensitivities of the local landscape, and recognising the need for sustainable economic activity within the county.

In respect of assessing impact on designated high amenity areas the subject development, 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.

LR O30 facilitating the utilisation of existing structures taking account the visual absorption opportunities provided by existing topography ad 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.

There is one policy relating specifically to quarries, LR 08, which states;

"LR 08 -Ensure that all quarrying activities and projects associated with the extractive industry comply with all relevant Planning and Environmental Legislation and the Guidelines for the Protection of Biodiversity within the Extractive Industry document 'Wildlife, Habitats & the Extractive Industry".

2.7.6 PLANNING AND DEVELOPMENT, MARITIME AND VALUATION (AMENDMENT) ACT 2022 (COMMENCEMENT OF CERTAIN PROVISIONS) (NO.2) ORDER 2023

The Planning and Development, Maritime and Valuation (Amendment) Act 2022 (Commencement of Certain Provisions) (no.2) Order 2023 (SI 645 of 2023) provides an amendment to S37L of the 2000 Act. The amendment extends simultaneous applications for both substitute consent and future development of land from quarries only to all types of development.

2.8 REFERENCES

Kildare County Development Plan 2023 – 2029.

Environmental Impact Assessments of Projects Guidance on the Preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU). European Commission 2018.

Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, Department of Environment, Community and Local Government, 2018.

Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EIAR) 2023.

Circular Letter PL 1/2017 - Implementation of Directive 2014/52/EU on the Effects of Certain Public and Private Projects on the Environment (EIA Directive).

Circular Letter EUIPR 02/2023 - Following the enactment of the Planning and Development, Maritime and Valuation (Amendment) Act 2022 (Commencement of Certain Provisions) (no.2) Order 2023 (SI 645 of 2023).

Guidelines on the Information to be contained in Environmental Impact Assessment Reports.

Key Issues Consultation Paper - Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems, 2017.

EU Environmental Impact Assessment Directive (Council Directive 2014/52/EU).

Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements. Institute of Geologist of Ireland, 2013.

Archaeological Code of Practice20 (Irish Concrete Federation, 2009);

Geological Heritage Guidelines for the Extractive Industry (Irish Concrete Federation, 2008).

HSA's 'Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations 2008.

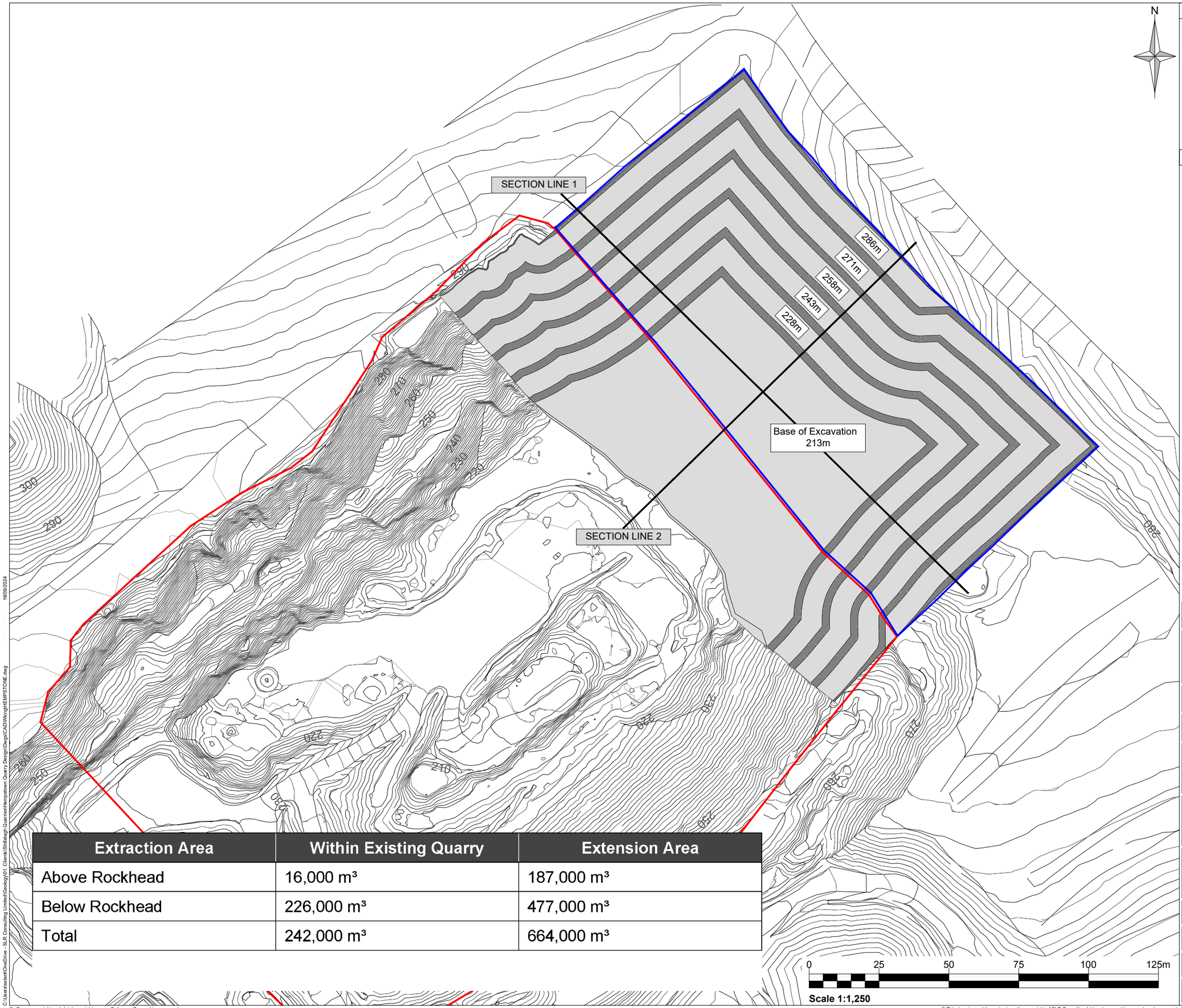
Environmental Management in the Extractive Industry: Guidelines for Regulators 2006.

Environmental Code (Irish Concrete Federation, 2005).

Department of the Environment, Quarries and Ancillary Activities, Guidelines for Planning Authorities 2004.

Appendix 2A

SLR QUARRY DESIGN



Extraction Area	Within Existing Quarry	Extension Area
Above Rockhead	16,000 m³	187,000 m³
Below Rockhead	226,000 m³	477,000 m³
Total	242,000 m³	664,000 m³

Notes:

1. Extension Area: 16,900 m² / 1.69 Ha

Legend:

- Current Extraction Boundary
- Extension Extraction Boundary
- Quarry Working Area

0 25 50 75 100 125m

Scale 1:1,250

Rev	Amendments	Date	By	Chk	Auth

SLR

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Drawing Status & Suitability Code

Client: Shillelagh Quarries

Project: Hempstown Quarry Design

Drawing Title: North East Extension Plan

Scale	SLR Project No.
1:1,250 @ A3	501.065616.00001

Designed	Drawn	Checked	Authorised
SS	SS	TM	TM
Date: SEPT 2024	Date: SEPT 2024	Date: SEPT 2024	Date: SEPT 2024

Drawing Number: 01 Rev.

16/09/2024

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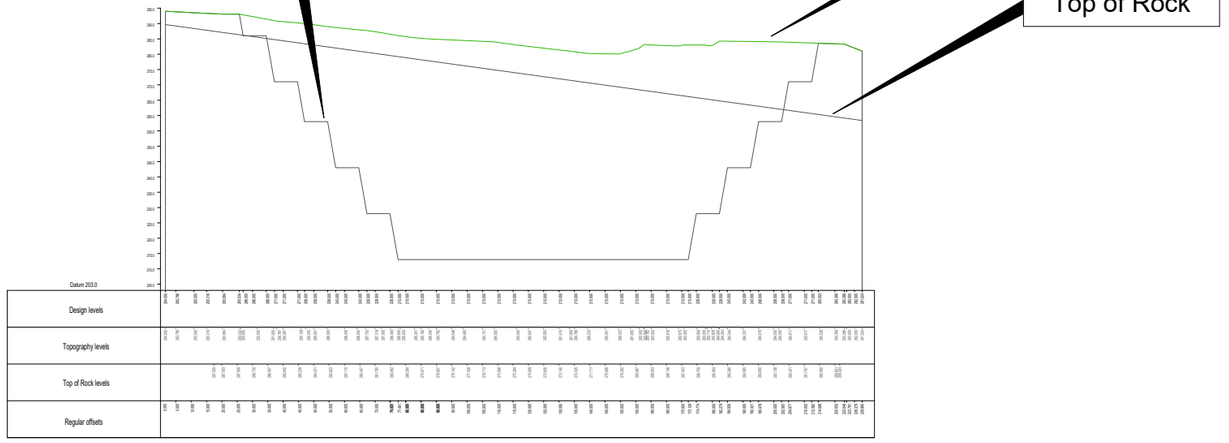
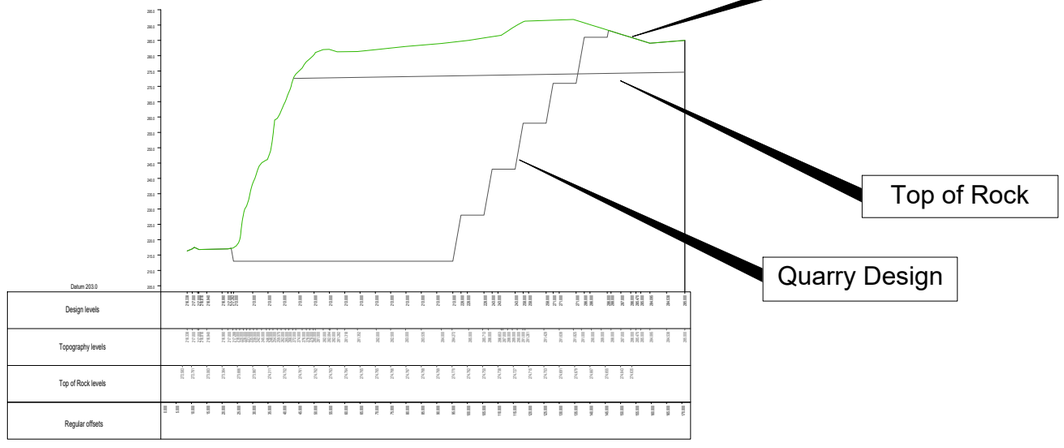
SECTION 1



SECTION 2



Extraction Area	Within Existing Quarry	Extension Area
Above Rockhead	16,000 m³	187,000 m³
Below Rockhead	226,000 m³	477,000 m³
Total	242,000 m³	664,000 m³

N

Notes:

1. Extension Area: 16,900 m² / 1.69 Ha

Legend:

Rev	Amendments	Date	By	Chk	Auth

SLR

www.slrconsulting.com

Drawing Status & Suitability Code

Client: Shillelagh Quarries

Project: Hempstown Quarry Design

Drawing Title: North East Extension Plan
Cross Sections

Scale	SLR Project No.
1:2,000 @ A3	501.065616.00001

Designed	Drawn	Checked	Authorised
SS	SS	TM	TM
Date: SEPT 2024	Date: SEPT 2024	Date: SEPT 2024	Date: SEPT 2024

Drawing Number: **02**

Rev.

16/09/2024

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Appendix 2B

PROPOSED RESTORATION PLAN

1 RESTORATION AND HABITAT MANAGEMENT PLAN

1.1 INTRODUCTION

Restoration proposals for the application Site at Hempstown have been developed on the basis of the following key objectives:

- To allow for an end use that is appropriate to the site's location;
- To integrate the final landform into the local landscape;
- To improve the visual quality of the existing site for surrounding sensitive visual receptors;
- To maximise ecological diversity of the site and its value for wildlife; and
- To deliver a high quality planting scheme of lasting benefit.

Shillelagh Quarries Limited are committed to ensuring that, as far as practicable, the decommissioning phase returns the site to a neutral condition and it is carried out in a manner that minimises any impact to the environment.

Shillelagh Quarries Limited recognise that aggregates are a non-renewable resource. Their extraction results in long-term change of the landscape. As a result, once a recoverable resource is exhausted, all modern extraction sites are required to be reinstated through conditions on planning permissions or permits.

Restoration is an intrinsic responsibility with an associated cost that, in common with labour and plant for example, is correctly accounted for as a contribution cost during the active extractive life of quarry.

The purpose of the plan is to set objectives for, and to guide the establishment of, biodiversity features at the Site covering all important habitats and species. This plan also defines the positive management and monitoring required to maintain these features at a favourable conservation status.

1.1.1 OBJECTIVES

The objectives of the HMP are:

- To present a general description of the Site and any associated features of biodiversity value;
- To compile a schedule of Biodiversity Management Features to be developed through phased restoration; and
- To describe in detail any Biodiversity Management Features identified, and to outline achievable management targets and realistic management activities for each feature. These management activities are derived from the results of the Biodiversity impact assessment (Chapter 4, EIAR) and have been developed in alignment with the design for the accompanying restoration plan.

1.1.2 GEOGRAPHICAL AND TEMPORAL SCOPE

The anticipated roles and general responsibilities of the key parties involved in the performance of this plan are set out in Table 1-1 below. However, it should be noted that all members of staff are responsible for ensuring the requirements of the plan are followed.

Any changes in roles and responsibilities identified will be clearly communicated to those affected and the plan updated and amended during the annual review process.

Due to the level of skill required to implement biodiversity management, the delivery of management tasks defined within this plan will be directed by an appointed Ecological Clerk of Works (ECoW). The ECoW will be the central point of contact for all biodiversity issues, liaising as appropriate with the Project Manager, an appointed biodiversity champion (e.g. the Environmental Officer) and the local planning authority's ecologist (i.e. KCC's ecologist/heritage officer) as required.

Table 1-1 - Roles and Responsibilities.

Position	Role/Responsibilities	Name
Project Manager	Responsible for: ▪ Compliance with legal consents relating to biodiversity if applicable e.g. species licences as applicable; ▪ Compliance with planning conditions relating to biodiversity (post planning determination); ▪ Managing and co-ordinating the biodiversity aspects of the project, including the biodiversity design; and ▪ Coordinating and overseeing the implementation of the environmental project works (including the HMP).	Shillelagh Quarries Limited (SQL) Staff
Environmental Clerk of Works (ECoW)	Responsible for: ▪ Monitoring compliance with the plan through restoration works; ▪ The ECoW frequency of visits will be defined by the complexity of the task and the potential for disturbance to existing sensitive features. Only once the ECoW is satisfied with the outcome of each item will they be considered as a completed action; ▪ Manage site activities of biodiversity specialists, if required; ▪ Liaison with consultees; ▪ Liaison and incident reporting to the Biodiversity Champion (see role below); ▪ Liaison and incident reporting to the Project Manager; ▪ Site inspections and reporting; and ▪ Provide training and information about the importance of ecologically sensitive receptors to all personnel on Site (including relevant sub-contractors) through delivery of 'Toolbox Talks'.	TBC
Biodiversity Champion (e.g. Environmental Manager)	Responsible for: ▪ Implementation of the biodiversity mitigation including the creation of the flood plain attenuation features; ▪ Ensuring the plan is adhered to on-site; ▪ Ensuring the implementation of environmentally sensitive working practices; ▪ Delivering site inductions; ▪ Responding to environmental incidents, and ensuring all reporting is carried out correctly; ▪ Reviewing incidents with colleagues to prevent repeat occurrences; and	Shillelagh Quarries Limited (SQL) Staff

	▪ Liaising with environmental/biodiversity stakeholders as required.	
Local Authority Ecologist (KCC) and NPWS officer	Overarching compliance management of the plan.	TBC

1.2 LEGAL COMPLIANCE

This restoration and HMP has been developed to establish good biodiversity management practice, including compliance with specific species and habitat protection legislation.

1.3 SPECIES AND HABITAT PROTECTION

This section addresses the legislation and guidance that has been considered when preparing this HMP, and the key policy context relevant to biodiversity.

1.3.1 LEGISLATION

- The Planning & Development Act 2000 & the Planning and Development (Amendment) Act, 2010 (as amended) hereafter referred to as the Planning Acts;
- The Wildlife Act 1976 as amended by the Wildlife (Amendment) Act, 2000 (as amended) hereafter referred to as the Wildlife Acts;
- The EIA Directive (Directive 2011/92/EU as amended by Directive 2014/52/EU), the Planning and Development Acts 2000-2018, and the Planning and Development Regulations, 2001-2018;
- European Communities (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018);
- European Commission (EC) Habitats Directive 92/43/EEC (as amended);
- EC Birds Directive 2009/147/EC;
- European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) hereafter referred to as the Birds and Habitats Regulations;
- Flora (Protection) Order, 2015;
- Environment (Miscellaneous Provisions) Act 2011;
- The Fisheries (Consolidation) Act 1959;
- The Local Government (Water Pollution) Act, 1977 (as amended by Sections 3 and 24 of the 1990 Act.); and
- S.I. No. 356/2015 - Flora (Protection) Order, 2022.

1.3.2 RELEVANT POLICIES AND PLANS

- Ireland's National Strategy for Plant Conservation;
- County Kildare Biodiversity Plan 2009 – 2014;
- Ireland’s 4th National Biodiversity Action Plan 2023–2030;
- Ireland's National Strategy for Plant Conservation;
- The Kildare County Development Plan 2023–2029;
- All Ireland Pollinator Plan 2021–2025; and
- County Kildare Heritage Plan 2019–2025.

1.4 SITE DESCRIPTION AND EXISTING BIODIVERSITY FEATURES

1.4.1 LANDFORM AND SITE PROCESSES

Following cessation of extraction, dewatering of the Site will cease, allowing collected waters to form a waterbody within the quarry void space. No reprofiling of lands is proposed, beyond rounding of the existing benches and stored overburden benches to create a profile more hospitable to marginal habitat development within the quarry void space.

In addition, the Site will undergo planting of grassland areas, native tree and shrub species. Indigenous plant species will be encouraged to re-colonize worked out areas (benches) to develop unique habitats and provide for increased biodiversity in these area.

Inter-mixed with the planting of native trees and scrubs, restoration surfaces will be seeded with native grasses and wildflowers to provide for increased biodiversity.

Vertical faces which remain along the north-western part of the Site will be maintained above the stored overburden and enhanced to promote biodiversity in terms of nesting birds.

All plant, equipment and temporary structures shall be decommissioned and removed from the Site.

1.4.2 OVERVIEW OF PHASING AND RESTORATION TASKS

Restoration activities within the Application Boundary will follow the cessation of aggregate extraction. Following the overall cessation of the extraction activities at the Site it is envisaged that the final restoration and closure will take approximately 2 years.

Upon decommissioning, dewatering of the Site will also cease, allowing a waterbody to be formed from collected waters in the base of the quarry. The final proposals will be completed in accordance with this plan, (refer also to Restoration Drawing in Appendix A.1) subject to agreement with the planning authority.

1.4.3 DECOMMISSIONING OF ACTIVITIES

Mobile plant and equipment will be removed from Site. However, staff facilities such as the office and toilets will still be required for the post-extraction restoration phases and will be removed upon completion of final restoration and closure phase.

Waste materials produced as a result of the decommissioning of the Site may include:

- Metal framing;
- Concrete;
- Plastics;
- Wood; and
- Glass.

The wheelwash tank will be removed during the restoration phase. The tank will be emptied by the appropriate licenced contractors/hauliers and the contents removed off-site to appropriately licenced disposal facilities. The unit itself will then be removed and disposed of through the appropriate channels. Any non-inert construction and demolition waste (principally scrap metal, plastic and timber) will be removed off-site by permitted waste collectors and brought to appropriately licenced recovery or disposal facilities.

It is noted that this restoration and HMP does not include for restoration or habitats management on third-party lands within the private access lane and to the north of the private access lane. Access will to those lands will be maintained to facilitate continued us of those lands by their owners.

1.5 ENVIRONMENTAL INFORMATION

1.5.1 HABITATS

A walkover survey of the area was conducted by WSP on the 15 August, 2024 and 21 October 2024 to record the habitats and flora in the area within the Development Site, and to detect the presence or likely presence of protected species, and the presence of suitable habitat for those species. The study was also concerned with identifying the need for further, more specialist surveys as applicable.

Ecological Survey methods were in general accordance with those outlined in the following documents:

- Heritage Council (2011). Best Practice Guidance for Habitat Survey and Mapping;
- Phase 1 Habitat Survey methodology (Joint Nature Conservation Committee (JNCC), 1990, revised 2010); and,
- Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (NRA, 2009).

Aerial photographs and site maps assisted the habitat survey. Habitats have been named and described following Fossitt (2000).

The survey also aimed to identify any invasive species which may occur on the site. However, this type of survey is not designed to replace specialist knowledge of invasive species recognition or eradication which should be undertaken by specialist contractors.

1.5.1.1 Fauna

The ecological impact assessment process in the EIAR (see Chapter 4, EIAR) identified a number of fauna features that are relevant to the HMP as features requiring habitat maintenance and enhancement. These are detailed within Table 1-2 below:

Table 1-2 - Fauna Features Identified

Fauna	Location	Faunal Feature
Bats	Local	There is suitable foraging habitat available for bats in trees, scrub and hedgerows.
Badger	Local	The Site provides suitable foraging and sett-building habitat. Two potential setts have been recorded. Badgers are mobile animals and their use of the Site could change rapidly.

Herpetofauna	Site	The Site provides suitable basking habitat and shelter for common lizard. The overflow soakaway may also provide suitable habitat for breeding amphibians as it was partially vegetated at the time of the survey.
Breeding Birds	Local	The walls of the quarry pit were said to have suitability for breeding peregrine and kestrel. A sand martin nesting colony was recorded on a north sandy face adjacent to the primary soakaway. Scrub and hedgerow along the Site periphery, and recolonising bare ground mostly in the north/northeast, provides suitable breeding habitat for a range of bird species.

1.5.2 STATUTORY AND NON-STATUTORY DESIGNATED SITES

1.5.2.1 Designated Nature Conservation Sites

A map displaying the designated nature conservation sites in the vicinity of the Site is shown at Figure 1-1.

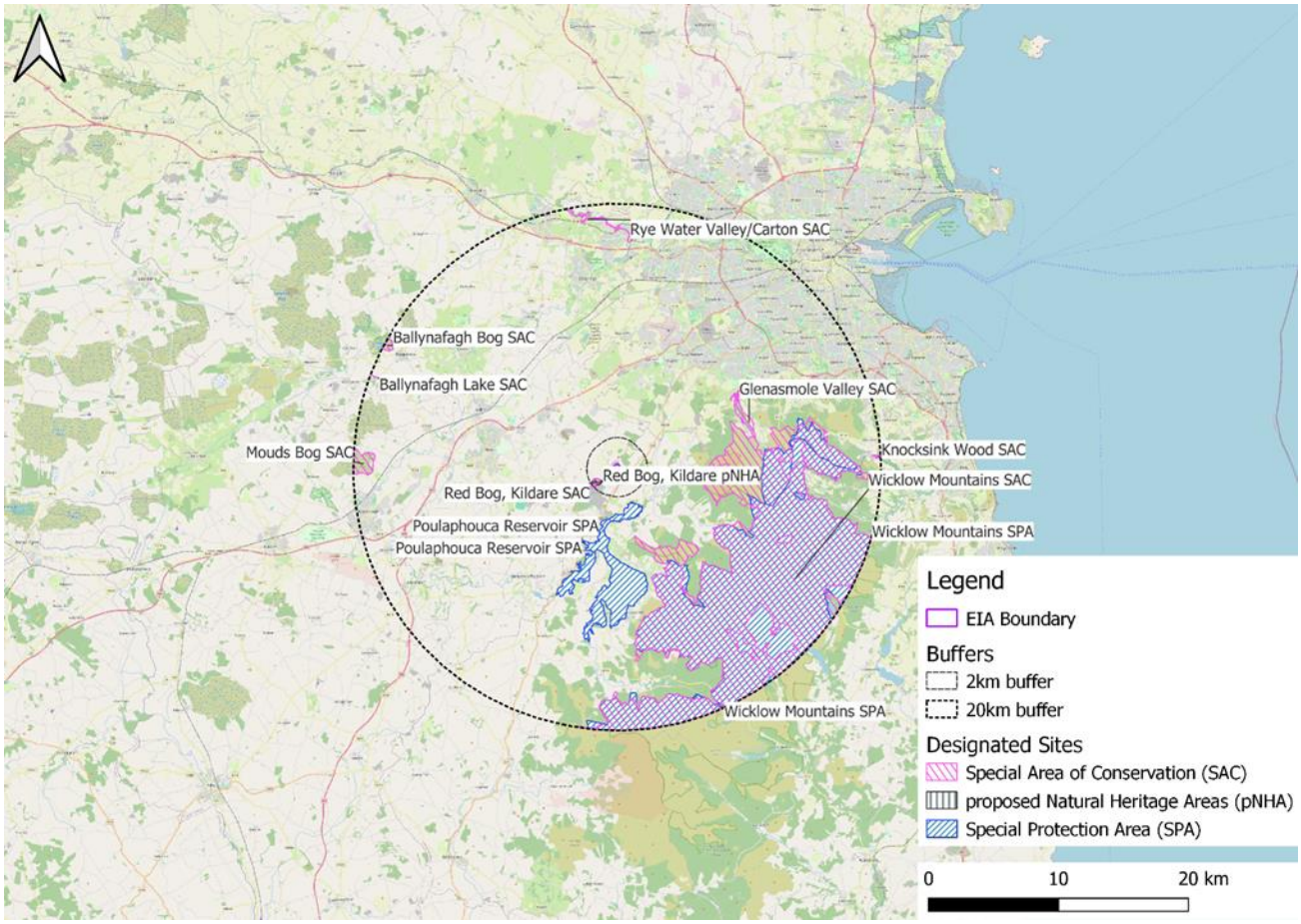


Figure 1-1 - Designations surrounding the site, including 2 and 20 km buffers.

There are 10 European sites of nature conservation importance located within the 20 km ecological zone of influence of the Application Site boundary. There are four non-statutory designated sites, in this case pNHAs, within 5 km of the Development. The nearest is Red Bog, Kildare pNHA which is 1.4 km southwest of the Site. There are no NHAs located within 5km of the Application Site, with the closest being Hodgestown Bog NHA, located approximately 21.8km northwest of the Application Site.

The Designated Sites are listed below:

- Red Bog, Kildare SAC (000397)
- Red Bog, Kildare pNHA (000397)
- Poulaphouca Reservoir SPA (004063)
- Poulaphouca Reservoir pNHA (000731)
- Kilteel Wood pNHA (1394)
- Slade Of Saggart and Crooksling Glen pNHA (000211)
- Wicklow Mountains SAC (002122)
- Wicklow Mountains SPA (004040)
- Glesamole Valley SAC (001209)
- Rye Water Valley/Carton SAC (001398)
- Mouds Bog SAC

- Ballynafagh Bog SAC
- Ballynafagh Lake SAC
- Knocksink Wood SAC

For internationally designated sites with an acknowledged impact source and ecological pathway to the Site a Natura Impact Statement accompanies this planning application, and includes citations for such designations, and details on their exact proximity to the proposed development footprint.

1.6 PROPOSED BIODIVERSITY FEATURES

The proposed biodiversity features to effectively restore the Site are habitat based and designed to enhance biodiversity. The restoration will be phased to maximise biodiversity value in the shortest time possible. Habitats will be managed in adherence to the biodiversity mitigation hierarchy, as follows:

- **Avoidance**: The first step of the mitigation hierarchy comprises measures taken to avoid creating impacts from the outset;
- **Minimisation**: Measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided;
- **Rehabilitation/restoration**: Measures taken to improve degraded or removed ecosystems following exposure to impacts that cannot be completely avoided or minimised; and
- **Offset**: Measures taken to compensate for any residual, adverse impacts after full implementation of the previous three steps of the mitigation hierarchy.

In real terms, the mitigation strategy is to enhance retained on-site habitats and create new habitats by:

- Creating native species-rich hedgerows in what are presently areas of species-poor hedgerow along the northeastern boundary of the application site;
- Creation and enhancement of woodland and scrub mosaic;
- The creation of areas of naturally recolonising bare ground ; and
- The creation of aquatic habitat for birds and riparian mammals.

1.7 MANAGEMENT FEATURES

Existing and Proposed Features

In line with the guidance provided in the Conservation Management System (CMS) guidelines (Alexander, 2005), the existing and proposed biodiversity features at the Site are consolidated into a list of Management Features:

'Management planning for nature conservation requires a focus. In theory, it might be possible to write a single, all-encompassing objective for an entire site. In practice, this would be an unwieldy statement, so complex that it is unlikely we would be able to recognise, or deal with, the detail.'

'The approach adopted is to identify a range of the most important features and use these as a focus for the entire plan (Alexander, 2005).'

The existing and proposed biodiversity features at the Site comprise the following (shown on the accompanying Restoration Plan Drawing, provided in Appendix A.1):

- Hedgerow – mostly existing hedgerows to be managed/enhanced,
- Woodland and Scrub Mosaic - Protection of existing and creation additional habitat;

- Naturally recolonising bare ground – Protection of existing habitat to be managed to promote natural recolonisation by flora species preset at the site; and
- Aquatic and Marginal Habitat to be created.

These comprise the four management features that are the focus of this HMP.

1.8 MANAGEMENT VISION

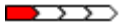
In line with the guidance provided in the Conservation Management System guidelines (Alexander, 2005) the following management vision has been produced by WSP. It provides a desired outcome for the habitat creation and enhancements set out in this HMP:

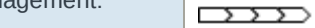
The diversity of habitats within the Site include connecting species-rich hedgerows, scrub, woodland and aquatic margins. Singing skylarks are abundant and barn owl hunt vole in the rank grassland margins. Smooth newt have colonised the aquatic marginal habitat and Irish hare traverse the Site.

1.8.1 SPECIFIC MANAGEMENT MEASURES

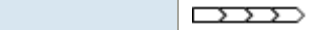
Table 1-1 presents the specific targets and measures for each Management Feature. Importantly, all habitat to be created will firstly be surveyed by the appointed ECoW to establish the latest baseline conditions. This will ensure that management prescriptions can be specifically tailored for biodiversity gain and that any existing features of biodiversity value can be protected.

Table 1-3 - Management Targets and Tasks - Action Plan

Management Feature	Location Drawing Ref. No.	Existing Baseline Conditions in 2024 Prior to the Implementation of Management Measures Existing baseline conditions in the area of proposed enhancement to be assessed and recorded. Dated observations inserted in this column by the appointed ECoW.	Management Target The end result against which progress will be regularly measured by the appointed ECoW.	Guiding Documents & Principals Technical references to guide the appointed ECoW in implementing the management targets.	Management Tasks	Task Timings Date(s) when habitat creation is required to commence to meet the objectives of the EIAR mitigation strategy, and date(s) when subsequent habitat management measures are required.	Progress in Delivering the Measurement Target and Annual Review of Success in Delivering Biodiversity Gain(s)   Not yet started (0%)  In progress (1-50%)  In progress (51-99%) Completed (100%) Review by the appointed ECoW.

Hedgerows	Restoration Drawing	Date: Existing Baseline Conditions: ……. Date: Existing Baseline Conditions: …….	See section 1.9 below. Targets to be agreed with Kildare County Council.	Countryside Stewardship BE3: Management of hedgerows.	The on-Site creation of native species-rich hedgerow is prescribed and committed as part of the EIAR. The scope of this task as defined will be delivered by the Applicant under the stewardship of the ECoW.	Hedgerow creation (bolstering): The be carried out between Nov– Mar (inclusive) 2037. Hedgerow management: Sept to Feb (inclusive), 2037, then every 2 years.	Progress Review Date: Progress in delivering the management target:  Progress Review Comments: ……. Annual Review of Success in Delivering Biodiversity Gain(s) compared to 2020 Baseline: ……..

Woodland and scrub mosaic	Restoration Drawing	Date: Existing Baseline Conditions: …….	See section 1.10 below. Targets to be agreed with Kildare County Council.	BS 8545:2014 Trees: From Nursery to Independence in the Landscape.	Creation of native woodland and scrub is prescribed and committed as part of the EIAR. The scope of this task will be delivered by the Applicant under the stewardship of the ECoW. Native tree and scrub species to be planted as detailed in Section 1.10 below.	Pre-creation survey: November 2037 to March 2028 (inclusive). Woodland and scrub creation: 2037 forward in accordance with phased restoration. Monitoring: Annual monitoring, starting in 2037, of the native woodland planting by the ECoW. Any plant failures through disease, weather exposure, neglect or damage to be replaced with equivalent species within one year of such failure.	Progress Review Date: Progress in delivering the management target:  Progress Review Comments: ……. Annual Review of Success in Delivering Biodiversity Gain(s) compared to 2020 Baseline: ……..

Recolonising Bare Ground	Restoration Drawing	Date: Existing Baseline Conditions: …….	See section 1.10 below. Targets to be agreed with Kildare County Council.	-	Details provided in section 1.11.	Throughout the year, starting in March 2037; ECoW to monitor for floral invasive species and to advise accordingly.	Progress Review Date: Progress in delivering the management target:  Progress Review Comments: ……. Annual Review of Success in Delivering Biodiversity Gain(s) compared to 2024 conditions applicable: ……..

Aquatic and marginal habitat.	Restoration Drawing	Date: Existing Baseline Conditions: …….	The aquatic and marginal habitat, are designed for biodiversity benefit where possible. The design allows for significant seasonal variation in water levels creating a shallow gradient draw down zone benefitting a diverse flora and fauna. Further details in section 1.12 below.	Farm Advisory Service TN688 Management and Conservation for Farmland Waders Natural England Technical Guidance Note TIN079. RSPB – Farming for Wildlife: Scrape creation for wildlife. RSPB – Farming and Crofting for Wildlife: Scrape creation for waders.	Aquatic and marginal establishment. Further details provided in section 1.12.	Aquatic and marginal establishment: 2037. Monitoring: Annual monitoring, starting in 2037, by the ECoW.	Progress Review Date: Progress in delivering the management target:  Progress Review Comments: ……. Annual Review of Success in Delivering Biodiversity Gain(s) compared to 2024 conditions Baseline: ……..

1.9 HEDGEROW BOLSTERING

The Restoration Plan drawing (Appendix A.1) illustrates the hedgerows that will enhanced as part of the HMP works.

All existing hedges illustrated in the restoration drawing as requiring enhancement will be enhanced as follows:

- Carry out work between 1 November and 31 March each year;
- Prepare the ground along a 0.75 m wide strip adjacent to the existing hedge on one side only to provide good soil conditions and as little competition from other vegetation as possible;
- Apply any herbicide to the 0.75 m strip in August or September prior to planting and respecting the existing hedge;
- Plants must be:
- 2-year-old transplants;
- At least 450 mm to 600 mm high;
- Native species, with no one species making up more than 70% of the total;
- Planted in a single row 30 cm apart with a minimum of 3 plants per linear metre; and
- Kept clear of weeds until they are established.
- Remove individual guards and tree shelters once the plants are established;
- Replace all failures in the following planting season;
- Trim the newly planted hedge in at least the first 2 years to encourage bushy growth, allowing the hedge to become taller and wider at each cut; and
- Prevent livestock and grazing animals from damaging the hedge by setting fencing at least 1.2 m from the centre of the hedge, or, if there is a bank, as close to the base of the bank as possible.

The appointed ECoW will oversee all advanced ground preparation and planting to ensure hedgerow establishment and minimise failure of whips.

1.9.1 HEDGEROW MANAGEMENT

The most effective way to manage existing hedgerows is by flail trimming. If used with care, this machine is considered to be the best way of trimming hedgerows as it is cost-effective and does an effective pruning job. Conservation best practice recommends the cutting of hedgerows only in alternate years. This is better for wildlife, and it reduces time and expense. Some species only flower on second year growth, so annual cutting reduces the flowering and subsequent berry crop.

1.10 WOODLAND AND SCRUB MOSAIC CREATION

In advance of woodland creation, the proposed creation footprint will be surveyed by the appointed ECoW. This will ensure that the woodland footprint does not impinge on any features of residual ecological value. Tree planting is proposed at locations to afford biodiversity enhancement and screening. Tree planting will occur in winter (November – February).

Any plant failures through disease, weather exposure, neglect or damage shall be replaced with equivalent species within one year of such failure, all to the satisfaction of the planning authority. The implementation of these protection measures will be monitored by the Environmental Manager. All tree planting will be implemented in accordance with BS 8545:2014 Trees: From Nursery to Independence in the Landscape.

The native tree species to be used will comprise:

- *Alnus glutinosa;*
- *Betula pendula;*
- *Betula pubescens;*
- *Corylus avellana;*
- *Crataegus monoygna;*
- *Ilex aquifolium;* and
- *Quercus robur.*

The establishment of woodland will be monitored by the appointed ECoW and updates to the management strategy will be provided as required.

A potential badger sett with 4 No. entrances and sandy bank containing sand martin burrows are present on the northwestern edge of the primary soakaway. As a precautionary approach, planting is not proposed within 10 m of these features on the basis Smal (2006) states '*Badger sett tunnel systems can extend up to c. 20m from sett entrances. Therefore, no heavy machinery should be used within 30m of badger setts (unless carried out under licence); lighter machinery (generally wheeled vehicles) should not be used within 20m of a sett entrance; light work, such as digging by hand or scrub clearance should not take place within 10m of sett entrances.*'

1.11 RECOLONISING BARE GROUND

This section of the plan is designed to all for natural regeneration of flora species onsite in order to promote local genetic plant stocks, and avoid negative impacts to genetic diversity in the local area by introduction of low genetic diversity seed mixes. If successful, and subject to pre-creation monitoring by the ECoW (April to September inclusive within the creation year), there will be:

- More flowering grass and wildflower species;
- Varied grass structure and height offering nectar and shelter for invertebrates; and
- Increased food supply for birds and shelter for small mammals.

Requirements:

- Lands will be fenced so as to avoid grazing.
- Tracking of vehicles or plant to be minimised in areas of recolonising bare ground, and avoided where possible.
- **Do not:**
  - Plough, cultivate or re-seed the recolonising bare ground.
  - Use pesticides, except for herbicides to spot-treat or weed-wipe to control nettles or docks.

The appointed ECoW will oversee any advanced ground preparation works or management to ensure the successful creation of this feature.

The appointed ECoW will assess the pre-existing ground conditions to ensure that any residual features of biodiversity interest are retained where possible.

1.12 AQUATIC AND MARGINAL HABITAT

Aquatic, semi-aquatic and ephemeral habitat features can provide important feeding areas for breeding wading birds such as lapwings and redshanks, and their chicks, which find invertebrate food in and around the wet muddy edges. Other farmland birds such as tree sparrows and yellow wagtails may also benefit from these insect-rich areas.

The Restoration Plan drawing (Appendix A.1) illustrates where aquatic habitat will be created and managed for biodiversity gain. The specific design of this wetland area will allow for maximal seasonal variation in water levels creating a shallow gradient draw down zone in the southern extent of the lake that will benefit a diverse flora and fauna. Aquatic habitat will extend naturally toward large expanses of recolonising bare ground (refer Restoration Plan drawing; Appendix A.1). This wetland habitat will be left to colonise naturally and will provide quality habitat for invertebrates and also wading and ground nesting birds. In addition, this area will provide key ecological connectivity at the Site and local level.

The design of this feature including the provision of wetland scrapes has been steered by good practice, documented by Farm Advisory Service (2017) in their Technical Note TN688 'Management and Conservation for Farmland Waders'

The aquatic marginal habitat will be planted, following wetland feature creation, with the following pre-established coir pallets to aid rapid establishment:

- Common reed;
- Branched bur-reed;
- Reed canary-grass;
- Greater and Lesser pond sedge;
- Reed sweet-grass;
- Meadowsweet; and
- Purple loosestrife.

The ECoW will monitor the establishment of this feature, including the presence of established marginal plants detailed above as part of the regular Site monitoring.

1.13 OTHER RESTORATION ISSUES

1.13.1 HEALTH AND SAFETY

The Applicant's Health and Safety policy applies to all sites. Required Health and Safety standards will be maintained by training and sign posting of safety information on site during restoration and landscaping activities. The site manager for the proposed facility will be responsible for safety management on site.

Following restoration, it is not proposed to allow public access to the site and the site boundary will be fenced off and warning signs indicating steep ground placed where appropriate. In addition, the ECoW will be tasked with monitoring restoration to ensure that non-native or invasive species are not colonising the site.

1.13.2 FENCING AND SECURING THE WATERBODY

A protective post & wire fence, 1.8 m high will be erected (complying with BS1722: Part 4 and erected in accordance with BS5837: 1991) around the Site perimeter. Rabbit proof netting shall be erected where required. New scrub and woodland planting will be protected from livestock grazing via suitable stock fencing.

The waterbody in the base of the pit will also be fenced for safety and security. The use of the waterbody at the quarry for recreation or bathing will be prevented as far as is reasonably practicable by restricting access and the placement of appropriate warning signs. The landowner will be responsible for ensuring the fencing is maintained and secure.

Other fencing may be required as appropriate to protect habitats during establishment.

1.13.3 ROOST CREATION - BAT, INVERTEBRATE AND BIRD BOXES

Commitments are provided as described which will increase the number of roosting opportunities for bats, invertebrates and birds on Site. Accordingly, Six bat boxes (the 2F Schwegler[1] generalist bat box, or similar) will be erected on suitable retained trees in the vicinity of the Site as indicated on the Restoration Drawing. The boxes will be placed at a height of between 3 – 6 m in sheltered sunny locations and will be placed with clear flight-lines to the box. Six invertebrate boxes[2] will also be placed in sheltered areas of the site as indicated on the Restoration Drawing. The restoration plan also provides for reptile refugia and basking habitat (see Appendix A.1).

In addition, six bird boxes (the 2GR Schwegler[3] nest box, or similar) will be erected on suitable retained trees in the vicinity of the Site as indicated on the Restoration Drawing. The boxes will be placed at least 2 m above the ground, in locations sheltered from prevailing wind, rain, and strong sunlight, ensuring birds have unobstructed access to the box. The measures detailed above will be signed off as complete by the ECoW and will form part of the reporting process (refer to section 1.14 below).

1.13.4 LIGHTING

No external lighting is proposed to be installed at the Site post-restoration. Any lighting used during the ongoing operation of the Site will be monitored by the ECoW to ensure that the lighting maintains suitable conditions around the Site for nocturnal and crepuscular species by using timers, cowls and hoods to maintain dark skies and avoid illuminating features such as the woodland and hedgerow habitat.

1.14 REPORTING

For each of the four management features there are requirements for monitoring by the ECoW, since it is only by regular monitoring that management can be appropriately reviewed and suggestions for improvements made. The ECoW will be responsible for determining any reporting requirements.

1.14.1 DEROGATION LICENCES

Although not envisaged, should any derogation licences for disturbing protected species be required, the need for these will be identified by, and sought by, the ECoW.

1.14.2 RECORD KEEPING

An up to date copy of the Restoration Plan including HMP will be maintained at the main Site office. Associated records will be held in the contractor's files.

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[1] https://www.arkwildlife.co.uk/products/schwegler-2f-bat-box?gclid=EAIaIQobChMIxpHo9vKL7QIVWbvVCh36lwT7EAAYASAAEgIDE_D_BwE
[2] https://www.arkwildlife.co.uk/products/mason-bee-eco-nest-box?_pos=7&_sid=e2b1bb071&_ss=r
[3] https://www.nhbs.com/2gr-schwegler-nest-box

1.14.3 STAFF TRAINING

Environmental training will be delivered and assessed throughout the project, to ensure the relevant aspects of the plan are communicated to the project team and front-line staff (including relevant sub-contractors). This will include:

- Site Environment Induction;
- Daily Pre-Start Meetings;
- Environmental Toolbox Talks;
- Incident and Near Miss bulletins; and
- Sub-contractors kick-off meetings.

1.14.4 LESSONS LEARNT

Procedures will be put in place to record and learn from the restoration works. Where relevant any learnings which improve efficiency, quality of the works or increased protection of the landscape will be incorporated into future phases of the operation and restoration.

1.14.5 HABITAT MANAGEMENT PLAN REVIEW & VERSION UPDATES

This Restoration and HMP will be reviewed and updated by the Biodiversity Champion (e.g. Environmental Manager) no less than every 12 months during the course of the operational and restoration phases. Details of the review dates and version updates are provided in Table 1-4.

Table 1-4 - Restoration and Habitat Management Plan Review and Version Updates.

Version	Review Date	Review Comments and Changes Made to HMP	Date of Next Review
HMP_1			

1.15 REFERENCES

Alexander, M. (2005) The CMS Guide to Management Planning. Talgarth: CMS Consortium.

A Guide to Habitats in Ireland. The Heritage Council, Dublin, Fossitt, J. A., 2000.

Fossitt, J. (2000) A Guide to Habitats in Ireland. Heritage Council.

Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Joint Nature Conservation Committee, revised reprint 2010

Smal (2006) Guidelines for the treatment of badgers prior to the construction of national road schemes.

Farm Advisory Service (2017) Technical Note TN688, Management and Conservation for Farmland Waders. Available at: www.fas.scot/downloads/tn688-management-conservation-farmland-waders/

Appendix A.1

RESTORATION PLAN

EXISTING HEDGEROW

BAT, INVERTEBRATE AND BIRD BOXES, REPTILE REFUGIA AND BASKING HABITAT

LIGHT STANDARD TREES

RECOLONISING BARE GROUND

BAT, INVERTEBRATE AND BIRD BOXES, REPTILE REFUGIA AND BASKING HABITAT

SECURE FENCING AROUND PERIMETER OF WATERBODY WITH PLANTING OF NEW NATIVE SPECIES HEDGEROW ON INTERIOR

EXISTING HEDGEROW

RECOLONISING BARE GROUND

WATERBODY

AQUATIC AND MARGINAL HABITAT

AQUATIC AND MARGINAL HABITAT

RECOLONISING BARE GROUND

SECURE FENCING AROUND PERIMETER OF WATERBODY WITH PLANTING OF NEW NATIVE SPECIES HEDGEROW ON INTERIOR

WETLAND SCRAPES

ACCESS TRACK

BAT, INVERTEBRATE AND BIRD BOXES, REPTILE REFUGIA AND BASKING HABITAT

SECURE FENCING AROUND SITE PERIMETER

WOODLAND AND SCRUB MOSAIC WITH SUITABLE STOCK FENCING FOR PROTECTION OF NEWLY PLANTED AREAS

GATED SITE ENTRANCE

LEGEND:

- LANDS UNDER CONTROL OF APPLICANT
- APPLICATION SITE BOUNDARY
- GROUND CONTOURS (mOD)
- CROSS SECTION (See Drawing 05)
- SOAKAWAY DRAINAGE ROUTE
- EXISTING SEPTIC TANK
- EXISTING WELL
- BOREHOLE
- VEGETATION

NOTES:

GRID REFERENCES ARE IN METRES & TO ITM COORDINATES.

LEVELS ARE IN METRES & TO O.S. DATUM.

DIMENSIONS ARE IN METRES.

OSI Licence No.: AR 0056020

OSI Reference Index:
Map Series | Map Sheets
1:2,500 | 3561-D
1:2,500 | 3561-B

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CLIENT
SHILLELAGH QUARRIES LTD.

CONSULTANT
wsp

YYYY-MM-DD	2025-Feb05
DESIGNED	POB
PREPARED	BVV
REVIEWED	RT
APPROVED	BB

PROJECT
SECTION 37L APPLICATION, SHILLELAGH QUARRY, HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE
RESTORATION PLAN

PROJECT NO. IE0037007.4788 | DRAWING NO. Appendix A.1 | REV. | SCALE Not to Scale

Appendix 2C

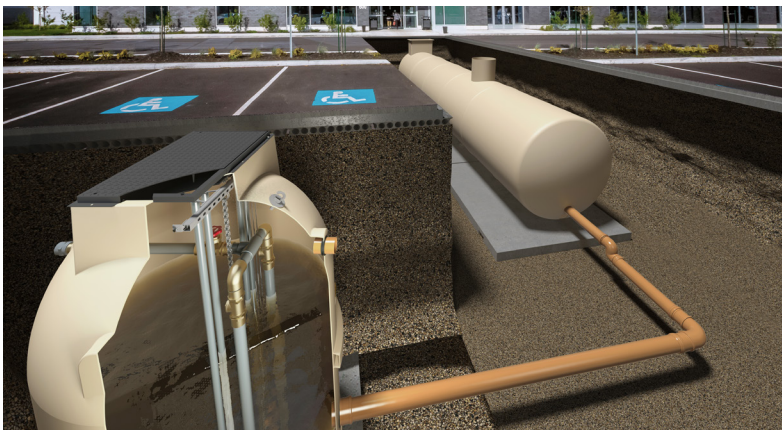
BYPASS SEPARATOR

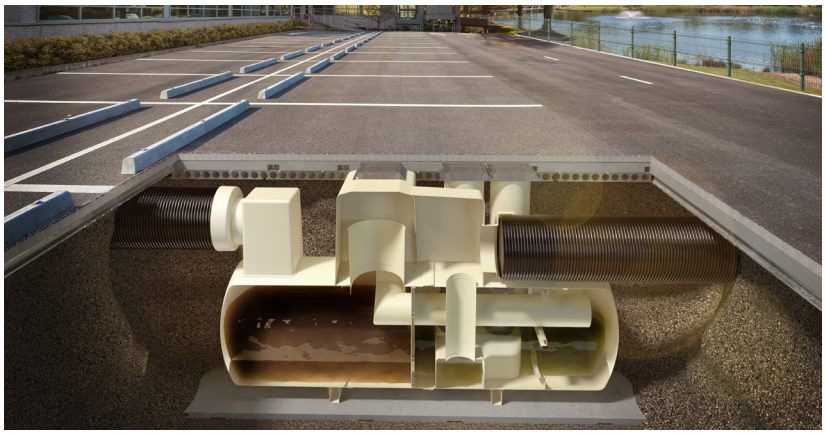
Water Management Solutions

Klargester

AquaCore® Sustainable Drainage Systems

Reliable and trusted surface water management solutions





kingspan.co.uk/klargester

Kingspan®

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:

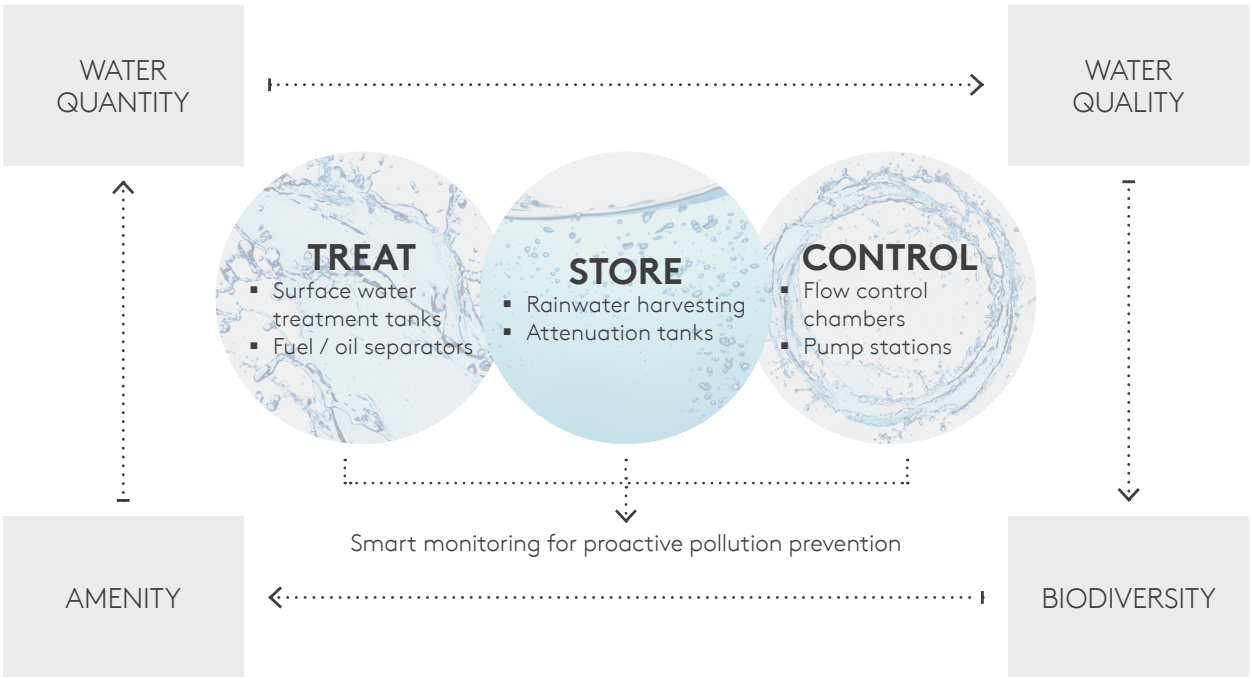
- Trusted solution from manufacturers with 65 years' industry experience
- UK factory fitted solutions which reduce on site time and cost
- Easy access for maintenance across all SuDS elements
- A fully managed solution including service and monitoring via Smart Serv Pro remote software (optional extra)

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 Klargester's Aqua**Core**® range is suitable for multiple applications, on and off-mains.

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

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

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

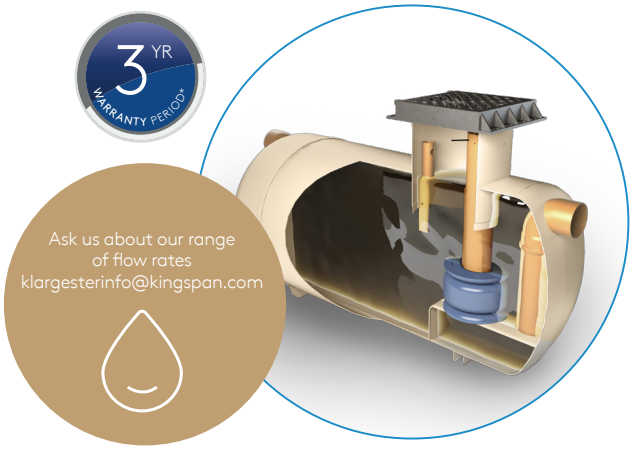
AquaFlow
SF Horizontal Flow Control and FC Vertical Flow Control solutions

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.



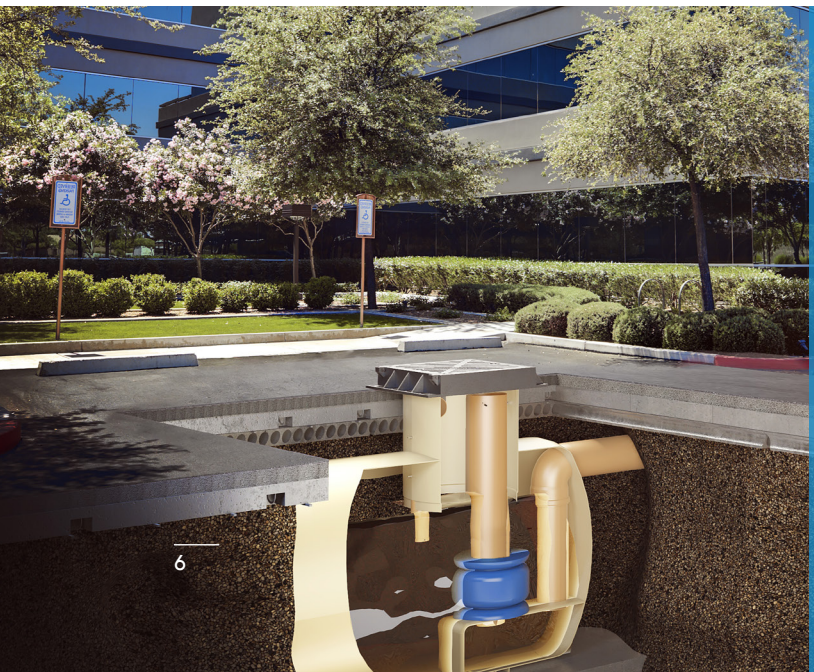
AquaTreat
Full Retention GRP Surface Water Treatment Separators range

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



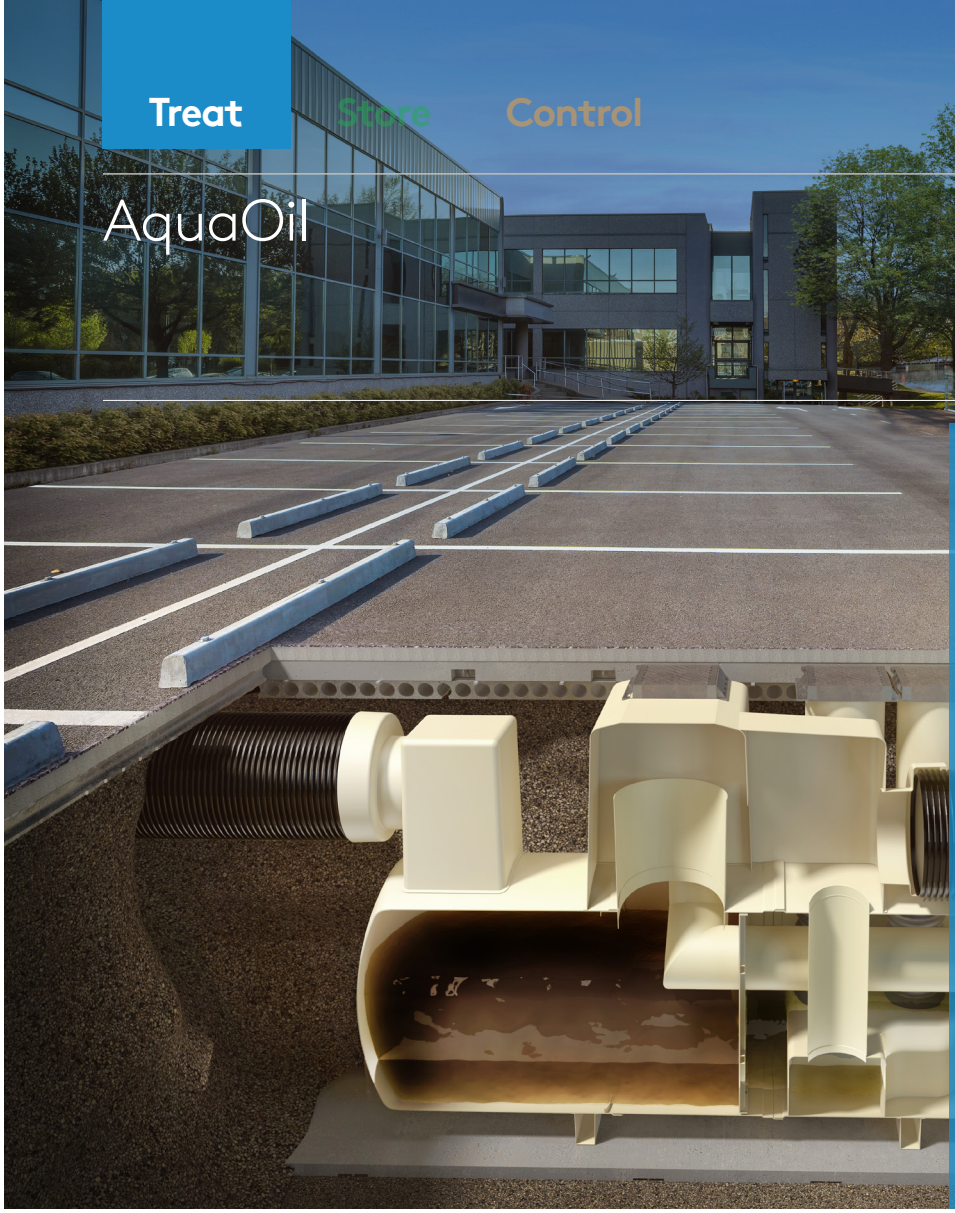
3 year warranty when registered online and must be serviced by a Kingspan engineer or accredited service partner. Other terms and conditions apply*

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*

3 YR WARRANTY PERIOD*

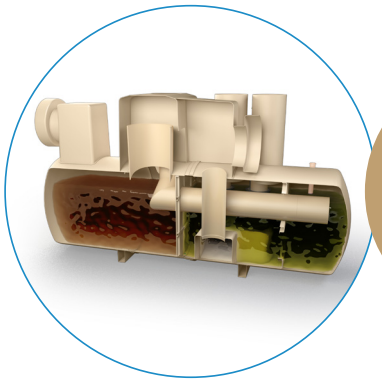
Scan the QR code to register your warranty

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.

3 YR WARRANTY PERIOD*

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

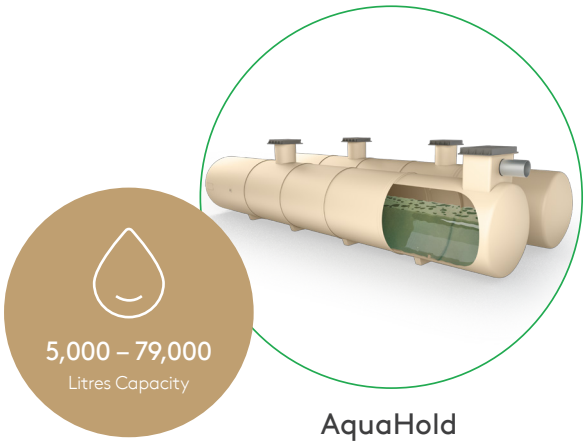
AquaHold

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.

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

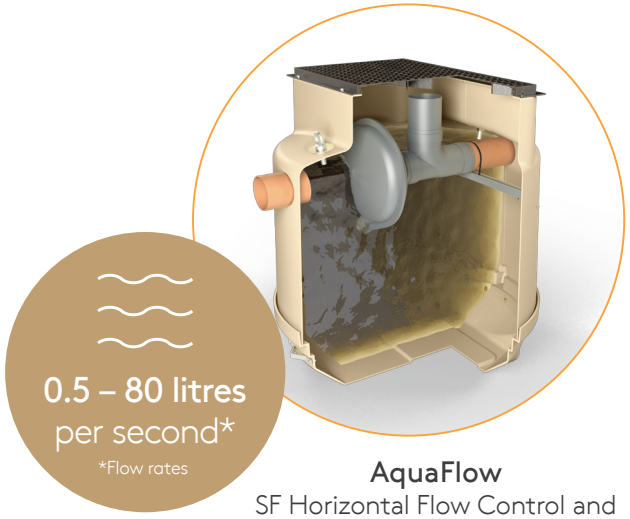
- Simple, robust solution
- Built from durable GRP material
- Suitable for small or large applications
- Easier to service
- Single or multiple tank installations available
- Full technical and servicing support available

*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 Klargester 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.



AquaFlow
SF Horizontal Flow Control and FC Vertical Flow Control solutions

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

*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*

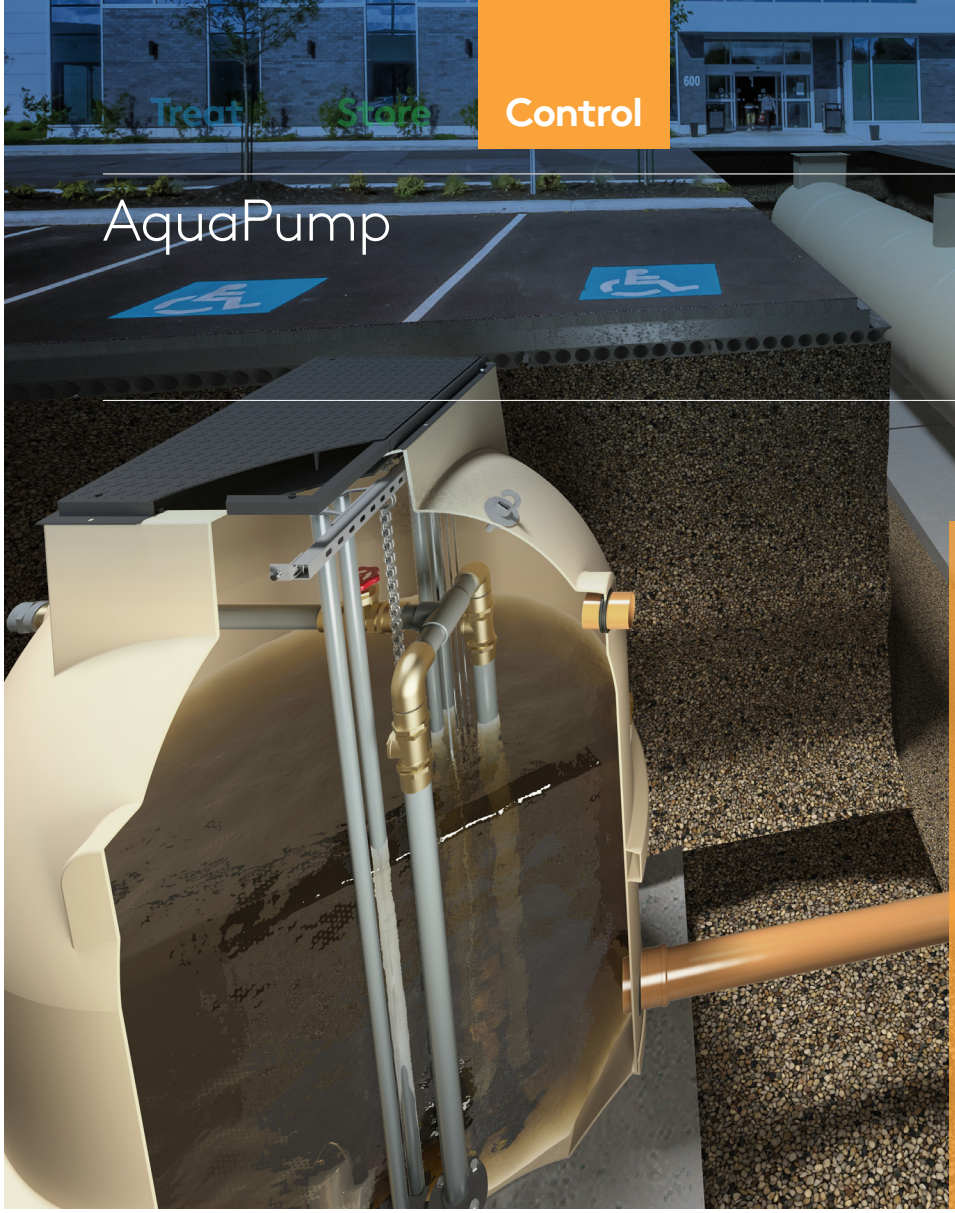
3 YR WARRANTY PERIOD*

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*

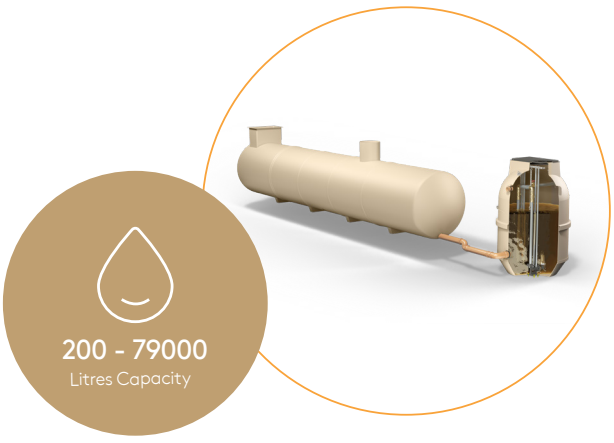
3 YR WARRANTY PERIOD*

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: klargester@kingspan.com

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