



SHADOW HABITATS REGULATIONS ASSESSMENT REPORT

**CLEATOR MILLS
CLEATOR**

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SHADOW HABITATS REGULATIONS ASSESSMENT REPORT

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REPORT FOR MANNING ELLIOTT PARTNERSHIP

Quality Assurance

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ABBREVIATIONS LIST

IRZ – Natural England Impact Risk Zone

JNCC – Joint Nature Conservation Committee

NERC – Natural Environment and Rural Communities Act 2006

HRA - Habitat Regulations Assessment

RAMS - Risk Assessment Method Statement

RSPB – Royal Society for the Protection of Birds

SAC – Special Area of Conservation

UK BAP – UK Biodiversity Action Plan

WACA – Wildlife and Countryside Act 1981

SPA - Special Protection Areas

VOC - Volatile Organic Compounds

LSE – Likely Significant Effect

SHADOW HABITATS REGULATIONS ASSESSMENT REPORT:

1 INTRODUCTION

Naturally Wild have been instructed to conduct a shadow Habitats Regulations Assessment (HRA) for demolition of two of the former factory buildings, and construction of a new warehouse unit with ancillary offices and 24 new parking spaces (Planning Reference 4/22/2364/0F1), and construction of a commercial unit with 9 new parking spaces (Planning reference 4/23/2010/0F1) at Cleator Mills, Cleator.

This report is a shadow HRA, it provides the competent authority, Cumberland Council (Copeland area), with an independent specialist assessment report which the competent authority can use as the basis of its assessment conclusions if it is appropriate to do so (DTA, 2022).

PROJECT DESCRIPTION

The Application Site is approximately 2.7 hectares in size and is shown edged red on drawing 1701-EX-001 (Figure 1). The proposal seeks planning permission to demolish two of the factory buildings, and construction of a new warehouse unit (Planning Reference 4/22/2364/0F1), in addition to demolition of a third small building to the southern aspect of site, and a building a commercial unit with 9 new parking spaces (Planning reference 4/23/2010/0F1). The site is currently a disused factory site with derelict buildings and associated areas of hardstanding.

1.1 The scope of works within the Application Site.

The scope of works within the Application Site includes the following:

- Demolition of two former mill buildings
- Addition of concrete hardstanding to match existing hardstanding
- Construction of new warehouse unit with ancillary offices
- Construction of new commercial unit
- Construction of 9 and 24 new parking spaces
- Erection of galvanised vertical security fencing

At the time of the completion of this report, no construction programme or indicative duration and planned start date has been provided.

1.2 Plant and Equipment

Plant and equipment will be used on-site post development, as the site will provide hire of plant and equipment on a commercial basis, which is likely to include HGV movements and other large plant and machinery.

1.3 Traffic and Routing

The existing site entrances to the south-west of site leading to Mill Street and the road to the north of site leading to the junction of Trumpet Terrace and Main Street will be utilised as vehicular access points.

1.4 The Application Site

Cleator Mills is located within the county of Cumbria, to the east of the village of Cleator. The site is approximately 2.7 hectares (ha) in size. The habitats on-site comprise four buildings, areas of hardstanding and an area of modified grassland with scattered trees. To the west of site lies the village of Cleator which comprises residential homes and associated amenity gardens. The wider surrounding area is comprised of arable, and cattle grazed fields. Directly adjacent to the south-eastern aspect of the site lies the river Ehen, which is designated as a Special Area of Conservation (SAC). Between Ennerdale Water and the confluence with the river Keekle at Cleator Moor the Ehen meanders across a narrow floodplain with extensive areas of riparian woodland and trees. This stretch of the river supports outstanding populations of the freshwater pearl mussel (*Margaritifera margaritifera*). The SAC is also designated for the presence of Atlantic salmon (*Salmo salar*).

The Site itself does not lie within any statutory designated sites of nature conservation importance, However the works lie directly adjacent to the river Ehen Special Area of Conservation (SAC). The river Ehen SAC is present immediately adjacent to the site, to the east and south. The river Ehen supports the largest freshwater pearl mussel (*Margaritifera margaritifera*) population in England. Exceptionally high densities (greater than 100 m²) are found at some locations, with population estimates for the entire river exceeding 100,000. The conservation importance of the site is further enhanced by the presence of juvenile pearl mussels, indicating recruitment since 1990. The SAC is also designated for the presence of Atlantic salmon (*Salmo salar*). there is a requirement to consider and address the potential impacts to the site, which is part of the UK National Site Network and protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, a.k.a, the 'Habitats Regulations'. This is discussed in more detail in Section 2.

The Natural England impact risk zone (IRZ) contours have been utilised to assess the impacts to the SAC. As the River Ehen lies directly adjacent to the proposed site, there is no geographical buffer present that could prevent any direct impact to the SAC by site activities, therefore appropriate mitigation measures in the construction and demolition phases will be required to prevent impacts to the SAC.



Figure 1. Site location plan
 (Image taken from drawing number 1701-EX-001, Manning Elliott Partnership, July 2022).

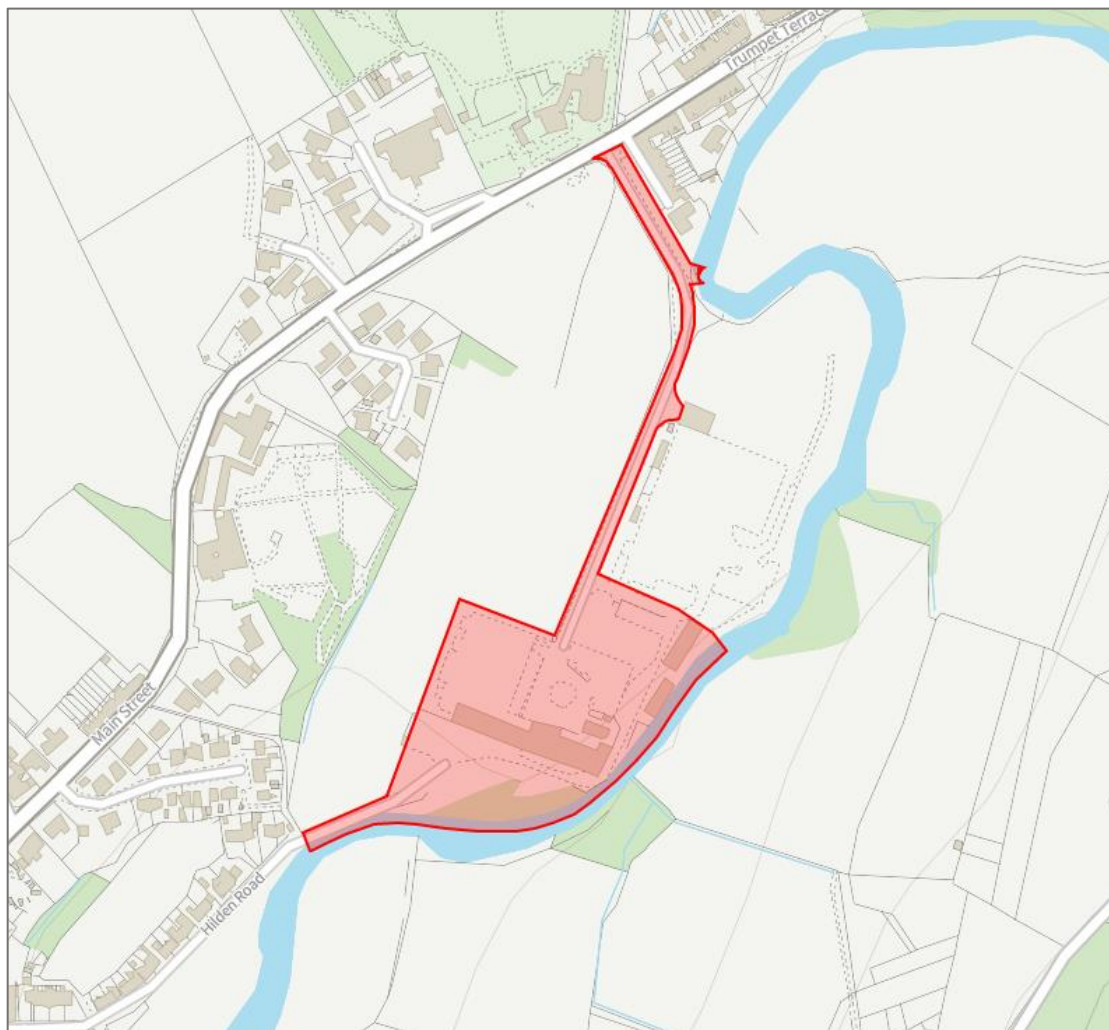


Figure 2. Site location plan with site boundary outlined in red
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2 REQUIREMENTS FOR A HABITATS REGULATIONS ASSESSMENT

2.1 Need For HRA

This shadow Habitat Regulations Assessment (HRA) report has been developed for the proposed demolition and construction works at Cleator Mill, Cleator and has been prepared for Manning Elliott Partnership on behalf of Cumberland Council to meet the requirements of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, known as the Habitats Directive, which was adopted in 1992 and is transposed into UK law through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (the 'Habitats Regulations'). The need to consider and address potential impacts on sites of European-level importance, a.k.a. an 'Appropriate Assessment,' is set out in Article 6(3) of the Habitats Directive and interpreted into British law by Regulation 63 of the Habitats Regulations.

Changes to the Conservation of Habitats and Species Regulations 2017 (as amended) have been implemented by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The key changes are the creation of a 'National Site Network' (NSN) (which no longer forms part of the EU Natura 2000 network) and the establishment of management objectives for the NSN. The network objectives are to:

- Maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive to a favourable conservation status; and,
- Contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

Although Ramsar Sites are not part of the NSN, they are subject to the same protections as SACs and SPAs.

An Appropriate Assessment needs to be undertaken in respect of any plan or project which is (a) likely to have a significant effect on a European protected site (either alone or in combination with other plans or projects) and (b) not directly connected with or necessary to the management of the site.

The Habitats Regulations apply a precautionary approach to relevant designated areas held under the collective term of European or UK National Site Network sites to ensure that a proposed project will have no adverse effect on the integrity of the site.

A wider search for sites of European-level importance within a 10km range of the site boundary was carried out using MAGIC database (DEFRA 2023) (Figure 3). The following sites were found within this range:

- River Ehen SSSI & SAC (Adjacent to site)
- Lake District High Fells SAC (6.5 km away at nearest point)
- Solway Firth SPA (6.9 km at nearest point)
- River Derwent & Bassenthwaite SAC (7.7km at nearest point)

Due to the Lake District High Fells SAC, Solway Firth SPA, and River Derwent & Bassenthwaite SAC being of significant distance from the proposed site, with development works being of relatively small scale, and each of these three sites being disconnected hydrologically to the development site or the site-adjacent River Ehen SAC, these sites have been screened out of the scope of the HRA. As the proposed development is commercial and not residential in nature, no effects from increased population are expected to occur at the Lake District High Fells SAC, Solway Firth SPA, and River Derwent & Bassenthwaite SAC.

This assessment has therefore been conducted with specific regard to potential impacts to the River Ehen SAC (Figure 4).

2.2 Responsibilities

Responsibility for completing an HRA lies with the competent authority, in this case the Cumberland Council. In undertaking an assessment, competent authorities must have regard to both direct and indirect effects on the interest features of European sites, as well as any in-combination impacts. Whilst it is the responsibility of the competent authority to determine whether it can be concluded that there are no adverse effects, it is the responsibility of the applicant to submit sufficient information to enable such a decision to be made. The intention of this document is to provide the Council with this information.

2.3 Method

UK Guidance on the use of Habitats Regulations Assessment (DTA 2022) identifies a staged process to the assessment of the effects of plans or projects on these protected sites. These stages are collectively referred to as the HRA.

There are four stages to the HRA process, as follows:

- Stage 1 – Screening. This process identifies the Likely Significant Effects (LSE) upon the Habitat Sites, either alone or in-combination with other projects or plans. This stage considers whether these impacts are likely to be significant and determines whether or not an Appropriate Assessment is needed.
- Stage 2 – Appropriate Assessment. The consideration of the effect on the integrity of the Habitat Sites, either alone or in-combination with other projects or plans, with respect to the site's structure and function and its conservation objectives.
- Stage 3 – Consideration of Suitable Alternative Solutions. This process examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Habitat Site. Alternatives that avoid adverse effects should be considered as early as possible and, in reality, the second and third stages should be considered in unison.
- Stage 4 - Imperative Reasons of Overriding Public Interest (IROPI) and provision of compensation. An assessment of compensatory measures is required where, in the light of no alternative solutions and an assessment IROPI, it is deemed that the project or plan should proceed.

If it is concluded at the screening stage that there will be no LSE, there is no need to carry out subsequent stages of the HRA.

2.4 Approach to Screening for LSE

Section 5 of this report is a record of the Screening stage (stage 1), which comprises the identification of LSE on the interest features of any Habitat Site.

An LSE is any effect that may be reasonably predicted as a consequence of a project that may affect the conservation objectives of the features of the protected site but excluding trivial or inconsequential effects. In accordance with the European Court of Justice Ruling on the 'People over Wind and Sweetman' case in 2018, mitigation at the Screening stage cannot be considered. Therefore, where LSEs are anticipated in the absence of mitigation, an Appropriate Assessment will be required. There is no requirement to consult with the Statutory Nature Conservation Body (SNCB) as part of the LSE assessment.

A precautionary approach is applied when undertaking HRAs and a plan/project cannot proceed unless it is ascertained that there will be no adverse effect on the integrity of a European Site, which is considered at the Appropriate Assessment stage.

3 Screening for European Designated Sites

3.1 European Designated Sites within 10km of Development

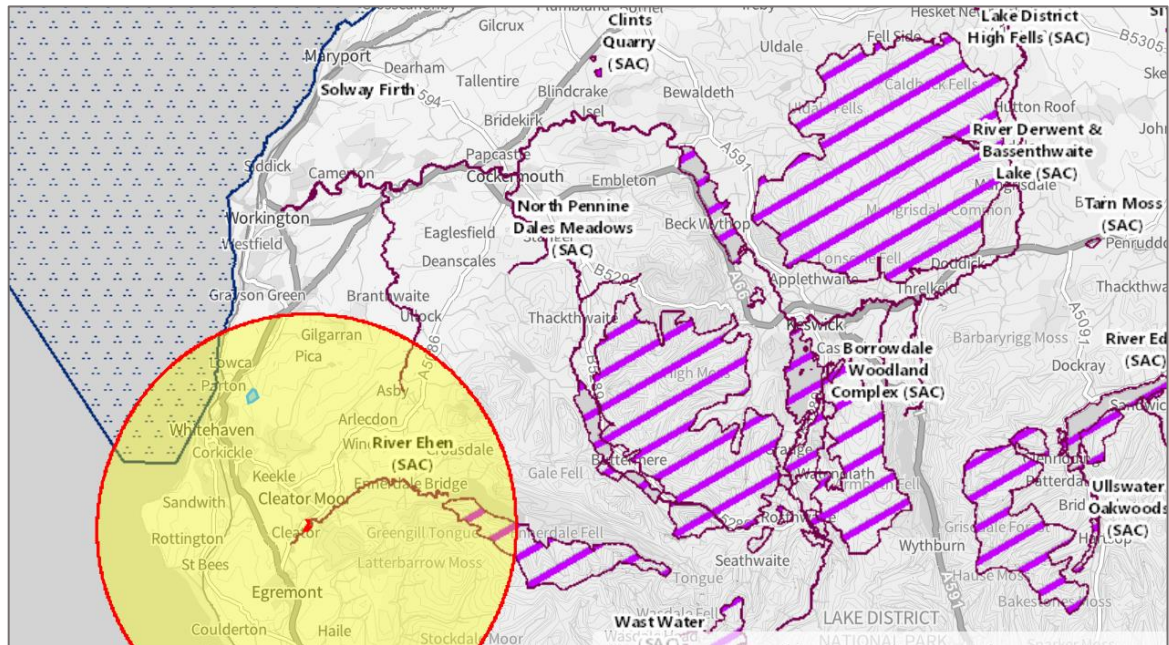


Figure 3. Location of European designated sites in relation to the Application Site with a 10km buffer around the proposed development site.

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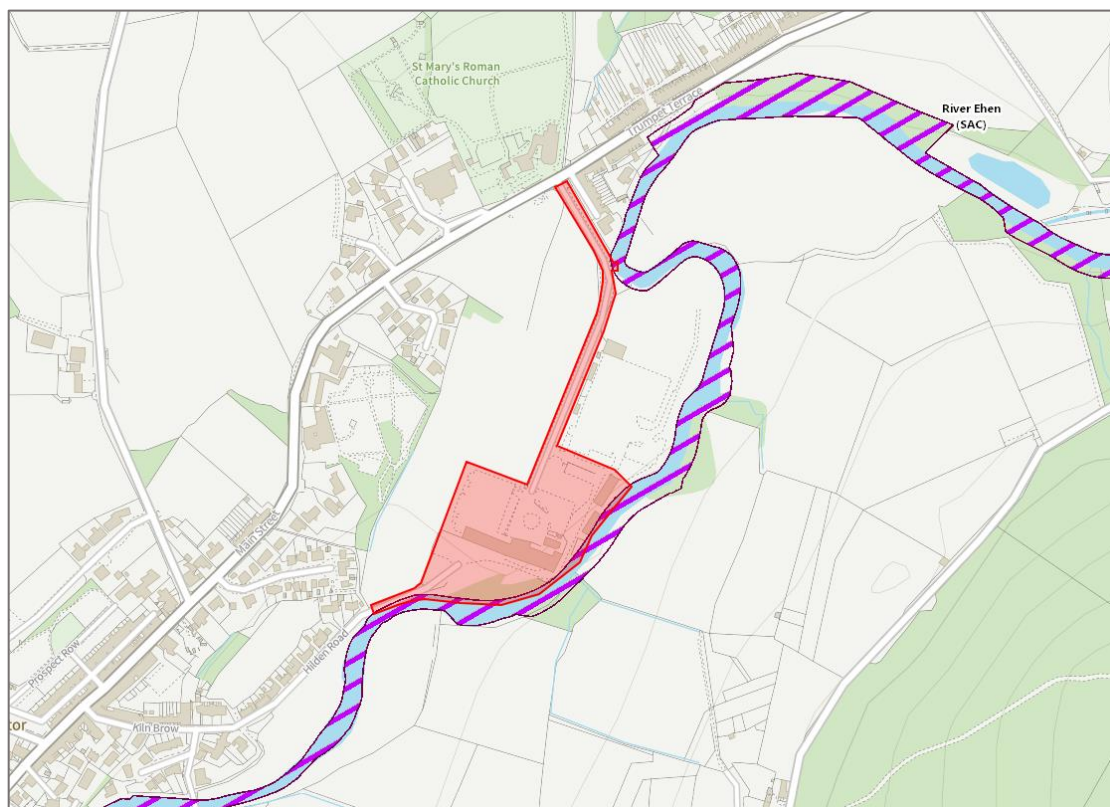


Figure 4. Location of the river Ehen SAC (Blue with purple stripes) in relation to the Application Site (red).

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3.2 River Ehen SAC

The river Ehen SAC (SAC ref: UK0030057) is located within the southern component of the site boundary and within a meander to the north of the site. The river Ehen SAC status was designated on 1st April 2005. It covers an area of 23.77 hectares (Ha). The river Ehen was selected as a SAC due to its association with the largest freshwater pearl mussel population in England and the third largest in Britain. The oligotrophic (nutrient-poor) conditions within the river and the surrounding riparian habitat within the Ennerdale Water to Keekle confluence, being composed of extensive woodland and trees, appears to be an important factor in the localised success of this species. Associated shading along the riverbank is believed to prevent the dominance of algal growth that would render this site unsuitable for freshwater pearl mussels. Species of interest are described below.

3.3 Qualifying features

Annex II species that are a primary reason for selection of this site:

1029 Freshwater pearl mussel *Margaritifera margaritifera*

- The River Ehen supports the largest freshwater pearl mussel *Margaritifera margaritifera* population in England. Exceptionally high densities (greater than 100 m²) are found at some locations, with population estimates for the entire river exceeding 100,000. The conservation importance of the site is further enhanced by the presence of juvenile pearl mussels, indicating recruitment since 1990.

Annex II species present as a qualifying feature, but not a primary reason for site selection:

- **1106** Atlantic salmon *Salmo salar*

3.3.1 Freshwater pearl mussel (*Margaritifera margaritifera*)

Description

The freshwater pearl mussel grows to 140 mm in length, and burrows into sandy substrates, often between boulders and pebbles, in fast-flowing rivers and streams. It requires cool, well-oxygenated soft water free of pollution or turbidity. The mussel spends its larval, or glochidial, stage attached to the gills of salmonid fishes. The larvae attach themselves during mid to late summer and drop off the following spring to settle in the riverbed gravel where they grow to adulthood.

Sensitivities

Vulnerable to anthropogenic factors such as pearl-fishing, pollution, acidification, organic enrichment, siltation, river engineering, and declining salmonid stocks. An additional serious threat in parts of mainland Europe is predation by introduced muskrat *Ondatra zibethicus* (Zahner-Meike & Hanson 2001). *M. margaritifera* is now a rare species whose conservation is giving rise to concern, and its increasing rarity in mainland Europe gives extra significance to UK populations.

Threats

The main threats to freshwater pearl mussel are:

-
- Physical disturbance: Disturbance of mussel beds via the movement of machinery or vehicles, river engineering works such as dredging or storage of materials in water.
 - Pollution: As a filter feeding species freshwater pearl mussels are notably vulnerable to declines in water quality via the introduction of physical matter e.g. silt in pollution or turbidity reduced oxygenation within their habitat.
 - Reduced presence of host species: Due to the association between freshwater pearl mussels and salmonids during its larval life stage, restriction of access or reduction of population by physical barriers or overexploitation by angling and netting of Atlantic salmon and trout can have a significant effect on freshwater pearl mussel populations.
 - Loss of riparian habitat: Reduction of shade producing features, such as trees and woodland, which increases the likelihood of a dominance of algal growth.

Conservation status

Formerly widespread but now England and Wales are believed to only support a single recruiting population. Scotland remains a major European stronghold with freshwater pearl mussel with functional populations in over 50 rivers, mainly in the Highlands. The majority of noted populations exist as isolated groups of individuals with no recorded recruitment noted with the surrounding area. As this species does not reach reproductive maturity until at least 12 years old and may live for over 120 years (Bauer 1992; Beasley & Roberts 1999), population age-structure is vitally important when assessing viability. The presence of juveniles (a feature essential to the long-term sustainability of mussel populations) is a clear indicator of the structural and functional features of the habitat required for the survival and reproduction of the species. Outside of Britain and Ireland the freshwater pearl mussel is widely distributed in Europe, Fennoscandia and north-eastern North America but has suffered severe declines and is threatened with extinction or highly vulnerable in every part of its former range. This species is listed as 'vulnerable' by IUCN, but is believed to be even more threatened.

3.3.2 Atlantic salmon (*Salmo salar*)

Description

Atlantic salmon are anadromous species that are drawn back to the river of their birth after spending 1-3 years at sea. (JNCC, 2023b).

Sensitivities

Atlantic salmon are vulnerable to pressures such as increased pollution, as well as the destruction of their spawning habitat and physical barriers to migration. (JNCC, 2023b)

Threats

The main threats to Atlantic salmon are:

- Physical barriers to migration. Although salmon are capable of clearing obstacles up to 3m tall, man-made barriers to migration are considered one of the most pressing threats to salmon populations.
- Pollution: salmon are predatory fish and so are vulnerable to pollutants building up in the food chain and a reduction in their prey, namely small fish and invertebrates.

-
- Overfishing: overexploitation by angling and netting is thought to have a significant effect on Atlantic salmon populations, both in saltwater and freshwater habitats.
 - Disease: Red vent syndrome (RVS) is an emerging disease and has been recorded since 2004.

Conservation status

Atlantic salmon are found in many rivers throughout the UK. However, the International Council for the Exploration of the Sea (ICES) report 2021 reports low egg depositions; a reduction in juvenile recruitment and predicts potential implications for future breeding; increased disease in fish returning to rivers to spawn.

3.4 River Ehen SAC Conservation Objectives

Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended). They provide a framework which should inform any 'Habitats Regulations Assessments' (which may include an Appropriate Assessment) that a competent authority may be required to make under the appropriate legislation. In addition, they can be used to inform any measures necessary to conserve or restore the European Site and/or to prevent the deterioration or significant disturbance of its qualifying features. These Conservation Objectives provide a framework to inform the measures needed to conserve or restore the European Site and the prevention of deterioration or significant disturbance of its qualifying features.

The river Ehen SAC conservation objectives are as follows:

“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.”*

5 SCREENING FOR LIKELY SIGNIFICANT EFFECTS

The first stage of an HRA is a screening assessment, which identifies the impacts upon one or more UK National Network Sites, either alone or in combination with other projects, and considers whether these impacts are likely to have significant effects on the designated sites or the features for which they are designated. These include direct and indirect impacts that may impact a protected site. Table 1 outlines the general potential impacts of commercial developments on European Sites; however, specific impacts relating to the Cleator Mills development are discussed in Table 2 and Section 6.

Table 1. Potential impacts of commercial development on European Sites

Broad categories and examples of potential impacts on European sites	Examples of activities responsible for impacts
Physical loss / damage • Sedimentation / silting • Edge effects	• Demolition and construction works producing high quantities of dust • Effects of increased traffic to the site near to the riverine habitat
Non-physical disturbance • Noise • Vibration • Visual presence • Human presence • Light pollution	• Demolition and construction works • Possible hardstanding removal using pneumatic tools • Vehicular traffic increase • Shading and visual impact of new buildings • Increased human presence in commercial offices/buildings • Artificial lighting
Water quantity and quality • Run-off • Toxic contamination • Non-toxic contamination	• Increased discharge (e.g., drainage, water runoff) from plant, vehicular traffic • Oil / chemical spills • Flood risk
Air Pollution • Nutrient enrichment • Toxic contamination	• Emissions from vehicles and plant • Dust from demolition and construction works
Non-toxic contamination • Nutrient enrichment (e.g., of soils and water) • Algal blooms • Changes in salinity • Changes in turbidity • Air pollution (dust)	• Discharge of dust and pollutants from demolition and construction

Table 2. Potential for LSE on the river Ehen SAC qualifying features as a result of the proposed development.

Annex II species that are a primary reason for the selection of this site		
Qualifying Feature	Potential effect in the absence of mitigation	LSE? Y/N
1029 Freshwater pearl mussel	Although there will be no direct habitat loss as a result of the works, there is potential for the proposed development to create chemical and sediment pollution which could impact freshwater pearl mussel within the SAC. The proposed development (particularly those involving site clearance, earthwork and heavy plant) have the potential to create chemical, dust, air and sediment pollution that can pass into the adjacent SAC. As the absence of a freshwater pearl mussel population in close proximity to the site has not been determined, it is considered likely that the proposed works would create disturbance that would directly impact freshwater pearl mussel of the SAC.	Y
	Light pollution is not expected to cause LSE due to the relative distance of the construction areas to the river, which is sheltered by the tree line providing a shading feature from artificial light sources (see appendix: Figure 8). The development is of a small-scale and is unlikely to produce construction noise above 50 dB and is not expected to be carried out within the boundaries of river Ehen itself, therefore it is unlikely that noise generated during the construction and operational phases of the works would significantly impact the designated species of the river Ehen.	N
Annex II species present as a qualifying feature, but not a primary reason for the selection of this site.		
Qualifying Feature	Potential effect in the absence of mitigation	LSE? Y/N
1106 Atlantic salmon	Although there will be no direct habitat loss as a result of the works, there is potential for the proposed development to create chemical and sediment pollution which could impact the Atlantic salmon within the SAC. The proposed development (particularly those involving site clearance, earthwork and heavy plant) have the potential to create chemical, dust, air and sediment pollution that can	Y

	pass into the adjacent SAC. As the absence of Atlantic population in close proximity to the site has not been determined. It is considered likely that the proposed works would create disturbance that would directly impact the Atlantic salmon utilising the SAC. It is considered likely that the proposed development would create disturbance that would directly impact the qualifying species.	
	Light pollution is not expected to cause LSE due to the relative distance of the construction areas to the river, which is sheltered by the tree line providing a shading feature from artificial light sources (see appendix: Figure 8). The development is of a small-scale and is unlikely to produce construction noise above 50 dB and is not expected to be carried out within the boundaries of river Ehen itself, therefore it is unlikely that noise generated during the construction and operational phases of the works would significantly impact the designated species of the river Ehen.	N

A HRA was determined to be necessary due to the proximity of the Application Site to the river Ehen SAC. It was considered that, without appropriate mitigation, the application had the potential to have an adverse effect on the integrity of the river Ehen and potentially cause disturbance and/or destruction to species for which they are designated.

On this basis, this assessment has been conducted with particular regard to the Annex I habitat and Annex II species for which the / SAC is designated, with potential risks arising from surface water drainage, pollution and dust, in the area resulting from the works in the Application Site.

In addition to considering the potential impacts of the project in isolation, a search of the planning section on the Cumberland Council website was also conducted to identify any other projects in the surrounding area that may act in combination with this proposed development to have an in-combination impact on the designated sites.

6 ASSESSMENT OF ADVERSE EFFECTS

6.1 Potential Direct Impacts

Utilising the information gained through existing reports accessible on the Cumberland Council planning portal and a subsequent desktop study, the project has been screened to identify whether potential effect pathways between the project and the designated sites are present which are likely to result in significant effects upon the designated sites.

6.2 Air Quality

Demolition and construction activities have the potential for air quality impacts on European sites, both by increasing levels of pollutants (e.g., through increased vehicle use) and through the spread of dust. The amount of air pollution caused by dust from construction and demolition varies depending on the size, chemistry, and concentration of the dust particles in the air as well as the local microclimate conditions. Dust can have physical effects on the nearby plants, such as obstructing and harming their internal structures and abrading leaves and cuticles, as well as chemical effects that may affect long-term survival.

6.2.1 Air Quality – Dust

Fugitive dust emissions arising from construction activities are likely to be variable in nature and will depend upon the type and extent of the activity, soil type and moisture, road surface conditions and weather conditions. Periods of dry weather combined with higher-than-average wind speeds have the potential to generate more dust. Construction activities that are considered to be the most significant potential sources of fugitive dust emissions are earth moving, due to the handling, storage and disposal of soil and subsoil materials; construction aggregate usage, due to the transport, unloading, storage and use of dry and dusty materials (such as cement and sand); movement of heavy site vehicles on dry or untreated haul routes; and movement of vehicles over surfaces where muddy materials have been transferred off-site (for example, on to public highways). Fugitive dust arising from construction activities is mainly of a particle size greater than the PM10 fraction (that which can potentially impact upon human health); however, it is noted that demolition and construction activities may contribute to local PM10 concentrations. Appropriate dust control measures can be highly effective for controlling emissions from potentially dust generating activities identified above, and adverse effects can be greatly reduced or eliminated. Providing appropriate mitigation is undertaken the impact from fugitive dust will reduce the likelihood of an effect occurring and therefore there will be no adverse effect on the integrity of the site. However in the absence of suitable mitigation (outlined in section 7) there will be LSE to the designated site.

6.3 Water Quality

As the proposed works are within 8m of the river (Figure 8), there is a risk of pollution, water and/or nutrient discharge or sediment into the riverine system, which could cause an increase in nutrients and/or fluctuation to the levels of water in the river Ehen SAC. However, due to the large volumes of water required for a flooding event, which would primarily remove hydrocarbon-based contaminants from the site, any contaminants would likely remain on the surface of the water and not interact with the mussel population in the river Ehen riverbed, as well as being diluted by the high quantities of water. Appropriate mitigation should be utilised to avoid unnecessary deposition of pollutants into the river system (see section 7).

6.7 Specific Risks to Qualifying Species

6.7.1 Freshwater Pearl Mussel

Freshwater pearl mussel requires water free of pollution or turbidity, as well as the presence of salmonid fishes for the glochidial stage of recruitment. They are vulnerable to anthropogenic factors including but not limited to pollution, acidification, organic enrichment, siltation, and declining salmonid stocks. Loss of riparian habitat: Reduction of shade producing features, such as trees and woodland, encourages the growth of algal formations. The primary impacts to freshwater pearl mussel that are likely to occur from the proposed works are pollution caused by water run-off and dust; and as the proposed works are in a flood risk zone, there is a risk of water and/or nutrient discharge into the riverine system through the works, which could cause an increase in nutrients and/or fluctuation to the levels of water in the river Ehen SAC. Therefore, impacts to freshwater pearl mussel are expected to be low in the absence of mitigative measures to prevent discharge into the river Ehen SAC (measures outlined in section 7).

6.7.2 Atlantic Salmon

Atlantic salmon are vulnerable to pressures such as increased pollution, as well as the destruction of their spawning habitat and physical barriers to migration. (JNCC, 2023b). Regarding the proposed works, the main risks to Atlantic salmon would be pollution caused by water run-off and dust; and as the proposed works are in a flood risk zone, there is a risk of water and/or nutrient discharge into the riverine system through the works, which could cause an increase in nutrients and/or fluctuation to the levels of water in the river Ehen SAC. As such, the impacts to the Atlantic salmon are predicted to be low in the absence of mitigative measures to prevent discharge into the river Ehen SAC (measures outlined in section 7).

6.8 In-combination

In-combination effects Article 6(3) of the Habitats Directive requires that “*any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives*”. The likely impacts on the integrity of the river Ehen SAC arising from the proposed demolition and construction works with other plans and projects relevant to the area must therefore be assessed.

It should be noted that no specific scope has been defined by Natural England or Cumberland Council in terms of the area of extent or time period over which the in-combination assessment should be undertaken. In the absence of specific guidance, the Natural England guidance in relation to European Protected Species mitigation licence applications, and on similar buffer zones around protected sites defined by other Local Planning Authorities. A search of postcodes from the site up to 5 km has been conducted for a five-year time period. The search included the following parishes between 2018 and 2023;

Cleator Moor, Ennerdale and Kinniside, Lamplugh, Arlecdon and Frizington, Weddicar, Moresby, Whitehaven, Egremont, St. Bees, Lowside Quarter, and Haile. Which lie within the 5km radius, and as such have the potential for in-combination impacts. In total there were seven applications within the 5km postcode search (Table 3). The search indicated that the majority of planning applications in the area around the application site relate to industrial developments. The applications are not considered to have adverse effects on the integrity of the SAC, either alone or in combination.

The developments identified in Table 3 have some potential to result in in-combination impacts should best practice pollution prevention and containment measure not be adhered to (i.e., those close to and / or adjacent to the SAC. The projects in Table 3 have been reviewed and assessed for in-combination impacts and it is considered that no significant in-combination impacts will occur and as such any impacts to the designated site will be negligible.

Table 3. Other large-scale developments with potential for in-combination impacts.

Application Number	Details	Location	Application Valid Date
4/22/2211/OF1	Works to refurbish existing industrial units	Leconfield Industrial Estate Cleator Moor Cumbria CA25 5QB	10/05/2022
4/22/2212/OF1	Works to refurbish existing industrial units	Leconfield Industrial Estate Cleator Moor Cumbria CA25 5QB	10/05/2022
4/22/2213/OF1	Works to refurbish existing industrial units	Leconfield Industrial Estate Cleator Moor Cumbria CA25 5QB	10/05/2022
4/22/2184/OO1	Erection of new building up to 4000 square metres in floorspace with various uses	Leconfield Industrial Estate Cleator Moor Cumbria CA25 5QB	26/04/2022
4/22/2161/OF1	Use of land as storage and distribution centre for gas bottles	Leconfield Industrial Estate Cleator Moor Cumbria CA25 5QB	07/04/2022
4/20/2289/OF1	Change of use to include more industrial	Leconfield Industrial Estate Cleator Moor Cumbria CA25 5QB	27/07/2020
4/23/2025/OF1	New warehouse building	Joe Mcbain Avenue Moresby Parks Cumbria CA28 8EA	24/01/2023

Overall, it is considered that the works will have a low impact on the river Ehen SAC. It is not thought that these would act in-combination with other schemes locally as the most significant potential impacts are due to the site's proximity to a European designated site. Any impacts from other works would not have greater impacts when considered in-combination with the works in the Application Site. It is concluded that there is sufficient confidence to conclude that there will not be an in-combination impacts attributable to the works and that this will not result in an in-combination impact on the site integrity of the River Ehen and SAC.

7 MITIGATION MEASURES

Based on the assessment undertaken, the following direct and indirect impacts were considered to be in need of mitigation measures: species disturbance in the form of –air pollution (dust), and water contamination. In view of the findings, the following mitigation measures are considered to be required to ensure no adverse effects to the river Ehen SAC.

- **Air Pollution – Dust**

Mitigation for dust should include the following measures:

- Minimising working of material in very dry, windy conditions, by reducing drop heights at material transfer points and controlling vehicle speeds.
- Regular maintenance and repair of any associated plant should be undertaken to ensure correct operation and to minimise dust generation.
- Mobile plant with upward or sideways exhausts should be used.
- Site haulage should keep to designated haul routes wherever possible.
- Unmade roads should be kept in good repair and wetted as required with a water bowser or sprinkler system.
- Vehicle speed limits should be kept to a minimum (ideally 15 mph) but would be determined according to the site and weather conditions pertaining at the time.
- Loose materials should be removed or treated as necessary.
- A high standard of housekeeping to minimise the effect of wind scouring.
- Demolition rubble may be wetted down to reduce the risk of wind-blow from exposed surfaces, however this should be done sparingly to avoid any runoff into the river Ehen SAC.
- The effects of off-site transportation can be minimised by ensuring that the site access routes are kept clean and in good repair.
- All vehicles leaving the site with loose material should be sheeted to prevent dust release, during the demolition and construction phase.
- The wheels and undercarriages of vehicles should be inspected before leaving the site and washed as necessary during the construction and development phase.

Provided that the dust mitigation measures contained within this assessment are fulfilled, it is expected that the dust produced by the proposed development will have a negligible impact to the river Ehen SAC.

- **Water quality & contamination:**

The river Ehen is present directly adjacent to the immediate vicinity of the site. There is the possibility of pollution events occurring due to run-off of substances from construction, demolition, and vehicles/machinery during the operation phase of the works into the river Ehen SAC. Therefore, the following mitigation measures should be followed to reduce any possible impacts to the river Ehen SAC and its designated species:

- All refuelling will be undertaken away from any watercourse (more than 10m)
- Oil and fuel will be stored in accordance with the oil storage regulations (REGULATIONS) with containers to be in good condition with properly fitting, secured lids to protect against vandalism.

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- Appropriate care will be taken to ensure that no chemicals or materials generated during vegetation clearance is discharged into the river.
 - No herbicides will be used within 5m of the watercourse and herbicide treatment where required will be carried out on stumps using glyphosate by suitably qualified individuals.
 - Construction plant nappy/spill containment pads will be used when idle and when refuelling, drip trays will be used to prevent the release of hydrocarbons into the river Ehen SAC.
 - Biodegradable fuels will be used in all handheld machinery.
 - Spill kits should be provided on site at all times
 - Delivery of fuel and oils will be supervised to avoid vandalism and unauthorised interference including vehicles being turned off and locked when not in use to prevent effects associated with the encroachment of construction vehicles and plant and contaminated surface run-off;
 - Drip trays will be used when filling smaller containers from tanks or drums to avoid drips and spills and prevent contaminant surface runoff into the river;
 - COSHH briefings will be undertaken for site staff to ensure that they are aware of the proper handling, storage and use with regards to environmental hazards including the action to take if there are any spills;
 - Department for Environment, Food and Rural Affairs (DEFRA) and Environment Agency (EA) guidance for Pollution Prevention will be followed
 - Drainage will be designed to reduce the risk of sediment or chemical pollution arising during the operational phase, of passing into the designated sites.
 - Dust and noise screens will be located around active parts of the Site to reduce the impact of noise and dust creation.
 - As the proposed works are in a flood risk zone, there is a risk of water and/or nutrient discharge into the riverine system, which could cause an increase in nutrients and/or fluctuation to the levels of water in the river Ehen SAC. However, due to the large volumes of water required for a flooding event, which would primarily remove hydrocarbon-based contaminants from the site, any contaminants would likely remain on the surface of the water and not interact with the mussel population in the riverbed, as well as being diluted by the high quantities of water.
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- **Freshwater Pearl Mussel:** The primary impacts to freshwater pearl mussel that are likely to occur from the proposed works are pollution caused by water run-off and dust during the demolition and construction phase. Therefore, the above mitigative measures outlined for management of water quality are required to avoid impacts to this species within the river Ehen SAC.
 - **Atlantic salmon:** Atlantic salmon are vulnerable to pressures such as increased pollution, as well as the destruction of their spawning habitat and physical barriers to migration. (JNCC, 2023b). Following the water quality mitigation measures outlined above to avoid the discharge of water and/or nutrients into the riverine system through the works, there is not expected to be an increase in nutrients and/or fluctuation to the levels of water in the river Ehen SAC. As such, the impacts to the Atlantic salmon are predicted to be negligible.

Providing the works are conducted within the existing scope and the above mitigation measures are implemented in full, it is considered that the works will not have an adverse effect on integrity of the river Ehen SAC and therefore no further assessment is required.

8 CONCLUSIONS

The proposals are demolition of two former mill buildings, addition of concrete hardstanding to match existing hardstanding, construction of new warehouse unit with ancillary offices, construction of new commercial unit and construction of a total of 33 new parking spaces, as well as erection of galvanised vertical security fencing.

The screening for potential impacts has determined that due to the river Ehen SAC being directly adjacent to the site, that there was a potential for disturbance to the qualifying features of the SAC from air and water pollutant run-off. As such, there was considered to be a requirement to consider and address the potential impacts on these designations.

With mitigation, there will be no adverse effect on the integrity of the site and no further assessment is required.

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10 Appendix I



Figure 5. 1701-EX-001 Site Location Plan. Provided by Manning Elliott Partnership.

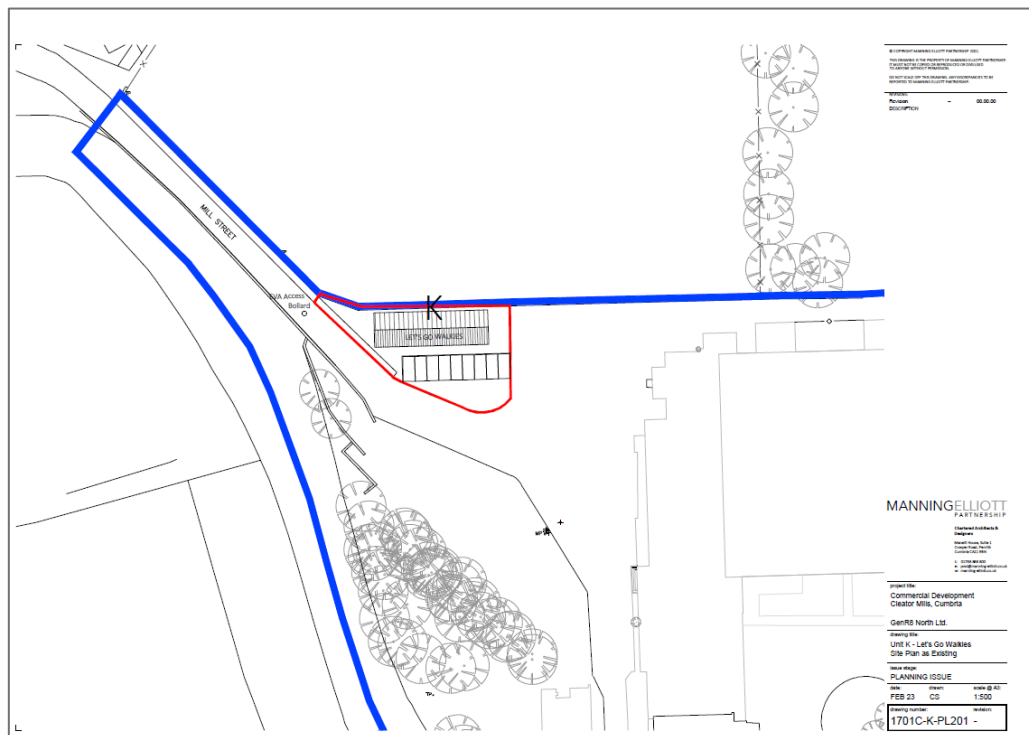


Figure 6. 1701C-K-PL201. Proposed location of commercial unit K. Provided by Manning Elliott Partnership.

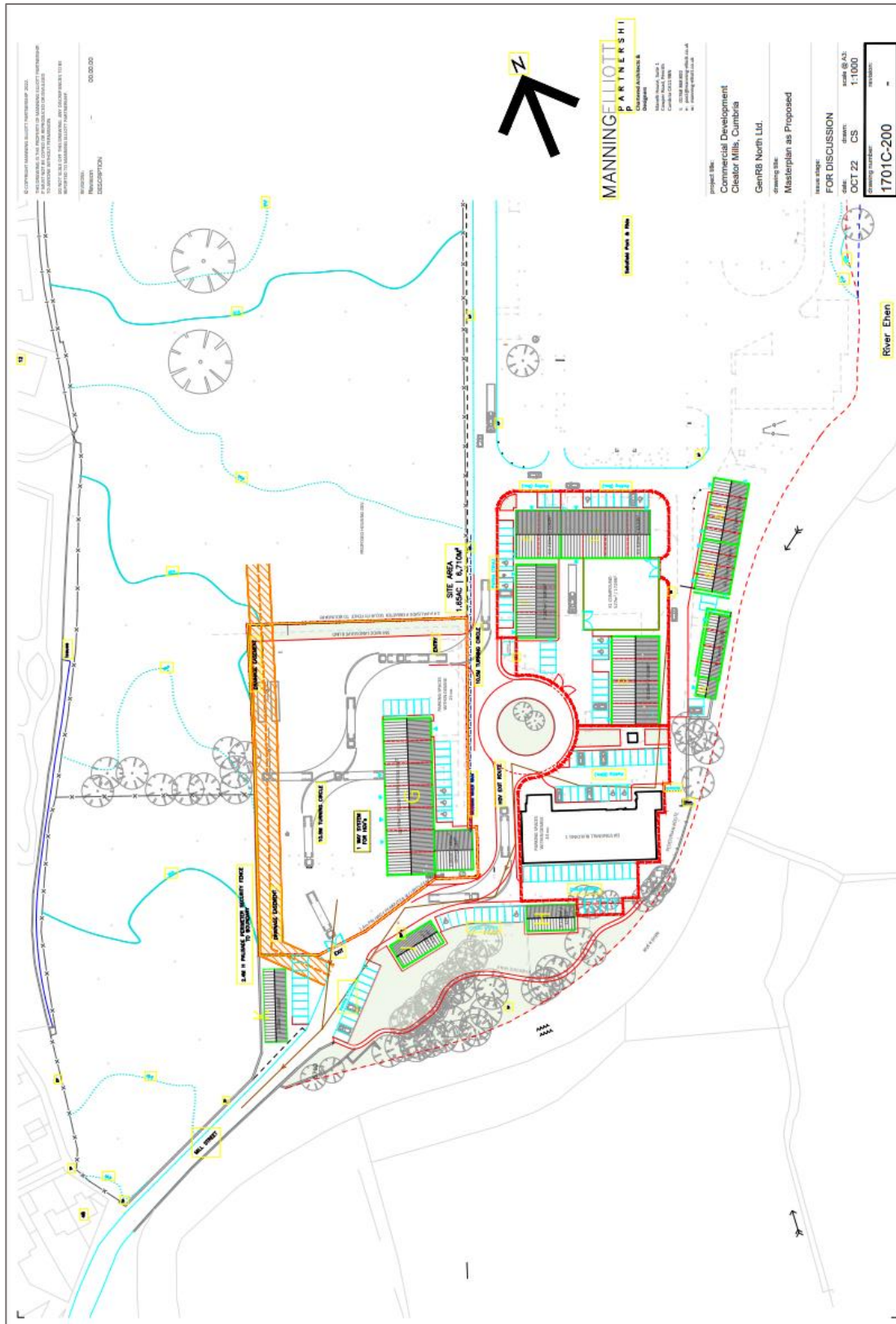


Figure 7. 1701C-200. Proposed location of commercial unit K and G as part of future wider site plans (not included in this application). Provided by Manning Elliott Partnership.

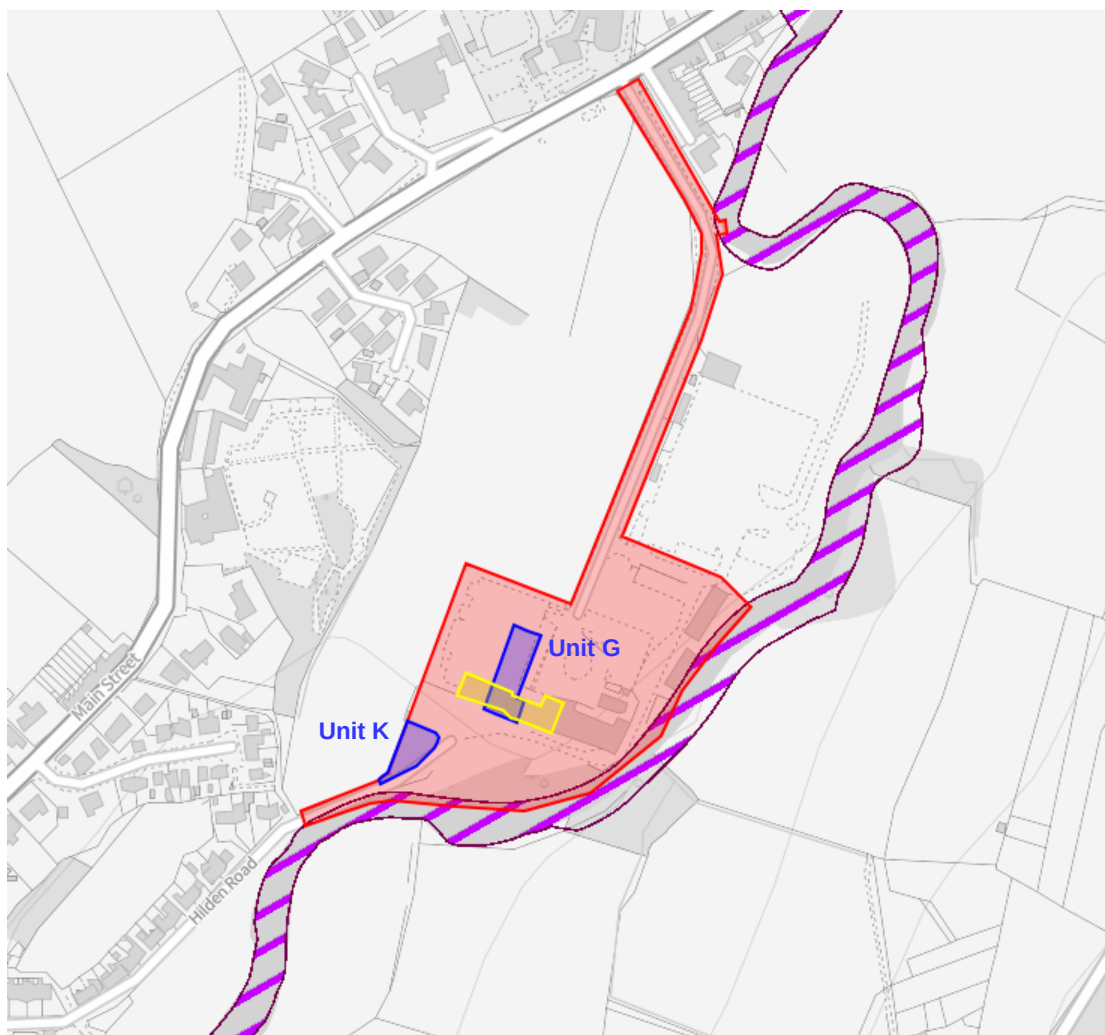


Figure 8. Proposed location of construction works for units K and G (outlined in blue) and proposed structures for demolition (outlined in yellow) .