

# Technical Studies

## INTRODUCTION

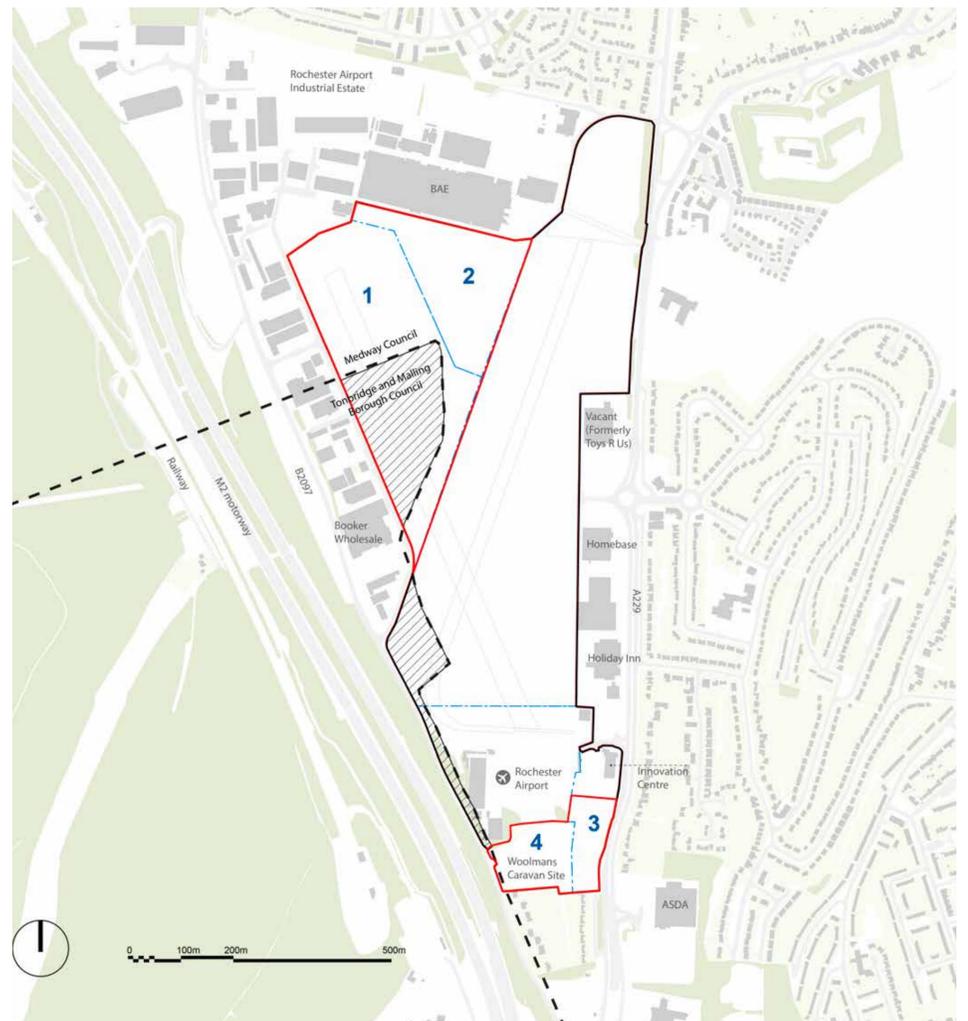
A number of technical studies have been undertaken that provide an evidence base and inform the masterplan and its design proposals.

### The studies are as follows:

- Air Quality Assessment
- Noise Survey
- Archaeological & Heritage Impact Assessment
- Contamination Survey
- Ecological Impact Assessment
- Flood Risk and Drainage Assessment
- Landscape and Visual Impact Assessment
- Transport Assessment
- Travel Plan
- Tree Survey

A summary of the key findings are presented here, with the full reports available online at [www.medway.gov.uk/innovationparkmedway](http://www.medway.gov.uk/innovationparkmedway)

Hard copies are also available to view at Innovation Centre Medway, Medway Council offices (Gun Wharf), Tonbridge & Malling Borough Council offices (Gibson Building), Rochester Community Hub and Chatham Community Hub during the consultation period.



Site Parcels



View looking north towards the Innovation Centre from Parcel 3



View looking north along the western boundary of Parcel 1

## THE SITE

The site is split into two separate areas, to the north and the south of the existing airport site.

**Northern Area:** The Northern Area consists of two distinct parcels.

- The main parcel (Parcel 1) comprises the airport occupied by part of runway 16/34, which contains well-maintained grass.
- The second parcel (Parcel 2) is occupied by BAE Systems. It is a car park area made up of concrete slabs and secured by a palisade fence.

**Southern Area:** The Southern Area also consists of two distinct parcels.

- The eastern parcel (Parcel 3) has concrete remains of structures that have previously been demolished on the site. Part of the site is currently being used as overflow parking for the Innovation Centre, to the north. Within Parcel 3 is a single storey brick structure and fenced compound. It is thought that both are related to utilities supplies within the site and the wider area.
- The western parcel (Parcel 4) is the site of the Woolmans Wood Caravan Park. The site is currently used as a caravan park and has space for approximately 100-125 caravans. The Parcel is surrounded on all boundaries by dense trees, some of which are subject of a Tree Preservation Order (TPO).

# Transport & Access

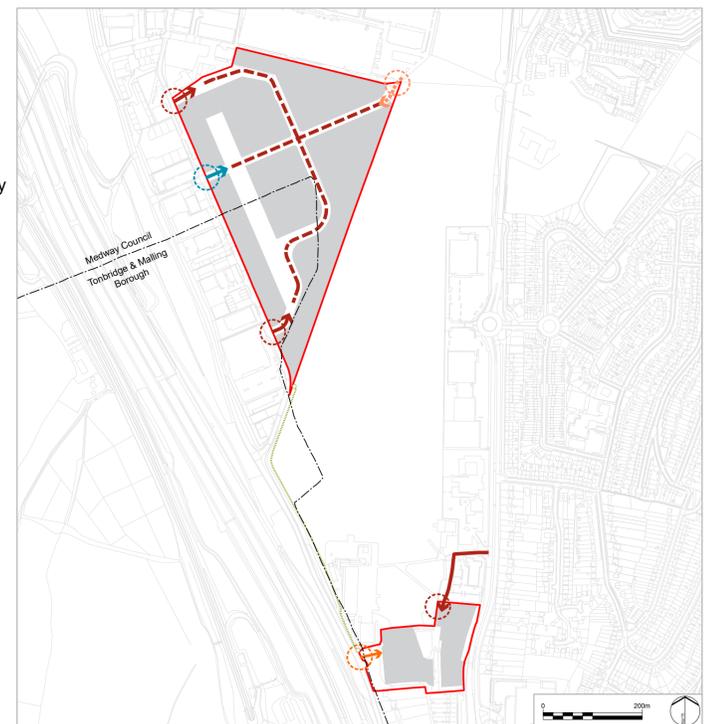
## TRANSPORT ASSESSMENT

The Transport Assessment has analysed traffic data to assess the existing conditions of the site and surrounding area including a review of the local road network, local public transport services, walking and cycling accessibility and analysis of accident records.

Traffic expected to be generated by the proposed development is likely to be within those parameters already established and accepted for development in the Medway area, and therefore will not have additional impacts. Mitigation measures and improvements such as localised junction works and new bus provision may be required in time as the development proceeds; traffic surveys are underway to establish the need for these. The site benefits from good bus, pedestrian and cycle provision, and has potential to support many non-car journeys.

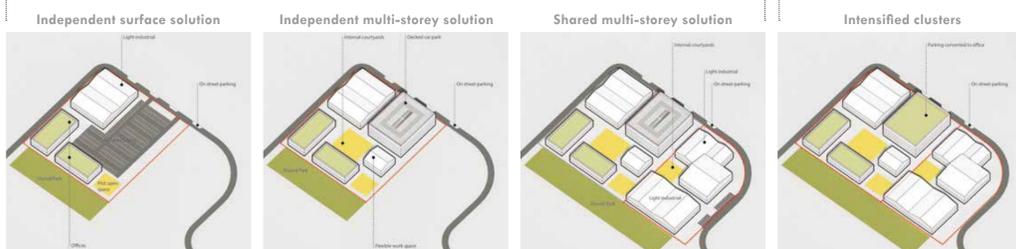
A Travel Plan has been prepared which will aim to reduce the number of single occupancy vehicle journeys to and from the site. It will provide an overview of the existing transport infrastructure and will identify measures that will be introduced in order to meet the Travel plan objectives. Overall, it will help to reduce the impact of travel to and from the site; improve the health and well-being of people using the site; and promote and encourage the use of sustainable modes of travel.

-  Site Boundary
-  Medway Council and Tonbridge & Malling Borough Council Boundary
-  Development Parcels
-  Potential pedestrian link between sites within secured site boundary
-  Primary Access Points
-  Secondary Access Points
-  Potential Long Term Access Points
-  Indicative primary access route
-  Bus priority access



ACCESS PARAMETER PLAN

## FUTURE PROOF PARKING



\*Indicative concepts for illustrative purposes only. Interested parties who deliver plots will need to consider access for deliveries and parking, with the primary route available for additional bays if required and acceptable in planning and design terms

## FUTURE PROOF INFRASTRUCTURE CORRIDOR



\*Indicative concepts for illustrative purposes only

## SITE ACCESS PROPOSALS

A number of points of access are proposed to connect the site to existing highways infrastructure. For the northern site, the central access point from Laker Road is proposed as a bus priority, with cars using the northern and southern access points to access the site. This reduces conflicting movements at the crossroads.

Within each cluster, space is allocated for multi-storey parking which will retain the runway park as a pedestrian friendly environment with vehicles staying outside of this area.

The amount of parking to be provided ensures compliance with the current Medway parking standards. It is noted that these standards are a maximum, therefore reducing parking numbers will maintain compliance. Minimum requirements will be met for accessible spaces, cycle parking and delivery space off the public highway. This can be managed on independent plots or through the shared use of multi-storey parking structures and servicing areas.

Based on expected demand for parking using trip rates from a similar site, it may be possible to reduce the number of parking spaces in the future.

## PARKING SOLUTIONS AND PREPARING FOR THE FUTURE

To future proof Innovation Park Medway, a variety of parking solutions have been explored which could unlock opportunities for increasing the amount of business space, particularly if means of transport change to more sustainable options in the future.

Whilst plots can come forward independently to be policy compliant with a typical, ground level parking solution, the framework also allows the benefits of multi-storey solutions to be explored which will improve the public realm and provide more car free areas for collaboration. In time, multi-storey parking solutions would allow for more business space and the multi-storey parking structures themselves could be future proofed to allow for conversion into additional employment space.



Illustrative cross-section through the primary access corridor.

# Landscape & Visual

## LANDSCAPE AND VISUAL IMPACT ASSESSMENT

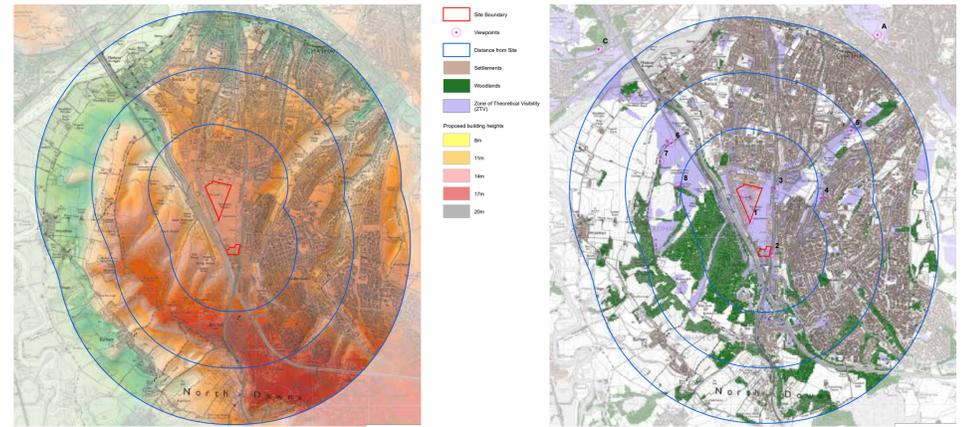
A full Landscape and Visual Impact Assessment (LVIA) has been prepared to inform the masterplan.

The LVIA includes a review of relevant landscape policies and designations, published landscape character assessments, and fieldwork to assess the existing landscape and visual characteristics of the site and its context.

The site lies within an “Urban and Industrial” area and is located approximately 100m from The Kent Downs Area of Outstanding Natural Beauty (AONB).

The study was informed by a zone of theoretical visibility (ZTV) study which identified the maximum theoretical visibility (allowing for topography, major areas of woodland and settlements) of the proposed development and enabled targeted fieldwork to identify the actual visibility of the proposals.

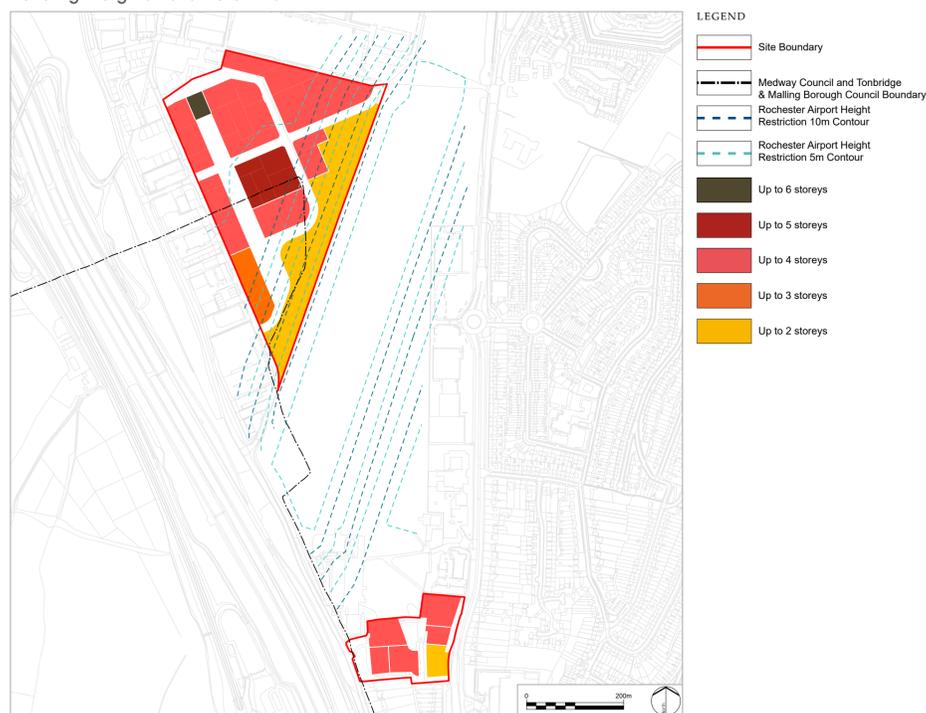
The assessment identified that there were no significant effects on the surrounding landscape and townscape arising from the proposed development. Intervening woodland and terrain reduces visibility of the proposals, and where the proposals can be seen, they would be viewed in the context of existing buildings in the industrial and employment areas surrounding the site, including the BAE Systems buildings (the highest of which is 23m above ground level) and which exert a strong influence on the surrounding environment.



Topography

Zone of Theoretical Visibility Study (ZTV) and Viewpoint Locations

Building Heights Parameter Plan



## BUILDING HEIGHTS

Views to and from the Kent Downs Area of Outstanding Natural Beauty (AONB) are an important consideration for the proposed scheme. Additionally, the height of any proposed development must work within the parameters set by the requirements of the adjacent operational airport.

The parameter plan above summarises airport safeguarding building height restrictions, using a height contour, and also identifies maximum building heights across the site.

The masterplan proposes predominantly 2, 3 and 4 storey buildings, with one strategically located taller landmark building at the north end of the Runway Park at up to 6 storeys. Whilst the illustrative masterplan is flexible, any future proposals for plots will need to consider and respect the maximum height of buildings and structures that may be accommodated within the safeguarded zones and with due consideration of the AONB and its setting.



Photomontage



Photomontage

LD&A DESIGN	<small>Note: the photomontage image has been created by superimposing a view of a 3D model on the photo. It takes account of the screening by topographic features but has not been altered to illustrate the screening effect of intervening vegetation or buildings. Visualisation prepared using Vertigo AR Augmented Reality software.</small>	PROJECT TITLE INNOVATION PARK MEDWAY	DRAWING TITLE Viewpoint 7 - Nasheden Down Nature Reserve Photomontage overlay and Photomontage FIGURE 6278_VAR_07 DATE 28/08/2018
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Visualisation: Viewpoint 7

## KEY CONSIDERATIONS

Landscape and Visual considerations have informed the design proposals from the outset, to ensure impacts on the Kent Downs AONB are limited and that the development is in keeping with its surrounding context. Key considerations are as follows:

Proposed buildings should be no higher than the BAE Systems buildings to the north of the site to limit visual impacts on the AONB;

Proposed tall buildings (six storeys or 20m) should be limited to a single plot (effectively a single building);

Proposed buildings across the two site areas should be variable in height, providing a staggered roofline.

Within the southern site area, proposed buildings along the south-eastern boundary should be restricted to no higher than 2 storeys, limiting the impact on the amenity of residential properties to the south.

Other parts of the southern site area are able to accommodate buildings of a similar scale to Innovation Centre Medway.



# Heritage & Archaeology

## ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT

An Archaeological and Heritage Impact Assessment has been undertaken to inform the masterplanning process. It identifies all known heritage assets potentially affected by the proposed development, whilst also identifying the potential for currently unknown heritage assets.

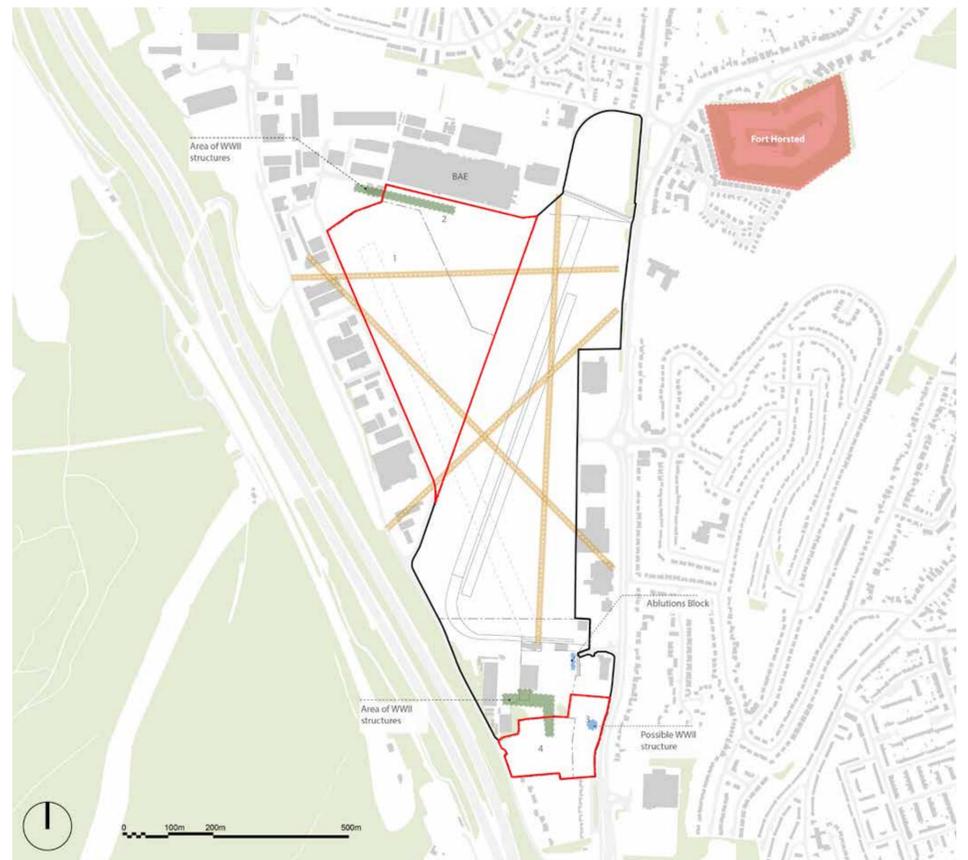
Designated and non-designated heritage assets within 2km of the study area have been identified.

An overview of the historic environment covering prehistoric activity through to post-war development, an historic map exercise and an aerial photograph analysis have been undertaken. Previous desk-based and intrusive archaeological investigations undertaken within the site and study area have also been reviewed.

This baseline review has found that there is a low probability of archaeological remains pre-dating the airfield to survive within the site, although this is slightly higher in some parts of the site due to the proximity of a Roman road.

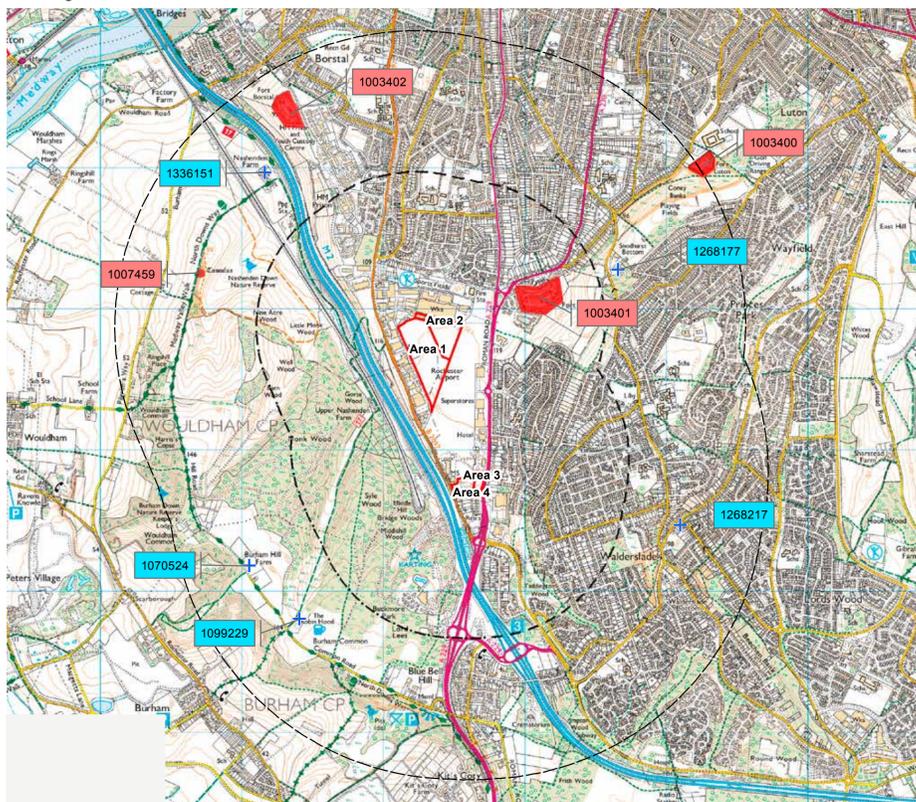
The review also found that below ground remains of WWII structures, some floor surfaces and foundations of a 1940's building and the airfield identifier circle and name from at least 1953 may be present within the site. If present, these would be impacted by the proposed development.

The heritage assessment has also found that development within the masterplanning site will result in visual changes to the setting of five designated heritage assets, including Fort Horsted Scheduled Monument. However, these visual changes are not considered to result in any reduction in the contribution that the setting makes to the significance of these assets.



Airfield Heritage Features

Heritage Assets in the wider area



### SCHEDULED MONUMENTS

- Fort Luton (1003400)
- Fort Horsted (1003401)
- Fort Borstal (1003402)
- Bell barrow in Shoulder of Mutton Wood (1007459)

### GRADE II LISTED BUILDINGS

- Barn at Burham Hill (1070524)
- Robin Hood Public House (1099229)
- Snodhurst Farmhouse and attached outbuildings (1268177)

- The Homestead (1268217)
- Nashenden Farmhouse with Briar Cottage attached (1336151)

## FEATURES OF HERITAGE INTEREST

- The two runways - the line of the 16/34 runway should be retained in the design to allow continued appreciation of the historic interest of the airport.
- Surviving early 20th Century buildings in the south-east of the site, and the presence of WWII defences.
- A water tank and several small structures of unknown function were located within Parcel 3. Below ground remains of these may still be present and may require further investigation to gather information on their function, state of preservation and significance.
- The majority of the former WWII buildings in Parcel 3 have been previously removed, but an "Ablutions Block" remains adjacent to the airport viewing area, and another building standing in the south of Parcel 3 may be of WWII date. These were not examined internally and are likely to require some historic building recording prior to any works being carried out, but are unlikely to merit retention.

## HERITAGE ASSETS IN THE WIDER AREA

- There are 26 Conservation Areas and 780 Listed Buildings within Medway. The site does not lie within a Conservation Area.
- Within 2km of the site there are four Scheduled Monuments (designated for their archaeological interest) and five listed buildings (designated for their architectural and historic interest).
- Although outside of the 2km radius, there are also Scheduled Monuments such as Kit's Coty House Long Barrow, Little Kit's Coty House Megalithic Tomb and White Horse Stone.



# Ecology & Nature Conservation

## ECOLOGICAL IMPACT ASSESSMENT

An Ecological Impact Assessment has been undertaken to inform the masterplanning process. This includes a desktop review, in addition to a phase 1 habitat survey and a number of protected species surveys undertaken during 2018.

A number of statutory and non-statutory designated sites within 10km of the site boundary have been identified. These include a Site of Special Scientific Interest (SSSI), three Special Areas of Conservation (SACs) and two Special Protection Areas (SPAs). In addition, there are two Local Wildlife Sites within 2km of the site. A range of habitats are also present within the site, including semi-improved grassland and lowland broadleaved woodland.

Protected or notable species found during historical or current onsite surveys include bats, dormouse, breeding birds and common lizard.

Overall, based on the nature and location of the proposed development, no adverse effects on statutory or non-statutory designated sites are anticipated. The proposed development would achieve a net gain in biodiversity, in line with guidelines set out in the National Planning Policy Framework. Although some semi-improved neutral grassland will be lost, this loss will be compensated through re-provision off-site.

## SUMMARY OF FINDINGS

**Parcel 1** - Supports reptile; common lizard have previously been recorded along the northern boundary. Small numbers of ground nesting birds and foraging bats have also been recorded. The airfield grassland is cut as a meadow and supports a semi-improved grassland community.

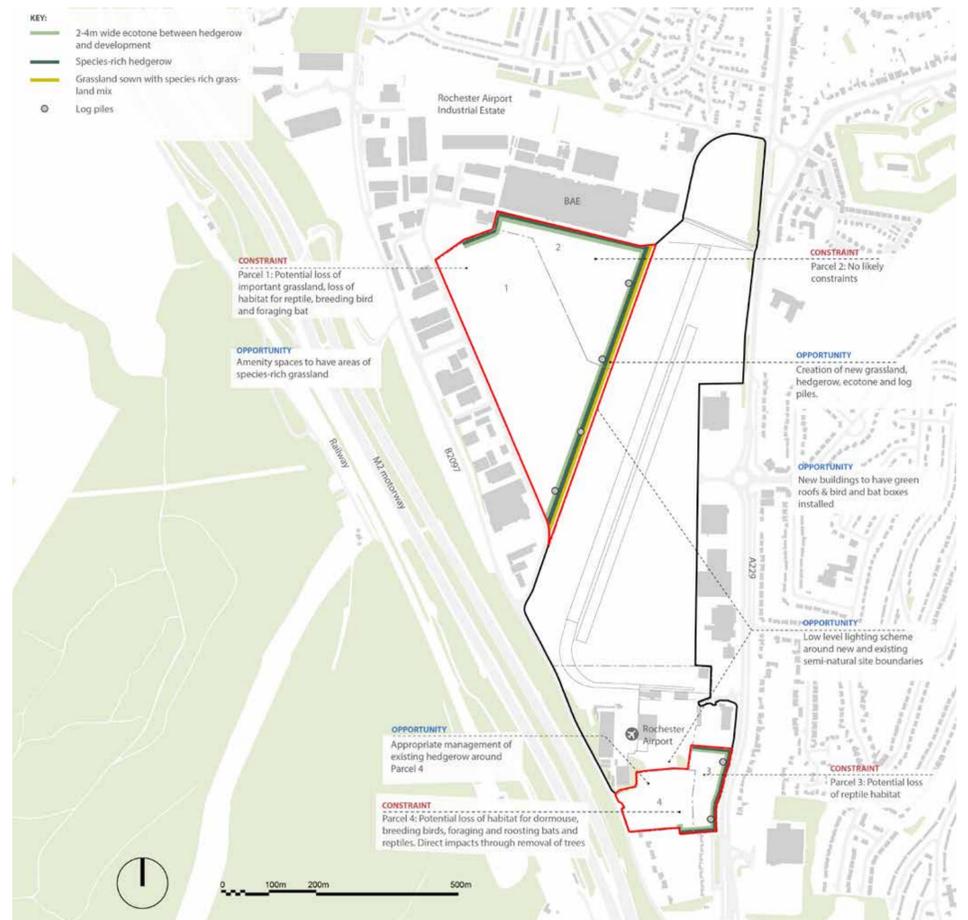
**Parcel 2** - Unlikely to support protected species.

**Parcel 3** - No protected species recorded.

**Parcel 4** - Dormouse present in woodland/trees, foraging bats present. Reptile and roosting bat have not been recorded.



Species rich grassland (recommended for proposed amenity areas and grassland ecotone)



Ecological Constraints and Opportunities

## POTENTIAL ECOLOGICAL MITIGATION/COMPENSATION MEASURES

- **Grassland** - The grassland in Parcel 1 is cut once a year and supports a semi-improved community. Its loss will be compensated through either creation of new grassland off-site or contribution towards long-term management/enhancement of a local wildlife site.
- **Woodland** - The woodland is a Habitat of Principle Importance (HPI); Lowland Mixed Deciduous Woodland. The loss of a small number of trees will require compensation through new tree planting on site.
- **Bats** - Bats are present foraging in Parcel 4. Mitigation to avoid impacts to foraging bats will involve the implementation of an appropriate low level lighting scheme on site.
- **Dormice** - Dormice are present within woodland around Parcel 4. A Natural England licence will be required for vegetation clearance here, and mitigation will involve implementation of a low level lighting scheme (as above).
- **Birds** - Breeding farmland birds (skylark) are present in the grassland of Parcel 1 and nesting birds present within scrub and woodland. Mitigation will involve clearance of these habitats to be carried out outside of the bird nesting season (March to August).
- **Reptiles** - Common lizard are present in Parcel 1 grassland and scrub. Mitigation will involve the translocation of common lizard from the Site to a suitable area elsewhere within the airport site.
- **An Ecological Management and Enhancement Plan (EMEP)** will be produced to provide prescriptions for the above mitigation measures, particularly in regard to dormice, birds and reptiles.

# Flood Risk & Drainage

## FLOOD RISK AND DRAINAGE ASSESSMENT

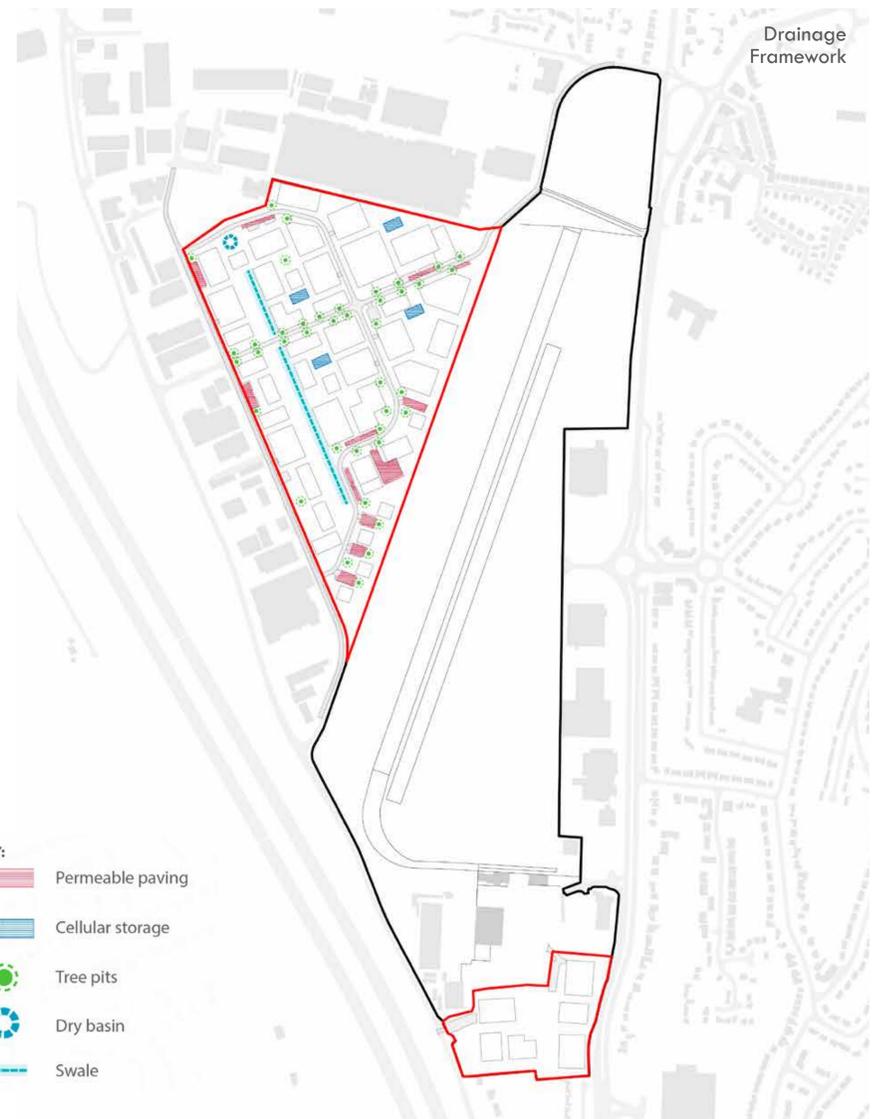
A Level 1 Flood Risk Screening Study has been undertaken for the site and confirms the site is located within Flood Zone 1.

The site is at low risk of flooding from fluvial (river) sources and mostly at low risk of surface water flooding. However, there is a medium risk of flooding from surface water along the northernmost boundary of the site. Site levels currently force the overland routing west to Laker Road and this overland route will be preserved, where possible, through the scheme design. There is also a high risk of surface water flooding in the centre of the existing airport site - however this is outside of the proposed development area.

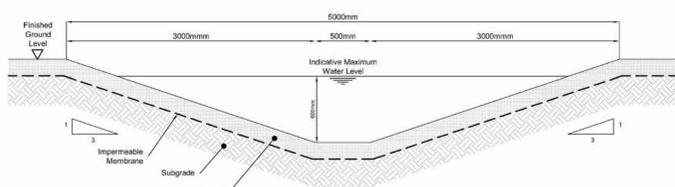
Strategic Flood Risk Assessments (SFRA) do not identify any significant risks of groundwater flooding within the district. Therefore no measures will be necessary to mitigate this.

There are no existing watercourses present on site. The River Medway runs west-east approximately 2.5km to the north of the site. Currently, all surface water on the developed site drains directly into the ground, while overland flow discharges to the west onto Laker Road. Other than the private airport network there are no surface water sewers on the existing site.

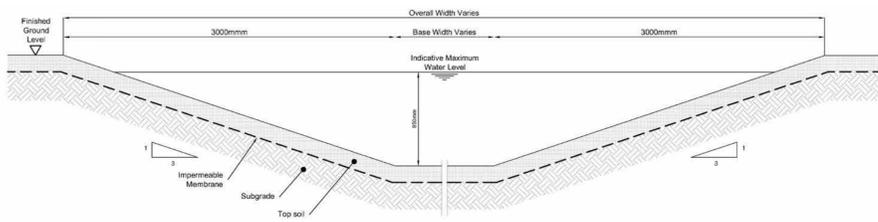
The site geology comprises primarily of superficial deposits of clay with flint, underlain by highly permeable Seaford Chalk strata. Any ground drainage would need to be located within this permeable strata.



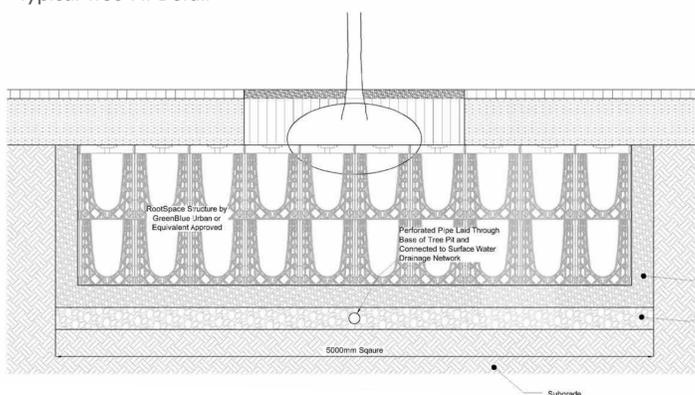
Typical Swale Detail



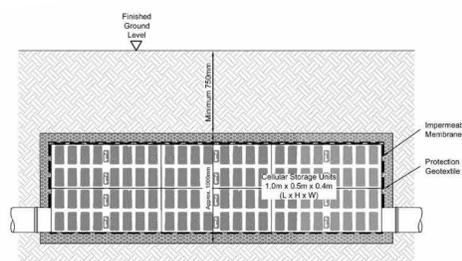
Typical Dry Basin Detail



Typical Tree Pit Detail



Typical Below Ground Cellular Storage



## DRAINAGE STRATEGY

Analysis of the existing ground conditions and drainage rates suggest soakaways are a viable option.

A strategic surface water drainage solution has been prepared for the proposed development based upon a range of ground drainage techniques that can be employed across the development. Surface water flood routing for the proposed development will also route flood water in the extreme events away from building footprints into areas of containment, such as swales and open storage structures along the landscaped green corridor.