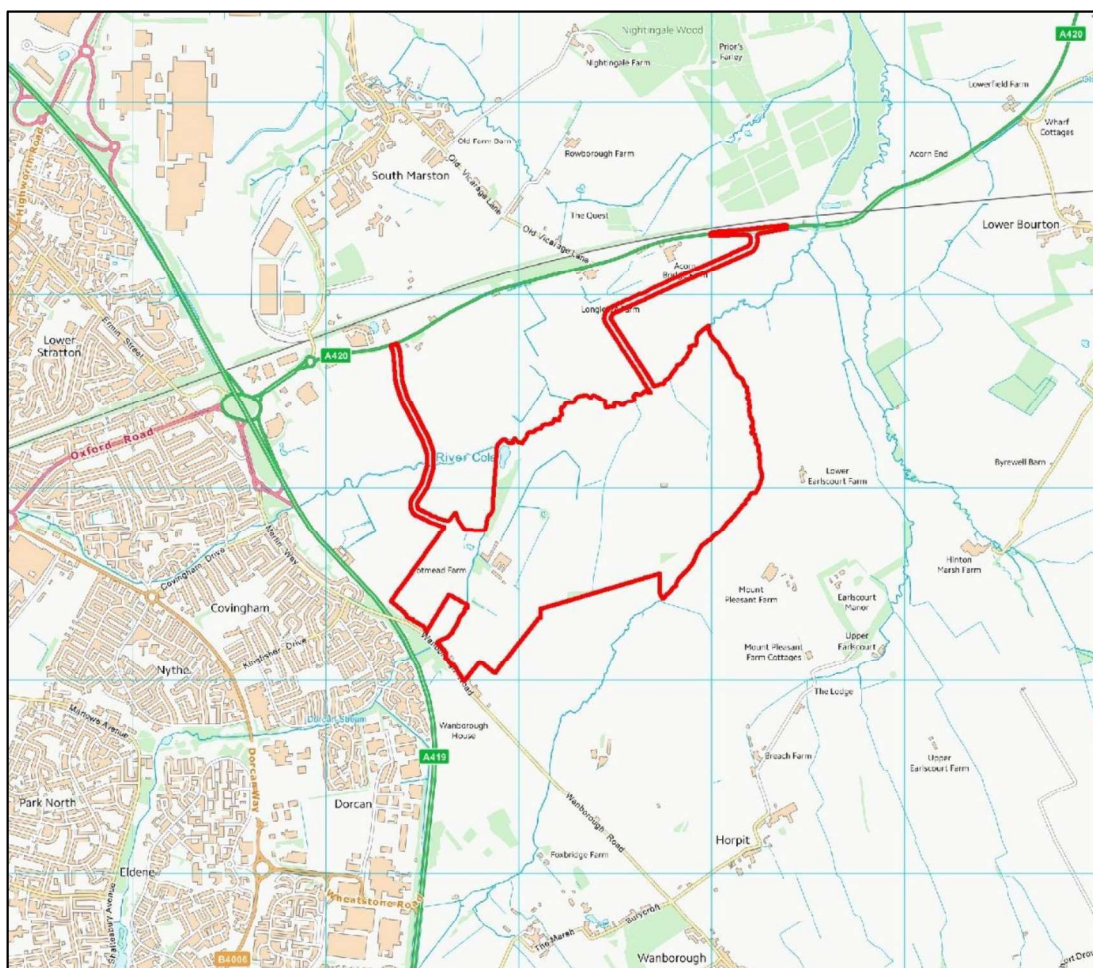


## 2 Site Setting

### 2.1 Site Description

- 2.1.1 The Lotmead Farm Villages site is located to the east of Swindon, within the area allocated for the Swindon New Eastern Villages. The approximate postcode of the site is SN4 0UY and the centre of the Site is located at approximate grid reference 420,500(E) 186,000(N).
- 2.1.2 The site lies within the administrative boundary of Swindon Borough Council (SBC). The overall site area is 168.7 ha.

Figure 2.1: Site Location Plan



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- 2.1.3 The Site is located to the east of the A419(T) and south of the A420, east of Swindon. It comprises the Lotmead (Earlscourt) and Lower Lotmead (Lower Earlscourt) villages. A site location plan is provided in **Figure 2.1** and **Appendix A**.
- 2.1.4 The northern boundary of the Site is largely formed by the River Cole, the eastern boundary by the Liden Brook, the southern boundary by land ownership field boundaries, and the western boundary by the A419(T) and Wanborough Road, the Dorcan Stream and field boundaries.
- 2.1.5 The Site is largely open farmland, albeit it also comprises – inter alia –
- Lotmead Farmstead, including dairy farm buildings;

- Lotmead 'Pick Your Own', which comprises various fruit and vegetables, a farmshop/café with outside seating area, animal and bird sanctuary/farm and children play area;
- Lotmead Business Village – renovated farm buildings offering business accommodation; and,
- Lotmead cottages.

2.1.6 The Site also includes a Scheduled Ancient Monument in its south west corner along Wanborough Road, which comprises a former roman settlement, now largely below ground

## 2.2 Topography

2.2.1 A topographic survey of the Site has been undertaken by the Greenhatch Group in October 2013 to Ordnance Datum and Ordnance Survey National Grid (OSBG36) (see **Appendix B**).

2.2.2 Levels at the Site vary from approximately 95m to 88m above Ordnance Datum (aOD). The Site is highest where it meets Wanborough Road. The lowest part of the Site is the north-eastern corner where the Liden Brook meets the Liden Brook.

2.2.3 Gradients at the Site are relatively gentle, with the central third of the Site being roughly flat at an elevation of 91m aOD.

2.2.4 The Site boundaries are largely formed by watercourses, and so the general trend is for the boundaries of the Site to be lower than the centre, with a general fall to the north-east in favour of the dominant watercourse – the River Cole. The road is higher, and so the western boundary of the Site is higher than the rest of the Site.

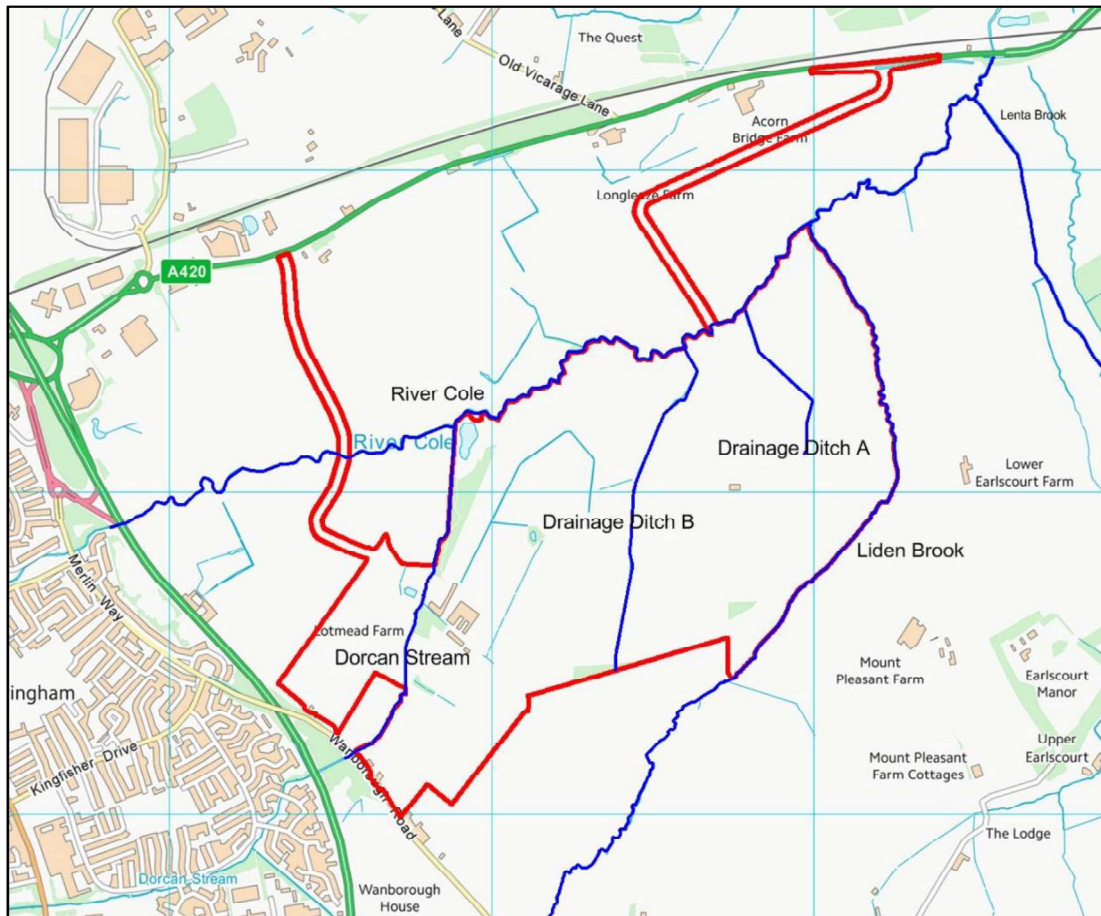
## 2.3 Hydrological Setting

2.3.1 There are a number of designated Main River channels that flow through the Site (see **Figure 2.2**). These are the River Cole, Dorcan Stream and Liden Brook. The Lenta Brook is another Main River tributary of the River Cole lying to the east of the Site and converging with the River Cole just upstream of the A420.

2.3.2 The River Cole flows from west to east along the northern boundary of the Site and is tributed by both the Dorcan Stream and the Liden Brook. The Dorcan Stream is the westernmost of the watercourses on Site and flows from south to north, to the east of the main Lotmead Farm buildings and access. The Liden Brook flows broadly in a south to north direction along the southern and eastern boundaries of the Site; its confluence with the River Cole is at the north eastern corner of the Site.

2.3.3 There are also two land drains (marked as Drainage Ditches A and B in **Figure 2.2** below) across the Site which drain into the River Cole, flowing north-south.

Figure 2.2: Modelled watercourses through site



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- 2.3.4 It is understood that there are five Flood Storage Areas (FSA) located upstream of the Site, within the existing urban area of Swindon, on the River Cole, Dorcan Stream and Liden Brook. Of these, the Wanborough Road flood storage area on the Dorcan Stream is located between the A419(T) and Wanborough Road, close to the Site.
- 2.3.5 It is understood that flooding has occurred historically in Covingham, upstream of Wanborough Road FSA, which may have been exacerbated by the FSA control structure. Planning policy states that a development cannot increase flood risk to third parties, and therefore this Lotmead Farm Villages Development cannot increase flood risk to existing communities. Furthermore, as demonstrated by the model, the outflow to the FSA and the elevation of Wanborough Road are such significant controls to water levels upstream and downstream that the impact of any development downstream of the FSA would have negligible impact upstream of the FSA.
- 2.3.6 Opportunities to provide additional benefit to the existing community of Covingham as part of the Development are limited. The control structure at the FSA influences water levels to such an effect that any additional storage provided downstream would have no material impact. Additionally, there is limited scope to provide additional storage immediately downstream of the road due to the presence of the scheduled ancient monument. It is not within the development team's control to dictate or amend operating rules of existing EA flood defence structures or reasonable to provide for possible future scenarios in terms of operating procedures at Wanborough Road FSA and alleviation options for Covingham.

## 2.4 Existing Drainage Arrangements

### On-Site Drainage

- 2.4.1 The site consists primarily of open agricultural land, such that surface water would either drain via natural infiltration into the ground or would drain to the existing ditches and watercourses within and adjacent to the site.
- 2.4.2 There are a few farm buildings and also Lotmead Business Park within the Site boundary, which may have private sewer connections, but there are no publicly adopted sewers within the Site marked on the Thames Water Asset Location maps. There are however several Discharge Consents associated with existing buildings on the Site, which would suggest that treated foul and surface water may currently be discharged into the watercourses at the Site rather than discharged to sewers.
- 2.4.3 There is therefore very little formal surface water drainage at the Site.
- 2.4.4 Existing impermeable areas within the proposed site are insignificant relative to the total site area.

## 2.5 Geology and Hydrogeology

- 2.5.1 The majority of the Site is underlain by the Ampthill and Kimmeridge Clay Formation bedrock. Parts of the Site adjacent to the principal watercourses also have superficial alluvial deposits.
- 2.5.2 The clay bedrock is designated as an Unproductive Stratum. The alluvial deposits are designated as a Secondary A Aquifer. This would indicate that the clay bedrock has a very low permeability, and that the alluvial deposits have some permeability. The infiltration potential of the alluvial deposits would be likely to be dependent on groundwater conditions; infiltration rates and groundwater levels should be determined at detailed design stage through an intrusive site investigation. Therefore, without the benefit of bespoke infiltration testing results, it is considered that the likelihood of widespread, if indeed any, sustainable infiltration drainage is very unlikely.
- 2.5.3 The EA groundwater maps show that there are no Source Protection Zones associated with the Site.