



The Heights Primary School
Transport Assessment
Mapledurham Playing Fields, Caversham, Reading



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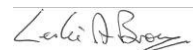
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Project Revision Sheet

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1 Introduction

- 1.1 MLM Consulting Engineers have been commissioned by Turner & Townsend/the Education Funding Agency (EFA) to provide a Transport Assessment (TA) associated with a proposal to provide a new permanent School at the Mapledurham Playing Fields, Upper Woodcote Road for the Heights Primary School. The Heights Primary school is currently located on a temporary site at 82 Gosbrook Road, Caversham approximately 2km south east from the Site towards Reading town centre. Refer to the Location Plan attached at **Appendix 1** which shows the existing and proposed school sites and the existing catchment area of the School.
- 1.2 Increasing demand for primary school places is currently a national issue. Looking to the future, additional housing is to be provided in the area, which will in turn lead to increased pupil numbers across the borough.
- 1.3 The current pupil roll of the existing school at Gosbrook Road is 168 pupils with 2 forms of entry with 25 pupils per class in Reception, Years 1 and 2 and 18 in Year 3 and has grown organically since the school opened in September 2014. The school currently has planning permission to continue at Gosbrook Road until July 2018 to accommodate 220 pupils although that site has limited space. The proposed School Site is therefore required for the beginning of the 2018/2019 academic year to enable the school roll to continue to expand as the pupils move through the year groups to Year 6. The proposed School Site will provide two forms of entry (max 30 pupils per class) from Reception Year through to Year 6. See Table 1.1 below for the existing and future pupil roll although the maximum pupil roll is expected to increase incrementally to the maximum over several years.

Table 1.1 – Pupil Roll over time

Year Group	Sept 2016	Sept 2017	Sept 2018	Sept 2019	Sept 2020	Sept 2021	Sept 2021	Sept 2022	Sept 2023
	At Gosbrook Rd		At Mapledurham Playing Fields site						
Reception	50	50	60	60	60	60	60	60	60
Year 1	50	50	50	60	60	60	60	60	60
Year 2	50	50	50	50	60	60	60	60	60
Year 3	18	50	50	50	50	60	60	60	60
Year 4		18	50	50	50	50	60	60	60
Year 5			18	50	50	50	50	60	60
Year 6				18	50	50	50	50	60
Total	168	218	278	338	380	390	400	410	420
Yearly Increase	0	50	60	60	42	10	10	10	10
Staff Nos	31	36	41	46	48	48	49	49	50

- 1.4 For the fully occupied school of 420 pupils the staffing levels are expected to increase to 50 members of full and part time staff.

The Scope of the TA

- 1.5 Pre-application meetings have been held with Reading Borough Council (RBC) to scope the transportation issues of the proposals sufficient for the planning application. This TA takes due account of current best practice advice contained in 'Transport evidence bases in plan making' 2014 within the government's 'Planning Practice Guidance' website.
- 1.6 Following this introduction the report will be structured in the following manner:-

Section 2, Baseline Conditions: Describes the existing site and adjacent areas, local highway network, accident records and public transport.

Section 3, Proposed Development & Access Arrangements: Considers details of the proposals along with the description of the site access arrangements and proposed parking provision.

Section 4, Trip Attraction & Impact: Considers the potential implications of development trips on the local highway network and impact.

Section 5, Mitigation: Considers mitigation measures to be put in place to reduce the impact of movements attracted by the proposals and the school in general.

Section 6, Conclusions: Provides a summary of the report and draws together its conclusions.

2 Baseline Conditions

Existing Site for Proposed School

- 2.1 The proposed School Site is located within the Mapledurham Playing Fields at the northern end of the Reading Borough in the Caversham area. The Site is south of the A4074 Upper Woodcote Road and surrounded by residential areas to the north and west with the playing fields pavilion building, car park and tennis courts to the east. To the south of the Site is the large expanse of the playing fields with residential areas further south. The Site is relatively flat and forms a trapezium shape of about 0.5 hectares. Refer to Site Location Plan at **Appendix 1** and Google aerial image below showing the Site in red. Refer to **Appendix 2** for the existing site layout.



- 2.2 Table 2.1 below lists the clubs that use the Playing Fields and responded to a questionnaire with regards their times of the day usage. It should be noted that these do not coincide with typical school drop off and collection times.

Table 2.1 Playing Field Clubs Usage

Group Name	Response
Bridge Club	Our bridge club plays at the pavilion every Thursday from 7:30pm until 10:30 pm
Caversham Trents Football Club	Our football club use MPF Saturdays and Sundays games.9am-1pm Monday through to Thursday Training as well as Saturdays through the summer months. We also use MPF and its pavilion for our presentation days and social events
Escape Toddler Group	The playgroup runs every Monday and Thursday morning 10:00-11:30 in term time only. We mainly use the hall, kitchen, toilets and storage cupboards. When the weather is warm and dry we open the rear doors and fence off a small area. Usually for sand and water play and slides/seesaws. Our attendees also use the car park.
Friends of Mapledurham Playing Fields	Practical ½ day work party sessions Public bat watching events during the summer
Soulball	Hired pavilion for futsal sessions with Caversham Trents on Wednesday evenings.
Volunteer Football Club	Football club uses the hall changing facilities some Sunday's around 10am to 12noon. I've been part of volunteer groups using the hall for Christmas Fairs, Summer fetes etc.

Site Access & Parking

- 2.3 The playing fields are accessed via two vehicular routes, a formal road leading to a car park accessed via Upper Woodcote Road and a gated unmade track to the south with access taken from Chazey Road. Refer to Photos 1 and 2 below. Pedestrian access is also provided via these two accesses with additional pedestrian access at the south eastern corner through a small area of woodland and along the western boundary of the playing fields.

Photos 1 & 2 : Upper Woodcote Road and Chazey Road Accesses



- 2.4 The main access road forms a dropped kerb vehicle crossing with Upper Woodcote Road and has visibility splays with Upper Woodcote Road well in excess of 2.4 x 70m in both directions which is in accordance with the Manual for Streets and DMRB criteria for the 30mph speed limit on Upper Woodcote Road. Refer to Photos 3 & 4 below

Photos 3 & 4 : Existing Upper Woodcote Road Access Visibility



- 2.5 The main access road is approximately 80m long and has a 3.9m carriageway width which is just short of accommodating two way vehicle flows. However, there are approximately 3.5m wide flush grass verges on each side of the access road which can be overrun by opposing vehicles. The access road leads to the playing fields car park which is mainly sub-based surfaced with a clockwise operation signed on entrance. Refer to Photo 5 and existing site layout plan at **Appendix 2**. Apart from the 9 tarmacked surfaced parking spaces adjacent to the pavilion building the rest of the car park area is unmarked but could feasibly accommodate about 30-35 parked cars depending on efficiently spaced car parking. Cycle racking for 8 bicycles is also provided adjacent to the tennis courts. Refer to Photo 6.

Photos 5 & 6 : Car Park entrance & cycle racking



Existing School Site – Gosbrook Road

- 2.6 The Heights Primary School at Gosbrook Road currently has a pupil roll of about 170 pupils aged between 4 to 8 years old. The school has 31 members of staff; mostly full-time but some part-time. The majority of the children attending the school reside in the western half of Caversham.

- 2.7 The school educational day starts at 08:45hrs and finishes at 15:30hrs. The school also operates a breakfast club from 07:30am with about 20 pupils attending. The schools also have after school clubs running most days of the week with up to 40 children attending each day. These clubs help alleviate congestion before and after the school day by removing pupil movements to/from the school at the busier start and end times of the formal school day.
- 2.8 The end of the school day tends to be busier than the start of the school day. This is due to vehicles waiting to pick up pupils that congregate at the end of the school day rather than be spread over a longer time period during drop-off before the school day starts. However, the school day finishes well before the typical highway network's PM peak hour of 17:00-18:00hrs and any through traffic using the adjacent highway network will be less than at the start of the school day which is during the highway network's AM peak hour of 08:00-09:00hrs.

Off-site Parking & Local Highway Network

- 2.9 The A4074 Upper Woodcote Road is classed by RBC as a Main Transport Corridor and is a 7.7m wide lit residential distributor road operating under a 30mph speed limit. It leads to the south east via Woodcote Road and Peter's Hill towards Reading Town Centre and north west towards Oxford. It is characterised by frequent side road junctions, central hatch areas and private residential accesses. Refer to Photos 7 & 8 below.

Photos 7 & 8: Upper Woodcote Rd looking west from Woodcote Rd junction & looking east towards Speed Camera from Site Access



- 2.10 Upper Woodcote Road has an AADT traffic flow of about 11,000 vehicles with an AM peak hour flow of about 1,100 two-way movements which are approximately balanced in each direction. HGV percentage for this period is 4.5%. Traffic flows for the 15:00-16:00hrs school collection period are lower at about 900 movements. The general alignment of the A4074 towards the town centre and the borough boundary to the west is curvy alignment and speeds are generally in line with the speed limit although the section of carriageway near the Site is relatively straight and speeds in this area can be higher which has warranted the installation of a speed camera just to the east of the Site access. Refer to Photo 8 above.
- 2.11 The carriageway has no parking restrictions although there are double yellow lines at the junction with Knowle Close. Properties in the area have generous off-street parking and on-street parking seldom occurs even off the residential side streets. Upper Woodcote Road adjacent to the Site has a 1.2m wide footways within grass verges on both sides of the carriageway.

Existing Traffic and Pedestrian Flows

- 2.12 A site visit was undertaken on Wednesday 30th November, 2016 before, during and after the school drop-off times to observe traffic and pedestrian conditions on the surrounding highway network to the proposed Site. Very few vehicles accessed the playing field access during this time and pedestrian flows in the area are relatively light. Traffic flows along Upper Woodcote Road in the vicinity of the Site were relatively uninterrupted during the AM peak period and very little queuing occurred at side road junctions. Observations were also recorded of where the queuing forms along the A4074 further east of the Site back from the A4074/Church St signalized junction. The length of this queuing is regularly over a kilometer with motorists who heading towards the town centre via the A4155 bridge over the River Thames. Pupils from the school's catchment area currently have to pass through this signalized junction and the queuing to access the current Gosbrook Road site.

Personal Injury Accident

- 2.13 Recorded Personal Injury Accident (PIA) data for the most recent 5 year period 2011-2016 have been obtained from Crashmap website but no recorded accidents were registered within a 500m zone of the Site. The accident map plot is attached at **Appendix 3**.
- 2.14 Although any accident is extremely unfortunate it is considered that the lack of recorded accidents in the 5 year period near to the Site should not be a particular cause for concern. Notwithstanding this, the school proposals with improvements to the proposed access arrangements and internal drop-off/collection arrangements and pedestrian crossings of Upper Woodcote Road are likely to maintain this excellent accident record in the area.

Walking & Cycling

- 2.15 Refer to accessibility plan at **Appendix 1**. All streets in this area are provided with footways, dropped kerb crossings and street lighting whilst the general nature of the area is one of a network of streets within a mainly residential area. As a result, the permeability of the area for cyclists and pedestrians is good, reflecting the use of the area by all modes of transport and not just the private car. However it should be noted that there are no dedicated pedestrian crossing facilities for Upper Woodcote Road and this needs to be addressed.
- 2.16 There are no designated cycle lane facilities in the vicinity of the site. Due to the nature of the surrounding highways it is unlikely that children will cycle to/from the school using carriageways although more confident staff members could use this mode of transport. National Cycle Route 5 is the closest cycle route to the Site which runs along Hemdean Road about a 1.5km to the east of the Site, beginning in Reading and following the northern half of the Thames Valley cycle route crossing the Chiltern Hills and passing through Wallingford, Didcot & Abingdon. The Reading Cycle network is signed throughout the town with routes converging in the central area. They are provided via a combination of routes on the carriageway or footways, either shared with or segregated from pedestrians or designated cycle paths. Refer to Reading Cycle Route Map at **Appendix 4**.

Public Transport

- 2.17 The nearest bus stops to the school are located on Upper Woodcote Road adjacent to the Site access and are annotated on the Accessibility Plan at **Appendix 1** with the bus frequency table and bus map in **Appendix 4**. Refer to Photos 9 and 10 below. These bus stops are served by bus numbers 145C, X39 and X40 which serves Woodcote, Henley, Reading Wallingford & Oxford. The X39 and X40 services provides a direct link to Reading town centre approximately 2.5km to the south east where other bus services to numerous destination are available including. Reading Railway Station also located about 2.5km to the south east provides access to train services provided by Great Western Rail to London Paddington, Newbury, Ealing Broadway, Oxford and beyond. Refer to **Appendix 4** for a train network plan and train frequencies.

Photos 9 & 10 : Westbound & Eastbound Bus Stops adjacent to Upper Woodcote Rd access



- 2.18 The existing site is served by public transport; however this is generally not considered an appropriate form of travel for primary school children attending the proposed school, particularly as most pupils are within walking distance of the site. However, buses and rail services do offer potential opportunities for some staff to travel to and from the school.

3 Proposed Development & Access Arrangements

- 3.1 As mentioned in Section 1, the development proposals are to relocate the Heights Primary School from its current temporary Gosbrook Road site to a new Site at Mapledurham Playing Fields to enable the school to expand to a maximum roll of 420 pupils in purpose made buildings and play space to current education standards. Reception Year intake for the new school will therefore start at 60 with the relocation to the new Site planned for September 2018. For this opening year the school will be at least two thirds full. As the full 2FE years pass through the School the school will be fully occupied at the latest by September 2022. Staff numbers will increase from the current 31 to about 50 members of staff. The proposed site layout is attached at **Appendix 5** and shows the proposed building, accesses and external areas.
- 3.2 To cater for the increased level of trips to and from the Site it is proposed to improve the existing site access junction with Upper Woodcote Road to provide a formal access junction with dedicated footways coming into the Site, widening the access road from 3.9m to 4.8m to facilitate two-way vehicle flows and rearrange the internal Playing Fields car park to improve vehicle and pedestrian circulation. Refer to **Appendix 6** plan for these proposed improvements to the access road and further improvements to Upper Woodcote Road consisting of new pedestrian refuge islands, carriageway markings and signage. The plan attached at **Appendix 7** shows improvements to the Playing Fields car park layout. The rearranged car park layout can comfortably cater for 30 vehicles although ample space around the circulation route can accommodate more informal parking. Access to the new school Site is taken via the playing fields car park with a dedicated footway route through to the School to the pedestrian access on the eastern boundary of the Site.
- 3.3 The proposed staff car park is located at the northern end of the school Site with separate in and out accesses to the Playing Fields car park. In order to improve the AM drop-off period it is proposed to operate a staff managed morning drop-off area within the staff car park for those parents happy to have their children quickly disembarked from parents vehicle. This has been proven very successful at other schools in reducing parking congestion which with the proposed layout can be promoted at this Site. This greatly improves the efficiency of vehicle movements through the Site rather than parents trying to find a space to park and then safely walk their younger children to the School gates. The remaining Playing Field car park would be used by other parents vehicles who do not want to use the quick on-site drop-off facility i.e take their children to the school gates. Due to the nature of the afternoon collection period and difficult logistics of organising pupils for a similar quick collection facility, the school staff car park/drop-off area will be closed off and parents collecting by car will need to use the MPF car park or by other arranged collection points off site.
- 3.4 The main pedestrian access to the School is located adjacent to the east side of the building with 2 other pedestrian accesses further south to the hard informal area and on the southern boundary of the Site onto the playing fields.

Delivery & Service Vehicles

- 3.5 Delivery and refuse vehicles will serve the school Site from the playing field car park area and will be able to enter and leave in forward gear. It is not expected that such vehicles will need to enter the staff car park area but special maintenance vehicles can do so but are likely to require arranged supervised management should they need to reverse in i.e large rigid lorry for furniture delivery vehicle. Waste collection and deliveries are expected to be restricted between 09:00 to 15:00 to avoid the beginning and end of the school day. Refer to vehicle swept paths at **Appendix 8**.

School Trips

- 3.6 School trip small coaches/mini buses can easily access the Playing Field car park but large coaches would need special arrangements to enter the Playing Field car park by coning off parking areas to facilitate access. It is likely that any larger coaches will pick up children from Upper Woodcote Road with pupils being escorted between the school buildings and the coach by staff. Refer to vehicle swept paths at **Appendix 8**.

School Site Parking

- 3.7 RBC parking standards are published in a Supplementary Planning Document and adopted in October 2011 and are based on a zonal system depending on where in the Borough the site is located. The proposed Site falls within Zone 3 which is classed as a 'Secondary Core Area'. The car parking standards are expressed as maxima and for Land Use Class D1: Primary Education is based on 1 car parking space per 1FTE staff and 1 drop-off space per 10 pupils. Therefore for the proposed school of 50 staff (assumed 40FTE) and the maximum 420 pupil roll this equates to a maximum 40 parking spaces for staff and 42 drop-off spaces. This level of parking provision is not in keeping with sustainable transport policies and the level of parking has been calculated on travel surveys of the existing staff and pupils' parents and how they currently travel to the temporary Gosbrook Road site and how they will travel to the new Site.
- 3.8 The proposed school will be provided with 20 formal on site car parking spaces, including 2 disabled spaces which are for staff only. Pre-arranged use of the disabled parking spaces for visitors can be arranged by appointment only as the staff car parking gates will be shut after 8.45am when the school day commences.
- 3.9 Any community use of the proposed school will be outside of normal school hours and the staff car park area or the wider Playing Field's car park would be available for this community use.
- 3.10 The RBC cycle parking standards are minimum standards and are applicable irrespective of zoning. The RBC's SPD document states that minimum cycle parking should be provided for primary schools of 1 space per 5 FTE staff for staff cycling and 1 space per 15 pupils for Years 1 to 3 and 1 space per 10 pupils for Years 4 to 6. This equates to a minimum cycle parking provision of 10 spaces for staff and a minimum 30 spaces for the proposed maximum roll of 420 pupils. These minimum requirements are provided with 3No covered cycle/scooter pods providing 48 cycle/scooter spaces for children; 1 pod located at the northern corner of the building and the other 2 at the southern corner. 5No covered cycle stands are located on the west side of the proposed school building providing 10 staff cycle parking spaces. Refer to proposed layout plan at **Appendix 5**.

- 3.11 Consideration should be given for the introduction of a suitable cover with additional racking to take into account increased cycle/scooter usage encouraged via the Schools' Travel Plan. Refer to Photos 11 and 12 below showing examples of scooter racking and scooter/cycle parking pods.

Photos 11 & 12 – Examples of Scooter Racking and Scooter/Cycle Parking Pods



4 Trip Attraction & Impact

- 4.1 The quantum of trips attracted to the proposed School has been assessed by using a recent existing travel mode survey undertaken by the School for both pupils (parents) and staff travel. Refer to **Appendix 9**. The survey for pupils (via parents 79% response) and staff (100% response) recorded their existing main travel modes to the Gosbrook Rd Site and main future travel mode for the proposed Site and are summarised in the tables below. This data is considered to be relevant for the current and immediate future school travel behaviour.
- 4.2 Due to the nature of these surveys there are inconsistencies with car sharing data where siblings have been recorded individually as coming by car and not as car share. The tables have been produced assuming the worst case scenarios i.e where staff or pupils come by car or walk on different days are assumed to travel by car.
- 4.3 The proposed pupil/staff roll table assumes that a 60 PAN will start when the new school opens and carries through. In Sept 2018 when the school opens the school could be only two thirds full with 280 pupils and 41 staff members.

Table 4.1 – Pupil Travel Data for the existing The Heights School, Gosbrook Rd

Main Mode of Transport	% of Pupils using mode	Pupil Trips for existing pupil roll - 168 pupils
Car	63.6%	107
Car Share	12.9%	22
Cycle	3.8%	6
Public Transport	1.5%	2
Walk	18.2%	31
Other	0%	0
Total	100%	168

Table 4.2 – Pupil Travel Data for the proposed The Heights School, Mapledurham Playing Fields

Main Mode of Transport	% of Pupils future modal split	Pupil Trips for existing pupil roll - 168 pupils	Net Trip Difference between Existing & Proposed Sites – 168 pupils	Predicted Pupil Trips for proposed pupil roll - 420 pupils
Car	20.4%	34	-73	86
Car Share	3%	5	-17	13
Cycle	7.6%	13	+7	32
Public Transport	0.8%	1	-1	3
Walk	68.2%	115	84	286
Other	0%	0	0	0
Total	100%	168	0	420

- 4.4 From the pupil travel tables above the key points are:-
- car mode (inc car share) reducing heavily from 76.5% to 23.4% for the existing and proposed school sites respectively.

- 90 (-73+-17) less pupil trips by car for the existing roll (168 pupils) when travelling to the proposed Site.
- 99 (86+13) pupil trips by car for fully occupied proposed school compared to 129 (107+22) pupil car trips for the current existing school; 30 less pupil car trips.

Table 4.3 – Staff Travel Data for the existing The Heights School, Gosbrook Rd

Main Mode of Transport	% of Staff using mode	Staff Trips for existing 31no staff
Car	64.5%	20
Car Share	0%	0
Cycle	0%	0
Public Transport	19.4%	6
Walk	16.1%	5
Other	0%	0
Total	100%	31

Table 4.4 – Staff Travel Data for the proposed The Heights School, Mapledurham Playing Fields

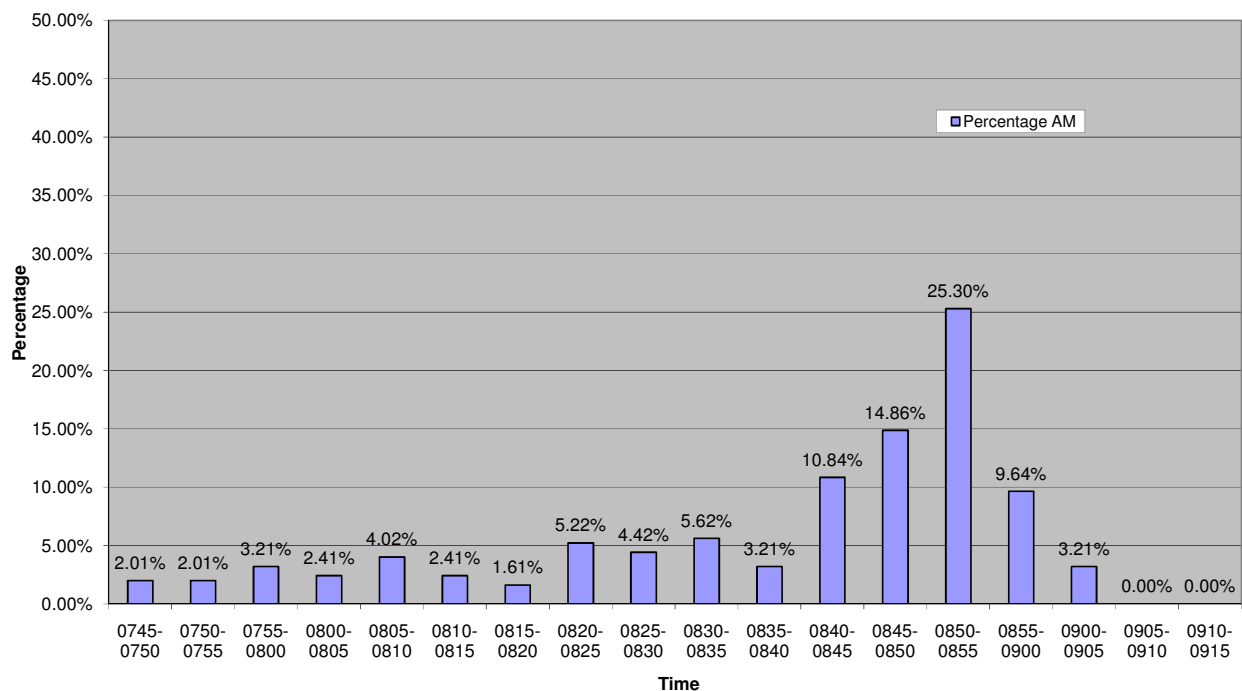
Main Mode of Transport	% of Staff future modal split	Staff Trips for existing 31no staff	Net Trip Difference between Existing & Proposed Sites – 3no staff	Predicted Staff Trips for proposed max pupil roll – 50no staff
Car	45.2%	14	-6	23
Car Share	0%	0	0	0
Cycle	3.2%	1	+1	2
Public Transport	22.6%	7	+1	11
Walk	29%	9	+4	14
Other	0%	0	0	0
Total	100%	31	0	50

4.5 From the staff travel tables above the key points are:-

- car mode reducing from 64.5% to 45.2% for the existing and proposed school respectively.
- Staff Car trips for the proposed school are 23. There is no indication of car sharing which with the more proactive travel plan could easily reduce this down to the 20 proposed staff car parking spaces.

- 4.6 The School have indicated that the proposed 20 car parking spaces are sufficient for their purposes and no staff car parking will occur off-site. Any visitors to the school are expected to park within the Playing Fields car park. In general staff arrive and depart at least half an hour before the school day begins and half an hour after it finishes although many staff are in earlier and leave later than this. This removes staff movements from the peak start and end periods of the school days when most pupils are being dropped off or collected.
- 4.7 As typical with many schools vehicles dropping off/collecting pupils do so away from the school grounds. The amount this happens very much depends on the quality of the drop-off/collection facilities next to or at the school. If delays, perceived by some as congestion, occur within these facilities parents will be inclined to drop-off /collect their children away from the site and walk to/from the school. They will quickly become aware of the parking issues at the school site and the majority of parents will know up to what time they can expect to find spaces in the car park or park elsewhere to avoid the inconvenience of trying to find a car parking space on the Site. This will tend to regulate the use of the available parking and undoubtedly delays will occur at some time during the drop-off and collection periods especially during bad and inclement weather. Parents will also take this into account when taking the decision to use the car park or not as the case may be. They would then adjust their travel times accordingly. However with the proposed School Site set back from the public highway, the available parking in the adjacent Playing Field car park and the AM period managed drop-off area within the School staff car park, this is not expected to occur as will be explained in the following paragraphs.
- 4.8 The on-site drop-off/collection area needs to be suitable to accommodate vehicles at the drop-off/collection times. As stated above in Table 4.2, 86 cars are predicted to drop-off pupils for the school at the start of the day. The graph below shows a typical arrival/departure graph for vehicles taking pupils to school in the morning. This highlights that during this AM period there will be a high turnover of the spaces on site for the drop-offs before the school day starts with a maximum of 25.3% of vehicles dropping off in a 5 minute period before the start of a typical school day. From on-site observations of the current Heights School at Gosbrook Road this spread of vehicles before the school starts is clearly evident with some children being dropped off half an hour before the school day starts and even earlier for the breakfast club. For the predicted 86 cars of the proposed 420 pupil school this equates to 22 cars which can be accommodated within the 30 space Playing Field car park alone irrespective of the managed parent drop-off in the staff car park.

Typical School AM - Vehicle Arrivals / Departures percentages



4.9 The school day finishes at 3.30pm and the collection of pupils at this time will be outside of the local highway network's PM peak hour and will not materially affect traffic flows on the network at that time. However, any vehicles waiting to pick up pupils will congregate at the end of the school day, rather than spread over a longer period before the school day starts. For the school 86 vehicles are robustly predicted to collect pupils after the school has finished. The school operates various after school clubs every day of the week; with homework clubs and activity clubs finishing at staggered times up to 6pm. The school has indicated that 20% of the school's pupils attend these clubs with only 80% finishing and leaving school shortly after the formal school day finishes at 3.30pm. Therefore only 80% of the 86 collecting vehicles will collect pupils shortly after 3.30pm which equates to 69 vehicles. With the 30 parking spaces of the proposed Playing Fields car park this would leave a short fall of 39 vehicles. It is expected that some vehicles would enter the site and find space within the circulation areas although as stated above it is likely that some parents collecting children will arrange to meet older children for collection away from the Site on the public highway or park up and walk to the Site to collect rather than the inconvenience of finding a parking space within a car park that may have reached capacity.

4.10 The route along the access road from Upper Woodcote Road via the Playing Field car park circulation route and back to Upper Woodcote Road is in excess of 250m which can accommodate 40 vehicles and the Site can theoretically accommodate this quantum of vehicles without vehicles backing onto the public highway.

4.11 Section 5 will identify mitigation measures that will go towards alleviating these movements by reducing vehicular traffic attracted to the school.

Construction Traffic

- 4.12 Aside from the operational traffic impact of the proposed development on the surrounding road network, consideration must also be given to the impact of construction related traffic. At this stage, as there are no firm details of the nature of construction traffic some broad assumptions have been made in order to provide an indication of HGV movements. A full Construction Traffic Management Plan (CTMP) will be prepared and submitted by the Contractor should planning permission be granted, prior to construction commencing. The primary focus of the CTMP will be to mitigate the impact of HGV movements associated with the site's development. It is envisaged that there will be HGV's movements required to carry material off site as well as construction materials on. It is considered reasonable to restrict the number of movements (in and out are 2 movements) during the construction period to a maximum of 20 per day. This would on average equate to 1 HGV movement coming into or travelling from the Site every 30 minutes during the working day. It is expected that a routeing agreement for construction vehicles will be implemented but at this stage is likely to be restricted to the A4074.
- 4.13 The actual hours of construction operation will need to be agreed with RBC but are expected to be:-
- 08:00 to 18:00 hrs Monday to Friday with exclusions during drop off/collection periods during term time
 - 08:00 to 13:00hrs Saturdays
 - No Sunday or Public/Bank Holidays
- 4.14 Construction worker trips to the Site will also be considered within the CTMP, with this also identifying ways in which construction workers may be able to access the Site by means other than the single occupancy car (thus limiting the impact of their travel on the surrounding highway network).

5 Mitigation

- 5.1 The proposed school Site, like other schools in the borough, will promote travel by sustainable modes of transport. The School will continue to encourage pupils and staff to access the site by foot, cycle, public transport and car share where possible as part of its Travel Plan with an updated plan submitted with the application to reflect the new school location. Subsequent revisions of the STP will identify further initiatives to be implemented and will be reviewed and modified at regularly intervals. Any updated STP will have the main headline objectives of reducing car journeys to school. As demonstrated in the previous section the relocation of the School to the centre of its catchment area will enable more pupil trips to be made sustainably. RBC currently work with many of the schools in the area, including the Heights, to further develop and improve STPs.
- 5.2 Some of the following aims will be evolved in the developing STP:-
- To support the Healthy Schools Initiative in accordance with the School Development Plan.
 - To keep children and adults in and around the school as safe as possible.
 - To encourage parents and pupils to park and stride or walk to school and promote the health and social benefits of doing so.
 - To promote and encourage cycling to school and to improve the secure storage facilities on site.
 - To be sensitive to the concerns and requirements of the neighbours.
 - To encourage staff to car share and cycle where feasible.
- 5.3 The proposed school Site is ideally situated away from the public highway within a lit residential area with good footway provisions. The proposed access modifications and internal vehicle circulation within the Playing Fields should enable any vehicle journey delays to be contained within the Site and will not result in any queue back onto the public highway. This will ensure that parents and pupils of the new school can safely enter and leave the Site/Playing Fields. A staff managed quick drop-off facility within the staff car park during the AM drop-off period will quickly remove cars from the area that would otherwise park longer whilst taking pupils onto the school grounds.
- 5.4 The proposed pedestrian crossings on Upper Woodcote Road (with the possibility of a school crossing control) and the proposed 'school-keep-clear' markings at the access will bring further improvements to the pedestrian conditions. It is recommended that school ahead warning signs are erected on both Upper Woodcote Road approaches. These signs should be fitted with accompanying wig-wag flashing signs to highlight the signs at the appropriate school times. Refer to **Appendix 6**.

6 Conclusions

- 6.1 MLM Consulting Engineers have been commissioned by Turner & Townsend/the Education Funding Agency (EFA) to provide a Transport Assessment (TA) associated with a proposal to provide a new permanent School at the Mapledurham Playing Fields, Upper Woodcote Road for the Heights Primary School. The Heights Primary school is currently located on a temporary site at 82 Gosbrook Road, Caversham approximately 2km south east from the Site towards Reading town centre.
- 6.2 The existing temporary school site is located outside of the school catchment area; thereby increasing car based trips compared to the proposed Site which is located in the catchment area thereby maximising opportunities to travel to the school by sustainable modes.
- 6.3 The report demonstrates that the School is served by public transport with bus stops located immediately outside the Playing Field's Upper Woodcote Road access. However, public transport is generally not a main form of travel for young school children attending the school, particularly as most pupils live within the school catchment area and can walk to/from the Site. However, buses and rail services do offer opportunities for staff to travel to and from the School.
- 6.4 The personal injury accidents for the surrounding area to the School have been assessed to investigate local safety issues. There were no recorded personal injury accidents recorded within a 500m distance of the Site for the past 5 years. It is considered that with this excellent accident record that the proposals should not be a particular cause for concern. The proposed improvements to the highway and access as part of the proposals will go towards ensuring that this good safety record continues.
- 6.5 The new school Site will be purpose made buildings and play space to current education standards with new access arrangements. The proposed buildings will be 2 storeys with the main staff car park and pedestrian accesses on the eastern side of the Site from the Playing Fields car park with secondary pedestrian accesses to the south from the hard informal areas.
- 6.6 The existing site access junction with Upper Woodcote Road is to be improved with a formal access junction with dedicated footways coming into the Site, widening the access road from 3.9m to 4.8m to facilitate two-way vehicle flows. The internal Playing Fields car park will also be remodelled to improve vehicle and pedestrian circulation. The rearranged car park layout can comfortably cater for 30 vehicles although ample space around the circulation route can accommodate more informal parking. Access to the new school Site is taken via the playing fields car park with a dedicated footway route through to the School to the pedestrian access on the eastern boundary of the Site.
- 6.7 It should be noted that when the new School Site opens in September 2018 the school is expected to be only two thirds full (280 pupils). The School will monitor their traffic management system as part of their School Travel Plan and make adjustments/improvements as necessary. A managed quick drop-off facility within the staff car park is also proposed for the AM drop-off period to expedite parent vehicles passing through the Playing Fields car park.

- 6.8 The proposed school will be served by 20 staff car parking spaces including 2 disabled parking space in accordance with RBC parking standards and based on predicted requirements from the School. Cycle parking provision will consist of 3No covered cycle/scooter pods giving 48 spaces and 5No cycle stands giving 10 spaces for staff which can be increased as demand dictates.
- 6.9 Waste collection and deliveries are expected to be restricted between 09:00 to 15:00 to avoid the beginning and end of the school day. Refuse and service deliveries to the school will use the Playing Field car park area adjacent to the Site. Vehicular access into the Site via the staff car park will be possible for maintenance and fire tender vehicles. School trip small coaches/minibuses can pick up from within the Playing Field car park but larger coaches may need to collect/drop-off from Upper Woodcote Road where pupils will be escorted between the school buildings and coach/buses by staff.
- 6.10 The numbers of vehicle trips predicted to be attracted by the fully occupied proposed school (420 pupils) have been assessed using recent parent/pupil and staff travel surveys. This recorded their existing main travel modes to the temporary Gosbrook Rd school site and their main future travel mode for the proposed Site. This showed the current 76.5% of pupil trips being by car for the Gosbrook Road site being reduced to 23.4% for proposed Site at the Playing Fields. This equates to 129 pupil car trips to Gosbrook Road for a 168 pupil roll reduced to 99 pupil car trips to the Playing Fields for a 420 pupil roll; 30 less pupil car trips despite the large pupil increase.
- 6.11 The School will continue to operate a Travel Plan as part of the Reading Borough Council School Travel Plan Programme but will be updated to reflect the new School Site location. This will continue and encourage further sustainable modes of transport to/from the school.
- 6.12 Overall it has been demonstrated that there are no transport or highways reasons to prevent the Heights Primary School relocating to a new school facility at the Mapledurham Playing Fields, Upper Woodcote Road for 420 pupils.