



Supplementary Environmental Statement (Main Text) for
AC Goatham and Sons

LOWER RAINHAM, PUMP/BLOORS FARMS

September 2020

Our Ref: SRS/18-01307

Contents

Quality Assurance	1
1 Informative.....	2
2 Methodology	5
3 Background to the Development.....	7
4 Planning Policy	9
5 Alternatives	10
6 Development Description	11
7 Economy, Population and Society (Socio Economics)	12
8 Water Resources	19
9 Ground Conditions/Contamination	20
10 Transportation.....	21
11 Landscape and Visual.....	22
12 Air Quality.....	40
13 Land Use and Agriculture	42
14 Archaeology and Cultural Heritage	43
15 Ecology and Conservation.....	46
16 Cumulative Effects.....	47
17 Overview of Effects	52

Figures

- 1.2a Illustrative Site Masterplan
- 2.1a Land Use Parameter Plan
- 2.2a Building Heights Parameter Plan
- 2.3a Movement Parameter Plan
- 2.4a Green/Blue Infrastructure Parameter Plan
- 5.1 *Illustrative Masterplan (February 2019)*

Appendices

- Appendix 1.3^{sup} *Statement of Competence*
- Appendix 10.1^{sup} *Transport Addendum, **September** 2020*
- Appendix 11.1a *LVIA, **September** 2020, Tyler Grange (R Hughes)*
- Appendix 13.2(i) *Farm Business Financial Viability, August 2020, Andersons Midlands (J Pelham)*
- Appendix 14.3a *Heritage Setting Assessment, **September** 2020, Pegasus Group (G Stoten)*

QUALITY ASSURANCE

This report has been prepared within the quality system operated at Rapleys LLP according to British Standard ISO 9001:2008.

Created by:	Sarah R Smith BA (Hons) MRTPI Planning Partner
Signature:	 <small>SarahRsmith (Sep 22, 2020 15:20 GMT+1)</small>
Checked by:	Duncan Parr BA DUPI Dip TP FRGS MRTPI Cgeog MEWI Planning Partner
Signature:	 <small>Duncan Parr (Sep 22, 2020 16:07 GMT+1)</small>

1 INFORMATIVE

- 1.1 An Environmental Statement (ES) was submitted to Medway Council (MC) in May 2019 as part of a suite of documents accompanying an outline planning application. That application comprised:
- Up to 1,250 dwellings, comprising a mix of properties sizes at a medium density;
 - Up to 1,000 sq. m of retail or other neighbourhood uses (Use Classes A1, A2, A3, A4 and A5, D1);
 - A primary school (Use Class D1);
 - A 60 bed extra care facility;
 - An 80 bed care home;
 - Open space, strategic landscaping and other green infrastructure, and
 - Associated vehicular, cycle, pedestrian and drainage infrastructure, including a primary access onto Lower Rainham Road and a secondary access onto Pump Lane.
- 1.2 Regulation 25(1) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 **allows for the provision of ‘further information’ to be submitted.**
- 1.3 In March 2020, further information was submitted during the course of the determination of the application. **This ‘further information’** did not result in any changes to the illustrative masterplan or the proposed development itself. This further information was summarised as follows -
- (i) Borehole and infiltration testing resulting in revisions and clarifications to drainage/flooding matters,
 - (ii) Review of MC strategic highway modelling resulting in clarifications to highway/transportation matters,
 - (iii) Clarifications in respect of air quality matters, and
 - (iv) Clarifications in respect of agricultural matters.
- 1.4 This further information was collated into a Supplementary Environmental Statement (SES), March 2020 (*ref 1.3*), produced in accordance with the aforementioned Regulations.
- 1.5 On 12th June 2020 the application (MC/19/1566) was refused for a variety of reasons relating to heritage, landscape, transport and highways, recreational pressures on the European sites on nature conservation importance, loss of best and most versatile agricultural land and lack of a completed S106 Agreement to secure necessary infrastructure.
- 1.6 The applicant is submitting an appeal against the refusal of the application, and as part of that appeal process is seeking to narrow the range of issues to be discussed at Inquiry. As part of this process, further environmental survey work, consultation with appropriate statutory bodies and assessment has been undertaken. This is reflected by way of an update to the ES.
- 1.7 In accordance with the aforementioned Regulation 25(1) above, this further information has been collated into another SES dated September 2020. Supplementary Technical Appendices have also been produced where appropriate, as has a Supplementary Non-Technical Summary (SNTS) reflecting any changes to environmental circumstance.

-
- 1.8 The further information described in this SES, September 2020, is summarised as follows:
- (i) Updates to policy and legislation where appropriate, including air quality,
 - (ii) A new Landscape Visual Impact Assessment (LVIA) taking into account the points raised in the reasons for refusal no. 3, namely the Gillingham Riverside Area of Local Landscape Importance,
 - (iii) A revised Heritage Setting Assessment taking on board the points raised in the reasons for refusal no.2, namely impacts on the listed buildings and adjacent conservation areas,
 - (iv) Further review and work in relation to highway and transport matters raised in reasons for refusal nos. 4,5 and 6,
 - (v) Further review and information in relation to agricultural land quality and farm business financial viability in respect of reason for refusal no.8, and
 - (vi) Updates to the parameter plans/illustrative masterplan, which reflect landscape and heritage buffer planting refinements. These are defined in paragraph 2.2 of this SES September 2020.

1.9 Where parts of the ES May 2019 and the subsequent revisions made in the SES March 2020 require deletion and /or replacement, this is noted in this SES. Within this SES, chapter amendments to text, figures, tables are identified in *red italics*. Technical Appendix, Figure and Table amendments are suffixed by the letter '**a**' replacing the version in the ES May 2019 - any further revisions of these are suffixed by the letter '**b**'. Supplemental information to be read in conjunction with the original numbered technical appendix is suffixed by the letters '*sup*'.

1.10 For ease of reading, the SES follows the exact same format and chapter numbering as the ES May 2019 and its SES March 2020.

ES CHAPTER 1 - INTRODUCTION

1.11 The changes to this chapter of the ES May 2019 and subsequent SES March 2020 are as follows -

1.12 Figure 1.2 is replaced by Figure 1.2*a*.

1.13 ES May 2019 paragraph 1.16 has the following final sentence added to it -

Three new consultants joined the team in August 2020 and were instructed to appraise heritage, landscape & visual matters and farm business viability.

1.14 A further Statement of Competence in respect of the two new consultants is found at Technical Appendix 1.3*sup*.

1.15 Table 1.1 is replaced by Table 1.1*a*.

Table 1.1a: Consultant Team

Organisation	Role
Rapleys LLP	Project Management; all planning matters; socio economic chapter; EIA co-ordinator.
PBA Stantec	Water Resources (including Flood risk and Drainage), Ground Conditions, Air Quality, and Utilities/Infrastructure.
PRC	All matters relating to the masterplanning of the site.
<i>Tyler Grange</i>	<i>Landscape, Townscape and Visual Amenity.</i>
Lloyd Bore	Landscape, Townscape and Visual Amenity.
Reading Agricultural	Agricultural land and soils assessment.
<i>Anderson Midland (J Pelham)</i>	<i>Farm Business Financial Viability.</i>
Bloomfields	Farm Business Analysis.
<i>Pegasus Group Ltd</i>	<i>Cultural Heritage</i>
SWAT/Quest	Archaeology and Cultural Heritage.
The Ecology Partnership	Ecology and Conservation.
DTA	Transportation and Highways

- 1.16 Paragraph 1.26 of the ES May 2019 refers to chapter 16 as an Overview of the cumulative effects post-mitigation. *Chapter 16 is now a new separate chapter titled ‘Cumulative Effects’.* *Chapter 16 Overview in the ES May 2019 is now Chapter 17 ‘Overview’ of the environmental effects post-mitigation* and the paragraphs and table are renumbered accordingly.
- 1.17 *Comments on the SES September 2020 should be made to the Secretary of State, via the Planning Inspectorate, Temple Quay House, The Square, Bristol BS1 6PN.*
- 1.18 The SES is also available to view on the web and at the Council Offices:
- Telephone: 01634 331700
 - Email: Planning.representations@medway.gov.uk
 - Address: Development Management, Medway Council, Gun Wharf, Dock Road, Chatham, ME4 4TR.
- 1.19 Hard copies of the NTS only (free of charge), or electronic copies of all documentation (either via a sharefile link of on a cd) are available from:
- Email: info@rapleys.com
 - Address: 33 Jermyn Street, LONDON, SW1Y 6DN.

2 METHODOLOGY

2.1 There are no amendments to paragraphs 2.1 to 2.3 of this chapter of the ES May 2019 or its subsequent SES March 2020.

EIA PARAMETERS

2.2 References to Figures 2.1, 2.2, 2.3 and 2.4 of the ES May 2019 are amended to and replaced by Figures 2.1*a*, 2.2*a*, 2.3*a* and 2.4*a*. The updates to the parameter plans reflect the heritage and landscape buffer planting refinements made to the Illustrative Masterplan (Figure 1.2*a*). The updates are in the northern part of the Site west of Pump Lane to the north of the proposed care home provision, and in the south-western part of the Site north of the railway.

2.3 Paragraphs 2.4 to 2.28 of the ES May 2019 remain unchanged save for the above figure references.

2.4 Paragraphs 2.29 to 2.32 referred to the assessment of cumulative effects. A separate chapter has now been drafted in respect of Cumulative Effects and this is to be inserted as Chapter 16 Cumulative Effects. The chapter 16 Overview in the ES May 2019 is thus renumbered as Chapter 17.

2.5 Consequently, paragraphs 2.29 to 2.31 of the ES May 2019 are **deleted** and **replaced** by

(2.29) Chapter 16 of the ES outlines the assessment of cumulative effects of the Proposed Development arising from its construction and operation. Cumulative effects are the result of multiple actions on receptors or resources. There are principally two types of cumulative effect:

- (i) Type 1 - Where different environmental impacts are acting on one receptor, as a result of the scheme; and*
- (ii) Type 2 - Where environmental impacts are acting on one receptor, but are the result of multiple projects in combination (including the scheme being assessed).*

(2.30) The impacts from a single development or a single environmental impact may not be significant on their own but when combined with other developments or impacts these effects could become significant.

(2.31) The methodologies for determining the potential effects of the Proposed Development are detailed in the specialist chapters of the ES. The cumulative impacts assessment focuses on effects that are significant, therefore only receptors experiencing moderate or major adverse effects are to be included in the assessment.

2.6 Paragraph 2.32 of the ES May 2019 remains unchanged.

2.7 Table 2.6 of the ES May 2019 is updated as follows -

Table 2.6: Cumulative Development Sites

<i>Site Name</i>	<i>Description of Development</i>	<i>Status</i>
<i>Land at Station Road, Rainham MC/14/0285</i>	<i>Development of 90 dwellings</i>	<i>Allowed on appeal</i>
<i>Land North of Moor Street, Rainham MC/14/3784</i>	<i>Development of 190 dwellings</i>	<i>Refused, but identified on the MC housing supply in the SHLAA</i>
<i>Land at Otterham, Quay</i>	<i>Development of 300 Dwellings</i>	<i>Permitted Feb 2017</i>

<i>Lane, Rainham MC/16/2051</i>		
<i>Berengrave Nursery, Rainham MC/17/3687</i>	<i>Development of 121 dwellings</i>	<i>Permitted Mar 2018</i>
<i>Land south of Lower Rainham Road, Rainham MC/17/1896</i>	<i>Development of 202 dwellings</i>	<i>Permitted August 2020, but also within MC housing supply in SHLAA</i>

2.8 There are no amendments to the remainder of this chapter of the ES May 2019.

3 BACKGROUND TO THE DEVELOPMENT

3.1 There are no amendments to paragraphs 3.1 to 3.12 of this chapter of the ES May 2019/SES March 2020.

3.2 **To reflect the recent refusal of planning permission, the ‘Planning History’ section of the original chapter is amended as follows -**

3.3 Paragraph 3.13 of the ES May 2019 is **deleted** and **replaced** with the following text -

(3.13) At the time of the application submission in May 2019, there was no planning history of relevance. Subsequently, on 12th June 2020 MC refused the application for the following reasons:

- 1. Insufficient information has been provided in relation to mitigation measures, and no agreement has been reached to secure such measures, which are necessary to ensure that there will be no adverse impact on the integrity of the Medway Estuary & Marshes SSSI, SPA and Ramsar site as a result of the additional recreational pressures caused by the proposal. In the absence of imperative reasons of overriding public interest, Regulations 63 and 70 of the Habitats Regulations require permission to be refused. In addition, the lack of information and mechanism to secure the mitigation also results in non-compliance with policies S6 and BNE35 of the Local Plan and NPPF paragraphs 175 & 176.*
- 2. The proposed development would have a harmful impact on the local historic landscape, as well as the setting and significance of a number of designated heritage assets, including: listed buildings (York Farmhouse (Grade II); Pump Farmhouse (Grade II); Chapel House (Grade II); 497-501 Lower Rainham Road (Grade II); The Old House (Grade II); Bloors Place (Grade II*); a range of outbuildings including cart lodge and granary west of Bloors Place (Grade II); and, the garden walls to south and east of Bloors Place (Grade II)); and, two Conservation Areas (Lower Twydall; and, Lower Rainham). Applying the great weight which has to be given to the conservation of the designated heritage assets (by virtue of NPPF paragraph 193 and Section 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990), the proposal is contrary to Local Plan policies BNE 12 and BNE18. In addition, as the public benefits of the scheme would not outweigh the harm to the designated heritage assets, the proposed development is also contrary to the NPPF paragraph 196.*
- 3. The proposed development would lead to significant long-term adverse landscape and visual effects to the local valued Gillingham Riverside Area of Local Landscape Importance (ALLI), which would not be outweighed by the economic and social benefits of the scheme, in conflict with Local Plan policy BNE34 and NPPF paragraph 170.*
- 4. The applicant has failed to satisfy Highways England that the development will not materially affect the safety, reliability and / or operation of the Strategic Road Network (SRN). This is contrary to the tests set out in department for Transport Circular 2/13 paragraphs 9 & 10 and the NPPF at paragraph 109.*
- 5. The cumulative impact from the increased additional traffic cannot be accommodated on the highway in terms of overall network capacity without a severe impact. This is contrary to Local Plan policy T1 and the NPPF at paragraph 109.*
- 6. The cumulative impact from the increased additional traffic from the development is unlikely to be able to create a safe highway environment. This is contrary to Local Plan policy T1 and the NPPF at paragraph 109.*

-
7. *No assessment nor technical details have been provided regarding the two new access points along Pump Lane to serve the proposed development, therefore it has not been possible to appropriately assess the adequacy of these access points. This is contrary to Policy T1 of the Medway Local Plan 2003 and paragraph 109 of the NPPF.*
 8. *The proposed development would result in the irreversible loss of 'best and most versatile' (BMV) agricultural land, contrary to Local Plan policy BNE48 and the NPPF at paragraph 170 and footnote 53.*
 9. *In the absence of a completed S106 legal agreement, the proposal fails to secure infrastructure necessary to meet the needs of the development. This is contrary to Local Plan policy S6 and the NPPF at paragraph 54.*

3.4 (3.14) *An appeal has been lodged in respect of the application refusal.*

4 PLANNING POLICY

4.1 There are no amendments to paragraphs 4.1 to 4.7 of the ES May 2019/SES March 2020.

NATIONAL PLANNING POLICY FRAMEWORK

4.2 The last sentence of paragraph 4.8 of the ES May 2019 is **deleted** and **replaced** as follows -

(4.8) - the latest position in this regard is acknowledged in appeal reference APP/A2280/W/19/3240339 dated 30 July 2020 where the housing supply was noted at 3.27 years for the period 2019-2024.

4.3 Paragraphs 4.9 to 4.26 of the ES May 2019/SES March 2020 remain unchanged.

DEVELOPMENT PLAN

4.4 Paragraphs 4.27 to 4.30 of the ES May 2019/SES March 2020 remain unchanged.

EMERGING PLANNING POLICY

4.5 Paragraph 4.31 as amended by the SES March 2020 is **deleted** and **replaced** with the following -

(4.31) The emerging local plan is still in its early stages of preparation and as a result of Covid-19, the timescale has slipped even further. The latest Local Development Scheme (LDS), as reported to Planning Committee on 4th August 2020 identifies that the publication draft (Regulation 19) is planned to be published in spring of 2021, with submission for examination by December 2021 and target adoption of December 2022.

5 ALTERNATIVES

- 5.1 There are amendments to paragraphs 5.1 to 5.14 of this chapter of the ES May 2019/SES March 2020.
- 5.2 Paragraph 5.15 of the ES May 2020 is supported by evidence provided in **new Technical Appendix 13.2(i) (Farm Business Financial Viability, August 2020)** - this reference is thus added to the end of that paragraph.
- 5.3 As a result of changes to the Town and Country Planning (Use Class) Order 1987 (as amended) that came into effect on the 1st September 2020, paragraph 5.16 is amended to
- 5.4 (5.16) The initial design concept in November 2018 as presented to MC as part of the pre-application discussion process (Figure 21 in the Design and Access Statement). The principles here focussed on the creation of a single urban extension with a community hub containing a primary school and provision for **Class E uses (formally A1, A2, A3, A4, A5, D1 or D2 uses)**, a 60 bed care home, open space, play space and other green infrastructure, associated accesses (vehicular, pedestrian, cycle).
- 5.5 As a result of revisions to the Illustrative Masterplan of February 2019 (ES 2019 Figure 1.2) detailed in new paragraph 5.18 below, the February 2019 masterplan is now superceded, albeit it remains part of the iterative assessment process. Consequently, in the context of this 'Alternatives' consideration, **Figure 1.2** of the ES 2019 is now renumbered as **Figure 5.1** and paragraph 5.17 of the ES 2019 is revised as follows -

The Illustrative Masterplan February 2019 (Figure 5.1)

(5.17) The Illustrative Masterplan design submitted with the application package in May 2019 is shown in Figure 5.1 and described in chapter 6 of the ES. A number of refinements were made to that Proposed Development in response to further assessment work and comments made during the pre-application and consultation process. The Masterplan includes further landscaping, refinement of the drainage strategy and swale locations, introduction of character areas within the residential development, the introduction of a 60 be extra care facility.

- 5.6 The following text is added as paragraph 5.18 -

The Illustrative Masterplan (September 2020) (Figure 1.2a)

(5.18) A number of refinements have been made to the Proposed Development in response to further assessment work in seeking to address the reasons for refusal (as referenced in paragraph 3.4). The Illustrative Masterplan (Figure 1.2a) includes refinements to landscaping detail and green infrastructure particularly to the west of Pump Lane/south of Lower Rainham Road around the Proposed Development access, in the south-west adjacent to the Lower Twydall Conservation Area and within the school site plot south of Lower Rainham Conservation Area.

6 DEVELOPMENT DESCRIPTION

- 6.1 All references to Figure 1.2 are to be amended to and replaced by Figure 1.2a.
- 6.2 All references to Figures 2.1, 2.2, 2.3 and 2.4 are to be amended to and replaced by Figures 2.1a, 2.2a, 2.3a and 2.4a. The explanation for this is set out in paragraphs 1.8(vi) and 2.2 of this SES.
- 6.3 Table 6.1 of the ES May 2019 is revised as follows -

Table 6.1: Development Quantum Masterplan Application

Land Use	Ha	Amount
Residential	29.78	Up to 1250 dwellings
Village Green	1.12	
Local Centre	0.64	Up to 1,000sqm
Primary School	2.60	
Green/Blue Infrastructure	15.69	
Care Home and Extra Care Facility	1.23	Up to 140 beds
TOTAL	51.07	

PARAMETERS

- 6.4 There are no amendments to paragraphs 6.4 to 6.19 of the ES May 2019 other than to note the following to paragraph 6.6 -
- 6.5 In light of the recent changes to the Town and Country Planning (Use Classes) Order 1987(as amended) that came into effect on 1st September 2020, classes A1, A2, A3, A4, A5, D1, D2 (amongst others) are all replaced by a single new class E. Consequently, paragraph 6.6 of the ES May 2019 should be amended as follows -

(6.6) The local centre comprises a strategic community hub containing a primary school (to the east of Pump Lane) and up to 1000 sq. m of commercial and community space consisting of *uses falling in class E (formally A1, A2, A3, A4, A5, D1, D2)* (west of Pump Lane), albeit the *precise combination of retail and community facilities* is to be determined at a later stage. Residential use (*class C1*) will also form part of the local centre with the aforementioned *class E uses* at ground level.

DEVELOPMENT PROGRAMME AND CONSTRUCTION

Phasing

- 6.6 Whilst the dates set out in paragraph 6.21 of the ES May 2019/SES March 2020 in reality are superseded as a result of the passage of time, and further as a result of the impending appeal, the principles of the timescales involved for each part of the development process described remain.
- 6.7 No other amendments to this chapter of the ES May 2019/SES March 2020 are required.

7 ECONOMY, POPULATION AND SOCIETY (SOCIO ECONOMICS)

7.1 A brief review of this chapter has been undertaken in the context of policy context, study area, population and house price growth and cumulative effects.

POLICY CONTEXT

7.2 There is no change to the policy context quoted in the ES May 2019.

7.3 The significance criteria used to define the level of impact in the ES May 2019 (paragraph 7.22) used the word 'slight' to describe a small change of low importance. For consistency with other chapters, this has been revised to '*minor*' throughout the ES May 2019 Economic, Population and Society chapter. This revision is thus reflected in both Table 7.13 of this SES, September 2020 and Table NTS1 of the SNTS September 2020.

BASELINE CONDITIONS

7.4 The study area used in the ES May 2019 compared data on the ward level (both Lower Rainham and Twydall wards), local authority level (Medway), the regional level (South East) and the national level - this is still considered appropriate. Whilst the demographic data percentages from the 2011 census data in the ES May 2019 are likely to have changed (for example, the population has grown according to the most up-to-date mid-year estimates), the fact that overall this data has not been updated will not have a fundamental bearing on the figures used and assumptions/conclusions drawn at that time.

7.5 Paragraph 7.27 of the ES May 2019 refer to a population estimate of 277,616 in 2017. The 2018 mid-year estimates (published in July 2019) record a population of **277,855**, an increase of 0.1% compared to 0.58% for the South-East and 0.6% for the UK.

7.6 Paragraph 7.44 of the ES May 2019 identified average house prices in February 2019 in Medway at £242,370 and £315,700 for the South-East. By December 2019 this had increased to **£250,000**. This is still considerably lower than the South East as a whole at **£325,000**.

IMPACTS

7.7 There are no amendments to the impacts identified during the construction phase of the Proposed Development in the ES May 2019.

7.8 There are no amendments to the impacts identified during the operational phase of the Proposed Development of the ES May 2019, beyond the factual corrections of the following paragraphs -

- (i) The amendment in paragraph 7.81 of ES May 2019 from 'moderate' to '*minor*'.
- (ii) the **deletion** of ES May 2019 paragraph 7.85.
- (iii) amendment of ES May 2019 paragraph 7.90 (now 7.88) to 'The proposed development would create a demand for 250 spaces which would leave *an approximate surplus of 50* spaces following occupation of the Proposed Development.
- (iii) Amendment of paragraph 7.94 (now 7.92) to 'The Proposed Development would result in an increase in demand for *community/leisure facilities*. The Proposed Development would, therefore, have a *minor adverse* effect on community facilities.
- (iv) ES May 2019 paragraphs 7.86 - 7.96 are thus **renumbered** to 7.84 to 7.94.

MITIGATION

- 7.9 Paragraph 7.97 of the ES May 2019 - Notwithstanding that no significant adverse effects were identified taking into account the inherent mitigation (onsite facilities being provided as part of the development), the Proposed Development will still be expected to contribute via a S106 Agreement to leisure, community and health facilities, waste and recycling, etc. Reason for refusal no.10 in respect of the application cites a lack of an agreed S106. It is anticipated that this position will be resolved during the course of the appeal - bearing this in mind, paragraph 7.97 is amended and renumbered as follows -

(7.95) This chapter has determined that no significant adverse effects have been identified when taking into account inherent mitigation. A number of beneficial effects have been identified. Notwithstanding this, it is anticipated that a S106 Agreement will be required to further mitigate impacts arising from the Proposed Development on matters such as waste and recycling, community and leisure facilities.

CUMULATIVE IMPACTS

- 7.10 The cumulative impact section for this chapter in the ES May 2019 did not cross reference the cumulative sites considered. The following is therefore to be inserted as a new paragraph 7.97 -

(7.97) The cumulative sites considered as part of this chapter assessment are those identified in Table 2.6 of the ES.

- 7.11 Minor typographical revisions are made to paragraphs addressing cumulative impacts. This section is repeated here in full with the revisions identified. Paragraphs 7.99 to 7.108 are renumbered as 7.98 to 7.106.

Construction Impacts

Demographics (count and demographic structure)

(7.98) Given the levels of construction employment in the District and ability of the labour market to meet demand as summarised above, no population migration will be required for the construction of the cumulative sites. As a result, the cumulative effects on this receptor are considered to be nil.

Economy and Employment (economic activity and employment composition)

(7.99) The cumulative sites will create similar construction jobs and offer benefits to the economy in terms of jobs created directly on each site to the Proposed Development. This will include direct and indirect, temporary and permanent jobs.

(7.100) Multiplier effects through supply chain and worker spend will increase further by supporting additional temporary jobs locally, regionally and nationally. The cumulative effects of the construction phases of the cumulative sites are expected to provide further opportunities to reduce local unemployment through partnerships between housebuilders, contractors and local employment agencies.

(7.101) Overall the cumulative impact on this receptor is considered to have a temporary effect that is moderate beneficial.

Wealth and Deprivation (levels of deprivation and material wealth)

(7.102) Increased construction employment would not be considered to materially alter the ward or Local Authority earning structure, but can sustain and grow the local sector. Therefore, it is considered to have a negligible effect on this receptor.

Housing (house prices, tenures and compositions)

(7.103) The cumulative impacts of the construction phases of the developments are unlikely to affect the housing market in the town or Local Authority Area. Construction workers are expected to largely be located within the District given the size of labour pool. Therefore, it is considered that the cumulative developments will have nil effect on the baseline conditions.

Education and Training (level of education and existing capacities)

(7.104) The construction phases of the cumulative developments are expected to provide some opportunities to link construction to local education and training programmes. The scale of employment and size of developments suggests that the effects on this receptor will be negligible overall.

Health, Community and Leisure (existing facilities and provision)

(7.105) It remains the case that the construction phase across all cumulative sites will have nil effect on health, community or leisure facilities.

Shopping (existing facilities and town centre health)

(7.106) Construction workers associated with each cumulative site will bring indirect beneficial impacts as a result of an increase of money within the local economy and an increase in the demand and use of local services, and retail facilities. It remains the case that the cumulative effect of the construction phases is considered to be minor beneficial and short to medium term.

7.12 Paragraph 7.108 of the ES May 2019 is deleted. Thereafter the paragraphs of the ES May 2019 are renumbered from 7.108 - 7.114 to 7.107 -7.113.

Operational Impacts

(7.107) The following section considers the potential cumulative impacts during operation. The following factors are considered to be inherent mitigation across all cumulative sites that are taken into account within this assessment:

- Proposed on-site green space to be secured via S106 Agreement;
- Proposed footpaths and cycleways; and
- Potential S106 contributions.

Demographics (population (count and demographic structure)

(7.108) The completed and occupied cumulative developments represent an increase in population in Medway of around 1.92% based on the district average of 2.48 people per dwelling. This increase is not considered to be significant and should be viewed in the context of meeting the needs of the Local Authority as a whole. This increase in population is considered to have a minor beneficial long-term effect overall.

Economy and Employment (economic activity and employment composition)

(7.109) Further direct jobs will be created.

(7.110) The amount of employment generating uses across all cumulative sites is limited to the Proposed Development subject of this ES. Overall, it remains the case that the cumulative impacts of the sites will have a minor beneficial long-term effect on this receptor.

Wealth and Deprivation (levels of deprivation and material wealth)

(7.111) It is assumed that earnings of the incoming population will be similar to the existing and therefore that the cumulative effect is Nil.

Housing (house prices, tenures and compositions)

(7.112) The **cumulative developments** will deliver approximately 2,153 dwellings (including 25% affordable homes) in Medway in the short and medium terms, contributing towards the **Council's five-year supply of deliverable housing in the short and medium terms.**

- 7.13 Paragraphs 7.115 to 7.122 of the ES May 2019 are **deleted** and **replaced** and **renumbered** as follows -

(7.113) **Overall the cumulative sites would lead to a moderate beneficial effect on this receptor.**

Education and Training (level of education and existing capacities)

(7.114) **The estimated projected increase in demand across cumulative sites will exceed the current capacity within primary schools and secondary schools in Medway. Through a combination of S106 contributions and on-site primary school provision. Without mitigation this will lead to a minor adverse impact across the district.**

Health, Community and Leisure (existing facilities and provision)

(7.115) **The cumulative developments will result in an increase in demand for local community facilities resulting in a minor adverse impact across the district.**

Shopping (existing facilities and town centre health)

(7.116) **An increase in population as a result of the cumulative sites will increase footfall and spend in the surrounding centres. The effect of the cumulative sites on existing shopping facilities is, therefore, considered to be **minor** beneficial and long term.**

Mitigation

- 7.14 Paragraph 7.123 of the ES May 2019 is **deleted** and **replaced** and **renumbered** as follows -

(7.117) **All of the committed cumulative developments make (or will make) a financial contribution via a S106 Agreement towards things like leisure and community facilities, waste and recycling, etc proportionate to the impacts of each development. In the case of the Proposed Development, given its size, on-site provision of primary education is considered as inherent mitigation.**

- 7.15 **A new section titled 'Residual Impacts' is inserted after the above paragraph.**

Residual Impacts

(7.118) **Taking into account the inherent mitigation and that provided through financial contributions as described above in paragraph 7.117, the residual impacts of the cumulative developments are considered to be negligible.**

SUMMARY

- 7.16 Paragraph 7.124 of the ES May 2019 is **renumbered** as 7.119.

- 7.17 Summary **Table 7.13** of the ES May 2019 is amended as follows -

TABLE 7.13: SUMMARY TABLE

Description of Likely Significant Effects	Significance	Effects					Description of Mitigation	Description of Residual Effects	Significance	Residual Effects				
		B/A	P/T	D/I	ST/M/ LT	L/R/ N				B/A	P/T	D/I	ST/M/ LT	L/R/ N
Demolition and Construction Phase														
Demographics: population count and demographic structure	Nil							Nil						
Economy and Employment	Minor Beneficial	B, T, D/I, ST/MT, L						Minor Beneficial	B, T, D/I, ST/MT, L					
Wealth and Deprivation	Negligible							Negligible						
Housing (house prices, tenure, composition)	Nil							Nil						
Education and Training	Negligible							Negligible						
Health, Community and Leisure	Nil							Nil						
Shopping	Minor Beneficial	B, T, D/I, ST/MT, L						Minor Beneficial	B, T, D/I, ST, MT, L					
Operational Phase														
Demographics: population count and demographic structure	Minor Beneficial	B, P, D, LT, L						<i>Minor beneficial</i>	B, P, D, LT, L					
Economy and Employment	<i>Minor beneficial</i>	B, P, D, LT, L						<i>Minor beneficial</i>	B, P, D, LT, L					
Wealth and Deprivation	Nil							Nil						
Housing (house prices, tenure, composition)	Moderate beneficial	B, P, D, LT, L						<i>Moderate beneficial</i>	B, P, D, LT, L					

Education and Training	Negligible		<i>Onsite primary provision. Financial contribution for secondary</i>		<i>Negligible</i>	
Health/ <i>Community</i> Facilities	Minor adverse	B, P, D, ST, L	<i>Financial contribution</i>		<i>Negligible</i>	
Shopping Facilities	Minor Beneficial	B, P, D, LT, L			Nil	
Town Centre Health	Nil				Nil	
Cumulative Impacts: Construction						
Demographics: population count and demographic structure	Nil				Nil	
Economy and Employment	<i>Moderate Beneficial</i>	B, T, D/I, ST/MT, L			<i>Moderate Beneficial</i>	B, T, D/I, ST/MT, L
Wealth and Deprivation	Negligible				Negligible	
Housing (house prices, tenure, composition)	Nil				Nil	
Education and Training	Negligible				Negligible	
Health, Community and Leisure	Nil				Nil	
Shopping	<i>Minor Beneficial</i>	B, T, I, ST/MT, L			<i>Minor Beneficial</i>	B, T, I, ST/MT, L
Cumulative Impacts: Operation						
Demographics: population count and demographic structure	Minor Beneficial	B, P, D, LT, L			Minor Beneficial	B, P, D, LT, L
Economy and Employment	<i>Minor beneficial</i>	B, P, D, LT, L			<i>Minor beneficial</i>	B, P, D, LT, L
Wealth and Deprivation	Nil				Nil	
Housing (house prices, tenure,	Moderate Beneficial	B, P, D, LT, L			Moderate Beneficial	B, P, D, LT, L

composition)						
Education and Training	<i>Minor adverse</i>	B,P,D,ST,L	<i>Financial contribution</i>		<i>Negligible</i>	
Health / <i>Community Facilities</i>	<i>Minor adverse</i>	B,P,D,ST,L	<i>Financial contribution</i>		<i>Negligible</i>	
Shopping/town centre health	Minor Beneficial	B, P, D, LT, L			Minor Beneficial	B, P, D, LT, L

(Beneficial or Adverse) (B/A), (Permanent or Temporary) (P/T), (Direct or Indirect) (D/I), (Short Term, Medium, Long Term) (ST, M, LT), (Local, Regional, National) (L, R, N)

8 WATER RESOURCES

- 8.1 There are no further amendments to this chapter of the May 2019 ES, over and above those set out in the SES March 2020. The conclusions in respect of the effect on the water resources environment remain as identified in the ES May 2019.

9 GROUND CONDITIONS/CONTAMINATION

9.1 There are no amendments to this chapter of its associated Technical Appendix 9.1 of the ES May 2019/SES March 2020.

10 TRANSPORTATION

- 10.1 The Transport chapter of the May 2019 ES was supported by Technical Appendix 10.1 Transport Assessment and Technical Appendix 10.2 Framework Travel Plan. Supplementary information was provided in respect of Technical Appendix 10.1 (Technical Appendix 10.1^{sup}) and Technical Appendix 10.2 (Technical Appendix 10.2^a) was replaced in full within the SES March 2020.
- 10.2 Since the refusal of the application in June 2020, a further Transport Assessment addendum has been prepared to directly respond to the Case Officer report and reasons for refusal. This document includes the following -
- (i) Additional assessment of Accident data on the road network. This is a widening of the assessment provided in Technical Appendix 10.1 (May 2019) and Technical Appendix 10.1^{sup} (March 2020) rather than amendments per se to the original assessment. The conclusions of the ES May 2019/March 2020 in respect of highway safety matters remain unaltered.
 - (ii) Further detail on the access arrangements. These are refinements / additional plans which are wholly consistent with those submitted as part of the application. The findings of the ES May 2019/SES March 2020 in respect of access matters remain unaltered.
 - (iii) Updated assessment on Trunk Road Impacts. This has resulted in minor amendments to the assignment of traffic on the wider network in the peak hours but does not affect the distribution. It should be noted that this assignment of traffic does not affect the assessments carried out in respect of Air Quality which relies on the traffic data.
 - (iv) Further detail on the public transport strategy. The findings of the ES May 2019/SES March 2020 in respect of accessibility matters remain unchanged.
- 10.3 Technical Appendix 10.1 (May 2019) and its Technical Appendix 10.1^{sup} (March 2020) and Technical Appendix 10.2^a (March 2020) remain and are supplemented by Technical Appendix 10.1^{sup} *September 2020*.

CONCLUSION

- 10.4 The information contained in *Technical Appendix 10.1^{sup} September 2020* does not result in any amendments directly to the paragraphs that make up chapter 10 Transportation of the ES May 2019. Consequently, the conclusions of the effects of the Proposed Development remain the same as previously reported.

11 LANDSCAPE AND VISUAL

11.1 Following the review of, and refinements to, the Landscape and Visual Impact Assessment (LVIA), the corresponding landscape and visual chapter (11) of the ES May 2019 has also been reviewed. It has been presented in a simplified format. As such, the chapter in the ES May 2019 is **deleted** and **replaced** with the following below. Technical Appendix 11.1 of the ES May 2019 is similarly deleted and replaced by Technical Appendix 11.1 **a**.

INTRODUCTION

11.2 *This chapter provides a summary of the findings of a Landscape and Visual Impact Assessment (LVIA) prepared by Tyler Grange Group Limited that forms Technical Appendix 11.1a to this Environmental Statement.*

11.3 *An overview of the Site context, key policy constraints and the landscape and visual baseline is included, as well as those landscape and visual receptors which have formed the basis of the assessment, having been identified as those with the potential to experience significant landscape or visual effects associated with the Proposed Development.*

11.4 *Key landscape and visual design principles and mitigation measures that have been incorporated into the proposals and have been taken into account within the assessment are set out. Full details of these can be found in the Design and Access Statement and the LVIA (Technical Appendix 11.1a).*

11.5 *A summary of the landscape and visual effects for each receptor during the construction phase, upon completion and residual effects after 15 years once mitigation planting has matured is provided. The text provides a summary of the reasonings behind the assessment. A summary of the significance of effects is set-out on Table 11.2 at the rear of this chapter.*

Proposed Development

11.6 *The Proposed Development incorporates a range of mitigation measures to minimise the landscape and visual effects and respond to the local context. These are set out in the Design and Access Statement and have been illustrated on the Landscape Framework plan contained in the LVIA. The landscape principles and mitigation measures include the following:*

- (i) Retaining hedgebanks and hedgerows along Pump Lane and Lower Bloors Lane to respect their character;*
- (ii) Planting of community orchards within areas of green space alongside Pump Lane and around the buildings at Pump Farm and Russett Farm;*
- (iii) Provision of a village green to provide setting to Pump Lane and the farm buildings / properties and reflect the agricultural heritage and character;*
- (iv) Areas of open space incorporating native hedgerows, trees and woodland planting to provide separation and buffers to the conservation areas at Lower Rainham and Lower Twydall;*
- (v) Strengthening of existing hedgerows to site boundaries and provision of landscape buffers to incorporate tree belts and green corridors with recreation routes, foot cycleways and SUDs;*
- (vi) Creation of improved connections through areas of green infrastructure and open space within the Site;*
- (vii) Limiting the height of development to respect the existing built form; and*
- (viii) Strategic landscape planting throughout the Development and tree planting to streets to break up the built form and provide a soft green backdrop when the Site is viewed from the estuary to the north.*

LOCAL PLANNING POLICY

Area of Local Landscape Importance

- 11.7 *The Site is situated within the Gillingham Riverside Area of Local Landscape Importance (ALLI), a non-statutory designation in the Local Plan that represents the lowest tier of designations at a local level (Policy BNE34 within the Medway Local Plan, adopted 2003). The ALLI includes land that extends to the east and west of the site, as well as land to the north of Lower Rainham Road, including the shoreline. The ALLI includes the Riverside Country Park, Parts of the Medway Estuary SSI, SPA and RAMSAR Site, as well as the Motney Hill Local Nature Reserve. The Saxon Shoreline Way long-distance path runs alongside the shoreline within the ALLI.*
- 11.8 *In addition to their landscape importance, the ALLIs are identified as functioning as buffers between neighbourhoods and communities, green corridors or links for the community to reach the wider countryside, urban fringe land to be protected from urban sprawl and a habitat and wildlife corridors. More specific functions are identified for each of the ALLIs, with the following identified for the Gillingham Riverside ALLI:*
- (i) Green buffer separating Twydall and Rainham from areas of international importance for nature conservation and recreation along the Medway estuary;*
 - (ii) Enhances the setting of the Medway Towns Ring Road and allows attractive views from the river and railway;*
 - (iii) Provides residents with an extensive area with access to attractive, rural landscape;*
 - (iv) Provides an attractive setting to the Lower Rainham and Lower Twydall conservation areas;*
 - (v) Contains a number of orchards, mature hedgerows and farm groups complementing and contributing to the Riverside Country Park; and*
 - (vi) Forms a green backdrop when viewed from the Medway Estuary.*
- 11.9 *The site-specific landscape character assessment to inform the LVIA (Technical Appendix 11.1a) has considered the function and features of the ALLI when assessing the value of each of the Local Landscape Character Areas identified. Along with a review of the Box 5.1 Value Factors identified within the Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3) (ref 11.1) this has allowed for the assessment to identify which of the features of each LLCA are related to those factors attributed to the designation of the ALLI area. This, in turn has enabled the LVIA to allow an informed assessment of how the Site contributes to the local character, features and valued aspects of the landscape.*

BASELINE CONDITIONS

Site Context

- 11.10 *The Site comprises an area of land comprising approximately 51.2 hectares of agricultural land that is managed for commercial fruit growing and is laid to orchard. The Site is situated on land to the immediate northeast of the built area of Twydall, which bounds the Site alongside the London to Margate railway line. To the southeast, development at Rainham extends to the north of the railway. The wider conurbation of Gillingham is situated to the west, adjoining Twydall.*
- 11.11 *To the northeast, the Site is bounded by Lower Rainham Road, including the settlement of Lower Rainham. To the southeast, the Site is bound by Lower Bloors Lane which connects with Lower Rainham Road and extends to the railway, where a footbridge provides pedestrian access into Twydall to the south. The western site boundary is irregular in shape, following field boundaries formed by hedgerows and tree belts to areas managed as orchard and arable fields to the northwest, east of Lower Twydall.*

-
- 11.12 *The Site is bisected by Pump Lane, which runs north-south from Lower Rainham Road and crosses under the railway south of the Site. To the centre of, and outside the Site development along Pump Lane include Pump Farm and a modern development of houses at Russett Farm.*
- 11.13 *A bridleway runs diagonally from Lower Bloors Lane on the eastern boundary, connecting with Pump Lane opposite Pump Farm.*
- 11.14 *Fields within the Site are divided by coniferous shelterbelts, including those along the bridleway, as well as bounding the allotments and railway line east of Pump Lane. Tall hedgerows run alongside Pump Lane and Lower Bloors Lane, with breaks in the vegetation at gateways, development frontages and accesses.*
- 11.15 *The land slopes gently upward from the low-lying marshes north of Lower Rainham Road and shoreline beyond towards the edge of Twydall to the south. The urban area of Twydall, Rainham and Gillingham extend up the slopes towards the wooden skyline of the North Downs beyond.*
- 11.16 *Land along the shoreline lies within the Riverside Country Park, with car parks, café and play areas on land north of Mariners Farm, north of the Site. Horrid Hill and Motney Hill project the shoreline into the Medway Estuary, with the Saxon Shore Way long distance path running along the shoreline. Bloors Lane community woodland lies to the east of the Site, accessed off Bloors Lane. Woodland and shelterbelts along the shoreline and inland provide containment and are distinctive features in the local landscape.*
- 11.17 *The Landscape Character and site Features are considered in detail in Section 4 of the LVIA (Technical Appendix 11.1a). This has included a review of published landscape character assessments, as well as a site-specific landscape character assessment undertaken by Tyler Grange which identifies Local Landscape Character Areas and features within the Site that maybe affected by the Proposed Development.*

Landscape Character

- 11.18 *The Site is situated within the “Lower Rainham Farmlands” LCA as identified by the Medway Landscape Character Assessment. The LCA extends between the railway to the south and Lower Rainham Road to the north and includes land up to the ring road to the northwest and edge of Rainham to the southeast. The key characteristics of the LCA include the mixed farmland including orchards, shelterbelts, and hedgebanks, as well as the enclosure by Lower Rainham Road and the railway line. The Medway Landscape Character Assessment recognises that the area has poor accessibility and links to urban areas and is divided by development at Rainham. Guidelines for the area include improving links between Twydall and the open countryside and with the Riverside Marshes to the north which is recognised for its value as a green buffer, wildlife corridor and as a wildlife corridor and link to the wider countryside.*
- 11.19 *The site-specific landscape character assessment has defined the Lower Rainham and Lower Twydall Fruit Belt LLCA which covers the area of and between the ring road on the edge of Gillingham to the west and Rainham to the east. The Site is situated within this LLCA, which is characterised by the gently sloping land with large rectilinear field managed as commercial orchards and arable fields. Paddocks and remnant orchards are present near the ring road to the northwest. Bloors Lane Community Woodland and tree belts provide enclosure to the southeast of the area.*
- 11.20 *The site-specific character assessment also identifies those features within and adjacent to the Site which may be affected by the Proposed Development. These include: Lower Bloors Lane, Pump Lane, Bridleway GB6a, Pump Farm & Russett Farm, Commercial Orchards;*

Lower Rainham & Lower Twydall; Lower Rainham Road; and the role of the Site as part of a green backdrop when viewed from the Medway.

11.21 *The land north and east of Rainham has been identified as falling within the Medway Marshes Farmland LLCA which is separated from the Site by Rainham Road to the north and development that extends northwards along Berengrave Lane to Motney Hill Road. The Medway Marshes Farmland LLCA provides separation between the shoreline and land south of Rainham Road.*

11.22 *The site-specific assessment has defined the strip of land north of the marshes farmland as the Medway Shoreline and Riverside Country Park LLCA. This includes the Saxon Shore Way and Riverside Country Park, including woodland and tree belts that form a distinctive vegetated backdrop to the estuary. Views across the estuary are identified as a perceptual attribute of this LLCA.*

Landscape Sensitivity

Lower Rainham and Lower Twydall Fruit Belt LLCA

11.23 *The assessment has identified the Lower Rainham and Lower Twydall Fruit Belt LLCA as having an overall Medium Landscape Sensitivity to residential development. The LLCA has been assessed as making a Low / Medium Contribution to the features and function of the Gillingham Riverside ALLI. This recognises that, whilst the area makes a limited contribution overall, the land within the LLCA has a role in providing a setting to the conservation areas at Lower Rainham and Lower Twydall, as well as part of a wider buffer between Twydall and Rainham and green backdrop in views from the estuary.*

11.24 *There are opportunities to provide improved access across the LLCA to connect the urban areas with the shoreline and country park, as well as respect the character of lanes and historic land use for traditional orchards and native trees and hedgerows to field boundaries.*

Medway Marshes Farmland LLCA

11.25 *The Medway Marshes Farmland LLCA has been assessed as having a Medium Landscape Sensitivity. The LLCA is valued for its recreation and ecological qualities associated with the Riverside Country Park and nature reserves. Woodland and hedgerows to field boundaries provide structure and enclosure, linking with the vegetation along the shoreline to the north. The LLCA has been assessed as making a Medium Contribution to the features and function of the Gillingham Riverside ALLI.*

11.26 *Development on land within the Site to the south of the LLCA beyond Lower Rainham Road would not directly impact upon the recreation or ecological value of the land, nor the character of the agricultural land and associated trees and hedgerows linking with the woodland and vegetation along the shoreline.*

Medway Shoreline and Riverside Country Park LLCA

11.27 *The Medway Shoreline and Riverside Country Park LLCA has been assessed as having a High Landscape Sensitivity. The LLCA is valued for its recreation, ecological and perceptual qualities associated with views across the estuary, as well as the distinctive character of the shoreline well vegetated backdrop. The LLCA makes a High Contribution to the features and function of the Gillingham Riverside ALLI.*

11.28 *However, given the physical and visual containment by a strong band of vegetation along the inland edge of the shoreline, development outside the LLCA would not directly impact upon the recreation value of the land and views across the estuary, nor the distinctive character of the shoreline and associated vegetated edge.*

Visual Context

- 11.29 *A summary of the composition of views obtained from within the Study Area is set out below. A full description of the composition of views is included alongside the representative Photoviewpoints within the LVIA (Technical Appendix 11.1a).*

Views from the North

- 11.30 *From the Hoo Peninsula on the northern shore of the Medway estuary there are expansive panoramic views across the mudflats and marshes towards the southern shoreline.*
- 11.31 *The shoreline and marshes to the north of Lower Rainham are well vegetated, with woodland at the Riverside Country Park and around Mariners Farm combining with trees and hedgerows to field boundaries to provide a soft green edge and backdrop to the views across the Medway. Beyond the marshes, houses at Lower Rainham are visible amongst the vegetation. The northern edge of Twydall is defined by linear housing that adjoins the railway line to the south of the Site. These properties form a developed backdrop that then extends up the slopes towards Gillingham beyond.*
- 11.32 *There are also expansive views across the wider estuary and backdrop to the shorelines of the Hoo Peninsula to the north and Lower Rainham to the south from Horrid Hill and Motney Hill. The composition of the views from these locations is similar to that from the more distant views to the north, with the vegetated shoreline and buildings along Lower Rainham Road beyond.*
- 11.33 *The land to the southwest of the Site adjacent to the railway line is situated in front of the properties on the northern edge of Twydall which form a linear edge and developed backdrop. The lower lying fields to the southwest and south of the Site are set beyond intervening vegetation and built form. Tall hedgerows bounding the Site along Lower Bloors Lane, the community woodland and hedges alongside the railway and bridleway provide enclosure and a well treed backdrop to the east.*
- 11.34 *Views from the shoreline along the Saxon Shore Way north of Lower Rainham Road are orientated across the expansive views of the Estuary to the north and northwest. Views inland are screened by the vegetation and woodland that runs alongside the shoreline associated with the Riverside Country Park and boundaries within the marshes.*
- 11.35 *Views along Lower Rainham Road include the linear settlement of Lower Rainham and tall hedgerows bounding the Site, with glimpsed views across arable fields towards the estuary to the north.*

Views from the East

- 11.36 *From the east, the Site is set beyond tall hedgerows and hedgebanks along Lower Bloors Lane. Views are focussed along the narrow, enclosed lane, with occasional glimpsed over hedgerows or through gateways.*

Views from the South

- 11.37 *Within the built area of Twydall, views are orientated along the residential streets and local roads. These follow a grid pattern, with Beechings Way running southeast - northwest channelling views.*
- 11.38 *From streets on the higher slopes that are orientated to look north-eastwards, there are framed views out across the estuary. In the foreground, linear development along Beechings Way forms a backdrop blocking views across the site.*
- 11.39 *There are some views north from properties and streets that overlook the Site adjacent to the railway line. In the summer, when trees and hedgerows are in leaf views across the*

Site are heavily filtered. In the wintertime, there may be some views across the Site towards the wider views north of the estuary.

Views from the West

- 11.40 In views obtained from gateways on Lower Twydall Lane, the rolling topography and hedgerows to field boundaries limit distant views to the east. The main focus of views is along the narrow lane that is bounded by tall hedgerows with little outward visibility.
- 11.41 There are views along the railway line for the footbridge on Lower Twydall Lane, with oblique views across the Site to the wooded backdrop beyond. Wider views are limited by trees surrounding properties at Lower Twydall.

Views from within the Site Area

- 11.42 Views from the bridleway that runs between Pump Lane and Lower Bloors Lane through the Site are enclosed by tall coniferous hedgerows and channelled along the route of the path. Outward views are limited to those through gateways or short sections of post and rail fencing.
- 11.43 Views along Pump Lane are channelled by the tall roadside hedgerows with glimpses through gateways into the Site. Properties at Pump Farm, Russetts Farm and cottages along the lane introduce development and focal points.

Visual Receptors

- 11.44 Having identified the extent of visibility, composition of views and representative viewpoints, those groups of people (visual receptor) who may have the potential to have their views and visual amenity affected by the Proposed Development have been identified. These are set out on the table below, along with their respective sensitivities to visual change associated with the Proposed Development.

Table 11.1 Visual Receptors

Visual Receptor	Representative Photoviewpoint	Visual Sensitivity		
		Value	Susceptibility	Overall Sensitivity
<i>Users of the Saxon Shore</i>				
<i>Northern shore of the Medway</i>	<i>Photoviewpoint 1</i>	<i>High</i>	<i>Low</i>	<i>Medium</i>
<i>South of Motney Hill</i>	<i>Photoviewpoint 4</i>	<i>High</i>	<i>Medium</i>	<i>Medium / High</i>
<i>North of Lower Rainham</i>	<i>Photoviewpoint 5</i>	<i>High</i>	<i>Low</i>	<i>Medium</i>
<i>Users of the Riverside Country Park</i>				
<i>Users of the Riverside Country Park - Horrid Hill</i>	<i>Photoviewpoint 2</i>	<i>High</i>	<i>Medium</i>	<i>Medium / High</i>
<i>Users of Lower Rainham Road</i>	<i>Photoviewpoints 6, 7 and 8</i>	<i>Low</i>	<i>Medium</i>	<i>Medium</i>
<i>Users of Lower Bloors Lane</i>	<i>Photoviewpoints 9 - 11</i>	<i>Medium</i>	<i>Medium</i>	<i>Medium</i>

Users of Lower Twydall Lane	Photoviewpoints 12 and 13	Medium	Medium	Medium
Users of Bridleway GB6a	Photoviewpoints 14a, 14b and 15	Medium	Medium / High	Medium
Users of Pump Lane	Photoviewpoints 16, 17 and 18	Medium	Medium	Medium
Users of Trains Passing the Site		Medium	Low	Low/Medium
<i>Residents of Properties adjacent to and overlooking the site</i>				
Lower Twydall South of the Railway	Photoviewpoint 19	High	Medium	Medium
Pump Lane		High	High	High
Lower Bloors Lane		High	High	High
				Medium
Lower Rainham		High	High	High
Lower Twydall		High	Medium	Medium

LANDSCAPE EFFECTS

Landscape Effects Within the Study Area

- 11.45 *Within the wider Study Area, the Proposed Development would not be inconsistent with the pattern and extent of development. The Site is situated within a peri urban context with the urban form of Twydall and Rainham impacting upon the character of the landscape across the Study Area.*
- 11.46 *The settlement pattern in the area includes development that lies in proximity to the shoreline, including the edge of Gillingham to the northwest. In proximity to the Site, land at Rainham to the east extends north beyond the railway line up to Lower Rainham Road, south of Motney Hill. Houses and commercial / light industrial units extend north of Lower Rainham Road on Motney Hill Road, on land adjacent to a nature reserve and in proximity to the Saxon Shore Way.*
- 11.47 *As recognised within the Medway Landscape Character Assessment, the Medway Fruit Belt Landscape Character Area has poor east-west connectivity and access to the recreation facilities and landscape of the Riverside Country Park and Saxon Shore Way. The Site in particular has poor access and does not provide connections from the wider urban area to existing amenities, including nature reserves, community woodland and the wider Public Right of Way network.*
- 11.48 *The Proposed Development offers the opportunity to greatly improve public access across the area, as well as the provision of attractive areas of green space including community orchards, recreation walks, equipped play areas, a village green and informal green spaces.*

Lower Rainham and Lower Twydall Fruit Belt LLCA

- 11.49 *The Proposed Development has been assessed as resulting in Moderate Adverse landscape effects at the Local Landscape Character Area scale for the Lower Rainham and Lower Twydall Fruit Belt LLCA. This reflects the extent of the Site within this LLCA and degree of change associated with the removal of the commercial orchards and construction of the Proposed Development.*

Site-Wide

- 11.50 *The assessment has also identified that the effects at a site-wide level will also be Moderate Adverse. The containment of the Site by existing development and woodland, shelterbelts / tree belts and tall hedgerows limit the influence that the Proposed Development will have upon the wider landscape. The strategic landscape buffers and associated planting proposed on the Site boundaries (embedded mitigation) will further contain and enclose the Site, limiting any effects on landscape receptors and character areas beyond.*
- 11.51 *The assessment has also identified the likely effects on a number of landscape receptors within and bounding the Site, taking into account embedded mitigation. These have identified Moderate Adverse effects for the Orchards, setting to Lower Rainham and character of Pump Lane, feeding into the overall site-wide assessment.*

Indirect Effects: Medway Shoreline and Riverside Country Park LLCA

- 11.52 *In addition to the effects on the Site area and associated features, the assessment has also considered indirect effects on other landscapes within the Study Area, including the Medway Marshes Farmland LLCA and Medway Shoreline and Riverside Country Park LLCA that have been identified by the site-specific landscape character assessment as part of the LVIA.*
- 11.53 *Although these LLCAs are separated from the Site by Lower Rainham Road, settlement and the belt of woodland and tree planting along the shoreline, land on the upper slopes to the southwest of the Site is visible from vantage points on the shoreline from Horrid Hill (Riverside Country Park) and Motney Hill (Saxon Shore Way). As recognised within the Local Plan, the green backdrop to views from the estuary is a feature of the Gillingham Riverside ALLI, within which the Site is situated. In this respect the backdrop to the estuary is one of the perceptual aspects and part of the scenic quality of the Medway Shoreline and Riverside Country Park LLCA.*
- 11.54 *As recognised by the site-specific landscape character assessment, the vegetation along the shoreline within this LLCA makes a high contribution to the green backdrop to the estuary. The Proposed Development will not impact on this.*
- 11.55 *The tree planting associated with the Proposed Development will, upon maturation provide a green canopy that will soften and break up development both on the Site and within the built area of Twydall on the rising land to the south. There will therefore be a residual Localised, Indirect Minor Adverse Effect on the Medway Shoreline and Riverside Country Park associated with the Proposed Development.*

VISUAL EFFECTS

- 11.56 *A summary of the key findings of the assessment are set out below for each of the groups of people (visual receptors) identified within the baseline assessment as having the potential to have their views and visual amenity affected by the Proposed Development. The effects during the construction phase are therefore generally greater than those*

experienced upon completion and the residual effects once the landscape mitigation has matured.

Users of the Saxon Shore Way and Riverside Country Park

- 11.57 *As identified through the analysis of policy and the baseline studies, access to the countryside and the associated recreational and amenity benefits are valued aspects of the landscape, with the views along the shoreline and across the estuary forming part of the experience enjoying by people using the Saxon Shore Way and Riverside Country Park. The contribution that the visual experience and views make to the value of the landscape has been incorporated into the assessment of landscape effects and has also informed the sensitivity of these people to visual changes associated with the Proposed Development. This has included consideration of the contribution that the Site makes as part of the green backdrop in views from the estuary, including those obtained from Horrid Hill (within the Riverside Country Park) and the Saxon Shore Way. Users of these recreation resources have been assessed as being of a Medium / High sensitivity to visual change associated with the Proposed Development.*
- 11.58 *Users of the Saxon Shore Way to the north of the Medway Estuary have the potential to experience Minor Adverse Visual Effects upon completion of the Proposed Development, reducing to Neutral after 15 years when the planting to site boundaries and within the Site mature. This reflects the distance of the viewers and limited nature of change in relation to the expansive views across the wider estuary.*

Construction Phase

- 11.59 *During the construction phase, Temporary Moderate Adverse Visual Effects have been identified for visitors to Horrid Hill and views obtained from the Saxon Shore Way to the south of Motney Hill. This is due to the introduction of uncharacteristic elements and movement that will draw attention and disrupt views towards the Site. The wider views across the estuary would remain unaffected.*

On Completion and Residual Effects

- 11.60 *In views from the Saxon Shore Way south of Motney Hill and Horrid Hill within the Riverside Country Park, the Proposed Development will be more visible due to the closer proximity. In views from these locations, the Proposed Development will be visible, set beyond vegetation on the shoreline and properties in Lower Rainham. The houses will be viewed against the built edge of Twydall and Rainham that extends up the slopes beyond the Site the south.*
- 11.61 *Upon completion, there will be Minor / Moderate Adverse Visual Effects resulting from the introduction of development into these views.*
- 11.62 *Upon maturation of the landscape buffer planting and trees throughout the Proposed Development, this will reduce to residual Permanent, Localised Minor Adverse Visual Effects.*
- 11.63 *As recognised within the assessment for the above receptors, the expansive views across the estuary from these vantage points and along the recreational routes will not be affected by the Proposed Development. In those views back towards the shore from the north and promontories of Horrid Hill and Motney Hill, the Proposed Development will retain a green backdrop, set beyond the woodland and shelterbelts along the shoreline and tying-in with the woodland and trees that bound the Site and within adjacent areas. The Proposed Development will also soften the existing linear developed edge south of the railway line through the provision of extensive new planting to boundaries and within the Site.*

Users of Lower Rainham Road

On Completion and Residual Effects

- 11.64 *For users of Lower Rainham Road passing the Site, there will be localised minor adverse visual effects arising from the implementation of the new site entrance to the northwest of Pump Lane both at completion and residual effects (after 15 years) when the landscape mitigation has matured.*
- 11.65 *The Site entrance will introduce a new gateway on the approach to Lower Rainham where there is a developed context with associated road signage, bollards and traffic lights. The Proposed Development will be set back beyond the retained tall hedgerows to the road and landscape buffer beyond incorporating tree planting. This will serve to screen views of the Proposed Development. At the Site frontage beyond the entrance of Lower Rainham Road, development is set beyond landscape buffers and areas of open space incorporating ponds, trees and hedgerow presenting an attractive entrance to the Site.*

Users of Lower Bloors Lane

Construction Phase

- 11.66 *During the construction phase, Temporary Moderate Adverse Visual Effects have been identified for users of Lower Bloors Lane where the works will be in close proximity to the lane and visible beyond lower sections of hedgerow and gateways.*

On Completion and Residual Effects

- 11.67 *Upon completion these will reduce to Localised Minor / Moderate Adverse Visual Effects where views of houses may still be obtained in close proximity along the lane.*
- 11.68 *The residual effects will be Permanent, Localised and Minor Adverse once the mitigation planting has matured.*

Users of Lower Twydall Lane

- 11.69 *In the limited views of the Site available Lower Twydall Lane, the Site is set beyond intervening trees and hedgerows to field boundaries. In these views, the Proposed Development will result in Minor Adverse Visual Effects at completion, reducing to Permanent Negligible Visual Effects upon completion when the mitigation planting has matured.*

Construction Phase

- 11.70 *In views from the footbridge over the railway on Lower Twydall Lane, there will be Temporary Moderate Adverse Visual Effects associated with the construction works in these localised and limited views.*

On Completion and Residual Effects

- 11.71 *Upon completion, housing to the southwest of the Site will replace oblique views across the Site beyond filtering vegetation along the railway line. The Proposed Development will be seen in context with houses at Lower Twydall to the south of the railway line and result in Localised Minor / Moderate Adverse Visual Effects.*
- 11.72 *These will reduce to Permanent, Minor Adverse with the maturation of the tree belts alongside the railway which will filter and soften views of the houses within the Site.*

Users of Pump Lane

Construction Phase

- 11.73 *During the construction phase, the works to create new access roads and development of the village centre, care home, school and housing will give rise to Temporary, Major Adverse Visual Effects for users of Pump Lane. This is a result of the proximity to the works and extent of construction works taking place along the lane, including the new access roads opening up views into the Site as well as and disruption caused by temporary closures and traffic management.*

On Completion and Residual Effects

- 11.74 *Upon completion of the Proposed Development, assuming the mitigation planting has not established there would be Localised, Moderate Adverse Visual Effects.*
- 11.75 *Once the landscape planting and community orchard areas, village green and buffers to the village centre, care home and school have established, the residual effects for users of Pump Lane will be Permanent, Localised and Minor / Moderate Adverse.*
- 11.76 *Development will be set back from the lane beyond areas managed as community orchards, the village green and opens spaces, in keeping with the existing glimpsed views of orchards obtained to the south of Russett Farm. The hedgerows along the lane and supplementary planting will screen views of development, with views along new accesses off the lane set beyond verges with street trees.*

Users of Bridleway GB6a

Construction Phase

- 11.77 *During the construction phase, there will be disruption to users of the bridleway with temporary closures to allow for the implementation of the internal roads and development.*

On Completion and Residual Effects

- 11.78 *Upon completion, there will be Localised, Minor Beneficial Visual Effects for users of the bridleway, which will be incorporated into a green corridor. The bridleway will pass alongside areas of open space including play areas / pocket parks and pass through the village green.*
- 11.79 *As the landscape establishes and planting matures, these will increase to Permanent, Localised Minor / Moderate Beneficial Visual Effects. This reflects the change from an enclosed path with glimpsed views of commercial orchards to a route that is integrated into areas of open space with recreation and amenity spaces at the heart of the new community.*

Users of Trains Passing the Site

On Completion and Residual Effects

- 11.80 *For users of trains passing the Site, the Proposed Development will result in the loss of filtered glimpsed views across the Site west of Pump Lane. Upon completion, this will result in Localised, Minor / Moderate Adverse Visual Effects.*
- 11.81 *With the maturation of buffer planting incorporating tree belts along the railway this will reduce to Permanent, Localised and Minor Adverse Visual Effects. The assessment reflects the fleeting, glimpsed nature and extent of the views from the trains and the*

existing vegetation that filters outward views across the Site from along much of the southwestern site boundary.

Residents of Properties Adjacent to and Overlooking the Site

- 11.82 *The Visual Assessment has also given consideration to the likely effects upon the views and visual amenity of residents of properties adjacent to and overlooking the Site. No properties have been accessed as part of the baseline studies. The assessment is based upon observation made from fieldwork in the public realm and from analysis of maps and aerial imagery.*

Residents of properties in Twydall south of the railway

Construction Phase

- 11.83 *For residents of properties with views across the Site, the construction works will give rise to Temporary, Localised and Moderate / High Adverse Visual Effects.*

On Completion and Residual Effects

- 11.84 *Upon completion, prior to maturation of landscape buffer planting alongside the railway, the loss of views across the Site will give rise to Localised, Moderate Adverse Visual Effects.*
- 11.85 *Once the trees have matured, this will reduce to Permanent Minor / Moderate Adverse.*
- 11.86 *The assessment recognises the context within which the views of the Site are experienced, beyond a busy railway line and planting to gardens and alongside the railway line filtering views across the Site.*

Residents of Properties on Pump Lane

Construction Phase

- 11.87 *During the construction phase, residents of these properties will likely experience Temporary, Localised Major Adverse Visual Effects on their views and visual amenity. This reflects the extent of construction works to the lane and on adjacent land surrounding the properties. This includes that associated with the implementation of infrastructure, opens space and development.*

On Completion and Residual Effects

- 11.88 *Upon completion there will be Localised, Moderate / Major Adverse Visual Effects before the landscaping to the open spaces and village green established, and trees within the community orchards, landscape buffers and opens paces mature.*
- 11.89 *Upon maturation of the trees and establishment of landscape to areas of green infrastructure and open spaces, the residual effects will reduce to Permanent, Localised and Moderate Adverse. This recognises the setting of the properties at the heart of a landscape framework to the centre of the Site and development incorporating buffers, green spaces, the village green and community orchards.*

Residents of Properties on Lower Bloors Lane

On Completion and Residual Effects

- 11.90 *For residents of those properties fronting onto and overlooking Lower Bloors Lane, there may be Localised, Minor / Moderate Adverse Visual Effects upon views and their visual amenity upon completion of the Proposed Development and before the maturation of mitigation planting.*

11.91 *Once gapping up and enhancement works to the hedgerows and trees / landscape buffer within the Site has matured, these will reduce to Permanent, Localised and Minor Adverse Visual Effects.*

Residents of Properties of Lower Rainham

Construction Phase

11.92 *From properties overlooking the Site, the construction works associated with the school and houses north of the bridleway will be visible, set back beyond the playing fields. This may give rise to Temporary, Localised and Moderate Adverse Visual Effects for these residents.*

On Completion and Residual Effects

11.93 *Upon completion, the setting-back of the Proposed Development beyond a landscape buffer and the playing fields will result in Localised, Minor / Moderate Adverse Visual Effects.*

11.94 *These will reduce to Permanent, Localised and Minor Adverse Visual Effects with the maturation of the planting to the landscape buffers along the Site boundaries and adjacent to the playing fields and housing south of the school.*

Residents of Properties at Lower Twydall

11.95 *There are limited views towards the Site from properties at lower Twydall. For those with outward views to the east, intervening vegetation to field boundaries filters views into the western site area.*

On Completion and Residual Effects

11.96 *Upon completion, any development visible from these properties will be set beyond intervening trees and hedgerows, resulting in Localised, Minor Adverse Visual Effects.*

11.97 *These will reduce to Permanent Negligible Visual Effects upon maturation of the landscape buffer planting to the western site boundary which will screen views of the Propose Development.*

SUMMARY

11.98 *The effects of the Proposed Development at the construction stage, at completion (with embedded mitigation planting), i.e, year 1 and the residual effects after 15 years of growth are summarised in Table 11.2 below.*

Table 11.2: Summary of Landscape and Visual Effects

Description of Likely Significant Effects	Significance	Summary	
Demolition and Construction Phase			
Landscape Receptors			
<i>Lower Rainham Farmlands LCA</i>	<i>Minor Adverse</i>	<i>A, T, I, LT, R</i>	<i>Works will introduce uncharacteristic elements into the local landscape, with the development changing the land use and character of the site area.</i>
<i>Lower Rainham and Lower Twydall Fruit Belt LLCA</i>	<i>Moderate / Major Adverse (localised)</i>	<i>A, T, I, LT, L</i>	<i>Works will introduce uncharacteristic elements into the local landscape, with the development changing the land use and character of the site area.</i>
<i>Medway Shoreline and Riverside Country Park LLCA</i>	<i>Minor Adverse</i>	<i>A, T, I, LT, L</i>	<i>Works will introduce uncharacteristic elements into the local landscape, with the development changing the land use and character of the site area.</i>
<i>Medway Marshes Farmland LLCA</i>	<i>Minor Adverse</i>	<i>A, T, I, LT, L</i>	<i>Works will introduce uncharacteristic elements into the local landscape, with the development changing the land use and character of the site area.</i>
<i>Site Area and Site Features</i>	<i>Major adverse (localised)</i>	<i>A, T, D, LT, L</i>	<i>Works will introduce uncharacteristic elements into the local landscape, with the development changing the land use and character of the site area.</i>

<i>Visual Receptors</i>			
<i>Users of Northern shore of the Medway</i>	<i>Minor adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Users of South of Motney Hill</i>	<i>Moderate Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Users of North of Lower Rainham</i>	<i>Minor Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>

<i>Users of Horrid Hill</i>	<i>Moderate Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Users of Lower Rainham Road</i>	<i>Minor / Moderate Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Users of Lower Bloors Lane</i>	<i>Moderate Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Users of Lower Twydall Lane</i>	<i>Moderate Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Users of Bridleway GB6a</i>	<i>Moderate Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Users of Pump Lane</i>	<i>Major Adverse (localised)</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Users of Trains Passing the Site</i>	<i>Minor / Moderate Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Residents of properties in Twydall south of the Railway</i>	<i>Moderate / Major Adverse (Localised)</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Residents of properties on Pump Lane</i>	<i>Major Adverse (localised)</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Residents of properties on Lower Bloors Lane</i>	<i>Minor / Moderate Adverse</i>	<i>A, Y, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Residents of properties of Lower Rainham adjacent to and overlooking the site</i>	<i>Moderate Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>
<i>Residents of properties at Lower Twydall</i>	<i>Minor Adverse</i>	<i>A, T, D, M, L</i>	<i>Construction activities introduce uncharacteristic elements, movement of vehicles and plant and disruption into views.</i>

Description of Likely Significant Effects	Significance	Effects Year 1	Description of Mitigation	Significance	Residual Effects (Year 15) (At maturation of proposed mitigation planting)
Operational Phase		B/ A, P/T,D/I,ST/M/LT,L/N/R			B/A,P/T,D/I,ST/M/L,L/R/N
Landscape Receptors					
Lower Rainham Farmlands LCA	Minor Adverse	A, T, D, LT, R	Embedded landscape mitigation measures.	Minor Adverse	A, P, I, LT, L
Lower Rainham and Lower Twydall Fruit Belt LLCA	Moderate Adverse	A, T, D, LT, L	Range of embedded landscape mitigation measures, including landscape buffers, tree planting and implementation of new areas of community orchards and village green.	Moderate Adverse	A, P, D, LT, L
Medway Shoreline and Riverside Country Park LLCA	Minor Adverse	A, T, I, LT, L	Embedded landscape mitigation measures.	Minor Adverse	A, P, I, LT, L
Medway Marshes Farmland LLCA	Minor Adverse	A, T, I, LT, L	Embedded landscape mitigation measures.	Minor Adverse	A, P, I, LT, L
Site Area and Site Features	Major Adverse (localised)	A, T, D, LT, L	Range of embedded landscape mitigation measures, including landscape buffers, tree planting and implementation of new areas of community orchards and village green.	Moderate Adverse	A, P, D, LT, L

Visual Receptors					
Users of Northern shore of the Medway (Photoviewpoint 1)	Minor Adverse	A, P, D, M, L	Landscape buffer planting and trees throughout the development	Neutral	P, D, LT, L
Users of South of Motney Hill (Photoviewpoint 4)	Minor / Moderate Adverse	A, P, D, M, L	Landscape buffer planting and trees throughout the development	Minor Adverse	A, P, D, LT, L

Users of North of Lower Rainham (Photoviewpoint 5)	Minor Adverse	A, P, D, M, L	Landscape buffer planting and trees throughout the development	Neutral	P, D, LT, L
Users of Horrid Hill (Photoviewpoint 2)	Moderate Adverse	A, P, D, M, L	Landscape buffer planting and trees throughout the development	Minor Adverse	A, P, D, LT, L
Users of Lower Rainham Road (Photoviewpoint 6, 7 and 8)	Minor Adverse	A, P, D, M, L	Development will be set back beyond the retained tall hedgerows to the road and landscape buffer beyond incorporating tree planting.	Minor Adverse	A, P, D, LT, L
Users of Lower Bloors Lane (Photoviewpoints 9, 10 and 11)	Minor / Moderate Adverse	A, P, D, M, L	Landscape buffer incorporating planting to gap-up and enhance the existing hedgerows alongside the lane, as well as new tree and hedgerow planting within the site.	Minor Adverse	A, P, D, LT, L
Users of Lower Twydall Lane (Photoviewpoints 12 and 13)	Minor Adverse	A, P, D, M, L	Landscape buffer and screening vegetation.	Minor Adverse	A, P, D, LT, L
Users of Bridleway GB6a (Photoviewpoints 14a, 14b and 15)	Minor Beneficial	B, P, D, M, L	The bridleway will pass alongside areas of open space including play areas / pocket parks and pass through the village green.	Minor / Moderate Beneficial	B, P, D, LT, L
Users of Pump Lane (Photoviewpoints 16, 17 and 18)	Moderate Adverse	A, P, D, M, L	Development will be set back from the lane beyond areas managed as community orchards, the village green and opens spaces, in keeping with the existing glimpsed views of orchards obtained to the south of Russett Farm. The hedgerows along the lane and supplementary planting will screen views of development, with views along new accesses off the lane set beyond verges with street trees.	Minor / Moderate Adverse	A, P, D, LT, L

<i>Users of Trains Passing the Site</i>	<i>Minor / Moderate Adverse</i>	<i>A, P, D, M, L</i>	<i>Buffer planting incorporating tree belts along the railway.</i>	<i>Minor Adverse</i>	<i>A, P, D, LT, L</i>
<i>Residents of properties in Twydall south of the Railway</i>	<i>Moderate Adverse</i>	<i>A, P, D, M, L</i>	<i>Buffer planting incorporating tree belts along the railway.</i>	<i>Minor / Moderate Adverse</i>	<i>A, P, D, LT, L</i>
<i>Residents of properties on Pump Lane</i>	<i>Moderate / Major Adverse (localised)</i>	<i>A, P, D, M, L</i>	<i>Development will be set back from Pump Lane, with hedgerows retained and areas of community orchards will replace the commercial orchards, viewed through the access and beyond the hedgerow.</i>	<i>Moderate Adverse</i>	<i>A, P, D, L</i>
<i>Residents of properties on Lower Bloors Lane</i>	<i>Minor / Moderate Adverse</i>	<i>A, P, D, M, L</i>	<i>Gapping up of hedgerows and planting to landscape buffers along the lane.</i>	<i>Minor Adverse</i>	<i>A, P, D, L</i>
<i>Residents of properties of Lower Rainham adjacent to and overlooking the site</i>	<i>Minor / Moderate Adverse</i>	<i>A, P, D, M, L</i>	<i>Mitigation planting to the site boundaries.</i>	<i>Minor Adverse</i>	<i>A, P, D, L</i>
<i>Residents of properties at Lower Twydall</i>	<i>Minor Adverse</i>	<i>A, P, D, M, L</i>	<i>Mitigation planting to the site boundaries.</i>	<i>Negligible</i>	<i>P, D, L</i>

(Beneficial or Adverse) (B/A), (Permanent or Temporary) (P/T), (Direct or Indirect) (D/I), (Short Term, Medium, Long Term) (ST, M, LT), (Local, Regional, National) (L, R, N)

12 AIR QUALITY

PREFACE

12.1 This chapter of the ES May 2019 was supported by Technical Appendices 12.1-12.7. No further survey or assessment work was carried out as part of the SES March 2020, although a Technical Note was prepared in response to a number of questions raised in consultation with the Council Environmental Health Officer. This was presented as Technical Appendix 12.1^{sup} within the SES March 2020.

12.2 As part of this SES September 2020 in support of the appeal process, a review of the ES May 2019 chapter has been undertaken relative to Policy Context. As it currently stands, there is no further update to the traffic data used in the ES May 2019 air quality assessment/SES March 2020 to create a need for further chapter updates in this regard.

POLICY CONTEXT

12.3 There are no amendments to paragraphs 12.6 to 12.25 of the ES May 2019.

Climate Emergency Discussion

12.4 The following **new** paragraphs are to be inserted after paragraph 12.25 as paragraphs 12.26 to 12.29 -

(12.26) On 8 October 2018, the UN Intergovernmental Panel on Climate Change (IPCC) released a report on the state of climate science, warning that if the planet warmed by 1.5 °C there would be devastating consequences such as extreme weather conditions. Medway Council, along with Kent County Council declared a climate emergency in April 2019. Council requested that the Cabinet establish a clear action plan for Medway to become carbon neutral within an appropriate timescale. Notwithstanding this, the Council does not have a statutory duty to reduce emissions in line with the Climate Change Act 2008 or to develop an action plan.

*(12.27) On 9 July 2019, a report was presented to the Cabinet setting out the **Council's** aspirations and approach to the delivery of an action plan. In particular, the Cabinet agreed to the establishment of the Climate Change Member Advisory Group. A five year rolling action plan is being developed.*

(12.28) On 20 March 2020, an update report was presented to Cabinet which identified that

- a draft Kent and Medway Energy and Low Emissions Strategy (KMELES) setting out how the Council would achieve carbon neutrality by 2050 was consulted on over the summer of 2019, with the final document expected to be adopted as policy in the spring of 2020 - this did not happen due to Covid-19 and there is no further update on this at this time,*
- the Climate Change Action Plan would be finalised by August 2020 subject to the completion of a carbon assessment and any other work arising as a result, and that the Action Plan would be presented to Cabinet in November 2020 - no further update is available at the time of writing this SES,*

(12.29) A number of measures that the Advisory Group have identified and are being pursued as part of the Action Plan (in addition to the KMELES) include EV charging infrastructure, electric buses in Medway, promoting car sharing/walking/cycling, developing an energy policy, developing a biodiversity/tree planting strategy, plastics use reduction, etc. It remains to be seen as these proposals are developed further, how they are translated into planning policy.

Planning Policy

- 12.5 There are no amendments to the NPPF in respect of air quality (paragraphs 12.26 to 12.29) of the ES May 2019, albeit these are now **renumbered** as 12.30 to 12.33
- 12.6 There are no amendments to the local plan policy position identified in paragraphs 12.30 to 12.32 of the ES May 2019, albeit these are now **renumbered** as 12.34 to 12.36.
- 12.7 All paragraphs of the ES May 2019 from 12.33 to 12.111 are **renumbered** as 12.37 to 12.215. There are no further textural amendments to the chapter of the ES May 2019.

13 LAND USE AND AGRICULTURE

- 13.1 This chapter of the ES May 2019 was supported by Technical Appendices 13.1 and 13.2. No further survey or assessment work was carried out as part of the SE March 2020, although a short Note was prepared in response to questions raised by Officers. This was included as part of the SES March 2020 as Technical Appendix 13.2*sup*.
- 13.2 In response to reason for refusal No. 8, a further report has been commissioned looking at Best and Most Versatile land in the wider Kent context and further farm business financial viability considerations. This report is appended as **Technical Appendix 13.2(i)**. Consequently, **Technical Appendix 13.2** of ES May 2019 and **Technical Appendix 13.2sup** of March 2020 are relabelled as **Technical Appendix 13.2(ii)** and **Technical Appendix 13.2(ii) sup** respectively. There are no further amendments to this chapter of the ES May 2019 and the conclusions on impacts remain as drafted.

14 ARCHAEOLOGY AND CULTURAL HERITAGE

- 14.1 Since the refusal of the application in June 2020, a new heritage consultant, Pegasus Group, has been instructed to review the reasons for refusal against the original Heritage Setting Assessment and Proposed Development design relative to designated heritage assets (listed buildings and conservation areas). Consequently, ES Technical Appendix 14.3 May 2019 is **replaced** by Technical Appendix 14.3a.
- 14.2 Beyond noting the above, there are no amendments to paragraphs 14.1 to 14.82 of this chapter in the ES May 2019.
- 14.3 The final part of paragraph 14.83 of the ES May 2019 is **deleted**, such that that paragraph now reads
- (14.83) There are no alterations proposed to the character of this part of Pump Lane.*
- 14.4 Paragraph 14.84 of the ES May 2019 is amended as follows
- (14.84) Residential development will replace some of the existing orchards surrounding the listed building altering the wider setting of the listed building. Construction activities will be short term and indirect in nature. The overall impact of construction including the establishment of development is considered to be Minor adverse, and the effect Minor Adverse.*
- 14.5 There are no amendments to paragraph 14.85 of the ES May 2019.
- 14.6 The final sentence in paragraph 14.86 of the ES May 2019 is amended as follows -
- (14.86) The overall impact is considered to be minor adverse and the effect minor adverse.*
- 14.7 There are no amendments to paragraph 14.87 of the ES May 2019.
- 14.8 Paragraph 14.88 of the ES May 2019 is **deleted** and amended as follows -
- (14.88) Construction activities will be short term and indirect. The overall effect of construction including the establishment of development on Bloors Place itself is considered to be negligible adverse, and the affect minor adverse. No harm is anticipated to the outbuildings.*
- 14.9 There are no amendments to paragraphs 14.89 and 14.90 of the ES May 2019.
- 14.10 Paragraph 14.91 of the ES May 2019 is **deleted** and amended as follows -
- (14.91) Construction of the residential development will be short term and indirect. The overall impact of construction including the establishment of development is considered to minor adverse and the effect is considered to be Moderate Adverse.*
- 14.11 There are no amendments to paragraph 14.92 of the ES May 2019.
- 14.12 The final sentence of paragraph 14.93 of the ES May 2019 is **deleted**.
- 14.13 Paragraph 14.94 of the ES May 2019 is **deleted** and amended as follows -
- (14.94) Construction activities will be short term and indirect. The overall impact of construction including the establishment of development is considered to be Negligible Adverse and the effect Minor Adverse.*
- 14.14 There are no amendments to paragraph 14.95 of the ES May 2019.
- 14.15 Paragraph 14.96 of the ES May 2019 is **deleted** and replaced as follows -

(14.96) Without further mitigation over and above the embedded mitigation, the level of impact is considered to be as identified during construction.

14.16 There are no amendments to paragraphs 14.97 to 14.103 of the ES May 2019.

14.17 Paragraph 14.104 of the ES May 2019 is **deleted**.

14.18 Thereafter paragraphs 14.105 to 14.110 of the ES May 2019 are renumbered as 14.104 to 14.109.

14.19 ES May 2019 paragraph 14.105 (now renumbered as 14.104) is **deleted** and **replaced** as follows -

(renumbered 14.104) Once the Proposed Development is completed, the level of impact to the setting of the assets is considered to reduce slightly, with the maturing of the additional planting, but remain in the overall levels as assessed above.

14.20 There are no amendments to paragraphs 14.106 to 14.109 of the ES May 2019, now renumbered as 14.105 to 14.108.

14.21 Paragraph 14.110 of the ES May 2019, now renumbered as 14.109, is **deleted** and **replaced** as follows -

(renumbered 14.109) The impact of the Proposed Development on the heritage significance of listed buildings and conservation areas within close proximity has been considered. minor adverse impacts were identified to Pump Farmhouse, Chapel House and the Lower Rainham Conservation Area, and Negligible Adverse Impacts were identified to Bloors Place and Lower Twydall Conservation Area. The significance of the effect of these impacts would be Minor for Bloors Place, Chapel House, Pump Farmhouse and Lower Twydall Conservation Area and Moderate for Lower Rainham Conservation Area.

14.22 Summary Table 14.5 of the ES May 2019 is amended as follows -

TABLE 14.5: SUMMARY TABLE

Description of Likely Significant Effects	Significance	Effect	Mitigation	Description of Residual Effect	Significance	Residual Effect
Demolition & Construction						
Buried Archaeology	Major adverse	A,P,D,LT,N	Secured by Condition	None	Moderate adverse	A,P,D,LT,N
Setting of designated assets - listed building	Minor adverse	A,T,I,ST,L	CEMP, Use of hoardings as necessary. Retention of existing planting.	As assessed	Minor adverse	A,T,I,ST,L
Setting of designated assets - conservation areas	<i>Moderate adverse (Lower Rainham)</i>	A,T,I,ST,L	CEMP, Use of hoardings as necessary. Retention of existing planting.	As assessed	<i>Moderate adverse (Lower Rainham)</i>	A,T,I,ST,L
	<i>Minor adverse (Lower Twydall)</i>				<i>Minor adverse (Lower Twydall)</i>	
Operation						
Buried Archaeology	Effects as construction					
Setting of designated assets - listed buildings	<i>Minor adverse</i>	AP,I,LT,L	Supplemental planting will mature over time, screening the development	As assessed	<i>Minor adverse</i>	A,P,I,LT,L
Setting of designated assets - conservation areas	<i>Moderate adverse (Lower Rainham)</i>	A,P,I,LT,L	Supplemental planting will mature overtime, screening development	As assessed	<i>Moderate adverse (Lower Rainham)</i>	A,P,I,LT,L
	<i>Minor adverse (Lower Twydall)</i>				<i>Minor adverse (Lower Twydall)</i>	

(Beneficial or Adverse) (B/A), (Permanent or Temporary) (P/T), (Direct or Indirect) (D/I), (Short Term, Medium, Long Term) (ST, M, LT), (Local, Regional, National) (L, R, N)

15 ECOLOGY AND CONSERVATION

- 15.1 There is no reason for refusal relating to ecology and conservation.
- 15.2 Reason for refusal no.1, however, cites a lack of mitigation measures and no secured agreement thereto in respect of the additional recreational pressures caused by the Proposed Development on the Medway Estuary and Marshes SSSI, SPA and RAMSAR site.
- 15.3 Mitigation for limiting such recreational pressure was included within the application documentation and referenced in paragraphs 15.113 to 15.114 of the ES May 2019.
- 15.4 Discussions with English Nature in this context have been ongoing throughout the determination of the application. This remains the case in respect of the appeal.
- 15.5 There is presently no formal resolution agreed. As such, there are no amendments to this chapter of the ES May 2019.
- 15.6 The applicant will continue to seek resolution to this issue by the early stage of the appeal. A further update to the corresponding chapter of the ES May 2019 will be made accordingly.

16 CUMULATIVE EFFECTS

PREFACE

- 16.1 Whilst this is a new chapter within this SES September 2020, it incorporates cumulative effects detail that was presented in each of the environmental topic chapters (7-15) of the ES May 2019.

INTRODUCTION

- 16.2 *This chapter assesses the cumulative effects of the scheme arising from the construction and operation of the Proposed Development. Cumulative effects result from the combined impacts of multiple developments as well as multiple in-scheme impacts, for example, combined landscape and ecology impacts on the same sensitive receptor. The impacts from a single development or a single environmental impact may not be significant on their own but when combined with other developments or impacts these effects could become significant.*
- 16.3 *There are several definitions of cumulative effects depending on the context in which the term is applied. However, generally, cumulative effects can be defined as ‘impacts that result from the incremental changes caused by other past, present and reasonably foreseeable future actions together with the project’ (Hyder 1999, Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions) (ref 17.1).*
- 16.4 ***The guidelines also define impact interactions as “The reactions between impacts whether between the impacts of just one project or between the impacts of other projects in the area.”***
- 16.5 *Cumulative Effects Assessment (CEA) is a systematic procedure for identifying and evaluating the significance of effects from multiple activities and developments. The purpose of CEA at project level is to consider the incremental contribution of any impacts arising from the activities associated with the development of the proposed scheme which is the focus of the ES, together with impacts from any other significant activities that may be taking place in the vicinity.*

STUDY AREA AND BASELINE CONDITIONS

- 16.6 *The study area, and thus receptors, for the assessment of cumulative effects has been informed by the study areas of the specialist environmental assessments - primarily the transport assessment as this had the largest study area, and hence the largest zone of influence of the scheme.*
- 16.7 *Baseline conditions are described in the relevant specialist environmental chapters of the original ES May 2019/SES March 2020. Paragraph 2.32 and table 2.6 of the ES May 2019 identify the committed developments which were considered as part of the cumulative effects assessment. Table 2.6 is included in this chapter as table 16.1 below.*

Table 16.1: Cumulative Development Sites

Site Name	Description of Development	Status
Land at Station Road, Rainham MC/14/0285	Development of 90 dwellings	Allowed on appeal
Land North of Moor Street, Rainham MC/14/3784	Development of 190 dwellings	Refused, but identified on the MC housing supply in the SHLAA
Land at Otterham, Quay Lane, Rainham MC/16/2051	Development of 300 Dwellings	Permitted Feb 2017
Berengrave Nursery, Rainham MC/17/3687	Development of 121 dwellings	Permitted Mar 2018
Land south of Lower Rainham Road, Rainham MC/17/1896	Development of 202 dwellings	Permitted August 2020, but also within MC housing supply in SHLAA

METHODOLOGY

- 16.8 The EIA Regulations require an environmental assessment to identify the potential for, and where present, assess the cumulative effects of a project. Cumulative effects can also be considered as effects resulting from incremental changes caused by other past, present or **reasonably foreseeable actions together with the scheme. ‘Reasonably foreseeable’ is interpreted to include other projects that are ‘committed’.** These should include (but not necessarily be limited to) development projects with valid planning permissions as granted by the Local Planning Authority, and for which formal EIA is a requirement or for which non-statutory environmental impact assessment has been undertaken, but the projects have not been constructed.
- 16.9 Cumulative effects are the result of multiple actions on receptors or resources. There are principally two types of cumulative effect:
- Type 1 - Where different environmental impacts are acting on one receptor, as a result of the scheme; and
 - Type 2 - Where environmental impacts are acting on one receptor, but are the result of multiple projects in combination (including the scheme being assessed).
- 16.10 The methodologies for determining the potential effects of the Proposed Development are detailed in the specialist chapters of the ES. The cumulative impacts assessment has focused on effects that were significant, therefore only receptors experiencing moderate or major effects are included in the assessment.
- 16.11 When considering type 2 cumulative effects, the receptors experiencing effects of moderate or large significance were assessed to understand how they would be affected by other proposed development projects. A two stage approach initially considered whether the receptors affected by the Proposed Development would be affected by other development projects. Following this, the second stage identified the significance of the cumulative impacts.
- 16.12 The significance of cumulative effects has been determined using the criteria shown in Table 16.1 below, which is taken from DMRB Volume 11, Section 2, Part 5 (ref 16.2).

Table 16.1 Determining Significance of Cumulative Effect

Significance	Effect
Severe	Effects that the decision-maker must take into account as the receptor/resource is irretrievably compromised.
Major	Effects that may become key decision-making issues.
Moderate	Effects that are unlikely to become issues on whether the project design should be selected, but where future work may be needed to improve on current performance.
Minor	Effects that are locally significant.
Not Significant	Effects that are beyond the current forecasting ability or are within the ability of the resource to absorb such change.

DESIGN AND MITIGATION

16.13 Mitigation measures are proposed in the individual specialist environmental chapters of this report and no further mitigation measures have been proposed for the cumulative impacts.

MAGNITUDE AND IDENTIFICATION OF IMPACTS

Type 1 Cumulative Impacts

16.14 The specialist topic chapters (chapters 7-15) have identified major/moderate significant impacts of the Proposed Development. These are summarised in Table 16.3 below.

Table 16.3: Major/Moderate Impacts of The Proposed Development

TOPIC CHAPTER	RECEPTOR	CONSTRUCTION		OPERATION	
		PRIOR TO MITIGATION	RESIDUAL	PRIOR TO MITIGATION (embedded in Landscape/Visual Context)	RESIDUAL (15 years growth in landscape context)
Society, Population, Economy	Provision of housing/housing supply			Moderate Beneficial	Moderate Beneficial
Archaeology & Cultural Heritage	Buried Archaeology	Major Adverse	Moderate adverse		
	Lower Rainham Conservation Area	Moderate Adverse	Moderate Adverse	Moderate Adverse	Moderate Adverse
Landscape Receptors	Lower Rainham and Lower Twydall	Moderate/Major Adverse	-	Moderate Adverse	Moderate Adverse

	<i>Fruit Belt LLCA</i>	<i>(localised)</i>			
	<i>Site Area and Site Features</i>	<i>Major Adverse (localised)</i>	<i>-</i>	<i>Major Adverse (localised)</i>	<i>Moderate Adverse</i>
<i>Visual Receptors</i>	<i>Users of South of Motney Hill</i>	<i>Moderate Adverse</i>	<i>-</i>		
	<i>Users of Horrid Hill</i>	<i>Moderate Adverse</i>	<i>-</i>	<i>Moderate Adverse</i>	
	<i>Users of Lower Bloors Lane</i>	<i>Moderate Adverse</i>			
	<i>Users of Lower Twydall Lane</i>	<i>Moderate Adverse</i>			
	<i>Users of Bridleway GB6a</i>	<i>Moderate Adverse</i>			<i>Moderate Beneficial</i>
	<i>Users of Pump Lane</i>	<i>Major Adverse (localised)</i>		<i>Moderate Adverse</i>	
	<i>Residents of properties in Twydall south of the Railway</i>	<i>Moderate/Major Adverse (localised)</i>		<i>Moderate Adverse</i>	
	<i>Residents of properties on Pump Lane</i>	<i>Major Adverse (Localised)</i>		<i>Moderate/Major Adverse (Localised)</i>	<i>Moderate Adverse</i>
	<i>Residents of properties of Lower Rainham adjacent to and overlooking the site</i>	<i>Moderate Adverse</i>			
<i>Ecology & Conservation</i>	<i>RAMSAR - from recreational pressure</i>			<i>Major Adverse</i>	<i>Negligible</i>
<i>Agricultural Land</i>	<i>BMV land</i>	<i>Major Adverse</i>	<i>Major Adverse</i>		
	<i>Horticultural Business</i>	<i>Major Adverse</i>	<i>Moderate Adverse</i>		

16.15 *Potential inter-related effects arise between:*

- (i) *Agricultural land, landscape and heritage during construction - in the context of the loss of the existing horticultural landuse which in turn affects the existing very localised landscape character of the Site and the setting of Lower Rainham Conservation Area. These cumulative effects are assessed as being of minor adverse significance.*
- (ii) *Landscape and heritage operational and residual - in the context of the very localised landscape character of the Site and the setting of Lower Rainham Conservation Area. These cumulative effects are again assessed as being of minor adverse significance.*

Type 2 Cumulative Impacts

- 16.16 *Table 16.1 identifies the committed developments already incorporated into the ES cumulative assessment considerations. Table 16.3 identifies the major/moderate significant impacts of the Proposed Development on identified receptors. The potential for the other planned or committed developments within the study area to affect those sensitive receptors has been considered.*
- 16.17 *There are not considered to be any significant cumulative construction or residual effects. This is principally because the timing of the construction of all of the sites is unlikely to coincide given that they all have planning permission or have been built out, with exception of the Proposed Development. In any event, it would be common practice for all development sites to operate under a Construction Environmental Management Plan.*
- 16.18 *Cumulative operational effects are considered to occur as follows -*
- (i) *Recreational pressure on the RAMSAR sites,*
 - (ii) *Squeezing of or loss of biodiversity resource,*
 - (iii) *Pressure on health/community/educational facilities, and*
 - (iv) *Additional provision of housing /maintaining a supply of housing.*
- 16.19 *The following cumulative operational residual effects are considered to occur -*
- (i) *Provision of housing/housing supply across the District would increase as a result of the development of the identified sites - this is a cumulative effect of moderate positive significance.*
- 16.20 *In respect of the above conclusions, it is assumed that any mitigation proposed by the developers of these committed sites is fully executed and is successful - for example, in respect of recreational impacts on the RAMSAR site and the biodiversity resource in general, there would be overarching commitments to maintaining and enhancing biodiversity, as well as financial compensation through SAMMS or onsite recreational improvements that would be applicable to each site.*

SUMMARY

- 16.21 *This CEA has examined the impacts of the scheme in combination and /or with other identified developments. Sensitive receptors and impacts identified through the EIA process for the Proposed Development have been considered and the nature and significance of any potential cumulative impacts likely to arise on these receptors have been examined and found to be of limited occurrence in respect of both Type 1 (both minor adverse significance) and Type 2 (moderate positive significance).*

17 OVERVIEW OF EFFECTS

17.1 In the ES May 2019, this Overview chapter was labelled as Chapter 16. In this SES August 2020, original chapter 16 becomes **chapter 17** and is amended as follows -

paragraph **16.1** of this chapter of the ES May 2019/SES March 2020 is **deleted, replaced** by, and **renumbered** as -

(17.1) An overview of construction and operational effects is set out in Table 17.1 below.

Table 17.1: Summary of Effects

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
CONSTRUCTION					
Agricultural Land	Loss of agricultural land	Major Adverse (significant)	N/A	Significant	Major adverse (significant)
	Effect on Soil Resource	Moderate adverse	Site Waste Management Plan; a Soil Management Plan or similar	Slight	Slight adverse
	Impact on Agricultural Business	Major/Moderate adverse (significant)	Consolidation of business plan		Moderate adverse
Economy, Population and Society	Demographics: population count and demographic structure	Nil	N/A	N/A	Nil
	Economy and Employment	Minor Beneficial	N/A	N/A	Minor Beneficial
	Wealth and Deprivation	Negligible	N/A	N/A	Negligible
	Housing (house prices, tenure, composition)	Nil	N/A	N/A	Nil
	Education and Training	Negligible	N/A	N/A	Negligible
	Health, Community and Leisure	Nil	N/A	N/A	Nil
	Shopping	Minor Beneficial	N/A	N/A	Minor Beneficial
Water Resources	Fluvial Flood Risk	Negligible (not significant)		N/A	N/A

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
	Water Quality - surface water	Slight adverse (not significant)	CEMP (embedded)	N/A	N/A
	Ground Water	Negligible (not significant)	CEMP (embedded)	N/A	N/A
	Foul Drainage	Negligible (not significant)	CEMP (embedded)	N/A	N/A
	Water Supply	Negligible (not significant)	CEMP and NMP (embedded)	N/A	N/A
Ground Conditions and Contamination	Human Health (Construction Workers)	Negligible	Standard operational health & safety. Embedded mitigation assumed site remediated if necessary, prior to construction	N/A	Negligible
	Controlled Waters/ground water	Negligible	As above.	N/A	Negligible
	Ecological systems	Negligible. Slight adverse - RAMSAR	As above	N/A	Negligible
	Ground Stability Landslide	Slight adverse	As above	N/A	Negligible
Transport	Community Severance	Negligible	Construction Traffic Management Plan/CEMP	N/A	Negligible
	Driver and Pedestrian Delay	Negligible	Construction Traffic Management Plan/CEMP	N/A	Negligible
	Accidents and Safety	Negligible	Construction Traffic Management Plan/CEMP	N/A	Negligible
	Fear and Intimidation	Negligible	Construction Traffic Management Plan/CEMP	N/A	Negligible
Ecology and Conservation	Medway Estuary and Marshes SPA/SSSI/Ramsar -Contaminated run-off -Dust -Air quality -Water abstraction	Negligible	CEMP and refer to paras 15.115-117 of ES		Negligible

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE	
	Non-statutory sites - LNR, LWS -Dust -Contaminated run-off -Noise	Minor adverse	CEMP and refer to para 15.115-117 of ES		Negligible	
	Commercial orchard -Loss of habitat, but it is of little ecological value	Negligible	Replanting smaller area of orchard of quality better habitat	Permanent net loss of this habitat	Negligible	
	Hedgerows/scattered trees -Loss of habitat -Damage to retained habitat -Dust	Negligible	Majority of hedgerows retained, for losses existing gaps or least sensitive location chosen, retained habitats protected, new hedge planting and sensitive management implemented. CEMP will prevent dust impacts.		Negligible	
	Semi-improved grassland -Loss of habitat -Damage to retained habitat	Minor adverse	Replacement grassland with species rich mix	Permanent loss of this habitat	Minor adverse	
	Foraging and commuting bats	Minor adverse	Refer to ES paras 15.101-104		Negligible	
	Reptiles	Minor adverse	Refer to ES paras 15.115-118		Negligible	
	Breeding Birds	Minor adverse	Refer to ES Technical Appendix 15.4		Negligible	
	Badgers	Minor adverse	Refer to ES Technical Appendix 15.3		Negligible	
	Landscape	<i>Lower Rainham/Lower Twydall Fruit Belt LCA</i>	<i>Moderate/Major Adverse</i>			
		<i>(Lower Rainham farmland LCA)</i>	<i>Minor adverse</i>			
<i>Medway Shoreline & Marshes, Riverside Country Park LLCA</i>		<i>Minor adverse</i>				
<i>Site Features</i>		<i>Major adverse (localised)</i>				

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
	<i>Users of Northern Shore</i>	<i>Minor adverse</i>			
	<i>Users south Motney Hill</i>	<i>Moderate adverse</i>			
	<i>Users north of Lower Rainham</i>	<i>Minor adverse</i>			
	<i>Users of Lower Rainham Road</i>	<i>Moderate /Minor adverse</i>			
	<i>Users Horrid Hill</i>	<i>Moderate adverse</i>			
	<i>Users Lower Bloor Lane</i>	<i>Moderate adverse</i>			
	<i>Users Lower Twydall Lane</i>	<i>Moderate adverse</i>			
	<i>Users of Bridleway</i>	<i>Moderate Adverse</i>			
	<i>Users of Pump Lane</i>	<i>Major Adverse (localised)</i>			
	<i>Users of trains passing Site</i>	<i>Minor/ Moderate adverse</i>			
	<i>Residents of Twydall south of railway</i>	<i>Moderate/major adverse (localised)</i>			
	<i>Residents on Pump Lane</i>	<i>Major adverse (localised)</i>			
	<i>Residents on Lower Bloor Lane</i>	<i>Minor/ Moderate adverse</i>			
	<i>Residents Lower Rainham</i>	<i>Moderate adverse</i>			
	<i>Residents Lower Twydall</i>	<i>Minor adverse</i>			

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
Air Quality	From dust soiling	Major (substantial) (high according to IAQM guidance)	Refer to chapter 12 para 12.166 of ES		Negligible
	Human Health	Slight (low according to IAQM guidance)			Negligible
Archaeology and Heritage	Physical impact to the potential buried Site archaeology	Major adverse (significant)	Preservation by record (strip, map and sample)	The loss of the asset would be offset by knowledge gained	Moderate adverse
	Setting on designated assets - listed buildings	Minor adverse	CEMP, embedded mitigation (retention of existing planting)	As assessed	Minor adverse
	Setting of designated assets - conservation areas	Moderate (Lower Rainham)	As above	As above	Moderate (Lower Rainham)
		Minor adverse (Lower Twydall)			Minor adverse (Lower Twydall)
OPERATION					
Society, Population and Society	Demographics: population count and demographic structure	Minor beneficial	N/A	N/A	Minor beneficial
	Economy and Employment	Minor Beneficial	N/A	N/A	Minor Beneficial
	Wealth and Deprivation	Nil	N/A	N/A	Nil
	Housing (house prices, tenure, composition)	Moderate Beneficial	N/A	N/A	Moderate Beneficial
	Education and Training	Negligible	Onsite primary, secondary financial contribution	N/A	Negligible

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
	Health/ <i>Community</i> Facilities	<i>Minor</i> adverse	<i>Financial contribution</i>	N/A	<i>Negligible</i>
	Shopping Facilities/ <i>town centre health</i>	<i>Minor</i> Beneficial	N/A	N/A	<i>Minor</i> Beneficial
Water Resources	Fluvial Flood Risk	Negligible (not significant)	N/A	N/A	N/A
	Surface water	Negligible (not significant)	CEMP	N/A	N/A
	Waste water drainage /Foul drainage	Negligible (not significant)	N/A	N/A	N/A
	Water Supply	Negligible (not significant)	N/A	N/A	N/A
	Groundwater	Negligible (not significant)	N/A	N/A	N/A
Ground Conditions	Human Health - site users	Slight adverse	Embedded through decontamination if necessary prior to construction.	N/A	Negligible
	Ground water - contamination	Negligible	As above	N/A	Negligible
	Ecological systems	Slight adverse	As above	N/A	Negligible
	Damage to built environment - contamination	Negligible	As Above	N/A	Negligible
	Site Users - land stability	Moderate adverse	As above	N/A	Slight adverse
Transportation	Community Severance	Negligible	Framework Travel Plan as standard	N/A	Negligible
	Driver and Pedestrian Delay	Negligible	Framework Travel Plan as standard	N/A	Negligible
	Accidents and Safety	Negligible	Framework Travel Plan as standard	N/A	Negligible

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
	Fear and Intimidation	Negligible	Framework Travel Plan as standard	N/A	Negligible
Ecology & Conservation	Statutory Sites - Medway Estuary and Marshes SPA/SSSI/Ramsar -recreational pressures	Major adverse(significant)	SAMMS, on-site recreation and off-site provision		Negligible
	Other statutory sites - -recreational pressure	Minor adverse	Refer to paras 15.116 of ES		Indiscernible
	Orchard (non-commercial, i.e. new planting as part of scheme of higher ecological value)	Minor adverse	Replanting to create betterment of habitat		Minor beneficial
	Hedgerows, scattered trees	Negligible	Refer to ES paras 15.122	Replacement and additional planting	Minor beneficial
	Semi-improved grassland	Negligible	Areas replanted and managed to enhance habitat, with more detail provided in a LEMP.		Minor beneficial
	Newly created Ponds and Suds	Negligible	Creation of new habitat as part of Development. More detail provided in a LEMP.	Overall habitat enhancement post-development.	Minor beneficial
	Foraging and commuting bats	Minor adverse	Refer to ES para 15.119-122. Management implemented to enhance habitat, with more detail provided in a LEMP.	Overall habitat enhancement post-development.	Indiscernible
	Reptiles	Minor adverse	Refer to ES Technical Appendix 15.5. Sensitive management implemented to enhance habitat, with more detail provided in a LEMP.	Overall habitat enhancement post-development.	Indiscernible
	Badgers - net loss of foraging habitat	Minor adverse	Refer to ES Technical Appendix 15.3.		Indiscernible

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
	Breeding Birds - increase in nesting habitat	Minor adverse	Refer to ES Technical Appendix 15.4		Minor beneficial
Landscape	Lower Rainham/Lower Twydall Fruit Belt LCA	Moderate adverse	Range of embedded landscape mitigation measures, including landscape buffers, tree planting and implementation of new areas of community orchards and village green.		Moderate adverse
	(Lower Rainham farmland LCA)	Minor adverse	Embedded landscape mitigation measures.		Minor adverse
	Medway Shoreline & Marshes, Riverside Country Park LLCA	Minor adverse	As above		Minor adverse
	Site Features	Major adverse (Localised)	As above		Moderate adverse
	Users of Northern Shore	Minor adverse	Landscape buffer planting and trees throughout the development		Neutral
	Users south Motney Hill	Moderate /Minor adverse	As above		Minor adverse
	Users north of Lower Rainham	Minor adverse	As above		Neutral
	Users of Lower Rainham Road	Minor adverse	As above		Minor adverse
	Users Horrid Hill	Moderate adverse	As above		Minor adverse

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
	Users Lower Bloor Lane	Minor/Moderate adverse	As above		Minor adverse
	Users Lower Twydall Lane	Minor adverse	As above		Minor adverse
	Users of Bridleway	Minor beneficial	As above		Minor/Moderate Beneficial
	Users of Pump Lane	Moderate adverse	As above		Minor/moderate adverse
	Users of trains passing Site	Minor/moderate adverse	As above		Minor adverse
	Residents of Twydall south of railway	Moderate adverse	As above		Minor/moderate adverse
	Residents on Pump Lane	Moderate/Major adverse (localised)	As above		Moderate adverse
	Residents on Lower Bloor Lane	Minor/moderate adverse	As above		Minor adverse
	Residents Lower Rainham	Minor/moderate adverse	As above		Minor adverse
	Residents Lower Twydall	Minor adverse	As above		Negligible
Air Quality	Existing sensitive receptors	Negligible	Refer to chapter 12 para 12.176 in ES	N/A	Negligible
	On Proposed residential receptors	Negligible	As above	N/A	Negligible
	On Ecological receptors	Unknown	Refer to para 12.176 of ES and the separate IHRA (albeit not specifically required in		Negligible

TOPIC	IMPACT	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT	SIGNIFICANCE
			respect of international/European designated sites)		
Archaeology and Heritage	Indirect impact on setting of Listed buildings and conservation areas	<i>Minor for the listed buildings.</i>	<i>Considerable strengthening and additional</i> boundary planting and on-site planting.	Indirect impact on setting listed buildings and conservation areas reducing over time as planting matures	<i>Minor for listed buildings.</i>
		<i>Moderate to Lower Rainham CA</i>			<i>Moderate to Lower Rainham</i>
		<i>Minor adverse Lower Twydall CA.</i>			<i>Minor adverse Lower Twydall CA</i>

17.2 Paragraphs 16.2 to 16.4 in respect of cumulative effects in this chapter of the ES May 2019/SES March 2020 are **deleted** and **replaced** with the following paragraphs -

CUMULATIVE EFFECTS

(17.2) Chapter 16 of this SES August 2020 has assessed the potential cumulative effects arising from the Proposed Development, including recommendations for mitigation where applicable.

(17.3) The CEA has determined that no additional mitigation measures are necessary to address cumulative effects.

(17.4) There are no predicted interactions between potential significant environmental effects that have not already been taken account of within the topic chapters in this ES.

CONCLUSIONS

17.3 Paragraphs 16.5 and 16.6 of the ES May 2019/SES March 2020 are **renumbered** as paragraphs 17.5 and 17.6.

ABBREVIATIONS

There are no changes to the Abbreviations section of the original ES May 2019/SES March 2020.

REFERENCES

The following changes/additions are made to the references of the original ES May 2019/SES March 2020 -

Chapter 1 has the following reference added to it -

- *1.3 Supplementary Environmental Statement, March 2020 - Rapleys LLP*

Chapter 11 has all references **deleted** except -

- *11.1 IEMAQ/Landscape Institute - Guidance for Landscape and Visual Assessment (GLVIA3) 2013*

Chapter 16

- *16.1 (Hyder 1999, Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions)*
- *16.2 DMRB Volume 11, Section 2, Part 5*

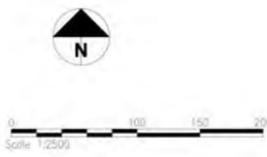
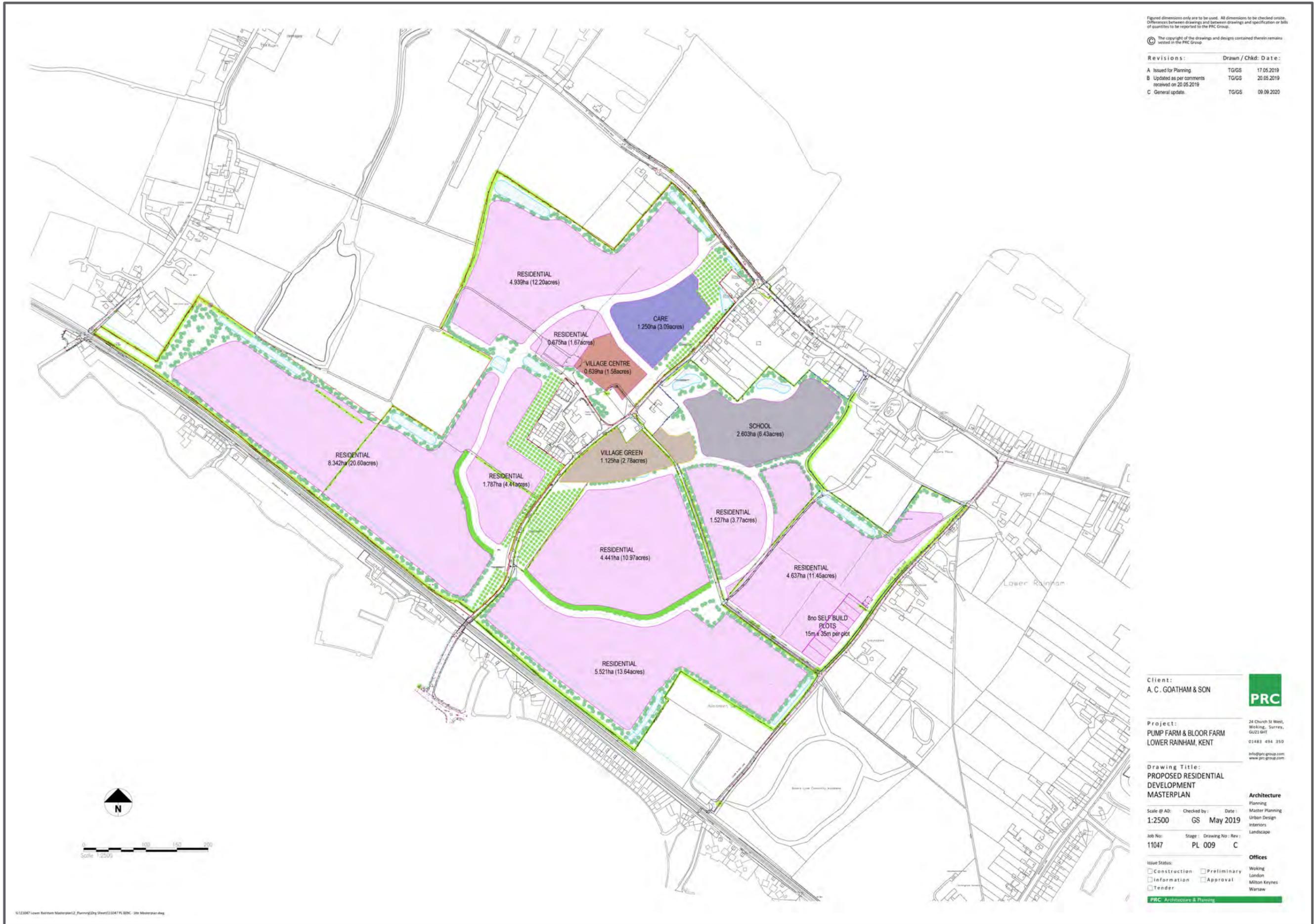
Figure 1.2a: Illustrative Masterplan

FIGURE 1.2a - Illustrative Site Masterplan

Figured dimensions only are to be used. All dimensions to be checked onsite. Differences between drawings and between drawings and specification or bills of quantities to be reported to the PRC Group.

© The copyright of the drawings and designs contained therein remains vested in the PRC Group.

Revisions:	Drawn / Chkd:	Date:
A Issued for Planning	TG/GS	17.05.2019
B Updated as per comments received on 20.05.2019	TG/GS	20.05.2019
C General update.	TG/GS	09.09.2020



Client:
A. C. GOATHAM & SON



Project:
PUMP FARM & BLOOR FARM
LOWER RAINHAM, KENT

24 Church St West,
Woking, Surrey,
GU21 0HT
01483 494 350
info@prc-group.com
www.prc-group.com

Drawing Title:
PROPOSED RESIDENTIAL
DEVELOPMENT
MASTERPLAN

Architecture
Planning
Master Planning
Urban Design
Interiors
Landscape

Scale @ A0: 1:2500
Checked by: GS
Date: May 2019

Job No: 11047
Stage: PL 009
Drawing No: Rev: C

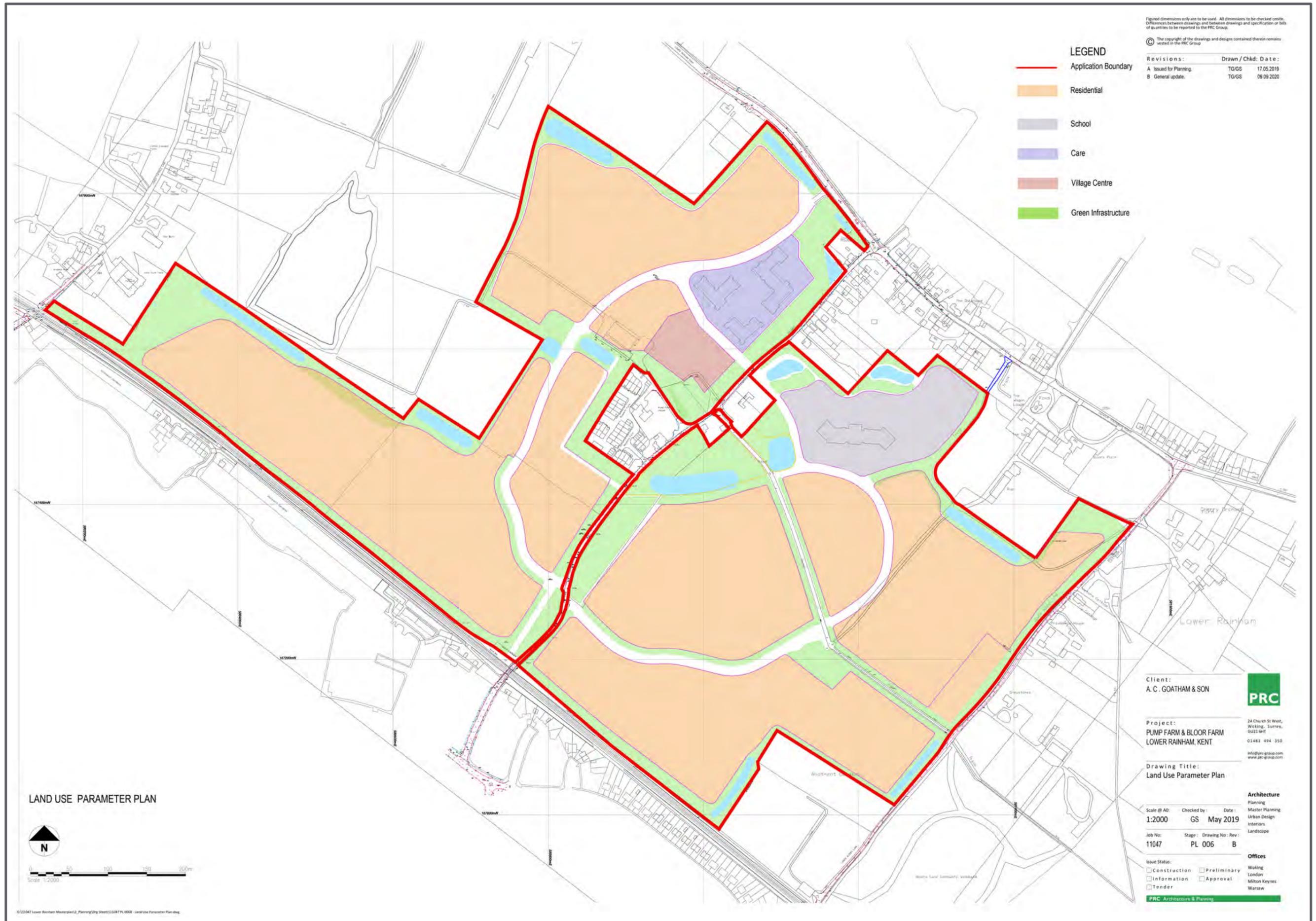
Issue Status:
 Construction
 Information
 Tender
 Preliminary
 Approval

Offices
Woking
London
Milton Keynes
Warsaw

PRC Architecture & Planning

Figure 2.1 **a**: Land Use Parameter Plan

FIGURE 2.1a - Land Use Parameter Plan



Figured dimensions only are to be used. All dimensions to be checked on site. Differences between drawings and between drawings and specification or bills of quantities to be reported to the PRC Group.

© The copyright of the drawings and designs contained therein remains vested in the PRC Group.

Revisions:	Drawn / Chkd:	Date:
A Issued for Planning	TG/GS	17.05.2019
B General update	TG/GS	09.09.2020

- LEGEND**
- Application Boundary
 - Residential
 - School
 - Care
 - Village Centre
 - Green Infrastructure

LAND USE PARAMETER PLAN

Scale 1:2000

0 50 100 150 200m

Client:
A. C. GOATHAM & SON

Project:
PUMP FARM & BLOOR FARM
LOWER RAINHAM, KENT

Drawing Title:
Land Use Parameter Plan

Scale @ A0: 1:2000
Checked by: GS
Date: May 2019

Job No: 11047
Stage: PL 006
Rev: B

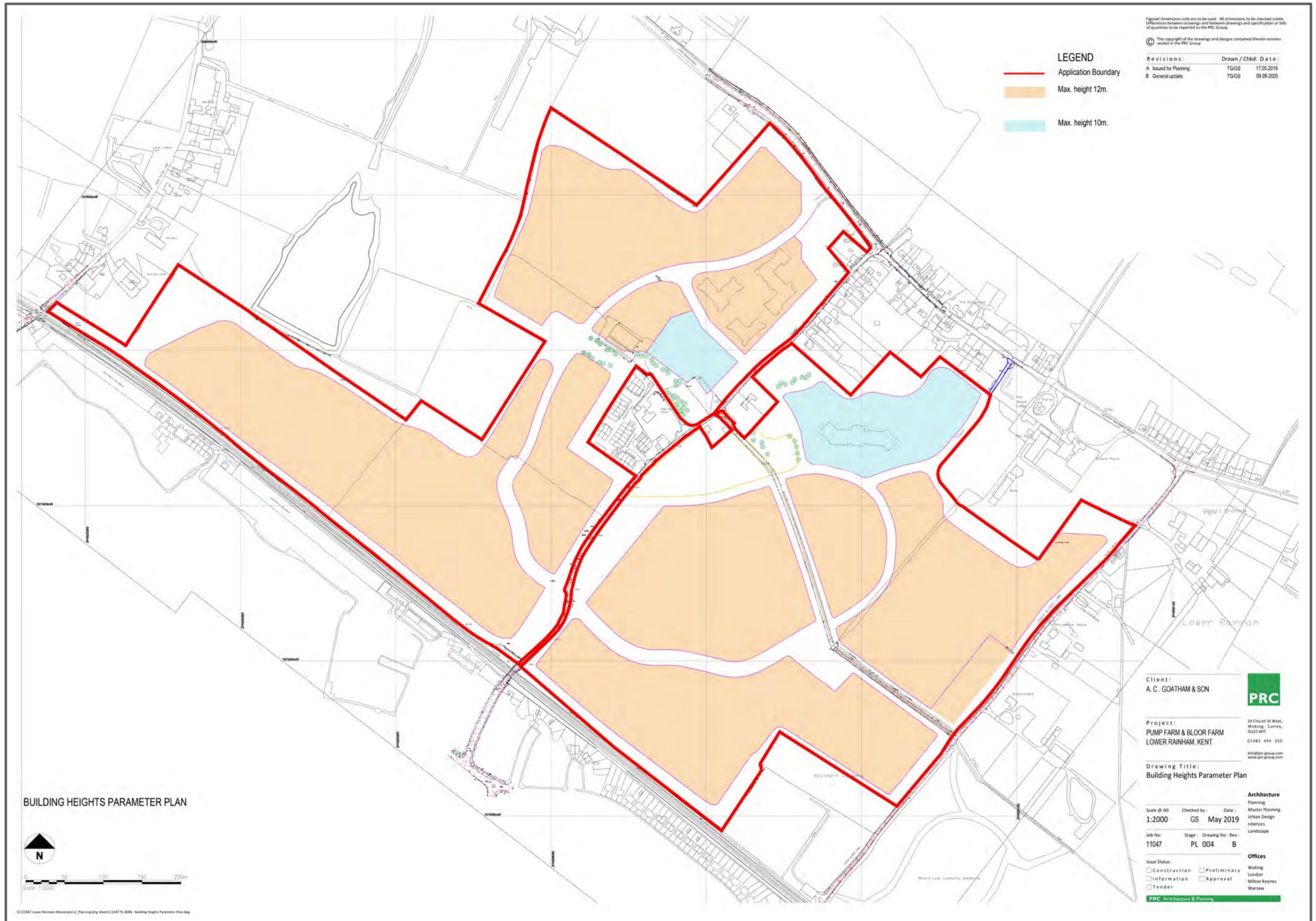
Issue Status:
 Construction
 Information
 Tender
 Preliminary
 Approval

Offices:
 Woking
 London
 Milton Keynes
 Warsaw

PRC Architects & Planning

Figure 2.2a: Building Heights Parameter Plan

FIGURE 2.2a - Building Heights Parameter Plan



Figured dimensions only are to be used. All dimensions to be checked on site. Differences between drawings and between drawings and specification or bills of quantities to be reported to the PRC Group.

© The copyright of the drawings and designs contained therein remains vested in the PRC Group

LEGEND

- Application Boundary
- Max. height 12m.
- Max. height 10m.

Revisions:	Drawn / Chkd:	Date:
A Issued for Planning	TG/GS	17.05.2019
B General update	TG/GS	09.09.2020

BUILDING HEIGHTS PARAMETER PLAN



Scale 1:2000

©131047 Lower Rainham Masterplan2_Planning(Dwg Sheet)11047 PL 004 - Building Heights Parameter Plan.dwg

Client:
A. C. GOATHAM & SON



Project:
PUMP FARM & BLOOR FARM
LOWER RAINHAM, KENT

24 Church St West,
Woking, Surrey,
GU21 0HT
01483 494 350
info@prc-group.com
www.prc-group.com

Drawing Title:
Building Heights Parameter Plan

Scale @ A0: 1:2000
Checked by: GS
Date: May 2019

Architecture
Planning
Master Planning
Urban Design
Interiors
Landscape

Job No: 11047
Stage: PL 004
Drawing No: Rev: B

Issue Status:
 Construction
 Information
 Tender
 Preliminary
 Approval

Offices
Woking
London
Milton Keynes
Warsaw

PRC Architects & Planning

Figure 2.3a: Movement Parameter Plan

FIGURE 2.3a - Movement Parameter Plan

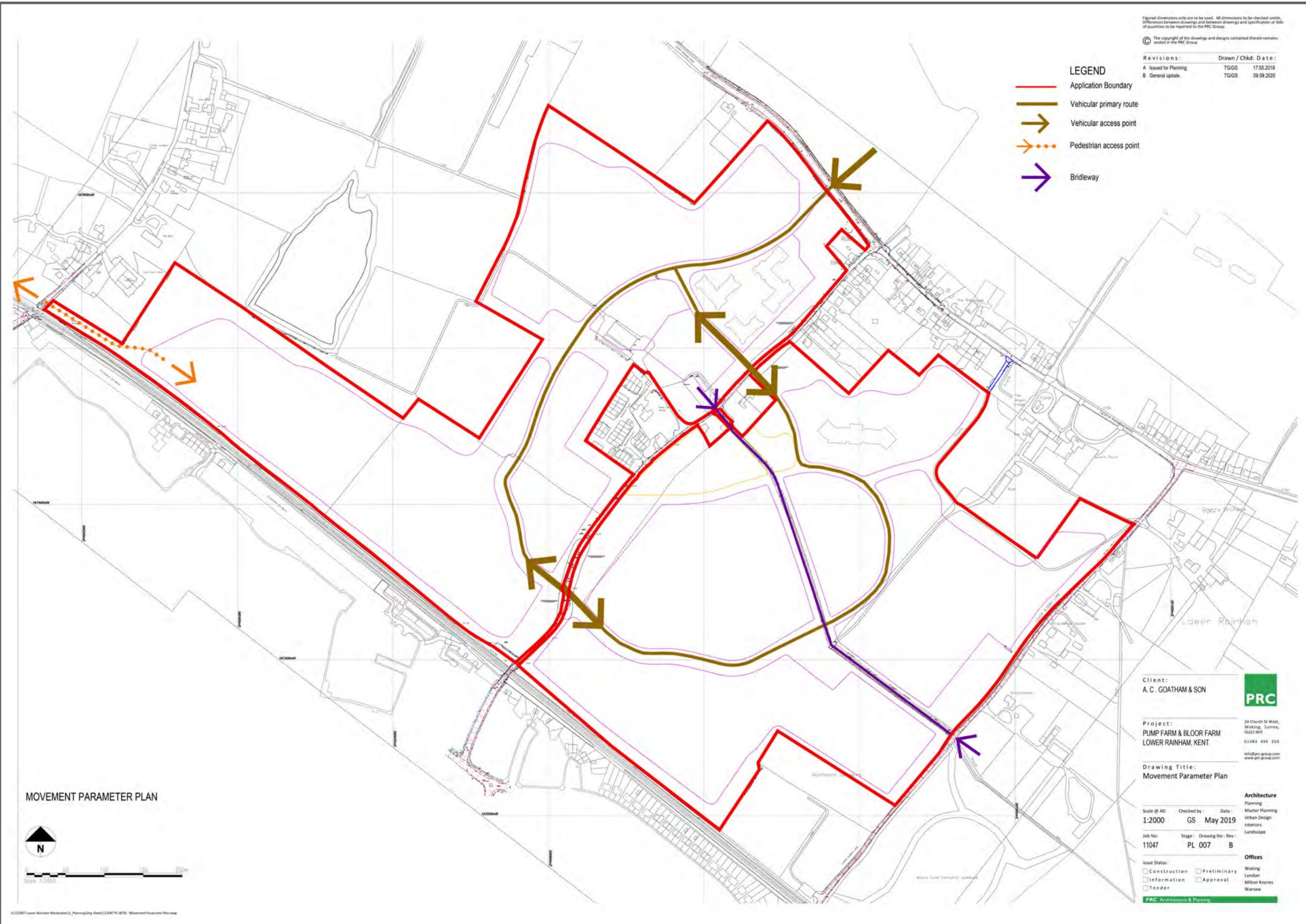
Figured dimensions only are to be used. All dimensions to be checked on site. Differences between drawings and between drawings and specification or bills of quantities to be reported to the PRC Group.

The copyright of the drawings and designs contained therein remains vested in the PRC Group.

Revisions:	Drawn / Chkd:	Date:
A Issued for Planning	TG/GS	17.05.2019
B General update	TG/GS	09.09.2020

LEGEND

-  Application Boundary
-  Vehicular primary route
-  Vehicular access point
-  Pedestrian access point
-  Bridleway



MOVEMENT PARAMETER PLAN



Client:
A. C. GOATHAM & SON

Project:
PUMP FARM & BLOOR FARM
LOWER RAINHAM, KENT

Drawing Title:
Movement Parameter Plan

Scale @ A0: 1:2000
Checked by: GS
Date: May 2019

Job No: 11047
Stage: PL 007
Rev: B

Issue Status:
 Construction
 Information
 Tender
 Preliminary
 Approval

Offices:
 Woking
 London
 Milton Keynes
 Warsaw

PRC Architects & Planning

PRC
 24 Church St West,
 Woking, Surrey,
 GU21 0HT
 01483 494 350
 info@prc-group.com
 www.prc-group.com

Architecture
 Planning
 Master Planning
 Urban Design
 Interiors
 Landscape

Figure 2.4a: Green/Blue Infrastructure Parameter Plan

FIGURE 2.4a - Green/Blue Infrastructure Parameter Plan

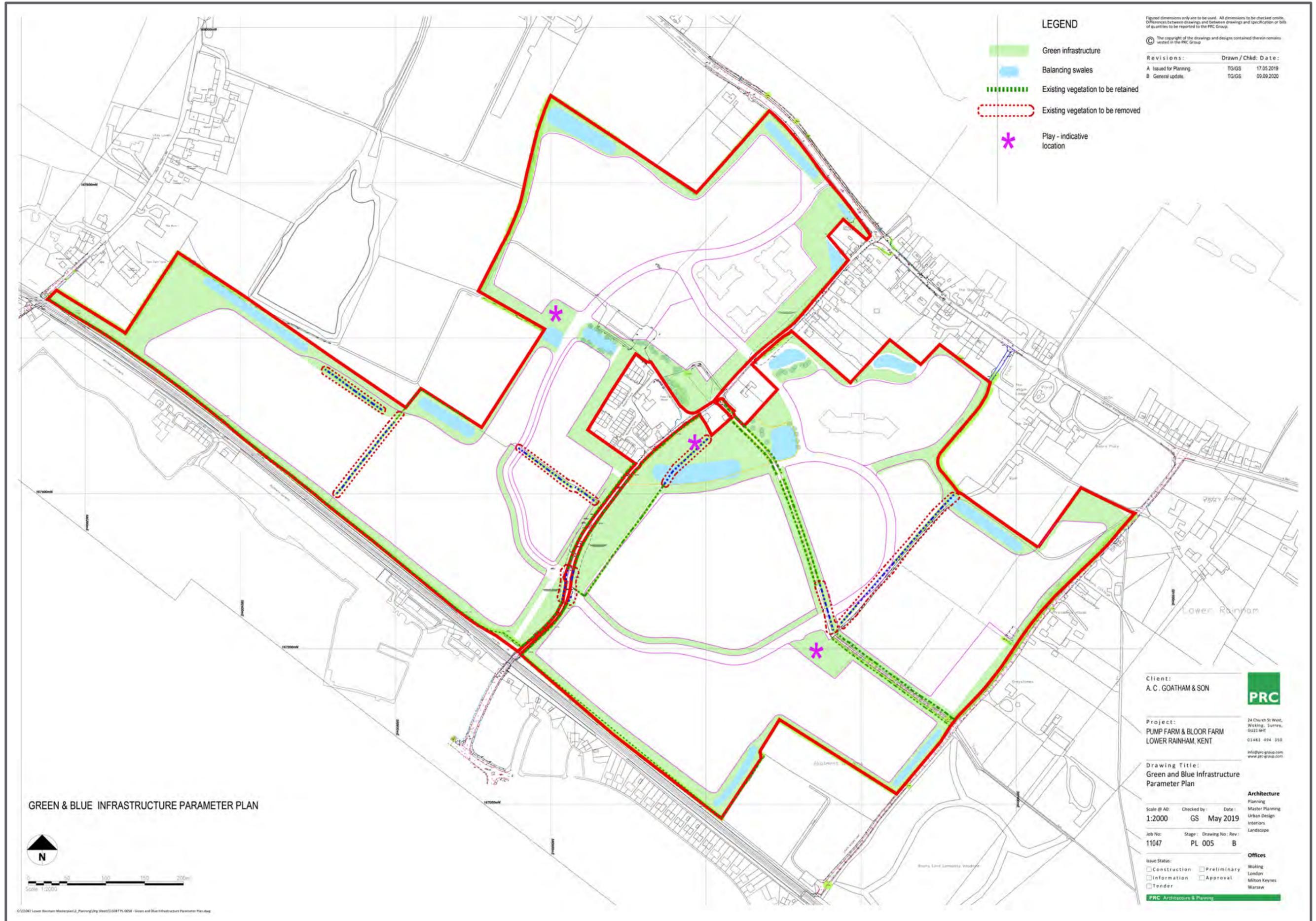
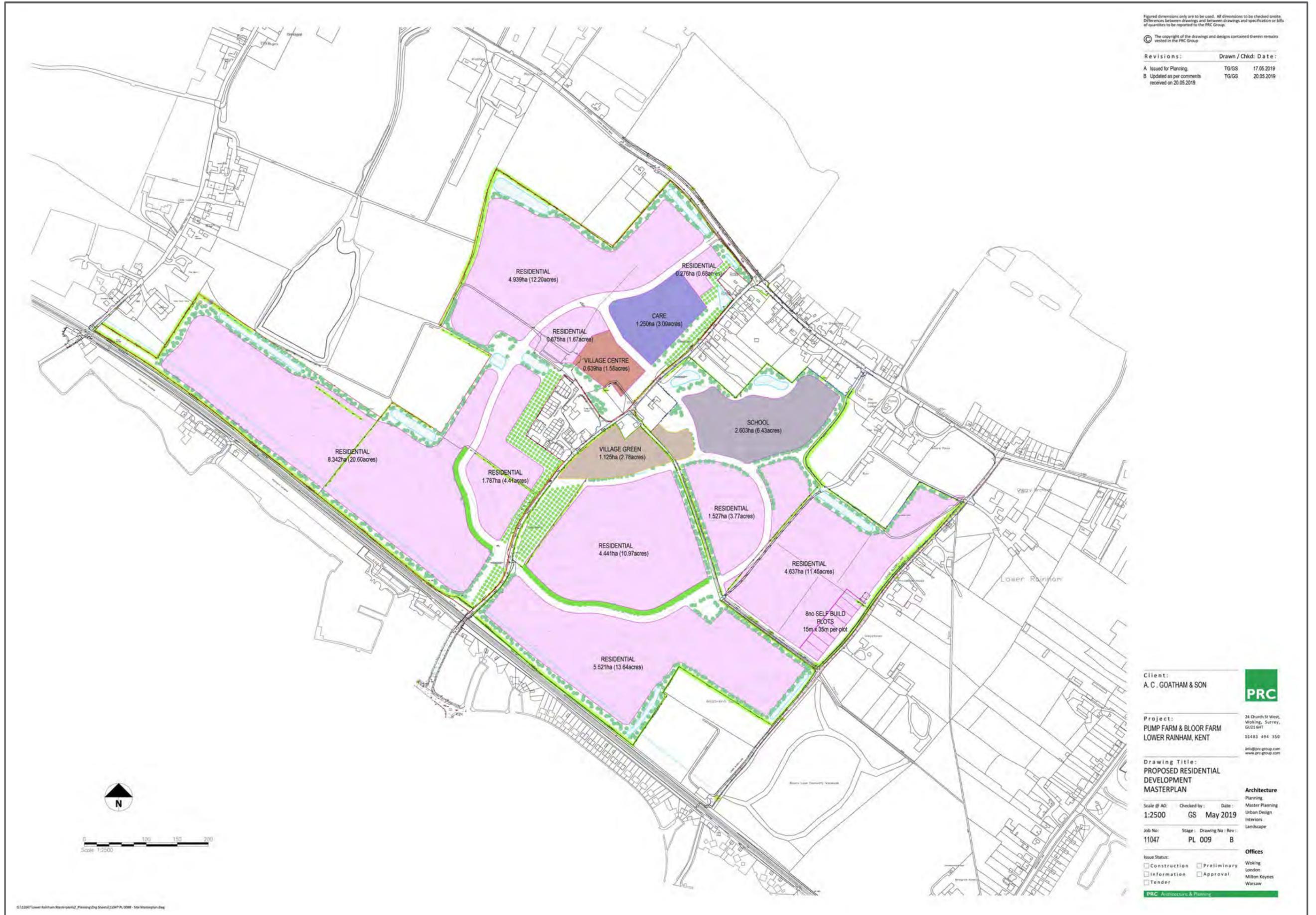


Figure 5.1: *Illustrative Masterplan (February 2019)*

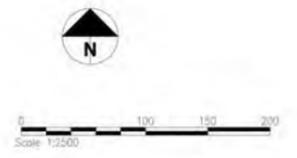
FIGURE 5.1 - Illustrative Site Masterplan



Figured dimensions only are to be used. All dimensions to be checked onsite. Differences between drawings and between drawings and specification or bills of quantities to be reported to the PRC Group.

The copyright of the drawings and designs contained therein remains vested in the PRC Group.

Revisions:	Drawn / Chkd:	Date:
A Issued for Planning.	TG/GS	17.05.2019
B Updated as per comments received on 20.05.2019.	TG/GS	20.05.2019



© 11047 Lower Rainham Masterplan2_Planning/Drg Sheets/11047 PL 009 - Site Masterplan.dwg