Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Habitat Regulations Assessment (HRA)

Uldale View, Egremont

Ref: P.1723.22

July 2023

(see revision dates below)

Rev	Date	Details
A	15th June 2023	General updates
B	10th July 2023	General updates
C	19TH July 2023	General updates

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P.1723.22

Habitats Regulation Assessment (HRA)

Of

Uldale View, Egremont

For

Gleeson Homes

20 July 2023

Document Author	Liz Kenyon BSc (Hons)
Technical Review	Lizzie Atkinson MSc CIEEM
QA Review & Approval	Ciaran Power - Operations Manager

Contents

1.0 Introduction

Ascerta has been instructed by Gleeson Homes to produce a Habitats Regulation Assessment (HRA) in compliance with the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended); hereafter referred to as the 'Habitats Regulations' for the land at Uldale View, Egremont (hereafter referred to as the site). The site OS grid reference is NY007100 and the What3Words reference is prove.spreading.fines .

The document has been produced to detail any significant impacts that effect the River Ehen (SAC) and the extended area of the river to the north (Ennerdale Water to Keekle Confluence) that is designated as an Site of Special Scientific Interest (SSSI), designated for Freshwater Pearl Mussels (FWPM) and Atlantic salmon and also as a SSSI for FWPM.

Our client seeks planning consent to redevelop the site for residential dwellings with associated access roads. An area of POS and attenuation ponds, along with a wetland area will be created within the site also.

1.1 The HRA Process

Regulation 63 of the Habitats Regulations requires a competent authority to make an 'Appropriate Assessment' of the implications of the plan or project for that site in view of its Conservation Objectives, before deciding to undertake or give consent for a plan or project which (a) is likely to have a significant effect on a European Site (either alone or in-combination with other plans or project), and (b) is not directly connected with or necessary to the management of that site. In light of the conclusions of the assessment, the competent authority may proceed with or consent to the plan or project only after having ascertained that it will not adversely affect the integrity of the European Site.

All plans and projects should identify any possible effects early in the process and then either alter the plan or project to avoid them or introduce mitigation measures to the point where no adverse effects remain. The 'competent authority' shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned, and if appropriate, having obtained the opinion of the general public.

The assessment of a project under the Habitats Regulations can be split into four stages as shown in Table 1.

Table 1: Stages of HRA

Stage	Description
Screening (Stage 1)	Assessment of the likelihood of a plan or project, alone or in-combination, having a significant effect on a European Site or its features. If a significant effect is likely, an Appropriate Assessment is required as set out in Regulation 63.
Appropriate Assessment (Stage 2)	A detailed consideration of the potential effects of the plan or project in relation to the Conservation Objectives for the European Site(s) to determine if there is likely to be an adverse effect on the integrity of the site (i.e. an effect that would compromise the site meeting its Conservation Objectives). If it can be demonstrated that with appropriate mitigation measures the plan or project would not give rise to an adverse effect on the integrity of a European Site, the plan or project can proceed.
Assessment of Alternative Solutions (Stage 3)	Where it cannot be demonstrated that there is no adverse effect, or there is uncertainty, the assessment would then need to consider if there were any other alternatives to the plan or project that would not give rise to adverse effects on the integrity of the European Site.
Assessment where no alternative solutions exist and where adverse impacts remain (Stage 4)	If adverse effects are still likely then the competent authority would then consider if there are any Imperative Reasons of Overriding Public Interest (IROPI), only at this stage can Compensatory Measures be considered. It is very unusual for plans or projects to be considered in Stages 3 or 4.

2.0 Guidance and policy when assessing the potential effects of a plan or project

The following guidance and policy must be followed when assessing the potential effects of the plan or project:

- The Habitats Regulations Assessment Handbook, DTA Publications Ltd; which includes analysis of relevant recent caselaw; and
- Gov.uk website.

Professional advice should be sought when required in order to ensure a thorough and scientific assessment of the plan or project and its potential effects on a European Site.

In addition to the guidance noted above, a number of websites has been used in June 2023 to gather information on the European Sites in order to inform the assessment,

- Natural England (NE) website;
- MAGIC (Multi-Agency Geographic Information for the Countryside) website; and
- Joint Nature Conservation Committee (JNCC) website.

3.0 Project Location

3.1 Desk Study

The site lies within Egremont to the south-west of Carlisle and is bound by Uldale View to the west, with residential dwellings to the north and agricultural land use to the south. The River Ehen (SAC) flows approximately 150m from the eastern site boundary. The site comprises agricultural fields that are planted with agricultural crops. The full site is bound by species poor hedgerows with tall ruderal vegetation present to the field margins. A ditch partially lines the northern boundary of the site and scattered trees with tall ruderal vegetation is present within the bank areas. The site proposals are shown on drawing 73D-MJG, Detailed Site Layout, Appendix 2.

The site was visited on 22nd August 2022 by Liz Kenyon BSc (Hons) when a Preliminary Ecological Appraisal of the site was carried out. An updated walkover survey of the site will also be undertaken in June 2023 and Ascerta report P.1723.22 Preliminary Ecological Appraisal should be read in conjunction with this report.

4.0 European Site conservation objectives and qualifying features

The River Ehen (SAC) lies 150m from the eastern site boundary and the onsite ditch flows into the river. The extended area of the river to the north (Ennerdale Water to Keekle Confluence) that is designated as a Site of Special Scientific Interest (SSSI), designated for Freshwater Pearl Mussels (FWPM) and Atlantic salmon and also as a SSSI for FWPM lies approximately 2.7km north of the proposed development site.

Atlantic salmon migrate from the sea to breed upstream between November and February and it is therefore likely that the species will pass briefly through the designated area, Ennerdale Water to Keekle Confluence as they return upstream to spawn (Ennerdale Water to Keekle Confluence.

The River Ehen (SAC) 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 (SAC) 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.

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 *Margaritifera margaritifera*, 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 riverbed and make it unsuitable for the mussels.

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 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.

Qualifying species: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Freshwater pearl mussel *Margaritifera margaritifera*
- Atlantic salmon *Salmo salar*

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

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.

5.0 Stage 1 - Screening for likely significant effects

5.1 Likelihood of Significant Effects

Stage 1 of the HRA, the screening, is a test of Likely Significant Effect (LSE) to determine whether an Appropriate Assessment is required against all impact pathways identified. The screening is done considering the proposal in isolation and therefore not in-combination with any other plans or projects. It is also done in the absence of avoidance or other mitigation measures. Note that the assessment is made with awareness of the conservation objectives for the features of the European Site, however the actual assessment of the plan or project against the conservation objectives is not required until the Appropriate Assessment (Stage 2).

5.2 Potential Impacts

Recreation

European sites can be adversely affected by recreational activities such dog walking which can cause harassment of local wildlife, damage to sensitive habitats as well as impacts to soil nutrients from potential dog fouling. Other activities such as walking, running and biking can lead to soil compaction and erosion.

Habitat Fragmentation/Loss

Habitat fragmentation can occur directly or indirectly in close proximity to European sites, with development result in either direct or indirect habitat loss as a consequence of the development. Loss of off-site, functional habitat outside of European site boundary can lead to habitat fragmentation/loss of connectivity. Species mortality can increase due potential collision risks due to habitat fragmentation.

Air quality

Air pollution, particularly associated with increased vehicular traffic, has been identified as a direct threat to biodiversity. Pollution created during construction can significantly contribute to air pollution and can carry for large distances. Oxides of Nitrogen (NOx) emissions are predominately related to vehicular exhaust and NOx has been found to have a directly toxic effect upon vegetation. Nature England has previously advised the effects of vehicular atmospheric emissions should be considered if roads are within 200m of a European site.

The exposure to dust generation can potentially also be a pollution risk. The areas around the site, focusing on the areas adjacent to the wate course, will be regularly inspected and cleaned off as necessary to prevent the accumulation of dust. Regular cleaning of all site surfaces will be undertaken including by mechanical means where required to ensure any build-up of dust is not transferred to the watercourse. A Construction Environment Management Plan (CEMP) will also be produced for the site, to ensure the protection of the watercourse throughout the works and will include details such as; vehicles leaving the site have the potential to transport dust beyond the boundary through track out. The use of handheld jet wheel washing upon leaving the site will be implemented, as well as procedures for effective cleaning and inspection of vehicles, and the covering of all dust producing vehicles. All haul roads will be dampened down when the surface is dry and prone to producing dust. Run off from the dampening down procedure will be directed to drainage points that are identified on site. The use of silt traps may also be implemented to protect the water course.

Water quality

An increase in development can result in reduced water quality of rivers and surrounding habitats. Sewage and industrial effluent discharges can contribute to nutrient changes within European sites, leading to unfavourable conditions. Additionally, a loss of permeable surfaces, due to development, can lead to an increase in surface run off and flooding, which can lead to contamination of watercourse links and reduced water quality.

Urbanisation effects

Urbanisation impacts are closely linked with recreational impacts but anti-social impacts such as vandalism, littering and fly tipping can cause damaging impacts to European Sites. Additionally, an increase in residents will often lead to an increase in domestic animals such as cats and dogs, that may disturb and predate on wildlife. Other urbanisation effects include light and noise pollution, which adversely effects bat and bird species.

5.3 Likely Significant Effects

Recreation

The proposals are for the development of residential dwellings this will indirectly impact the River Ehen (SAC) as it lies 150m from the eastern site boundary and the onsite ditch flows into the river, however the designated species Atlantic salmon and FWPM are only recorded to be present within the extended area of the river to the north (Ennerdale Water to Keekle Confluence) that lies approximately 2.7km north of the proposed development site, however it is likely that Atlantic Salmon will pass through the majority of the River including the section hydrologically connected to the site on migration. As Atlantic salmon will only be passing through the section of the river it is considered that there will be no recreational impact the designated species due to their proximity and connectivity to from the proposed development site.

The current masterplan includes areas of public open space (POS) to be provided within the proposals (see drawing 73D-MJG, Detailed Site Layout, Appendix 2). It is likely that these future areas of POS will be frequented on a more regular basis by homeowners. There is also no direct access to the River Ehen (SAC) or Ennerdale Water to Keekle Confluence via public footpaths from the proposed site and the retained ditch will be fenced off from the residents and managed regularly for litter.

Habitat Fragmentation/Loss

The proposals will not result in a loss of land within the designated site as the River Ehen (SAC) lies 150m east of the site, with the Ennerdale Water to Keekle Confluence, approximately 2.7km north of the proposed development site. As the only habitat loss within the site is terrestrial, it is considered that qualifying features, Atlantic Salmon and FWPM will not be impacted. Due to the water depth of the ditch being approximately 5cm, it is unsuitable for migrating Atlantic salmon and therefore unlikely to support FWPM. The ditch is likely to be subject to some nutrient run off from the agricultural land use, resulting in the waterbody being less favourable for FWPM.

Air quality

The Ennerdale Water to Keekle Confluence lies approximately 2.7km north of the proposed development site, however it is likely that Atlantic Salmon will pass through the majority of the River including the section hydrologically connected to the site on migration. As Atlantic salmon will only be passing through the section of the river, it is considered that the proposals of the construction of 164 residential dwellings will not have an impact the air quality due to an increase in vehicular pollution.

Water quality

The River Ehen (SAC) is hydrologically linked to the current onsite water course and the proposed drainage scheme indicates the surface water outfall will link to the existing watercourse via a wetland area to the north eastern corner of the site (see drawing 23127-GAD-00-00-DR-C-100, Rev P01, Drainage layout, Appendix 2) which may result in an minimal increase in nutrient loading within the hydrological catchment of the SAC, through the production of wastewater during construction or operation, potentially leading to degradation of habitat or changes in water quality. A loss of permeable surfaces, due to the development, will also likely lead to an increase in surface run off and flooding.

The exposure to dust generation can potentially also be a pollution risk. The areas around the site, focusing on the areas adjacent to the wate course, will be regularly inspected and cleaned off as necessary to prevent the accumulation of dust. A Construction Environment Management Plan (CEMP) will also be produced for the site, to ensure the protection of the watercourse throughout the works.

The increased input could lead to eutrophication of the watercourse and connected waterbodies during construction or operation, which may lead to mortalities, injuries etc through pollution incidents. The surface water run-off from the development will be treated prior to the proposed outfall that will directly outfall into The River Ehen (SAC) through a Sustainable Drainage System (SuDs) as indicated on the Drainage Layout plan (Appendix 2). The SuDs will remove pollutants from the wastewater discharged from the proposals, which will minimise the impact where possible to the River Ehen (SAC), the qualifying features also lie 2.7km from the proposed development site, however Atlantic salmon are likely to pass through the majority of the River including the section hydrologically connected to the site on migration. It is however considered that there will be no impacts to Atlantic Salmon or FWPM as the Atlantic Salmon will only pass through these areas to reach the designated section of the water course.

Urbanisation effects

The qualifying features lie within a section of The Ennerdale Water to Keekle Confluence, approximately 2.7km from the proposed development site, however it is likely that Atlantic Salmon will pass through the majority of the River including the section hydrologically connected to the site on migration. As Atlantic salmon will only be passing through the section of the river, it is considered that there will be no impacts to Atlantic Salmon or FWPM due to this distance from the proposals.

6.0 Stage 2 - Appropriate Assessment

6.1 Assessment of potentially adverse effects with additional mitigation measures

Recreation

When considered alone, the proposed development can be determined to have no adverse impact on the integrity of the River Ehen (SAC) and The Ennerdale Water to Keekle Confluence due to an increase in recreational pressure, as there is no direct access to the River Ehen (SAC) or Ennerdale Water to Keekle Confluence via public footpaths from the proposed site. The Ennerdale Water to Keekle Confluence, holds the designated species Atlantic Salmon and FWPM, however due to its distance from the site of 2.7km, it will not be impacted via recreational pressure from the proposed development site.

Habitat Fragmentation/Loss

The proposals will not result in a loss of land within the designated site as the River Ehen (SAC) lies 150m east of the site, with the Ennerdale Water to Keekle Confluence, approximately 2.7km north of the proposed development site. As the only habitat loss within the site is terrestrial, it is considered that qualifying features, Atlantic Salmon and FWPM will not be impacted. Due to the water depth of the ditch being approximately 5cm it is unsuitable for migrating Atlantic salmon and therefore unlikely to support FWPM.

Air quality

The Ennerdale Water to Keekle Confluence lies approximately 2.7km north of the proposed development site, however it is likely that Atlantic Salmon will pass through the majority of the River including the section hydrologically connected to the site on migration. As Atlantic salmon will only be passing through the section of the river it is considered that the proposals of the construction of 164 residential dwellings will not have an impact the air quality due to an increase in vehicular pollution.

Dust emissions during the construction phase will be kept to a minimum with the implementation of a Construction Ecology Management Plan (CEMP), however there will be an increase in dust emissions during the operation stage of the site from the residential use. Dust particles and emissions adjacent to the onsite ditch can enter the eater course and travel to the River Ehen (SAC) and increase the turbidity and limit the biodiversity of the European site. Dust emissions to the River Ehen (SAC) will have a very limited effect on the water course due to the distance of the river from the proposed development, given that the surrounding land use is residential use any potential effect on the water course is not considered to be significant.

Water quality

The River Ehen (SAC) is hydrologically linked to the current onsite water course and the proposed drainage scheme indicates the surface water outfall will link to the existing watercourse via a wetland area to the north eastern corner of the site (see drawing 23127-GAD-00-00-DR-C-100, Rev P01, Drainage layout, Appendix 2) which may result in an minimal increase in nutrient loading within the hydrological catchment of the SAC, through the production of wastewater during construction or operation, potentially leading to degradation of habitat or changes in water quality. A loss of permeable surfaces, due to the development, will also likely lead to an increase in surface run off and flooding.

The increased input could lead to eutrophication of the watercourse and connected waterbodies during construction or operation, which may lead to mortalities, injuries etc through pollution incidents. The surface water run-off from the development will be treated prior to the proposed outfall that will directly outfall into The River Ehen (SAC) through a Sustainable Drainage System (SuDs) as indicated on the Drainage Layout plan (Appendix 2). The SuDs will remove pollutants from the wastewater discharged from the proposals, which will minimise the impact where possible to the River Ehen (SAC), the qualifying features also lie 2.7km from the proposed development site and therefore there will be no impacts to Atlantic Salmon or FWPM.

Urbanisation effects

Urbanisation impacts are closely linked with recreational impacts but anti-social impacts such as vandalism, littering and fly tipping can cause damaging impacts to European Sites. Additionally, an increase in residents will often lead to an increase in domestic animals such as cats and dogs, that may predate on wildlife. Other urbanisation effects include light and noise pollution, which adversely affect bat and bird species. The qualifying features lie within a section of The Ennerdale Water to Keekle Confluence, approximately 2.7km from the proposed development site, however it is likely that Atlantic Salmon will pass through the majority of the River including the section hydrologically connected to the site on migration. As Atlantic salmon will only be passing through the section of the river it is considered that there will be no impacts to Atlantic Salmon or FWPM.

7.0 Conclusions on site integrity

The screening assessment identified a number of key impacts that would likely arise as a consequence of the proposals and adversely impact the integrity of the River Ehen (SAC), The Ennerdale Water to Keekle Confluence and its conservation objectives described in section 4.0. Based on the information gathered from the screening process, an assessment of the significant adverse effects that have been identified. Suitable mitigation measures, outlined in section 6.0, have been provided within the site for these impacts, which when applied are capable of reducing the effects to a level where they are negligible and will not adversely affect the integrity of the site, then the integrity of the European Site and its qualifying features, Atlantic Salmon and FWPM will be maintained.

8.0 References

EC Directive 92/42 on the Conservation of Natural Habitats and of Wild Fauna and Flora *[online, assessed 08.06.2023]*

https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

Ministry of Housing, Communities and Local Government (2021), *National Planning Policy Framework (NPPF)*

Multi Agency Geographic Information for the Countryside (MAGIC) [online]

Natural England Access to Evidence http:/publications.naturalengland.org.uk

Natural England *European Site Conservation Objectives for River Ehen Special Area of Conservation. Site Code:0030057[online, assessed 08.06.2023]*

South East Wales Strategic Planning Group Habitat Regulations Assessment (HRA): A toolkit to support HRA Screening and Appropriate Assessment Of Plans, [online, assessed 20.02.2023]

Tyldesley, D. and Chapman, C. (2013) The Habitats Regulations Assessment Handbook. Nov 2019 edition. UK, DTA Publications Ltd https://www.dtapublications.co.uk/

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Appendix 1

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name:	River Ehen
Unitary Authority/County:	Cumbria
SAC status:	Designated on 1 April 2005
Grid reference:	NY031144
SAC EU code:	UK0030057
Area (ha):	24.39
Component SSSI:	River Ehen (Ennerdale Water to Keekle Confluence) SSSI

Site description:
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.

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 *Margaritifera margaritifera*, 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.

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 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.

Qualifying species: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Freshwater pearl mussel *Margaritifera margaritifera*
- Atlantic salmon *Salmo salar*

This citation relates to a site entered in the Register of European Sites for Great Britain.
Register reference number: UK0030057
Date of registration: 14 June 2005
Signed: Trevor Salmon
On behalf of the Secretary of State for Environment, Food and Rural Affairs

European Site Conservation Objectives for River Ehen Special Area of Conservation Site Code: UK0030057

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

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.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

Qualifying Features:

S1029. *Margaritifera margaritifera*; Freshwater pearl mussel
S1106. *Salmo salar*; Atlantic salmon

Explanatory Notes: European Site Conservation Objectives

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 as amended from time to time (the “Habitats Regulations”). They must be considered when a competent authority is required to make a ‘Habitats Regulations Assessment’, including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives and the accompanying Supplementary Advice (where available) will also 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.

These Conservation Objectives are set for each habitat or species of a Special Area of Conservation (SAC). Where the objectives are met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving Favourable Conservation Status for that species or habitat type at a UK level. The term ‘favourable conservation status’ is defined in regulation 3 of the Habitats Regulations..

Publication date: 27 November 2018 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

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Appendix 2

NOTES

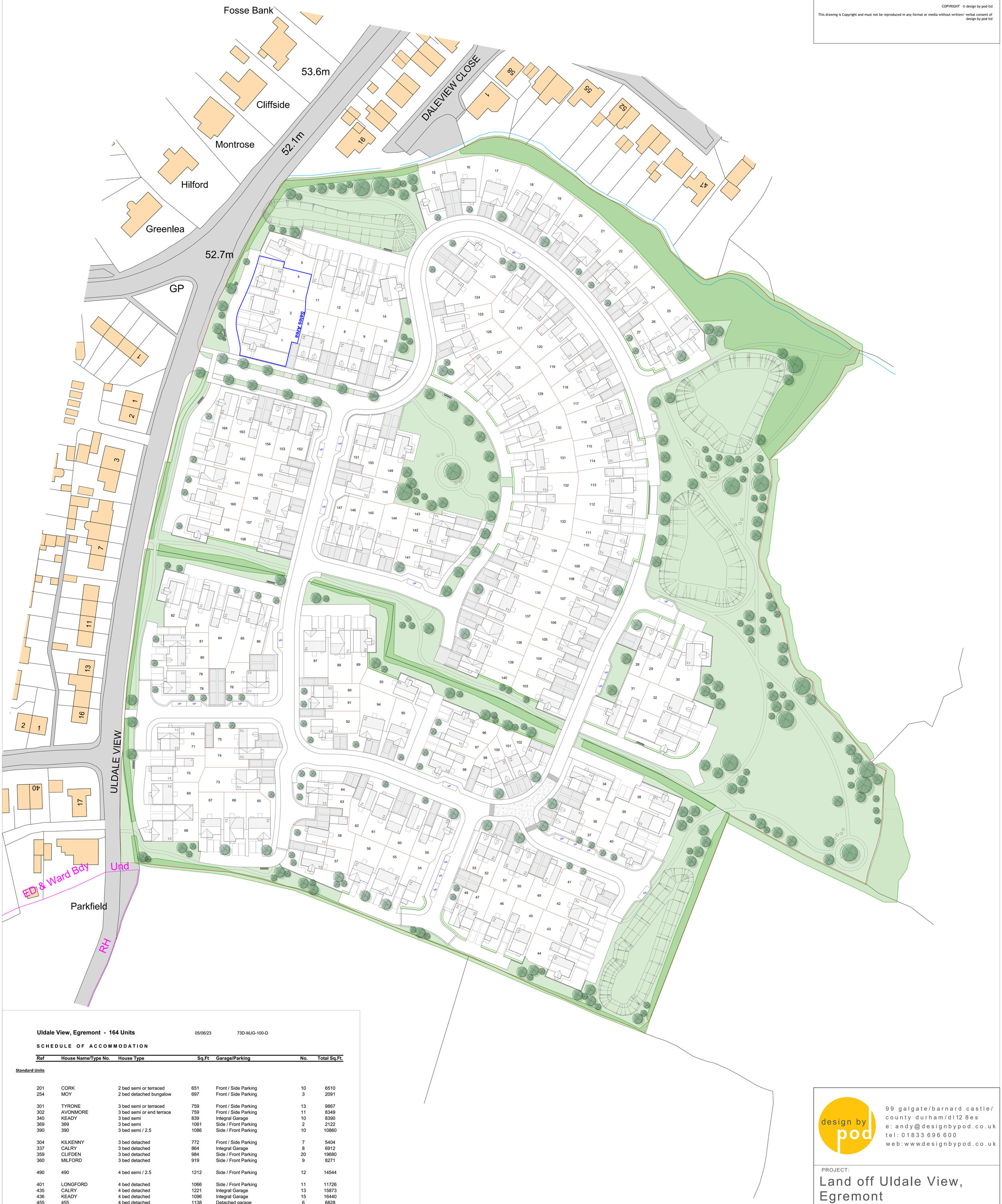
Do not scale from this drawing. Only figured dimensions are to be taken from this drawing.

The contractor must verify all dimensions on site before commencing any work or shop drawings.

The contractor must report any discrepancies to design by pod ltd before commencing work. If this drawing exceeds the quantities taken in any way, design by pod ltd is to be informed before the work is initiated.

Ordnance Survey information is used on design by pod ltd drawings. design by pod ltd is not responsible for the accuracy of dimensions relating to any Ordnance Survey data, or beyond the boundary of the inserted topographic survey data.

Work within The Construction (Design and Management) Regulations 2015 is not to start until a Health and Safety Plan has been produced.



Uldale View, Egremont - 164 Units 05/06/23 73D-MJG-100-D

SCHEDULE OF ACCOMMODATION

Ref	House Name/Type No.	House Type	Sq.Ft	Garage/Parking	No.	Total Sq.Ft.
Standard Units						
201	CORK	2 bed semi or terraced	651	Front / Side Parking	10	6510
254	MOY	2 bed detached bungalow	697	Front / Side Parking	3	2091
301	TYRONE	3 bed semi or terraced	759	Front / Side Parking	13	9867
302	AVONMORE	3 bed semi or end terrace	759	Front / Side Parking	11	8349
340	KEADY	3 bed semi	839	Integral Garage	10	8390
369	369	3 bed semi	1061	Side / Front Parking	2	2122
390	390	3 bed semi / 2.5	1086	Side / Front Parking	10	10860
304	KILKENNY	3 bed detached	772	Front / Side Parking	7	5404
337	CALRY	3 bed detached	864	Integral Garage	8	6912
359	CLIFDEN	3 bed detached	984	Side / Front Parking	20	19680
360	MILFORD	3 bed detached	919	Side / Front Parking	9	8271
490	490	4 bed semi / 2.5	1212	Side / Front Parking	12	14544
401	LONGFORD	4 bed detached	1066	Side / Front Parking	11	11726
435	CALRY	4 bed detached	1221	Integral Garage	13	15873
436	KEADY	4 bed detached	1096	Integral Garage	15	16440
455	455	4 bed detached	1138	Detached garage	6	6828
590	590	5 bed detached / 2.5	1586	Detached garage	4	6344
					164	
Total Number of Units and Square Foot					**164**	**160211**

Gross Site Area in Metres	77875.8414
Gross Site Area in Acres	19.24
Strategic Public open Space in M	24507.3611
Strategic Public open Space in Ac	6.06
Net Site Area in Metres	53368.4803
Net Site Area in Acres	13.18
Net Site Area in Hectares	5.33
Density (Sq.Ft per Acre)	12156
Density (Units Per Acre)	12
Density (Units Per Hectare)	30.75

N W E S

SCALE BAR 1:500

0 10 25 50

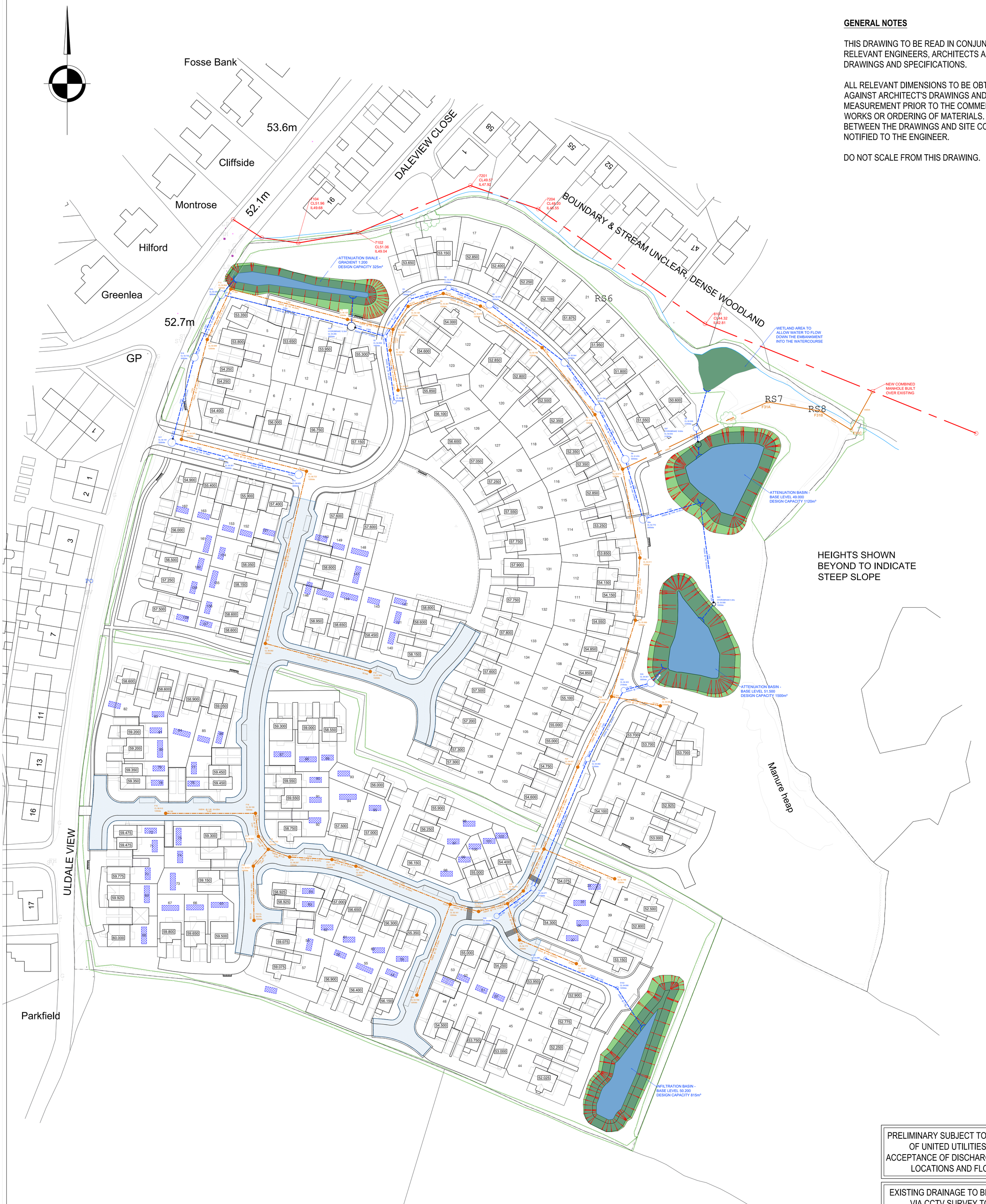
design by pod

99 galgate/barnard castle/
county durham/dl12 8es
e: andy@designbypod.co.uk
tel: 01833 696 600
web:www.designbypod.co.uk

PROJECT:
Land off Uldale View, Egremont

DRAWING TITLE:
Detailed Site Layout Plan

CLIENT:		DATE:
MJG		04/23
STATUS: PLANNING	DWN BY: JG	CKD BY: AD
SCALE: 1:500	SHEET SIZE: A0	REVISION: D
PROJECT NO: 73D-MJG	DRAWING NO: 100	



GENERAL NOTES

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.

ALL RELEVANT DIMENSIONS TO BE OBTAINED/CHECKED AGAINST ARCHITECT'S DRAWINGS AND BY SITE MEASUREMENT PRIOR TO THE COMMENCEMENT OF WORKS OR ORDERING OF MATERIALS. DISCREPANCIES BETWEEN THE DRAWINGS AND SITE CONDITIONS TO BE NOTIFIED TO THE ENGINEER.

DO NOT SCALE FROM THIS DRAWING.

PRELIMINARY SUBJECT TO CONFIRMATION OF UNITED UTILITIES AND LLFA ACCEPTANCE OF DISCHARGE CONNECTION LOCATIONS AND FLOW RATES

EXISTING DRAINAGE TO BE INVESTIGATED VIA CCTV SURVEY TO CONFIRM DISCHARGE LOCATIONS

Key:

- Combined Drainage
- Foul Drainage
- Surface Water Drainage
- Geocellular Baskets
- Open Drainage Feature
- Permeable Surfacing (with thickenings @ 10m c/c) - to percolate naturally (see detail)

Drainage Strategy:

SUDS Hierarchy

The hierarchy of potential methods for disposing of surface water are shown below in order of preference:

- discharge via infiltration
- discharge to watercourse
- discharge to a surface water sewer
- discharge to a combined sewer

BRE365 soakaway testing has been carried out which deem infiltration drainage to be suitable for the south and south western sections of the site.

There is an unnamed watercourse that runs along the northern boundary of the site.

Drainage records United Utilities sewer records show a 525mm diameter public surface water running from south to north along Uldale View, before discharging into the watercourse that runs along the northern boundary of the site.

There are two combined public sewers to the east of the site, running parallel to the eastern boundary. One is 450mm vitrified clay and the other is a 900mm diameter concrete sewer. There is also a combined 300mm diameter concrete sewer running along the northern boundary of the site.

Surface Water Strategy

The north and western part of the site will be served by impermeable highways, with surface water being collected in gulleys and entering the piped network. House roof and driveway areas will also enter the system that will include a conveyance swale and two attenuation basins before discharging into a wetland area to the north east of the site. The discharge will be restricted using a vortex flow control device and the wetland area will ultimately discharge into the watercourse on the northern boundary.

The area to the south east of the site will enter a piped network and be served by an infiltration basin. The highway within this area will be impermeable and surface water will enter the piped network. House roof and driveway areas will also enter the piped network before discharging into the basin.

The remaining area will be served by a permeable highway, which will then percolate naturally through the stone layer beneath. There will be thickenings every 10m beneath the highway to provide attenuation. Driveways will be permeable and will infiltrate, with attenuation provided in the stone layer beneath. House roof areas will enter individual geocellular soakaways and also infiltrate.

The surface water system will attenuate for storm periods up to and including the 100 year plus 50% climate change event with an allowance of 10% for urban creep and a 30 % allowance for the remaining greenfield areas on site.

The discharge to the watercourse will be restricted using a vortex flow control device. The runoff rate will match the one year return period and QBAR for all storms above this up to and including the 100 year event plus a 50% allowance for climate change.

Foul Water Strategy

The foul drainage will be a traditional gravity fed piped network that will discharge into the existing combined sewer to the north east of the site.

Maintenance:

- Highway to be adopted by Highway Authority
- Surface water drainage be adopted by United Utilities
- Foul drainage to be adopted by United Utilities

General Notes:

Geocellular soakaways to be min 5m from property and 2.5m from boundaries.

REV	DATE	DESCRIPTION	BY	CHK	APP
P01	23/05/2023	PLANNING ISSUE	RB	RG	MG

DRAWING STATUS: **PLANNING**

CLIENT: GLEESON HOMES

ARCHITECT: DESIGN BY POD

PROJECT: LAND OFF ULDALE VIEW EGREMONT

TITLE: DRAINAGE LAYOUT

STATUS:	PROJECT No.	ORIGINATOR	PHASE	LEVEL	TYPE	ROLE	DRAWING No.	REV:
S2	23127	- GAD -	00	- 00	- DR	- C -	1000	P01

SCALE @ A0:	DESIGNED:	DRAWN:	CHECKED:	APPROVED:	DATE:
1:500	RB	RB	RG	MG	MAY 2023

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