
Land at Stakehill, Rochdale Road

Environmental Impact Assessment Non-Technical Summary

May 2023

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Prepared on behalf of Redrow Homes Limited

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1. INTRODUCTION

- 1.1 Redrow Homes Ltd (the 'Applicant') and Valerie Drake, Robert Allen and John Thomas Allen, June Greenwood, Willie Greenwood and Mark Greenwood and David Andrew Tetlow and Amanda Jane Tetlow; are applying for a hybrid planning permission¹ (part in outline, part in detail) for the Development of up to 1,380 new homes of which 233 dwellings will form part of Phase 1 (the detailed element), and the remaining up to 1,147 dwellings will be in outline. The Development will also comprise a mixed-use development², green infrastructure and Sustainable Urban Drainage Systems (SuDS)³ (the 'Development') on land at Stakehill, Rochdale (the 'Site').
- 1.2 The Site is located in the administrative area of Rochdale Borough Council ('RBC') and is 87.52 hectares (ha) in area; the Site boundary is shown on Figure 1.1. A full description of the Site and Development is provided in Chapter 3: Site and Development Description of this Environmental Statement (ES).

Environmental Statement Availability

- 1.3 The planning application can be viewed, and comments made, via RBC's website record (<https://www.rochdale.gov.uk/planning-permission-building-regulations/search-planning-applications>) or can be viewed by appointment at the RBC Planning Department during normal office hours at the following address:

Planning and Development
Number One Riverside
Smith Street
Rochdale OL16 1XU

Tel: 0300 303 8873
Email: development.management@rochdale.gov.uk

- 1.4 Copies of the ES can be purchased from Barton Willmore, now Stantec:

Environmental Planning Team
Barton Willmore, now Stantec
7 Soho Square
London, W1D 3QB

¹ A hybrid planning application seeks to gain outline planning permission on one part and full planning permission for another part of the same site.

² A mixed-use development is a type of development can be a development that is made up of a variety of end uses, such as commercial, residential, institutional or cultural.

³ Sustainable Drainage Systems (SuDS) provide an alternative to the direct channelling of water through networks of pipes and are instead designed to mimic natural drainage processes.

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- 1.5 Printed paper copies of the ES and the technical appendices can be purchased at a cost of £300 and £400 respectively. This NTS can be obtained for £20. Copies of the ES, technical appendices and NTS can be obtained on a data stick for £20.

2. EIA METHODOLOGY

2.1 Environmental Impact Assessment (EIA) is a procedure used to assess the likely significant effects of a proposed development on the environment. The results are written into an ES which is submitted with the planning application. The ES provides the local planning authority (in this case RBC) with sufficient information about the potential environmental effects of the Development before a decision is made about the planning application. Effects may arise during the construction and operational phases of the Development.

2.2 The ES has been prepared in accordance with national legislation (the EIA Regulations) and reference has also been made to currently available good practice guidance on EIA including the Planning Practice Guidance issued by the Department for Levelling Up, Housing and Communities⁴.

Screening

2.3 Screening is the process through which it is decided whether or not a planning application requires EIA.

2.4 The Applicant did not submit a formal EIA screening request to RBC. Due to the size and scale of the Development, the Applicant proceeded to the EIA Scoping stage.

Scoping

2.5 Scoping involves focusing the content of an ES on issues of significance. It is an important tool for identifying the likely significant effects of a proposed development through its design, construction and completed phases and ensures that appropriate mitigation options are considered where necessary. A request for an EIA Scoping Opinion, accompanied by an EIA Scoping Report (Appendix 2.1 of the ES), was submitted to RBC on 31st October 2022. The Scoping Report identified the topics to be scoped into and out of the ES and for those assessments to be included, details of the scope of the assessments.

2.6 As set out in the EIA Scoping Report, the topics scoped into the ES comprise:

- Landscape and Visual Effects;

⁴ Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

- Biodiversity;
- Cultural Heritage;
- Transport;
- Air Quality; and
- Noise and Vibration.

2.7 RBC subsequently adopted their Scoping Opinion on 15th February 2023 (Appendix 2.2 of the ES). The Scoping Opinion agreed with the topics proposed to be scoped in (as listed above) and also requested that a Population and Human Health along with a Climate Change chapter should be scoped into the ES. These Chapters have therefore also been provided as part of the ES (Chapters 12 and 13).

EIA Methodology

2.8 The EIA Regulations stipulate that an ES should identify, describe and assess the likely significant effects of a development on the environment during the construction and operational phases. The significance of each environmental effect identified is generally determined by two factors:

- The sensitivity, importance or value of the environment (such as people or wildlife); and
- The actual change taking place to the environment (i.e. the size or severity of change taking place).

2.9 Most environmental disciplines classify effects as negligible, adverse, or beneficial, where effects are minor, moderate or major. Some disciplines use bespoke criteria based on published guidance. The technical studies have been undertaken in accordance with current best practice. Specific guidance used is referenced within each of the respective ES chapters. The majority of assessments involved consultation with statutory and non-statutory bodies, desk-based research, site inspections and surveys, impact prediction and mitigation.

2.10 Environmental effects have been evaluated with reference to definitive standards and legislation, where available. Where it has not been possible to quantify effects, qualitative assessments have been carried out, based on available knowledge and professional judgement. Where uncertainty exists, this has been noted and considered in the applicable assessment chapter.

2.11 The ES includes a description of the current environmental conditions known as the baseline conditions, against which the likely significant environmental effects of the Development have

been assessed. The ES also looks at the future baseline and how, in the absence of the Development, the Site may change.

Consultation Process

- 2.12 The planning application is the culmination of an extensive design process which has involved consultation with RBC, statutory consultees, the local community, and other stakeholders.
- 2.13 The Applicant has undertaken consultation with key stakeholders including pre-application discussions with RBC councillors in October 2022 and a design workshop in November 2022. Consultation with the local community included a consultation letter sent out to the local community and businesses and a consultation website (<https://landatstakehill.co.uk/>) to coincide with the distribution of the letter. Information outlined the Site, the Development proposals, the design workshop and allowed for feedback via an online feedback form.
- 2.14 The primary concerns raised during the consultation process are listed below. These have been considered during the design evolution of the Development to ensure concerns are addressed, as discussed in the Statement of Community Involvement (SCI) submitted separately with the planning application and Chapter 4 Alternatives of the ES:
- Loss of Green Belt;
 - Highways Concerns; and
 - The impact on local services and amenities.

Cumulative Effects

- 2.15 An EIA must assess the potentially significant effects of a development that may arise cumulatively (when combined with) other major development with planning permission or under construction in the local area. The EIA Regulations state that '*existing and/or approved*' developments should be considered. The following schemes have been identified that could have the potential to lead to likely significant cumulative effects on the environment. This includes schemes which have been granted planning permission, as well as those which are considered to be reasonably foreseeable developments.
- 2.16 Table 2.1 provides details of the cumulative schemes, and the locations of the schemes are shown on Figure 2.1.

Table 2.1: Cumulative Schemes

Figure 2.1 Ref.	Site and Planning Reference	Description of Development	Planning Status	Distance from the Site
1*	Land south of Cowm Top Lane, Castleton Planning Ref. 22/01190/FUL	Residential development comprising 495 dwellings with associated access, car parking, landscaping and infrastructure.	Pending Consideration	Approximately 200m north
2*	Castleton Sidings Policy JPA20	Delivery of around 125 dwellings, a temporary rail halt and car parking.	Places for Everyone Draft Allocation	Approximately 500m north west
3	Stakehill Industrial Estate, Unit 61 Touchet Hall Road Middleton M24 2RW Planning Ref. 20/01439/FUL	Demolition of the existing industrial unit (Use Class B2/B8) and replacement with a new B2/B8 use facility, with ancillary office accommodation, service yards, vehicle parking and landscaping.	Granted subject to Conditions 23 February 2021	Approximately 750m south
4	Land at Royle Road, Castleton Planning Ref. 18/01399/FUL	Erection of 201 dwellings and a block of 24 apartments including the demolition of existing structures together with associated ground works to the north of the site, public open space, landscaping and vehicular access from Royle Road.	Granted subject to conditions - 12 August 2020	Approximately 1.5km north
5	Land At Hollin Lane Middleton Planning Ref. 15/01183/OUT 19/01183/REM	Outline application (including access) for up to 205 residential units (Use Class C3) with associated landscaping, open space, access arrangements and car parking (Resubmission of 14/00849/OUT). Submission of reserved matters (appearance, landscaping, layout and scale) for 90 dwellings pursuant to outline planning permission 15/01183/OUT (Phase 2).	Granted subject to Conditions 14 October 2016 Granted subject to Conditions 24 May 2021	Approximately 1.8km south west
6	Land Bound By Manchester Road, Hareshill Road And Pilsworth Road West Of Junction 19 Of The M62 Rochdale Planning Ref. 16/01399/HYBR	Part full/part outline planning application for the development of land at South Heywood, including the demolition of a number of existing on-site buildings and structures. Full consent sought for the construction of a new link road between Junction 19 of the M62 and Pilsworth Road, the widening of part of Pilsworth Road, together with associated junction improvements, landscaping, lighting and other works including the importation of material and	Granted Subject to Conditions 31 March 2020	Approximately 2km west

Figure 2.1 Ref.	Site and Planning Reference	Description of Development	Planning Status	Distance from the Site
		engineering works in order to construct the link road. Outline consent (with all matters reserved for future approval except access) sought for a major mixed-use development comprising supporting residential uses comprising up to 1000 dwellings (Class C3); employment uses (Classes B2/B8) comprising up to 135,460m2 Gross Internal Area(GIA); a new primary school (Class D1); Class A1/A2/A3/A5 uses comprising up to 2500m2 GIA which includes no more than 499m2 of A1 uses; together with associated landscaping, open space and sports pitches, drainage, ecological enhancements, cycleway and footpath linkages, infrastructure and other works ancillary thereto.		
7*	Land off Don Street, Middleton Planning Ref. 21/00744/FUL	Residential development of 311 dwellings (Use Class C3) with associated infrastructure, landscaping and access.	Granted subject to conditions - 13 September 2022	Approximately 2km south west

*These schemes have been added following receipt of the RBC Scoping Opinion

3. SITE AND DEVELOPMENT DESCRIPTION

Site Description

- 3.1 The Site (as shown in Figure 1.1) extends to 87.52 hectares (ha) and largely comprises agricultural land that is divided into a number of irregular shaped fields, associated with Newhey and Thornfields farms. Field boundaries comprise mature trees and hedgerow. The Site is adjacent to existing development to the west and road infrastructure to the north, south and east. The Agricultural Land Classification (ALC)⁵ of the Site is classified as Grade 4 which is considered 'poor agricultural quality land'.
- 3.2 A garden centre lies within the west of the Site, adjacent to the A664 Manchester Road. The buildings are surrounded by hardstanding with introduced shrub and scattered trees. There are two tree belts within the Site, one extends from the northern Site boundary into the Site with the second extending along the rear of the garden centre, within the west of the Site.
- 3.3 The landscape across the Site varies, there is a gradual rise from west to east, with Thornfields farm buildings towards the east marking a high point at 180m Above Ordnance Datum (AOD)⁶. Towards the high point in the east, there is a phone signal mast, located south-east of Thornfields Farm. There is a further phone mast located to the north of Thornham New Road. The waterbodies located on the Site are located in areas of lower topography. There are five ponds located on the Site. One is located within the far north western corner of the Site, one is located within the west of the Site adjacent to Carnforth Avenue. Two are located within the southern portion of the Site, south of Thornham Lane and the remaining pond is located centrally on the Site, to the north of the St John's CE Primary School.
- 3.4 Multiple Public Right of Way (PRoWs)⁷ pass through the Site, including a PRoW which runs south into the Site off Thornham New Road within the north of the Site, connecting to Thornfields Farm. A PRoW is located along Thornham Lane within the south of the Site, and a further PRoW also runs north into the Site connecting to Newhey Farm to the west.
- 3.5 Vehicular access to the Site is provided from several points around the Site, including from

⁵ The Agricultural Land Classification (ALC) provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system. The Best and Most Versatile (BMV) agricultural land is defined as land which falls in ALC grades 1 to 3a. This land is considered the most flexible, productive, and efficient and is most capable of delivering crops for food and non-food uses.

⁶ The term 'Ordnance Datum' refers to the height of mean sea-level, taken from a reference point at Newlyn in Cornwall. This is basis of the national height system for Britain.

⁷ A Public Right of Way (PRoW) is a path that anyone has the legal right to use on foot, and sometimes using other forms of transport.

Thornham New Road which runs east-west through the northern portion of the Site and from Thornham Lane which runs east-west through the southern portion of the Site.

Site Context

- 3.6 The Site boundary (as shown in Figure 1.1) is located at Stakehill, south of the M62 on the southern edge of the town of Rochdale in Greater Manchester, within the administrative boundary of RBC.
- 3.7 The north of the Site is bound by Thornham New Road and the M62, running east-west across the northern boundary of the Site. The M62 is a 107-mile-long west-east trans-Pennine motorway in Northern England, connecting Liverpool and Hull via Manchester, Bradford, Leeds, and Wakefield. The south and east of the Site is bound by the A627(M) and the west of the Site is bound by the villages of Slattocks and Castleton as well as the A664 Manchester Road. The south west of the Site is bound by agricultural land.
- 3.8 The wider land uses surrounding the Site vary in nature. To the north of the Site, beyond the M62 is a mixture of open space and residential land uses within the south of Rochdale. The land to the south and west of the Site, beyond the A627(M) is agricultural in nature. Stakehill Industrial & Distribution Park, which includes distribution warehouses, depots, and engineering services is also located to the south of the Site, approximately 250m south from the Site boundary. Beyond the A664 Manchester Road to the west of the Site is the Rochdale canal towpath, a railway line (operated by Northern Rail), and Manchester Golf Club. National Cycle Route (NCR)⁸ 66 passes along the Rochdale canal towpath.
- 3.9 The closest railway station to the Site is Castleton, which is located approximately 1.1km north of the Site. Tandle Hill Country Park is located approximately 650m east of the Site. Other surrounding land uses include the Thornham Cricket Club to the immediate south west of the Site. A number of uses are also encompassed by the Site, including St John's CE Primary School to the south of the Site, adjacent to Thornham Lane, St John's Thornham Church located towards the south west of the Site, and Thornfields farm buildings to the east of the Site. A further cluster of farm buildings (known as Newhey Farm) is located to the immediate west of the Site, adjacent to existing residential development within Castleton.
- 3.10 The Site is not covered by any national or local landscape or ecological designations⁹. Within

⁸ A national cycling route network is a nationwide network of designated cycling routes.

⁹ Environmental designation means a categorical classification of areas important because of their environmental quality, geology, biodiversity and/or their historic, architectural or archaeological significance.

1.5km of the Site there are two designated ecological sites¹⁰. The closest international and national ecological designated site is the Rochdale Canal Site of Special Scientific Interest (SSSI)¹¹ and Special Area of Conservation (SAC)¹², located approximately 190m south west of the Site at its closest point. The Hopwood Woodlands Local Nature Reserve (LNR)¹³ is located approximately 380m south-west of the Site.

- 3.11 There are two Grade II listed buildings¹⁴ that are encompassed by the Site but not within the Site boundary, the Church of St. John and Thornham Parish War Memorial, which are located just north of Thornham Lane. There are no Grade I or Grade II* listed buildings on the Site. Beyond the Site boundary there are 11 Grade II listed buildings within 1.5km of the Site, the closest being the Rochdale Canal Slattocks Top Lock and Adjoining Bridge, located approximately 270m south-west of the Site. The Grade II* listed Hopwood Hall is also located approximately 1.1km south-west of the Site.
- 3.12 There are no Scheduled Monuments¹⁵ located on the Site. The nearest Scheduled Monument is the March Barn Bridge, Rochdale Canal, located approximately 1.2km north of the Site. There are no Registered Battlefields or Registered Parks and Gardens on or in proximity to the Site.
- 3.13 The Site is located entirely within Flood Zone 1¹⁶, which is considered to be at the lowest risk of flooding from rivers or the sea. Much of the Site is at low risk of flooding from all sources (rivers, groundwater, sewers). However, there are areas of the Site that are identified as being at risk of surface water flooding, particularly from Thornfields farm buildings in the east to the central portion of the Site, following the topography of the Site and running in a south west direction.

¹⁰ Statutory Designations apply to areas of land or water and serve to identify local or regional areas of value to the natural heritage and to assist better planning and management of the countryside.

¹¹ A Site of Special Scientific Interest (SSSI) is a formal conservation designation. Usually, it describes an area that is of particular interest to science due to the rare species of flora or fauna it contains – or even important geological or physiological features that may lie in its boundaries.

¹² A Special Area of Conservation (SAC) is a site designated under the European Union's Habitats Directive to protect the natural habitats and/or the populations of the species that are considered to be of European interest. SACs can be in the countryside or in urban areas and cover a range of habitat types and species.

¹³ A Local Nature Reserve (LNR) is a designation for nature reserves in Great Britain. The designation has its origin in the recommendations of the Wildlife Conservation Special Committee.

¹⁴ A building is listed when it is of special architectural or historic interest considered to be of national importance and therefore worth protecting. Buildings are listed on their significance ranging from Grade I being the highest grade, Grade II* being the middle and Grade II the lowest level of significance.

¹⁵ A Scheduled Monument is a site that's legally protected because of its historical importance. Scheduled monuments might be: archaeological sites, such as ancient burial mounds.

¹⁶ Locations which are determined to be in flood zone 1 have a low probability of flooding – less than 0.1% annual probability of river or sea flooding. Areas in flood zone 1 can also be described as: Land having a less than 1 in 1,000 annual probability of river or sea flooding.

- 3.14 The Site is located entirely within a Nitrate Vulnerable Zone¹⁷. The Site is not within in a Drinking Water Safeguarded Zone¹⁸ or a Source Protection Zone (SPZ)¹⁹.
- 3.15 The Site is partially located within the Greater Manchester Combined Authority (GMCA) Air Quality Management Area (AQMA)²⁰, declared in 2005 and 2016 for exceedances of annual mean nitrogen dioxide (NO₂) objective, with the source being defined as 'mixture of road types'.
- 3.16 The Site is not located within an Area of Archaeological Importance.

The Development

- 3.17 The Development comprises a hybrid planning application (Phase 1 will be in detail and the remainder of the Development will be in outline) for the development of land at Stakehill, Rochdale Road. The formal description of the Development is:

"Hybrid planning application seeking:

Full Planning permission for erection of residential development (Use Class C3) with associated landscaping, means of access, drainage, and other necessary supporting infrastructure.

Outline planning permission for residential development, mixed-use development, landscaping, and supporting infrastructure (all other matters reserved)."

Land Use

Residential

- 3.18 The Development includes the delivery of up to 1,380 new homes across the Site, 233 of which will be included as part of the detailed element of the Development as shown in Figure

¹⁷ A nitrate vulnerable zone is a conservation designation of the Environment Agency for areas of land that drain into nitrate polluted waters, or waterways that could become polluted by nitrates due to environment and health threats.

¹⁸ Drinking Water Safeguard Zones (Surface Water) are catchment areas that influence the water quality for their respective Drinking Water Protected Area (Surface Water).

¹⁹ Source Protection Zones are defined around large and public potable groundwater abstraction sites. The purpose is to provide additional protection to safeguard drinking water through constraining the proximity of an activity that may impact upon a drinking water abstraction.

²⁰ An Air Quality Management Area (AQMA) is an area where air pollution levels have exceeded the national air quality objectives. The air quality objectives are set for the following pollutants: nitrogen dioxide, particulate matter.

3.2, with up to 1,147 included as part of the outline element of the Development.

- 3.19 In the detailed element of the Development, a total of 35 homes will be affordable, equating to approximately 15% of homes.
- 3.20 Details relating to housing types, the number of bedrooms, and the size of habitable rooms are to be agreed at a subsequent stage of planning approval (known as the Reserved Matters stage) for the outline element of the Development.

Mixed use

- 3.21 As shown in Figure 3.1, there is an area of mixed-use development in the western area of the Site. This area could comprise residential land uses as well as commercial use, or a local centre.

Primary School

- 3.22 As shown in Figure 3.1, approximately 1ha of land has been reserved to accommodate an extension to St John's Primary School, towards the southern portion of the Site, located adjacent to Thornham Lane. The precise boundary of the school extension and scale of the extension is to be agreed with the Local Education Authority at a later design stage. The land adjoining the school extension area will accommodate a 'drop-off' point.

Building Heights and Massing

- 3.23 The residential element of the Development will be a maximum of three storeys in height. The mixed-use area will be a maximum of two storeys in height, and the primary school extension will be a maximum of 2.5 storeys in height.

Green Infrastructure

- 3.24 As shown in Figure 3.1 green infrastructure²¹ provided will be varied across the Development, which will include retained planting, new planting, children's play areas, and off-road pedestrian and cycle routes. 'Green corridors' will be introduced that connect the Development with the existing settlement and wider countryside.

²¹ Green infrastructure refers to any vegetative infrastructure system which enhances the natural environment through direct or indirect means. It describes the network of green spaces and water systems that are intended to deliver multiple environmental, economic and social values and benefits for sustainable urban development.

- 3.25 An existing pond located within the west of the Site will be retained, and a Sustainable Urban Drainage System (SuDS) pond will be created adjacent to this pond.
- 3.26 The area of land for the extension of St John's Primary School also includes public open space²² and a retained pond.

Community Parkland and Wildlife Area

- 3.27 As shown in Figure 3.1, a Community Park will be located within the southern area of the Development, south of Thornham Lane. The Community Park will include retained and new landscape features, ecological enhancement and seating areas. It is proposed that two existing ponds will be retained as part of the Community Park.
- 3.28 An existing area of trees are also proposed to be retained as part of the Community Park.

Access

Vehicular Access

- 3.29 Vehicular access to the Development will be provided from the south west, from the A664 Manchester Road. A secondary access point for approximately 100 homes and emergency access is proposed towards the north west of the Development via Thornham New Road, as shown in Figure 3.1.

Walking and Cycling Access

- 3.30 As outlined in the Design and Access Statement (DAS)²³ submitted separately to the planning application, the footpath and cycle strategy within the Development is designed to provide pleasant, safe, and accessible routes for new residents at the Development.
- 3.31 The Development includes several pedestrian access points, as shown in Figure 3.1. There are pedestrian access points from Church Avenue towards the south west of the Development.

²² Public open space can take many forms, from formal sports pitches to open areas within a development, linear corridors and country parks.

²³ A Design and Access Statement (DAS) is a short report that provides a framework for the Applicant to explain how the Development is a suitable response to the site and its setting, and demonstrates that it can be adequately accessed by future users. A DAS also explains the design principles and concepts that have been applied to the Development, and how the Development's context has influenced its design.

There are two pedestrian access points directly to the east and west of St John's CE Thornham Primary School, via Thornham Lane, towards the southern central area of the Development. Three pedestrian access points will be from existing residential areas associated with Chatburn Avenue. There is also an access point to the north of the Site towards the M62. These pedestrian access points will integrate the Development with existing residential land uses to the west of the Site.

- 3.32 Figure 3.1 also shows that existing PRoW within and adjacent to the Site will be retained. A PRoW route will run through the centre of the Development and can be accessed from the existing residential development to the west of the Site, from Church Lane to the south west and from Thornham Lane to the east of the Site.

Vehicle and Cycle Parking

- 3.33 As the majority of the Development is in outline, information regarding vehicle and cycle parking for the outline element is currently unavailable and will be decided as part of future reserved matters applications.
- 3.34 Within the detailed element of the Development, a total of 554 parking spaces will be provided. Each residential dwelling in the detailed phase (233 dwellings) will have an electric vehicle charging point.

Drainage Infrastructure

- 3.35 The entirety of the Site is located within Flood Zone 1 and subsequently at low risk of flooding from rivers and the sea. However, central and eastern portions of the Site are at low-high risk of surface water flooding (i.e., from rain). Surface water discharge from the Site will be filtered by SuDS and discharged to the Site watercourse (the Dell).
- The SuDS features within the Development will implement features such as water attenuation basins²⁴.

Lighting

- 3.36 The Development will include controlled lighting and the implementation of a lighting strategy. Lighting measures will ensure that the potential effects on surrounding sensitive receptors from light spill, glare and sky glow are minimised and reduced to an acceptable level.

²⁴ Attenuation basins provide flow control through the storage of stormwater runoff.

Earthworks

- 3.37 Finished floor levels will be set at a minimum of 150mm above the local ground level which is in line with best practice to mitigate against the risk of surface water runoff.

Energy, Sustainability and Climate Change

- 3.38 In order to deliver environmentally responsible buildings within the Development, an exemplar approach is proposed based on low energy design principles. This approach involves energy demand minimisation through effective building form and orientation, good envelope design and proficient use of services. An Energy and Climate Adaptation Statement has been submitted in support of the planning application and sets out measures to reduce energy consumption and enhance energy efficiency of the Development (within the detailed phase). Energy reduction measures (which follow the energy hierarchy²⁵) incorporated into the detailed phase of the Development include:

- Highly insulated building fabric with external walls, floors and roofs;
- Efficient double glazed windows;
- Low air permeability;
- Use of natural ventilation;
- Low energy lighting; and
- The use of low carbon technology such as Air Source Heat Pumps (ASHP)²⁶.

Ecological Mitigation

- 3.39 The Development is designed to avoid and minimise adverse effects to key habitats and species identified on the Site. Mitigation in the form of a Construction Ecological Management Plan (CEcMP) included as part of the Construction Environmental Management Plan (CEMP) which will be agreed and implemented before construction works begin, which will ensure that adverse effects on retained features are addressed to avoid any degradation during the construction phase.
- 3.40 New habitat creation has been incorporated into the landscape design proposals for the

²⁵ The Energy Hierarchy is a classification of energy options, prioritised to assist progress towards a more sustainable energy system.

²⁶ An Air Source Heat Pump (ASHP) is a type of heat pump that can absorb heat from outside of a structure and release it inside of a building.

Development, as demonstrated in Figure 3.1 and in the DAS. Hedgerows and trees throughout the Site will be retained where possible and replaced twofold should they need be removed from the Site. The Development will also include wildflower planting, incorporating a meadow flower mix. Hedgerow planting will improve connectivity between the existing and newly created habitats. Further, ponds located on the Site, in the southern, western and central portions will be retained alongside the provision of new SuDS features.

4. ALTERNATIVES

4.1 Under the EIA Regulations an ES is required to provide a description of the reasonable alternatives studied by the Applicant. The main alternatives to a development typically comprise:

- The 'Do Nothing' alternative, where the Development is not progressed;
- Consideration of Alternative Locations or Uses; and
- Consideration of Alternative Designs.

The 'Do Nothing' Alternative and Alternative Sites

4.2 The Site is included as a draft allocation²⁷ for residential development, assuming the Development were not to proceed, the Site could be progressed by another entity for residential development. The Applicant is in a position to deliver residential development and so the do-nothing option was not considered; nor were any alternative sites considered as the Applicant can deliver the Development at the Site.

Alternative Designs

4.3 As discussed in Statement of Community Involvement ('SCI') accompanying the planning application, the design of the Development has evolved from engagement with the local community and stakeholders, and in response to the constraints and opportunities within and local to the Site.

4.4 The following concerns were raised through the consultation process:

- Loss of Green Belt;
- Highways Concerns; and
- Impact on Local Services and Amenities.

4.5 These concerns outlined above have been considered in the evolution of the design. Further information is available from Chapter 4 (Alternatives) of the ES.

²⁷ A Site Allocation means that the site is allocation for a particular type of development or use, such as housing, employment and leisure, within a development plan.

Environmental Considerations

- 4.6 The following design changes were made, in order to improve the environmental effects of the Development. The DAS provides more detail on the evolution of the Development, which is not required for the ES:

Detailed Element:

- In the western portion of the Development, three new SuDS attenuation ponds adjacent to Thornham Cricket club will be created alongside the existing linear pond, providing increased flood attenuation and biodiversity benefits;
- The existing pond south of Carnforth Avenue will be retained and a new pond will be created adjacent to it, providing biodiversity enhancements;
- Meadow grass mix will be planted alongside new trees and a proposed wildlife pond and existing trees surrounding St John's Church towards the south-west of the Development will be retained, reducing the adverse effect on the setting of the Grade II listed building;
- A PRoW running through the western central portion of the Site will be retained as part of the Phase 1 detailed element of the Development, creating a recreational path for the new residents and encouraging active travel, which will have a beneficial effect on residents' health;
- The detailed element of the Development will comprise 15% affordable housing for new residents, as well as a range of housing tenures from 1–5 bedroom homes, which will have a beneficial effect on local housing supply;
- The mixed use development could provide affordable homes as well as a commercial use for new residents, therefore having a beneficial effect on access to local infrastructure;
- Proposed native tree and shrub planting in the western portion of the Site adjacent to Carnforth Avenue will mitigate the effect of a changed landscape for existing residential receptors;
- The 3m shared footpath and cycleway will encourage a modal shift to more sustainable forms of travel, therefore having beneficial effects in terms of transport, air quality and noise; and
- New planting of a variety of trees, hedgerows, plants and grassland, alongside new wildlife ponds will capture carbon from the atmosphere²⁸, therefore improving climatic effects.

²⁸ Carbon storage is the process whereby carbon dioxide (a climate warming gas) is removed from the atmosphere and held in solid (i.e., trees) or liquid form (i.e., in water) in an attempt to mitigate the effects of climate change.

Outline Element:

- The community parkland in the south of the Development will provide ecological enhancements as well as recreational space, therefore having beneficial health effects for new residents and visitors to the area;
- Land to the north of St John's Primary School includes open space which will enhance biodiversity on the Site and provide an area for recreation for pupils, therefore having beneficial health effects;
- The school extension land, as shown in Figure 3.1, provides space for a school extension to increase pupil capacity should it be necessary, improving primary school capacity in the local area;
- The north and east of the Development will comprise an area of green infrastructure, as shown in Figure 3.1, and this will mitigate effects on the Development in terms of noise and air quality from the adjacent motorways;
- As shown in Figure 3.1, the maximum height of the Development will be up to 3 storeys in keeping with the local area, which will mitigate adverse effects on landscape and views;
- There will be several pedestrian access points to the Development, as shown in Figure 3.1 including from Chatburn Avenue and Carnforth Avenue to the west, along Thornham Lane in the south and from the M62 to the north. This will integrate the Development to the existing built form and encourage a walkable neighbourhood, and therefore have beneficial health effects;
- A secondary access point, to provide access to approximately 100 homes within the north of the Development, will alleviate significant adverse transport effects on the primary access point; and
- Ponds and trees will be retained throughout the outline element of the Development which will be beneficial in terms of biodiversity.

Conclusion

- 4.7 The parameter plan and detailed site layout (Figures 3.1 and 3.2), against which the ES is assessed, has evolved from the consideration of the environmental opportunities and constraints to the Site, and in response to the concerns and priorities of the local community from the consultation.

5. CONSTRUCTION METHODOLOGY AND PHASING

- 5.1 Planning for construction is broad at this stage and may be subject to modification. The assessment of construction phase environmental effects is based on reasonable assumptions and experience. A detailed CEMP will be secured and implemented before construction works begin.
- 5.2 Construction of the Development is anticipated to commence in Spring 2024 subject to gaining planning permission and span approximately 14 years. Overall, construction is expected to be completed by 2038.
- 5.3 Each chapter of the ES has assessed the worst-case scenario for construction to ensure all realistic likely significant effects have been considered and appropriate mitigation proposed.
- 5.4 Construction will include the following activities:
- Site access road construction;
 - Site Preparation and Enabling works;
 - Excavation and sub-structure works;
 - Infrastructure and Drainage works;
 - Construction of superstructure;
 - Fit out; and
 - Landscaping and SuDS.
- 5.5 Where possible, materials and resources used during the construction of the Development would be sustainably sourced and procured from known sources. Recycled aggregate will be given preference over virgin aggregate, a finite resource, wherever such material can meet the required specification for use. The Applicant recognises the opportunity to reduce the use of natural resources through responsible procurement and implementation of modern construction methods. Adopting sustainable construction methods reduces the environmental impact of the Development.
- 5.6 The waste hierarchy²⁹ will be adopted in the construction of the Development of appropriate mitigation control measures to reduce the amount of waste sent to landfill and promote recycling. The off-site re-use, recycling or recovery of construction and excavation waste

²⁹ The “waste hierarchy” ranks waste management options according to what is best for the environment. It gives top priority to preventing waste in the first place. When waste is created, it gives priority to preparing it for re-use, then recycling, then recovery, and last of all disposal (e.g., landfill).

would be maximised where possible. Waste would only be sent to landfill as a last resort if there is no alternative disposal route.

Construction Phase Vehicle Movements

- 5.7 Construction vehicles will access and exit the Site from the west of the Site via Rochdale Road. Table 5.1 provides an indicative level of construction traffic, showing the likely number of vehicles generated by the construction of the Development.

Table 5.1: Estimated Daily Construction Traffic

Vehicle Type	Average Trips Per Day
Heavy Goods Vehicles (HGVs)	34
Cars or Light Goods Vehicles (LGVs)	131

- 5.8 Heavy Goods Vehicle (HGV) movements would be dispersed across the working day, outside of the morning and evening peak periods. The arrival and departure of light vehicles would have some impact during the morning and evening periods however, it is likely that a significant majority of construction workers would travel outside of the network peak periods due to an early daily start on-site.

Environmental Management

- 5.9 As discussed previously, the construction phase will be carried out in accordance with a detailed CEMP, which would consolidate the various mitigation measures identified in this ES and would be agreed with RBC and relevant statutory bodies. The CEMP will be secured by an appropriately worded planning condition.
- 5.10 Working hours on the Site will be agreed with RBC through the CEMP. However, it is likely that the standard hours of work will be adhered to. These are:
- Monday to Friday, 07:00 to 18:00;
 - Saturday, 09:00 to 14:00; and
 - Sunday and Bank Holidays, no working anticipated, however this is subject to change according to planning conditions and Client requirements.

6. LANDSCAPE AND VISUAL EFFECTS

- 6.1 The ES has assessed the likely significant effects of the Development with respect to Landscape and Visual Effects.

Baseline

- 6.2 The baseline conditions of the Site and the surrounding landscape has been informed by desk-study and fieldwork undertaken in August 2022. The Site is located between the settlements of Rochdale to the north and Middleton to the south. Other areas of settlement within the study area (see Figure 6.1) include Heywood, Royton, Shaw and Milnwood. The Site is predominantly agricultural land enclosed by existing urban development. The agricultural landscape is generally highly broken up by the dense network of large transport corridors that surround the Site. Local development and typical land uses associated with local residential areas, along with Golf clubs, including the Manchester Golf Club and the Castle Hawk Golf Club, dominate the open land within the western half of the study area.
- 6.3 The visibility of the Site is mainly influenced by landform and the extent and type of vegetation cover and built elements within the surrounding landscape. For the majority of views, it is not possible to appreciate the Site as a whole from within the Site and from the surrounding landscape.
- 6.4 The Site is not covered by any designations for landscape or scenic beauty. However, the following designations within the study area are of note:
- The entirety of the Site lies within the Liverpool and Manchester Green Belt;
 - The nearest SSSI is the Rochdale Canal SSSI (which is also a SAC), which runs along the canal crossing the study area in a north to south direction;
 - LNRs are present within the study area, the nearest of which is Hopwood Woodlands LNR;
 - Scattered areas of ancient semi-natural woodland are present within the study area, the nearest block to the Site being 450m from the Site boundary; and
 - Tandle Hill Country Park is situated approximately 580m to the east of the Site boundary.
- 6.5 The study area is served by a network of PRow, several of which pass through the Site.

Construction Effects

- 6.6 The construction of the Development will result in temporary Moderate/Major Adverse effects during the construction phase to the majority of views and settings, related to activities such as the removal of limited sections of hedgerow and trees and the introduction of new temporary elements, including material stockpiles, welfare facilities, plant and machinery, and construction site lighting, which is considered to be significant. Subsequent to the implementation of mitigation, such as the CEMP which will include measures such as the unloading of construction materials and equipment within the Site boundary to limit adverse effects on character and views outside of the Site, residual effects are unlikely to differ in magnitude or significance.

Operational Effects

- 6.7 The design of the Development has been informed by the local landscape and visual context. Subsequent to the implementation of mitigation measures, at year 15 of the completed Development, three landscape receptors are likely to experience effects that are considered to be significant:
- Open fields will be subject to a Moderate Adverse residual effect as a result of the noticeable change and loss of its openness and agricultural character;
 - Woodland will be subject to a Moderate Beneficial residual effect as there will be 14.5ha of new woodland planted which would have matured, enhancing the existing woodland setting; and
 - Canopy trees will increase across the Site, which once mature will provide a green character with increased tree canopy cover which reflects the local character, which is considered to be a significant Moderate Beneficial residual effect.
- 6.8 The remaining landscape receptors identified in the assessment will be subject to adverse or beneficial residual effects that are either Minor or Negligible, and are therefore not considered to be significant.
- 6.9 A single visual receptor (users of the PRoW within the Site) is considered likely to experience a Moderate Adverse significant residual effect due to the change in views as the PRoW will pass through residential development, changing the character of the views. No further visual receptors are considered likely to experience significant residual effects following establishment of proposed planting at Year 15.

Cumulative Effects

- 6.10 The cumulative effects on landscape character were identified as Minor Adverse and not significant and cumulative visual effects were identified as Negligible Adverse and not significant.

7. BIODIVERSITY

- 7.1 The ES has assessed the likely significant effects of the Development with respect to biodiversity.

Baseline

- 7.2 The majority of the Site comprises agricultural fields.
- 7.3 Survey work undertaken on the Site has identified evidence of badgers. In addition, bats, water voles, brown hares, breeding birds (such as bullfinch, cuckoo and curlew) were found to use the Site. A search for Great Crested Newts was undertaken in proximity to the Site, with no records returned.
- 7.4 There are two ecological designated sites within 2km of the Site. The nearest is Hopwood Woods Local Nature Reserve (LNR), which is located approximately 380m to the south west of the Site. The Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) is located approximately 500m to the west of the Site.
- 7.5 There are six non-statutory designated sites within 1km of the Site. Each of these sites are designated as Sites of Biological Importance (SBI)³⁰.
- 7.6 Of the statutory designated and non-statutory designated sites identified, the following are considered to be located within the area in proximity to the Site that may be affected by the Development due to their proximity and/or sensitivity to particular impact pathways³¹:
- Hopwood Woods LNR;
 - Rochdale Canal SSSI and SAC;
 - Lords Wood SBI;
 - A627m by Tandle Hill SBI; and
 - Gerrard Wood SBI.

³⁰ Sites of Biological Importance (SBIs) are local planning designations covering areas of nature conservation importance in Greater Manchester which contain locally valuable habitats, plants, and animals.

³¹ A route by which a receiving body, area, or environmental receptor could be affected by an impact (e.g., construction-related dust travelling through the air to a Local Nature Reserve and impacting plants and animals).

Construction Effects

- 7.7 In the absence of mitigation, likely significant effects during the construction phase include disturbance and damage to the majority of habitats within the main area of the Site, along with the potential increase in light disturbance. Light disturbance will have an effect on species during the construction phase due to the risk of light spill and disturbance to habitats. There may be some temporary construction-related effects to the Rochdale Canal SSSI and SAC.
- 7.8 Mitigation measures to address adverse effects during construction would largely be addressed through the implementation of a CEMP. The CEMP will include measures such as the provision of protective fencing around the Site, pollution prevention (e.g., the appropriate storage of oils and fuels), dust management (e.g., water suppression whilst cutting dust-generating materials), routing of construction traffic away from sensitive areas such as hospitals, schools and residential areas, and Reasonable Avoidance Measures (e.g., sensitive clearance of vegetation and good working practice).
- 7.9 Once mitigation measures are implemented, construction effects are considered to be temporary, minor adverse at the local level only.

Operational Effects

- 7.10 Operational mitigation measures will include the provision of bat and bird boxes to be included in the detailed design stage. The ecology mitigation, long-term management and ongoing monitoring will be outlined within a Landscape Ecology Management Plan (LEMP). The LEMP will be agreed within the detailed design of the Development and will specify how landscape management will be ensured, such that habitats are managed to maximise their biodiversity value. The LEMP will ensure that habitats are managed through a management plan for a minimum of 30 years. Following the implementation of mitigation measures, it is anticipated that effects on all species identified on the Site will be minor adverse and not significant.
- 7.11 Disturbance through noise, human disturbance (i.e., recreational impacts) and light spill may occur and could impact the statutory designated and non-statutory designated sites identified in proximity to the Site. The resulting effects are considered to be minor adverse and not significant.

Cumulative Effects

- 7.12 No significant cumulative effects are anticipated with respect to biodiversity for either the construction or operational phase.

8. CULTURAL HERITAGE

- 8.1 The ES assessed the likely significant effects of the Development with respect to Cultural Heritage, which considers above ground (built heritage) assets and below ground (archaeological) assets.

Baseline

- 8.2 There are no Scheduled Monuments, World Heritage Sites³², Registered Parks and Gardens³³ or Registered Battlefields³⁴ on, or within 1km of the Site boundary. There are two listed buildings adjacent to the south western boundary, as outlined below:

- Church of St John the Evangelist; and
- Thornham Parish War Memorial.

- 8.3 There are a further seven Grade II listed buildings within 1km of the Site boundary, the closest of which is located approximately 260m to the south-west of the Site.

- 8.4 There are two non-designated assets³⁵ located within the Site boundary:

- Slattocks Peat which is a small parcel of peat located in the southern area of the Site; and
- Saplin Farm (site of) which has potential for archaeological remains and is located to the north-west of St Johns school.

- 8.5 There are a further 35 non-designated heritage assets within 1km of the Site.

³² A World Heritage Site is a natural or man-made site, area, or structure recognised as being of outstanding international importance and therefore as deserving special protection. Sites are nominated to and designated by the World Heritage Convention (an organisation of the United Nations Educational, Scientific and Cultural Organization (UNESCO)).

³³ A Registered Park and Garden are those sites, or gardens that generally started life as the grounds of private houses, however public parks and cemeteries in some cases also constitute a Registered Park or Garden. They are a fragile and finite resource that can be easily damaged beyond repair, or lost forever.

³⁴ Registered Battlefields are battlefields recognised as having specific historic or cultural significance. They are recognised as such by conservationist organisations for a variety of reasons, including protecting them from development that may threaten historic buildings, items, or landscape.

³⁵ A non-designated heritage assets are buildings, monuments, sites, places, areas or landscapes identified as having a degree of importance meriting consideration in planning decisions because of their heritage interest but which do not meet the criteria to be a designated heritage asset.

Construction Effects

- 8.6 There will be no impacts on the peat deposit (Slattocks Peat) within the Site boundary during the construction phase, as the deposit will be located in an area of green open space away from the built development.
- 8.7 There is potential for impacts on previously unknown archaeological remains at the Site, although this is considered to be low. The significance of such impacts is not known. Archaeological investigation and mitigation measures have been requested by RBC, which will be implemented before construction of the Development and would ensure of no significant residual effects to below ground archaeology.
- 8.8 Construction phase mitigation will comprise best practice measures (such as the appropriate positioning of construction access routes on the Site and appropriate routing of construction traffic) and will be implemented through the CEMP, which would seek to minimise any effects. In addition, the Development includes mitigation in the form of undeveloped green open space in the area of the buried peat deposits.
- 8.9 After the implementation of best practice mitigation measures, there would be minor adverse / negligible (not significant) residual effects on the designated and non-designated heritage assets that are within and adjacent to the Site.

Operational Effects

- 8.10 There will be no direct (physical) impacts on the statutory and non-statutory designated heritage assets within and adjacent to the Site once the Development is completed. There will be minor adverse / negligible (not significant) effects on the setting³⁶ of all built heritage assets that have been identified.
- 8.11 The Development includes the implementation of 'screening' vegetation, seeking to separate the Church of St John the Evangelist (Grade II Listed) from housing in its background in views from the south and west and those within the churchyard.

³⁶ The 'setting' of a heritage asset is the surroundings in which the heritage asset is experienced. This includes elements such as the landform and structures that are visible with the heritage asset.

Cumulative Effects

- 8.12 Potential cumulative effects from the schemes identified in Table 2.1 are assessed to be negligible as the heritage assets assessed are less visible from the cumulative schemes due to the form of the landscape. The schemes identified in Table 2.1 will adopt a CEMP and best practice measures to reduce likely significant effects. Furthermore, the likelihood of construction taking place at the same time is unlikely. As such, it is considered that the Development would not give rise to any likely significant cumulative effects.

9. TRANSPORT

- 9.1 The ES assessed the likely significant effects of the Development with respect to Transport.

Baseline

- 9.2 The Site is located approximately 2km to the south of Castleton and approximately 4km to the south of Rochdale Town Centre. The Site is enclosed by existing urban development, Thornham Road, the M62, the A627(M) and the A664 Manchester Road. Thornham Lane crosses the southern area of the Site.

Construction Effects

- 9.3 Table 5.1 above sets out that during the construction works approximately 34 HGVs and 131 cars or LGVs could access the Site on a typical weekday. As the Development is built out, the number of these vehicle movements would reduce over time. The movement of construction related traffic will not be significant across a typical working day. Therefore, the potential construction-related transport effects on severance, driver delay, pedestrian delay, pedestrian and cyclist amenity, and accidents and safety will be short-term with a minor adverse effect, which is not considered to be significant. A Construction Traffic Management Plan (CTMP) will be implemented to result in negligible (not significant) residual effects and will include measures such as:

- Construction material deliveries being phased and outside of peak traffic hours to minimise local disruption and the normal workings of the surrounding properties;
- Segregation of plant, materials and pedestrians on the Site and safe access routes to areas on the Site; and
- Temporary signage, road markings or protection barriers.

- 9.4 The implementation of the CTMP will result in negligible (not significant) residual effects.

Operational Effects

- 9.5 Prior to the implementation of mitigation measures, the effects on driver delay, pedestrian delay and accidents and safety are considered to be negligible (not significant). Effects on severance are considered to be minor adverse (not significant). Effects on pedestrian and cyclist amenity are considered to be minor beneficial as the Development will provide a high-quality public realm. The pedestrian and cyclist provisions within the Development will be complemented by enhancements to the external highway network, including footway

widening and improvements to cycle facilities.

9.6 Subsequent to the implementation of a Travel Plan³⁷, effects will be minimised to negligible (not significant) with the exception of the effects on pedestrian and cyclist amenity which will remain as minor beneficial, for the reasons outlined above. The principal aims of the Travel Plan are to:

- Encourage the use of more sustainable modes of transport (i.e., walking, cycling and use of public transport);
- Reducing the need to travel; and
- Encourage the use of sustainable travel by improving facilities and providing information.

Cumulative Effects

9.7 The schemes identified in Table 2.1 will be subject to the implementation of a CTMP such that any potentially significant effects could be fully managed and mitigated in cooperation with the Local Highway and Planning Authorities. No cumulative effects are anticipated.

³⁷ A Travel Plan is a long-term management strategy to integrate sustainable forms of travel into the Development (such as promoting the use of public transport, walking, and cycling). An intention of a Travel Plan is to minimise impacts on Air Quality.

10. AIR QUALITY

- 10.1 The ES assessed the likely significant effects of the Development with respect to Air Quality.

Baseline

- 10.2 The Site is partially located within the Greater Manchester Combined Authority Air Quality Management Area (AQMA)³⁸, covering the M62 and A627(M) adjacent to the north and east of the Site, respectively. This AQMA was declared for exceedances of the annual mean nitrogen dioxide (NO₂) objective.
- 10.3 Two NO₂ monitoring tubes are located within 1km of the Site. There were no exceedances of the annual mean NO₂ standard³⁹ in 2020 or 2021.

Construction Effects

- 10.4 The potential risk of construction phase impacts from dust soiling (i.e., the deposition of dust on surfaces) is predicted to be 'low' to 'high' risk. Effects on human health is predicted to be 'negligible' to 'low' risk. Effects on ecology is predicted to be 'low' to 'medium' risk.
- 10.5 Mitigation measures such as the implementation of the CEMP will reduce the risk of dust and particulate matter being generated (for example suppressing airborne dust by spraying water), and would reduce emissions from vehicles and plant associated with construction activities. No significant residual effects are anticipated during the construction phase following mitigation.

Operational Effects

- 10.6 Air quality impacts during the operational phase are likely to be those related to emissions from road traffic. The Air Quality Assessment (Appendix 10.1 of the ES) has determined that the effect of the Development on NO₂ and particulate matter⁴⁰ concentrations at existing sensitive human receptors, prior to mitigation, will be negligible (not significant) at all identified locations. Therefore, it is considered that no specific mitigation measures will be

³⁸ An Air Quality Management Area (AQMA) is an area set up by the Local Authority where the air pollution does not meet the national air quality objectives.

³⁹ In the Air Quality Directive (2008/EC/50) the EU has set two limit values for NO₂ to protect human health: the NO₂ hourly mean threshold cannot be exceeded more than 18 times in a year and the NO₂ annual mean threshold cannot be exceeded. If they are exceeded, an AQMA is implemented to improve the local air quality.

⁴⁰ Tiny pieces of solids or liquids that are in the air.

required for the operational phase. Nevertheless, transport related mitigation measures, such as implementation of a Travel Plan (which would include dissemination of public transport information and maps indicating local cycle and walking routes) would further reduce any potential effects of the Development on local air quality.

Cumulative Effects

- 10.7 The Development in addition to the cumulative schemes have been assessed to not have a significant effect on air quality in both the construction and operational phases.

11. NOISE AND VIBRATION

- 11.1 The ES has assessed the likely significant effects of the Development with respect of Noise and Vibration.

Baseline

- 11.2 Baseline noise surveys have been carried out at three locations within the Site:

- 5m to the south Thornham New Road;
- To the rear of properties on Chatburn Avenue; and
- 5m to the north of Thornham Lane.

- 11.3 The results show that existing dwellings adjacent or near to the locations surveyed are subject to low to modest daytime background noise levels.

- 11.4 Vibration has been scoped out of the assessment as it is considered that the construction and operation of the Development will not give rise to any significant effects as result of vibration.

Construction

- 11.5 Figures 3.1 and 3.2 show that the majority of dwellings will be constructed away from existing dwellings in the surrounding area; however, there will be periods of noise from construction of new dwellings that are located close to existing dwellings.

- 11.6 Without the implementation of appropriate 'best practice' noise mitigation measures (such as limited daytime working hours on the Site, and one-way construction road access to minimise the use of reversing sirens on vehicles), construction noise may give rise to short-term noise effects of minor to moderate adverse significance during periods when the noisiest activity is taking place at the closest points to existing dwellings or newly built properties.

- 11.7 Construction vehicle movements will be managed by a the CTMP. The CTMP would include mitigation measures such as construction vehicles complying with noise certification limits, and deliveries of building materials being made to the Site during the Site's daytime working hours, to minimise noise impacts. Following the implementation of appropriate mitigation measures such as the CTMP, CEMP, and best practice measures, the noise effect at any one location during the construction phase will be no more than minor adverse (not significant), and temporary.

Operation

- 11.8 The potential effects on residents from additional traffic noise as a result of the Development have been assessed. In the absence of mitigation, the effects from traffic noise generated by the Development will be permanent and minor adverse (not significant). Therefore, no mitigation is required. Nevertheless, transport related mitigation measures, such as implementation of a Travel Plan would further reduce any potential noise effects; sustainable modes of transport will be encouraged throughout the Development which can contribute to reduced noise effects. Notwithstanding, the residual effect will remain as minor adverse (not significant).

Cumulative Effects

- 11.9 The potential for cumulative effects from other committed developments, outlined in Table 2.1, for the construction and operational phases has been assessed and the effects are considered to be negligible (not significant).

12. POPULATION AND HUMAN HEALTH

12.1 The ES has assessed the likely significant effects of the Development with respect to Population and Human Health.

Baseline

12.2 The Study Area for this ES Chapter is shown on Figure 12.1. The current population and human health baseline conditions comprise:

- The Ordnance Survey (ONS) 2021 Census Mid-Year Population Estimates⁴¹ (MYPE's) for the Study Area estimates that the population to be 21,927 people, which accounts for 10% of the RBC area's total population (223,775 people).
- The 2021 Census recorded approximately 90,223 households in the RBC area, 9.9% (8,921) of which are within the Study Area.
- A total of eight registered, non-domestic early years facilities are located within the Study Area.
- There are a total of seven primary schools located within the Rochdale Southwest Primary Planning Area. Six of these seven schools are operating within available capacity.
- There are nine secondary schools located within the Middleton Township Secondary and Rochdale Township Secondary Planning Areas combined, two of which are currently operating over capacity.
- There are three GP practices operating from within the Study Area, two of which are running over capacity.
- The Site is located within two 'neighbourhoods': Lower Super Output Area (LSOA)⁴² Rochdale 017D and Rochdale 017Cⁱ. The population is amongst the 30% most deprived neighbourhoods in England.
- The 2021 Census recorded 9,808 people aged 16 years and over who are classified as 'economically active'⁴³.

Construction Effects

12.3 The construction phase of the Development will generate jobs across all construction disciplines, from ground workers to construction management. It is anticipated that the

⁴¹ Mid-year population estimates are the official source of population sizes in-between censuses, covering populations of local authorities, counties, regions and countries of the UK by age and sex.

⁴² Lower Layer Super Output Areas (LSOA) are a geographic hierarchy designed to improve the reporting of small area statistics in England and Wales. The Minimum population is 1000 and the mean is 1500.

⁴³ This includes all people in employment, or available to work (for example those who are unemployed).

Development will produce direct employment for an average of 121 Full Time Equivalent (FTE)⁴⁴ workers over the construction period. In addition, the construction phase will produce indirect jobs in the supply chain. Therefore, there is likely to be a temporary, minor beneficial effect in the RBC area during the construction phase, which is not considered significant.

- 12.4 Construction traffic, noise, dust, emissions and visual disturbance from the presence of construction machinery and plant could, in the absence of mitigation, have adverse effects on mental and physical health and quality of life over the 14-year construction period. With mitigation in place through the CEMP and CTMP, construction effects related to Air Quality and Transport would be negligible. The residual effects related to views would range from major (significant) to minor adverse (not significant). The residual effects related to construction noise would be Minor Adverse, which is not considered significant. The residual effects from transport accidents and safety, and air quality construction effects are considered to be negligible.

Operational Effects

- 12.5 The Development will provide up to 1,380 new homes, which will contribute 18.8% of the RBC area's total housing requirement over the Local Plan period. Therefore, there is likely to be a permanent, major to moderate beneficial effect on housing delivery during the operational phase, which is considered significant.
- 12.6 It is calculated that the Development could generate additional household expenditure of £27.7m per annum, increasing household expenditure in the RBC area by 1.5%. Therefore, there is likely to be a permanent, minor beneficial effect on household expenditure, which is not considered significant.
- 12.7 It is estimated that the Development will generate a need for up to 207 early years education places, which will require 47% of the available early years places in the study area. It is considered that there will be a moderate to minor adverse effect on early years education, which is not considered significant.
- 12.8 It is calculated that the Development will generate a need for up to 290 primary school places. Whilst there are currently primary school places available, the number of available places is anticipated to reduce in the coming years. Furthermore, the Development is estimated to

⁴⁴ Full Time Equivalent (FTE) is a standardised method of measurement that represents the number of hours worked by an individual in one week (this could be 40 hours, or 30 hours, depending on the company, its policies and location).

provide homes for approximately 3,381 people, therefore creating a need for 3,381 additional GP places which cannot be accommodated within the existing GP provision. On this basis, there would be a major adverse (significant) effect on primary education and GP provision. Mitigation is expected to be requested in the form of a financial contribution to increase primary education and GP availability in the local area to the Site, which would reduce the effect to negligible (not significant).

- 12.9 The Development is estimated to create a need for up to 207 additional secondary school places. This magnitude of change is considered to be minor and, on this basis, a moderate to minor adverse effects on secondary education is anticipated, which is not considered significant.
- 12.10 The Development will deliver up to 46.42 hectares of local open space, incorporating formal play areas. On this basis, there will be a permanent major to moderate beneficial effect on open/play space during the operational phase, which is considered significant.
- 12.11 The Development will deliver employment floorspace as part of new mixed use areas. It is estimated that the employment floorspace could support approximately 56 FTE jobs. On this basis it is considered that the Development will provide a permanent, negligible effects on employment in the RBC area, which is not considered significant.
- 12.12 In relation to human health, residual visual effects during operation would be moderate adverse (significant) to negligible (not significant). Subsequent to the implementation of a Travel Plan, effects from changes in road traffic noise are considered minor adverse and not significant. Effects from transport accidents and safety, and air quality emissions from traffic are considered to be negligible (not significant).
- 12.13 There is a moderate adverse and significant effect with respect to the risk on future users of the Site during periods of heatwaves related to climate change.

Cumulative Effects

- 12.14 The identified cumulative effects of the construction phase range from minor adverse to negligible, which is not considered significant. The cumulative developments are located at a distance from each other such that significant effects would not occur subsequent to the implementation of mitigation measures, such as the implementation of a CEMP.
- 12.15 During the operational phase of the Development, cumulative effects on early years education are anticipated to be moderate to minor adverse, which is not considered to be significant.

For primary education, secondary education, and GP provision, cumulative effects are anticipated to be major adverse, moderate to major adverse, and major adverse respectively; however it is assumed that each cumulative development will mitigate the impact of their own development in the form of a financial contribution for GP, primary and secondary education facilities, reducing the effects to negligible and not significant. The remaining potential cumulative effects range from negligible, to major beneficial (housing provision).

13. CLIMATE CHANGE

- 13.1 The ES has assessed the likely significant effects of the Development with respect to Climate Change.

Baseline

- 13.2 Climatic averages between the years 1991 – 2020 indicate that in a year, the average amount of rainfall is 1197.22mm, approximately 11% below the Regional (north-west of England) average. The most rain falls in December, averaging 138.88mm. The average annual maximum temperature is 13.13°C, with the warmest month being July, having average maximum temperatures of 20.01°C. February is the coldest month, with temperatures averaging 1.41°C.
- 13.3 Overall, carbon emissions have steadily declined across the industrial, commercial, domestic and transport sectors. Emissions from domestic sources have declined by approximately 44% between 2005 and 2020. Grand total emissions have also shown a downward trend since 2018.

Construction Effects

- 13.4 The construction of the Development will result in the temporary emissions of carbon dioxide (CO₂) from direct and indirect sources, for example CO₂, emissions associated with construction traffic accessing the Site, and from emissions associated with the production of materials that are needed to build the Development. These emissions are unlikely to make a significant contribution to the overall UK Greenhouse Gas⁴⁵ emissions. Therefore, there is likely to be a negligible overall effect on the climate, which is not considered to be significant. Notwithstanding, construction vehicle movements will be managed through the CEMP, in tandem with the CTMP, which will include measures to contribute to reduction in emissions associated with construction vehicles.

Operational Effects

- 13.5 The Development will result in an increase in vehicle movements on the local road network, with an estimated annual average daily traffic flow increase of 109,353 vehicle trips per day on top of existing traffic flows, which would result in a major adverse and significant effect on climate change. The implementation of a Travel Plan will encourage the use of more

⁴⁵ A gas that contributes to global warming by absorbing radiation from the sun, such as carbon dioxide (CO₂).

sustainable modes of transport, such as the use of public transport, walking and cycling. The Travel Plan aims to reduce emissions from operational vehicle use and the associated climate change impacts, and would reduce the residual effects to moderate adverse (significant).

- 13.6 A range of energy efficiency measures will be incorporated into the Development, such as highly insulated buildings and efficient double-glazed windows. Heat and hot water demand will be met by low carbon technology using Air Source Heat Pumps (ASHPs)⁴⁶, further reducing greenhouse gas emissions. The likely effect from operational energy emissions is considered to be minor adverse and not significant. The use of technologies such as ASHPs would allow the Development to achieve net zero operational carbon emissions once the grid decarbonises, therefore the residual effect of operational energy emissions is considered to be negligible and not significant.
- 13.7 An assessment of the ability of the Site to sequester (store) carbon was undertaken. The introduction of new and varied habitats on the Site, in tandem with the retention of those existing habitats, will increase the potential of the Site to sequester carbon, representing a minor beneficial effect, which is not considered to be significant.
- 13.8 Moderate adverse effects have been identified on future users of the Site as a result of increased frequency and intensity of heatwaves, which is considered to be significant. In addition, there is potential for moderate adverse effects on habitats, planting and landscaping as a result of climate change effects. A landscape and sustainable urban drainage strategy will ensure that green and blue infrastructure is provided and maintained on the Site to provide a level of thermal cooling/shading. The residual effects on future users and habitats, planting and landscape are considered to be minor adverse and not significant; however, the residual effect in terms of heatwaves remains as moderate adverse (significant).

Cumulative Effects

- 13.9 The cumulative effect of greenhouse gas emissions arising from global human activity is high. This is due to the nature of climate change as a global, cumulative issue. As greenhouse gas emissions are intrinsically cumulative, no specific assessment has been carried out for greenhouse gas emission sources. Further, the combination of cumulative schemes will not impact upon climate change resilience for the Development or cumulative schemes. A cumulative assessment of climate change resilience has therefore not been considered. Notwithstanding, it is assumed that all committed developments will be required to meet

⁴⁶ Air Source Heat Pumps (ASHPs) absorb heat from the outside air and use it to increase the temperature inside the home.

relevant standards for emissions reduction and comply with related planning policy. On this basis, it is reasonable to assume that any applications that are consented include 'reasonable' measures to avoid, reduce and/or offset the generation of greenhouse gas emissions.

14. SUMMARY AND RESIDUAL EFFECTS

14.1 An ES including this Non-Technical Summary has been prepared to support a planning application which seeks hybrid planning permission for the residential-led development at the land at Stakehill, Rochdale.

14.2 Mitigation measures have been incorporated into the construction and operational phases of Development in order to avoid, reduce or offset significant environmental effects. The measures incorporated into the Development are as set out within Chapter 4 of this NTS.

14.3 The Development will result in the following significant beneficial residual effects:

Operation:

- Housing delivery (Major-Moderate Beneficial);
- Open and play space provision (Major Beneficial); and
- Effects on Landscape features (Moderate adverse to Moderate Beneficial).

14.4 The Development will result in the following significant adverse residual effects:

Construction:

- Effects on landscape features (i.e., loss of openness, alterations to the existing Site, removal of limited sections of hedgerow and trees and the introduction of new temporary elements such as material stockpiles and plant and machinery) (Major Adverse – Neutral); and
- Effects on visual receptors (i.e., users of existing PRoW on and in proximity to the Site) (Major - Moderate – Minor Adverse);
- Effects on Wider Human Health (Visual) (Major to Minor Adverse).

Operation:

- Effects on landscape features (up until the maturation of landscape mitigation planting at year 15 of the operational Development) (Moderate adverse to Moderate Beneficial);
- Effects of operational transport emissions (Moderate Adverse); and
- Effects of climate change on future site users during heatwaves (Moderate Adverse).

Interactive Effects

- 14.5 The ES considers the interrelationship between the significant effects outlined above. During the construction and operational phases of the Development, it is considered that interactions could potentially occur between the local population and Site users, landscape and views, users of the local road network, and biodiversity. It is considered that interactive effects during construction and operation are minor, and therefore not significant. The findings of this exercise are set out in Table 14.1 below:

Table 14.1: Interactive Effects

Effect	Local Population and Site Users	Landscape and Views	Users of the Local Road Network	Biodiversity	Climate Change
Construction					
Effects from construction traffic	*		*	*	
Loss of habitat and boundary planting	*	*		*	*
Effects of construction dust and air quality	*			*	*
Disturbance of below ground built heritage assets	*	*			
Loss of Agricultural Land		*		*	*
Operation					
Housing provision	*				
Enhanced planting and habitat provision	*	*		*	*
Views of the Development	*	*			
Improvements to the road network	*		*		
Operational road and plant pollutant emissions	*		*	*	*
Operational traffic changes	*		*	*	
New open space creation	*	*		*	*

* indicates where an effect may occur

Cumulative Effects

- 14.6 Each of the technical assessments considers the likely significant cumulative effects of the Development with the cumulative schemes set out in Chapter 2 of the ES.
- 15.1 The technical assessments identified the following significant beneficial cumulative effects:

- Housing delivery (Major-Moderate Beneficial).

14.7 The technical assessments identified that there are no significant adverse cumulative effects.

FIGURE 1.1
SITE LOCATION PLAN

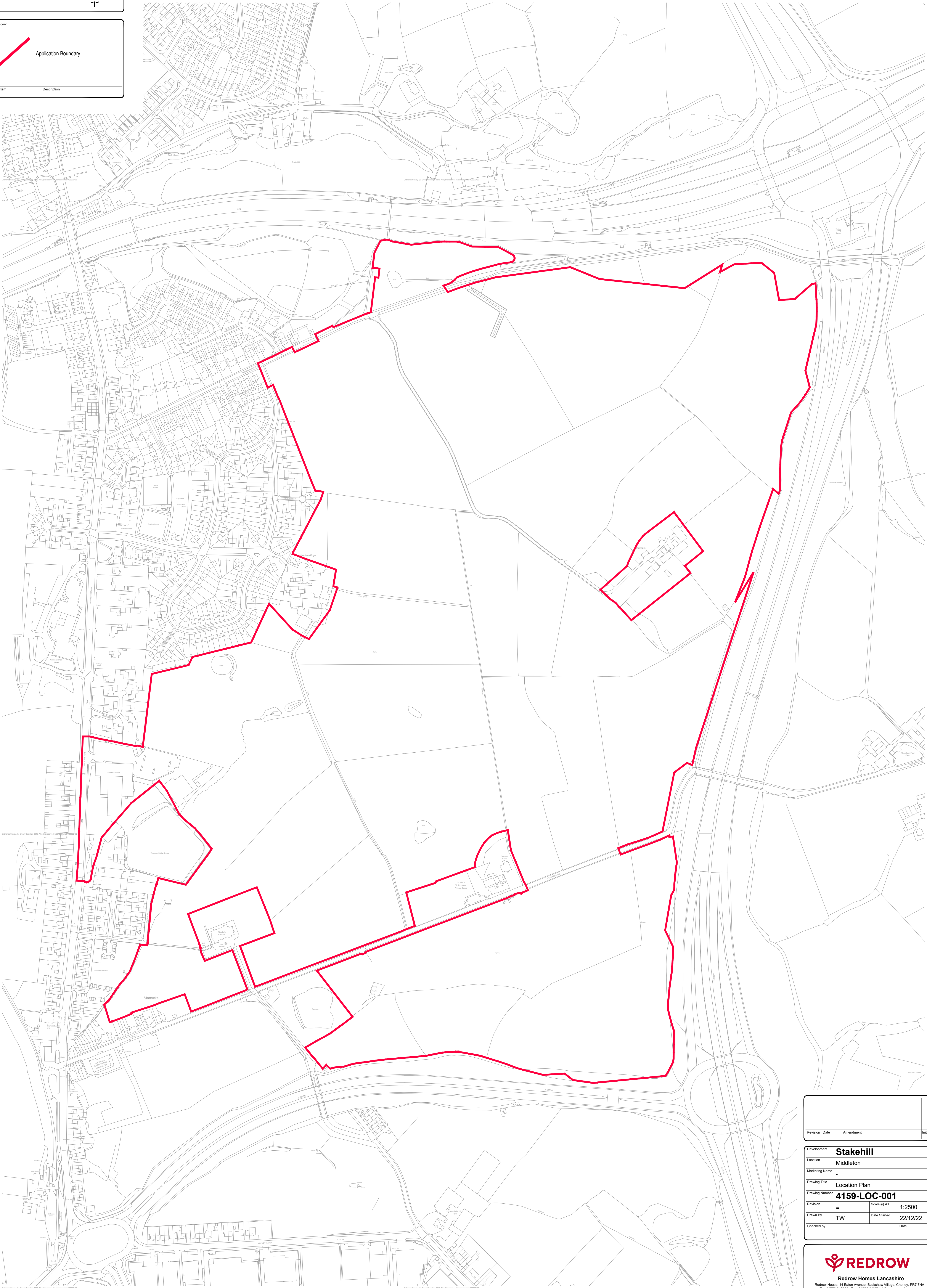
Survey Information

Legend

Application Boundary

Item

Description



Revision	Date	Amendment	Initials
Development			
Stakehill			
Location			
Middleton			
Marketing Name			
-			
Drawing Title			
Location Plan			
Drawing Number			
4159-LOC-001			
Revision	-	Scale @ A1	1:2500
Drawn By	TW	Date Started	22/12/22
Checked by			

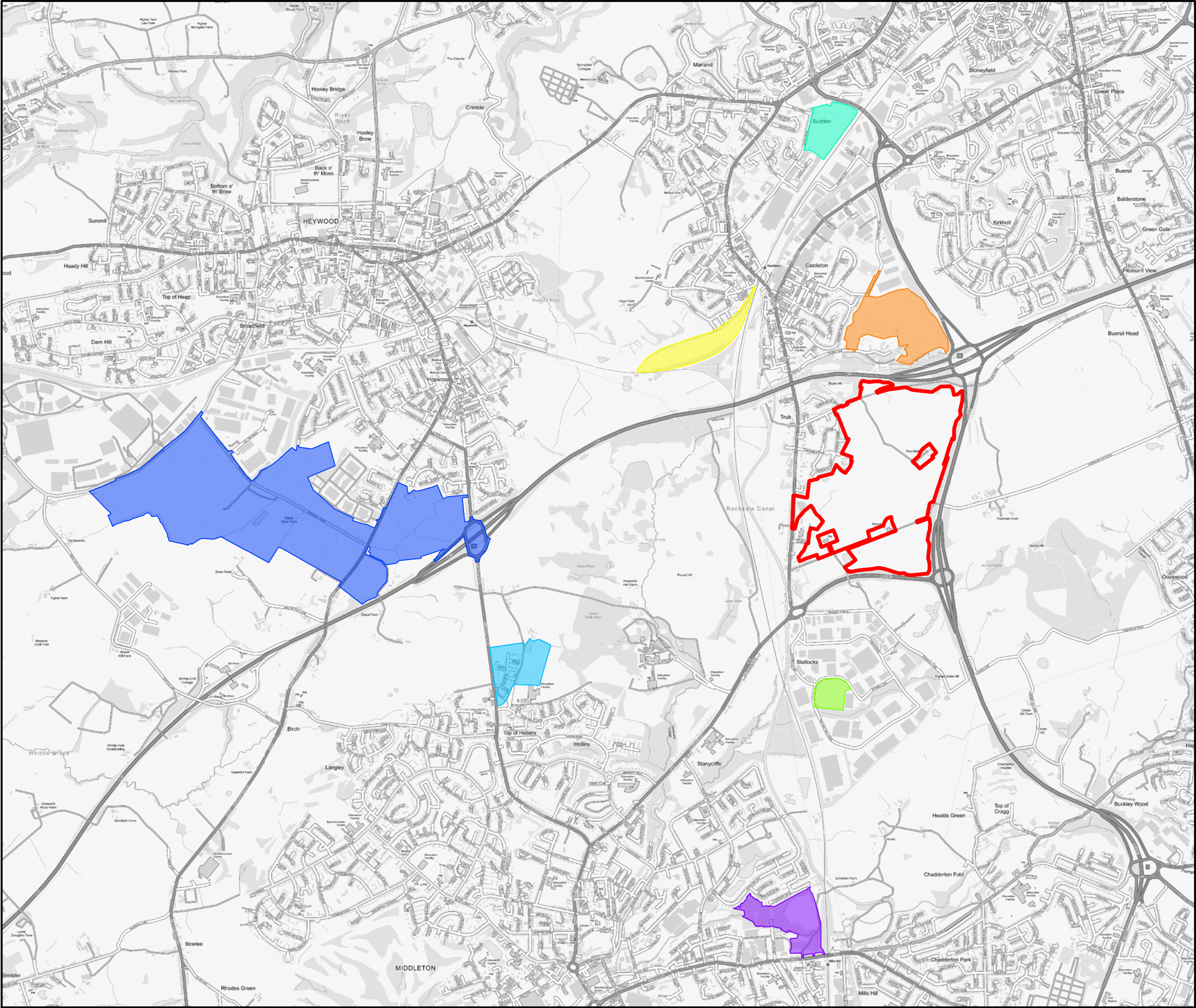
Redrow Homes Lancashire

Redrow House, 14 Eaton Avenue, Buckshaw Village, Chorley, PR7 7NA
Tel: 01772 643700 Fax: 01772 643701 Web: www.redrow.co.uk

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FIGURE 2.1
CUMULATIVE SCHEMES PLAN



The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

LEGEND

- Site Boundary
- Land south of Cowm Top Lane, Castleton
Planning Ref. 22/01190/FUL
- Castleton Sidings
Policy JPA20
- Stakehill Industrial Estate, Unit 61 Touchet Hall
Road Middleton M24 2RW
Planning Ref. 20/01439/FUL
- Land at Royle Road, Castleton
Planning Ref. 18/01399/FUL
- Land At Hollin Lane Middleton
Planning Refs. 15/01183/OUT & 19/01183/REM
- Land Bound By Manchester Road, Hareshill
Road And Pilsworth Road West Of Junction 19
Of The M62 Rochdale
Planning Ref. 16/01399/HYBR
- Land off Don Street, Middleton
Planning Ref. 21/00744/FUL

FIGURE 2.1

Project
**Land at Manchester Road,
Middleton**

Drawing Title
Cumulative Schemes Plan

Date 31.03.2023	Scale 1:25,000 @A3	Drawn by ML	Check by NS
Project No 33961	Drawing No LN-E-01	Revision -	

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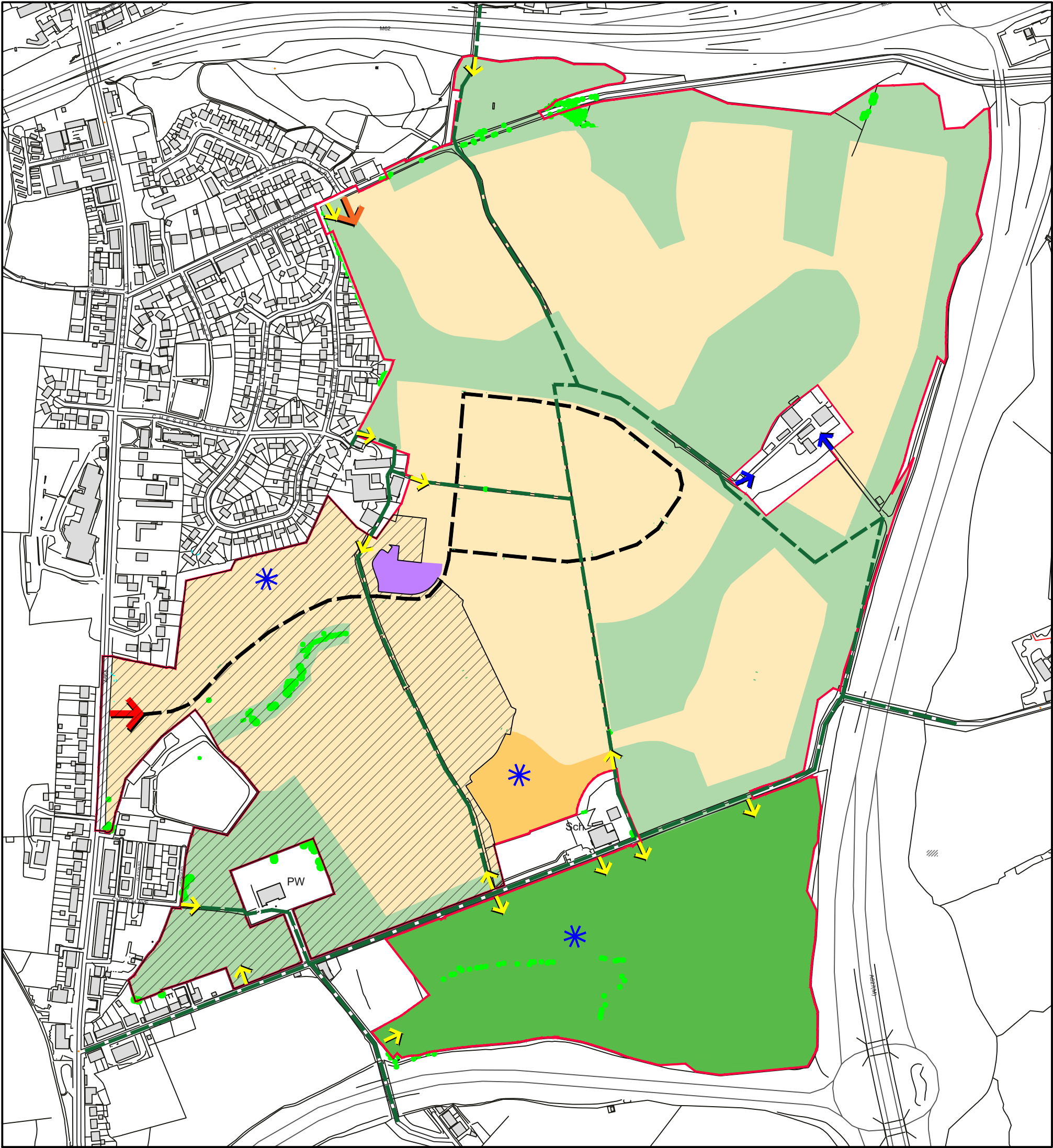
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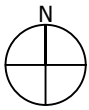
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Glasgow Leeds London Manchester Newcastle Reading Southampton

FIGURE 3.1
PARAMETERS PLAN



- Site Boundary (c.87.52ha)
- Full Application Boundary (c.18.99ha)
- Residential - up to 3 Storey (up to c.185.5m AOD)
(inclusive of retained and new landscape features, SuDS, public open space/ green infrastructure, highway/ utilities infrastructure)
- Local Centre and/or Residential - up to 2 Storey (up to c.160m AOD)
- School Extension - up to 2.5 Storey (up to c.168.5m AOD)
(inclusive of public open space and retained pond)
- Green Infrastructure and/or limited residential development at edges
(inclusive of retained and new landscape features, public open space, active travel routes, play, SuDS and ecological enhancement)
- Thornham Park
(inclusive of retained and new landscape features, ecological enhancement, active travel routes and seating)

- Primary Access point
- Secondary Access point (c.100 homes only and emergency access)
- Pedestrian Access point
- Farm Access point
- Approx. extent of retained trees (to be confirmed at the Reserved Matters Stage(s))
- Existing pond to be retained within area of public open space
- Public Right of Way
(to be retained in situ or within landscape corridors, see Landscape Strategy section of the DAS for guidance)
- Indicative alignment of the Primary Street



Project
**Land at Stakehill
Rochdale**

Drawing Title
**Parameter Plan
Land Use and Access**

Date 21.03.23	Scale 1:5000@A3	Drawn by AT	Check by SW
Project No 33961	Drawing No DWG12	Revision B	

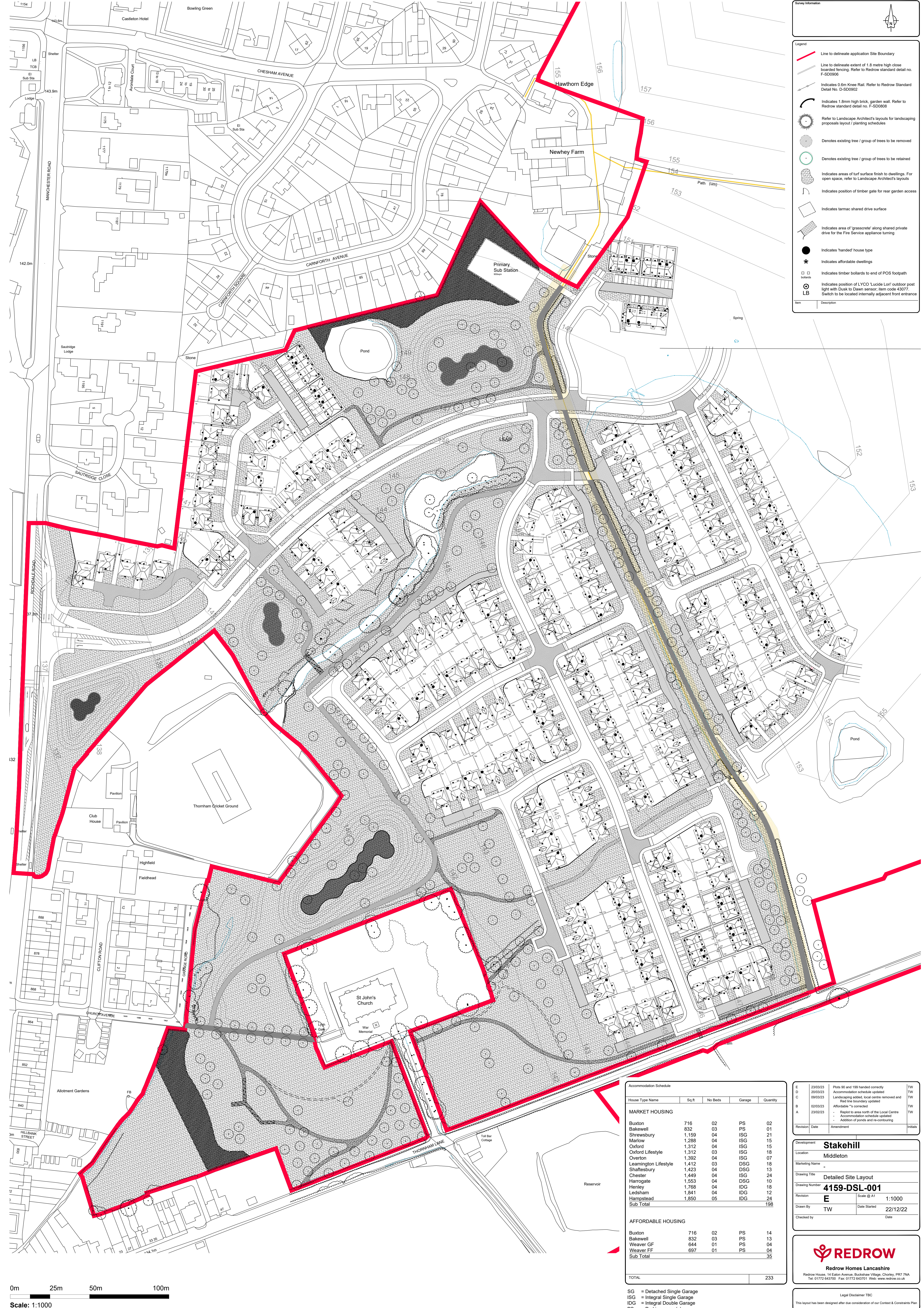
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FIGURE 3.2
DETAILED SITE LAYOUT



Survey Information

Legend

Line to delineate application Site Boundary

Line to delineate extent of 1.8 metre high close boarded fencing. Refer to Redrow standard detail no. F-SD0806

Indicates 0.6m Knee Rail. Refer to Redrow Standard Detail No. D-SD0902

Indicates 1.8mm high brick, garden wall. Refer to Redrow standard detail no. F-SD0808

Refer to Landscape Architect's layouts for landscaping proposals layout / planting schedules

Denotes existing tree / group of trees to be removed

Denotes existing tree / group of trees to be retained

Indicates areas of turf surface finish to dwellings. For open space, refer to Landscape Architect's layouts

Indicates position of timber gate for rear garden access

Indicates tarmac shared drive surface

Indicates area of 'grasscrete' along shared private drive for the Fire Service appliance turning

Indicates 'handed' house type

Indicates affordable dwellings

Indicates timber bollards to end of POS footpath

Indicates position of LYCO 'Lucide Lox' outdoor post light with Dusk to Dawn sensor; item code 43077. Switch to be located internally adjacent front entrance

Item

Description

Accommodation Schedule				
House Type Name	Sq. ft	No Beds	Garage	Quantity
MARKET HOUSING				
Buxton	716	02	PS	02
Bakewell	832	03	PS	01
Shrewsbury	1,159	04	ISG	21
Marlow	1,288	04	ISG	15
Oxford	1,312	04	ISG	15
Oxford Lifestyle	1,312	03	ISG	18
Overton	1,392	04	ISG	07
Leamington Lifestyle	1,412	03	DSG	18
Shaftesbury	1,423	04	DSG	13
Chester	1,449	04	ISG	24
Harrogate	1,553	04	DSG	10
Henley	1,768	04	IDG	18
Ledsham	1,841	04	IDG	12
Hampstead	1,850	05	IDG	24
Sub Total				198
AFFORDABLE HOUSING				
Buxton	716	02	PS	14
Bakewell	832	03	PS	13
Weaver GF	644	01	PS	04
Weaver FF	697	01	PS	04
Sub Total				35
TOTAL				233

E

23/03/23

Plots 90 and 109 handed correctly

TW

D

20/03/23

Accommodation schedule updated

TW

C

09/03/23

Landscaping added, local centre removed and Red line boundary updated

TW

B

02/03/23

Affordable '1s' corrected

TW

A

23/02/23

Replot to area north of the Local Centre

TW

Accommodation schedule updated

Addition of ponds and re-contouring

Revision

Date

Amendment

Initials

Development

Location

Marketing Name

Drawing Title

Drawing Number

Revision

Drawn By

Checked by

Stakehill

Middleton

Detailed Site Layout

4159-DSL-001

E

TW

Scale @ A1

1:1000

22/12/22

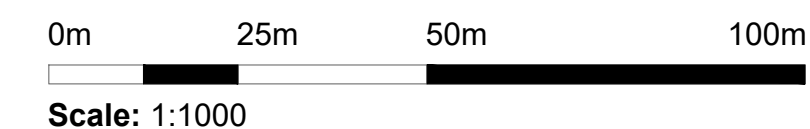
Date

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Tel: 01772 843700 Fax: 01772 843701 Web: www.redrow.co.uk

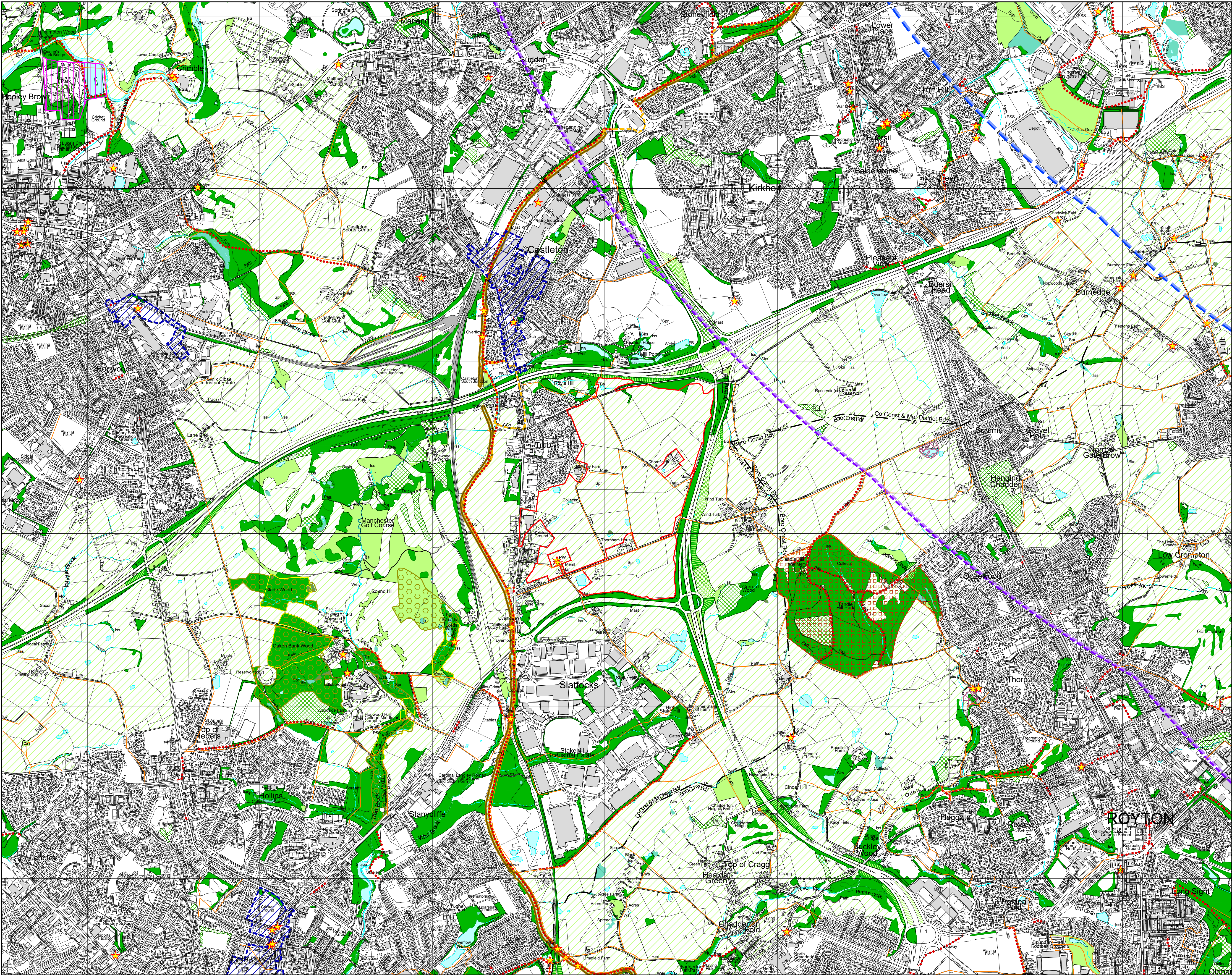
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SG = Detached Single Garage
ISG = Integral Single Garage
IDG = Integral Double Garage
PS = Parking space(s)

FIGURE 6.1
LANDSCAPE & VISUAL EFFECTS STUDY AREA



Revision

The scaling of this drawing cannot be assured

Date

Drm

Ckd

LEGEND

Site Boundary

Existing Woodlands, Copses and Tree Belts ^

Existing Scrub ^

Existing Water Courses and Features ^

Contours/Spot Heights (Metres AOD) ^

Public Rights of Way *

National Trails # / Long Distance Walks ^

Countryside Rights of Way Access Areas #

Sustrans Cycle Route +

Cycle Route ++

Listed Buildings ~

Registered Parks and Gardens ~

Green Belt ^^

Special Protection Area, 5km Buffer #

Special Protection Area, 7km Buffer #

Ancient Woodland #

Local Nature Reserve #

Country Park #

Sources:

^

OS Mapping

#

Natural England GIS Data Set

~

Historic England National Monument Record GIS Data Set

+

<County Council> Definitive Map

+

Sustrans National Cycle Network GIS Data

++

Department of Transport Cycle Network Model

Data collated for constraints and analysis mapping is based on publicly available sources at the time of preparation inserted using the British National Grid and may itself not be accurate. Barton Willmore, now Stantec shall not be liable for the accuracy of data derived from external sources.

FIGURE 1

Project

Land at Manchester Road

Middleton

Drawing Title

Site Context Plan

Date

16.08.22

Project No

31599

Scale

1:10,000 @A1
1:20,000 @A3

Drawing No

LN-LP-01

Drawn by

RL

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MF

Revision

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FIGURE 12.1
POPULATION AND HUMAN HEALTH STUDY AREA

Figure 12.1: Study Area

