# ALTERNATIVES 3

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## INTRODUCTION



- 3.1 This Chapter of the Environmental Impact Assessment Report (EIAR) addresses the topic of Alternatives in relation to the proposed development at Halverstown, Kilcullen, Co. Kildare which provides for:
  - an increase in the permitted total intake of soil and stone and broken rock waste to the existing licensed recovery facility, from 1.2 million tonnes to 2.06 million tonnes. The additional intake to the facility will comprise a mix of soil and stone managed as waste (as heretofore) and as (non-waste) by-product;
  - (ii) an extension to the permitted life of the existing facility of 3 years (to December 2029) in order to accommodate the additional soil and stone intake;
  - (iii) continued shared use of existing, co-located site facilities, structures and infrastructure (including the site office, staff welfare facilities, weighbridge (with dedicated office), wheelwash, hardstand areas, fuel storage tanks and site access road);
  - (iv) continued soil and stone intake at a rate of up to 300,000 tonnes per annum, of which no more than 95,000 tonnes (per annum) will be managed as waste;
  - (v) continued separation of any construction and demolition waste (principally concrete, metal, timber, PVC pipework and plastic) inadvertently imported to the facility, prior to removal off-site to authorised waste disposal or recovery facilities;
  - (vi) continued use of a section of the existing concrete block curing shed as a waste inspection and quarantine facility;
  - (vii) continued environmental monitoring of noise, dust and groundwater for the duration of the site recovery and restoration activities and for a short period thereafter (and in accordance with current waste licence requirements);
  - (viii) continued temporary stockpiling of topsoil pending its re-use as cover material for final restoration of the site; and
  - (ix) ultimate restoration of the modified final landform (entailing harrowing, topsoiling and seeding) to establish a native woodland habitat on the northern side of the access road and grassland habitat on the southern side.
- 3.2 The proposed increase in the total quantity of soil intake
  - will not give rise to any increase in the rate of soil importation to the existing licenced recovery facility - the maximum intake rate will remain at 300,000 tonnes / year (in line with the current development permitted by Planning Ref. 18/453);
  - will not require any new or replacement site infrastructure, as all existing facilities (permitted by Planning Ref. 18/453) will remain in service.
- 3.3 As at the present time, the imported backfilling / recovery materials will continue to comprise uncontaminated (inert) naturally occurring soil, stone and/or broken rock generated by construction and development activity in the surrounding region. No peat, contaminated soils or non-hazardous waste materials will be accepted at the facility.
- 3.4 It is intended that the additional backfilling / recovery and long-term restoration works will be undertaken on a phased basis, with initial priority being given to completing the importation and placement of soil by-product over the area on the northern side of the site access road leading into the facility ('Area 1').
- 3.5 Intermittent importation and placement of soil waste will take place on the southern side of the road (at 'Area 2') as backfilling with by-product material progresses at Area 1. Backfilling activity across Area 2 area will progress in earnest using by-product and waste soils once the backfilling works have been completed at Area 1.



- 3.6 The proposed increase in the total quantity of excess soil to be imported, and the quantity / proportion of it imported as waste annually (up to 95,000 tonnes per annum) are such as to require the planning application to be accompanied by an EIAR and to require an application for review of the existing waste licence to be submitted to the Environmental Protection Agency (EPA).
- 3.7 Further detail in respect of the proposed development and the application site context is provided in Chapters 1 and 2 of this EIAR.
- 3.8 The following sections of this Chapter reprise and update the need to provide for additional soil backfilling / recovery capacity at Halverstown and possible alternatives thereto.

## Scope of Work / EIA Scoping

3.9 In relation to consideration of alternatives the DoHPLG (2018) Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment state:

"4.12 The Directive requires that information provided by the developer in an EIAR shall include a description of the reasonable alternatives studied by the developer. These are reasonable alternatives which are relevant to the project and its specific characteristics. The developer must include the main reasons for the option chosen taking into account the effects of the project on the environment.

4.13 Reasonable alternatives may relate to matters such as project design, technology, location, size and scale. The type of alternatives will depend on the nature of the project proposed and the characteristics of the receiving environment. For example, some projects may be site specific so consideration of alternatives may not be relevant."

## **Consultations / Consultees**

3.10 Although no consultations were undertaken specifically for the purposes of preparing this Chapter of the EIAR, it is informed by informal discussions held between Kilsaran, SLR and officials from Kildare County Council during an initial virtual (online) meeting held on 23 June 2023 and a further consultation meeting held on 15 January 2024 (Ref. No. PP5660) (following changes in waste policy framework and publication of draft by-product criteria for greenfield soil and stone in October 2023).

## **Contributors / Author(s)**

3.11 This Chapter of the EIAR was prepared by Derek Luby (BE MSc. DIC MIEI), a civil engineer and Technical Director with SLR Consulting Ireland. Derek is a technical, planning and environmental advisor on minerals and waste development. He has previously been responsible for the scoping, preparation and submission of numerous EIARs in respect of soil backfilling / recovery activity at former pits and quarries.

## **Difficulties Encountered**

3.12 No limitation or difficulties were encountered in the preparation of this Chapter of the EIAR.

## NEED FOR THE DEVELOPMENT

3.13 Backfilling and recovery activities commenced at the worked-out pit at Halverstown in 2016, initially under a Local Authority Waste Facility Permit 2016 (WFP Ref. No. WFP KE 16 0085 01), and subsequently, from late 2020, under an EPA Waste Licence (Ref. W0300-01).



- 3.14 Within a short time of re-starting backfilling and recovery activities under EPA licence in late 2020 and early 2021, it became apparent to Kilsaran that there was a sustained high level of demand for soil waste intake / recovery capacity from hauliers, contractors and developers. It is likely that much of this demand is tied to the level of construction and development activity locally and across the wider eastern region, as well as the facility's strategic location along the R448 Regional Road (the former N9 National Primary Road) and its proximity to, and ease of access from, Junctions 2 and 3 of the M9 Motorway between Kilcullen and Waterford and the wider national road network.
- 3.15 The level of demand for soil backfilling / recovery capacity has been such that the total soil intake to the existing facility at Halverstown has been at, or close to, the maximum permitted intake level (300,000 tonnes per annum) in each full year of operation to date. This level of demand has continued throughout the early part of 2024, though in an effort to ensure continuity of operation while this planning application to extend the life and capacity of the existing facility is determined, it is likely annual intake for the year and next (2025) will be managed lower to approximately 190,000 tonnes per annum.
- 3.16 It is considered that the need for the additional soil backfilling / recovery capacity to be provided by the proposed development at Halverstown is evidenced by the continued, sustained high level of demand for soil intake capacity since backfilling activities started under EPA licence in late 2020.

## Policy Background

3.17 The opportunity to import excess soil and stone to a soil recovery facility and achieve a beneficial outcome in the process, arises due to the volume of such excess natural geological materials being generated by the increase in the level of construction and development activity across the Eastern and Midland Region in recent years. The increased level of construction activity has generated sustained high demand for outlets which can accept excess soil and stone for beneficial use and/or for recovery purposes and thereby avoid having to dispose of it at engineered landfill facilities.

#### Waste Action Plan for Circular Economy

- 3.18 The Government's national waste policy for the period out to 2025 titled 'A Waste Action Plan for a Circular Economy'<sup>1</sup> was published in September 2020. Across all waste streams, including construction and demolition (C&D) waste, the policy document looks to
  - shift the focus away from waste disposal and treatment (at the lowest tier of the waste hierarchy);
  - promote waste avoidance and prevention (at the top of the waste hierarchy), particularly at earlier stages in the production cycle;
  - develop a circular economy where waste is re-purposed as a resource; and
  - ensure that excess or previously unwanted materials or products remain in productive use for longer.
- 3.19 The Waste Action Plan identifies a number of specific challenges around the management of C&D waste in the construction and development sector which need to be addressed and overcome in the years ahead including the need to:
  - Promote waste prevention in the first instance;
  - Follow best available techniques;
  - Expand the range and use of recycled products;
  - Create a market demand for recycled products.



<sup>&</sup>lt;sup>1</sup> A Waste Action Plan for a Circular Economy, Department of Environment, Climate and Communications, September 2020, Dublin

3.20 In Chapter 13, the policy addresses the delivery of indigenous waste management capacity and in discussing challenges around this topic states:

'The primary objective here is to support the development – for environmental and economic reasons – of the adequate and appropriate treatment capacity at indigenous facilities to ensure that the full circularity and resource potential of materials is captured in Ireland. Adequate in this sense refers to volume, while appropriate here relates to where a treatment process sits in the waste hierarchy. While the move away from disposar and increased use of recovery has helped Ireland in realising our EU targets, we need to drive on and move up the waste hierarchy with reducing reliance on recovery over the medium term.'

- 3.21 It is considered that the existing and proposed further development at Halverstown supports the attainment of the goals and objectives identified in the Waste Action Plan for a Circular Economy for the construction and development sector specifically, by
  - supporting prevention of waste by providing an outlet for excess soil and stone (and other material) which is classified as (non-waste) by-product; and
  - promoting better resource management and circularity whereby resources and materials are no longer discarded, but put to practical and beneficial use (at this development, this is achieved by using them to backfill and restore the former pit); and
  - meeting emerging market demand for increased capacity within the circular economy, as described above.

#### National Waste Management Plan for a Circular Economy

- 3.22 The Waste Management Act 1996 requires Local Authorities to make a waste management plan either individually or collectively for their functional areas. The Regional Waste Management Planning Offices, under the auspices of the County and City Management Association National Oversight Group, have recently co-ordinated the preparation of a new national waste plan, titled the *National Waste Management Plan for a Circular Economy*. This Plan sets out a framework for the prevention and management of waste in Ireland for the period 2024 to 2030 and supersedes the previous regional waste management plan, the Eastern Midland Regional Waste Management Plan 2015-2021.
- 3.23 The Circular Economy Act 2022 is supported by a wider circular policy base which establishes the framework for the national transition to a circular economy. The role of the waste and resource sector is central to this national transition and the National Waste Management Plan for a Circular Economy (the 'Plan') provides a framework to support this strategy.
- 3.24 The Plan was prepared on foot of a two-year engagement and collaboration with key stakeholders and interested parties. Responsibility for key deliverables, which will drive the success of the plan has been allocated to the Local Authority Sector, the Department of the Environment, Climate and Communications and the Environmental Protection Agency. The draft plan was published in May 2023 and was open for public consultation for 2 months ending 3<sup>rd</sup> July 2023. The National Waste Management Plan was published on 4<sup>th</sup> March 2024 and came into effect immediately.
- 3.25 Within the Plan, there are a number of 'Material Stream Focus Areas'. Focus Area 8 looks at Construction and Demolition Waste and identifies prescribed policies and priority actions. These policies and actions presented include measures to mitigate consumption, improve circular systems and to promote better regulation. The stated aim of these policies set out is "*To support national decisions for C&D waste and promote EPA Best Practice Guidelines for Construction & Demolition Projects*".



3.26 Some of the policies set out in the plan of particular relevance for this application are:

**Targeted Policy 8.1** - Prioritise waste prevention and circularity in the construction and demolition sector to reduce the resources that need to be captured as waste.

**Targeted Policy 8.3** - "Incorporation of the EPA Best Practice Guidelines for the preparation of Resource and Waste Management Plans for Construction and Demolition Projects and NWPS Soil and Spoil Action Plans and monitoring by Local Authorities of the application of these requirements."

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

**Targeted Policy 14.3** – "Monitor Soil Recovery Facility capacity in the market to ensure adequate and appropriate authorisations are in place, in each region, to satisfy the need for soil recovery capacity."

- 3.27 It is considered that the existing and proposed further development at Halverstown supports the attainment of the goals and objectives identified in the *Waste Action Plan for a Circular Economy* and the *National Waste Management Plan for a Circular Economy 2024 2030* in respect of the construction and development sector specifically, by
  - supporting prevention of waste by providing an outlet for excess soil and stone (and other material) which is classified as (non-waste) by-product; and
  - promoting better resource management and circularity whereby resources and materials are no longer discarded, but put to practical and beneficial use (at this development, this is achieved by using them to backfill and restore the former pit); and
  - meeting emerging market demand for increased capacity within the circular economy, as described above.

#### National By-product Criteria

- 3.28 The EPA published draft national by-product criteria in respect of soil and stone from greenfield sites<sup>2</sup> in October 2023 and it is expected that a final decision will be published in June 2024. This decision establishes a legal framework whereby excess soil and stone from greenfield development sites can be more readily managed outside of the waste management regime by being classified as (non-waste) by-product. The roll-out, adoption and application of these by-product criteria by stakeholders in the construction and development sector will
  - significantly reduce the volume of material which is generated and managed as waste across the country;
  - ensure that these materials can be more readily re-used for productive purposes (as they will not be tainted or labelled as 'waste' and will be free of the regulatory burden which would otherwise arise were they managed as waste);
  - promote the most favourable option or outcome in the waste hierarchy (i.e. prevention of waste); and
  - promote circularity and the development of the circular economy, in line with public policy which aims to ensure that resources and materials are no longer discarded but put to best practical and beneficial use.



<sup>&</sup>lt;sup>2</sup> EPA Draft National By-Product Criteria : Reference Number: BP-N002/2023 of the  $03^{rd}$  of October 2023 establishing detailed criteria on the application of the conditions of Regulation 27(1)(a) – (d) when making the decision that greenfield soil and stone can be regarded as a by-product under Regulation 27 of the European Union (Waste Directive) Regulations 2011 – 2020.

3.29 As a result of this policy development / innovation, the proposed additional soil backfill capacity to be provided at Halverstown will comprise a mix of waste intake (as heretofore) and by-product intake.

## Available / Future Soil Intake Capacity

- 3.30 The Waste Action Plan for a Circular Economy references (in Chapter 11) the major construction projects envisaged under Project Ireland 2040, the huge potential the provide in terms of the prevention and recycling of construction and demolition waste and the challenge in ensuring there is capacity to manage the waste generated. The policy document specifically states that *'it is vital that there is sufficient capacity for the recovery and/or disposal of the envisaged increased construction and demolition waste'*.
- 3.31 Aside from any projected future increase in demand from construction activity, there are a number of other factors which could lead to a potential further increase in demand for soil waste recovery capacity across the Eastern and Midland region in future years. These include:
  - a reduction in demand for soil cover at municipal / industrial landfill facilities;
  - an increase in enforcement activity around unauthorised waste disposal activity;
  - effective cessation of soil waste intake at another licenced facility (in Kildare) in recent years which has reduced the intake capacity available to the local market by 344,000 tonnes per annum;
  - the reduction in soil waste intake capacity provided at the licensed recovery facility at Huntstown in North Dublin (Licence Ref. W277-03), from 1,500,000 tonnes per annum to 750,000 tonnes per annum (assuming a waste licence review application currently under consideration by the EPA is ultimately approved);
  - the reduction in waste recovery capacity at existing permitted and registered waste facilities as a result of enhanced regulation and the stated policy objective in regional waste management plans to preferentially support the development of larger capacity waste facilities rather than a myriad of smaller ones.
- 3.32 In light of the foregoing, it is considered that the proposal to provide additional soil intake capacity at the existing facility at Halverstown can be justified on the basis that:
  - it complies with stated policy objectives to support the development of a circular economy;
  - the facility will provide additional soil backfilling / recovery capacity within the Eastern Midland region over the short-to-medium term (for the next 3 to 5 years); and
  - Kilsaran has a proven track record over recent years in providing significant soil recovery capacity at large scale, well managed backfilling / recovery facilities at strategically located sites.

## **CONSIDERATION OF ALTERNATIVES**

3.33 The provision of additional soil intake / backfilling / recovery capacity at Halverstown offers clear environmental and economic advantages relative to other locations and/or greenfield sites. The environmental impacts associated with the provision of almost 3 years additional recovery capacity (at a maximum permitted intake rate of 300,000 tonnes per annum) are essentially established and extant at the current time, are subject to oversight and enforcement by the EPA and would not be expected to change significantly in nature or magnitude.



- 3.34 The principal change arising from the proposed development is that established impacts (such as they are) will continue for a further 3-year period, as additional soil intake is imported for backfilling and placement at the facility.
- 3.35 The additional capacity provided by the proposed development at Halverstown is readily achieved by.
  - increasing the overall height of filling by 1m on the western side of the access road and steepening side slopes to 1v:6h;
  - creating a 3m high, 20m wide screening berm along the northern side of the access road and steepening side slopes to the site boundary to 1v:4v (which will provide screening and noise attenuation of traffic movements along the access road to the concrete block plant); and
  - allowing for the fact that the density of imported soil placed in-situ is approximately 20% greater than was assumed at the time the planning application was submitted (site records indicate the soil density achieved in-situ is 1.8t/m<sup>3</sup> as against 1.5t/m<sup>3</sup> which was initially assumed at the outset).

### **Development at Greenfield Site**

- 3.36 The provision of an additional 300,000 tonnes of soil waste intake capacity per annum at the existing Halverstown facility offers clear environmental and economic advantages in the short-to-medium term relative to any alternative which would provide a comparable level of intake capacity at a greenfield site location elsewhere across the Eastern Midlands region (e.g., within an existing natural depression, or benched into an existing natural slope).
- 3.37 The restoration of the former pit through the development and operation of a soil waste recovery facility and backfilling using imported soil and stone waste, is already permitted under a pre-existing planning permission (Planning Ref. 18/453) as it is recognised to be a logical, progressive evolution from past extractive activities and is also compatible with previously permitted extractive development.
- 3.38 As was the case with preceding extractive development, backfilling and recovery activities at the worked-out essentially comprise handling, placement and transport of naturally occurring geological materials.
- 3.39 Although they may differ slightly, the potential environmental impacts associated with backfilling and recovery activities are essentially similar in nature to those associated with prior extractive activity (specifically in respect of potential dust and noise emissions, potential impacts on surface water and groundwater, and traffic related impacts). Likewise, the mitigation measures and environmental controls which will be used to reduce and eliminate these impacts are broadly similar to the best practice measures used in the extractive sector.
- 3.40 The development of a new soil backfilling / recovery facility at an alternative greenfield site is unlikely to offer any potential for a long-term beneficial outcome comparable to that associated with the provision of additional intake capacity at Halverstown. On completion, the pit will be backfilled and restored to native woodland and grassland habitat, with the original pre-development landform effectively reinstated, albeit with the addition of a berm along the northern side of the site access road to provide visual screening and noise attenuation of traffic movements to the existing concrete block plant.
- 3.41 Development of a new facility at a greenfield site with an annual soil intake capacity of the magnitude provided for with this application (i.e. 300,000 tonnes per annum) would necessitate significant site development works and associated cost. Given the compatibility with past and ongoing activities and the fact that the necessary site



infrastructure is already in place at Halverstown, this means that the continuation of soil backfilling and recovery activities for an additional 3-year period will

- extend the life of the existing development / infrastructure;
- minimise waste:
- conserve resources; and
- reduce establishment costs.
- NED. 28103 ROS 3.42 As such, the provision of additional intake / recovery capacity at Halverstown will be more in keeping with the principles of sustainable development and related public policy objectives in respect of the circular economy than any alternative development (or provision of alternative backfill and recovery capacity) at a greenfield site.
- 3.43 It is considered that continued backfilling and soil recovery activities at Halverstown is, subject to continued implementation of best environmental management practices and compliance with established planning and waste licensing controls, more appropriate, more sustainable, less likely to generate significant environmental impacts and less likely to give rise to nuisance complaints than would otherwise be the case were a new or replacement facility located at any alternative 'greenfield' (i.e. previously undeveloped) site location.

### **Development at Alternative Pit or Quarry Location**

- 3.44 In the overall planning context, given the long-term beneficial impact in restoring a previously disturbed landform to its original around profile, and the reduced short-tomedium term impacts over its operational life, the development and operation of a soil recovery facility at another worked-out pit or quarry would be clearly preferable to development at an alternative 'greenfield' site.
- 3.45 As previously noted, the application site / existing facility at Halverstown is well served by the existing road access, is strategically located close to the national road network and has an established history of comparable traffic generation / local road use associated with historic and ongoing activities. This may not necessarily be the case at any alternative worked out pit or quarry.
- 3.46 The provision of additional soil intake / backfilling / recovery capacity at Halverstown and the continued use of existing site infrastructure, maximises its operational life / utility and minimises the requirement for significant additional investment and/or site establishment costs which might otherwise be incurred in providing comparable capacity at another extractive site. The continued use of existing infrastructure helps to conserve natural resources and avoid (or at least defer) its potential obsolescence.
- 3.47 Kilsaran does not have any other sites located within County Kildare which are currently exhausted of reserves and suitable for soil backfilling / recovery activities or as optimally located as the existing facility at Halverstown.
- 3.48 Having regard to the criteria and policy objectives set out in the EMRWMP, particularly around the suitability of former extractive sites for development of soil / C&D waste recovery facilities, it is considered that there are unlikely to be many other strategically located inactive sites available for such development in this part of the Eastern Midlands region.

## **Alternative Designs / Layouts**

3.49 Alternative designs, including alternative layouts within the site were considered, with particular attention being paid to the phased infilling of the development. The design and slightly modified phasing that was chosen is considered to best minimise the potential impacts on the environment and at surrounding sensitive receptors from noise, dust, visual and landscape impacts.



## **Consideration of Sensitive Receptors**

3.50 It is proposed that soil importation and backfilling in the immediate future will be focussed along the northern side of the main access road leading into the facility. This will ensure that the north-eastern area is available for restoration (harrowing, topsoiling, seeding and planting) at the earliest opportunity and can consequently, provide earlier visual screening and noise attenuation of traffic movements (in and out of the soil recovery facility and concrete block plant) for surrounding residential receptors, principally those located to the north of the facility.

### **Ecological, Landscape and Visual Consideration**

- 3.51 The application site area is bounded by extensive mature hedgerow and tree vegetation. The vegetation at the site boundaries is bring retained. Measures outlined in British Standard *BS 5837 (2012) Trees in Relation to Design, Demolition and Construction -Recommendations* have been / will continue to be implemented to protect this vegetation, whilst any further operations required to clear vegetation or strip and store topsoil are undertaken.
- 3.52 Further planting has been undertaken to enhance existing boundary hedgerows, in particular along the eastern boundaries of the site, adjacent to the R448 Regional Road and also along the northern and south-western boundaries of the site. These mitigation measures will form part of the permanent landscape and are illustrated in the landscape and restoration plan.
- 3.53 At the end of the backfilling and recovery activities, the application site will be restored to native woodland and grassland which is in keeping with the surrounding rolling farmland.

## **DO NOTHING ALTERNATIVE**

- 3.54 If the proposed additional intake / backfilling / recovery capacity at Halverstown is not approved, it would not be possible to complete the approved backfilling of the worked-out pit or the restoration of the site to the approved landform and former ground levels (in view of the in-situ density of soil placed at the site being 20% higher than initially assumed at the time the previous planning application was submitted).
- 3.55 The opportunity would also be lost to optimise intake / backfilling / recovery capacity at the existing facility. As such, it would then be necessary to provide it at alternative sites and locations, which may be potentially less strategically or conveniently located, may generate more significant environmental impacts and incur greater set-up or establishment costs.
- 3.56 The opportunity would also be lost to provide visual screening and noise attenuation of traffic movements (in and out of the recovery facility and concrete block plant) for surrounding residential receptors, principally those located to the north of the facility.

