

Site at Mangrove Road, Hertford

Site Access Assessment

August 2014

Christ's Hospital Foundation

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Issue and revision record

Revision	Date	Originator	Checker	Approver	Description	Standard
A	July 2014	D Friel	S Almond	D Friel	Draft Issue	
B	July 2014	D Friel	S Almond	D Friel	First Issue	
C	August 2014	D Friel	S Almond	D Friel	Second Issue	

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1.1 Overview

Mott MacDonald has been commissioned by Christ Hospital Foundation to provide a summary note which explains the access potential for a proposed residential development at Mangrove Road, Hertford. It is understood that the proposed site could accommodate 50 to 80 residential dwellings. The location of the site is shown in **Figure 1**.

Figure 1 : Mangrove Road Site Location



Source: Background Mapping - Ordnance Survey data © Crown copyright and database right 2014

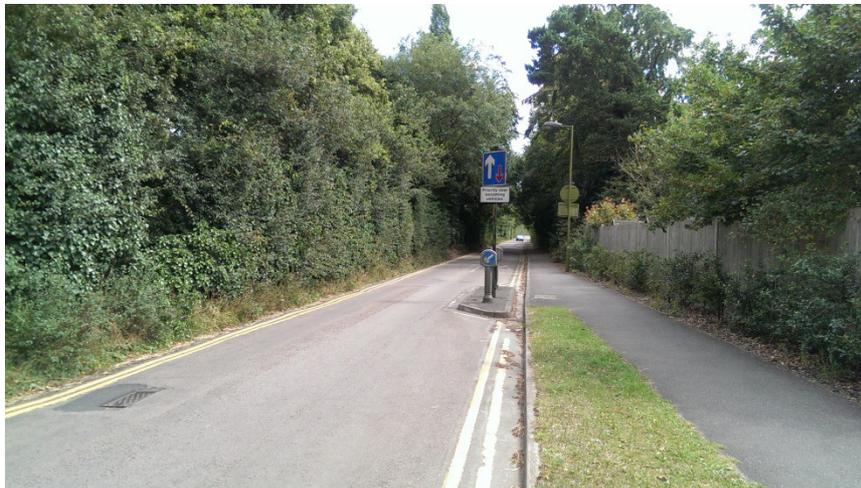
The potential for providing access to the development site are considered in the following sections. A site visit was undertaken on Wednesday 16th July 2014.

1.2 Vehicular access

Vehicular access to the site would need to be taken from Mangrove Road. Along the site frontage, the road is subject to a 30mph speed limit and further to the north there are regular traffic calming features that help to maintain appropriate speeds. The road width along the site

frontage reduces to below five metres, and there is no central line marking. It is possible that two movements involving one or more lorry (HGV) would be restricted, although it is expected that this would not be a regular occurrence. A view on Mangrove Road towards the site frontage is provided in **Figure 2**.

Figure 2 : View of Mangrove Rd, south towards site frontage



Along the site frontage and to the north, parking is restricted due to double yellow lines being provided along both sides of Mangrove Road. To the south, through the daytime parking is restricted by a single yellow line. A footway is provided on the eastern side of Mangrove Road, although the width is limited to approximately one metre along the site frontage.

As shown in **Figure 1**, there is an existing vehicular access on the opposite side of Mangrove Road and this will potentially influence the exact location of any access for the proposed site. However, given the alignment of the road it is expected that an appropriate access, with visibility splays, could be provided in the central part of the site. Some vegetation along the site frontage may need to be removed / cut back to provide the required visibility splays from the site access.. It is expected that the technical design guidance contained in the “Manual for Streets” document would apply at this location, and the visibility splay would need to be 2.4m x 43m. A possible arrangement is shown indicatively in **Figure 3**. The location of mature trees may dictate the exact position of the access and some tree root protection may be needed. However, there is potential to provide an alternative access further to the north or south of the position indicated

Figure 3 : Indicative site vehicular access



Due to the limited width of the footway and the road carriageway, it is likely that the highway authority will require some localised widening from the site access to the existing traffic calming to the north. It is unlikely that additional widening to the south would be justified.

In summary, it is expected that a vehicular access arrangement is achievable, although some local widening of Mangrove Road may also be required.

1.3 Sustainable transport links

The site benefits from a good standard of pedestrian connectivity. There is an existing footway of an adequate width that runs along the western side of Mangrove Road. This provides a connection from the site to the town centre, which is less than 0.5 mile walking distance. There is a footpath from Mangrove Road to the town centre, with a subway providing a traffic free crossing of the A414.

The same footpath provides a direct link to Abel Smith Primary School, which is less than 0.4 mile from the site. Morgans Primary School is also within walking distance. Simon Balle secondary school is located on Mangrove Road, a short distance to the north of the site.

There are no dedicated cycle facilities within the immediate proximity of the proposed site, although it is expected that cyclists would be able to safely use the local residential roads. The A414 does present a barrier to cycling between the site and the town centre, and it is not permitted to cycle under the existing subways. It is possible that the local authority would seek contributions towards cycle infrastructure improvements.

The nearest bus stops are provided on the A414 London Road and are within easy walking distance, although pedestrians would need to use the subway at the nearby roundabout to access stop provided on the northern side of the road. The stops are approximately 0.4 mile from the site. The stops are served by a comprehensive number of routes and provide a high frequency of bus services.

In summary, the proposed site is well located and existing pedestrian connections are good. There is a lack of dedicated cycle infrastructure provision and it is possible that the local authority make seek contributions towards local improvements.

1.4 Offsite highway impacts

It is expected that the vast majority of traffic movements associated with the proposed site will be routed to / from the north, and will use the A414 London Road to access Mangrove Road. It is understood that the A414 corridor can become extremely busy at peak times and that congestion can occur. This was observed at the site visit, and it is apparent that significant delays can be a result of the capacity constraint at the A414 London Road roundabout.

The potential impact of the proposed development needs to be considered against Paragraph 32 of the National Planning Policy Framework (NPPF) which states that “development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are **severe**.”

At the current time, it is unclear whether the existing congestion levels on the A414 can be considered as being severe although it is expected that this proposed development and others will contribute to a worsening of the current conditions. Given the scale of the development (approx. 50 to 80 dwellings) and the sensitivity of the local road network, it is expected that a full Transport Assessment would be required to review the potential impacts of the development traffic on the operation of the Mangrove Road / A414 London Road junction and the A414 London Road / Gascoyne Way roundabout.

It is expected that this proposed development will need to contribute towards A414 corridor improvements. The level of contribution will be dependent on the availability of spare capacity at the A414 roundabout, and the scale of works identified as part of any Transport Assessment and / or a route strategy being undertaken by the local highway authority (see the following section). It is understood that the development scenario could range from 50 to 80 residential dwellings. Using data from the TRICS database (a planning tool using survey information from other similar sites) it is possible to estimate the level of traffic that could be generated by the development. For the purposes of this exercise, average trip rates have been used.

The estimates are based on three development scenarios, which represent the potential range of units that could be accommodated on the site. The dwelling mix for each indicative development scenario are informed by the tenure / unit mix proportions as identified in the Strategic Housing Market Assessment Update report (2013). A summary of the average trip rates associated with each development scenario is presented in **Table 1.**

Table 1 : Development scenario trip rate analysis

50 units	Arrival trip generation	Departure trip generation	Total trip generation
0800-0900	5	16	21
1700-1800	14	9	23

65 units	Arrival trip generation	Departure trip generation	Total trip generation
0800-0900	6	21	27
1700-1800	19	11	30

80 units	Arrival trip generation	Departure trip generation	Total trip generation
0800-0900	7	26	33
1700-1800	23	14	37

Source: Deloitte LL and TRICS database V7.1.1

Depending of the type of residential unit, the difference of 30 units could result in approx. 15 additional peak hour vehicle trips being generated by the site. Whilst this is unlikely to have a significant impact on the operation of the site access and on Mangrove Road, there would be implications in relation to the mitigation of wider highway impacts and potential contributions (see the following section).

1.5 Cumulative development impacts

To inform the emerging Local Plan, it is expected that Hertfordshire County Council will produce an “Infrastructure Delivery Plan” in late 2014 / early 2015, and this will include a focus on improvements to the A414 through Hertford. It is understood that detailed traffic modelling of the local road network is currently being undertaken to inform this study. This work will identify any works that are needed at the A414 London Road corridor to facilitate the extent of development identified within the emerging Local Plan. It is anticipated that the Local Plan would present a mechanism to ensure that an appropriate contribution is made by the Mangrove Road residential site towards such highway improvements.

There are proposals to expand the nearby Simon Balle School, and that the current scheme is to develop a primary school age element to the school. A planning application for the proposal was submitted in July 2014. By the year 2021, there could be an additional 420 students located at the site, plus 60 nursery places. The planning application is supported by a Transport Assessment. The planning application proposes a new vehicular access onto Mangrove Road, a new pedestrian crossing on Mangrove Road and due to the level of existing traffic and additional traffic associated with the proposed school expansion, it is proposed that a mini-roundabout is introduced at the Mangrove Road / Hagsdell Road junction. The introduction of a 20mph speed limit on part of the local road network is also proposed, but this is dependent on a separate application process. The school will also introduce a parking management plan to ensure that access to the site and the potential impact on Mangrove Road is mitigated.

The potential expansion of the school will add further pressure to the existing capacity constraints on the Mangrove Road and A414 road corridors, and this will need to be reflected in any assessment undertaken to support the proposed residential site. The Transport Assessment submitted in support of the proposed school does include traffic flow information and also analysis of the Mangrove Road / Hagsdell Road junction. This could be used to assess the potential local impact of the residential development, although the scope of the submission does not extend to the A414 corridor. It should be noted that a strategy to improve the A414 corridor could reduce the existing “rat run” issue that occurs on Mangrove Road and Hagsdell Road. Assessing the local impacts without an understanding of the more strategic proposals could prove to be premature.