



ALLIANCE OF CANTERBURY RESIDENTS ASSOCIATIONS (ACRA)

PLANNING APPLICATION CA//16/00600

FORMAL OBJECTION-JANUARY2022

INTRODUCTION

The Alliance comprises some seventeen community groups from within and around the city.

Membership numbers of each group range from 30 to 300.

ACRA has registered formal objections to this application in 2016 and again in 2020.

The observations we made and the objections we raised at that time remain valid.

We are very disappointed that this consultation period has been unacceptably short.

It is a complex application with over 1100 documents posted on the CCC website.

The applicant has failed to initiate any formal/informal consultation with the local community since 2016.

Consequently, there has not been a public exhibition of the plans together with an explanation of changes made in the last six years. Thus, the residents of Canterbury remain completely unaware of significant elements of the scheme and its impact on the local environment.

We have set out below in detail the objections we wish to lodge now together and we request that Cllrs and planning officers give the most careful consideration.

Our concerns cover a broad series of issues from non-compliance with the NPPF, through to unsustainable environmental pressures and are set within the context of the declaration by CCC of a Climate Emergency and government policy to wherever possible avoid development on valuable greenfield open space /prime agricultural land by reusing available brown space in urban areas.

NON-COMPLIANCE WITH NPPF

Corinthian have glibly inserted a sub-section into the "other material considerations" section of their 2021 Planning Statement submitted to CCC entitled "NPPF (2021)"¹. They carefully avoid pointing out in this section the material changes which have been made to the NPPF since they first submitted their application in 2015.

The main elements of the application and nearly all the supporting documentation are unchanged since 2015. However, several elements of the NPPF affecting a choice of greenfield sites for housing allocations, requiring protection of the environment, promoting sustainable transport and ensuring biodiversity have been strengthened in the meantime.

ACRA submits that the totality of the application is no longer fit for the purpose of satisfying these strengthened provisions in the NPPF, either because the applicant has failed to provide data and up to date evidence of the impact of the development or because the site allocation itself, as envisaged

¹ National Planning Policy Framework – July 2021 – Ministry of Housing, Communities and Local Government.

in the current Local Plan, needs to be revisited, particularly as to its size, if those provisions are to be respected within the Canterbury district.

Relevant changes to the NPPF include:

Brownfield sites (2018)

The version of the NPPF released after adoption of the Canterbury District Local Plan stipulates that substantial weight must be given by the planning authority to the possibility of re-using brownfield sites.

Canterbury City Council has taken a favourable view of redevelopment of a few brownfield sites in the district for partial residential use, Kingsmead being a recent example. However, there was no sign in 2019 or 2020 of the council thoroughly evaluating brownfield potential and revisiting housing supply site allocations on greenfield land accordingly, in order to comply with the revised NPPF. That should have been done, even if it would require a recasting of part of the Local Plan.

Re-purposing retail or commercial premises (2018)

Also, in 2018 a requirement was added to the NPPF that councils be proactive in re-purposing retail or commercial premises in deciding how to fulfil a required housing supply. The city council is inclined to grant planning permission for residential developments on the former Nasons and Debenhams sites, it is true, but again there was no sign in 2019 or 2020 of the council thoroughly evaluating empty retail space potential and revisiting housing supply site allocations on greenfield land accordingly, in order to comply with the revised NPPF. That should have been done, even if it would require a recasting of part of the Local Plan.

Sustainable development obligations (2021)

In 2021 sustainable development obligations were strengthened, so that the environmental objective in the NPPF is now for developers to protect and enhance, and to improve biodiversity, where before the requirement was simply to contribute to these matters. Corinthian proposals even to protect biodiversity on the site are unconvincing, given that 55% of the land, equivalent to over 150 hectares will become hard-surfaced. The biodiversity compensation promises they make seem to relate to land owned by Corinthian somewhere other than Canterbury.

Sustainable transport (2021)

The responsibility of developers and planning authorities regarding the availability of sustainable transport options for residents in a new, large urban extension were strengthened in 2021, by virtue of a stipulation that any supply of large numbers of new homes should be supported by a *genuine choice of transport modes*. Corinthian has presented evidence in their new Planning Statement that this requirement will be met in full as far as future residents of Mountfield Park are concerned. Given the non-viability of the so-called fast bus route and the complete absence of obligations for the developer to facilitate transport by rail, the city and county councils should be conducting a thorough review of realistic transport options to and from the site. Additional mitigation will surely be indicated, given the over-optimistic projections of modal shift relied on by Corinthian. As far as the councils are concerned, if an extant Local Plan is not consistent with a material provision of the NPPF, the planning authority has a duty to amend it before proceeding to approve any development not fulfilling an obligation in the relevant provision.

SUSTAINABILITY AND CLIMATE EMERGENCY

Given Canterbury City Council's commitment to the Climate Crisis and reducing carbon emissions the goal should be to reduce carbon emissions to zero. The developer's state that they will "deliver an exemplary net zero development" but this is not borne out by the actual proposals.

The developer has specified only the minimum level of carbon reduction – to the level of the very soft Future Homes Standard promoted by the government – aiming at near-zero carbon performance by 2050. This is not good enough – evidence for the need for more urgent action is mounting.

The stated aim, for the buildings to be 'zero carbon ready', rather than built as zero carbon is a significant drawback to the scheme. In addition, claims about water use, wastewater disposal etc do not meet best environmental standards or emerging guidance on planning and development to achieve sustainable development.

The development should be designed to avoid fossil fuels from day 1, by not installing a gas supply, and this should be imposed by the council as another planning condition. This will lead to no gas boilers being installed (which is in any case the government's aim from 2025), Instead buildings of all types should involve the installation of sustainable energy technology such as heat pumps, solar thermal panels (for water heating) and solar pv panels (generating electricity). Commercial premises should similar be zero carbon and zero emissions and have heat pumps, solar thermal panels (for water heating) and solar pv panels (generating electricity).

The revised sustainability statement states that *"The scale of potential renewable energy generation could potentially mean South Canterbury is a net exporter of renewable energy during periods of low demand and high generation"*.

Yet no details of how energy production will be achieved is provided.

It is also noted with concern that the Sustainability Strategy Addendum part 2 doubts that local generation of power will be needed because electricity will be decarbonised.

Such a provision would accord with the 2021 NPPF guidance, which should be implemented.

155. To help increase the use and supply of renewable and low carbon energy and heat, plans should:

a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);

b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and

c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply

Additionally, we urge the carbon reduction measures include not only what are called fabric measures (designing envelopes to higher insulation standards) but also embodied energy – the

energy used to extract, fabricate and transport the materials to site, which should be minimised, and verified by adopting one of accredited carbon reduction schemes.

Broadly - all carbon reduction measures must be monitored and managed by accredited third party schemes – eg Passiv Haus.

TRANSPORT

Our newly published (commissioned and funded by local residents) Independent Railton Report² (see Appendix 1) confirms that the mitigation and modal shift strategies proposed by the developer are not feasible. The Transport Statement addendum does confirm there is to be a Monitor and Manage Framework (MMF) as required as an ancillary Condition in the 2016 Permission, but asserts that this will show that the traffic flows will be so low that proposed mitigation measures would exceed their target, and can be delayed or reduced (eg new A2 junction delayed). In fact, the developer should have a plan for proposed mitigation measures failing to perform, and have additional measures planned that could be introduced to compensate.

These would in essence be the same as what we recommend should be provided as an enhanced public transport offering in any case:

It would be possible for the developer to radically increase the take-up of non-car travel modes, by subsidising or providing a full complement of public transport services to the level that would qualify the development as a car-free development

- permanent subsidy to bus service links to Canterbury centre.
- rail link to Canterbury East via Bekesbourne Station / new station.
- upgraded fast bus link(s) not reliant on existing congested road layout.
- in-estate bus shuttle service feeding public transport, in-estate transport hub(s).
- safe and fully connected e-cycle lanes to city centre with cycle priority.
- fully developed safe and connected walking routes.

In essence, we believe the development ignores totally the direction of NPPF.

73. The supply of large numbers of new homes can often be best achieved through planning for larger scale development, such as new settlements or significant extensions to existing villages and towns, provided they are well located and designed, and supported by the necessary infrastructure and facilities (including a genuine choice of transport modes). Working with the support of their communities, and with other authorities if appropriate, strategic policy-making authorities should identify suitable locations for such development where this can help to meet identified needs in a sustainable way.

Modal shift can only happen in conjunction with concrete multiple public transport planning, policy and infrastructure. The huge addition to Canterbury's roads network by cars from Mountfield Park for both the work commute and leisure will exacerbate the ongoing traffic problems. Empowering communities to travel through sustainable and healthy means, including a shift away from car use

² Mountfield Park (Canterbury South) Objection to updated Application (Dec 2021) on Transport and Highways Grounds on behalf of Alliance of Canterbury Residents' Associations (ACRA) - Railton TPC Ltd - Author: Bruce Bamber BSc MA MSc MCIHT

and more equitable access to transport, brings a range of benefits for local people, places, and our wider environment, and will be a necessity in combatting the climate emergency.³

Department for Transport – The White Paper ‘Great British Railways: The Williams-Shapps Plan for Rail’⁴ states the government’s ambition to use rail to spearhead the nation’s ambition to become a world leader in sustainable transport. It highlights decarbonisation as a key element in ensuring rail is the “backbone of a cleaner, greener public transport network”, and how modal shift from road to rail, supported by integration and connectivity between travel modes, is vital to support a green recovery. modal shift is also expected to be a key priority in the Department for Transport’s forthcoming Transport Decarbonisation Plan. A key recommendation is to fully integrate rail, bus, walking and cycling and shared mobility, therefore any development must come with Mountfield Park train station at its heart and a clear planning condition. This new station will help resident commute to places of work i.e. London and for leisure around Kent. A new Mountfield Park station could be supported by a “Canterbury Parkway” station linking the East and West lines and enabling a links to the high-speed line from Mountfield Park. It will also help modal shift providing crucial, quick access to the city centre. Without rail links and a realistic bus plan, the modal shift projections for the proposed development lack any real credibility as stated in the Railton Traffic Report.

AIR QUALITY

Given the traffic assessment under-quantifies the number of car trips, no confidence can be had in the statement that no re-assessment of air quality impacts are required (Para 4.46 in the Planning Statement).

Any additional traffic along New Dover Road will further place an upward pressure on air quality in New Dover Road. St Georges Place and as far as Canterbury College already experiences levels of NO₂ and potentially PM_{2.5} above current regulatory limits. Thus the development should be contributing to reductions in pollution at these points. No allowance has also been made for recent evidence on the health effects of NO₂ and PM_{2.5} which has led to the World Health Organisation significantly lowering its upper limits for these pollutants.

The English Government’s air quality strategy as set out in the 2019 Air Quality Strategy Plan sets an ambition to meet WHO limits for pollutants. Therefore any assessment relying on measuring future emissions against current AQ limits is fundamentally flawed. New WHO limits mean that the development site already experiences levels of NO₂ higher than that deemed safe for human health.

A radical solution would be to make the development zero carbon and a zero emissions zone. Probably unrealistic in practice more stress needs to be placed on limiting vehicle and building emissions to the fullest possible extent. Any additional traffic along New Dover Road will further place an upward pressure on air.

³ COMMUNITYRAIL: Encouraging and Enabling Modal Shift

⁴ Department for Transport – The White Paper ‘Great British Railways: The Williams-Shapps Plan for Rail’

BIODIVERSITY

ACRA does not believe that habitat mitigation in areas away from the site and outside of Canterbury is in anyway acceptable. We question who will effectively monitor the delivery of this and the benefit if any to local people.

Only 69 hectares of the current 233 hectares will be green. Of the built environment only some 20% will be non hard landscape. Consequently **the current 220+ hectares of open landscape will be reduced by nearly 50%. In terms of water retention, biodiversity, green cover and carbon retention, this area is irreplaceable and cannot be mitigated by creating up to 30 hectares of habitat elsewhere.**

The developer asserts in a Predicted Ecological Gain report that there will be a 15% net gain in ecological assets or all kinds, comparing the proposals with the existing farmland.

This is not difficult to believe as the habitat areas on the existing land has been stripped to a bare minimum. 15% of current provision is virtually undetectable.

The new estate should incorporate significantly larger interconnected habitat zones that permeate the whole scheme, well linked to the bordering countryside, some linear eg broad hedges, some as larger areas.

A mixed diet of habitats is obviously required – meadows, wetlands etc but structural elements are vital:

- Internal linear woodland borders to both sides of the Pilgrims Way path.
- Edge buffer zones should be substantially increased in depth and include linear woodland, to all edges adjoining existing development or open country, and internally bordering the motorway.

OPENSOURCE

With the proposed development is the loss of open space and bio-diversity. Much has been made of the loss of the grade 1 agricultural land yet the impact the proposed development will have on the biodiversity of the natural world needs to be seriously considered. Section 40 of the Natural Environment and Rural Communities Act 2006 places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and decision making throughout the public sector, which should be seeking to make a significant contribution to the achievement of the commitments made by government in its 25 Year Environment Plan.⁵

In fact, the guidance revised in 2019 and after the original plans were put forward many years ago, calls for green infrastructure to be considered in planning decisions. It states that

Green infrastructure opportunities and requirements need to be considered at the earliest stages of development proposals, as an integral part of development and infrastructure provision, and taking into

⁵ Guidance to the National Planning Policy Framework – Natural Environment *Explains key issues in implementing policy to protect and enhance the natural environment, including local requirements. From Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government - Published 21 January 2016, Last updated 21 July 2019*

account existing natural assets and the most suitable locations and types of new provision. Green infrastructure will require sustainable management and maintenance if it is to provide benefits and services in the long term. Arrangements for funding need to be identified as early as possible, and factored into the design and implementation, balancing the costs with the benefits. Local community engagement can assist with management and tailoring provision to local needs.

What do we mean by “green infrastructure”? Green infrastructure can embrace a range of spaces and assets that provide environmental and wider benefits. It can include open spaces, woodland, allotments, sustainable drainage features, green roofs and walls, street trees and ‘blue infrastructure’ such as streams, ponds, canals and other water bodies. We ask you to protect the number of hedgerows providing corridors for nature to pass and roam, the badge sets, birds of prey (kites, sparrowhawks etc) hunting the field and harvest mice, voles and shrews all found on the site.

This objection to the planning application seeks to protect the biodiversity found on Grade 1 agricultural land and ensure that any development puts in place genuine, serious, and credible green infrastructure plans that benefit the local community. The government guidance is clear, green infrastructure needs to be strategically planned for large open spaces such as a 650 acre farming site let alone a 650 acre residential site on grade 1 agricultural land, local communities need to be consulted and that planning conditions, obligations, or the Community Infrastructure Levy may all be potential mechanisms for securing and funding green infrastructure.

SEWAGE

The inclusion of a Wastewater Treatment Works in the new scheme has been accepted by EA on face value, but it calls for a detailed design to be submitted and approved before construction commences. The developer's statement merely says it will to the satisfaction of the EA. The detail of the design is clearly crucial, and must be published to all when completed, but we question whether the small area allowed for the plant – 0.4Ha – is sufficient. It must service 4,000 homes plus 75000 commercial uses. The Vauxhall Rd treatment plant services approximately 20,000 houses.

FRESH WATER

There should also be a principle of water neutrality as this is an area of water supply stress and wastewater problems. Essentially this means the development being designed to include grey water recycling, water efficient fixings, soak aways, porous paving etc. and undertake water offsetting – funding water efficiency savings in the wider Canterbury housing stock, commercial and public services buildings.

AFFORDABLE HOUSING

We argue that CCC should take this opportunity to review the operation of their policy of requiring 30% of housing on the site to be affordable housing. They should ensure that the financial contribution of the developer is enough to allow flexibility in developing a truly affordable housing formula. We welcome the changed proposal to provide 30% affordable housing as each stage is completed (rather than waiting until 523 market-price houses are inhabited).

WORLD HERITAGE SITE (WHS)

Given that it is now formally acknowledged that our WHS in Canterbury is at risk of losing UNESCO recognition we are keen to ensure that this development should not compromise the integrity of the WHS

The developers Planning Statement notes the various heritage assets near the site, and the existence of the World Heritage Site – the Cathedral and St Martin's complex.

It discusses the various sites and the WHS, and refers at some length to the NPPF, picking up as favourable references for the development the various policies that introduce formulae for measuring harm done to assets, and measuring these against benefits which the NPPF states are to be allowed to offset the harms.

However, the Statement deliberately edits out the most important NPPF policy

199. When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.

The consequence of formula is that since the WHS asset is acknowledged to be irreplaceable and this means 199 has to be balanced against 200:

200. Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:

- a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional;
- b) assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional⁶⁸.

Thus we assert that the intervisibility issues of the development are critical:

- the visibility of the northeast edge of the development on the skyline visible from the cathedral area – destroying the sense that the city rests in a rural bowl whose natural edges are tangible
- the interruption of the classic city approach view of the Cathedral from New Dover Road, by the 15m high buildings in the community centre area of Phase 1A.

These cause irreversible and measurable harm, and must be resisted. The Height Parameter plan must be revised to reduce development heights bordering New Dover Road, and the housing on the northeast edge set back sufficiently to overcome these problems.

Rural Character

In passing, the Planning Statement recognises that the rural character of Mount Farm etc will be lost and reviews the impact of streetlighting with a view to minimising it to the degree safely possible but comes to no useful conclusions. To reinforce we note that the NPPF states in policy 185 that developments should

c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

S106 MONIES

ACRA has very serious concerns that the benefits and environmental improvements for the community of S Canterbury which it might have expect to be funded from S106 money are to be diverted to pay for major highways schemes.

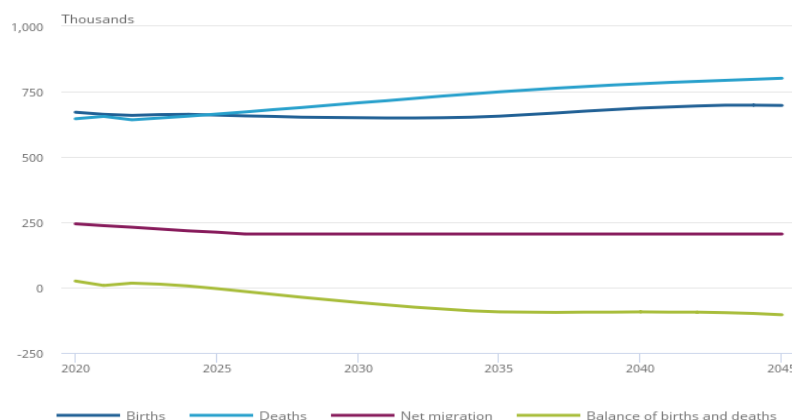
According investment in the environmental infrastructure is .This is plainly inequitable and in the light of rising house prices since 2016 we urge CCC to use its negotiating power to ensure that substantially more S106 money is reinvested in the area in and immediately around the city centre area.

HOUSING DEMAND IN THE LONGER TERM

According to the Office for National Statistics (ONS) *National population projections: 2020-based interim report*⁶ updating the 2018 report, the UK's population growth will come entirely from migration, it goes on to say that over the next ten years, there will be more deaths than births, reflecting the lower fertility rates for all UK nations and that the UK population growth is slower than the even 2018 projections.

The ONS goes onto state that whilst 6.6 million people will be born between mid-2020 and mid-2030, 6.7 million people will die during that time. The chart below from the ONS demonstrates how the imbalance between births and deaths will continue to grow from 2025 through to 2045. Therefore, the need for housing is in fact a short-term problem. The issue the UK faces and certainly here in Kent is not a question of *more housing* but of more affordable housing especially in light of the recent article highlighting that new build house sales accounted for only 5% of all property sales in Canterbury.

Figure 2: Over time, births and deaths are projected to reach similar levels, therefore net international migration causes most growth
Projected births, deaths and net migration, UK, years ending mid-2020 to mid-2045



Source: Office for National Statistics – National population projections

⁶ National population projections: 2020-based interim report. - *The potential future population size of the UK and its constituent countries. These statistics are widely used in planning, for example, fiscal projections, health, education and pensions.*

CONCLUSION

The objections that we raise here are significant and merit meticulous consideration.

The overall scheme because of its size, density and location so close to the city centre has major implications both for the local environment and the life quality and health of Canterbury citizens for decades to come.

CCC has a clear duty of care to safeguard residents in this regard.

We are happy to provide Cllrs and officers with any further information that they might need and to participate in any further consultations that may be deemed necessary before decisions are made.

We would urge CCC to require a public exhibition of the proposal in its current state so that residents can be fully informed of the extent and detail of the proposals.



Stefan Colley

Chair

ACRA

20th January 2022

Mountfield Park (Canterbury South)

Objection to updated Application (Dec 2021) on
Transport and Highways Grounds on behalf of
Alliance of Canterbury Residents' Associations
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Railton TPC Ltd ref:	Mountfield Park 2021 B
Planning Inspectorate Ref:	N/A
Planning Authority Ref:	CA/16/00600
Date:	January 2022
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Appendix 1: Variations in Car Driver and Walk Mode Share in Parts of Outer Barton Ward

Appendix 2: Calculation of Mode Share for Parts of Outer Barton Ward

Appendix 3: Extracts from RGP Technical Note demonstrating Flaws in Mode Share Calculations

1 INTRODUCTION

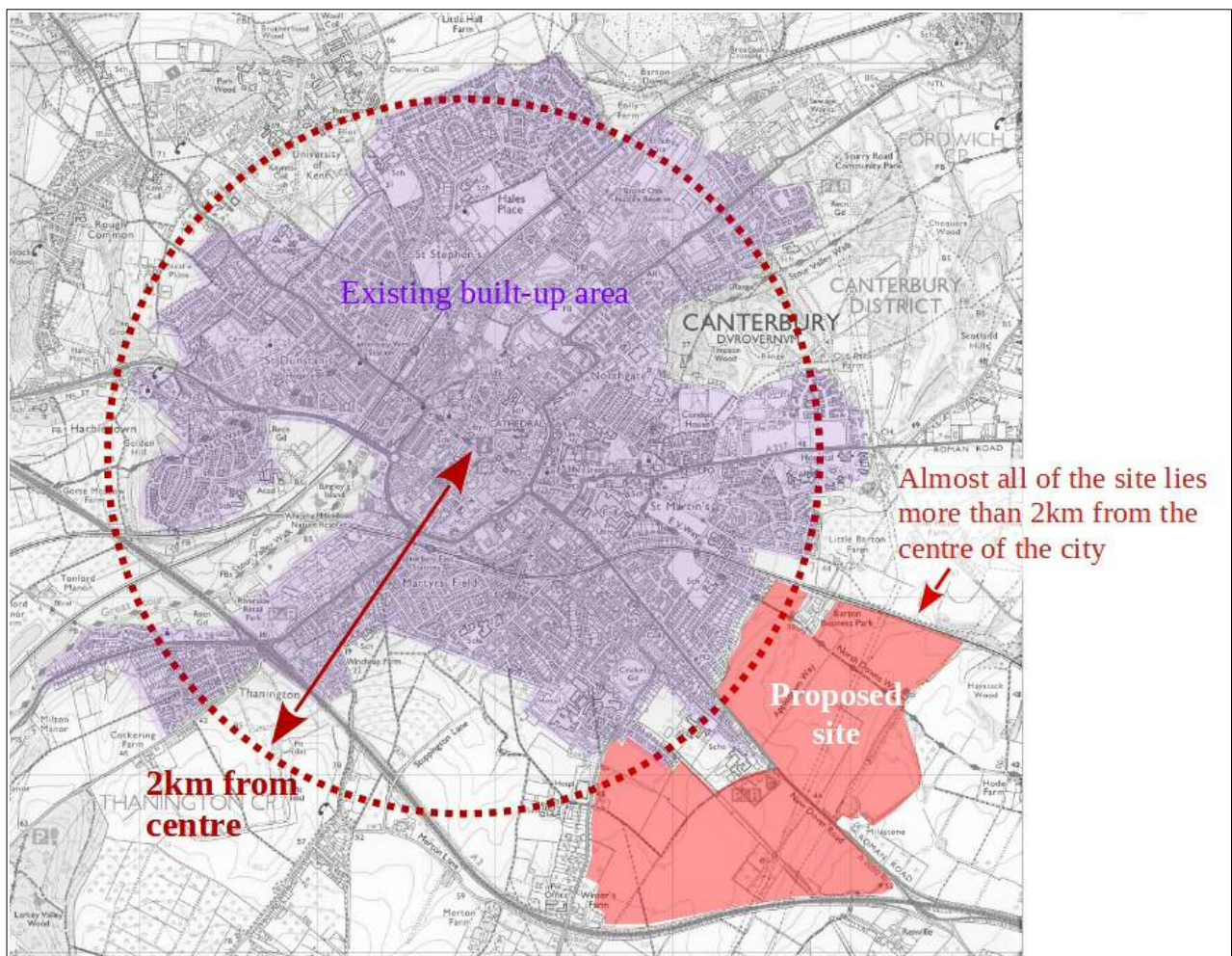
- 1.1 This report has been prepared on behalf of the Alliance of Canterbury Residents' Associations (ACRA) and sets out a critique of transport and highways information submitted in support of the updated Mountfield Park planning application (Canterbury City Council (CCC) ref. 16/00600) submitted in December 2021. Many local residents are very concerned that a development of this size, located on the edge of the city will have an unacceptable impact on the already congested and highly constrained transport networks in and around the city and that the current and previous transport assessments have been overly and unreasonably optimistic in their predictions of the numbers of trips expected to transfer from car to sustainable modes.
- 1.2 The updated planning application is very similar to the original planning application submitted in 2016. Transport and highways work has been updated to deal with a number of altered circumstances including changes in the policy context, the changed timescale of development and changes in base traffic flows.
- 1.3 Railton TPC Ltd objected to the original application (Transport and Highways Review, May 2016) on behalf of ACRA. This prompted a response on behalf of the applicant (RGP Technical Note 39, July 2016). Railton submitted a further report in September 2016 dealing with matters raised by RGP.
- 1.4 The concerns raised in the 2016 Railton reports were largely ignored or dismissed by officers preparing the December 2016 Committee Report. Much of the detailed work presented in the 2016 reports remains relevant to the transport work that is currently relied upon to support the application and is referenced where appropriate.
- 1.5 RGP, on behalf of the applicant, has vastly reduced standard trip generation rates through the application of highly subjective and methodologically unjustifiable assumptions in order to arrive at a conclusion that the proposals will not lead to an unacceptable level of highways impact. The sections below throw light on the assumptions that underpin the applicant's assessments and provide evidence that the level of highways impact will be significantly higher than currently suggested.

2 OVER-ESTIMATION OF SITE'S TRANSPORT SUSTAINABILITY

Distance of Site from City Centre

- 2.1 The applicant relies heavily on an assumption that the site is well located to encourage the use of sustainable modes. However, scrutiny of the applicant's approach reveals that unreasonable parallels have been drawn between the site and existing residential areas in Canterbury.
- 2.2 The following plan shows the location of the site in relation to the existing built-up area of Canterbury:

Figure 2.1: Plan showing the Distance of the Site from the Centre of Canterbury (crow-fly distances)



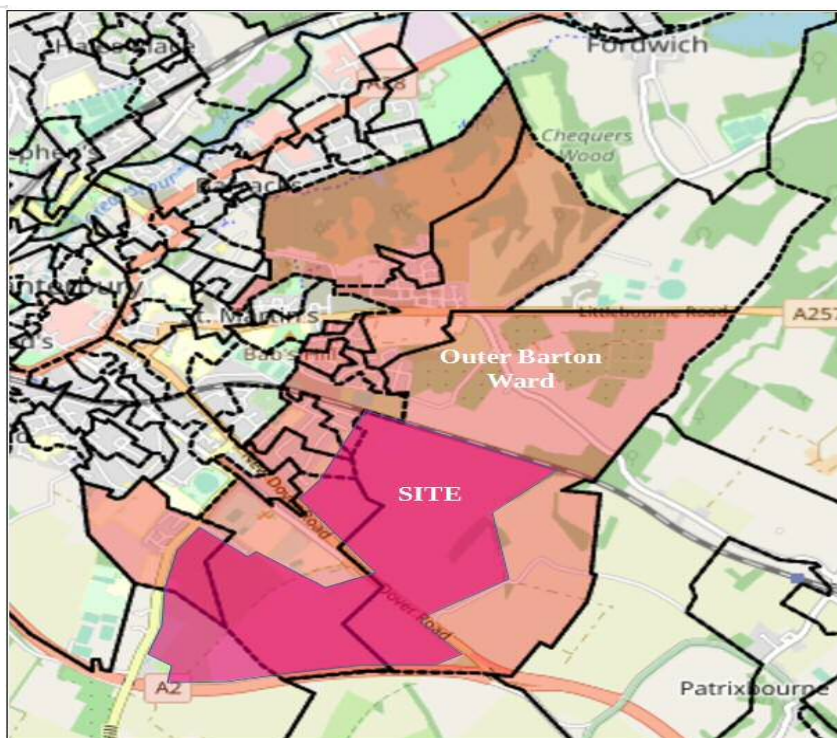
- 2.3 It can be seen that almost all of the existing built-up area of Canterbury lies within 2km of the centre of the city. The proposed development, however, lies almost entirely

beyond 2km from the centre of the city. This is a very important fact when considering the transport sustainability credentials of the site since people will not generally walk more than 2km to access services and facilities¹. In many instances, and this is likely to be confirmed by the reader's own experience, people will choose to drive over distances significantly less than 2km. **There is therefore no merit in any argument that suggests that a significant proportion of trips between the site and the city centre will be on foot.**

Misleading Use of Census Data

2.4 The applicant defends the approach that has been adopted on the basis that 'baseline' travel behaviour is derived from a select number of areas defined as the 'Outer Barton Ward'. On initial examination, it would seem that the areas from which travel behaviour is derived correlate well with the location of the new development as illustrated in the following plan:

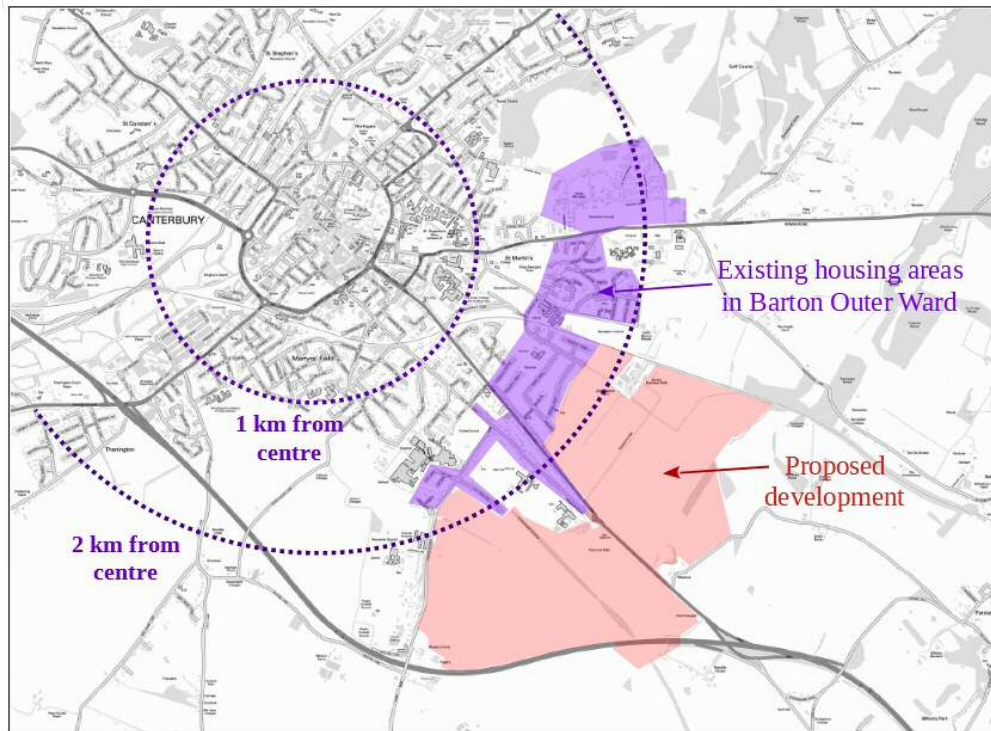
Figure 2.2: Correlation between 'Outer Barton Ward' and Site Location



1 Table 3.2 of the Institution of Highways and Transportation's 'Guidelines for Providing for Journeys on Foot' identifies 2,000m as the 'preferred maximum' walking distance for commuting, school and sight-seeing purposes. RGP, at para. 3.6.28-29 of the TA, quotes a White Young Green study that identifies the 85th percentile walk distance of 1,950m. RGP incorrectly state that 15% of people walk further than the 85th percentile walk distance. This is not correct and displays a misunderstanding of the statistics. The 85th percentile figure is based on the distribution of walk distances and does **not** indicate that 15% of people will walk more than the figure. It is likely that significantly less than 15% of people will walk over 1,950m.

2.5 However, closer examination reveals that the majority of the Outer Barton Ward is devoid of existing residential areas and the vast majority of the existing residential areas on which travel patterns are based lies between the site and the city centre. This is shown clearly on the following plan:

Figure 2.3: Location of Existing Housing on which Travel Patterns are Based



- 2.6 Almost all of the residential areas that are assumed to represent the location of the proposed site lie closer to the city centre than the site itself and again it is evident that whereas the site itself lies almost entirely in excess of 2km from the centre of the city, almost all of the Barton Outer Ward lies between 1km and 2km from the centre.
- 2.7 The applicant has assumed that, as a starting point, all parts of the development at all times will experience a walk mode share exactly the same as the existing Outer Barton Ward. This assumption is highly implausible, if not inconceivable. Further evidence that the applicant is in error on this point is provided below.

Failure to properly Interrogate Census Data

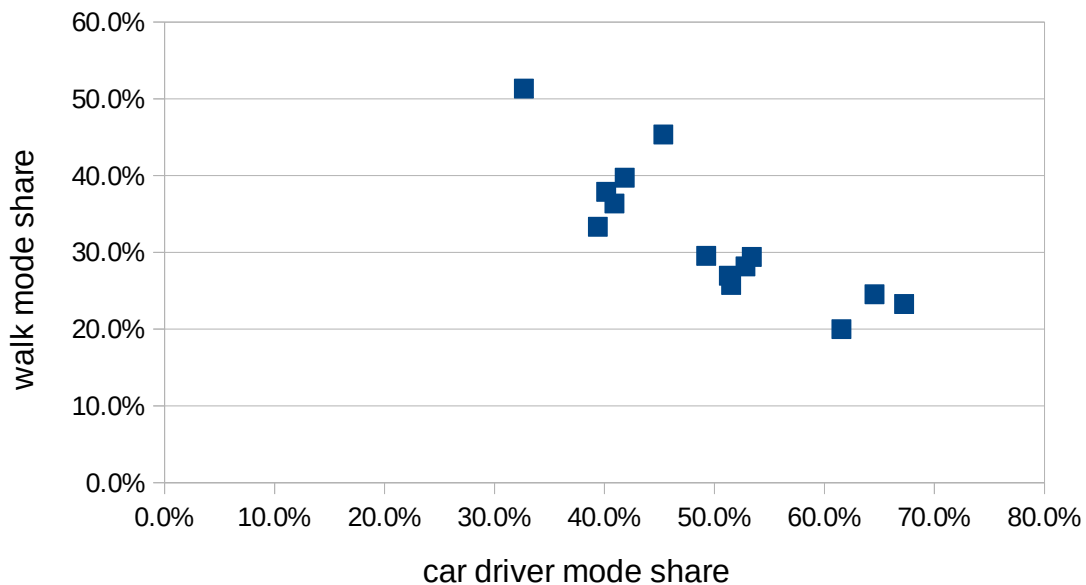
- 2.8 The applicant has had the opportunity to interrogate the mode share source census travel to work data that are presented in Appendix C of Appendix L of the Transport

Assessment (TA). It is clear from the data that there are large differences in the mode share characteristics of the various areas that make up the Outer Barton Ward.

2.9 The level of car use varies between 32.7% and 64.5%. The applicant has adopted a figure of 48.8%. The variation is shown on the first plan attached in **Appendix 1**. It is evident that the area that includes the housing along Dover Road that most closely represents the locational characteristics of the site has a car mode share of 64.5%. This is higher than the Canterbury CDTS (district-wide) value of 62.2%. Similarly, the level of walking varies between 20.0% and 51.3% (see second plan in **Appendix 1**) The applicant has adopted a figure of 32.1%. The walk mode share for the Old Dover Road housing area is 24.4%, significantly lower than the existing area with the most comparable locational characteristics.

2.10 The following scatter graph shows the pattern of walk and car driver mode share for the various parts of the Outer Barton Ward:

Graph 2.1: Relationship between Walk and Car Driver Mode Share in Outer Barton Ward (data points refer to Census Output Areas within Outer Barton Ward)



source: Table QS701EW, Method of Travel to Work, Nomis 2011 Census Data

2.11 The first thing to notice is the significant variation in both car driver and walk mode shares across the area. The other clear pattern is the inverse relationship between walking and car use. The graph provides clear evidence that as journey distances increase, walking becomes less attractive and car travel increases. The applicant has

ignored these very strong patterns and has instead chosen to adopt **average** figures for the Outer Barton Ward. **If the applicant's calculations were to be correct it would have to be the case that people are as likely to walk 4km as 1km. It is impossible to defend this position.** The applicant's calculations would be conceptually defensible if the proposed development were located in the **centre** of the existing housing in the Outer Barton ward. This is evidently not the case. It would be more justifiable to adopt the highest observed level of car use for the most accessible parts of the proposed development and higher levels still for parts of the development further from the city.

- 2.12 The implications of this fundamental error are significant. Even if a very conservative approach were to be adopted where allowance for the observed wide variations is achieved by calculating an 85th percentile figure (as is often done for trip generation rates), the resulting car driver mode share would be 59.6%², only slightly lower than the CDTs district-wide figure.
- 2.13 There will inevitably be some level of internalisation of trips within the site and the travel plan may have some influence on travel behaviour but the methodology adopted by the applicant seeks to overlay these effects on an assumed background mode split that is clearly over-estimating the site's sustainable transport credentials.

Error in Mode Share Calculation

- 2.14 Details of the calculation of the existing mode share in the Outer Barton Ward are provided in Appendix L of the TA. The source data derived from Table QS701EW of the Office for National Statistics (ONS) are provided in Appendix C of Appendix L. These figures have been reproduced and are attached in **Appendix 2** of this report. Despite the body of the text of Appendix L making specific reference to the calculations in Appendix C, is evident that the mode shares presented in the body of the text are different from those derived from the source data in Appendix C. For example, the data show a car driver mode share of 47% (this corresponds with a car driver mode share of 49.6% when those who work mainly from home are excluded) yet the text shows a car driver mode share of 44.7%. The only place that a figure of 44.7% appears in Appendix C of Appendix L of the TA is on the final sheet where 44.7% represents the percentage of bus users in the Outer Barton Ward compared with bus users for the whole of the Barton Ward (see **Appendix 3**). Clearly this figure has no relevance in relation to car driver mode share. The incorrect figure has been transcribed into the body of the TA

² See calculation in **Appendix 2** (mean car mode share plus one standard deviation).

and has been used in all the calculations that run through the transport impact assessments.

Irrational Basis for Calculating Transfer Trips

- 2.15 The methodology employed by the applicant identifies a level of transfer of car trips to sustainable modes based on a largely subjective allocation of scores representing distance, opportunity for mode change and car parking availability. This leads to an assumed transfer of 56% of all AM peak trip types that are deemed to have an opportunity to transfer³. However, in the PM peak the level of transfer is assumed to be 76%⁴ for all of these trip types. Since there are negligible numbers of education trips in the PM peak, the applicant has deemed it necessary to assume that people undertaking other trip types will be **more likely** to transfer in the PM peak in order that an overall transfer level of 39.3% is achieved in both peaks. This clearly makes no sense. There is no rational reason why people are more likely to transfer to sustainable modes in the afternoon compared with the morning.
- 2.16 If it is the case that the development presents an opportunity to transfer a significant number of education trips to non-car modes, then the associated effect of overall trip reduction cannot be assumed to apply to the PM peak since the site does not benefit from the education transfer at this time.

Error in Assumption about Grammar School Travel

- 2.17 In Appendix BB of the TA, it has been assumed that 20% of education trips are to grammar schools (10% to Simon Langton School and 10% to St Anselms). It may be the case that 20% of secondary school aged children go to grammar schools in the area but only around 50% of all school children go to secondary schools; the other 50% (years 1-6) go to primary schools. The proportion of all children going to grammar schools is therefore half of that assumed in the applicant's calculations.

3 Appendix BB of TA shows AM non-car transfer for trips scoring 10-14 as 56%

4 Appendix BB of TA shows PM non-car transfer for trips scoring 10-14 as 76%

Failure to Justify Assumed Level of Internalisation

- 2.18 It has been assumed that 30% of all shopping and leisure trips are to destinations within the proposed development. Given the strong draw of facilities within and around the city centre, it seems highly implausible that such a high level of internalisation will be achievable. The applicant offers no justification for the adoption of the 30% value.

Unreliability of Use of Accessibility Index to Predict Mode Transfer

- 2.19 Car trips have been transferred to other modes based on an 'accessibility index'. This approach has been applied in preference to the conventional method of calculating the likelihood of people transferring from one mode to another that is based on the relative generalised costs of using different modes⁵. This applicant's approach is given pseudo-legitimacy through a system of quantification. The system does not, however, withstand closer scrutiny as it is highly subjective. Destinations are given three scores, each out of a maximum of 5 points leading to a maximum score of 15 points.
- 2.20 The first score is for 'distance'. No information is provided to show how 'distance' is converted to a score. The whole site is given a score of '2' with respect to the city centre despite there clearly being very significant differences in 'distance' for different parts of the site.
- 2.21 Destinations are given a score of either '5' or '1' in relation to 'opportunity for mode change'. The fact that 'opportunity' is either present (scoring '5') or hardly present at all (scoring '1') entirely fails to reflect the reality of human behaviour and raises the question as to why a 1-5 score is necessary or, indeed, meaningful. The whole site is given a score of '5' in relation to the city centre despite there obviously being significant differences in opportunities for mode change for different parts of the site.
- 2.22 The third score is based on 'car parking availability'. Again, no information is provided to explain how scores have been derived. In relation to the city centre, the site is given a score of '3'. If this factor were to be treated consistent with the 'opportunity' factor then

⁵ Elasticities of travel demand for a given mode are typically based on travel and wait times expressed in monetary terms, costs of travel such as public transport fares or fuel costs and adjustments for modal bias.

the city centre should presumably be given a score of '1' since there is almost always some parking available within the city centre.

2.23 It is clear that the accessibility index scoring system is highly subjective, prone to significant bias and does not lead to any value that would correspond with any elasticity of mode choice as conventionally applied in transport modelling.

2.24 The system adopted by the applicant leads to an accessibility index score of '10' in relation to the city centre. An arbitrary threshold of '10' is adopted, above which mode shift is predicted to occur. If a threshold of '11' were adopted or if it were assumed that the opportunity for mode shift value were '4' instead of '5' or the car parking availability were assessed to be '2' instead of '3' or if distance were to be judged '1' instead of '2', the system would predict *no* mode change in relation to the city centre and the applicant's calculations would show significantly raised vehicle trip generation rates. **The whole basis for the applicant's predictions of a 39.3% reduction in vehicle trip generation rests on a knife edge. One very small change in subjective assumptions would lead to a vastly inflated level of traffic impact⁶.**

2.25 The bizarre nature of the applicant's approach has already been demonstrated by the fact that an accessibility score of '10' is assumed to lead to a 56% shift away from car in the AM peak hour and a 76% shift in the PM peak hour.

Inconsistency of Use of Census Area Data

2.26 Figure 3.2 of Technical Note in Appendix L of the TA shows area E00167555 to form part of the *Inner* Barton Ward. The calculations, however, include this area within the *Outer* Barton Ward. The discrepancy is highlighted in **Appendix 2** attached. This has the effect of artificially lowering the overall car driver mode share since the area has one of the lowest car driver mode shares in the Outer Barton Ward.

Example of Irrational Outcomes

2.27 The problems with the applicant's car trip generation calculations can be illustrated with reference to Area G. Area G contains 1,500 dwellings and is generally between 3km and 4km from the centre of Canterbury. The calculations set out in Appendix BB of the TA state that in the AM peak hour, 8.89% of all development car trips are commuting trips to

⁶ If the threshold for mode shift were to be changed to '11' rather than '10', the peak hour car trip generation rate would increase by up to 33%.

the city centre. It is suggested that in the AM peak, 4.95% (56%) will transfer to sustainable modes for all areas including Area G. In the PM peak this figure increases to 76% (as described already). Area G is too far from the centre of the city for there to be any significant shift to walking. There would need to be inconceivably large increases in cycling and/or bus use to achieve anything like the level of transfer that is inferred. Car use in the Outer Barton Ward area is currently of the order of five times the levels of cycle and bus use combined. The increase in cycle and bus use would need to increase by over 300% to accommodate the suggested mode shift⁷. The combined bus and cycle mode share for commuting trips into the city centre would need to be 37.7%.

- 2.28 Given the relatively low level of cycling currently observed in the Outer Barton Ward (3.9%) it is unreasonable to assume anything but a very modest potential to increase cycling to any significant degree. This suggests that the transfer would be largely dependent on the ability to massively increase bus use relative to car use, indeed, to a situation where bus use would be significantly higher than car use⁸. The existing level of bus use in those areas close to existing high frequency services (around 10 services per hour) along the Dover Road is currently modest (5.5% - see **Appendix 2**). It therefore seems highly implausible to suggest that areas within the site that will have a lower level of bus accessibility than existing areas will, in effect, prefer the bus to the car.

Section Summary

- 2.29 It is concluded that the fundamental basis for the applicant's assessments of traffic impact, particularly in relation to the city centre, is flawed. The applicant fails to properly interrogate source data, applies mode share figures in calculations that are not based on factual data, applies an unjustifiable 'blanket' approach to sustainable accessibility and adopts a methodology that bizarrely assumes that people are 20% more likely to transfer to sustainable modes in the PM peak compared with the AM peak. Clear and obvious errors in calculations have not been identified by highway authorities thus undermining the credibility of their earlier decisions.
- 2.30 The applicant points to the bus strategy, the travel plan and trip internalisation to support the traffic projections. The following sections demonstrate that faith should not be

⁷ Figures in **Appendix 1** show existing bus mode share in Outer Barton Ward to be 5.5% and cycle mode share 3.9% giving a combined value of 9.4%. Car use is 49.6%. It is suggested that car use would reduce by 28.3%. Thus cycle and bus use combined would need to increase from 9.4% to 37.7% or an overall increase of 301%.

⁸ Appendix BB of TA shows 4.95% non car driver commuting trips to city centre and 3.93% car driver trips in the AM peak and 7.5% non car driver and 2.41% car driver trips in the PM peak.

placed on these three aspects of the development to achieve the extraordinary level of transport sustainability that has been ascribed to the site.

3 COMMENTS ON OVERALL MODE SHARES

3.1 The following table summarises the existing average mode share for people living in the Outer Barton Ward and the predicted final average mode share for the proposed site (end of Phase 4):

Table 3.1: Comparison of Mode Shares

Mode	Existing (Outer Barton Ward) ¹	Predicted (Whole Development) ²	% Change
walk	32.6%	32.3%	-1%
cycle	3.9%	6.0%	+54%
bus	5.5%	9.3%	+69%
train	3.1%	5.8%	+87%
car driver	49.6%	37.8%	-24%
car passenger	4.8%	7.1%	+48%
other	0.5%	1.6%	+221%
Total	100.0%	100.0%	-
Total bus incl. 25% train	6.3%	10.8%	+72%

¹figures as shown in Appendix C of Appendix L of TA (figures used in TA are not correct)

²based on figures shown in Appendix GG of TA

3.2 It has already been shown that the 'starting point' for mode share calculations is fundamentally flawed as it does not take into account the starkly different locational characteristics of the site compared with the existing Outer Barton Ward. Notwithstanding the fact that the basis for the applicant's calculations is undermined, there are further serious concerns about the predicted mode shares.

3.3 The applicant predicts that the overall level of walking will be almost identical to the existing Outer Barton Ward. It is inconceivable that this would be the case for a number of reasons. The Outer Barton Ward already benefits from close proximity to a number of facilities including hospitals, primary and secondary schools, open spaces, supermarkets (Londis and Waitrose), coffee shops, a post offices, takeaways, golf club, a bowling club, a neighbourhood centre and numerous miscellaneous businesses. The Outer Barton Ward also benefits from being within a reasonable walking distance of most of the facilities within the city centre. The proposed development suffers from being beyond a reasonable walking distance to the city centre. The level of pedestrian accessibility within the proposed development will fall significantly below that enjoyed by

the housing within the existing Outer Barton Ward. It is therefore unreasonable to assume that the level of walking for the proposed development will equal that observed in the existing Outer Barton Ward.

- 3.4 The level of 'other' travel is shown to increase from 0.5% to 1.6% as categories of travel including taxi and motorcycle are added to 'other'. This element of travel is effectively 'lost' and fails to appear in any of the calculations of traffic impact. This is an error in the applicant's calculations since no allowance is made for some modes, such as taxi, that will inevitably increase overall traffic impact.
- 3.5 Car passenger mode share is predicted to be 48% higher than in the Outer Barton Ward. The only measure aimed at increasing car occupancy is promotion of lift sharing databases. With the best will in the world, it is unreasonable to expect that this would increase overall car occupancy by any significant amount. It is considered irresponsible to adopt this unreasonable assumption for the purposes of assessing the potential overall traffic impact of the proposed development and for identifying appropriate mitigation.
- 3.6 Train travel is expected to increase by 87%. Rail travel, like bus travel is inherently constrained by the inflexibility of services or the fact that destinations (bus stops and train stations) are limited. There are no substantial measures within the travel plan to encourage people to travel by train. Almost the entire site lies beyond a reasonable walking distance of the railway station. The travel plan explicitly states that discussions with Stagecoach have revealed that the bus operator is not inclined to allow bicycles on buses to access the station. Within this context there seems very little justification for predicting anything other than a very limited increase in train use, indeed it may even be difficult to achieve the level of train use observed within the Outer Barton Ward given the site's distance from the station.
- 3.7 Cycling is predicted to increase by over 50% compared with the existing Outer Barton Ward. It is extremely difficult to increase cycling levels for reasons that are familiar to most people. There are examples of locations where cycling is a major mode but it is unreasonable to rely on highly optimistic predictions about fundamental changes in cycling behaviour based on places that are culturally distinct, topographically favourable to cycling and have very high quality cycle networks. Although the site itself can be provided with a reasonable standard of cycle infrastructure, cycle journeys will be influenced by the wider road environment within the city that is generally hostile to cyclists with congested, narrow streets, roundabouts, awkward crossings of major

vehicle routes and sub-standard cycle facilities where they do exist. The applicant is not offering any significant mitigation in terms of improving the overall standard of cycle facilities within the city. It may be that the centre of the city is made more conducive to cycling in the future by excluding much of the vehicular traffic but any such changes are not envisaged as part of this scheme. Cycling tends to be undertaken by a small proportion of experienced and committed cyclists and the scope to expand this section of the population is very limited. It is unreasonable to base the assessments of future traffic impact on an assumption of cycling increasing by over 50% compared with the existing Outer Barton Ward.

- 3.8 The bus strategy predicts that there will be 535 bus journeys made in the AM peak hour. This represents 10.8% of all trips. This is based on optimistic predictions about patronage and relies on significant subsidies for bus use (free travel for a certain period). The existing bus use mode share for the area around the Old and New Dover Roads that benefits from a bus frequency significantly higher than that proposed for the site itself is 5.5%. There is one area within the Outer Barton Ward that currently shows a 10.4% bus mode share but other areas display lower levels, the lowest being 1.5%. Although the applicant is predicting an ambitious increase in bus mode share and is backing this with infrastructure, new services and subsidies, it is not credible to suggest that further increases in bus patronage could compensate for the over-estimation of future travel by other sustainable modes, particularly walking that has been very significantly over-estimated.
- 3.9 The applicant suggests that travel patterns within the proposed site will be significantly more sustainable than those currently observed within the Outer Barton Ward. Given the existing level of local services and facilities within the Outer Barton Ward, its high level of public transport accessibility, its closer location to the station and its proximity to facilities within the city centre, **it is impossible to maintain a position that implies than as one steps out of the site on the side closest to the city centre, car use suddenly becomes more attractive.**
- 3.10 It is concluded that the applicant's predictions about future mode share are not credible and do not form a robust basis for assessing the traffic impact of the proposed development and for identifying an appropriate level of mitigation.

4 OVER-RELIANCE ON TRAVEL PLAN

- 4.1 Travel plans were originally developed for employment sites where significant influence over travel behaviour could be achieved through the management of car parking, financial incentives and penalties and clear and direct communication between employers and employees. Travel plans were then extended to educational settings where influences on travel behaviour are less but still sufficient to achieve meaningful results. It was only later that Travel plans were extended to residential settings where it is much more difficult to influence travel behaviour. The proverb, ‘*You can lead a horse to water but you can’t make him drink*’ is apt since there are few, if any, measures in residential travel plans that ‘force’ residents to opt for sustainable modes rather than drive their cars. Indeed, for some time now, car parking standards within residential developments have been increased after a period when restrictive parking standards led to undesirable and often unsafe levels of on-street parking in inappropriate areas within developments.
- 4.2 There is a dearth of evidence relating the effects of residential travel plans. The 2005 Department for Transport (DfT) publication, ‘Making residential travel plans work’ quotes a 2002 DfT study that found that **organisations**, on average, could achieve an 18% reduction in car use through the implementation of a travel plan. Although the report goes on to suggest that, ‘*Residential travel plans are no exception*’, no evidence is provided to support the statement. Although there are instances where some level of mode shift can be ascribed to the implementation of a residential travel plan, the effects are generally extremely modest. The following table summarises the vehicle trip rates at numerous housing sites in the south of England (excluding London) and the Midlands both with and without travel plans as derived from the TRICS database:

Table 4.1: Vehicle Trip Rates per Dwelling at Housing Sites without and with Travel Plans

	AM Peak	PM Peak	Daily
Without travel plan (15 sites)	0.483	0.482	4.477
With travel plan (19 sites)	0.489	0.485	4.149
% difference	+1.2%	+0.6%	-7.3%

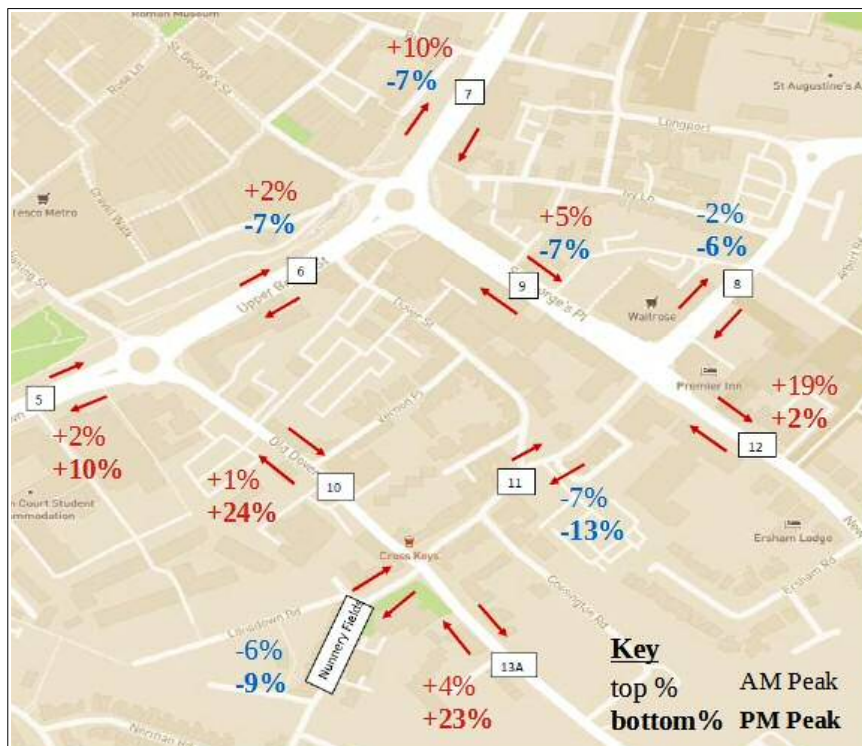
Notes: based on all private housing sites in southern England excluding London and Midlands, edge of town centre, suburban area, edge of town and neighbourhood centre sites, 80 dwellings or more, weekday (Mon-Fri)

- 4.3 It is clear that there is no discernible benefit afforded to the sites with travel plans in terms of peak hour vehicle trip generation rates. Indeed, the sites with travel plans show slightly higher levels of trip generation in the peak hours. On a daily basis the data show a modest reduction of 7.3% in vehicle trip rates for sites with travel plans.
- 4.4 Kent County Council (KCC) has been contacted to obtain information about the implementation and effectiveness of travel plans in the county. This reveals that there are currently only five residential travel plans being implemented in Kent and there is currently no reliable monitoring data to suggest what level of impact these travel plans might have on car driver mode share. It is understood that a typical target reduction in car driver mode share is in the region of 3%-5%.
- 4.5 The applicant's calculations are based on an assumed shift from car to sustainable modes of 39.3%. This quantum of mode shift is very substantial. It has already been shown how the applicant's calculations severely under-estimate future car use. It is evident from the evidence that there is no merit in any argument that the travel plan will make a significant contribution towards the achievement of the 39.3% mode shift target.

5 PROBLEMS WITH JUNCTION ASSESSMENTS AND DERIVATION OF TRAFFIC FLOWS

- 5.1 The Updated Transport Statement (TS) (RGP, December 2021) reports that KCC has stated that new traffic survey data may be considered valid as traffic levels have increased to something similar to pre-pandemic levels. New surveys have been undertaken during Autumn 2021 (Thursday 7th October for turning counts around the Ring Road area).
- 5.2 The Updated TS states that overall traffic in the Ring Road area has increased in both the AM and PM peak hours compared with previous predictions⁹. The following plan summarises the changes in predicted base flows in each of the peak hours:

Figure 5.1: Changes in Base Flows



source: Appendix L of Updated TS

Note: Figures show difference between 2017/8 surveys factored to 2021 using NRTF and 2021 surveys.

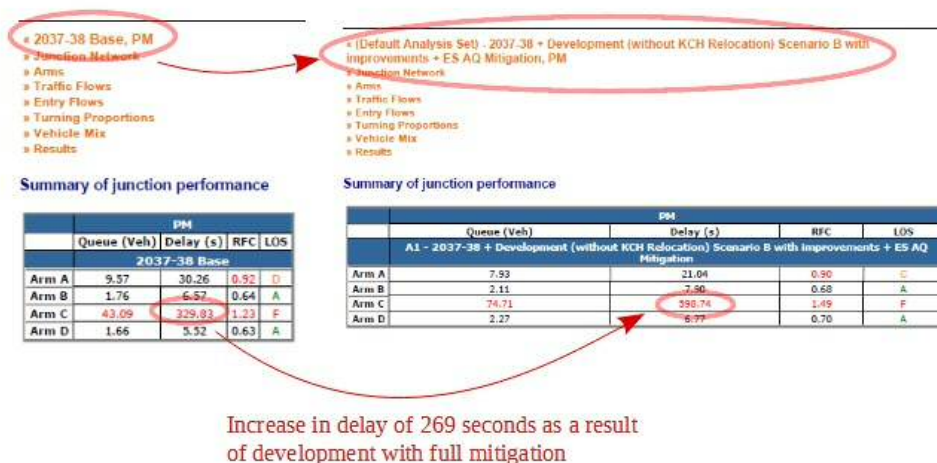
- 5.3 The red figures indicate increases and the blue figures indicate reductions compared with previous predictions. Although there are some links where flows have reduced, there are others that are showing significant increases, particularly New Dover Road in

⁹ Para. 8.4.9 of Updated TS identifies a 4% increase in the AM peak hour and a 3% increase in the PM peak hour.

the AM peak (+5%, +19%), Old Dover Road in the PM peak (+23%. +24%) and on sections of the Ring Road in both peak hours (up to +10%).

5.4 The Updated TS states that the worst case impact would be an increase of 7 seconds on St George’s Place. The Updated TS fails to provide any summaries of the numerous operational assessments that have been undertaken for the Ring Road junctions. In order to check whether the applicant’s statement is correct it is necessary to refer to the numerous operational assessment printouts in Appendix P. Scrutiny of these printouts reveals that the text of the Updated TS is misleading. There are several instances of levels of impact far in excess of 7 seconds. For example, the St George’s Street arm of the St George’s roundabout is shown to experience increases in delays in the PM peak of 269 seconds as a result of the development. This is despite full mitigation. The following extract shows the output tables from the relevant modelled scenarios:

Figure 5.2: Extracts from Appendix P of Updated TS: Operational Assessments of St George’s Roundabout



source: Appendix P of Updated TS

5.5 Other examples are increases in delay of 61 seconds on the Old Dover Road arm of the Riding Gate roundabout in the PM peak hour (Option B) and an increase of 115 seconds on the St George’s Street arm of the St George’s roundabout in the PM peak hour with Option A. **The applicant needs to provide a proper summary of the operational assessments to support the conclusions that are drawn in the text.**

5.6 Further examination of the traffic flow data reveals numerous discrepancies in the derivation of traffic flows used for the operational assessments. The applicant fails to

provide a full set of flow diagrams showing the steps whereby surveyed base flows are adjusted to allow for growth, committed development, development flows and the various other adjustments that are allowed for. The flow diagrams provided in Appendix N of the Updated TS comprise just a 2037/38 Base and then a series of 'with development' scenarios. The numerous intervening steps are a 'black box' that is impossible to interrogate. It would not be acceptable for the applicant to state that the procedure that has been undertaken is the same as that used previously since scrutiny of the original traffic flow diagrams show that when the various flow 'components' are added together, they do not equal the future year 'with development' flows. A simple calculation comprising the addition of the various Option A flow adjustments set out in the original TA to the revised 2037/8 Base flows shown in Appendix N of the Updated TS reveals that the total combined inflows at the Chantry Lane and Nunnery Fields signalised junctions (modelled together in the latest LINSIG analyses) shown in the summary future year Option A flow diagram in Appendix N (4,195 vehicles) are significantly lower than would be expected by adding the various flow components together (4,935 vehicles). It appears that the impact of the proposed development may have been significantly under-estimated. **The applicant needs to provide a full set of traffic flow diagrams that can be added together in a *transparent* way to arrive at traffic flows that are used as inputs to the operational assessments.**

6 CONCLUSION

- 6.1 This report has been prepared on behalf of the Alliance of Canterbury Residents' Associations (ACRA) and deals with the concerns expressed by local residents that the transport work submitted to support the proposed Mountfield Park planning application is flawed and that the scheme will lead to unacceptable transport and highways impacts.
- 6.2 An initial review of the location of the site shows that, unlike the vast majority of the existing city, it lies beyond a reasonable walking distance (>2km) of city centre facilities. Although the applicant suggests that the source travel data that forms the basis for assessments is representative of the proposed site, analysis demonstrates that housing in the 'Outer Barton Ward' lies between the site and the city and does not provide a robust basis for analysis. As a result, all of the applicant's assumptions of mode share under-estimate car travel.
- 6.3 Closer scrutiny of existing patterns of movement in the Outer Barton Ward show wide variations in levels of walking and car use. Given that almost the whole site lies significantly further from the city than the Outer Barton Ward, the applicant should have at least allowed for this variation by adopting a 'starting point' for assessment that properly allows for the range of levels of car use currently seen in the areas adjacent to the site. This has not been done and this leads to a situation where the locational characteristics of the site are assumed to be those of an area significantly closer to the city, an area from where it is possible to access the city centre on foot. This assumption is a fatal flaw in the applicant's assessment of the site's transport sustainability.
- 6.4 The applicant predicts a level of mode shift away from car on the basis of a highly subjective, biased and logically flawed series of assumptions. The approach leads to irrational conclusions such as people will be 20% more likely to transfer from car in the PM peak than in the AM peak. The methodology cannot withstand rational interrogation and cannot form a basis for deriving reliable predictions of transport impact.
- 6.5 The deficiency of the approach adopted towards the prediction of future patterns of movement is highlighted with reference to the difference in patterns between the existing Outer Barton Ward and the site as a whole:
- The level of walking for the site is predicted to be the same as the average for the Outer Barton Ward. This is an entirely unreasonable prediction given the site's location.

- The level of cycle use is predicted to increase by 54%. Given the characteristics of this mode of travel and the constraints to cycle movement in and around the city, this prediction appears highly unlikely.
- The level of train use is predicted to increase by 87%. There is no rational justification for this. Indeed, the site's location would suggest that the attractiveness of train travel would be significantly less than that for the existing Outer Barton Ward.
- Travel by 'other' modes, a category that is effectively 'lost' in the calculations is predicted to increase by 221%. This prediction is clearly unjustified and serves to artificially reduce the overall traffic impact.
- Car passenger travel is predicted to increase by 48% yet the only measure aimed at increasing car occupancy is promotion of car share databases. It is inconceivable that car occupancy could be increased by this amount through such a minimal intervention.

6.6 The applicant relies on a travel plan to achieve a 39.3% reduction in car use. It should be noted that this is a reduction of a level of car use that is already under-estimated by reliance on unrepresentative census data. Discussions with Kent County Council reveal that there is no evidence available of other travel plans within the county that have achieved anything like this level of mode shift. National data on trip generation indicate that the presence of a travel plan has a negligible impact on peak hour car trip generation rates. It is therefore evident from both local and national data that there is no merit in any argument that the travel plan will make a significant contribution towards the achievement of the 39.3% mode shift target.

6.7 Given the fundamental weakness and bias of the methodology used to identify future levels of car use, there is a real danger that the applicant has seriously under-estimated the impact of the development on surrounding transport networks and has thus failed to identify an appropriate level of mitigation.

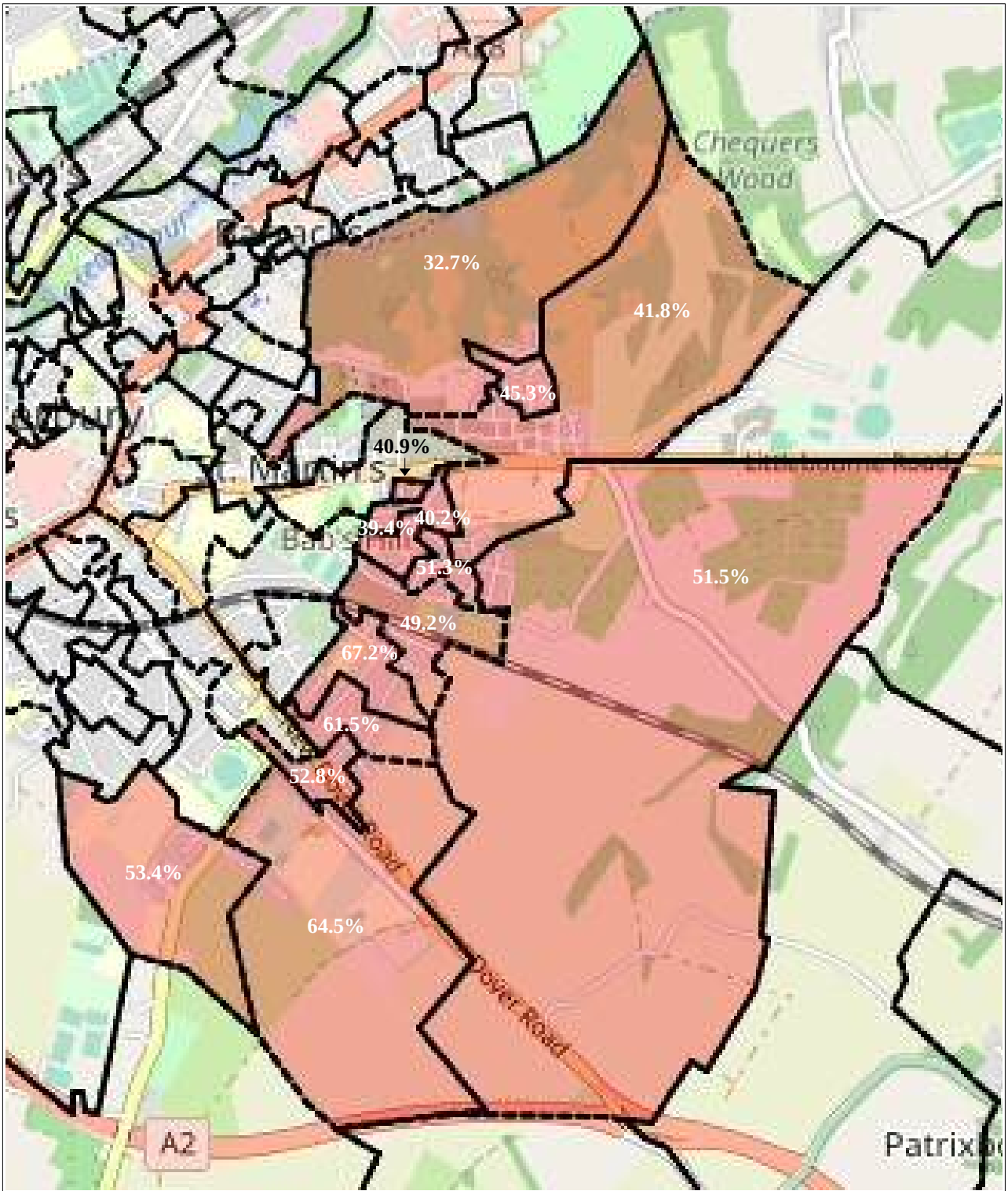
6.8 The applicant suggests that traffic surveys undertaken in Autumn 2021 confirm that the proposed development will not lead to unacceptable impacts at junctions around the Ring Road. The applicant fails to provide information that allows the flow derivation methodology to be checked. This needs to be submitted. The applicant also reports minimal increases in queues and delays based on revised junction modelling. However, closer scrutiny of the information that has been submitted indicates that the impact of the

proposed development based on the more recent surveys is very significant in some cases.

- 6.9 Overall it is concluded that the applicant has under-estimated the traffic impact of the proposed development by adopting a flawed and biased assessment methodology and the applicant fails to provide sufficient information to allow important aspects of calculations to be checked. It has not, therefore, been demonstrated that it is possible to properly mitigate the adverse transport impacts of the proposed development.

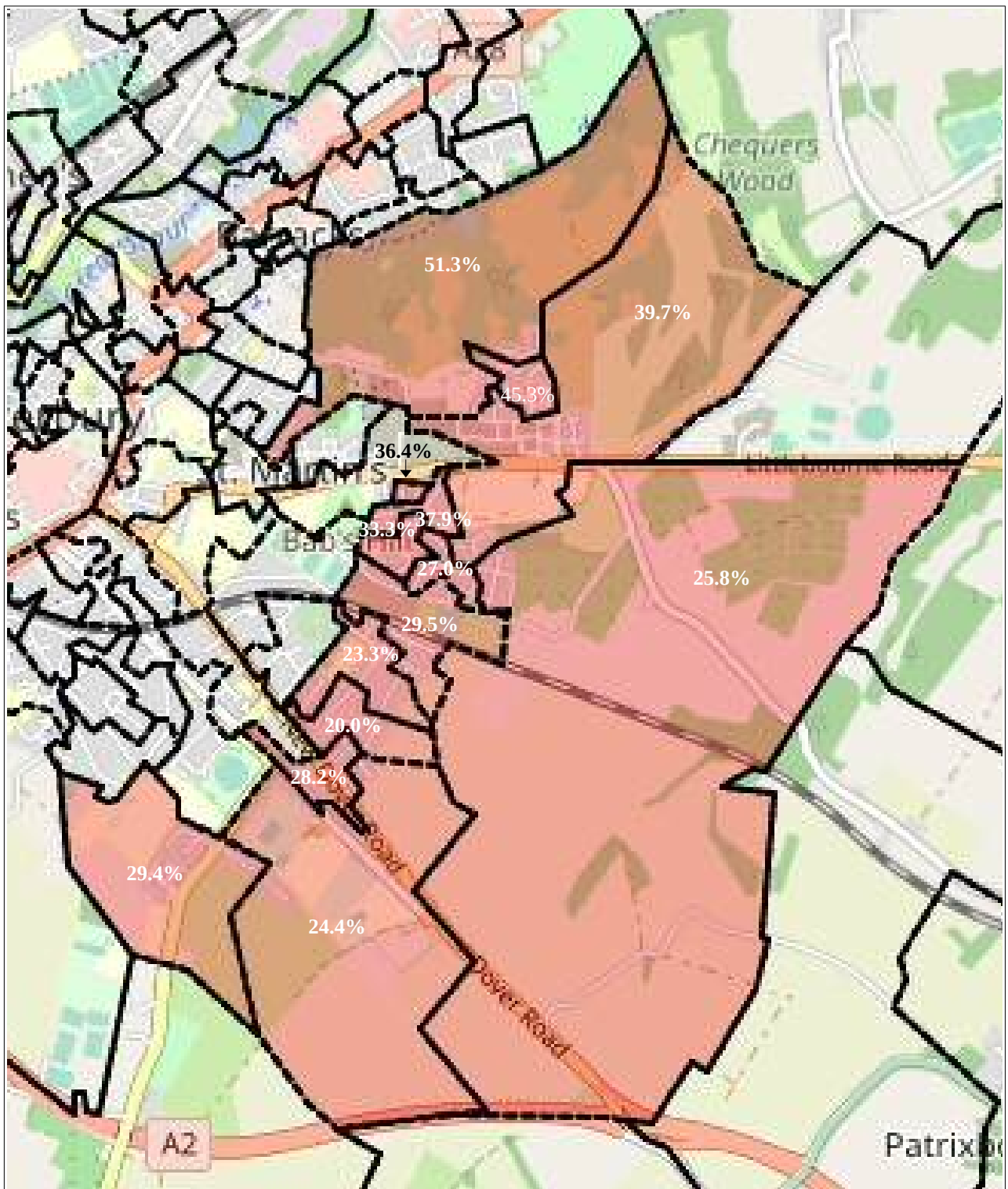
Appendices

Appendix 1: Variations in Car Driver and Walk Mode Share in Parts of Outer Barton Ward



Appendix 1A: Variation in Existing Car Driver Mode Share

source: ONS Table QS701EW - Method of travel to work



Appendix 1B: Variation in Existing Walk Mode Share

source: ONS Table QS701EW - Method of travel to work

Appendix 2: Calculation of Mode Share for Parts of Outer Barton Ward

QS701EW - Method of travel to work

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population All usual residents aged 16 to 74
 units Persons
 date 2011
 rural urban Total

All Categories

Method of Travel to Work	Output Areas														Total	%
	122078	122082	122083	122084	122086	122090	122093	122094	122095	122096	122097	122098	122100	167555		
All categories: Method of travel to work	246	287	271	295	258	208	194	222	312	204	267	259	252	85	3360	100.0%
Work mainly at or from home	7	7	1	3	2	5	11	17	15	13	5	5	1	0	92	2.7%
Underground, metro, light rail, tram	0	0	0	1	0	1	0	1	1	0	0	0	0	0	4	0.1%
Train	4	3	1	2	0	3	6	10	14	2	3	6	1	1	56	1.7%
Bus, minibus or coach	5	11	10	12	7	5	2	6	6	6	11	9	8	3	101	3.0%
Taxi	0	1	0	2	0	0	0	1	1	0	0	0	0	0	5	0.1%
Motorcycle, scooter or moped	1	1	0	1	0	1	0	0	1	0	0	1	0	0	6	0.2%
Driving a car or van	65	59	53	59	39	78	80	75	118	71	68	49	78	18	910	27.1%
Passenger in a car or van	8	6	12	5	9	1	9	4	11	0	11	4	4	4	88	2.6%
Bicycle	10	6	5	5	10	2	7	4	7	4	4	4	2	2	72	2.1%
On foot	39	56	50	31	33	27	26	40	65	27	34	77	78	16	599	17.8%
Other method of travel to work	1	0	1	1	1	0	0	3	0	0	1	1	1	0	10	0.3%
Not in employment	106	137	138	173	157	85	53	61	73	81	130	103	79	41	1417	42.2%

Main Modes

Method of Travel to Work	122078	122082	122083	122084	122086	122090	122093	122094	122095	122096	122097	122098	122100	167555	Total	%
All categories: Method of travel to work	139	148	133	118	101	121	141	159	236	123	137	155	173	44	1928	100.0%
Work mainly at or from home	7	7	1	3	2	5	11	17	15	13	5	5	1	0	92	4.8%
Train	4	3	1	2	0	3	6	10	14	2	3	6	1	1	56	2.9%
Bus, minibus or coach	5	11	10	12	7	5	2	6	6	6	11	9	8	3	101	5.2%
Driving a car or van	65	59	53	59	39	78	80	75	118	71	68	49	78	18	910	47.2%
Passenger in a car or van	8	6	12	5	9	1	9	4	11	0	11	4	4	4	88	4.6%
Bicycle	10	6	5	5	10	2	7	4	7	4	4	4	2	2	72	3.7%
On foot	39	56	50	31	33	27	26	40	65	27	34	77	78	16	599	31.1%
Other method of travel to work	1	0	1	1	1	0	0	3	0	0	1	1	1	0	10	0.5%

Value of 25 shown in Appendix C of Appendix L of Transport Assessment

Excluding Working from Home

Method of Travel to Work	122078	122082	122083	122084	122086	122090	122093	122094	122095	122096	122097	122098	122100	167555	Total	%
All categories: Method of travel to work	132	141	132	115	99	116	130	142	221	110	132	150	172	44	1836	100.0%
Train	4	3	1	2	0	3	6	10	14	2	3	6	1	1	56	3.1%
Bus, minibus or coach	5	11	10	12	7	5	2	6	6	6	11	9	8	3	101	5.5%
Driving a car or van	65	59	53	59	39	78	80	75	118	71	68	49	78	18	910	49.6%
Passenger in a car or van	8	6	12	5	9	1	9	4	11	0	11	4	4	4	88	4.8%
Bicycle	10	6	5	5	10	2	7	4	7	4	4	4	2	2	72	3.9%
On foot	39	56	50	31	33	27	26	40	65	27	34	77	78	16	599	32.6%
Other method of travel to work	1	0	1	1	1	0	0	3	0	0	1	1	1	0	10	0.5%

Percentages Excluding Working from Home

Method of Travel to Work	122078	122082	122083	122084	122086	122090	122093	122094	122095	122096	122097	122098	122100	167555	Total	%
All categories: Method of travel to work	3.0%	2.1%	0.8%	1.7%	0.0%	2.6%	4.6%	7.0%	6.3%	1.8%	2.3%	4.0%	0.6%	2.3%	44	2.3%
Train	3.8%	7.8%	7.6%	10.4%	7.1%	4.3%	1.5%	4.2%	2.7%	5.5%	8.3%	6.0%	4.7%	6.8%	56	4.7%
Bus, minibus or coach	49.2%	41.8%	40.2%	51.3%	39.4%	67.2%	61.5%	52.8%	53.4%	64.5%	51.5%	32.7%	45.3%	40.9%	101	40.9%
Driving a car or van	6.1%	4.3%	9.1%	4.3%	9.1%	0.9%	6.9%	2.8%	5.0%	0.0%	8.3%	2.7%	2.3%	9.1%	88	9.1%
Passenger in a car or van	7.6%	4.3%	3.8%	4.3%	10.1%	1.7%	5.4%	2.8%	3.2%	3.6%	3.0%	2.7%	1.2%	4.5%	72	4.5%
Bicycle	29.5%	39.7%	37.9%	27.0%	33.3%	23.3%	20.0%	28.2%	29.4%	24.5%	25.8%	51.3%	45.3%	36.4%	599	36.4%
On foot	0.8%	0.0%	0.8%	0.9%	1.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.8%	0.7%	0.6%	0.0%	10	0.6%
Other method of travel to work																

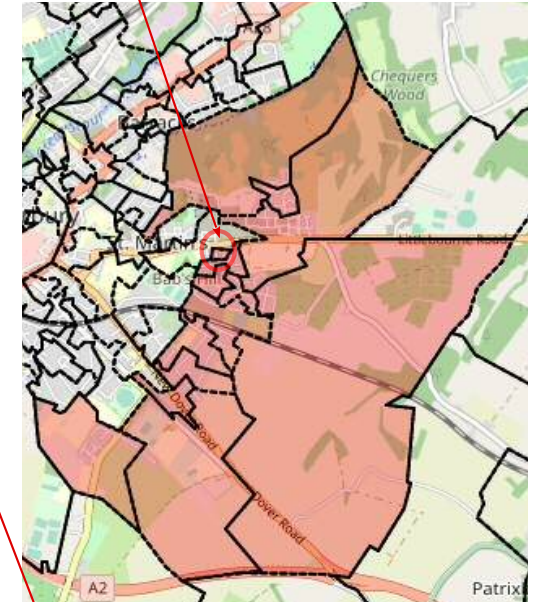
Calculation of St Dev

car driver
 mean 49.42%
 standard deviation 10.16%
 85th percentile car driver mode share 59.58%

Existing bus mode share for housing along Dover Road

Area not shown as part of Barton Outer Ward but included in calculations in Appendix C of Appendix L of Transport Assessment

Area containing existing housing along Dover Road



Car driver mode share calculated by the appellant in Appendix C of Appendix L of Transport Assessment

Car driver mode share adjusted to exclude working from home

Appendix 3: Extracts from RGP Technical Note demonstrating Flaws in Mode Share Calculations

Final page of Appendix C of Appendix L of Transport Assessment showing '44.7%' figure:

2011 Barton Ward Data % split - Not Mode Share

ONS Data	Barton Ward	Inner		Outer	
All Usual Residents Aged 16 to 74	4596	2653	57.7%	1943	42.3%
Work Mainly at or From Home	248	156	62.9%	92	37.1%
Train	164	108	65.9%	56	34.1%
Bus, Minibus or Coach	226	125	55.3%	101	44.7%
Driving a Car or Van	1832	922	50.3%	910	49.7%
Passenger in a Car or Van	182	94	51.6%	88	48.4%
Bicycle	151	79	52.3%	72	47.7%
On Foot	1689	1090	64.5%	599	35.5%
Other	104	79	76.0%	25	24.0%

The 44.7% figure is reproduced at various places within the technical work to represent car driver mode share yet the source data do not show a 44.7% car driver mode share. Indeed, the second sheet within Appendix C of Appendix L of the Transport Assessment shows a car driver mode share for the Outer Barton Ward of 47%:

2011 Method of Travel to Work (QS701EW)			Method of Travel to Work (QS701EW)		
	total			total	
All Usual Resi	3360		All Usual Resi	1943	
Work Mainly	92	3%	Work Mainly	92	5%
Underground	4	0%			
Train	56	2%	Train	56	3%
Bus, Minibus	101	3%	Bus, Minibus	101	5%
Taxi	5	0%			
Motorcycle, etc	6	0%			
Driving a Car	910	27%	Driving a Car	910	47%
Passenger in	88	3%	Passenger in	88	5%
Bicycle	72	2%	Bicycle	72	4%
On Foot	599	18%	On Foot	599	31%
Other Metho	10	0%	Other Metho	25	1%
Not in Emplo	1417	42%			