

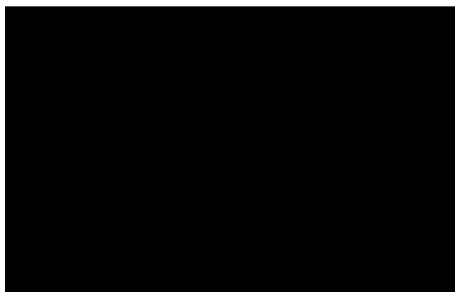
# Ford Airfield

## Environmental Statement

### Non-Technical Summary

Prepared on behalf of Redrow Homes Southern Counties, and  
Wates Developments Ltd

|              |             |             |               |
|--------------|-------------|-------------|---------------|
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## 1.0 INTRODUCTION

- 1.1 Redrow Homes Southern Counties and Wates Developments Ltd (the 'Applicants') are applying for outline planning permission for a proposed residential led, mixed-use development at Ford Airfield (the 'Site'). Located within the administrative area of Arun District Council (ADC), the Site extends to 86.63 hectares (ha) and is shown on Figure 1 at the end of this report.
- 1.2 An Environmental Statement (ES) has been prepared to support the planning application. An ES is the report of an Environmental Impact Assessment (EIA) carried out as required by national law known as the "EIA Regulations". This document is the non-technical summary of the ES and summarises the content and conclusions of the ES.
- 1.3 Paper copies of the main ES (chapters and figures) and the technical appendices can be purchased at a cost of £150 and £250 respectively. Paper copies of the non-technical summary can be obtained for £20. Copies of the full ES can be obtained on CD for £20. All documents are available from:

Environmental Planning Team Secretary  
Barton Willmore LLP  
7 Soho Square  
London, W1D 3QB

Tel: [REDACTED]

Email: [REDACTED]

- 1.4 Copies of this ES are also available for viewing online and by the public during normal office hours in the planning department of ADC at the address below:

Strategic Development Planning Team  
Arun Civic Centre  
Maltravers Road  
Littlehampton  
West Sussex, BN17 5LF

Tel: [REDACTED]

Email: [REDACTED]

Online: [REDACTED]

## 2.0 EIA METHODOLOGY

- 2.1 EIA is a procedure used to assess the likely significant effects of a proposed development on the environment. The results are written in to an ES which is submitted with the planning application. This ES has been prepared in accordance with national law (the *Town & Country Planning (Environmental Impact Assessment) Regulations 2017*<sup>1</sup>, as amended (the “EIA Regulations”)), which implement European law (European Council Directive No. 97/11/EC as amended by Council Directive No. 2014/52/EU<sup>2</sup>).
- 2.2 The ES provides the local planning authority (in this case ADC) with sufficient information about the potential significant environmental effects of the Development (which may arise during the construction and operational phases of the Development) before a decision is made about the planning application. The ES predicts the significance of each environmental effect by determining two factors:
- The sensitivity, importance or value of the environment (such as people or wildlife); and
  - The actual change taking place to the environment (i.e. the size or severity of change taking place).
- 2.3 Most environmental disciplines classify effects as negligible, adverse or beneficial, where effects are minor, moderate or major. Some disciplines use bespoke criteria based on published guidance. Each chapter of the ES states which effects are considered significant. The significance assessment within the ES takes into account the current environmental conditions known as the baseline conditions.
- 2.4 Any adverse environmental effects have been considered for mitigation at the design stage and, where practicable, specific measures have been put forward. Where the effectiveness of the mitigation proposed has been considered uncertain, or where it depends upon assumptions of operating procedures, data and/or professional judgement has been introduced to support these assumptions. The likely significant effects on the environment, assuming the successful implementation of mitigation measures proposed, have been identified within each chapter.

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<sup>1</sup> SI.571 as amended by SI. 695,2018.

<sup>2</sup> Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014

### EIA Scope

2.5 An ES should focus on the likely significant effects of the development on the environment during the construction and operational phases. The scope of the EIA<sup>3</sup> was agreed formally with ADC. The disciplines scoped into the ES comprise:

- Population and Human Health;
- Landscape and Visual Effects;
- Archaeology and Built Heritage;
- Biodiversity;
- Transport & Access;
- Air Quality;
- Noise and Vibration;
- Agricultural Land;
- Water Resources and Flood Risk; and
- Ground Conditions.

2.6 Other environmental issues are covered in standalone documents submitted with the planning application.

### Stakeholder Engagement and Public Consultation

2.7 The planning application is the culmination of an extensive design process which has involved consultation with ADC (various departments), Ford, Yapton and Climping Parish Councils, Ford Neighbourhood Plan Steering Group, statutory consultees, the local community including local businesses (including Grundon waste management / recycling facility, Southern Waste Water Treatment Works (WWTW) and Viridor recycling facility) and other stakeholders. Consultation has also been undertaken with the following statutory consultees:

- Natural England;
- Environment Agency (EA);
- Historic England; and
- West Sussex County Council (WSCC) (various departments).

### Cumulative Effects

2.8 EIA must assess any potentially significant effects of the Development that may arise cumulatively (when combined with) other major development with planning permission, which

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<sup>3</sup> An exercise undertaken to determine the topics to be addressed within the Environmental Statement.

is under construction in the local area or which are pending or at appeal. Details of the developments considered in the ES are included in Table 1 and shown on Figure 2. This list has been agreed with ADC.

**Table 1: Developments considered in cumulative assessment**

| Scheme Name & Application Number                                                     | Scheme Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Planning Status                        | Approximate Distance from the Site                   |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------|
| <b>Yapton</b>                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |                                                      |
| Land to the south of Ford Lane East of North End Road, Yapton<br>Ref. Y/80/16/OUT    | Outline planning application with some matters reserved for 4.5 hectares of residential development comprising 3.4 hectares of land for up to 100 dwellings (up to 30 (30%) affordable housing) together with 1.1 hectares of land set aside for public open space and strategic landscaping and 2.2 hectares of public open space and green corridors with vehicular access from Ford Lane and pedestrian/cycle access only from North End Road. This application is a Departure from the Development Plan. | (At appeal – APP/C381 0/V/16 /3158261) | Approximately 260m to the west of the Site boundary. |
| Land off Burndell Road, Yapton<br>Ref. Y/19/16/OUT                                   | Outline application for the development of a maximum of 108 No. residential dwellings, vehicular access from Burndell Road, public open space, ancillary works & associated infrastructure.                                                                                                                                                                                                                                                                                                                  | (At appeal – APP/C381 0/V/16 /3158261) | Approximately 470m to the west of the Site boundary. |
| Bonhams Field Main Road Yapton<br>Ref. Y/1/17/OUT                                    | Outline Application with some matters reserved for the erection of 56 No. dwellings with associated open space and creation of new access. This application is a Departure from the Development plan & affects the character & appearance of the Yapton (Main Road) Conservation Area.                                                                                                                                                                                                                       | Pending Decision                       | Approximately 1km to the west of the Site boundary.  |
| Land at Stakers Farm North End Road Yapton<br>Ref. Y/44/17/OUT                       | Outline Planning Application for 70 No. residential dwellings including 30% affordable, public open space & associated landscaping. All matters to be reserved apart from Access. This application is a Departure from the Development plan. This application affects the character & appearance of Main Road/Church Road Yapton Conservation Area & the setting of Listed Buildings.                                                                                                                        | Approved                               | Approximately 1km to the west of the Site boundary.  |
| Clays Farm North End Road Yapton<br>Ref. Y/62/18/OUT                                 | Outline application with some matters reserved (appearance, landscaping, layout & scale) for 33 No. residential dwellings, access, landscaping & associated works. This application is a Departure from the Development Plan.                                                                                                                                                                                                                                                                                | Pending Decision                       | Approximately 1km to the west of the Site boundary.  |
| Land North of Yapton C of E Primary School North End Road Yapton<br>Ref. Y/88/18/OUT | Outline application with some matters reserved for the erection of 38 No. dwellings. This application affects a Public Right of Way.                                                                                                                                                                                                                                                                                                                                                                         | Pending Decision                       | Approximately 1km to the west of the Site boundary.  |

| Scheme Name & Application Number                                                   | Scheme Details                                                                                                                                                                                                                                                                                                                                                                                                            | Planning Status                       | Approximate Distance from the Site                    |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------------------|
| <b>Yapton</b>                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                                       |
| Land at Street Buildings North End Road Yapton BN18 0DT<br><br>Ref. Y/49/17/OUT    | Outline application with some matters reserved for the demolition of all existing structures & redevelopment of the site with up to 45 dwellings (30% affordable (up to 14)) & 0.3 hectares of landscaped open space with vehicular access from Maypole Lane & pedestrian/cycle access only from North End Road. This application is a Departure from the Development Plan & may affect the setting of a listed building. | Pending Decision                      | Approximately 1km to the west of the Site boundary.   |
| Land at Bilsham Road, Yapton<br><br>Ref. Y/91/17/OUT                               | Outline application for the development of up to 250 residential dwellings (Class C3), vehicular access, public open space, ancillary works and associated infrastructure.                                                                                                                                                                                                                                                | Approved                              | Approximately 1.1km to the west of the Site boundary. |
| Land east of Drove Lane, Yapton<br><br>Ref. Y/92/17/OUT                            | Outline application with all matters reserved save access, for up to 300 dwellings, link road, surface drainage, open space and landscaping.                                                                                                                                                                                                                                                                              | Pending Decision                      | Approximately 1.4km to the west of the Site boundary. |
| <b>Ford</b>                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                                       |
| Land to the South of Ford Lane, Ford<br><br>Ref. F/4/18/PL                         | Salt storage building, office building, parking & turning area & open storage areas for highways maintenance depot.                                                                                                                                                                                                                                                                                                       | Approved                              | To northwest of Site boundary                         |
| Arun DC Secondary School Site                                                      | A new 10 form entry secondary school to accord with Policy INF SP2 of the recently adopted ADC Local Plan.                                                                                                                                                                                                                                                                                                                | Application to be submitted in future | Adjacent to northwest of the Site                     |
| Ford Airfield Market Application                                                   | Full planning application for the reconfiguration of Ford Market, including revised market access, new vehicular parking and hardstanding and associated infrastructure, landscape, ancillary and site preparation works.                                                                                                                                                                                                 | Application submitted                 | Adjacent to east of the Site                          |
| Land at Wicks Farm, Ford Lane, Ford<br><br>Ref: F/18/17/WS                         | Proposed installation of a digestate lagoon <sup>4</sup> approved under planning permission WSCC/061/16/F (WSCC/026/16/F as amended).                                                                                                                                                                                                                                                                                     | Approved                              | Approximately 50m northwest of the Site boundary.     |
| Land south of Burndell Road, Yapton<br><br>Ref: F/7/15/OUT                         | Outline application for residential development comprising 45 dwellings.                                                                                                                                                                                                                                                                                                                                                  | Approved                              | Approximately 450 west of the Site boundary.          |
| <b>Climping</b>                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                                       |
| Land At Northwood Farm, Burndell Road, Yapton<br><br>Ref. CM/6/18/PL               | Change of use to develop a concrete batching plant, with associated infrastructure, site offices & parking                                                                                                                                                                                                                                                                                                                | Approved                              | Approximately 20m southwest of the Site boundary.     |
| <b>West Sussex</b>                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                                                       |
| Waste Treatment Facility, Circular Technology Park, Ford<br><br>Ref. WSCC/027/18/F | Proposed new access road                                                                                                                                                                                                                                                                                                                                                                                                  | Pending Decision                      | To east of the Site                                   |

<sup>4</sup> Man-made outdoor earthen basin filled with animal waste that undergoes anaerobic respiration as part of a system designed to manage and treat refuse.

### 3.0 SITE AND DEVELOPMENT DESCRIPTION

#### Site Context

- 3.1 The Site (refer to Figure 1), is located within the administrative boundary of ADC. The village of Ford is located to the north east of the Site, with the villages of Climping and Yapton located to the south and west of the Site. The town of Littlehampton is located approximately 1.5km to the east of the Site while Bognor Regis is located approximately 2km to the south west of the Site.
- 3.2 The north of the Site is bound by Ford Lane. To the immediate north of Ford Lane is a mixture of commercial, industrial and residential uses. The wider area to the north of the Site is in agricultural use. Ford train station is located approximately 2km to the northeast of the Site.
- 3.3 The northeast of the Site is bound by agricultural fields. A Waste Water Treatment Works (WWTW) (operated by Southern Water) is located to the east of the Site with a Waste Management Facility (operated by Grundon) located immediately north of the WWTW. The River Arun is located approximately 500m to the east of the Site.
- 3.4 South of the WWTW are sections of concrete runway associated with Ford Airfield, a decommissioned Royal Navy Fleet Air Arm and Royal Air Force aerodrome which ceased operations in 1980. The runways are used for year-round Sunday markets and Car boot sales (every Thursday, Saturday and Sunday). In order to accommodate the Development, it is necessary to make some amendments to the market and therefore a separate planning application is being submitted for its reconfiguration. The market will continue to operate and will have the same trading and visitor capacity.
- 3.5 To the southeast of the Site is a recycling facility (operated by Viridor) and Rudfield Industrial Estate. The very south of the Site is bound by Horsemere Green Lane, beyond which are residential properties located within Climping. HM Prison Ford is located approximately 200m to the southeast of the Site.
- 3.6 The west of the Site is bound by Rollaston Park beyond which are residential properties located within Yapton. Ford Industrial Estate is also located adjacent to the western Site boundary and comprises a number of associated commercial and light industrial warehouse buildings. Yapton Road (B2233) borders the Site to the south west, with Ford Rifle Range and agricultural fields beyond. National Cycle Route 2 also runs along Yapton Road.

- 3.7 The Site is not subject to any ecology, heritage or landscape designations. There are a number of listed buildings in the immediate surrounding area, within the villages of Ford, Yapton and Climping. The nearest listed building to the Site is the Grade II listed Atherington House Ford Place Southdown House the Lodge, located approximately 150m to the northeast of the site. The Grade I listed Parish Church of St Andrew is located approximately 350m northeast of the Site and the Grade I Listed Parish Church of St Mary, is located approximately 550m to the northwest of the Site. The nearest Scheduled Monument to the Site is a Medieval earthworks site located east and southeast of St Mary's Church, approximately 700m to the southeast of the Site.
- 3.8 Designations in the wider area include Climping Beach Site of Special Scientific Interest (SSSI)<sup>5</sup>, located approximately 2km to the southeast of the Site and the Solent and Dorset Coast Special Protection Area (SPA)<sup>6</sup>, located approximately 2.3km to the southwest of the Site. The South Downs National Park is located approximately 1.8km to the north of the Site. Upstream of the Site lies the Arun Valley, which consists of three SSSIs in an area of wet meadows on the floodplain of the River Arun. The nearest of these to the Site is Arundel Park SSSI, located approximately 4km north of the Site.
- 3.9 The majority of the Site is located in Flood Zone 1 which means that there is a 'very low risk' of flooding. A very small area (approximately 0.01km<sup>2</sup>) within the northern boundary of the Site is located in Flood Zone 3, which means that there is a 'high risk' of flooding. The Site is not located within a Groundwater Source Protection Zone (SPZ)<sup>7</sup> as defined by the Environment Agency. In addition, the Site is not located within an area protected for air quality or archaeological purposes.

#### Site Description

- 3.10 The Site extends to 86.63ha and predominantly comprises land which was formerly in use as Ford Airfield. Large areas of the Site now comprise agricultural fields, separated by hedgerows and trees. A small area within the north of the Site is occupied by a Highways England compound and a haulage company.
- 3.11 Part of the runways of the former airfield are located within the centre and south of the Site. Within the centre of the Site are also two large warehouse buildings, in use as the Arun Sports Arena and Flying Fortress play centre.

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<sup>5</sup> A statutory conservation designation covering an area of particular interest to science due to the rare species of fauna or flora it contains or important geological or physiological features.

<sup>6</sup> A Special Protection Area (SPA) is a designation under the European Union Directive on the Conservation of Wild Birds. Under the Directive, Member States of the European Union (EU) have a duty to safeguard the habitats of migratory birds and certain particularly threatened birds.

<sup>7</sup> Groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area.

- 3.12 The former perimeter track of the airfield is located on the Site and provides connectivity between the villages of Yapton (to the west of the Site) and Climping (to the south of the Site). Two public footpaths also pass through the northern and southern parts of the Site. The northern footpath provides connection between the villages of Ford (to the northeast of the Site) and Yapton. The southern footpath connects the villages of Climping and Yapton.
- 3.13 The route of the Portsmouth to Arundel canal cuts east–west across the northern part of the Site.

### Description of Development

- 3.14 The description of the Development on the planning application is:

*"Outline planning application (with all matters reserved except for access) for the development of up to 1,500 dwellings, 60-bed care home, up to 9,000 sqm of employment floorspace, local centre of up to 2,350 sqm including up to 900 sqm retail / commercial and 1,450 sqm community / leisure floorspace, land for a two-form entry primary school, public open space, allotments, new sports pitches and associated facilities, drainage, parking and associated access, infrastructure, landscape, ancillary and site preparation works, including demolition of existing buildings and part removal of existing runway hardstanding"*

- 3.15 Figures 3, 4 and 5 show the Land Use and Density, Access and Movement and Green and Blue Infrastructure Parameter Plans for the Development. The Parameter Plans set the maximum extents of a development not subject to a detailed planning application

### Land Use

#### Residential

- 3.16 The Development will provide up to 1,500 residential dwellings, the majority of which (up to 1,475 dwellings) will be distributed across two residential neighbourhoods in the northern and southern portions of the Development (refer to Figure 3). Up to 25 residential dwellings will be located in the proposed local centre (as set out below). Dwellings will be provided in a variety of sizes and tenures and the indicative mix is shown in Table 2 below.

Table 2: Indicative Residential Unit Mix

| Residential Unit Size | Market | Affordable | Percentage of Units |
|-----------------------|--------|------------|---------------------|
| 4 Bed                 | 35%    | 10%        | 28%                 |
| 3 Bed                 | 30%    | 20%        | 27%                 |
| 2 Bed                 | 35%    | 35%        | 35%                 |
| 1 Bed                 | 0%     | 35%        | 10%                 |

| Residential Unit Size | Market      | Affordable  | Percentage of Units |
|-----------------------|-------------|-------------|---------------------|
| <b>Total</b>          | <b>100%</b> | <b>100%</b> | <b>100%</b>         |

#### *Mixed-use*

#### *Local Centre*

- 3.17 The Development will include a new local centre, to be located within the centre of the Development (refer to Figure 3). The local centre will comprise up to 2,350 square metres (sqm) of mixed-use floorspace, and will include a Food Store (up to 600 sqm) and supporting retail use (Up to 300 sqm), as well as a Health Facility (up to 550sqm), a community building (Up to 500 sqm) and a nursery (up to 400sqm). Up to 25 residential dwellings will also be located in the local centre, above the retail/commercial uses.

#### *Care Home*

- 3.18 A 60 bed care home (up to 0.5ha) will be provided as part of the Development, to be located centrally within the northern part of the Site, in close proximity to the local centre (refer to Figure 3).

#### *Employment Use*

- 3.19 The Development will include up to 9,000sqm of employment floorspace, to be located within the east of the Site (refer to Figure 3).

#### *Primary School*

- 3.20 The Development will also include land for a two-form entry Primary School on a site of up to 2.3ha. The Primary School would be located in close proximity to the facilities and services provided in the local centre within the centre of the Site (refer to Figure 3). The primary school will include sufficient space to cater for the nursery (next to or as part of the primary school), if it is not provided separately in the local centre.
- 3.21 As part of the Development, the existing 'Hard Area' Sports Arena / Flying Fortress within the centre of the Site will also be retained (refer to Figure 3).

#### *Building Heights and Massing*

- 3.22 Residential areas of the Development will predominantly be up to 2-2.5 storeys (+9/10.5m above ground level), with a maximum of up to 3 storeys (+12m above ground level) in height.

- 3.23 The mixed-use local centre in the centre of the Site and the employment use in the east of the Site will be up to a maximum of 4 storeys (+15m above ground level) in height.
- 3.24 The two-form entry primary school will be up to a maximum of 3 storeys in height (+12m above ground level).

#### Green Infrastructure

- 3.25 As shown in Figure 5, the Development includes large areas of green infrastructure and open space provision. In total, the Development will include up to 18.82ha of green infrastructure and open space.
- 3.26 The Development will include the provision of three large areas of open space, comprising Runway Park, Landings Green and Arun Way. Runway Park will be located in the southern part of the Site, Landings Green will run from the local centre in the centre of the Site to Ford Lane to the north of the Site and Arun Way will provide a green link east-west across the Site.
- 3.27 In addition to the parks, formal sports provision is proposed in the centre of the Site adjacent to the existing Arun Sports Arena and Flying Fortress and in close proximity to the local centre. A series of incidental open spaces are also proposed within the residential neighbourhoods and along the Site's boundaries, as well as buffer planting around the Site.

#### Access

- 3.28 As shown on Figure 4, primary vehicle access points will be located to the north of the Site off Ford Lane and to the southwest of the Site off Yapton Road. A further primary vehicle access point is proposed to the east of the Site off Ford Road, which will service the proposed employment use.
- 3.29 The Development will also be permeable to pedestrians and cyclists, with a number of non-vehicular access points located around the Site.

#### Drainage

- 3.30 In accordance with good practice, a surface water drainage strategy is proposed. This includes an appropriate Sustainable Systems, to alleviate the risk of flooding associated with the change from greenfield to built development. Appropriate drainage attenuation areas will be located to the northeast and southeast of the Site, as indicated on Figure 5.

## 4.0 ALTERNATIVES & DESIGN EVOLUTION

4.1 The EIA Regulations require an ES to provide a *description of reasonable development alternatives (for example in terms of design) studied by the developer, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.*

4.2 Consideration of Alternative Designs is summarised below. The 'do nothing' alternative and alternative locations and uses for the Site were not considered.

### Consideration of Alternative Designs

4.3 The Development submitted for approval is the result of a thorough analysis of environmental constraints and opportunities, access issues and market demand. Consultation with ADC, Ford, Yapton and Climping Parish Councils, Ford Neighbourhood Plan Steering Group, statutory consultees and the general public has been a key influence in the design evolution.

4.4 Specifically, the design has adapted to respond to the requirements of the local community at several public exhibition events that have been undertaken in recent years, including events in October 2014, March and November 2015 and May and June 2018.

4.5 A number of changes have occurred over the course of the design evolution in relation to key constraints and opportunities on and surrounding the Site. These are summarised below.

4.6 Air quality modelling work was undertaken at the Site which identified a zone within the southern extent of the Site where it was advised that sensitive uses (e.g. residential use) should not be located. This is due to odour emitted from the WWTW operated by Southern Water, located to the immediate east of the Site. Following the results of the modelling work, a 100m standoff zone was implemented into the design of the Development for 'calm conditions' to offset the implications of the odour. As a result, the Development incorporated an area of open space including Sustainable drainage, allotments and formal sports into the zone identified in the air quality modelling work.

4.7 The identification of various noise sources surrounding the Site have also influenced the design of the Development. Surveys undertaken to inform the assessment for the Development identified some significant noise sources. To mitigate the noise impacts from sources surrounding the Site, the design of the Development has evolved so that noisier uses are sited away from residential properties and acoustic barrier/bunds and screening have

been included in the Development.

- 4.8 Following a Site survey and desk-based analysis of landscape and visual considerations, a number of opportunities were identified. The landscape strategy for the Development has evolved and been designed to take the above opportunities into consideration. The landscape concept was based on a 'figure of eight', pinching in the middle where the Development's Local Centre is proposed to be located to connect the neighbourhoods in the north and south of the Development. The design of the southern neighbourhood has been heavily influenced by the geometry of the former runways, whereas the northern neighbourhood has been influenced by the village of Ford and its rural setting. Two large parks are proposed for each neighbourhood that will be shaped by their heritage and setting to create distinctive green spaces. In addition, the existing public footpath that runs east-west across the Site will be retained and become a key green corridor through the Site linking the surrounding communities.
- 4.9 Initial archaeological assessment work identified the potential for archaeological remains at the Site and elements of the military remains associated with Ford Airfield (including sections of the concrete runway to the south of the Site) will be preserved in situ.

## 5.0 CONSTRUCTION METHODOLOGY & PHASING

- 5.1 Planning for construction is broad at this stage. The assessment of construction phase environmental effects is based on reasonable assumptions and experience.
- 5.2 Demolition and construction of the Development is anticipated to commence in 2020/2021, subject to gaining planning permission and span approximately 10 years. The construction works would begin in the north and south of the Site and progress to the centre of the Site. Overall, the construction process is expected to be completed by 2030/2031. Table 5 provides an indicative construction phasing.

Table 5. Indicative trajectory for residential dwelling completions

| Year      | 2020<br>/21 | 2021<br>/22 | 2022<br>/23 | 2023<br>/24 | 2024<br>/25 | 2025<br>/26 | 2026<br>/27 | 2027<br>/28 | 2028<br>/29 | 2029<br>/30 | 2030<br>/31 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Dwellings | 50          | 175         | 175         | 175         | 175         | 175         | 175         | 150         | 150         | 100         | 0           |

Note the above trajectory is indicative and dependant on the Main Contractor's desired construction programme.

- 5.3 Construction will include the following activities:
- Access Road Construction and Enabling works (including demolition);
  - Site preparation (including excavation and grading);
  - Provision of infrastructure;
  - Construction of substructure;
  - Construction of superstructure;
  - Fit out of buildings; and
  - Landscaping.
- 5.4 A Construction Environmental Management Plan (CEMP) will be prepared for the Development that will provide the methods of managing environmental issues, such as noise and dust during construction.

## 6.0 POPULATION AND HUMAN HEALTH

- 6.1 An assessment has been made of the likely significant effects of the Development on the environment with respect to effects on population and human health.

### Baseline Conditions

- 6.2 Baseline evidence has identified that the Site is located within an area of growth and the population of ADC is anticipated to increase over the construction period. The local workforce is largely employed in manufacturing, mining, quarrying and utilities, business administration, health or in construction. There are two GP Practices operating within close proximity of the Site, with a further three located within 3km. No spare capacity has been identified. There is currently a small surplus of primary school places available within proximity to the Site and a significant surplus of secondary school places available. Housing completion targets have been missed in the area over a number of years and there is a resulting shortfall in housing provision.

### Likely Significant Effects

- 6.3 Construction of the Development is likely to produce employment for an average equivalent of 396 full time workers per month, over a 120-month period, providing a temporary, moderate beneficial effect on employment. A permanent, moderate beneficial effect on employment is also identified as a result of the between 662 and 710 net additional jobs created by the Development's provision of office floorspace, retail floorspace, community/leisure floorspace (including a health centre and nursery), a two form-entry primary school and 60-bed care home.
- 6.4 The provision of 1,500 units will contribute to ADC's housing requirement, which will help address the shortfall experienced over recent years. Between 2020 and 2030 ADC is projected to see an increase of 15,000 people. The 1,500 residential units could provide homes for between 3,180 and 3,660 people, which will help towards meeting the needs of ADC's growing population. It is therefore considered that the Development will have a permanent, moderate beneficial effect on population and housing.
- 6.5 The new households will generate a significant growth in the level of household expenditure in the local area which will have a moderate beneficial effect on the local economy.
- 6.6 There is no spare capacity within the existing GP provision to accommodate the additional

demand arising from the Development. This assessment has identified a need for up to two additional GPs, however, the provision of a healthcare facility as part of the Development will meet the needs arising from the Development and wider area and therefore the Development is considered to have a minor beneficial effect on primary healthcare.

- 6.7 The wider human health effects of the Development are taken into consideration through the Development design and are considered to be negligible to minor beneficial.
- 6.8 There is currently a small surplus of primary school places available within proximity to the Site. However, the surplus available is not sufficient to meet the need for 375 additional primary school places arising from the Development. However, the land for the two form-entry primary school being provided as part of the Development means that the Development is considered to have a minor beneficial effect on primary education, should the school be built out.
- 6.9 There is currently a significant surplus of secondary pupil places in proximity to the Site. However, this surplus is forecast to turn into a deficit in the coming years which will not accommodate the need for 330 secondary school places (including 6<sup>th</sup> Form) arising from the Development. For this reason, the Development is considered to have a minor adverse effect on secondary education until the future delivery of the Council-provided secondary school which is being delivered to meet the needs arising from cumulative development across ADC, including development at Ford. Once the secondary school is delivered, it is considered that the Development will have a negligible effect on secondary education.

#### Cumulative Effects

- 6.10 A cumulative assessment of the Development alongside other schemes for which a planning application has been submitted, has identified beneficial effects on population and housing, local expenditure and employment and some adverse effects on healthcare and education. However, it is noted that ADC have identified the need for a new secondary school to meet the need for new secondary school places arising from the cumulative impact of development.

## 7.0 LANDSCAPE AND VISUAL EFFECTS

- 7.1 This chapter of the ES assesses the likely significant effects of the Development on the environment in respect of landscape and visual effects.

### Baseline Conditions

- 7.2 The Site is located within a former airfield between the settlements of Ford, Burndell, Horsemere Green and Climping upon flat, low-lying coastal plain. The Site comprises a number of medium to large scale agricultural fields that are predominantly arable. The exception is an area of sports fields associated with Arun Sports Arena. The fields within the Site are generally bounded by relatively modern hedgerows/tree belts with field boundaries at the perimeter of the Site bounded by generally native hedgerows and hedgerow trees.
- 7.3 Long distance elevated views from the north are generally limited to the north-west and south of the Site due to site vegetation and built form.
- 7.4 The Site is located approximately 1.8km from the South Downs National Park and approximately 4.2km from Arundel Castle.

### Likely Significant Effects

- 7.5 During the construction works, there would be some adverse landscape and visual effects. Construction activity will be visible from adjacent streets and would consist of earthworks, vehicle and plant movement, scaffolding and part-built dwellings at various points across the Site at different stages of the work. Effects during construction would be short to medium term.
- 7.6 During operation, effects to landscape character would be at their greatest within the Site and up to 50m from the Site boundary, based on the visible change from undeveloped land to a housing development. Permanent effects to Landscape Character Area<sup>8</sup> (LCA) 29 would be major to moderate adverse. Effects to this character area will reduce to moderate adverse up to 500m from the Development where there is intervisibility. Effects to LCA 31 reduce with distance from the Site boundary from moderate to minor adverse to minor adverse to negligible up to around 1km. Beyond this distance, effects would decrease to negligible with no discernible change to landscape character.

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<sup>8</sup> Geographically unique areas where a combination of factors such as topography, vegetation pattern, land use and cultural associations combine to create an area with a distinct, recognisable character.

- 7.7 Effects on settlement form and context will be notably changed, albeit that key gaps and visual separation between neighbouring settlements between Yapton and Ford and Climping and Ford would be included in the Development.
- 7.8 The retention of the majority of the vegetation on the Site, along with the implementation of a comprehensive landscape strategy would soften views of built form and help integrate the Development into the landscape and retain features that contribute positively to landscape character.
- 7.9 Visual effects would be relatively contained and localised, with the most affected receptors located within or immediately adjacent to the Site where views would be possible through and above intervening vegetation.
- 7.10 During operation there would be some major adverse effects as visual receptors located within Site would experience a fundamental change from a series of arable fields influenced by industrial/utility built form on a former airfield to a housing development.
- 7.11 Within close proximity of the Site's boundary (up to 50m), effects would be major to moderate adverse and neutral with tree planting maturing. Beyond 50m of the Site's boundary, effects on receptors would reduce to moderate to minor adverse and neutral, such as land to the north and south of Yapton within 500m of the Development. Beyond 500m from the Development, visual receptors would not experience effects greater than negligible and neutral. There would be negligible or no effect on other receptors within the 5km study area including the South Downs National Park.
- 7.12 Mitigation measures have been incorporated into the design of the Development, which include tree planning along the western, northern, eastern and south-eastern boundaries to incorporate the Development into the existing landscape character of the Site and maintain visual separation. In addition, the existing hedgerow along Yapton Road will be retained (with the exception of the access point into the Site), with buildings set back from the road to allow a landscaped corridor with a footpath/cycleway through.

#### Cumulative Effects

- 7.13 Approximately two thirds of the proposed cumulative developments located in and around Yapton and Ford would have very little cumulative landscape or visual effect with the Development, due to their physical and visual separation from the Site, or the cumulative

schemes having little landscape and visual effect in their own right. Cumulative effects would arise with the scheme at Ford Lane (Ref: Y/80/16/OUT), the schemes off Burndell Road (Refs: Y/19/16/OUT and F/7/15/OUT) and the Arun DC Secondary school scheme.

- 7.14 Major adverse effects, which are greater than for the Development alone, would arise on intermediate areas of LCA: 29 North of Yapton Coastal Plain and wide areas of users of public rights of way and local roads north of Yapton, if all four cumulative schemes above and the Development were built.

## 8.0 ARCHAEOLOGY AND BUILT HERITAGE

- 8.1 An assessment has been undertaken in relation to effects on archaeology and built heritage.

### Baseline Conditions

- 8.2 Surveys have established that the Site contains two areas of prehistoric/Roman remains, below ground remains of the former World War I and World War II airfield and also parts of the concrete runways of the airfield. These remains are considered to be of local significance and low sensitivity. The assessment has established that the Site contains no designated heritage assets and is also located beyond the setting of nearby designated heritage assets.

### Likely Significant Effects

- 8.3 The construction of the Development will impact two previously unrecorded areas of archaeological activity of presumed Prehistoric/Romano-British date, which have been identified during survey work, along with some elements of the former Ford airfield, including the western arm of the airfield runway. Effects will occur during the construction phase, as a result of ground excavation and ground movements. No effects will occur during the operation of the Development.
- 8.4 A mitigation programme will comprise archaeological evaluation trenching, followed where appropriate, by further excavation and recording where the trenching reveals remains that will be impacted by the construction of the Development. Through consultation with ADC's archaeological advisor, it was confirmed that no pre-determination archaeological evaluation would be necessary and that such work and any subsequent mitigation works could be secured by condition on the outline planning permission.
- 8.5 Following the implementation of the proposed mitigation measures above, there will be a residual minor beneficial effect due to the research undertaken on non-designated archaeological heritage assets within the Site and the contribution to the understanding of the heritage of the area. The residual effect on the setting and significance of built heritage designated heritage assets is assessed as negligible.

### Cumulative Effects

- 8.6 Due to their locations in comparison to the Development, the potential effects from the identified cumulative schemes on the historic environment will be contained within their

boundaries for non-designated archaeological heritage assets and their immediate vicinity for effects on the setting and significance of designated heritage assets. All the cumulative schemes are located beyond the setting of the designated assets that the Development will affect. Therefore, there will be no cumulative effects arising on designated heritage assets.

## 9.0 BIODIVERSITY

- 9.1 An assessment has been undertaken in relation to biodiversity, including ecology and nature conservation.

### Baseline Conditions

- 9.2 The Site is dominated by arable land, grassland, ruderal vegetation and scrub of negligible intrinsic value, with hedgerows, woodland, tree lines and scattered trees of local value present on the Site boundary. These habitats are suitable for bats, badgers, European hedgehogs, brown hares, harvest mice, breeding and wintering birds, reptiles and amphibians. The habitats are valuable at the site level only for all species/species groups with the exception of bats which are valued at county level due to use by rare species including barbastelle, greater horseshoe and Leisler's bat as well as significant numbers of common pipistrelle.

### Likely Significant Effects

- 9.3 Construction works have the potential to result in habitat damage, isolation or loss, and disturbance or harm to animals. The construction of the Development will result in a significant loss of habitats of negligible intrinsic value, however the majority of habitats of local intrinsic value will be retained as part of the Development. Adverse impacts will be mitigated/compensated through protection of retained habitats, pollution prevention measures, removal of animals from the construction zone (where appropriate), sensitive working methods, timing of works to when affected animals will not be present, and habitat creation including green corridors.
- 9.4 The occupation of the Development by new residents has the potential to result in habitat degradation through human activities, including insensitive management of habitats, and killing and injury of animals through predation by pets. Adverse impacts will be mitigated through the implementation of a sensitive management strategy to ensure the high quality of newly created and enhanced habitats are maintained and to avoid harm to animals which they may support. New residents will be encouraged to use bells or CatBibs™<sup>9</sup> on their cats to reduce predation success, and will be discouraged from entering areas of greatest ecological sensitivity on the Site.

- 9.5 The proposed mitigation measures will ensure there are no adverse effects on the majority

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<sup>9</sup> A product which acts as a barrier, preventing cats from catching and killing wild birds.

of ecological features associated with the Site, with the exception of those that make use of arable habitats. However, given that these habitats are common and widespread in the local area, this remaining adverse effect is considered to be of minor to negligible significance. The measures will also ensure that activities on the Site comply with relevant wildlife legislation.

- 9.6 The Development will result in a significant net gain in high quality habitats at the Site and provide increased opportunities for the majority of wildlife at the Site. As such, despite a minor to negligible adverse effect on a small number of species, the Development represents a net gain for biodiversity overall.

#### Cumulative Effects

- 9.7 As the Development will result in adverse residual effects on brown hare, harvest mouse and skylark, only cumulative effects on these species were assessed. Only three of the cumulative schemes are likely to result in in-combination effects, Land off Burndell Road, Yapton (Y/19/16/OUT), Land to the south of Ford Lane (Ref: Y/80/16/OUT), and the Arun DC Secondary School scheme, which together total approximately 25ha of suitable habitat. Given the availability of arable land in the local area, this is considered to be a minor adverse effect on ecological features of low impact sensitivity and is therefore concluded to be a minor to negligible cumulative effect overall.

## 10.0 TRANSPORT AND ACCESS

- 10.1 This Chapter of the ES assesses the likely significant effects of the Development on the environment in respect of transport and access.

### Baseline Conditions

- 10.2 The Site is bound to the north, east, south and west by the public highway network. Ford Road is located immediately adjacent to the eastern boundary of the Site and provides a direct connection to the A27 approximately 5km to the north-west of the Site. The B2233 Yapton Road runs along the western boundary of the Site; Ford Lane borders the Site to the north; Horsemere Green Lane is located immediately to the south of the Site running on an east-west alignment between Yapton Road and Ford Road. The A259 is located approximately 1km to the south of the Site and connects to Yapton Road and Church Lane. Ford Railway Station is located to the west of Ford Road, approximately 2km to the north-east of the Site.

### Likely Significant Effects

- 10.3 The assessment identified that there would be some adverse construction effects in terms of pedestrian and driver delay and accidents and safety associated with the Yapton Road North of Oystercatcher junction and along Church Lane South of Horsemere Green Lane.
- 10.4 In terms of construction mitigation, a Construction Traffic Management Plan (CTMP) would be implemented (secured by way of a planning condition). The CTMP will include details for the anticipated number, frequency and types of vehicles used during construction, the method of access and the routing of vehicles during construction. The CTMP will also outline information on the parking of vehicles by site operatives and visitors, the loading and unloading of plant, materials and waste, the storage of plant and materials used in construction of the development, the provision of wheel washing facilities as well as traffic management and temporary works on the public highway.
- 10.5 Construction traffic would be routed to ensure that the impact upon sensitive areas, such as schools and accident black spots, is minimised.
- 10.6 Following the implementation of the above mitigation measures, all residual construction effects relating to transport would be negligible with the exception of some minor adverse effects on pedestrian and driver delay and accidents and safety at the Yapton Road north of Oystercatcher junction, and on pedestrian and driver delay at the Church Lane, south of

Horsemere Green Lane.

- 10.7 The assessment identified that there would be some adverse operational effects in terms of pedestrian and driver delay and accidents and safety associated with the Yapton Road North of Oystercatcher junction, at the B2233 Yapton Road West of North End Road and along Church Lane South of Horsemere Green Lane.
- 10.8 The Development will bring forward a number of local highway improvements, including:
- A roundabout improvement at the junction of the B2233/North End Road to enhance the operational capacity at the junction and improve pedestrian crossing provision;
  - Financial contribution to WSCC to enable a scheme of comprehensive scheme of improvements to be brought forward at the A259/Yapton Road junction to enhance operational capacity and increase safety; and
  - A scheme of footway and cycleway improvements on the eastern side of Church Road to improve conditions for pedestrians and cyclists and provide a connection to NCN Route 2.
- 10.9 In addition, the Development will also provide the following additional mitigation measures:
- A Framework Travel Plan<sup>10</sup> to encourage a shift and support the update of sustainable modes of travel;
  - A scheme of junction improvements or an equivalent financial contribution to WSCC to enable the delivery of an alternative comprehensive corridor improvement, to enhance the operational capacity at the Bilsham Road south of Burndell Road mini-roundabout;
  - A scheme of pedestrian improvements to enhance crossing provision at Burndell road, north-west of Rollaston Park;
  - A scheme of works or an equivalent financial contribution to WSCC to enable improvements to come forward, providing off-road pedestrian and cyclist provision along the Ford Road corridor on the approach to Ford Railway Station; and
  - A financial contribution to WSCC to enable a scheme of comprehensive scheme of improvements to be brought forward at the A259/Bilsham Road junction.
- 10.10 The implementation of the above mitigation measures would result some minor residual beneficial effect on pedestrian and driver delay at the Yapton Road north of Oystercatcher junction, at the B2233 Yapton Road, west of North End Road and at Church Lane, south of Horsemere Green Lane. There would also be some residual adverse effect on accidents and

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<sup>10</sup> Long-term management strategy which encourages sustainable travel

safety at these locations however this would be minor. Residual effects on community severance and fear and intimidation would be negligible.

#### Cumulative Effects

- 10.11 Cumulative schemes are included within the main assessment and therefore, the likely cumulative effects remain unchanged from the above effects identified in the main assessment.

## 11.0 AIR QUALITY AND ODOUR

- 11.1 This Chapter of the ES assesses the likely significant effects of the Development on the environment in respect of Air Quality, including dust and odour.

### Baseline Conditions

- 11.2 There are some industries surrounding the Site including the Viridor Materials Recycling Facility and agricultural operations, which have the potential to affect air quality through the release of dust however these uses are not regarded as being potentially large sources of dust emissions.
- 11.3 ADC undertake air quality monitoring in the surrounding area, specifically for Nitrogen Dioxide (NO<sub>2</sub>) emissions. In 2017, the most recent year that monitoring data is available for, the annual mean air quality objective (AQO) was achieved at all monitoring locations. ADC do not undertake Particulate Matter (PM<sub>10</sub>) monitoring within the vicinity of the Site.
- 11.4 Ambient odour is not a pollutant that is measured in the UK as it is not possible to accurately obtain a background concentration using standard monitoring techniques. Complaint data for odour has been used to identify if odour has previously been detected in the area close to the Site and a total of nine complaints have been recorded since 2012.

### Likely Significant Effects

- 11.5 Mitigation measures will be detailed within a CEMP which will be approved by ADC before construction commences on the Site. In summary, the CEMP would include the following measures:
- Undertake on-Site and off-Site inspection to monitor dust, record the results and make the log available to ADC when asked;
  - Impose and signpost a maximum speed limit of 15 miles per hour (mph) on surfaced and 10mph on unsurfaced haul roads and work areas;
  - Ensure an adequate water supply on the Site for effective dust/PM<sub>10</sub> suppression/mitigation using non-potable water where possible;
  - Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment;
  - Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable; and

- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material.

- 11.6 Following the implementation of the CEMP, negligible effects on the air quality is anticipated as a result of dust and traffic emissions as a result of the construction phase of the Development.
- 11.7 The construction works are not anticipated to generate any significant odour, therefore no mitigation is required.
- 11.8 On completion, the Development will include sustainable transport measures aimed at minimising Development traffic and promoting other methods of travel. This sustainable travel will ease congestion and therefore reduce potential air quality impacts and have a negligible effect. No further mitigation measures on air quality are required.
- 11.9 The operational Development will not generate any odour however the adjacent Ford WWTW is a potential odour source. Odour modelling has therefore been undertaken and the results have been taken into account in the design of the Development to ensure an appropriate distance is maintained from the WWTW. Therefore, there will negligible effects regarding odour.

#### *Cumulative Effects*

- 11.10 Should the construction phases of the cumulative developments overlap with those of the Development then there is potential for moderate adverse cumulative effects. The implementation of appropriate mitigation measures will ensure that cumulative impacts as a result of dust soiling and on human health will be negligible.
- 11.11 There is potential for cumulative construction traffic impacts on air quality as a result of consented and proposed planning applications in vicinity of the Site. The implementation of appropriate mitigation measures will ensure that cumulative impacts from construction traffic on air quality will be negligible.
- 11.12 During the operational phase, there is anticipated to be negligible air quality cumulative effects at all existing and proposed sensitive receptor locations.
- 11.13 There will be no cumulative odour effects associated with the construction and operational phase of the Development.

## 12.0 NOISE AND VIBRATION

- 12.1 This Chapter of the ES assesses the likely significant effects of the Development on the environment in respect of Noise and Vibration.

### Baseline Conditions

- 12.2 It was observed during noise surveys undertaken at the Site that the dominant noise sources in the surrounding area related to road traffic using Yapton Road and Ford Lane.

### Likely Significant Effects

- 12.3 The construction works would result in some minor adverse effects in terms of construction noise and vibration however this would be short-term. Good management of construction noise and vibration and the implementation of the CEMP (enforced via planning condition) would ensure that construction noise levels are minimised. This will include measures such as regular maintenance of plant and vehicles and limiting use as much as possible. The residual construction effects are considered to be negligible.

- 12.4 During operation, the effect of increases in traffic noise levels would result in some minor adverse effects. The effect of noise from the commercial aspects of the Development has the potential for moderate to minor adverse effects. Mitigation measures to control the potential impacts of noise from commercial sources include:

- appropriate Site layout to be worked up at the detailed design stage;
- the location of commercial sources, i.e. siting noisier types of use such as industrial processes further away from residential properties;
- setting of appropriate limits for noise emissions from commercial uses;
- restrictions on hours of operation for certain types of commercial uses; and
- the use of acoustic barrier/bunds around the commercial uses, including acoustic screening.

- 12.5 Following the implementation of the proposed mitigation measures, the residual effects from the proposed commercial uses would be minor adverse to negligible.

### Cumulative Effects

- 12.6 The cumulative effects of noise will be most significant during periods where particularly noisy activity is taking place within both the Development and committed developments at the

closest points of the construction workings to nearby noise-sensitive properties, which would be a short-term, minor adverse effect. This would only occur if the programmes and local phasing of both developments were to coincide. For the majority of the time, when workings are more distant from noise-sensitive properties, it is anticipated that any cumulative effects will not be significant and any effect will be negligible.

- 12.7 Cumulative effects in relation to the operational Development and other schemes in the wider area will relate to vehicle noise, with some minor adverse effects anticipated at worse.

## 13.0 AGRICULTURAL LAND

- 13.1 This Chapter of the ES assesses the likely significant effects of the Development on the environment in respect of Agricultural Land.

### Baseline Conditions

- 13.2 The Agricultural Land Classification survey classed the land as 77.5% Grade 2 land, which is very good quality agricultural land, and 10.0% Subgrade 3a land, which is good quality agricultural land. Grade 2 and Subgrade 3a are considered to be Best and Most Versatile agricultural land, which is protected in national policy. There was however evidence of historic disturbance in some areas, with soils being often stonier and containing blocks of concrete and brick or clinker fragments.

### Likely Significant Effects

- 13.3 The construction phase of the Development would result in the loss of 74.47ha of Best and Most Versatile agricultural land, comprising 66.78ha of Grade 2 and 7.69ha of Subgrade 3a agricultural land. The loss of Grade 2 agricultural land of high sensitivity, is considered to be of major magnitude and major adverse significance. Significant effects are therefore predicted due to the loss of high-quality agricultural land. However, the loss of agricultural land needs to be considered in the context of the district, which has a high proportion of Best and Most Versatile land, with lower availability of lower quality agricultural land.
- 13.4 While it is not possible to mitigate the loss of agricultural land, the excavated soils can be preserved for use in the gardens of the new residential dwellings to provide a greater depth of soil or to landscape other parts of the Development. Construction activities could damage soil structure, nutrient content and soil organism activity, which could impact on the reuse of soils. However, soils would be managed during the construction phase to reduce damage in accordance with a Soil Resource Plan. In addition, up to 0.98ha of the Site would include for a community allotment. This allows some of the good quality soils to be used on the Site, which would provide a local food source and have a community benefit.

### Cumulative Effects

- 13.5 The cumulative impact assessment identified that there would be some major adverse cumulative effects due to the loss of Best and Most Versatile agricultural land, which reflects the high proportion of high-quality land within the district.

## 14.0 WATER RESOURCES AND FLOOD RISK

- 14.1 This Chapter of the ES assesses the likely significant effects of the Development on the environment in respect of water resources and flood risk.

### Baseline Conditions

- 14.2 The Site and surrounding area is defined by the River Arun valley which lies approximately 500m east of the Site. The Site and surrounding area fall towards the River Arun from west to east. Immediately east of the Site is the Southern Water WWTW and the Grundon Waste Management Site. Adoptable sewers and rising mains cross the Site to connect to the sewage works.
- 14.3 The Environment Agency's aquifer classification system designates the superficial deposits across the Site as an aquifer meaning the soils could support local water supply. The chalk bedrock underlying the Site is classified as a Principal aquifer meaning that it may support water supply on a strategic scale. The Site is not located within a Source Protection Zone.
- 14.4 The majority of the Site is located in Flood Zone 1 (very low risk of flooding), with a small area inside the northern boundary of the Site, approximately 0.01km<sup>2</sup> in size, is located in Flood Zone 3 (high risk of flooding).

### Likely Significant Effects

- 14.5 Effective Site management is required to mitigate surface water flooding during the construction phase of the Development. The Development will be phased to enable the volume of surface water to be controlled and managed. In addition, surface water will be captured using gullies, pipelines, surface channels, French drains, temporary cut off walls and pumping as required. Where necessary, desilting techniques will be carried out during construction to prevent silt from entering off site watercourses and sewers. Following the implementation of the above measures, the construction phase of the Development is anticipated to result in a minor adverse effect on surface water flooding, foul water and water quality.
- 14.6 The impact on fluvial flooding and groundwater during construction is negligible, therefore no mitigation measures have been proposed.
- 14.7 The operational stage of the Development is anticipated to generate a minor adverse effect on surface water flooding as a result of potential for uncontrolled surface water runoff. This will be mitigated by providing a suitably designed drainage system. In addition, the finished

ground levels for the Development will be designed so that overland water will flow away from the properties towards areas of lower risk such as green corridors, open space and drainage basins. Following the implementation of these measures, the residual effect for surface water flood risk is considered to be negligible.

- 14.8 During operation, there is a risk that groundwater and watercourses could be polluted by hydrocarbons from vehicles and spillages of other chemicals and pollutants into the surface water sewerage system by residents. Sustainable Drainage systems will be provided to reduce pollutants at source. The residual effect would remain as minor adverse as there would still be a risk of a large pollution incident which overwhelms the Sustainable Drainage systems or pollutants being released directly at the drainage outfall(s).
- 14.9 The Development will have a negligible effect on fluvial (flood risk from rivers) and tidal flood risk, groundwater flood risk and foul water sewerage systems.

#### *Cumulative Effects*

- 14.10 The cumulative effect of the Development and other nearby identified schemes has been assessed as negligible both during construction and operation.

## 15.0 GROUND CONDITIONS

- 15.1 This Chapter of the ES assesses the likely significant effects of the Development on the environment in respect of land contamination and ground conditions.

### Baseline Conditions

- 15.2 A number of potential sources of contamination were identified on the Site primarily associated with an historic infilled canal and the previous use of the Site as an airfield. The Site was subject to an intrusive investigation which used exploratory techniques to target potential sources of contamination identified during desk study analysis. The investigation identified some elevated concentrations of pollutants and the presence of asbestos was recorded within a former landfill located to the east of the Grundon waste treatment facilities, to the northeast of the Site. A single elevated concentration of lead was also recorded in the field east to the landfill. The assessment did not record any elevated concentrations of contaminants elsewhere across the former airfield.
- 15.3 An Unexploded Ordnance (UXO)<sup>11</sup> risk assessment was undertaken for the Site which indicates that the Site was heavily bombed during the Second World War and concluded that there is a moderate risk from German air dropped UXO on the Site. There is also the possibility that munitions may have been left behind by the Royal Air Force due to the Site's extended use as a military airfield.

### Likely Significant Effects

- 15.4 During the construction works, localised piling works would result in a minor adverse impact to the underlying Principal Aquifer caused by the release of sediment, however any impact would be very localised and temporary.
- 15.5 Construction works will be subject to a range of controls required under current legislation and managed through adoption of industry standard working practices as identified within the Applicant's Code of Construction Practice (CoCP)<sup>12</sup> and the CEMP. This will minimise the likelihood of spills and leaks from construction plant and machinery.

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<sup>11</sup> Includes unexploded bombs, or explosive remnants of war including explosive weapons (bombs, shells, grenades, land mines, naval mines, cluster munition, etc.)

<sup>12</sup> A code of construction practice (CoCP) sets out the standards and procedures to which a developer or contractor must adhere in order to manage the potential environmental impacts of construction works.

- 15.6 Following the implementation of the above mitigation measures, negligible effects are anticipated for the following receptors:
- Health effects during construction on construction workers, neighbours, residents and built environment from contamination;
  - Mobilisation of sediments during localised piling operations that may impact on Principal Aquifer;
  - Risk of encountering unexploded ordnance during site investigation and construction works; and
  - Releases of fuel and chemicals from storage and use during construction works.
- 15.7 Simple to implement mitigation measures such as clean capping<sup>13</sup> or preventing access to the area would reduce the risk associated with inert landfill located next to the Grundon Waste recycling facilities. This would be confirmed through a remediation strategy for the Site prior to commencement of the Development. Following mitigation, the impact to future Site users and the environment is considered to be negligible.
- 15.8 Upon completion of the Development, it is considered that there would be no residual effects.

#### Cumulative Effects

- 15.9 The cumulative developments identified would have addressed any issues associated with land contamination issues, if present. No mitigation measures are required on the Site to address risks from contamination. Therefore, during both the construction and operational phases it is considered that there will be no significant adverse cumulative effects from any of the adjacent or nearby schemes together with those predicted for the Development.

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<sup>13</sup> Placing a cover over contaminated material, isolating and keeping the material in place to avoid the spread of contamination.

## 16.0 SUMMARY

16.1 The Development will result in the following beneficial residual effects:

- Benefits to the local economy, through increase spending from new population and from employment generation;
- Increase in housing provision in the area;
- Benefits to the education provision in the local area;
- Provision of new ecological habitats on the Site and opportunities for nature;
- Beneficial effects on non-designated heritage assets resulting from a programme of archaeological evaluation trenching followed by mitigation excavation and recording; and
- Beneficial effects on the local highway network and pedestrian/cycle network.

16.2 The ES has also identified a number of adverse residual effects, many of which relate to effects during construction of the Development, including:

- Loss of Grade 2 and subgrade 3a agricultural land;
- Effects on surface water flooding, water quality and the foul water sewage system;
- Some loss of existing habitats, albeit new habitats would be provided;
- Effects from construction noise;
- Effects on water quality following the implementation of Sustainable Drainage techniques to remove pollutants;
- Effects resulting from changes to the landscape and views during the construction and operational phases of the Development; and
- Effects on pedestrian and driver delay and accidents and safety during the construction and operational phases of the Development;

**FIGURE 1:**  
**SITE LOCATION PLAN**



Extract

Extract

Project:  
**FORD AIRFIELD**

Drawing Title  
**SITE BOUNDARY PLAN**

|                     |                       |                |                  |
|---------------------|-----------------------|----------------|------------------|
| Date<br>01.10.14    | Scale<br>1:2500@A1    | Drawn by<br>MD | Check by<br>D.S. |
| Project No<br>23885 | Drawing No<br>RG-M-01 | Revision<br>T  |                  |

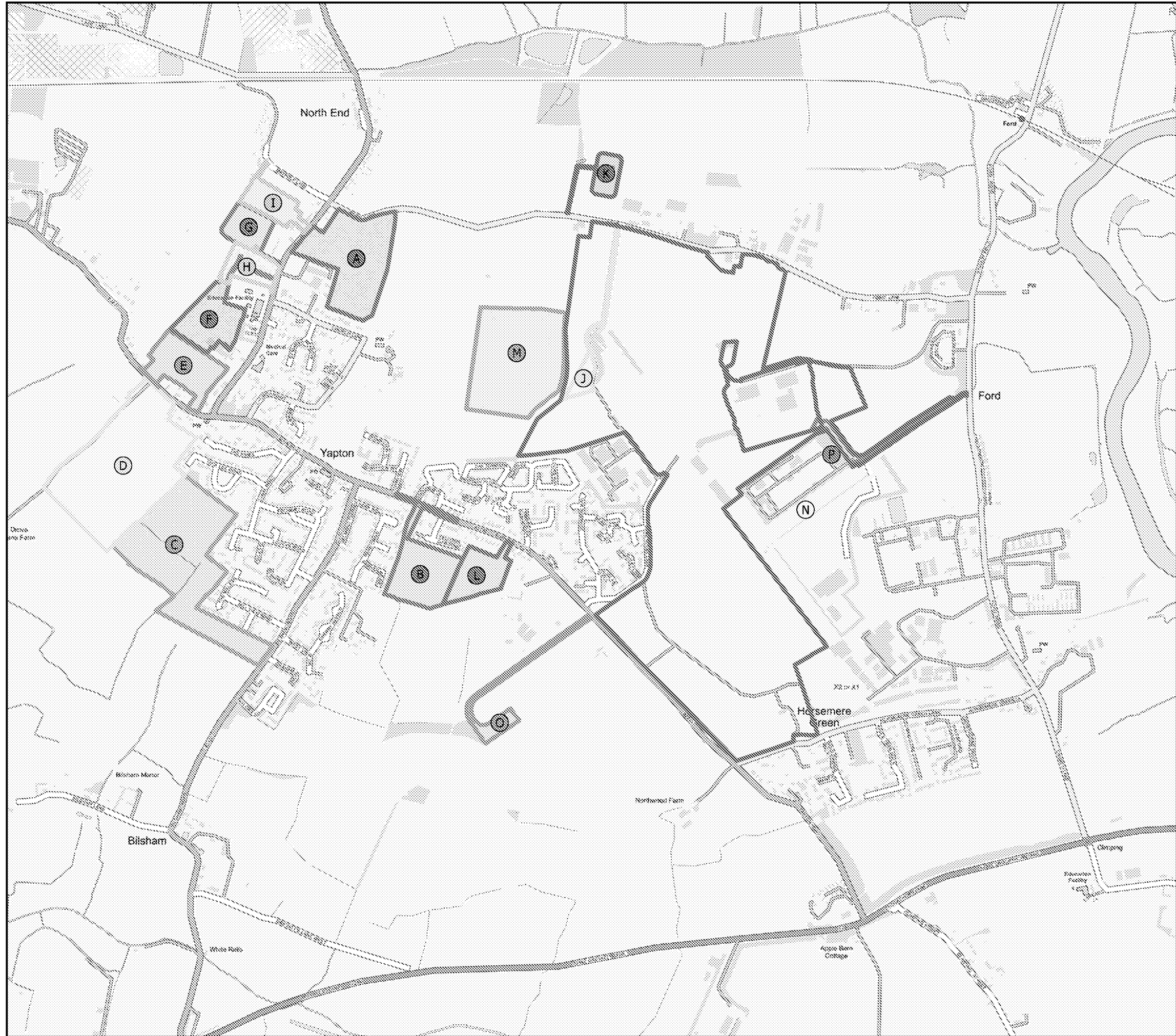
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**FIGURE 2:**  
**CUMULATIVE SCHEMES PLAN**



The scaling of this drawing cannot be assured

| Revision | Date       | Drn | Ckd |
|----------|------------|-----|-----|
| 1        | 19.12.2019 | GS  | NP  |

### LEGEND

**Site Boundary**

**Yapton**

- A Land to the south of Ford Lane East of North End Road, Yapton
- B Land off Burndell Road, Yapton
- C Land at Bilsham Road, Yapton
- D Land east of Drove Lane, Yapton
- E Bonhams Field Main Road Yapton
- F Land at Stakers Farm North End Road Yapton
- G Clays Farm North End Road Yapton
- H Land North of Yapton C of E Primary School North End Road Yapton
- I Land at Street Buildings North End Road Yapton

**Ford**

- J Land to the South of Ford Lane, Ford
- K Land at Wicks Farm, Ford Lane, Ford
- L Land south of Burndell Road, Yapton
- M Arun DC Secondary School Site
- N The Ford Market Application

**Climping**

- O Land at Northwood Farm, Burndell Road, Yapton BN18 0HR

**West Sussex**

- P New Access Road (Grundon)

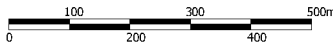
## FIGURE 2

Project  
**Ford Airfield**

Drawing Title  
**Cumulative Schemes Plan**

| Date       | Scale         | Drawn by | Check by |
|------------|---------------|----------|----------|
| 19.12.2019 | 1:12,500 @ A3 | GS       | NP       |

| Project No | Drawing No | Revision |
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**FIGURE 3:**  
**LAND USE AND DENSITY PARAMETER PLAN**



Site Boundary

Area within which Residential Development is permitted - 1,500 dwellings maximum, typically 2-2½ storey - 3 storey maximum:

Lower Density: 20-30 dph

Medium Density: 27.5-37.5 dph

Higher Density: 35-45 dph

Area within which Employment is Permitted  
- Building Height: up to 15m high

Access to Employment

Zone within which Primary School and Nursery must be located - up to 3 storey

Zone within which Local Centre must be located.  
- Up to 4 Storey. Including Residential, Retail, Commercial, Leisure and Community Floorspace.

Green & Blue Infrastructure including Open Space, Buffer Planting and SuDS

Existing Sports Arena / Flying Fortress

Project  
FORD AIRFIELD

Drawing Title  
LAND USE & DENSITY  
PARAMETER PLAN

|            |            |          |          |
|------------|------------|----------|----------|
| Date       | Scale      | Drawn by | Check by |
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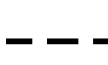
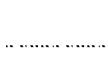
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**FIGURE 4:**  
**ACCESS AND MOVEMENT PARAMETER PLAN**



-  Site Boundary
-  Primary Vehicular Access Points
-  Corridor within which the Spine Road will be Delivered
-  Access to Employment
-  Existing and Proposed Non Vehicular Access Points
-  Retained Existing Public Footpath
-  Area within which Built Development is Permitted, also to Include Incidental Open Space, Drainage and Infrastructure
-  Green & Blue Infrastructure including Open Space, Buffer Planting and SuDS

Project  
FORD AIRFIELD

Drawing Title  
ACCESS & MOVEMENT  
PARAMETER PLAN

|            |            |          |          |
|------------|------------|----------|----------|
| Date       | Scale      | Drawn by | Check by |
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| Project No | Drawing No | Revision |          |
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**FIGURE 5:**  
**GREEN AND BLUE INFRASTRUCTURE PARAMETER PLAN**



- Site Boundary
- Open Space including SuDS, Allotments and Formal Sports  
- Net Open Space provision to be minimum 14.85Ha
- Buffer Planting (Excluded from Open Space Calculation)
- FS

Formal Sport Provision (Included in Open Space Calculation)
- Area within which Attenuation is Permitted (The Net Area of Drainage is not included in the Open Space Calculation)
- Retained Existing Public Footpath
- Area within which a Neighbourhood Green is Permitted - Minimum 0.2Ha
- Alignment of the Arundel to Chichester Canal to be reflected in the Development Layout
- Existing Sports Arena / Flying Fortress
- Green Gateway to the Development
- Area within which Built Development is Permitted, also to Include Incidental Open Space, Drainage and Infrastructure

Project

FORD AIRFIELD

Drawing Title

GREEN & BLUE INFRASTRUCTURE  
PARAMETER PLAN

Date

14.08.19

Scale

1:5,000@A1

Drawn by

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Check by

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Project No

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Drawing No

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