

Report to Inform an Appropriate Assessment

Cleator Mills

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1. Introduction

1.1 Background

- 1.1.1 This report provides information to enable the Competent Authority (Copeland Borough Council) to undertake an Appropriate Assessment (AA) under the Conservation of Species and Habitats Regulations (2017) as amended (the Habitats Regulations) of the implications of the Proposed Scheme (Cleator Mills) for the National Site Network.
- 1.1.2 The National Site Network comprises a network of protected areas that include Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites. These cover the UK's most valuable and threatened species and habitats. Prior to the UK's departure from the EU, the National Site Network was referred to as Natura 2000. Protected areas within the National Site Network will hereafter be referred to as 'European Sites' to remain in-line with the legislation.
- 1.1.3 A Habitats Regulations Assessment (HRA) report was produced by Naturally Wild Consultants Ltd in 2023 (document reference MEP-22-01), following comments from Natural England (NE) and the acquisition of Naturally Wild by Ecus Ltd. this amended document is provided to address NE comments.
- 1.1.4 Details of the assessment process are provided in Section 2; however, the process is commonly referred to as HRA.

1.2 Structure of Document

- 1.2.1 This report is structured as follows:
 - Section 1 (this section): introduction and overview of the Proposed Scheme and why a Report to Inform an Appropriate Assessment is required.
 - Section 2: Methodology. This section of the report sets out the methods followed to assess effects of the Proposed Scheme on European Sites. It includes a summary of consultation with Natural England relating to European Sites.
 - Section 3: European Sites. This section describes the European Sites which have the potential for interaction with the Proposed Scheme and any Conservation Objectives, Supplementary Advice and Site Improvement Plans which may be available and relevant.
 - Section 4: Findings of Stage 1 - Screening. This section of the Report presents the findings of the HRA screening. Any likely significant effects (LSE) predicted to occur to SAC, SPA and Ramsar sites within the National Site Network are reported. Mitigation measures designed solely to avoid, reduce, or ameliorate LSE are not considered at the HRA screening stage, following the People Over Wind ruling (People over Wind and Peter Sweetman v Coillte, 2018).
 - Section 5: Information to inform an appropriate assessment. This section of the HRA report includes a detailed assessment of LSE identified at the HRA screening stage. The potential for adverse effects on the integrity of one or more designated sites within the National Site Network is determined. Where mitigation measures may avoid or reduce identified effects, these are considered at this stage. The potential for adverse effects on integrity is considered both for the Proposed Scheme alone and for the Proposed Scheme in-combination with other plans and projects.
 - Section 6: A conclusion and statement of the findings of this assessment.

1.3 Proposals

1.3.1 The development proposals (Proposed Scheme) at Cleator Mills, Cleator, Cumbria, CA23 3DT (National Grid Reference (NGR) NY 01976 13670) comprise:

- Demolition phase
 - Removal of existing unsafe structures
 - Removal of potentially contaminated surface dressing
 - Identification and removal of potential hydrological pathways linking the Mill site to the adjacent River Ehen.
 - Import of non-calcareous inert surface dressing in preparation for construction.
- Construction phase
 - Construction of a new warehouse unit with ancillary offices and 24 new parking spaces (Planning Reference 4/22/2364/0F1)
 - Construction of a commercial unit with 9 new parking spaces (Planning Reference 4/23/2010/0F1)
 - As part of the above works, to install a modern infiltration drainage system to control run-off from the Mill site.
- Operational phase
 - Occupation of the site by a national plant hire company, including ongoing maintenance of drainage systems.

1.3.2 A revised series of planning drawings have been included in Appendix 1. These drawings show:

- 1701C-EX-001(A) Location Plan - Site Ownership Boundary
- 1701C-EX-002(-) Works Boundary Plan - Demolition Phase
- 1701C-EX-003(-) Works Boundary Plan - Construction Phase
- 1701C-EX-004(-) Works Boundary Plan - Operational Phase

1.4 Habitats Regulations Assessment

Legislative Drivers

- 1.4.1 'Competent Authorities' must assess plans and projects for their potential to cause Likely Significant Effects (LSE) on the National Site Network. Should Likely Significant Effects (LSE) be identified by the initial screening process it is necessary to further consider the effects by way of an 'appropriate assessment (AA)'. Where the plan or project may lead to LSE it must be subject to an AA to determine whether there will be adverse effects to any such sites. Any plan or project that would lead to adverse effects on the integrity of these site(s) cannot be permitted without meeting strict additional tests.
- 1.4.2 Overall, this process of assessment is known as Habitats Regulations Assessment and further details of the applicable legislative context are summarised below.
- 1.4.3 Following the UK's exit from the European Union (EU), The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 has resulted in amendments to the Habitats Regulations.

Defra guidance (2021) states that Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK no longer form part of the EU's Natura 2000 ecological network. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 have created a National Site Network on land and at sea, including both the inshore and offshore marine areas in the UK. The National Site Network includes:

- Existing SACs and SPAs; and
- New SACs and SPAs designated under these Regulations.

1.4.4 Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new National Site Network.

1.4.5 Maintaining a coherent network of protected sites with overarching conservation objectives is still required to:

- Fulfil the commitment made by government to maintain environmental protections; and
- Continue to meet our international legal obligations, such as the Oslo and Paris Conventions (OSPAR), Bern, Bonn and Ramsar Conventions.

1.4.6 It is also a matter of government policy that Ramsar sites and potential SACs and SPAs are given the same protection as other European Sites, as described in para 181 of the National Planning Policy Framework. In that context, Ramsar sites have also been considered in this report.

HRA Policy and Guidance

1.4.7 The following policy and guidance relevant to the HRA process has been considered while producing this assessment:

- European Commission (2000). Communication from the Commission on the Precautionary Principle.
- European Commission (2018). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- Joint Nature Conservation Committee (JNCC) (2016). SAC and SPA Standard Data Forms and Ramsar Information Sheets. Available online: <http://www.jncc.gov.uk/>. Accessed [27/01/2022].
- Tyldesley, D. and Chapman, C. (2013) The Habitats Regulations Assessment Handbook (July 2020 Edition) UK DTA Publications Ltd.
- Department for Housing, Communities and Local Government (DHCLG) (2023). National Planning Policy Framework.
- Planning Inspectorate (2017) Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects.

Stages of Habitats Regulations Assessment

1.4.8 Guidance on the Habitats Regulations (UK Government 2023¹) sets out the step wise approach which should be followed to enable Competent Authorities to discharge their duties under the Habitats Regulations. The process used is usually summarised in three distinct stages of

¹ <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>. Accessed 26/01/2024

assessment:

- Stage 1: Screening: the process which identifies whether effects upon a European Site(s) of a plan or project are possible, either alone or in combination with other plans or projects, and considers whether these effects are likely to be significant;
- Stage 2: Appropriate Assessment: the detailed consideration of the effect on the integrity of European Sites of the plan or project, either alone or in combination with other plans or projects, with respect to the site's conservation objectives and its structure and function;
- Stage 3: Derogation – comprising:
 - Assessment of alternative solutions: the process which examines alternative ways of achieving the objectives of the plan or project that avoid adverse effects on the integrity of the European Site(s); and
 - Assessment where no alternative solutions exist and where adverse effects remain: an assessment of whether the development is necessary for Imperative Reasons of Overriding Public Interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the National Site Network.

2. Methodology

2.1 Overview of Section 2

- 2.1.1 This section of the report sets out the methodology followed to identify potential LSE on European Sites. It also sets out the methodology followed to assess whether identified LSE, could lead to adverse effects on the integrity of European Sites.
- 2.1.2 The approach to each of these steps is set out below.

2.2 Methodology for Screening Likely Significant Effects

Step 1: Can the Project be exempted from assessment

- 2.2.1 Any project that is directly connected with or necessary for the management of any European Site(s) does not require assessment under the HRA process. This is straightforward to assess, as it is simple to identify whether a plan or project is proposed for reasons related to the management of European Sites, or for other reasons.

Step 2: Describe the plan or project and any other plans or projects which, in combination, could result in significant effects on the European Site

- 2.2.2 During this step, the characteristics of the Proposed Scheme that could lead to biophysical changes to European Sites are described. Any other plans or projects with potential to contribute to in-combination effects are also described. Further detail on the in-combination assessment is provided below.

Step 3: Identify the potential effects on the European Site

- 2.2.3 During this step, the biophysical changes arising from the Proposed Scheme are examined, to identify how they could lead to change to European Site qualifying features. This impact pathway approach is useful in clearly linking the impacts of the Proposed Scheme to potential effects upon European Sites. Several sources of information will be considered when completing this assessment:
- Information on the European Site(s) being assessed, including citation information on the qualifying interests;
 - The description of the Proposed Scheme including Primary Mitigation (i.e. measures that are integral to the design of the Proposed Scheme) relevant to avoiding or reducing impacts on any European Site(s);
 - The spatial extent over which the identified biophysical changes from the Proposed Scheme would occur (hereafter referred to as the 'Zone of Influence' (Zol));
 - The locations where the boundary of European Sites overlaps with the Zol of the Proposed Scheme;
 - The locations of any land outside the boundary of European Sites but within the Zol of the Proposed Scheme, that could support the qualifying interests (habitats and species) of any European Site(s); and
 - Technical assessments presented in the Environmental Statement for the Proposed Scheme.
- 2.2.4 In accordance with the People over Wind Judgment targeted measures to mitigate effects on

European Sites will not be considered at the HRA screening stage. The People Over Wind ruling states that:

“...in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.”

2.2.5 UK government guidance to Competent Authorities carrying out HRA (Department for Environment, Food & Rural Affairs (DEFRA), Natural England, Welsh Government, and Natural Resources Wales, 2021) further confirms this requirement. In relation to HRA screening, this guidance states that:

“At this stage, you should not consider any mitigation measures included by the proposer for the purpose of avoiding or minimising risk to a European site. These mitigation measures need to be considered at the appropriate assessment stage.”

Step 4: Assess the significance of any effects on European Sites

2.2.6 Potential LSEs will be assessed in relation to two main criteria:

- Information on the qualifying interests of European Sites within the Zol of the Proposed Scheme and their sensitivity to the identified impact pathways;
- The conservation objectives for each qualifying interest, which if compromised would result in LSE to the qualifying interest(s).

2.2.7 Conservation objectives for European Site qualifying interests broadly comprise the following:

- Maintain or restore the extent and distribution of qualifying habitats and habitats of qualifying species;
- Maintain or restore the structure and function (including typical species) of qualifying natural habitats;
- Maintain or restore the structure and function of the habitats of qualifying species;
- Maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;
- Maintain or restore the populations of qualifying species; and
- Maintain or restore the distribution of qualifying species within the site.

2.2.8 For the purposes of this assessment, Steps 3 and 4 are reported together in Section 4.4 of this report.

Assessing Effects in-combination with other plans and projects

2.2.9 During screening, potential LSE on European Sites need to be considered both ‘alone’ and ‘in-combination’. Where LSEs may arise from the Proposed Scheme alone, assessment of in-combination effects can be completed at the appropriate assessment stage. No in-combination assessment is required at the screening stage under this circumstance.

2.2.10 If an effect is identified that is not predicted to lead to LSE on any European Sites alone, it is necessary to undertake an in-combination assessment at the screening stage. This considers

whether the non-significant effect from the Proposed Scheme may, in-combination with effects from other plans or projects, result in LSE on the European Site(s) concerned.

- 2.2.11 The way in which effects from the Proposed Scheme and other plans and projects could increase the risk of LSE to European Sites, are therefore considered in the HRA Screening. In-combination effects may contribute to increased impacts and hence effects on qualifying features relative to the Proposed Scheme alone. It is therefore important to carefully consider how other plans and projects may lead to effects on European Sites.
- 2.2.12 Where it can be demonstrated that the Proposed Scheme will have no appreciable impacts or effects on European Sites, in-combination assessment will not be required. This is because if the Proposed Scheme has no effects whatsoever, then there are no effects that could combine with effects from other plans or projects.

2.3 Methodology for Collating Information to Inform Appropriate Assessment

Appropriate Assessment methodology

- 2.3.1 Where the potential for likely significant effects (LSE) cannot be excluded, it is necessary to complete an appropriate assessment. The purpose of this is to identify if the identified LSE could lead to adverse effects on the integrity of European Sites. As per the HRA screening stage, the potential for adverse effects on integrity must be considered for the Proposed Scheme both alone and in-combination with other plans and projects.
- 2.3.2 The appropriate assessment will involve a more detailed consideration of how identified LSE could affect the European Site qualifying interests and their conservation objectives. The conservation objectives provide a framework for assessment and information on how qualifying features may be adversely affected.
- 2.3.3 In England, the conservation objectives should be read in conjunction with the Supplementary Advice on Conservation Objectives ('SACO') published by Natural England. The supplementary advice sets out how the Conservation Objectives for each qualifying interest can be met, in relation to various criteria. For example, SACO may set out the population size a qualifying interest species needs to reach to meet the Conservation Objective "maintain or restore the populations of qualifying interest species".
- 2.3.4 Where a Conservation Objective is being met, SACO provide advice on how the Conservation Objective can be maintained. Where a Conservation Objective is not being met, SACO provide advice on the steps needed to restore the qualifying interest concerned.
- 2.3.5 Ramsar sites do not have published conservation objectives. Sites designated as Ramsar sites often share boundaries with SPAs and/or SACs. Where this occurs, the SAC/SPA conservation objectives for these sites are often relevant and will be referred to during assessment of the Ramsar site.

Assessment of potential adverse effects on integrity

- 2.3.6 European Site integrity is defined as 'the coherence of the site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the populations of the species for which the site is or will be designated'. European Commission guidance (European Commission, 2018) sets out that the assessment of adverse effect should focus on the achievement or otherwise of a European Site's conservation objectives.
- 2.3.7 The appropriate assessment section of this report includes an assessment of adverse effects that

may arise from the demolition, construction and operation phases of the Proposed Scheme. The identified LSE are examined in detail, to determine whether they could frustrate achievement of the conservation objectives for each qualifying feature.

- 2.3.8 The assessment of adverse effects will be informed by consideration of how the receiving environment surrounding the Proposed Scheme is expected to respond to the biophysical changes arising from the Proposed Scheme.

Key Case Law

- 2.3.9 This section identifies key case law that has been considered in this HRA Report. It is not intended to be an exhaustive list, instead it highlights case law that is considered of relevance to the HRA of the Proposed Scheme.

People over Wind, Peter Sweetman v Coillte Teoranta (Case C-323/17)

- 2.3.10 The “People over Wind” judgment ruled that any measures added to achieve the purpose of avoiding or reducing harmful effects on a European Site(s) should not be considered at the screening stage. The Competent Authority can only consider such mitigation measures as part of an appropriate assessment.
- 2.3.11 The key part of the judgment is summarised in Paragraph 40 as “in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site”.
- 2.3.12 UK Government guidance (DEFRA, 2021) clarifies that measures which have been specifically added to achieve the purpose of avoiding or reducing its harmful effects on a habitats site should not be considered at the screening stage. However, features that are integral to the design or physical characteristics of the project that is being assessed, for example, the layout, timing and location of a scheme, may be considered at the screening stage.
- 2.3.13 In accordance with UK government guidance on the application of the People over Wind ruling, this HRA Report will only consider avoidance or mitigation measures, specifically added to avoid or reduce harmful effects on a European Site(s), during the appropriate assessment stage. Such measures will not be considered at the HRA screening stage.

Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu v College van gedeputeerde staten van Limburg and College van gedeputeerde staten van Gelderland (Cases C-293/17 and C-294/17)

- 2.3.14 The “Dutch Nitrogen” cases established that: (Paragraph 126) “...it is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm to the integrity of the site concerned, by guaranteeing beyond all reasonable doubt that the plan or project at issue will not adversely affect the integrity of that site, that such a measure may be taken into consideration in the ‘appropriate assessment...’ and (Paragraph 130) “The appropriate assessment of the implications of a plan or project for the sites concerned is not to taken into account the future benefits of such ‘measures’ if those benefits are uncertain, inter alia because the procedures needed to accomplish them have not yet been carried out or because the level of scientific knowledge does not allow them to be identified or quantified with certainty”.
- 2.3.15 The cases established that ‘future benefits’ as referred to above include ‘autonomous measures’ i.e., measures delivered outside the scope of the Proposed Scheme, that would be expected to deliver beneficial outcomes to European Sites (for example strategic national level initiatives to

manage nitrogen pollution, or local measures to limit recreational disturbance of European Site qualifying interest species). Such autonomous measures may only be taken into account where their benefits are certain at the time of the assessment.

Consideration of measures to address adverse effects

2.3.16 Following the People Over Wind ruling referred to in paragraph 2.3.10, measures intended to avoid or reduce the harmful effects of a project on European Sites should only be considered at the appropriate assessment stage of the HRA process. Where required to address potential adverse effects on integrity, mitigation measures are therefore identified in the appropriate assessment section of this report.

2.3.17 Where mitigation measures are required, the appropriate assessment section of this report identifies how these would be secured.

Effects in-combination with other Plans or Projects

2.3.18 Where an in-combination assessment has been taken forward to the appropriate assessment stage following HRA screening, potential adverse effects on European Site(s) integrity must be considered. As for the assessment of the Proposed Scheme alone, this is a more detailed assessment than is carried out at the HRA screening stage.

2.3.19 In addition to considering Proposed Scheme mitigation, any targeted mitigation measures for European Sites being delivered by other plans and projects will be considered.

2.4 Natural England Consultation

2.4.1 NE were consulted by the Local Planning Authority (LPA) and their latest response, dated 30/11/2023 is provided in Appendix 2.

2.4.2 In summary, NE were concerned that insufficient information was presented to enable the Competent Authority to undertake a robust Appropriate Assessment. Matters raised by NE were:

- Clarification relating to Table 1;
- Detail of all phases of the Proposed Scheme should be included in the Screening Assessment;
- Clarification in relation to potential direct effects on the river or riparian habitats;
- Details in relation to potential contaminated land risk;
- Potential for direct damage, modification, displacement and/or disturbance to protected species and riverine or riparian habitat;
- Potential for sediment or other polluting run-off to enter the river, both during the construction period (including earthworks, storage, and use of machinery, materials, and fuels) and any potential siltation, run-off, or other pollution arising from the development in its construction or operational phase. Any discharge (including foul drainage) and/or run-off or drainage from the site must not lead to a deterioration in water quality in the watercourse;
- Potential for impacts derived from the use and/or disturbance of contaminated land;
- Potential for the introduction and/or spread of invasive, non-native species;
- Potential flood risk issues and pollution during a flood event;
- Clarification on LSE being taken to Stage 2;

- Specific consideration of potential air quality impacts;
- Further information relating to potential pollution, particularly during flood events;
- Further discussion of potential effects on freshwater pearl mussel *Margaritifera margaritifera*;
- Further discussion of potential effects on Atlantic Salmon *Salmo salar*;
- Inclusion of Environment Agency Permits within the In-combination Assessment; and
- A review of mitigation measures proposed considering the preceding comments and clear reference to enable appropriate conditions to be placed on the Proposed Scheme.

3. European Sites

3.1 Introduction

- 3.1.1 A desk study² indicates that there are three SAC and one potential SPA within 10km of the Proposed Scheme.
- 3.1.2 These are:
- River Derwent & Bassenthwaite Lake SAC (UK0030032);
 - River Ehen SAC (UK0030057);
 - Lake District High Fells SAC (UK0012960); and
 - Solway Firth pSPA.
- 3.1.3 The previous iteration of the HRA for the Proposed Scheme identified the River Ehen SAC as the only site which is within the ZOI of the works.
- 3.1.4 The River Derwent & Bassenthwaite Lake SAC is not hydrologically connected to the Proposed Scheme.
- 3.1.5 The Lake District High Fell SAC is approximately 6.7km from the Proposed Scheme location and is not within the ZOI for the Proposed Scheme.
- 3.1.6 The Solway Firth pSPA is located approximately 7km from the Proposed Scheme location, further via hydrological connection. The Proposed Scheme site does not contain habitats suitable to support wading birds or wildfowl.
- 3.1.7 As such only the River Ehen SAC is discussed here.

3.2 River Ehen SAC

- 3.2.1 The River Ehen forms the outfall from Ennerdale Water and flows some 20 km before reaching the Irish Sea at Sellafield. For much of its upper length the River Ehen is oligotrophic (nutrient-poor) and flows over bryophyte-dominated shingle, pebbles and rock. Above Ennerdale Bridge the catchment is largely composed of acidic rocks of the Borrowdale Series and Skiddaw Slates. Downstream from Ennerdale Bridge the river is slightly enriched by streams flowing from Limestones and Millstone Grits of the Carboniferous Series.
- 3.2.2 The designated stretch of the river, between Ennerdale Water and the confluence with the River Keekle at Cleator Moor, meanders across a narrow floodplain with areas of riparian woodland and trees. This stretch of the river supports outstanding populations of the freshwater pearl mussel, which is known to have recruited successfully within the last 20 years. An important feature of this stretch of the Ehen is the amount of tree shade along the banks, as bank-side shade appears to be of great importance for the mussels. Along with the nutrient-poor status of the river, the shade from direct sunlight helps to reduce the amount of algal growth in the channel. This would otherwise dominate the river bed and make it unsuitable for the mussels.
- 3.2.3 Freshwater pearl mussels can live for over 100 years. Their life cycle is however complex and in part dependent upon the maintenance of a healthy salmonid population. The mussels do not mature until 15 years, when the females produce eggs. After initially remaining within the mother's

² <https://magic.defra.gov.uk/> accessed 25/01/2024

shell the larvae (0.2mm) attach themselves for a short period to young salmon and trout. After dropping off, they remain buried within clean sand and gravel in the stream bed for a further five to ten years. This buried stage within the life cycle is particularly susceptible to changes in the flow regime, siltation and algal deposition.

3.2.4 The SAC is designated due to the presence of the following Qualifying Species:

- Freshwater pearl mussel
- Atlantic salmon

Conservation Objectives

3.2.5 The Conservation Objectives for this site, as described in the Natural England Conservation Objectives (2018), are to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- The extent and distribution of the habitats of qualifying species
- The structure and function of the habitats of qualifying species
- The supporting processes on which the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Threats and Vulnerabilities

3.2.6 No Conservation Objective Supplementary Advice documentation was available from the NE website at the time of writing. However, a Site Improvement Plan (SIP) was available. The SIP Plan Summary has been reproduced in Table 1 to identify the known threats and pressures on the SAC.

Table 1: SIP Plan Summary

Priority & Issue	Pressure or Threat	Feature(s) affected	Measure	Delivery Bodies
1 Water abstraction	Pressure	S1029 Freshwater mussel	Revocation of abstraction licence, and restoration of natural hydromorphology	Environment Agency, Natural England, United Utilities Water Plc
2 Low breeding success/ poor recruitment	Pressure	S1029 Freshwater mussel	Research, and targeted activities to protect the distributions of native species	Defra, Environment Agency, Forestry Commission, Natural England, United Utilities Water Plc, Woodland Trust, Centre for Environment, Fisheries and Aquaculture Science (Cefas), West Cumbria Rivers Trust, Wild Ennerdale, Derwent Owners Association, Angling Trust(s), International Council for the Exploration of the Sea (ICES), North Atlantic Salmon Conservation Organisation (NASCO)
3 Siltation	Pressure	S1029 Freshwater mussel, S1106 Atlantic salmon	Reduction of siltation levels, and maintenance of natural processes.	Environment Agency, Forestry Commission, Natural England, United Utilities Water Plc, Woodland Trust, Local partnership, South Cumbria Rivers Trust, West Cumbria Rivers Trust, Cumbria

				Invasives Forum, PiP Life + Project
4 Water Pollution	Pressure	S1029 Freshwater mussel, S1106 Atlantic salmon	Reduce diffuse pollution from agriculture	Environment Agency, Forestry Commission, Natural England, United Utilities Water Plc, Woodland Trust, West Cumbria Rivers Trust, Wild Ennerdale
5 Water Pollution	Pressure/Threat	S1029 Freshwater mussel, S1106 Atlantic salmon	Reduce pollution from point sources	Environment Agency, Forestry Commission, National Trust, Natural England, Bardon Aggregates, Aggregate Industries
6 Inappropriate weirs dams and other structures	Pressure	S1029 Freshwater mussel, S1106 Atlantic salmon	Removal of obstructions to fish migration	Environment Agency, Natural England, United Utilities Water Plc
7 Agricultural management practices	Pressure/Threat	S1029 Freshwater mussel, S1106 Atlantic salmon	Manage and control the impacts of agriculture	Environment Agency, Forestry Commission, Natural England, Rural Payments Agency (RPA), United Utilities Water Plc, Woodland Trust, West Cumbria Rivers Trust, Wild Ennerdale, Derwent Owners Association, Angling Trust(s)
8 Invasive species	Pressure/Threat	S1029 Freshwater mussel, S1106	Monitor extent and control,	Environment Agency, Natural England, Local partnership,

		Atlantic salmon	and eradicate invasives	South Cumbria Rivers Trust, West Cumbria Rivers Trust, Cumbria Invasives Forum
9 Forestry and woodland management	Threat	S1029 Freshwater mussel, S1106 Atlantic salmon	Licences, grants and mitigation measures	Forestry Commission, Natural England, Woodland Trust, PiP Life + Project
10 Public Access/Disturbance	Pressure	S1029 Freshwater mussel, S1106 Atlantic salmon	Education programme and management of recreational use	Lake District National Park Authority, National Trust, West Cumbria Rivers Trust, Wild Ennerdale
11 Transportation and service corridors	Pressure/Threat	S1029 Freshwater mussel, S1106 Atlantic salmon	Maintenance of infrastructure	Cumbria County Council, Environment Agency, Lake District National Park Authority, Natural England

4. Findings of HRA Screening

4.1 Overview

- 4.1.1 This section of the HRA report sets out the findings of the HRA screening. Those aspects of the Proposed Scheme that could trigger LSE on European Sites are described. Where LSE are identified, the impact pathways triggering them are described along with an initial consideration of how European Site qualifying interests and achievement of their conservation objectives could be affected.

4.2 HRA Screening Step 1: Can the Project be Exempted from Assessment

- 4.2.1 The Proposed Scheme includes demolition of existing structures, site improvement works, construction and operation of a plant hire site. It is clear the Proposed Scheme is not directly connected with or necessary for the management of any European Site. Due to its proximity to the River Ehen SAC, the Proposed Scheme must however be subject to HRA under the Habitats Regulations.

4.3 Step 2: Describe the Plan or Project and any other Plans or Projects which, in combination, could result in significant effects on the European Site

Demolition

Description of Key Characteristics

- 4.3.1 Identification of hydrological pathways from the site to the River Ehen.
- 4.3.2 Removal and/or stopping-up of identified hydrological pathways.
- 4.3.3 Demolition of existing unsafe buildings and removal of non-reusable materials to appropriate licenced waste sites.
- 4.3.4 Removal of existing potentially contaminated surface dressing.
- 4.3.5 Testing of all potentially reusable materials for contaminants.
- 4.3.6 Removal from site of any contaminated material.
- 4.3.7 Import of chemically inert, clean surface dressing/sub-base material.
- 4.3.8 Note, no works were undertaken on the riverbank. No site compound was required, and all refuelling took place outside the site.

Biophysical Changes During Demolition

- 4.3.9 The demolition phase had the potential to give rise to changes in the physical habitats present within and supporting the SAC either through removal/damage to those habitats or disturbance of them.
- 4.3.10 Hydrological changes could occur during demolition works which, if the scale or location was significant, could negatively affect an aquatic SAC.
- 4.3.11 During the demolition phase of works, the potential was present for dust to be mobilised which could have entered the River Ehen SAC. Dust and airborne pollutants are not recorded as a threat to the qualifying features of the SAC within the SIP, however, there could be a potential for dust or increased nutrients or other airborne pollutants to negatively impact the water chemistry or cause physical smothering within the river if the works were undertaken for a significant period. It is

important to note that flowing watercourses are less susceptible to airborne pollution than still water lakes etc. due to the dilution factor of the deposition surface being in constant movement and therefore absorbing less of the compounds within the air.

- 4.3.12 A significant threat to freshwater pearl mussel and to Atlantic salmon has been identified as sediment loading within the river. Demolition works, when poorly managed, can give rise to significant run-off of sediment-heavy water from construction sites.
- 4.3.13 Waterborne pollutants have been identified as a significant threat to the qualifying species of the SAC. Pollution sources identified are diffuse pollution from agricultural practices and point source pollution arising from industrial and waste treatment sources. The Proposed Scheme had the potential to be a point source of pollutants during demolition.
- 4.3.14 Given the 50m separation of the demolition works from the river, lighting and potential disturbance from personnel within the site would not have given rise to a biophysical change.

Construction

Description of Key Characteristics

- 4.3.15 Establishment of a site compound. Note, the compound area will not be used for storage of fuels etc, and all refuelling will take place outside Flood Risk Zone 3.
- 4.3.16 Erection of new buildings on existing concrete bases.
- 4.3.17 Installation of car parking spaces.
- 4.3.18 Installation of a closed cell infiltration drainage system to capture and remove all surface water from within the Proposed Scheme boundary.
- 4.3.19 Installation of a full containment interceptor between the drains and the closed cell infiltration system to remove and contain hydrocarbons.
- 4.3.20 No works to the flood defences or riverbank.

Biophysical Changes During Construction

- 4.3.21 The construction phase's potential biophysical changes are very similar to the demolition phase.
- 4.3.22 The main differences between these phases include the duration of work, with construction being a more protracted activity, and the installation of drainage which could affect hydrology. Therefore, construction has the potential to have a greater air pollution, sediment and other pollutant risk, and possibly negatively affect the SAC hydrology.

Operation

Description of Key Characteristics

- 4.3.23 Operation of a plant hire company.
- 4.3.24 Regularly scheduled maintenance of the full containment interceptor.
- 4.3.25 Regularly scheduled maintenance of the closed cell infiltration system.
- 4.3.26 Operation of an emergency response plan to address unforeseen spillage of hydrocarbons within the site.

Biophysical Changes During Operation

- 4.3.27 During the operation of the site, there is a risk that pollutants could be allowed to enter the river, either through poor drainage design or maintenance or through flood events mobilising sediments

or pollutants and washing them into the watercourse.

- 4.3.28 In addition, with the site operating as a plant hire base, vehicles will be fuelled within the footprint of the development on a regular basis. This increases the potential for hydrocarbon release into the SAC.

Other Plans and Projects

- 4.3.29 The potential for the Proposed Scheme to interact with other plans or projects during demolition, construction or operation has been considered in Section 4.5. A planning search informed the potential for other projects to have additive effects with the Proposed Scheme. A statement in relation to Environment Agency permits was received from the developer, and the local plan HRA was reviewed.

4.4 STEP 3 & 4: Identify the Potential for LSE on European Sites and determine significance

- 4.4.1 This section of the report examines each of the biophysical changes arising from the Proposed Scheme and considers how they could lead to change to European Site qualifying features. The biophysical changes set out in paragraph 4.3.9-4.3.14, 4.3.21-4.3.22 and 4.3.27-4.3.28 of this report will be considered in turn, firstly for the Proposed Scheme alone and then with consideration of other plans and projects. Where the potential for LSE is identified, these are taken forwards for appropriate assessment.
- 4.4.2 Potential LSE arising from invasive non-native species (INNS) have been ruled out as no INNS have been recorded within the works footprint, the works are approximately 50m from the River Ehen and standard construction good practice would remove the risk of importing INNS to the site.

Potential Effects of the Proposed Scheme alone – Demolition

- 4.4.3 The demolition phase of the Proposed Scheme has been completed. Therefore, this section deals with an assessment of LSE which could have arisen during those works.

Loss or Disturbance of Habitats within European Sites

- 4.4.4 While the land ownership and previously reported site boundary extends into the River Ehen SAC, the Proposed Scheme is located approximately 50m away from the top of riverbank. There would therefore be no loss or disturbance of habitats within any European Site arising from demolition associate with the Proposed Scheme (see 1701C-EX-001(A) Location Plan - Site Ownership Boundary and Figure 1701C-EX-002(-) Works Boundary Plan - Demolition Phase in Appendix 1).
- 4.4.5 Therefore, no LSE will have arisen during demolition through direct loss or disturbance within the River Ehen SAC.

Loss or Disturbance of Functionally linked Habitats

- 4.4.6 Functionally linked habitats are areas outside the boundary of a European Site, but which support the qualifying interests for which the European Site has been designated. For example, fields outside the boundary of a European Site may be used for foraging or roosting by birds that are a qualifying interest of a nearby European Site. Although the fields do not fall inside the boundary of the European Site, they may be of importance for sustaining the European Site bird population. There can also be functional linkages for habitats. For example, an area of lowland heathland outside but adjacent to a SAC with lowland heathland as a qualifying interest could support the ecological functioning of the lowland heathland inside the SAC.

4.4.7 With regard to the Proposed Scheme, the demolition works took place within the previously built environment of the former Mill site and did not require the removal of any habitats which could constitute supporting habitat for freshwater pearl mussel or Atlantic salmon.

4.4.8 Therefore, no LSE will have arisen during demolition through loss or physical disturbance to functionally linked habitats.

Hydrological change

4.4.9 During the demolition/site preparation phase of works the development team actively identified all existing drainage which flowed from the site into the River Ehen SAC. All of these outfalls and other hydrological pathways were properly stopped to remove the risk of sediment or pollution arising within the site from mobilising into the watercourse during normal flow conditions.

4.4.10 Therefore, no LSE would have arisen through changes in hydrology during demolition.

Air Pollution

4.4.11 It is standard demolition and construction practice to employ measures which reduce dust emission from sites. As these measures would be employed with or without the presence of a European Site, it is acceptable practice to consider them at the screening stage, and therefore the potential for LSE to have arisen can be ruled out.

4.4.12 The level of potential exhaust emissions during the demolition phase would not have been sufficient to give rise to an LSE on the River Ehen SAC.

4.4.13 Therefore, no LSE will have arisen during demolition from air pollution of the River Ehen SAC.

Increased Risk of Pollution from Increased Sediment Load

4.4.14 While many standard construction practices are used to reduce sediment run-off from demolition and construction sites, these measures can be insufficient to protect highly sensitive habitats or species.

4.4.15 The demolition works were undertaken some 50m from the bank of the River Ehen SAC, and therefore the risk of a sediment release is reduced somewhat, though not eliminated.

4.4.16 Therefore, in the absence of mitigation, an LSE is predicted to have arisen during the demolition.

Accidental Releases of Waterborne Pollutants

4.4.17 The potential for contaminated material movements from demolishing the buildings or removing potentially contaminated surface dressings could not be ruled out without mitigation measures.

4.4.18 Therefore, an LSE is predicted to have arisen during demolition.

Disturbance from Noise and Vibration

4.4.19 Fish species are sensitive to noise and vibration, and while these potential effects have not been identified within the SIP, they nevertheless pose a direct risk of injury or mortality to Atlantic salmon, further, noise and vibration from demolition can cause a barrier effect in adjacent watercourses which deter fish from using the section of river affected, potentially during a critical period in their lifecycle.

4.4.20 Demolition works did not include any use of explosives which greatly reduces the risk that LSE could have arisen. Further, the timing of the demolition in December reduces the risk of Atlantic salmon being present within the watercourse adjacent to the works site. In addition, the duration of the works and plant used would not have been likely to give rise to an LSE.

Potential Effects of the Proposed Scheme alone – Construction

Loss or Disturbance of Habitats within European Sites

- 4.4.21 The footprint of the construction works is similar to the demolition works (see Figure 1701C-EX-003(-) Works Boundary Plan - Construction Phase, Appendix 1).
- 4.4.22 Therefore, no habitat loss or disturbance will occur within the SAC and no LSE will arise.

Loss or Physical Disturbance of Functionally-linked Land

- 4.4.23 As for demolition, no supporting habitats are present within the construction footprint and therefore no LSE will arise during construction.

Hydrological change

- 4.4.24 Inappropriate drainage design could lead to a significant alteration in the flow regime entering the River Ehen SAC from the site. Effects could arise through scour and through alteration of the water quantities within the watercourse.
- 4.4.25 Therefore, in the absence of mitigation an LSE is predicted through changes in hydrology during construction.

Air Pollution

- 4.4.26 As for demolition, the risk of dust giving rise to an LSE from the scale of development proposed is not realistic.
- 4.4.27 Similarly, the amount of construction plant on site and duration of construction works would not give rise to a significant effect on the watercourse SAC.
- 4.4.28 No LSE are predicted from air pollution.

Increased Risk of Pollution from Increased Sediment Load

- 4.4.29 In the absence of mitigation measures, the construction phase poses a significant threat of mobilising increased sediment loads into the River Ehen.
- 4.4.30 Should a flood event occur during construction, it is unlikely that silt fencing and other standard practice measures would be sufficient to control sediment flows into the adjacent river.
- 4.4.31 Therefore, an LSE is predicted from sediment loading.

Accidental Releases of Waterborne Pollutants

- 4.4.32 In the absence of mitigation measures, the construction phase poses a significant threat of mobilising hydrocarbons which could enter the River Ehen.
- 4.4.33 In addition, pollutants could enter the underlying aquifer and given the proximity to the River Ehen it is difficult to predict how localised pollution/contamination of groundwater may migrate or become part of the baseflow of the River Ehen.
- 4.4.34 Therefore, an LSE is predicted for waterborne pollutants.

Disturbance from Noise and Vibration

- 4.4.35 Construction noise and vibration standards require assessment of receptors within 50m of a construction source. For vibration this distance would increase if percussive piling was to be used.
- 4.4.36 As no percussive piling is to be used in the construction of the Proposed Scheme, with existing building footings being used where possible, no LSE is predicted to arise from noise or vibration

during construction.

Potential Effects of the Proposed Scheme alone – Operation

Loss or Disturbance of Habitats within European Sites

4.4.37 No habitat changes will occur during the operational phase of the Proposed Development (see Figure 1701C-EX-004(-) Works Boundary Plan - Operational Phase, Appendix 1).

4.4.38 Therefore, no LSE are predicted from habitat loss during operation.

Loss or Physical Disturbance of Functionally-linked Land

4.4.39 No functionally linked habitat will be lost or disturbed during operation.

4.4.40 Therefore, no LSE are predicted from functionally linked habitat loss or disturbance during operation.

Hydrological change

4.4.41 In the absence of a sympathetic and appropriate drainage design, the effects in operation could be the same as for the construction phase.

4.4.42 Therefore, an LSE is predicted to arise through changes in hydrology in the absence of mitigation.

Air Pollution

4.4.43 No point of diffuse sources of pollution will be present within the site, apart from normal vehicle traffic.

4.4.44 Given the lack of sensitivity watercourses have to air pollution of this scale, no LSE are predicted to arise through air pollution during operation.

Increased Risk of Pollution from Increased Sediment Load

4.4.45 The Proposed Scheme is designed with no outfalls from the site into the River Ehen. Further, during operation, there will be no exposed earth within the operational footprint of the site.

4.4.46 Therefore, during operation, no LSE are predicted in relation to sediment load.

Accidental Releases of Waterborne Pollutants

4.4.47 During operation, in the absence of mitigation measures, there is the potential for significant fuel and or oil spills within the site. Without appropriate controls in place, these hydrocarbons could enter the River Ehen and lead to significant ecological damage.

4.4.48 In addition, pollutants could enter the underlying aquifer and given the proximity to the River Ehen it is difficult to predict how localised pollution/contamination of groundwater may migrate or become part of the baseflow of the River Ehen.

4.4.49 Therefore, an LSE is predicted for waterborne pollutants during operation.

Disturbance from Noise and Vibration

4.4.50 Operational use of the site will be restricted to vehicle and plant movements of short duration.

4.4.51 The operational site is over 50m from the River Ehen.

4.4.52 Therefore, no LSE are predicted for operational noise and vibration.

4.4.53 Table 2 provides a summary of the screening assessment.

Table 2: Screening Outcome – Proposed Scheme Alone

Receptor	Habitat loss or disturbance within European Site	Loss or disturbance – Functionally linked habitat	Hydrological Change	Air pollution	Sediment	Water pollution	Noise/Vibration
Demolition							
Freshwater pearl mussel	N	N	N	N	Y	Y	N
Atlantic salmon	N	N	N	N	Y	Y	N
Construction							
Freshwater pearl mussel	N	N	Y	N	Y	Y	N
Atlantic salmon	N	N	Y	N	Y	Y	N
Operation							
Freshwater pearl mussel	N	N	Y	N	N	Y	N
Atlantic salmon	N	N	Y	N	N	Y	N

Key: N= No LSE predicted; Y=LSE predicted

4.5 In-combination Impacts and Effects

- 4.5.1 This section of the HRA Report identifies effects that may arise from the Proposed Scheme in combination with other plans and projects. Each of the impact pathways that have been identified for the Scheme is reassessed, with consideration to how those impacts could be changed by the other plans and projects brought forward for in-combination assessment.
- 4.5.2 Planning applications for small-scale development e.g. extensions to existing buildings, single dwellings etc. have not been considered as the likelihood of an in-combination effect arising from such proposals is negligible.
- 4.5.3 A search of Copeland Borough Council's planning portal was undertaken in January 2024 to identify relevant planning applications granted, refused and appealed or awaiting determination, these are detailed in Table 3.
- 4.5.4 Concerning NE's request that relevant Environment Agency permits should be included in the assessment, the developer, GenR8 North Ltd, provided information that no EA permits with the potential to act in-combination with the Proposed Scheme exist.

Table 3: In-combination Developments Considered

Application Reference	Planning Application Number	Description	Location	Potential Interaction
1	4/21/2278/0 F1	7 No. 2 bedroom terraced houses	Former Clinic, Ennerdale Road, Cleator Moor	No LSE predicted – this development is within the built environment of Cleator Moor and approximately 400m from the River Ehen with no apparent hydrological link.
2	4/21/2301/0F1	Terrace type housing block	Dentholme, Cragg Road, Cleator Moor	Constructed – no LSE predicted.
3	4/21/2504/0O1	Demolition of existing chapel and erection of 11 residential dwellings.	St Begas RC Church, Whitehaven Road, Cleator Moor	The development is within the urban fringe of Cleator Moor however, it is near the Nor Beck which is hydrologically linked to the River Ehen. LSE relating to waterborne pollution and siltation cannot be excluded based on information available. No HRA appears to have been completed for the development.
4	4/21/2254/0R1	Reserved matter application associated with planning reference 4/17/2391/0O1 – erection of 19 dwellings	Land to North of Flish Meadows, Cleator	This development is located within 260m of the Cleator Mill site and within 340m of the River Ehen. The original application cannot be located within the planning portal, however, as the permission was granted, it must be assumed that adequate consideration was given to the Habitats Regulations and that suitable mitigation would be included within conditions as required. However, LSE for waterborne pollution and siltation cannot be

				excluded based on information available.
5	4/22/2028/0F1	Erection of 3 No. dwellings	Keekle Meadows, Mill Hill, Cleator Moor	This application forms part of the application discussed in 4.5.5 below.
6	4/22/2032/0R1	Reserved matters application for 52 dwellings.	Keekle Meadows, Cleator Moor	This application forms part of the application discussed in 4.5.5 below.
7	4/22/2092/0O1	Hybrid application for 21 self-build dwellings and site infrastructure	Land to North of Flish Meadows, Cleator	See Development Reference 4 above. These proposals are collocated with the above development application.
8	4/22/2084/0R1	Reserved matters application for 5 dwellings	Land at Birks Road, Cleator Moor	The proposed development is directly adjacent to Nor Beck which is hydrologically linked to the River Ehen. LSE cannot be ruled out for invasive non-native species, siltation and waterborne pollution.
9	4/22/2184/0O1	Erection of a new building with up to 4000 sq m in floorspace	Land to the North East of Leconfield Industrial Estate, Cleator Moor	This application forms part of a wider masterplan which has been subject to HRA and concluded that no LSE would arise from the proposed masterplan.
10	4/22/2213/0F1	Refurbishment of existing industrial units	Leconfield Industrial Estate, Cleator Moor	Proposed works include switching surface water drainage from outfalling to Nor Beck into the sewerage system. No LSE are predicted.
11	4/22/2212/0F1	Refurbishment of existing industrial units	Leconfield Industrial Estate, Cleator Moor	Proposed works include switching surface water drainage from outfalling to Nor Beck into the sewerage system. No LSE are predicted.
12	4/22/2211/0F1	Refurbishment of existing industrial units	Leconfield Industrial Estate, Cleator Moor	Proposed works include switching surface water drainage from outfalling to Nor Beck into the

				sewerage system. No LSE are predicted.
13	4/22/2256/0F1	Temporary construction, testing and demolition of a mock chimney	19 Leconfield Industrial Estate, Cleator Moor	This application forms part of a wider masterplan which has been subject to HRA and concluded that no LSE would arise from the proposed masterplan.
14	4/22/2308/0O1	Redevelopment and extension of existing industrial estate.	Leconfield Industrial Estate, Cleator Moor	The HRA for this proposed development sets out appropriate mitigation measures and concludes no risk of adverse effects on the River Ehen SAC, subject to United Utilities confirmation of surface water treatment.
15	4/23/2009/0F1	Residential development consisting of 64 dwellings	Land east of Jacktrees Road, Cleator Moor	Situated approximately 450m from the River Ehen with no hydrological connection apparent, this proposal is unlikely to give rise to LSE.
16	4/22/2076/0O1	Residential development for up to 65 dwellings	Land of Dalzell Street, Moor Row, Egremont	Though potentially hydrologically linked to the River Ehen via Nor Beck and the River Keekle, the development does not assess potential impacts under the Habitats Regulations. Natural England have stated no objection to the scheme as proposed, therefore it is acceptable to assume no LSE.
17	4/23/2106/0O1	Proposed residential development	Site of former Grove Court Hotel, Cleator	The development proposal lies some 350m from the River Ehen SAC. No hydrological link is apparent. Surface water is to be controlled through rainwater harvesting and storage and permeable hard surfaces. No LSE are predicted.

- 4.5.5 In addition, there are several applications for variation or discharge of conditions associated with application reference 4/18/2472/001, which is for the erection of up to 65 dwellings at Keekle Rise, Cleator Moor. No details were available within the planning portal in relation to this permission, though an examination of aerial photography indicates that the development is ongoing. In the absence of evidence to the contrary, it is appropriate to conclude that such a development would have been considered under the Habitats Regulations prior to planning permission being granted and while all appropriate mitigation measures should have been included, LSE cannot be ruled out for siltation and waterborne pollution given the proximity of the River Keekle which is hydrologically linked to the River Ehen.

Local Development Plan

- 4.5.6 The local plan for Copeland Borough was subject to HRA in 2020 (David Archer Associates, 2020). Within this report the potential for policies to result in increased urbanisation with associated water quality pressures on the River Ehen SAC are recognised.
- 4.5.7 The Stage 2 – Appropriate Assessment for the local plan proposes project level HRA to evidence appropriate mitigation measures that can be delivered to ensure no adverse effects on the River Ehen SAC integrity.
- 4.5.8 Therefore, LSE must be assumed for the local plan in-combination with the current proposals.

4.6 Stage 1 - Screening Conclusion

- 4.6.1 LSE have been identified both alone and in-combination with other plans and projects.
- 4.6.2 Therefore, a Stage 2 – Appropriate Assessment will be required prior to the Competent Authority giving a lawful approval for the Proposed Scheme.
- 4.6.3 Section 5 below provides an appropriately detailed examination of each LSE and suitable mitigation measures proposed to ensure no adverse effect on the integrity of the River Ehen SAC.

5. Information to Inform an Appropriate Assessment

5.1 Introduction

- 5.1.1 Following identification of potential LSE which may arise from the Proposed Scheme, either alone or in-combination with other plans or projects, Stage 2 of the HRA process is required.
- 5.1.2 Table 4 summarises the LSE which have been identified and brought forward to Stage 2.
- 5.1.3 The Appropriate Assessment must be undertaken by the Competent Authority, which in this instance is Copeland Borough Council. In undertaking this assessment, the council must have due regard to NE's opinion and if the council considers that they disagree with NE, they must make a record of the reasoning behind that decision.
- 5.1.4 At Stage 2 of the HRA process the assessment examines whether the potential biophysical changes which may arise as part of the Proposed Scheme are likely to have an adverse effect on the integrity of the designated European Site, often referred to as AEoSI.
- 5.1.5 Government Circular 06/2005 '*Biodiversity and Geological Conservation – Statutory obligations and their impact within the planning system*' (August 2005) describes integrity as:
"The site's coherence, ecological structure and function across its whole area enables it to sustain the habitat, complex of habitats and/or the levels of population of species for which it was classified".
- 5.1.6 Where detailed consideration of an LSE determines that an AEoSI may arise, suitable mitigation measures are proposed, including the mechanism for securing the delivery of those measures.
- 5.1.7 Finally, a determination of whether the information provided gives reasonable scientific certainty that no AEoSI will arise is presented.

Table 4: Summary of LSE from Proposed Scheme Alone and In-combination

LSE	Alone	In-combination
Demolition		
Sediment	Y	Y
Water pollution	Y	Y
Construction		
Hydrological change	Y	N
Sediment	Y	Y
Water pollution	Y	Y
Operation		
Hydrological change	Y	N

Sediment	Y	Y
Water pollution	Y	Y

5.2 Demolition

Sediment

- 5.2.1 In the absence of mitigation measures, the demolition phase has been determined to have had the potential to lead to increased sediment loading in the River Ehen SAC.
- 5.2.2 One of the first exercises undertaken within the site was the identification and stopping up of hydrological pathways linking the site to the River Ehen, including existing drains. These measures effectively isolated the works site from the River Ehen in all but flood conditions.
- 5.2.3 Mitigation measures employed included adherence to strict Method Statements and a Construction Environmental Management Plan (CEMP) to control potential sediment mobilisation. An example Method Statement and the CEMP are provided in Appendix 3.
- 5.2.4 Considering the above mitigation measures, no biophysical change will have occurred within the SAC or supporting habitats through sedimentation.

Accidental Releases of Waterborne Pollutants

- 5.2.5 In the absence of mitigation measures, the demolition phase has been determined to have had the potential to lead to pollution of the SAC with hydrocarbons and other pollutants arising from contaminated land.
- 5.2.6 One of the first exercises undertaken within the site was the identification and stopping up of hydrological pathways linking the site to the River Ehen, including existing drains. These measures effectively isolated the works site from the River Ehen in all but flood conditions.
- 5.2.7 Mitigation measures were employed during the demolition phase which included the adoption and strict adherence to a CEMP and Method Statements controlling plant movement, refuelling practices, spillage control measures and handling of contaminated materials (physical movement, testing and selection for re-use/storage). An example Method Statement and the CEMP are provided in Appendix 3.
- 5.2.8 All works were undertaken a minimum of approximately 50m from the SAC boundary. Refuelling took place outside of the works area and outside flood zone 3. Refuelling was undertaken following best practice, with all fuel stored in bunded containers, 'plant nappies' being available to capture any minor spills and emergency measures such as spill kits and booms being available for use if required.
- 5.2.9 No flood events occurred during the demolition phase and therefore no contamination events occurred. However, given that no build-up of contaminated material, including that originating from spillages that may have occurred during demolition, was allowed to occur, the risk to the SAC was controlled to a level at which dilution from spate water would have rendered any impact within acceptable limits.
- 5.2.10 Considering the above mitigation measures, no biophysical change will have occurred within the SAC or supporting habitats through waterborne pollution.
- 5.2.11 Therefore, considering the measures described in paragraphs 5.2.1 to 5.2.10 it can be concluded

that no AEoSI occurred during demolition.

5.3 Construction

Hydrological change

- 5.3.1 Construction activities can have an AEoSI either through reducing needed flows into watercourses by intercepting surface and/or groundwater flows or by increasing surface flows and/or discharges such that biophysical changes occur in the receiving watercourse, including scour, sedimentation, localised changes in water chemistry or temperature.
- 5.3.2 Given the nature of the Proposed Scheme, including the scale of development, the removal (during demolition) of hydrological pathways linking the site to the SAC, the nature of the works (including the use of sustainable drainage systems (SuDS)), there will be no increase in localised outfalls to the river and there will be no change to baseflow from the site to the river.
- 5.3.3 Therefore, the risk of altering surface or groundwater flows will not pose an AEoSI to the River Ehen SAC.

Sediment

- 5.3.4 In the absence of mitigation measures, construction works pose a significant risk of sediment mobilisation and release to the surrounding environment. This could have an AEoSI on the River Ehen SAC. The following paragraphs describe the measures to be employed throughout construction of the Proposed Scheme.
- 5.3.5 Construction activities within the site will be managed through the implementation of a CEMP and suitable Method Statements.
- 5.3.6 Within the CEMP and MS are measures to control the potential release of sediment to the SAC. These include the use of silt fencing, a silt buster and suitable means to ensure discharged water has silt removed before release to the receiving environment (see CEMP, Appendix 3).
- 5.3.7 The site has been prepared with non-calcareous dressing material to reduce the potential for silt movement.
- 5.3.8 Should a flood incident occur during the construction works, all plant will be removed from the site and measures will be taken to ensure that potential sediment emission is minimised. Following the event, all mitigation measures will be audited to ensure they are functioning as intended before work recommences. Flood events are natural short-term occurrences which mobilise sediment from the wider environment and temporarily increase the turbidity of water, given the size of the proposed development, the 50m separation from the river, the removal (during demolition) of hydrological pathways linking the site to the SAC, the nature of the works and the minimal excavations required (e.g. the existing concrete foundations are to be re-used, therefore significantly reducing the need for exposure and movement of soils within the site), there is no risk of the Proposed Scheme having an AEoSI.

Accidental Releases of Waterborne Pollutants

- 5.3.9 The uncontrolled release of hydrocarbons is a significant risk to the River Ehen SAC features. In the absence of mitigation measures, construction activities can result in incidents of pollution, which could lead to an AEoSI. The following paragraphs describe the measures to be employed during construction to control pollution events.
- 5.3.10 The measures described under the demolition phase will be repeated during the construction

phase, including strict adherence to the CEMP and Method Statements.

- 5.3.11 Regular inspections will be conducted within the site to identify any potential leaks from plant, or hydrocarbon presence on the site, and any such incidents will be dealt with immediately, with all contaminated arisings being removed from the site and disposed of at a licensed facility.
- 5.3.12 Should a flood event occur, all plant will be removed from the site to prevent the release of pollutants to the river.
- 5.3.13 No AEoSI is predicted to arise from release of hydrocarbons to the River Ehen SAC.
- 5.3.14 The movement of contaminated material within the site has the potential to have an AEoSI on the River Ehen SAC. During demolition, all potentially contaminated materials were tested and those which pose a risk were removed to a suitable licensed facility for disposal. Therefore, the construction phase does not have the potential to mobilise contaminated material to the river and no AEoSI will occur.
- 5.3.15 Considering the above mitigation measures, no biophysical change will have occurred within the SAC or supporting habitats through changes to hydrology, sedimentation or waterborne pollution. Therefore, it can be concluded that no AEoSI occurred during construction.

5.4 Operation

Hydrological change

- 5.4.1 In the absence of a suitable drainage design and maintenance plan, the risk of hydrological change occurring during operation would be the same as for the construction phase.
- 5.4.2 As the Proposed Scheme includes the provision of a SuDS scheme designed to maintain outfall from the site by the use of infiltration drainage from a closed cell system, with all rainfall and surface water flowing across buildings and hardstandings being collected and directed into the SuDS system, and the commitment to regular controlled maintenance of the SuDS system to avoid sediment build-up reducing the effectiveness of the infiltration drainage, there will be no deleterious change in the hydrology during operation.
- 5.4.3 Therefore, no AEoSI will arise from hydrological change associated with the operation of the site.

Sediment

- 5.4.4 While the operational phase of the development will have a much-reduced potential for mobilisation of sediment, as a plant hire operation there will be regular movement of vehicles onto and out of the site, some of which may require cleaning before reuse. Therefore, it is anticipated that sediment may be generated by the operation within the site.
- 5.4.5 The closed cell infiltration SuDS system will capture all sediment-laden surface water from the operation of the site and will contain it to ensure no increase in the turbidity of the adjacent river.
- 5.4.6 Without sufficient maintenance, this SuDS system could become clogged with sediment and debris, and cease fulfilling its function either partially or fully. To ensure this does not happen, a schedule of regular maintenance will be agreed upon with the occupiers and secured through an appropriate planning condition.
- 5.4.7 With these control measures in place, no AEoSI will arise from sediment associated with the operation of the site.

Accidental Releases of Waterborne Pollutants

- 5.4.8 During the operation of the site, there is potential for accidental spillage of hydrocarbons which could enter the river either through surface flow or through groundwater contamination.
- 5.4.9 To control hydrocarbons within the site, a full containment interceptor will be installed between the buildings, hardstanding and closed cell infiltration system. Details of the type of interceptor are provided in Appendix 4.
- 5.4.10 This equipment effectively separates hydrocarbons from the surface waters and contains them within a closed vessel which is protected from backflow and flood events by valves and construction.
- 5.4.11 Without suitable monitoring and maintenance, an interceptor can exceed its capacity to effectively remove and contain hydrocarbons. Therefore, a schedule of regular maintenance checks and activities will be agreed and secured through an appropriate planning condition.
- 5.4.12 In addition, the interceptor will be equipped with an alarm system which alerts the site occupiers to any excessive build-up within the interceptor.
- 5.4.13 Therefore, no AEoSI are predicted to arise from accidental pollution events during the operation of the site.

5.5 In-combination assessment

- 5.5.1 While the potential for in-combination effects to arise during demolition, construction and/or operation of the Proposed Scheme were identified in Table 4, the measures proposed to control the potential effects from the Proposed Scheme alone will be sufficient to ensure that no additive effect will remain which could interact with other plans or projects.
- 5.5.2 The Proposed Scheme proponent (GenR8 North Ltd.) indicates that no EA permits have the potential for in-combination effects.
- 5.5.3 Therefore, no AEoSI are predicted from the Proposed Scheme in-combination with other plans or projects.

6. Conclusions

- 6.1.1 Several LSE were identified from the demolition, construction or operation of the Proposed Scheme at Stage 1 of the HRA process.
- 6.1.2 Mitigation measures have been identified and discussed in Stage 2 of the HRA process, including design measures and control measures such as Method Statements and a CEMP.
- 6.1.3 Considering the measures proposed for the works it has been shown that no adverse effects on the site integrity of the River Ehen SAC will arise from the Proposed Scheme, either alone or in-combination with other plans or projects.

7. References

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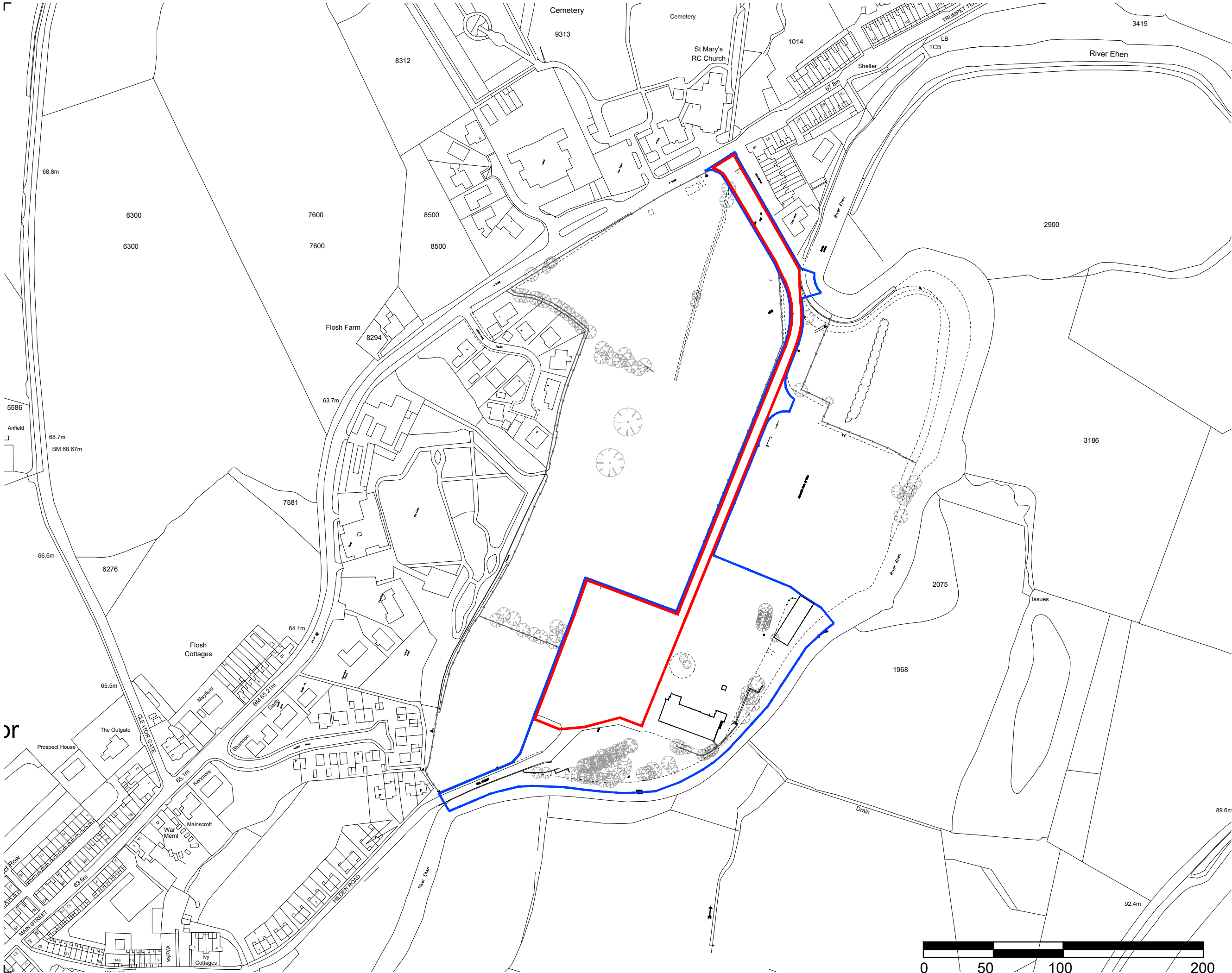
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Appendix 1. Figures



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REVISIONS:		
Revision A	CS/NB	18.01.2024
Plan re-orientated to North		
Red / blue lines clarified		



-  Site Ownership
-  Works Boundary

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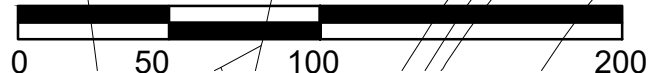
project title:
**Proposed Development
Cleator Mills, Cumbria**

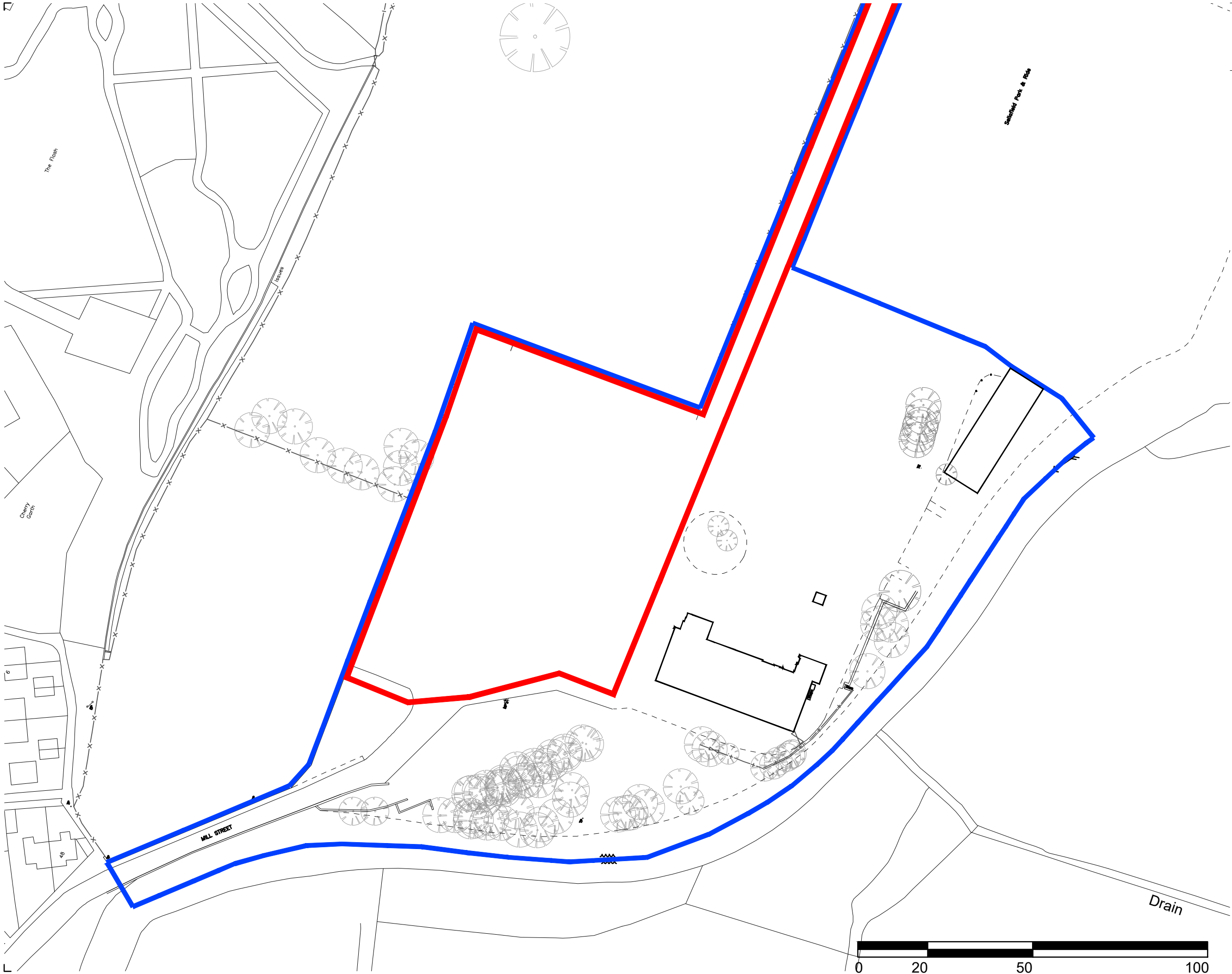
drawing title:
**Location Plan
Site Ownership Boundary**

issue stage:
PLANNING ISSUE

date:	drawn:	scale @ A3:
JAN 24	CS/NB	1:2500

drawing number:	revision:
1701-EX-001	A





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Site Ownership



Works Boundary

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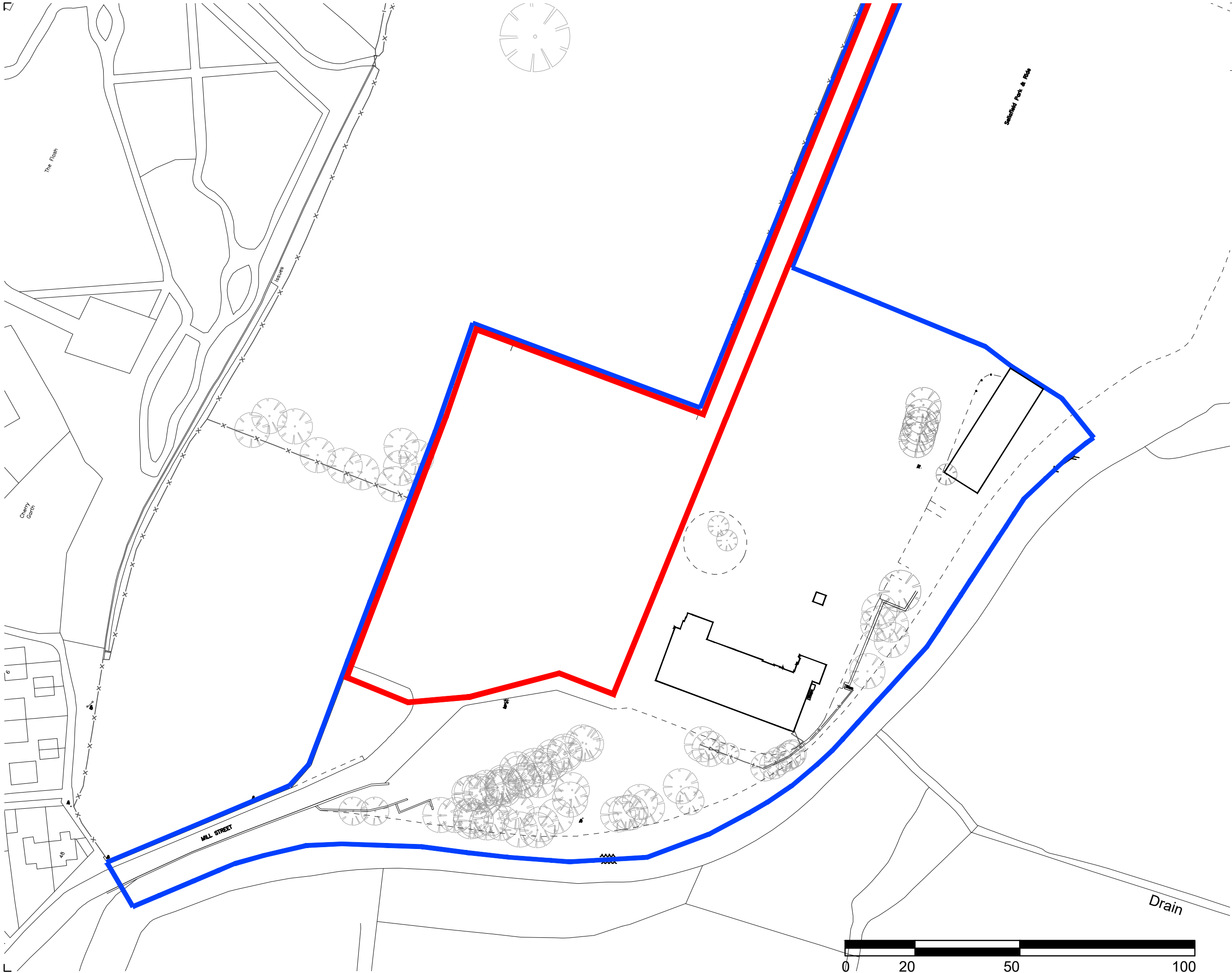
GenR8 North Ltd

drawing title:
**Works Boundary Plan
Demolition Phase**

issue stage:
PLANNING ISSUE

date:	drawn:	scale @ A3:
JAN 24	CS/NB	1:1000

drawing number:	revision:
1701-EX-002	-



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-  Site Ownership
-  Works Boundary

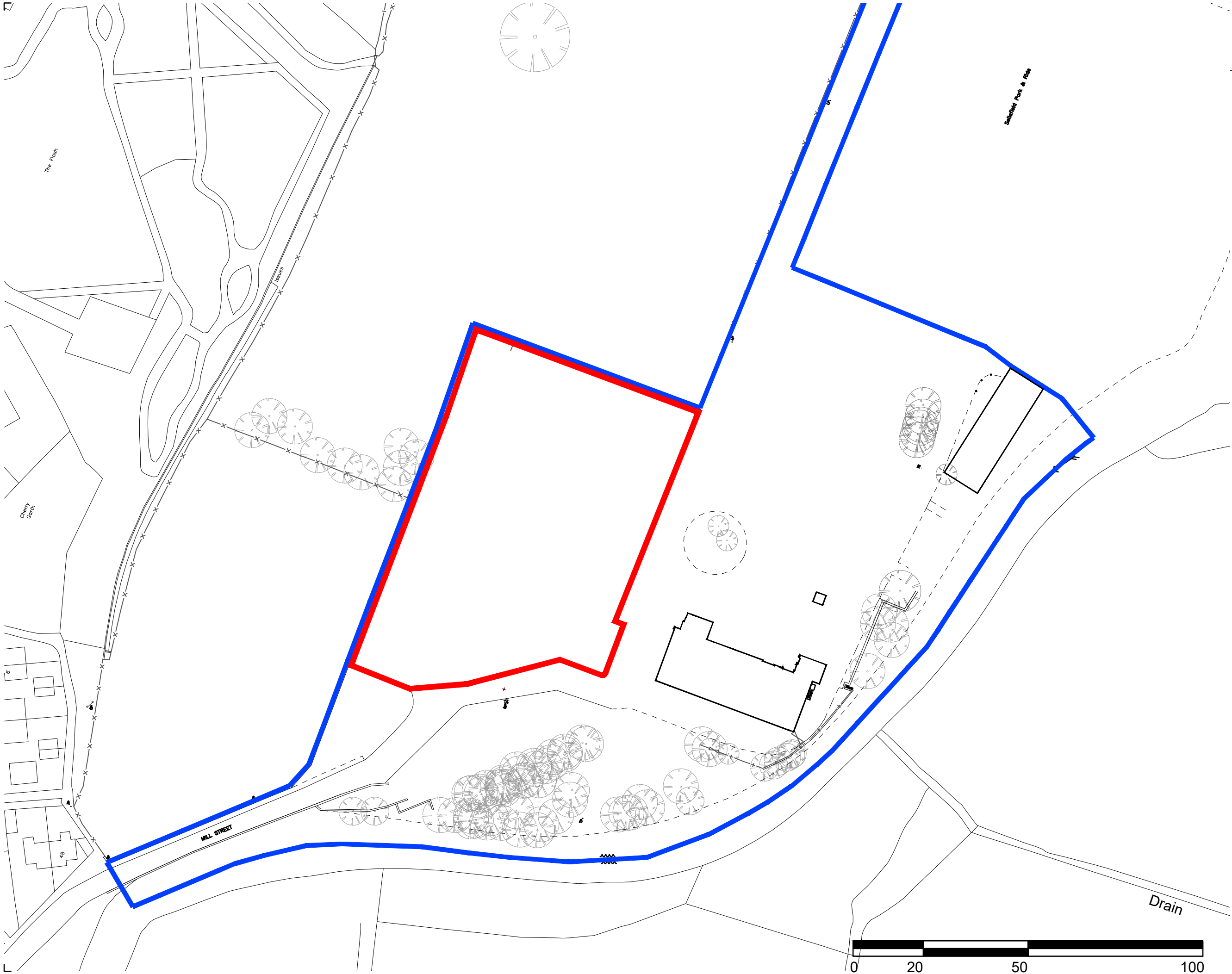
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project title:		
Proposed Development Cleator Mills, Cumbria		
GenR8 North Ltd		
drawing title:		
Works Boundary Plan Construction Phase		
issue stage:		
PLANNING ISSUE		
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1701-EX-003		-

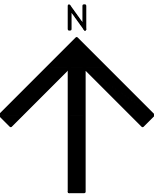


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REVISIONS:



-  Site Ownership
-  Operational Boundary

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project title:
**Proposed Development
Cleator Mills, Cumbria**

GenR8 North Ltd

drawing title:
**Works Boundary Plan
Operational Phase**

issue stage:
PLANNING ISSUE

date:	drawn:	scale @ A3:
JAN 24	CS/NB	1:1000

drawing number:	revision:
1701-EX-004	-

Appendix 2. Natural England Comments

Chris Staniewski

From: Development Control < >
Sent: 10 August 2023 14:01
To: Christopher Harrison
Subject: FW: Natural England Response 438637 Amendment and updated HRA for FORMER CLEATOR MILLS SITE, CLEATOR (Cumberland/Copeland) 4/22/2364/0F1

I have added to MIS and web!

Oli Hoban

Digital Support Officer | Development Management
Thriving Place and Investment | Cumberland Council
The Market Hall | Market Place | Whitehaven | CA28 7JG
T.
cumberland.gov.uk

From: Carpenter, Rachel
Sent: Thursday, August 10, 2023 12:01 PM
To: Development Control
Subject: Natural England Response 438637 Amendment and updated HRA for FORMER CLEATOR MILLS SITE, CLEATOR (Cumberland/Copeland) 4/22/2364/0F1

CAUTION: External email, think before you click!
Please report any suspicious email to our [IT Helpdesk](#)

Dear Oli,

Thank you for consulting Natural England on this application. The development is in close proximity to the River Ehen Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC).

Natural England have reviewed the submitted Habitats Regulations Assessment (HRA) and provide the following comments:

The proposal sits within Flood Risk Zone 2 and 3, which poses a serious risk to the long-term durability of the site. Natural England advises that the flood banks should be assessed as to whether it will provide appropriate long term flood management for the reconstruction of the proposed warehouses. The reinforcement of the flood banks, if needed, would disrupt the natural functioning of the River Ehen and reduce the structural integrity of the existing flood bank. The hydrological impacts of reinforcing foodbanks along the River Ehen Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) would require additional planning applications. Natural England notes that there would be concern for the reinforcement of flood defences in this location of the SAC.

As the works will be taking place adjacent to the River Ehen SAC a Construction Environmental Management Plan (CEMP) must be secured through Condition to detail the pollution prevention measures that will be implemented during the works. The application will also require a permit from the Environment Agency (EA) to be obtained for the use of glyphosate.

The potential for introduction and/or spread of invasive non-native species poses a risk during construction and operational phases for development proposals adjacent to the watercourses. Natural England advice the check-clean-dry procedure should be incorporated into the method statement and be strictly adhered to prevent the introduction and spread of non-native invasive species.

A 10m buffer strip from the river must be adhered to during all construction activities to prevent any sediment and pollution in surface water run-off from reaching the SAC. All materials and equipment must be stored outside the buffer strip. Natural England advises a 10m buffer strip from the river in which herbicides are not to be used and the land managed for nature to reduce the hydrological impacts on the River Ehen SSSI and SAC.

Yours Sincerely,

Rachel Carpenter

Sustainable Development Lead Advisor
Cumbria Area Team, Natural England

Natural England
www.gov.uk/natural-england



From: Oliver Hoban >
Sent: 15 June 2023 11:18
To: SM-NE-Consultations (NE) <
Subject: 4/22/2364/0F1 - FORMER CLEATOR MILLS SITE, CLEATOR

You don't often get email from oliver.hoban@cumberland.gov.uk. [Learn why this is important](#)

Please find attached a consultation letter relating to the above planning application.

The submitted plans and documents can be viewed on the Councils web site using the following link:

Comments should be sent to the following e mail address within the next **21 days**:

Kind regards,

Oli Hoban
Digital Support Officer | Development Management
Thriving Place and Investment | Cumberland Council
The Market Hall | Market Place | Whitehaven | CA28 7JG
T.
cumberland.gov.uk



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Appendix 3. Construction Environmental Management Plan and Method Statement Example

GenR8 North Ltd
Former
Cleator Mills
Cumbria

**CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
FOR
THE FORMER CLEATOR MILLS SITE
CUMBRIA**



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1.0 INTRODUCTION

This Construction Environmental Management Plan has been prepared on behalf of GenR8 North Ltd, who propose to undertake site remedial works to enable the repurposing of the site for redevelopment for use in the plant and equipment rental sector.

The site occupies an area of 0.5ha and is located at the former kangol factory in Cleator Mills, adjacent to a derelict industrial building to the East of the proposed site with agricultural land surrounding to the North and West with the River Ehen approximately 60 meters to the Southeast of the proposed site boundary.

The management plan includes protective measures which will be implemented by GenR8 North and their appointed contractor. The measures are intended to both avoid significant effects on the SAC and protected species, as well as to protect construction workers, neighbors, and future users.

2.0 LIMITATIONS OF THE REPORT

The recommendations contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted industry practices. The report takes into consideration potential sources, pathways, receptors and evaluates potential pollutant linkages. Every care has been taken to ensure that the interpretation of the site condition is based on all known data collected and as such is not a guarantee that the site is free of unidentified hazardous or potentially hazardous materials. EES prepared this report for our client. Any third party using this report does so entirely at his or her own risk. EES makes no warranty or representation whatsoever, express, or implied, with respect to the use by a third party of any information contained in this report or its suitability for any purpose. EES assumes no responsibility for any costs, claims, damages, or expenses (including any consequential damages) resulting from use of this report or any information contained in this report by a third party.

APPROVED BY	G Litherland	SIGNED	Final	DATE	September 2023
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3.0 ENVIRONMENTAL IMPACTS

- This CEMP document should be read together with other submitted reports and statements submitted in support of the application.

4.1 CONSTRUCTION TASKS

The plan identifies the main activities that are needed to complete the required tasks which include:

- The sensitive removal of any above ground structures floor slabs and any associated footings, foundations and or any existing surface water drainage was highlighted in previous intrusive investigation reports.
- Stockpiling of suitable recovered waste material prior to recycling.
- Removal and stockpiling of exiting topsoil if deemed necessary.
- Removal from site under current waste management legislation of any materials deemed unsuitable for reuse on site.
- Replacing the site won topsoil and seeding where necessary.

5.1 RISKASSESSMENTS

- All activities undertaken on site would be subject to a Principal Contractor risk assessment (approved by the Client) by trained staff following approved procedures which would:
 - Identify the significant environmental impacts that can be anticipated.
 - Assess the risks from these impacts.
 - Identify the control measures to be taken and re-calculate the risk.
 - Report where an inappropriate level of residual risk is identified so that action can be taken through design changes, re-scheduling of work or alternative methods of working to reduce the risk to an acceptable level.
- The results of the risk assessments, and their residual risks are only considered acceptable if:
 - The severity of outcome is reduced to the lowest practical level.
 - The number of risk exposures are minimized; all practical mitigating measures have been taken and the residual risk rating is reduced to a minimum.
 - The findings of the risk assessment and the necessary controls would be explained to all operatives before the commencement of the relevant tasks using an agreed instruction format.

6.1 METHOD STATEMENTS

Experienced personnel will complete method statements, in consultation with environmental specialists. Their production would include a review of the environmental risks as identified, so that appropriate control measures are developed and included within the construction process. Method statements will contain:

- Location of the activity and access / egress arrangements.
 - Work to be undertaken and methods of construction.
 - Plant and materials to be used.
 - Labor and supervision requirements.
 - Health, safety, and environmental considerations.
 - The risks associated with potential flooding incidents and implications.
-
- Site method statements will be provided by the Principal Contractor or their representative.
 - Prior to commencement of work on site, site fencing to the temporary compound, signage and surrounding the site shall be established.
 - All recovered materials from the associated site clearance works that can be recycled will be subject to a stringent acceptance procedure, Prior to any re use or placement the material will be stockpiled, and representative samples of the material will be collected and sent for chemical testing at a UKAS and MCERTS accredited laboratory. The material will only be classified as suitable if it is visually, texturally, and chemical and or geotechnically suitable for its intended use, those materials that are deemed unsuitable will be removed from site under current waste management legislation'

7.1 WORK ON SITE

7.2 Drainage

The temporary site compound initially will be located within the proposed footprint of the building, all foul water and sewage generated from the site welfare facilities will be removed from site by a licensed contractor removing any potential environmental impact.

Elsewhere, the works are very linear and not necessarily elevated therefore the risk posed by site run off during the initial works is reduced significantly, if upon further inspection risks are increased a cut off trench will be installed effectively cutting off the potential pathway to the sensitive receptor any ponding or excessive pooling of surface water within the construction site will be removed using pumping equipment and processed through a silt buster unit with any residual discharge being pumped through a Hy Tex dewatering silt control bag overland in the adjacent green field, given the location of the site and the adjacent river Ehen silt curtains will be installed as a precautionary measure.

All tasks undertaken shall view the potential for pollution and by design and good practice minimize any risks to the environment.

Pollution Control Measures

Construction phase operations have considered and will be carried out in accordance with guidance contained within the Environment Agency Pollution Prevention Guidelines including:

- General Guide to the Prevention of Pollution:
- Above Ground Oil Storage tanks:
- Use and Design of Oil Separators in Surface Water Drainage Systems:
- Works and maintenance in or near water:
- Working at Construction and Demolition Sites:
- Refueling facilities:
- Safe Storage and Disposal of Used Oils:
- Pollution Incident Response Planning:
- Dealing with spills:
- Drums and Intermediate Bulk containers:

Works on site shall follow the best practice guidelines outlined in sections 5 & 6 of CIRIA C532 – control of water pollution from construction sites).

Site personnel will be given training in pollution prevention and control techniques.

Foul drainage

Existing foul drainage if encountered within the footprint of the proposed building will be removed in their entirety preventing any potential historical preferential pathways from being opened, during site construction works temporary site welfare facilities will be used and maintained appropriately with all waste being removed from site.

Monitoring of Discharge

During site operations the appointed Contractor will ensure that discharge points are

monitored on a daily / shift basis, frequency may be increased depending upon activities along with daily checks of any silt fencing deployed within the river , silt buster unit and or any silt bag units in use in the active areas of construction or demolition works , If pollution is noted within the river , works will be suspended, and the Emergency Incident and Response Plan implemented.

General Monitoring and Maintenance

A site-specific daily monitoring plan will be established to ensure that the works do not impact on the surrounding infrastructure with priority given to the River Ehen, Monitoring will typically be carried out daily. Frequency may be varied subject to the level of activity, location of works and prevailing weather conditions to meet the perceived risk at the given time as described above.

Visual checks will include:

- Change to watercolor.
- Change to water transparency.
- Oily sheen on the surface of the water.
- Scum or foam building up on the surface of the water.
- Signs of dying plants or animals.
- Check condition of silt fencing
- Check condition and operation of the site silt buster.
- Check the condition and operation of the Hy Tex silt bag.

Monitoring surveillance will be undertaken through the construction period. The site manager will undertake the monitoring throughout the construction program to ensure environmentally sound working practices are adopted and maintained.

Further safeguards including the potential of the site flooding.

A daily inspection of the historical drainage infrastructure where accessible and deemed safe will be carried out and recorded if changes occur additional investigations will be undertaken to avoid the potential of environmental damage or incident occurring where necessary they will be removed.

The site lies within a flood risk zone 3 to which site specific risk and method statements will be produced given the proposed works, this will include awareness of current and prevailing weather conditions , alternative secure plant storage areas off site availability of sand bags and barge boards , removal of any chemicals or construction products (in containers) that have the potential to cause harm , evacuation procedures and post flooding remedial works.

7.3 Fuels / Oils

No refueling will be undertaken with the designated construction zone, all refueling of plant will be undertaken off site outside of the flood risk zone reducing the potential for pollution incidents to occur.

Emergency spill kits, including oil booms and oil absorbent materials, will be retained on the site and in the site cabin and all site operatives will be trained in their use should any accident or incident occur whilst the plant is being used on site.

Plant should be well maintained with hydraulic leaks repaired. Drip trays shall be used during any servicing or repairs to plant or machinery on site as necessary.

All precautions regarding the use, storage, disposal, spillage procedures, first aid, etc., will be given within the relevant COSHH Assessment which will be contained within the Site Safety Manual which will be kept by the site manager in the office on site.

A contingency plan will be prepared to ensure that all staff are trained to recognize and report any pollution incidents on site. These shall be immediately reported to the Site Manager and the Safety Manager, who will in turn inform the relevant authorities.

8.1 PROTECTED SPECIES.

- Prior to any works commencing on site any site-specific risks associated with protected species will be reviewed by a competent person with subsequent assessments and or site-specific requirements being implemented by means of toolbox talks and written into site method statements and risk assessments.

9.0 NOISE & VIBRATION MANAGEMENT

Remediation activities will involve the movement of excavating plant (tracked or wheeled) depending on the size of the task being undertaken, where concrete breaking activities are undertaken site noise monitoring will be carried out in line with current legislation with records being retained on site.

All equipment in use on and around the site will be shut down when not in use.

Any operation which is to take place on site, and which is liable to expose employees, or others, to noise levels approaching the first action level, will be assessed in accordance with the Noise at Work Regulations by the Safety Manager. Actions resulting from any such assessment will be implemented and brought to the attention of all concerned by the Safety Manager.

10.0 DUST SUPPRESSION

Given the location of the site and its proximity to the River Ehen Regard will be given to the prevention of causing statutory nuisance problems under Part IIA of the Environmental Protection Act 1990 and dust suppression measures will be employed when conditions require them. Mitigation methods that need to be employed during the construction phase are outlined below.

Awareness and significance of dust pollution shall be included in the site induction procedures for all personnel, contractors, and sub-contractors.

All vehicles transporting materials shall be sheeted to and from the site. By limiting the speed of general vehicles within the site to 5mph the potential for dust generation will be reduced.

The prime source of dust on site will arise from the movement of plant or vehicles on unbound ground and during any excavation work, and the breaking up of remnant structures, footings, and foundations. This will occur primarily during periods of dry and windy weather. In such circumstances dust shall be controlled by wetting the surface of the site and / or soil and other material especially during loading or unloading and restricting vehicular access only to wet areas. The frequency of use shall be managed by the on-site manager or his representative on site.

Under extreme circumstances plant and vehicular movements will cease until dust control methods are implemented and successful.

Appropriate dust suppression shall also be employed at the request of the Local Council or Environmental Health Services.

11.0 SITE WASTE MANAGEMENT / REMEDIAL WORKS

All materials generated throughout the construction phase will be subject to site specific management given there is a potential risk of contaminated ground which has been highlighted in the Geo environmental engineering site report ref – 2023-5775DTS with specific concerns over the historical land use and the potential for contaminants highlighted in the report to cause environmental damage or impact.

The site manager will be responsible for the implementation and monitoring of waste generated throughout the construction phase and implement both safe segregation of site won materials and the segregation of those materials which have been identified as potential sources of contamination, all materials will be assessed for potential re use on site prior to being used with those materials deemed unsuitable being removed from site as soon as possible.

All waste will be clearly identified and placed in the relevant stockpiles until such time as the results of chemical testing prove the suitability, any materials deemed hazardous will be stored securely, covered, and removed from site as soon as practicable to prevent any potential environmental impact.

Copies of all chemical testing, duty of care and any hazardous waste consignment notes will be retained on site in the site office and be available upon request.

12.0 VERMIN CONTROL MEASURES

The Principal Contractor will implement adequate arrangements for the removal of waste generated from site welfare facilities and maintain those in accordance with best practice.

The site manager is responsible for site tidiness; he will ensure that adequate resources and time are given to keeping the workplace clean and tidy. Employees and subcontractors will be made aware of the need for good housekeeping as part of their induction safety training.

Persons will be delegated to carry out clearing up operations throughout the course of the working day.

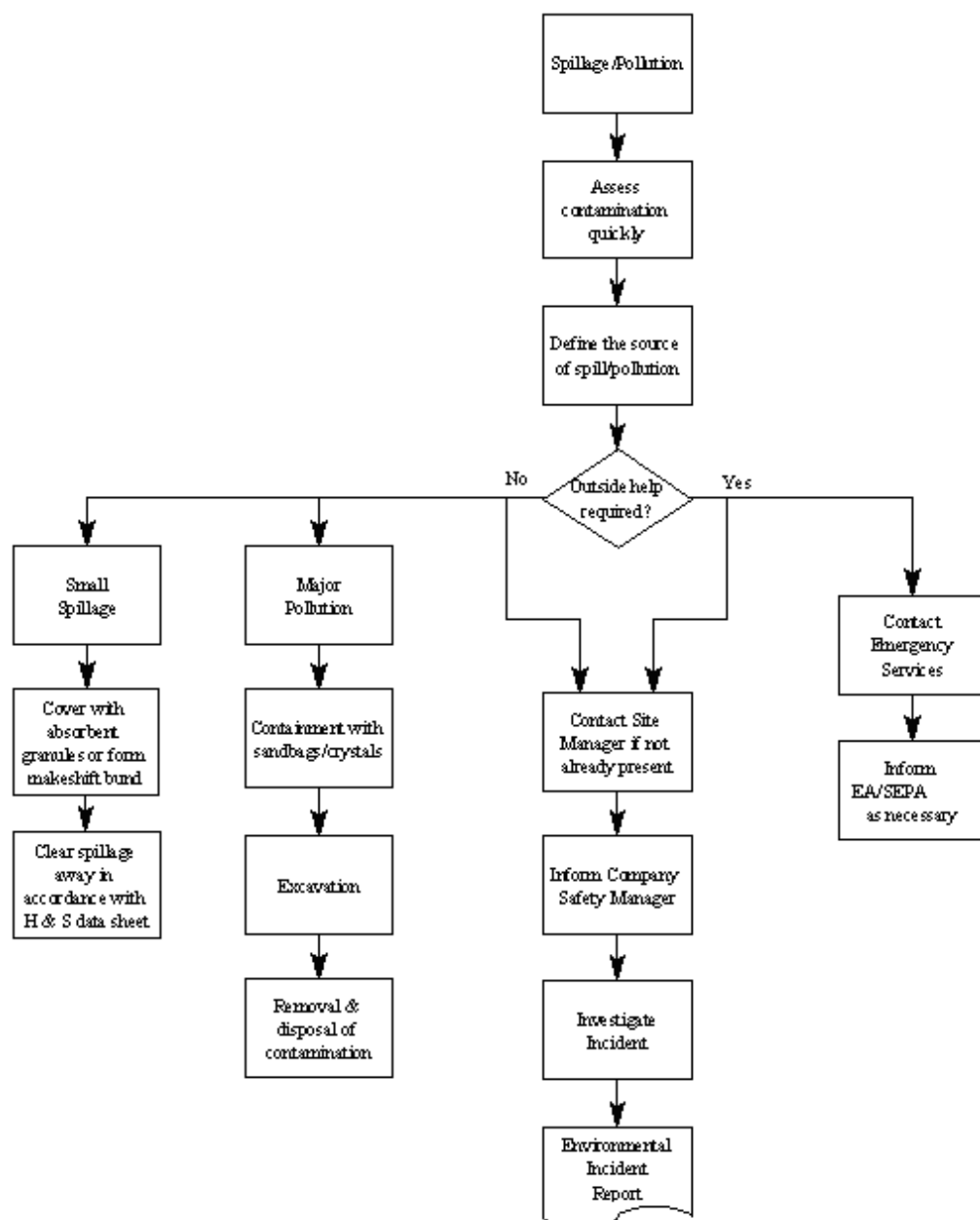
All waste will be placed in designated areas that will house suitable containers that will be removed from site on a regular basis.

Any waste hazardous substance/s will be clearly identified, bagged, and disposed of to a licensed tip. Individuals will be delegated by the site manager to implement the above.

Site Cabins

Waste bins will be positioned inside the site cabin; these will be emptied daily or as and when required, site cabins will also be swept daily, by a delegated person. If an infestation occurs the contractor will take such actions as is necessary to deal with it, as required by the relevant local authority.

13.1 EMERGENCY RESPONSE



General

The flow chart details the actions to be taken if a hazardous substance is spilled or there is major pollution.

Containment

- Call out / alert all other people on-site to the emergency.
- Clear up all spillages as quickly as possible.
- If there is a risk of spillage entering drains or watercourses, the EA Pollution Prevention Officer, Local Authority Contaminated Land Officer, Fire Authority and Police as appropriate should be informed.

- Put on personal protective equipment.
- Isolate liquid spillages within a ring of inert absorbent. Make any leaking or ruptured containers safe.
- Shovel contaminated absorbent into an impermeable container (e.g., a heavy-duty plastic bag).
- Place all contaminated materials (e.g., used paper, brush heads, contaminated disposable coverall) into an impermeable container:
- Tie off and label the container (indicate name of product involved). Put the container in a secure place to await disposal.

Personnel Contamination

- Remove personnel from the source of contamination immediately and inform the site manager.
- Carefully remove all protective clothing and any other clothing that may have encountered it.
- Wash contaminated skin, eyes, and hair thoroughly in plenty of water.
- Seek medical advice and help as soon as possible, taking the relevant product label(s). If this is not possible, note the product name; take any appropriate product safety data sheets if visiting a doctor or hospital.
- Put all contaminated clothing in a heavy-duty plastic bag for decontamination (washing) or safe disposal later.

14.0 Wheel Washing

Wheel washing facilities at present are not deemed necessary given the distance from the site to highway, should the weather deteriorate, or the site haul roads become comprised facilities will be implemented on site including a road sweeper .

15.0 Car Parking

An area for car parking will be allocated for use by the on-site contractors and visitors will be created adjacent to the site cabin.

16.0 Road Cleaning

Mud on the highway is a source of nuisance and potentially reduces road safety. To minimize any debris mud on the highway the site will implement the following measures.

The need for the prevention of any spillage / mud on the highway shall be included in the site induction procedures for all personnel and hauliers.

All lorries leaving or arriving on site will have been securely sheeted to prevent spillage from the donor site.

Hard standing areas will be provided for vehicles entering, parking, and leaving the site.

Wheel washing facilities will be provided at the site if deemed necessary.

If, despite the controls in place, mud does leave the site and impacts upon the highway, remedial action will be taken by site personnel either using a road sweeper or manual labor.

17.0 WORKING HOURS

Working hours will be restricted to between 07:30hrs and 18:00hrs between Monday and Friday and between 07:30 and 13:00 on Saturdays with no work to be carried out on Sundays or Bank Holidays. Winter daylight hours may restrict working hours further and only emergency or essential maintenance operations will take place outside these hours or on Sundays.

Lorry deliveries will be checked (i.e., companies notified prior to deliveries) to prevent arrivals outside normal working hours.

18.0 HY TEX SILT BAG DETAILS



Ultra-Dewatering-B
ags.pdf

19.0 SILT CURTAIN DETAILS



Pro-Tex™-Silt-Curtai
ns.pdf

20.0 SILT BUSTER DETAILS



Solutions-for-Susp
ended-Solids-Remo'

Eskdale Environmental Service Ltd



Project: **METHOD STATEMENT**

Job Ref: **Cleator Mills**

Method Statement No: **MSTA107**

Title: **Site demolition and remedial works**

Date Issued	Issue No.	Issued by	Checked by	Approved by
1.08.2023	1	G Litherland		GL

Cleator Mills Cumbria		<i>METHOD STATEMENT</i>	
TITLE:	Site demolition and remedial works	M/statement No	MSTA107
		Issue No:	1
		Date:	01.08.2023

Prepared by:	Grant Litherland	Approved by:	Grant Litherland
Distribution:	Operators		

RECORD OF BRIEFING		
I confirm that I have been briefed and understand the requirements of this Method Statement and the control measures identified in the associated Risk Assessment. I also understand that if the methods of working outlined during the briefing should change, then I must refer to my Site principal contractor supervisor before continuing work. If no one is available on site due to the remote nature, stop work and contact manager as soon as possible,		
NAME	SIGNATURE	DATE
Person(s) in Charge of Work Grant Litherland		
Tradesmen/Operatives		

Cleator Mills Cumbria		METHOD STATEMENT	
TITLE:	Site demolition and remedial works	M/statement No	MSTA107
		Issue No:	1
		Date:	01.08.2023

1.0 Introduction: (Brief description of work, location and contractors involved) <i>To attend the site and carry out the required site remedial works including the demolition removal and breaking up of existing concrete structures, slabs, and associated infrastructure, prepare the site for re development including and specific remedial works associated with the former land use.</i>	Action EES / GN
2.0 Consultation with Third Parties Consultation with all parties involved with the design, planning conditions ,environmental conditions associated with the remedial works .	GL /GN
3.0 References: (Related MS No's, BS No's, statutory provisions, Codes of Practice etc) HSG 47 Avoiding danger from underground services. COSHH Control of substances hazardous to health EA the hazardous waste regulations (England and Wales) Regulations 2005 CAR The control of asbestos regulations 2012	EES / GN
Design: (Drawings or other applicable design documents) Existing site investigation report, site service drawings, site materials laydown plan, CEMP and associated environmental assessments	EES/GN
5.0 Risk Assessment: See attached. Separate Risk Assessments	EES

6.0 COSHH Assessment: All Safety Data sheets are attached or have been submitted previously				
Material	Hazards	Initial Risk	Precautions/PPE Required	Residual Risk
Soils, sub soils, tarmac, concrete, asbestos	Hydrocarbons, asbestos fibres,	HIGH	GLOVES, RPE, GLASSES, BOOTS OVERALLS	LOW
Contaminated soils	Hydrocarbons, heavy metals	HIGH	GLOVES, RPE, GLASSES, BOOTS OVERALLS	LOW

7.0 Temporary Works (Design and Construction if applicable) Signing and guarding of the immediate work area including any mobile plant	Action EES/GN
8.0 Services (Services required, any service shutdowns required) Service drawing to be available throughout works.	EES/GN

Cleator Mills Cumbria		METHOD STATEMENT	
TITLE:	Site demolition and remedial works	M/statement No	MSTA107
		Issue No:	1
		Date:	01.08.2023

Previous site investigation information to be available on-site during works REF 2023/5775 geo environmental engineering DTS.	
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9.0	Programme	Activity	Responsibility	Date Due
10.0	Material processing on site			Action
	Plant and equipment will be brought to site by Eskdale Environmental and stored on site securely on site, the highlighted concrete structures will be removed by an excavator 20ton using either a breaker attachment or concrete pulveriser attachment depending on the item requiring removal, thereafter, being transported to a waste management area on site for processing, material will be transported by dumper truck and stored approximately at the rear of the site. Material will be screened and where necessary crushed to provide material for re use. testing of the material will be carried out in line with any specification if required once approved the material will be re distributed on site for reuse and compaction or if unsuitable removed from site via tipper wagons to a licenced facility.			EES
11.0	Manpower Requirements: (Supervision, Labour, Skills, and Training)			
	In total 6 persons will be involved in the works at various stages, G Litherland will be managing the site with plant, machinery and labour support being provided by (TBC).			EES
12.0	PPE Requirements			
	Overalls, Safety Boots, Hard Hat, PVC Gloves, Safety Glasses/Visor, Wet Gear, Hi-Vis Jacket and Trousers, FFP3 respirators.			EES
12.0	Plant Requirements (Type, positioning, and mode of operation) re fuelling			
	Plant to be provided by EES / TBC, wagons to be provided by EES and contract haulier, traffic routes and loading areas to be confirmed by principal contractor GenR8 North Ltd No fuel will be stored on site , re fuelling will be undertaken in a designated area outside of the operational areas within a building (TBC) during re fuelling plant nappies will be used and suitable drip trays to capture any spills or drips ,oils and greases for plant will be kept in the operators vehicles and removed from site daily , daily plant inspections will be undertaken to reduce the potential for leaks or spills to occur with faulty equipment being either repaired or replaced as necessary , all plant refuelling will be undertaken outside of the flood risk zone .			EES / GN
13.0	Permits to Work and Access Requirements			
	Personnel to report to representative on arrival to attend any briefing/induction required.			EES
	Personnel to comply with risk and methodology at all times . Client or competent person to complete Permit to Work paperwork (if required) Line Manager or Supervisor to advise if applicable.			GN
	RAMS to be presented to GenR8 North Ltd or their representative prior to works commencing.			

Cleator Mills Cumbria		METHOD STATEMENT	
TITLE:	Site demolition and remedial works	M/statement No	MSTA107
		Issue No:	1
		Date:	01.08.2023

14.0	Method of Work (Details of operations, step-by step sequence and working methods to be covered in task activity MS)	
METHOD STATEMENT.		
<u>Equipment</u>	1 x 21ton tracked Excavator, 1 x 5-ton dumper truck, 1 x crusher, 1x pecker attachment, 1 x Concrete Pulveriser attachment Tipper wagons, hand tools, fencing, silt buster unit .	
<u>Job Description</u>	To remove the identified redundant concrete slab footings, foundations, redundant drainage where required in line with the site remedial works, stockpile site won material for re use, where required the material will be processed using an impact /jaw crusher thereafter being stockpiled on site where required awaiting testing and classification for re use or disposal.	
<u>Environmental</u>	Given the location of the site and the sensitive receptors additional measure will be implemented including where necessary cut off trenches will be installed , silt curtains in the river and silt removing equipment (silt buster and associated filter bag arrangement) , addition measures to be implemented given the location of the site given it lies within a flood risk zone 3 , all plant and equipment used in mitigating silt migration will be installed to manufacturers specifications , inspected , tested and replaced as necessary .	
<u>Job Objectives</u>	To carry out the site remedial works.	

Cleator Mills Cumbria		METHOD STATEMENT	
TITLE:	Site demolition and remedial works	M/statement No	MSTA107
		Issue No:	1
		Date:	01.08.2023

Site Restrictions

Operating hours 08.00 – 17.30 Monday to Friday

METHOD

1. On arrival at site, EES will inform the site contact of their arrival.
2. Sign into the site office daily upon arrival and departure
3. Site induction to be carried out by EES/GN to all persons working on site.
4. Toolbox talks, site methodology and specific risks associated with the River and SAC, and associated daily monitoring requirements set out within the CEMP , installation of silt curtain in to sections of the watercourse deemed at risk from the site works (separate MS for working in and around water courses) to be installed by a competent persons only and in line with manufacturer specifications , given the flood risk level sandbags and barge bords will be available in the site compound should such an event occur , additional toolbox talks will be given on flooding procedures , evacuation of plant and persons along with the removal where possible of any potentially harmful construction materials .
5. Wear appropriate PPE.
6. Carry out site walk over and mark areas of concern, highlighted during the site investigation review /site remedial plan install cut off trenches where a risk of surface water migration has been identified and install the silt buster unit appropriately along with any silt bag units for the discharge overland, this will be undertaken by a suitably trained person and in line with manufactures specifications along with any specific management and or monitoring required .
7. Carry out remedial activities including removal of the redundant slab using excavator and breaker attachment, removal by excavation of footings and foundations using the excavator, loading dumper truck with excavator, transporting across the site with dumper to waste storage for crushing.
8. Crushing to be undertaken by suitably trained operator only, dust suppression to be always utilised during crushing works to remove environmental risk from dust.
9. Remove from site if waste materials if not suitable for re use, tipper wagons to adhere to site controls and speed limits, cover vehicles before leaving site, and if necessary, deploy sweeper to keep access roads and highway clean.

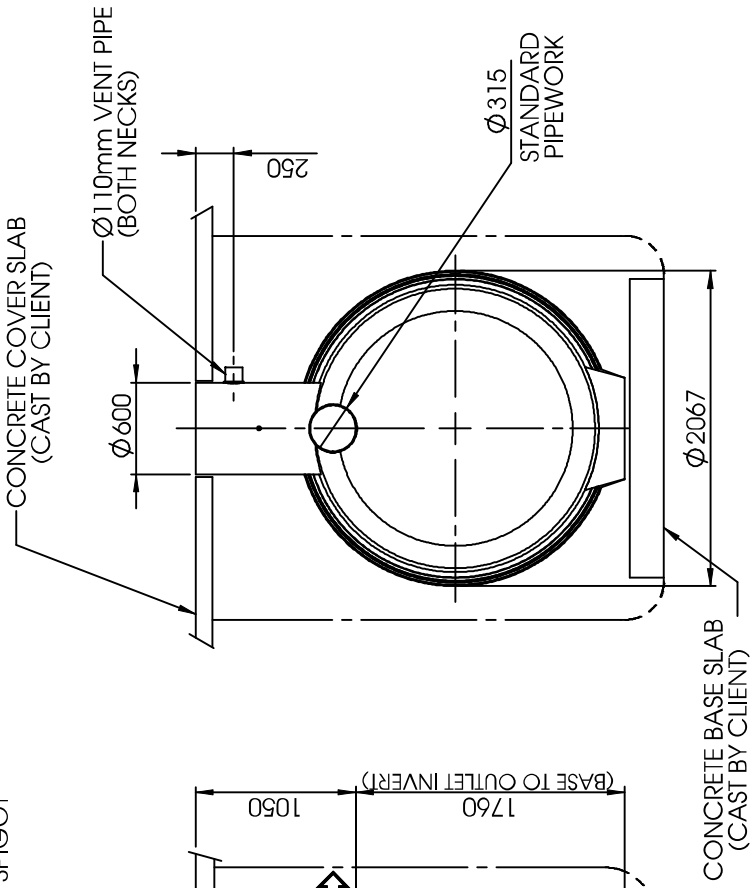
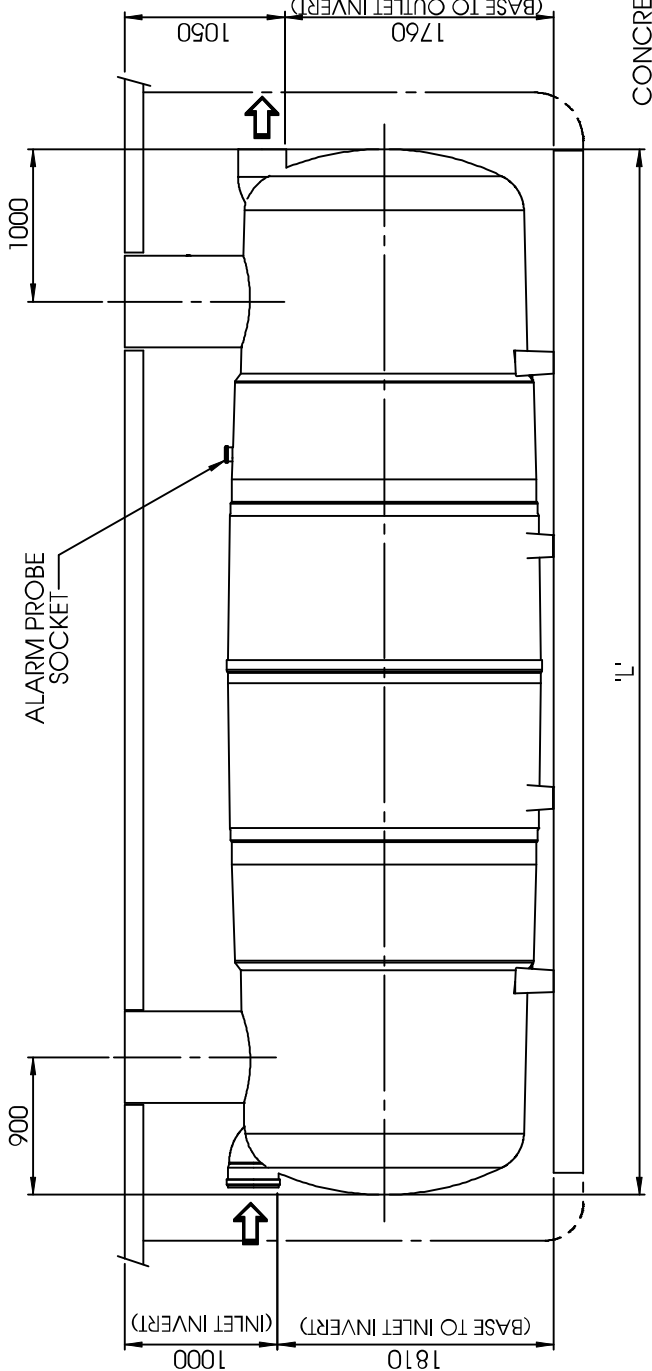
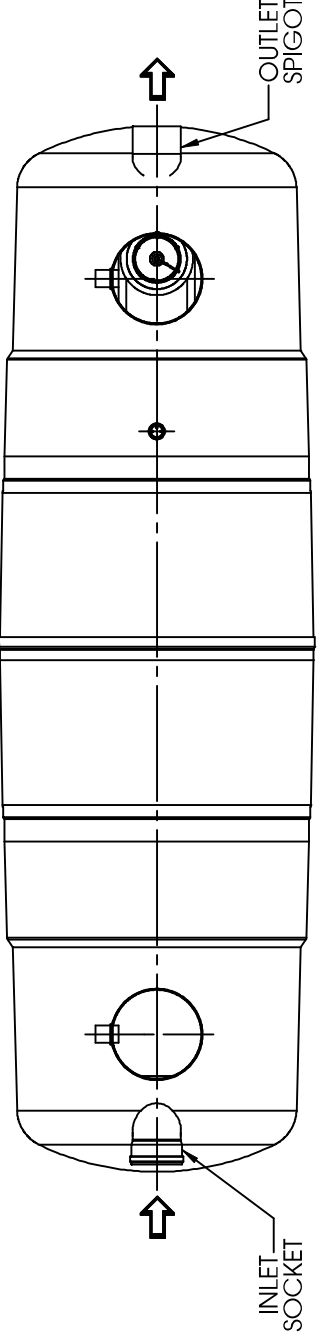
NB. AT THE COMPLETION OF THE WORKS, WE MUST LEAVE THE SITE IN A CLEAN AND TIDY CONDITION AND LIASE WITH THE CLIENT BEFORE LEAVING SITE.

Cleator Mills Cumbria		METHOD STATEMENT	
TITLE:	Site demolition and remedial works	M/statement No	MSTA107
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15.0 Waste Disposal Arrangements		
Waste material being brokered through EES to local licenced facilities TBC.		EES
16.0 Contingency Plans: (Emergency arrangements, contingency plans)		
Emergency Services on standby if necessary Emergency contact numbers are given to the working party in case of an emergency. In the event of an incident or accident, please notify your supervisor or line manager.		EES / GN
17.0 Attachments: (Related documents, sketches)		
COSHH data not available at present due to the unknown origin of the contaminants on site		EES

Appendix 4. Oil Interceptor Details

UNIT REF.	NOMINAL FLOW RATE (L/s)	APPROX. EMPTY WEIGHT (kg)	OVERALL LENGTH 'L'
NSFA020	20	575	3200
NSFA030	30	665	3915
NSFA040	40	740	4640
NSFA050	50	985	5425
NSFA065	65	1145	6850
INFORMATION COMMON FOR CLASS 1 & CLASS 2 UNITS			



NOTES:-

1. INLET/OUTLET PIPES ARE PLAIN PIPE Ø315mm PVCu. THE STANDARD EN858 STATES MINIMUM CONNECTION SIZES, UNITS ORDERED WITH DIFFERENT SIZED CONNECTIONS ARE NOT FULLY COMPLIANT WITH THE STANDARD. PLEASE NOTE, A CLASS 1 SEPARATOR INCLUDES FILTER MEDIA, CLASS 2 DO NOT.
2. EXTENSION NECKS FOR DEEPER INVERTS CAN BE PROVIDED IN 0.5m INCREMENTS, FOR ON SITE ASSEMBLY. MAXIMUM 2.0m INVERT RECOMMENDED.
3. ALL UNITS REQUIRE APPROPRIATE COVER AND FRAME TO SUIT APPLIED LOADINGS.
4. THIS DRAWING SHOULD BE USED FOR DIMENSIONAL INFORMATION ONLY. IT IS ESSENTIAL THAT THIS DRAWING IS READ IN CONJUNCTION WITH INSTALLATION GUIDELINES SUPPLIED WITH UNIT. (COPIES ARE AVAILABLE FROM OUR SALES DEPARTMENT).
5. THIS DRAWING IS ALSO AVAILABLE ON OUR WEBSITE www.kingspanenv.com

Please check with Environmental Treatment Services Ltd that this drawing is the latest issue				Material: Various		Tolerance: ± 5mm		Drawing : DS0911P NSFA020 - NSFA065 Full Retention Separators	Page 1 of 1
Issue	Date	Description		Finish	Weight	Thickness	Surface Area		
02	29.01.09	JC	Update Border	n/a	n/a	n/a	n/a		
01	30.04.08	T. Kelly	CC-065 - Initial Release	n/a	n/a	n/a	n/a	Kingspan reserve the right to alter the details of this drawing without prior notice. This drawing is copyright and may not be reproduced or used without the written permission of Kingspan.	
All dimensions in mm			Scale: Not to scale						
R:\Engineering\Drawing Data\02 - Sales Drawings\DS\DS - 09\DS0911P NSFA020 - 065 Full Retention Separators									



SEPARATORS

A RANGE OF FUEL/OIL SEPARATORS
FOR PEACE OF MIND



60 YEARS OF
Expertise &
Innovation
1955-2015

Separators

A RANGE OF FUEL/OIL SEPARATORS FOR PEACE OF MIND

Surface water drains normally discharge to a watercourse or indirectly into underground waters (groundwater) via a soakaway. Contamination of surface water by oil, chemicals or suspended solids can cause these discharges to have a serious impact on the receiving water.

The Environment Regulators, Environment Agency, England and Wales, SEPA, Scottish Environmental Protection Agency in Scotland and Department of Environment & Heritage in Northern Ireland, have published guidance on surface water disposal, which offers a range of means of dealing with pollution both at source and at the point of discharge from site (so called 'end of pipe' treatment). These techniques are known as 'Sustainable Drainage Systems' (SuDS).

Where run-off is draining from relatively low risk areas such as car-parks and non-operational areas, a source control approach, such as permeable surfaces or infiltration trenches, may offer a suitable means of treatment, removing the need for a separator.

Oil separators are installed on surface water drainage systems to protect receiving waters from pollution by oil, which may be present due to minor leaks from vehicles and plant, from accidental spillage.

Effluent from industrial processes and vehicle washing should normally be discharged to the foul sewer (subject to the approval of the sewerage undertaker) for further treatment at a municipal treatment works.

SEPARATOR STANDARDS AND TYPES

A British (and European) standard (EN 858-1 and 858-2) for the design and use of prefabricated oil separators has been adopted. New prefabricated separators should comply with the standard.

SEPARATOR CLASSES

The standard refers to two 'classes' of separator, based on performance under standard test conditions.

CLASS I

Designed to achieve a concentration of less than 5mg/l of oil under standard test conditions, should be used when the separator is required to remove very small oil droplets.

CLASS II

Designed to achieve a concentration of less than 100mg/l oil under standard test conditions and are suitable for dealing with discharges where a lower quality requirement applies (for example where the effluent passes to foul sewer).

Both classes can be produced as full retention separators. The oil concentration limits of 5 mg/l and 100 mg/l are only applicable under standard test conditions. It should not be expected that separators will comply with these limits when operating under field conditions.

FULL RETENTION SEPARATORS

Full retention separators treat the full flow that can be delivered by the drainage system, which is normally equivalent to the flow generated by a rainfall intensity of 65mm/hr.

On large sites, some short term flooding may be an acceptable means of limiting the flow rate and hence the size of full retention systems.

Get in touch for a **FREE** professional site visit and a representative will contact you within 5 working days to arrange a visit.

helpingyou@klargester.com to make the right decision or call **028 302 66799**

BYPASS SEPARATORS

Bypass separators fully treat all flows generated by rainfall rates of up to 6.5mm/hr. This covers over 99% of all rainfall events. Flows above this rate are allowed to bypass the separator. These separators are used when it is considered an acceptable risk not to provide full treatment for high flows, for example where the risk of a large spillage and heavy rainfall occurring at the same time is small.

FORECOURT SEPARATORS

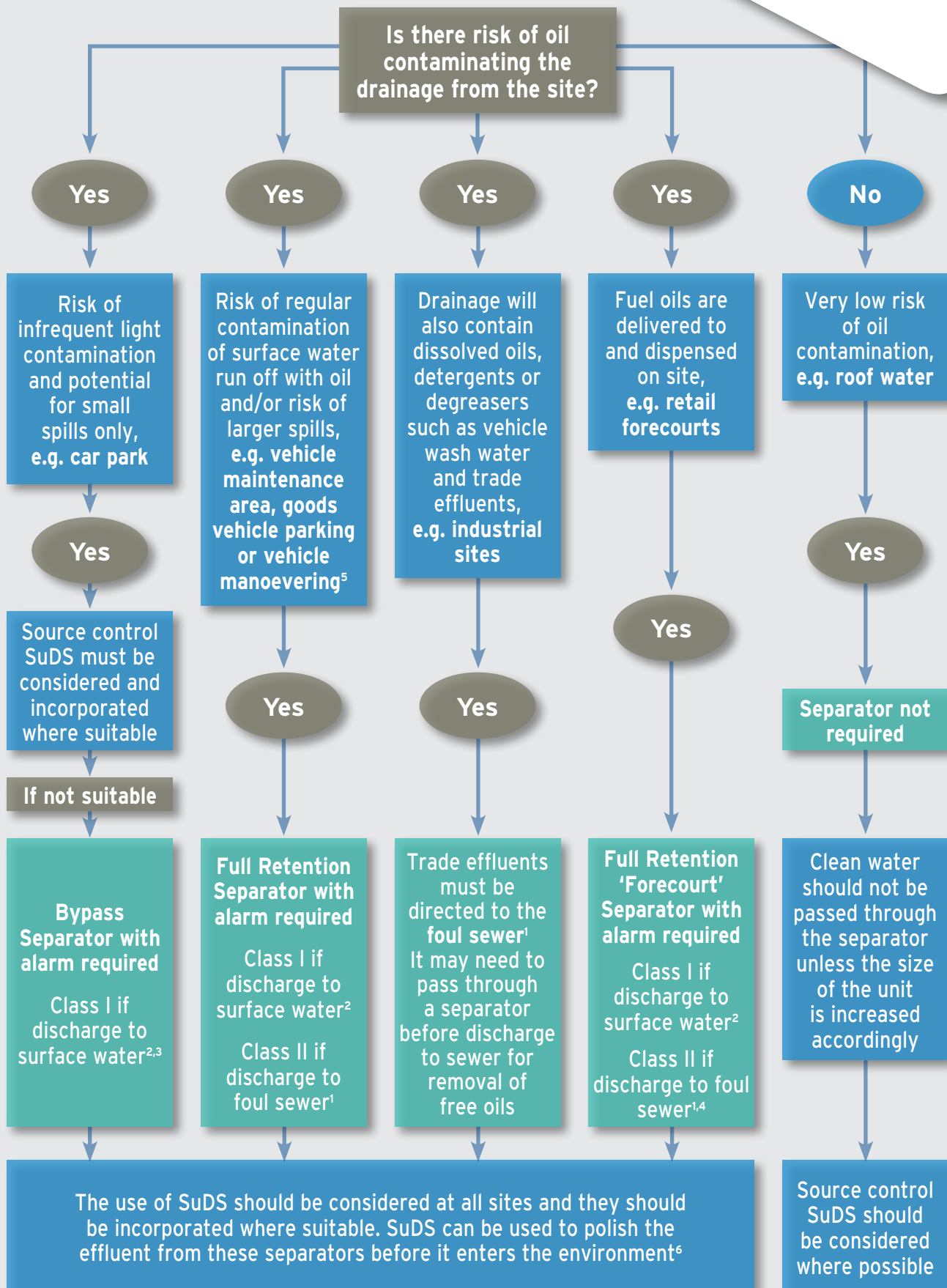
Forecourt separators are full retention separators specified to retain on site the maximum spillage likely to occur on a petrol filling station. They are required for both safety and environmental reasons and will treat spillages occurring during vehicle refuelling and road tanker delivery. The size of the separator is increased in order to retain the possible loss of the contents of one compartment of a road tanker, which may be up to 7,600 litres.

SELECTING THE RIGHT SEPARATOR

The chart on the following page gives guidance to aid selection of the appropriate type of fuel/oil separator for use in surface water drainage systems which discharge into rivers and soakaways.

For further detailed information, please consult the Environment Agency Pollution Prevention Guideline 03 (PPG 3) 'Use and design of oil separators in surface water drainage systems' available from their website.

Kingspan Klargester has a specialist team who provide technical assistance in selecting the appropriate separator for your application.



1 You must seek prior permission from your local sewer provider before you decide which separator to install and before you make any discharge.

2 You must seek prior permission from the relevant environmental body before you decide which separator to install.

3 In this case, if it is considered that there is a low risk of pollution a source control SuDS scheme may be appropriate.

4 In certain circumstances, the sewer provider may require a Class 1 separator for discharges to sewer to prevent explosive atmospheres from being generated.

5 Drainage from higher risk areas such as vehicle maintenance yards and goods vehicle parking areas should be connected to foul sewer in preference to surface water.

6 In certain circumstances, a separator may be one of the devices used in the SuDS scheme. Ask us for advice.

Bypass NSB RANGE

APPLICATION

Bypass separators are used when it is considered an acceptable risk not to provide full treatment, for very high flows, and are used, for example, where the risk of a large spillage and heavy rainfall occurring at the same time is small, e.g.

- Surface car parks.
- Roadways.
- Lightly contaminated commercial areas.

PERFORMANCE

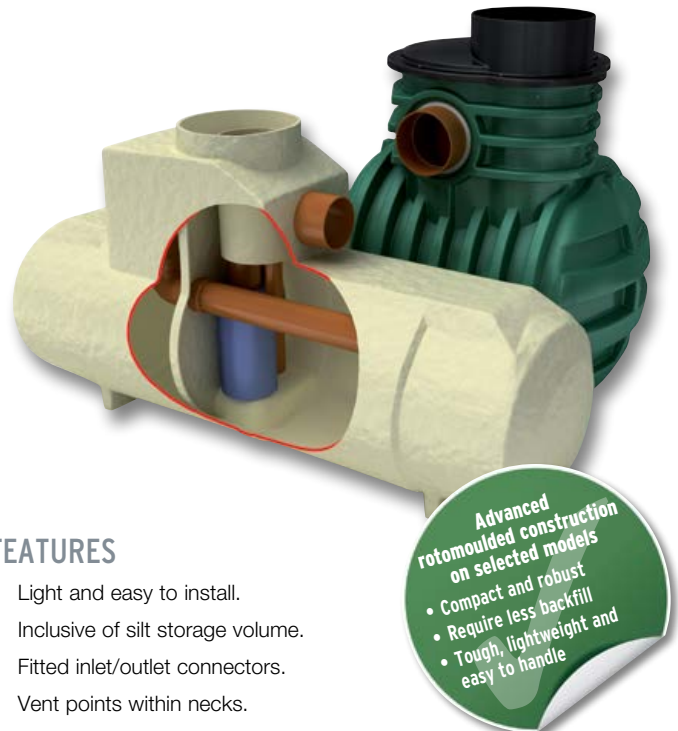
Klargester were one of the first UK manufacturers to have separators tested to EN 858-1. Klargester have now added the NSB bypass range to their portfolio of certified and tested models. The NSB number denotes the maximum flow at which the separator treats liquids. The British Standards Institute (BSI) tested the required range of Kingspan Klargester Bypass separators and certified their performance in relation to their flow and process performance assessing the effluent qualities to the requirements of EN 858-1. Klargester bypass separator designs follow the parameters determined during the testing of the required range of bypass separators.

Each bypass separator design includes the necessary volume requirements for:

- Oil separation capacity.
- Oil storage volume.
- Silt storage capacity.
- Coalescer.

The unit is designed to treat 10% of peak flow. The calculated drainage areas served by each separator are indicated according to the formula given by PPG3 $NSB = 0.0018A(m^2)$. Flows generated by higher rainfall rates will pass through part of the separator and bypass the main separation chamber.

Class I separators are designed to achieve a concentration of 5mg/litre of oil under standard test conditions.



FEATURES

- Light and easy to install.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.
- Vent points within necks.
- Oil alarm system available (required by EN 858-1 and PPG3).
- Extension access shafts for deep inverts.
- Maintenance from ground level.
- GRP or rotomoulded construction (subject to model).

To specify a nominal size bypass separator, the following information is needed:-

- The calculated flow rate for the drainage area served. Our designs are based on the assumption that any interconnecting pipework fitted elsewhere on site does not impede flow into or out of the separator and that the flow is not pumped.
- The drain invert inlet depth.
- Pipework type, size and orientation.

SIZES AND SPECIFICATIONS

UNIT NOMINAL SIZE	FLOW (l/s)	PEAK FLOW RATE (l/s)	DRAINAGE AREA (m ²)	STORAGE CAPACITY (litres)		UNIT LENGTH (mm)	UNIT DIA. (mm)	ACCESS SHAFT DIA. (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT	STANDARD FALL ACROSS (mm)	MIN. INLET INVERT (mm)	STANDARD PIPEWORK DIA.
NSBP003	3	30	1670	300	45	1700	1350	600	1420	1320	100	500	160
NSBP004	4.5	45	2500	450	60	1700	1350	600	1420	1320	100	500	160
NSBP006	6	60	3335	600	90	1700	1350	600	1420	1320	100	500	160
NSBE010	10	100	5560	1000	150	2069	1220	750	1450	1350	100	700	315
NSBE015	15	150	8335	1500	225	2947	1220	750	1450	1350	100	700	315
NSBE020	20	200	11111	2000	300	3893	1220	750	1450	1350	100	700	375
NSBE025	25	250	13890	2500	375	3575	1420	750	1680	1580	100	700	375
NSBE030	30	300	16670	3000	450	4265	1420	750	1680	1580	100	700	450
NSBE040	40	400	22222	4000	600	3230	1920	600	2185	2035	150	1000	500
NSBE050	50	500	27778	5000	750	3960	1920	600	2185	2035	150	1000	600
NSBE075	75	750	41667	7500	1125	5841	1920	600	2235	2035	200	950	675
NSBE100	100	1000	55556	10000	1500	7661	1920	600	2235	2035	200	950	750
NSBE125	125	1250	69444	12500	1875	9548	1920	600	2235	2035	200	950	750

Rotomoulded chamber construction
 GRP chamber construction
 * Some units have more than one access shaft – diameter of largest shown.

Full Retention NSF RANGE

APPLICATION

Full retention separators are used in high risk spillage areas such as:

- Fuel distribution depots.
- Vehicle workshops.
- Scrap Yards

PERFORMANCE

Kingspan Klargester were the first UK manufacturer to have the required range (3-30 l/sec) certified to EN 858-1 in the UK. The NSF number denotes the flow at which the separator operates.

The British Standards Institute (BSI) have witnessed the performance tests of the required range of separators and have certified their performance, in relation to their flow and process performance to ensure that they met the effluent quality requirements of EN 858-1. Larger separator designs have been determined using the formulas extrapolated from the test range.

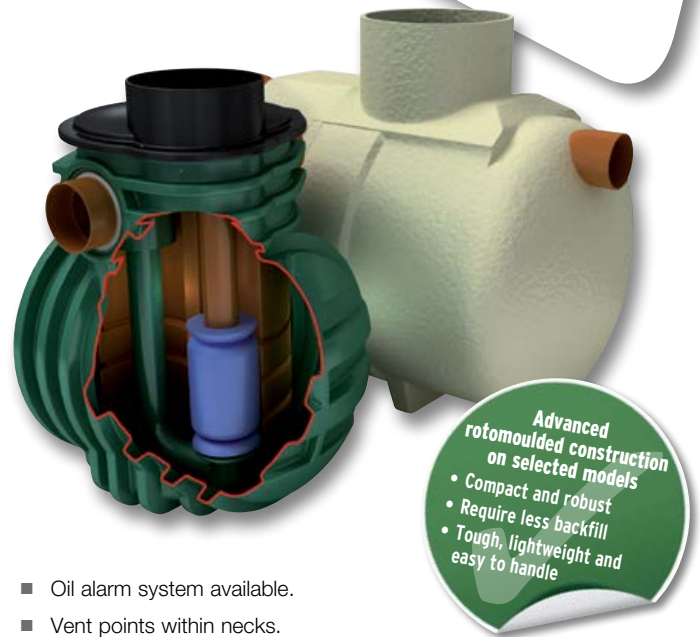
Each full retention separator design includes the necessary volume requirements for:

- Oil separation capacity.
- Oil storage volume.
- Silt storage capacity.
- Coalescer (Class I units only).
- Automatic closure device.

Klargester full retention separators treat the whole of the specified flow.

FEATURES

- Light and easy to install.
- Class I and Class II designs.
- 3-30 l/sec range independently tested and performance sampled, certified by the BSI.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.



- Oil alarm system available.
- Vent points within necks.
- Extension access shafts for deep inverts.
- Maintenance from ground level.
- GRP or rotomoulded construction (subject to model).

To specify a nominal size full retention separator, the following information is needed:-

- The calculated flow rate for the drainage area served. Our designs are based on the assumption that any interconnecting pipework fitted elsewhere on site does not impede flow into or out of the separator and that the influent is not pumped.
- The required discharge standard. This will decide whether a Class I or Class II unit is required.
- The drain invert inlet depth.
- Pipework type, size and orientation.

SIZES AND SPECIFICATIONS

UNIT NOMINAL SIZE	FLOW (l/s)	DRAINAGE AREA (m ²) PPG-3 (0.018)	STORAGE CAPACITY (litres)		UNIT LENGTH (mm)	UNIT DIA. (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT	MIN. INLET INLET (mm)	STANDARD PIPEWORK DIA. (mm)
			SILT	OIL						
NSFP003	3	170	300	30	1700	1350	1420	1345	500	160
NSFP006	6	335	600	60	1700	1350	1420	1345	500	160
NSFA010	10	555	1000	100	2610	1225	1050	1000	500	200
NSFA015	15	835	1500	150	3910	1225	1050	1000	500	200
NSFA020	20	1115	2000	200	3200	2010	1810	1760	1000	315
NSFA030	30	1670	3000	300	3915	2010	1810	1760	1000	315
NSFA040	40	2225	4000	400	4640	2010	1810	1760	1000	315
NSFA050	50	2780	5000	500	5425	2010	1810	1760	1000	315
NSFA065	65	3610	6500	650	6850	2010	1810	1760	1000	315
NSFA080	80	4445	8000	800	5744	2820	2500	2450	1000	300
NSFA100	100	5560	10000	1000	6200	2820	2500	2450	1000	400
NSFA125	125	6945	12500	1250	7365	2820	2500	2450	1000	450
NSFA150	150	8335	15000	1500	8675	2820	2550	2450	1000	525
NSFA175	175	9725	17500	1750	9975	2820	2550	2450	1000	525
NSFA200	200	11110	20000	2000	11280	2820	2550	2450	1000	600

■ Rotomoulded chamber construction ■ GRP chamber construction

Washdown & Silt

APPLICATION

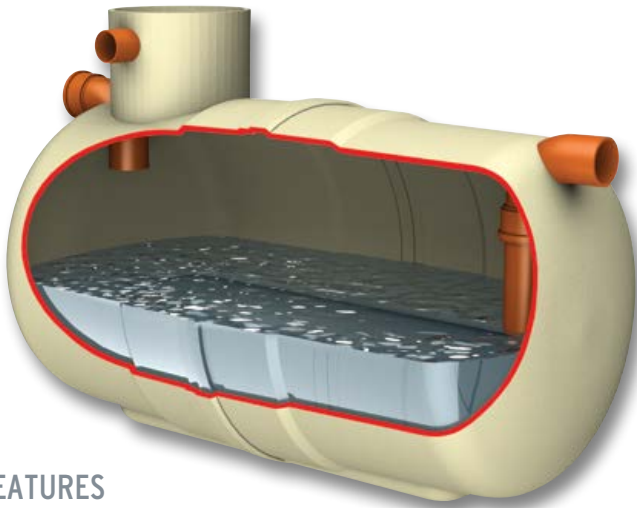
This unit can be used in areas such as car wash and other cleaning facilities that discharge directly into a foul drain, which feeds to a municipal treatment facility.

If emulsifiers are present the discharge must not be allowed to enter an NS Class I or Class II unit.

- Car wash.
- Tool hire depots.
- Truck cleansing.
- Construction compounds cleansing points.

PERFORMANCE

Such wash down facilities must not be allowed to discharge directly into surface water but must be directed to a foul connection leading to a municipal treatment works as they utilise emulsifiers, soaps and detergents, which can dissolve and disperse the oils.



FEATURES

- Light and easy to install.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.
- Vent points within necks.
- Extension access shafts for deep inverts.
- Maintenance from ground level.

SIZES AND SPECIFICATIONS

REF.	TOTAL CAPACITY (litres)	MAX. REC. SILT	MAX. FLOW RATE (l/s)	LENGTH (mm)	DIAMETER (mm)	ACCESS SHAFT DIA. (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT (mm)	STANDARD FALL ACROSS UNIT (mm)	MIN. INLET INVERT (mm)	STANDARD PIPEWORK DIA. (mm)	APPROX EMPTY (kg)
W1/010	1000	500	3	1123	1225	460	1150	1100	50	500	160	60
W1/020	2000	1000	5	2074	1225	460	1150	1100	50	500	160	120
W1/030	3000	1500	8	2952	1225	460	1150	1100	50	500	160	150
W1/040	4000	2000	11	3898	1225	460	1150	1100	50	500	160	180
W1/060	6000	3000	16	4530	1440	600	1360	1310	50	500	160	320
W1/080	8000	4000	22	3200	2020	600	2005	1955	50	500	160	585
W1/100	10000	5000	27	3915	2020	600	2005	1955	50	500	160	680
W1/120	12000	6000	33	4640	2020	600	2005	1955	50	500	160	770
W1/150	15000	7500	41	5435	2075	600	1940	1890	50	500	160	965
W1/190	19000	9500	52	6865	2075	600	1940	1890	50	500	160	1200

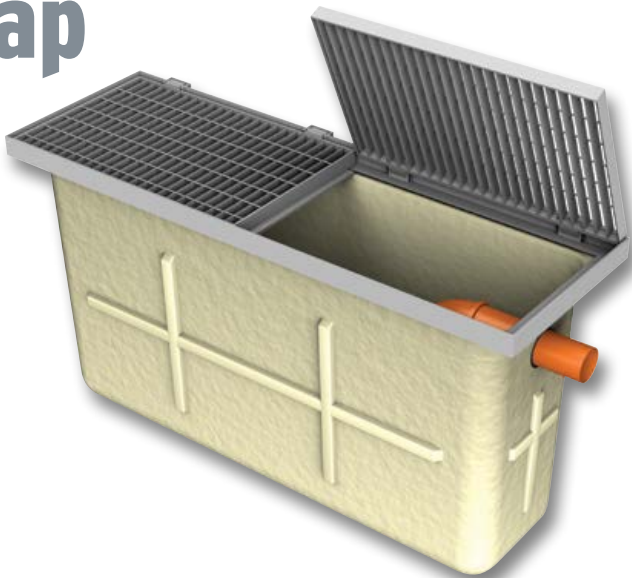
Car Wash Silt Trap

APPLICATION

Car Wash silt trap is designed for use before a separator in car wash applications to ensure effective silt removal.

FEATURES

- FACTA Class B covers.
- Light and easy to install.
- Maintenance from ground level.



Forecourt

APPLICATION

The forecourt separator is designed for installation in petrol filling station forecourts and similar applications. The function of the separator is to intercept hydrocarbon pollutants such as petroleum and oil and prevent their entry to the drainage system, thus protecting the environment against hydrocarbon contaminated surface water run-off and gross spillage.

PERFORMANCE

Operation ensures that the flow cannot exit the unit without first passing through the coalescer assembly.

In normal operation, the forecourt separator has sufficient capacity to provide storage for separated pollutants within the main chamber, but is also able to contain up to 7,600 litres of pollutant arising from the spillage of a fuel delivery tanker compartment on the petrol forecourt. The separator has been designed to ensure that oil cannot exit the separator in the event of a major spillage, subsequently the separator should be emptied immediately.

FEATURES

- Light and easy to install.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.
- Vent points within necks.
- Extension access shafts for deep inverts.
- Maintenance from ground level.

SIZES AND SPECIFICATIONS

ENVIROCEPTOR CLASS	TOTAL CAP. (litres)	DRAINAGE AREA (m²)	MAX. FLOW RATE (l/s)	LENGTH (mm)	DIAMETER (mm)	ACCESS SHAFT DIA. (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT (mm)	STD. FALL ACROSS UNIT (mm)	MIN. INLET INVERT (mm)	STD. PIPEWORK (mm)	EMPTY WEIGHT (kg)
I	10000	555	10	3963	1920	600	2110	2060	50	400	160	500
II	10000	555	10	3963	1920	600	2110	2060	50	400	160	500
I	10000	1110	20	3963	1920	600	2110	2060	50	400	200	500
II	10000	1110	20	3963	1920	600	2110	2060	50	400	200	500



- Class I and Class II design.
- Oil storage volume.
- Coalescer (Class I unit only).
- Automatic closure device.
- Oil alarm system available.

INSTALLATION

The unit should be installed on a suitable concrete base slab and surrounded with concrete or pea gravel backfill. See sales drawing for installation.

If the separator is to be installed within a trafficked area, then a suitable cover slab must be designed to ensure that loads are not transmitted to the unit.

The separator should be installed and vented in accordance with Health and Safety Guidance Note HS(G)41 for filling stations, subject to Local Authority requirements.

Alarm Systems

British European Standard EN 858-1 and Environment Agency Pollution Prevention Guideline PPG3 requires that all separators are to be fitted with an oil level alarm system and that it should be installed and calibrated by a suitably qualified technician so that it will respond to an alarm condition when the separator requires emptying.

- Easily fitted to existing tanks.
- Excellent operational range.
- Visual and audible alarm.
- Additional telemetry option.



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Klargester

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In keeping with Company policy of continuing research and development and in order to offer our clients the most advanced products, Kingspan Environmental reserves the right to alter specifications and drawings without prior notice.

011259
NSFA020 – NSFA065 Full Retention Separators
Installation & Maintenance Guidelines



Kingspan Environmental Service Contact Numbers:

GB: 0844 846 0500

NI: 028 3025 4077

IRL: 048 3025 4077

Associated Documents

DS0911P	NSFA020 – NSFA065 Full Retention Separators Sales Drawing
DS0859P	Neck & Coalescer Extension Details
PD0323	Oil Probe Fitting Details

Issue	Description	Date
02	CC1087	September 2012

HEALTH & SAFETY

These warnings are provided in the interest of safety. You must read them carefully before installing or using the equipment.

It is important that this document is retained with the equipment for future reference. Should the equipment be transferred to a new owner, always ensure that all relevant documents are supplied in order that the new owner can be acquainted with the functioning of the equipment and the relevant warnings.

Installation should only be carried out by a suitably experienced contractor, following these guidelines.

We recommend the use of a dust mask and gloves when cutting GRP components.

Electrical work should be carried out by a qualified electrician.

Contaminated surface water can contain substances harmful to human health. Any person carrying out maintenance on the equipment should wear suitable protective clothing, including gloves. Good hygiene practice should also be observed.

Access covers should be selected with reference to the location of the unit and traffic loads to be accommodated. These are not (normally) part of the Separator supply.

When covers are removed precautions must be taken against personnel falling into the unit.

Should you wish to inspect the operation of the equipment, please observe all necessary precautions, including those listed below, which apply to maintenance procedures.

Ensure that you are familiar with the safe working areas and accesses. Ensure that the working area is adequately lit.

Take care to maintain correct posture, particularly when lifting. Use appropriate lifting equipment when necessary. Keep proper footing and balance at all times. Avoid any sharp edges.

OIL ALARM SYSTEMS

PPG3 recommends that the oil level alarm be fitted, tested and commissioned by a competent Installer. This is to ensure that the oil probe is calibrated correctly, raising an alarm when 90% of the oil storage volume is reached. Should the oil level alarm fail to provide an early warning, excessive oil could pass through the separator, thus polluting the environment. This could result in substantial cleanup costs and legal action being taken under the water resources act 1991.

MAINTENANCE

The correct ongoing maintenance is essential for the proper operation of the equipment. Operators who rely on oil level alarms to prompt them to service separators between maintenance intervals run the risk of polluting, should the alarms not work, hence the ongoing functional assessment of the oil alarm systems is fundamental if pollution incidents are to be avoided.

The removal of sediment and retained oil/grease should be carried out by a contractor holding the relevant permits to transport and dispose of such waste. The contractor must refer to the guidelines in this document.



Kingspan Environmental
College Road North
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Aylesbury
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10

EN 858 : Separator systems for light liquids

GRP Glass Reinforced Plastic Tank

Full Retention Separators NS003 - NS200

Class 1 & 2

Watertightness	Passed
Structural Testing	Passed
Hydraulic efficiency	Passed

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Appendices

Separator Maintenance Log

1.0 Introduction

These Guidelines represent Best Practice for the installation of the above Full Retention Separator Units. Many years of specialist experience has led to the successful installation of thousands of separator units. It must be noted, however, that these Guidelines are necessarily of a general nature. It is the responsibility of others to verify that they are appropriate for the specific ground conditions and in-service loads of each installation. Similarly, a qualified specialist (e.g. Civil engineering consultant) must verify any information or advice given by employees or agents of the company regarding the design of an installation.

For guidance of Separator selection and application, please refer to the most recent issue of Environment Agency Guidelines No.3 (PPG3) and BS EN 858. Our Units have been independently tested by BSI and are certified as meeting the standards.

2.0 Handling & Storage

- 2.1. Care must be taken to ensure that units are not damaged during delivery and handling on site. Please take care and place unit so that it can not fall and become damaged.
- 2.2. The design requirements of our products will frequently mean that the centre of gravity of the unit is "offset". Care must therefore be taken to ensure that the unit is stable when lifting. Rainwater may also collect inside units, particularly if they have been stored on site prior to installation, adding weight and increasing instability. Check units before lifting and pump out any excess water.
- 2.3. When lifting units, use webbing slings of a suitable specification. Do not use chains.
- 2.4. A suitable spreader bar should be used to ensure that units are stable and that loads are evenly distributed during lifting. When lifting separators, a spreader bar should be used where the slings would otherwise be at an angle > 30 degrees to the vertical.
- 2.5. Lifting equipment should be selected by taking into account the unit weight, length and the distance of lift required on site.
- 2.6. We accept no responsibility for the selection of lifting equipment.
- 2.7. Whenever our units are stored or moved on site, ensure that the storage location is free of rock, debris and any sharp objects, which may damage the unit. The units must be placed on ground, which is flat and level to evenly support the base of the unit. Do not roll separators.

3.0 Site Planning

The following points should be considered before installation of the equipment:

- 3.1. The discharge must have the consent of the relevant Environmental Regulator.
- 3.2. The installation should have Planning and Building Control approval.
- 3.3. Consider installing flow cut-off valves to isolate the separator in an emergency or during site cleaning operations. See Environment Agency Guidelines PPG3.
- 3.4. We will fit a tube to receive the alarm probe. This tube provides protection and ensures that the probe is positioned at the correct level to sense the oil build up. The tube design and probe level setting assumes the use of our standard oil alarm system and may not be suitable for other alarm supplier's equipment. The probe tube may be fitted either within the neck or within the body of the unit. It should be extended to ground level when fitted in the body of the tank and you should make provision to extend the tube to the required height before backfilling. Consult the alarm supplier's instructions for their detailed fitting installation instructions.
- 3.5. Consider venting of the unit. Comply with local regulations. In the UK, comply with the following regulations, for Petrol Stations: Health and Safety Guidance Note 41 (HS(G)41), for other applications: BS8301: 1985 (obsolescent) BS EN 752 Building Drainage. Adequate ventilation should be provided to the separator. The ventilation pipe should be as short as is practicable and be terminated not less than 2.5m above paving nor less than 1m above the head of an openable window or other opening into a building within a horizontal distance of 3m. Each neck should be vented independently, we advise against joining these below ground prior to their rising as vent stacks.
- 3.6. Uncontaminated run off such as roof water should be excluded from separators. (EA Guidelines PPG3.)

- 3.7. Consider installation of a sampling point downstream of the separator as there is no suitable facility to effectively sample the waste water from inside the unit. (Suggested in EN 858 Pt 1).
- 3.8. Ground conditions and water table level should be assessed. If the water table will be above the base of the units at any time of the year, adequate concrete backfill must be provided to avoid flotation. In poorly draining ground, consideration should also be given to the likelihood of flotation due to surface water collecting in the backfill, and an appropriate installation method devised to avoid this.
- 3.9. If the discharge is to a soakaway, a porosity test should be carried out as part of the assessment of suitability for sub-soil drainage.
- 3.10. The separator must be installed at a level that will allow connection to the incoming drain and a free discharge at the system outlet.
- 3.11. Do not install the unit deeper than necessary, if required, ensure that you purchase extension necks and coalescer extensions. The minimum invert depth of the unit is shown on the customer drawing.
- 3.12. Adequate access must be provided for routine maintenance. Vehicles should not be permitted within a distance equal to the depth of the unit, unless suitable structural protection is provided to the installation.
- 3.13. There must be at least 1 metre of clear, level ground all around the access covers to allow for routine maintenance.
- 3.14. It is essential that a mains water supply is accessible for routine cleansing and refilling after removal of waste material and liquid.
- 3.15. Provide electrical supply for alarm system.
- 3.16. Installation should only be carried out by suitably qualified and experienced contractors in accordance with current Health and Safety Regulations. Electrical work should be carried out by a qualified electrician, working to the latest edition of IEE wiring regulations.
- 3.17. This unit is designed to operate with gravity in and out flows. The unit is not designed to operate with a pumped influent.

4.0 Installation – General

- 4.1. When units are installed in unstable ground conditions where movement of the surrounding material and/or unit may occur, the connecting pipework should be designed to minimise the risk of damage from differential movement of the unit(s) and/or surrounding material.
- 4.2. For separators with burial depths greater than 1000mm from cover level to the top of the unit, specific site conditions should be taken into consideration and the backfill designed to bear any loads which may be applied during and after installation to prevent the tank being subjected to these loads.
- 4.3. The excavation must be deep enough to provide bedding and cover depth as determined by the type of surface pavement and loading. Asphalt and concrete pads should extend a minimum of 300mm horizontally beyond the unit in all directions.
- 4.4. In situations where the excavation will not maintain a vertical wall, it will be necessary to shore up the side walls of the excavation with suitable trench sheets and bracing systems to maintain a vertical wall from the bottom to the top of the excavation. DO NOT completely remove the shoring system until the backfilling is complete, but before the concrete fully hardens.
- 4.5. In areas where the water table is above the bottom of the excavation and/or the excavation is liable to flood, the excavation should be dewatered using suitable pumping equipment and this should continue until the installation is complete.
- 4.6. During installation care must be taken to ensure that the body of any unit is uniformly supported so that point loads through the unit are avoided.
- 4.7. The Concrete Specification is not a site specific installation design.

GENERAL CONCRETE SPECIFICATION IN ACCORDANCE WITH BS EN 206-1 (BS 8500-1)		
TYPE OF MIX		(DC) DESIGN
PERMITTED TYPE OF CEMENT		BS 12 (OPC): BS 12 (RHPC): BS 4027 (SRPC)
PERMITTED TYPE OF AGGREGATE (coarse & fine)		BS 882
NOMINAL MAXIMUM SIZE OF AGGREGATE		20 mm
GRADES: C25 /30 C25 /30 C16 /20		REINFORCED & ABOVE GROUND WITH HOLDING DOWN BOLTS REINFORCED (EG. FOR HIGH WATER TABLE) UNREINFORCED (NORMAL CONDITIONS)
MINIMUM CEMENT CONTENT	C30	270 - 280 Kg/M ³
	C20	220 - 230 Kg/M ³
SLUMP CLASS		S1 (25mm)
RATE OF SAMPLING		READY MIX CONCRETE SHOULD BE SUPPLIED COMPLETE WITH APPROPRIATE DELIVERY TICKET IN ACCORDANCE WITH BS EN 12350-1
NOTE: STANDARD MIXES SHOULD NOT BE USED WHERE SULPHATES OR OTHER AGGRESSIVE CHEMICALS EXIST IN GROUND WATER		

5.0 Separator Installation

- 5.1. Excavate a hole of sufficient length and width to accommodate the tank and a minimum 300mm concrete surround and to a depth that allows for the burial depth of the unit plus concrete base slab.
- 5.2. Construct a suitable concrete base slab appropriate to site conditions. Ensure that the slab is flat and level.
- 5.3. When the concrete base slab has set enough to support the installed load, add a concrete haunch so as to provide even support under the unit, and then lower the unit onto the haunch using suitable webbing slings and lifting equipment.
- 5.4. Locate the float valve in the coalescer unit(s). Lift float valve and secure in the open position before filling and release when full. If the valve is not lifted during filling, it may "seat". The valve is fitted with cord to aid lifting. Add cord if extending the invert and fasten end to a convenient point.
- 5.5. **Pour no more than 300mm depth of clean water into the unit, avoiding shock loads. For units with more than one chamber, add water to each chamber simultaneously. DO NOT OVERFILL, the unit is not designed to hold water whilst unsupported. FILL THROUGH OUTLET AS WELL AS INLET.**
- 5.6. **Place concrete backfill to approximately 300mm depth under and to the sides of the tank ensuring good compaction to remove voids. DO NOT use vibrating pokers. Continue adding concrete backfill, simultaneously keeping the internal water level no more than 200mm above the backfill level at all times, until the backfill is just below the underside of the outlet drain, giving sufficient room to connect the inlet and outlet pipework.**
- 5.7. Connect inlet and outlet drains and vent pipes when safe access to the backfill can be gained.

PIPEWORK CONNECTIONS

In all cases, ensure that the outlet pipework level is maintained for correct operation. (Unless specified on the order, the fall across the unit will be as per the customer drawings). Small units are generally fitted with **PVCu spigots** to both the outlet and the inlet. Connect using the same size PVCu socket or a suitable reducer. Larger units are generally fitted with our own **GRP** manufactured sockets. The connecting pipework should be pushed into the socket and a joint made to fill in the gap using rope/hemp with a cement mortar or bonding mix. Ensure that the seal is secure and watertight before backfilling the pipe. Alternatively, proprietary **flex seal couplings** can be obtained to fit over the outside of the site pipework and the outside of the GRP socket. When using this connection method, please be aware that the outside GRP laminate is not perfectly regular and that you may need to use a sealant on the outside diameter of the GRP. Take care not to over tighten the coupling when connecting to the GRP and ensure that the seal is secure before backfilling the pipe. Drawing DS0185 provides the ID of our GRP sockets. The OD is variable, as the wall thickness can be up to 15-20 mm. If purchasing a flex seal coupling for use with clay/concrete, we suggest that a size 110 mm larger than the ID is selected.

5.8. Oil Level Alarm Neck fitting

We will fit a tube to receive the oil alarm probe. This provides protection and ensures that the probe is positioned at the correct level to sense oil build up. See alarm supplier information and ensure that the probe is placed within the tube and can be accessed from ground level.

Continue backfilling with concrete over the tank body to the required level. Build up a shell of concrete, minimum 225mm thick, around the access shaft(s). Temporarily strut the access shaft to avoid distortion.

- 5.9. Where we supply an extension shaft to meet a deeper invert requirement, a coalescer extension is also provided when needed. If there is a coalescer, remove it from the unit before adding the extension shaft(s). It is advisable to seal the joints on the extension shafts (particularly on sites with high ground water) with proprietary sealant or by GRP lamination (if skilled operatives are available). Temporarily strut the extension neck(s) to avoid distortion during back filling. Where more than one neck section is required to suit a deep invert, consider back-filling section by section. If the extension neck is too long, it can be trimmed using a fine-toothed saw. The original fixing hole bolting the coalescer to the neck should be sealed. Ensure that the vent socket if cut out, is replaced elsewhere. The maximum recommended inlet invert is 2000mm (using 500mm long extension sections). If you are installing a unit deeper than this then you must make your own arrangements for removing and replacing the coalescer. Consideration must be given to the depth of lift involved.
- 5.10. If extending the neck, remember to add a suitable length of cord to enable the float valve to be lifted when the unit is emptied. If the valve is not raised during filling then the float valve may stick at the base.
- 5.11. Coalescer. When refitting, ensure that the core tube is correctly seated onto the base fitting.
- 5.12. Continue back-filling, ensuring minimum 225mm concrete thickness around the access shaft/extension neck and alarm access tube (as applicable).
- 5.13. Mains powered alarm Systems. See alarm suppliers installation instructions. Lay 82mm diameter PVCu underground ducting between the alarm panel location and the alarm probe position. The ducting should be 500mm below ground level and fitted with a drawstring for later cable insertion. Any changes of direction should be by long radius bend. If necessary, drill a suitable hole in the access shaft adjacent to the alarm probe terminal box, to accept the ducting and seal.
- 5.14. In traffic areas a suitable top slab must be constructed. The top slab should bear on a suitable foundation to prevent superimposed loads being transmitted to the unit and access shafts. Loads applied to covers and frames must bear on the top slab, not the access shaft.
- 5.15. The unit should be filled with clean water up to the invert level of the outlet pipe. Ensure the unit identification is placed/marked inside the neck for future information. The unit is now ready for use.

6.0 Alarm Installation

- 6.1 Install the alarm probe and control panel, as per the Suppliers Alarm Installation Guidelines. Ensure that the probe is positioned correctly for the required storage of oil. The table below indicates the volume of oil stored and the depth of floating oil expected in the separation chamber.

Unit	Recommended Maximum Oil Storage volume	Max. Depth of floating oil (100 %) (Static)
NSFA020	200 litres	53mm
NSFA030	300 litres	60mm
NSFA040	400 litres	65mm
NSFA050	500 litres	70mm
NSFA065	650 litres	67mm

7.0 Operation

- 7.1 The unit is sized on treating a defined area and rainfall (50 mm/hour) EN 858 Part 1, and using the factor provided in the EA guidelines PPG 3. The entire flow up to the units listed flow rating is fully treated.
- 7.2 Class 1 units include a core tube with replaceable media. Separated Liquid enters the core tube after passing through the media, to the outlet. The coalescer media requires maintenance and replacement at intervals. See section 8.
- 7.3 Class 2 units do not include replaceable media
- 7.4 Both Class 1 and class 2 units are provided with a closure device, incorporating a float. As the level of oil builds up and forms a floating layer, so the float/closure device moves downward to prevent oily water being passed through the unit. The unit **MUST** be emptied after the closure device has operated. The coalescer media should be inspected and changed if fouled.
- 7.5 An oil probe should be positioned to detect the accumulation of oil when there is no or low flow conditions. It is a requirement to position the probe so that the alarm operates at 90% of the maximum recommended oil storage volume. **When the alarm operates, the oil should be removed. Accumulated silt should also be removed.**
- 7.6 These Separators are not effective for the removal of soluble or emulsified pollutants such as oil/detergent mixes found in vehicle wash effluents. With permission, such discharges may be drained to the foul sewer. See Environment Agency Guidelines PPG3. Or contact our Technical Sales Department for suitable alternative equipment.

8.0 Maintenance

Separated light liquid **must** be removed from the separator when the oil capacity has been reached.

- 8.1. An oil level alarm system is available which gives warning when the separated light liquid/water interface level reaches 90% of the maximum recommended oil storage volume.
- 8.2. Separators should be inspected at least every six months or more frequently if experience dictates. A log should be maintained detailing the depth of oil found, any volume removed and any silt removal or cleaning carried out. A specimen maintenance log is included in the appendices.
- 8.3. Every site is different, in respect to the amount and type of silt generated by the drain design and installation. Frequently, the site construction programme itself generates large and perhaps unusual quantities of silt and grit. We recommend that following the initial installation, an inspection of the separator contents be made to check that building rubble has not entered the unit. Further inspections at 3 and 6 months should be made so as to be able to assess the volumes of silt and oil accumulated. An inspection and emptying programme can then be defined following the first 6 months site experience. We recommend a maximum inspection interval of 6 months.
- 8.4. Coalescer media is a replaceable item and is available as a spare.
- 8.5. Alarm probes should be removed and cleaned with water whenever waste material is removed from the separator. Please note the alarm may alert until the liquid level is replaced. Consult the alarm supplier's literature.
- 8.6. If the unit is emptied, the float/closure device should be raised and lowered only after the unit has been refilled. (Do not lower it into an empty unit as the closure device will self seat)
- 8.7. **Separator waste is a “special waste” under the terms of The Waste Management Code of Practice. The Code imposes a duty of care on the waste producer to ensure that the Cleansing contractor is registered with the Environment Agency and that the final disposal of the waste is to a licensed facility.**
- 8.8. You should consider the purchase of a maintenance service, from a competent installer, which includes bi-annual inspections, removal of oil and silt, cleaning of the alarm probe and cleaning or replacement of the coalescer media (where appropriate).

Waste Removal Procedure – Oil & Silt

Oil should only be removed when there is no flow entering the unit. Isolate the unit and prevent flow from entering. Always remove the oil before attempting to remove the

coalescer. If this is not done, when the coalescer is withdrawn, any excess oil may coat the media surface and when replaced could contaminate the effluent.

- 8.9. Remove the access cover and lower the desludging hose into the separation chamber. Draw off the surface oil.
- 8.10. When removing the silt, lower the desludging hose to the base of the tank and withdraw any grit or sludge that may be present. It is not necessary to remove all the liquid unless you need to ensure the unit has been fully emptied. Ensure that you access and clean all compartments.
- 8.11. Remove the alarm probe, clean with water and replace. Ensure that it is working correctly
- 8.12. Consider the period of time that the coalescer has been installed and consider removing and inspecting (cleaning or replacing) the coalescer media. If removed, ensure that it is correctly replaced and secured into position. It is best to lower the liquid level when refitting. Replace the access covers.
- 8.13. Re-fill the separator with clean water up to the outlet level. The alarm may display an alarm condition until the separator is re-filled. Check alarm operation when unit full.
- 8.14. Check the float/closure device and raise, if it has self-seated.

Checking the Coalescer Assembly

- 8.15. Coalescers should be checked and cleaned regularly, also following a major incident replaced if necessary. It may be possible to squeeze/rinse out silt contamination from the media, but it is impossible to remove oil. Please contact the company if you wish to purchase replacement coalescer foam media. Identify the type and size of separator (shown on labels inside the access neck).
- 8.16. Assemblies weighing less than 25 Kg may be removed by hand. Heavier assemblies should be lifted by mechanical means. Any lifting device employed must be capable of lifting:
 - In excess of the maximum assembly weight.
 - The assembly completely out of the access shaft.
 - Giving a smooth and controlled lift.
 - Swinging the assembly to one side clear of the access shaft.

Unit	Dry Weight (Kg) Core tube & media	Wet Weight (Kg) Core tube & media	Silted Weight (Kg) Core tube & media	Replacement media part no.
NSFA020	27 kg	40 kg	≈ 55 kg	402733
NSFA030	27 kg	40 kg	≈ 55 kg	402733
NSFA040	27 kg	40 kg	≈ 55 kg	402733
NSFA050	27 kg	40 kg	≈ 55 kg	402733
NSFA065	27 kg	40 kg	≈ 55 kg	402733

- 8.17. Ensure that the area around the access shaft is clear and that there is space to place the coalescer core tube assembly once removed. If space is not available it will be necessary to support the assembly over the access shaft e.g. by scaffold poles and platform.
- 8.18. Only remove the access cover when necessary to remove the assembly. Do not leave the access shaft uncovered and unattended.
- 8.19. It is recommended that core tubes be lifted by mechanical means, especially if it is suspected that the coalescer media be silted.

8.20. Removing the coalescer assembly.

- 8.21. A cut out is provided in the top of the coalescer tube to aid lifting. When the unit is installed the coalescer tube is bolted to the neck. Deeper invert units are provided with a coalescer tube extension of the appropriate length. The coalescer tube must be bolted in place during use.

- 8.22. Lift the assembly with a smooth and steady motion. Core tubes and media will become lighter as water drains from the exposed media. Allow the water to drain completely. Assemblies blocked with fine silt may be very heavy.
- 8.23. Fully extract the assembly and set it down adjacent to the access shaft. Consider cleaning or replacement of the media.
- 8.24. Cleaning the coalescer assembly /Media Replacement.**
- 8.25. Hose down the assembly using clean water at normal pressure. (You may be able to return the cleaning water into the separator, if there is sufficient separator capacity.) Do not allow untreated cleaning water to pass out of the unit. Continue hosing media until the water runs clear. If the media is heavily contaminated with oil and silt it may not be possible to clean effectively by hosing and should be replaced.
- 8.26. When replacing the media, undo the banding. Slide media off the core tube and slide new media on. Ensure all the apertures on the core tube are covered by the media. Re-secure or replace banding. Consider replacing media every two years.
- 8.27. Replacing the coalescer assembly.**
- 8.28. Position coalescer assembly over the access shaft and remove any safety coverings.
- 8.29. Lower the assembly steadily into the access shaft, orientate core tube correctly and locate over sump cone. Bolt core tube into place, check the float/closure device is free to operate.

9.0 Emergencies

- 9.1. At sites where there is a high risk of spillage, spill kits containing drain seals, absorbent materials, disposal containers and other appropriate equipment should be held. In the event of a spillage on site, the material should be contained, (if a spill kit is not available, sand or soil may be used) and the Environment Agency notified immediately using the appropriate emergency hotline number listed in the Agency Guideline PPG3. Year 2012 – 0800 80 70 60

SEPARATOR MAINTENANCE LOG

Site address/location	
	
Separator location	
	
Type of separator	
Nominal Flow	
Total capacity	

[illegible]

