Tiverton Eastern Urban Extension (EUE)

Residential Amenity Assessment

A095750

July 2016

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1.0 Introduction

1.1 Background

1.1.1 The Tiverton Eastern Urban Extension (EUE) is allocated for a mixed use development by Policy AL/TIV/1 of the Mid Devon Allocations and Infrastructure Development Plan Document (AIDPD). Policy AL/TIV/1 describes how the Tiverton EUE is allocated for a mixed-use development comprising the following.

- From 1550 - 2000 dwellings, including a proportion of affordable housing.
- From 95,000 - 130,000 sqm of employment floor space.
- Transport provision to ensure appropriate accessibility for all modes.
- Environmental protection and enhancement.
- Community facilities to meet local needs arising.
- Carbon reduction and air quality improvements.
- An agreed phasing strategy to bring forward development and infrastructure in step and retain overall development viability.

1.1.2 Policy AL/TIV/7 describes how before a planning application is made, the Local Planning Authority will carry out a major public consultation exercise into the masterplanning of the site. That masterplanning exercise was completed in 2013/14 and a 'Masterplan Supplementary Planning Document' (hereinafter referred to as the masterplan SPD) was adopted by the Council in April 2014.

1.1.3 The masterplan SPD relates to the west and north areas of the Tiverton EUE, known as Area A. The masterplan SPD makes clear that a further public consultation exercise will be required for the remaining area of the Tiverton EUE, known as Area B.

1.1.4 Since the adoption of the masterplan SPD, two Outline planning applications have been submitted in relation to Area A. In summary, these proposals are as follows:

- The Waddeton Park application (13/01616/MOUT) relating to part of Area A in the north east of the allocation sought permission for: up to 300 dwellings; associated access infrastructure; public open space; and landscaping. This application was granted outline consent on 18th September 2015.

- The Chettiscombe Trust Estate application (14/00881/MOUT) relating to the bulk of the rest of Area A sought permission for: up to 700 dwellings, 22,000 square metres of B1/B8 employment land, care home, primary school and neighbourhood centre with associated access including a left in left out junction on the westbound A361 and access and egress onto Blundells Road. This application has a resolution to grant planning permission subject to the prior signing of a S106 agreement.

1.1.5 Given that applications that are acceptable to Council haven been received on Area A, the Council is now looking to continue the masterplan process for Area B. The Council intends to adopt a new Supplementary Planning Document for Area B of the Tiverton EUE.

1.2 Purpose and Scope of the Study

1.2.1 This document is intended to form part of the evidence base to inform the masterplanning process for the Area B SPD. The objectives of this study are twofold:

1. To provide Mid Devon District Council with an updated evidence base sufficient to complete the land use planning work in the master plan SPD across Area B.

2. Provide MDDC with a thorough assessment of the potential to accelerate delivery of Area B by examining the feasibility of the creation and use of alternative primary access options at Mayfair and/or Manley Lane.

1.2.2 In response to the first objective, the following technical assessment work has been undertaken:

1. Topographical survey (Area B)
2. Arboricultural survey (Area B)
3. Ground conditions desktop survey (Areas A and B)
4. Ecological walkover survey (Area B, with a review of Area A ecology evidence)
5. Noise assessment (Area B)
6. Air quality Assessment (Area B)
7. Area B Vehicle Trip Forecast and Capacity Assessment

1.2.3 These technical assessments are summarised in section 2 of this assessment and are provided as separate standalone documents.

1.2.4 In response to the second objective, as currently drafted, the Area A masterplan SPD indicated that the development of Area B would commence toward the latter phases of Area A. This is because Area B was reliant upon access through Area A to Blundell's Road.

1.2.5 In consultation with the Area B landowners, the Council has identified a potential opportunity to accelerate delivery of Area B in advance of the main access being provided through to the site from Area A. In doing so, it wishes to consider the feasibility of options that are presented by the use of existing roads at Mayfair and Manley Lane either individually and/or in combination, whilst taking account the proposed new access route through Area A as currently set out in the adopted masterplan SPD.

1.2.6 On this basis the study assesses the potential impacts on the residential amenity of residential properties in the immediate vicinity of four access options for the Tiverton Eastern Urban Extension (EUE), Area B, these are:

- Access and egress via Mayfair
- Access and egress via Manley Lane
- Access via Mayfair and egress via Manley Lane
- Access via Manley Lane and egress via Mayfair Lane.

1.2.7 The study of residential amenity includes input from four specialist assessments of the above access options. These specialist assessments are in relation to the transport implications of the access options, landscape and visual amenity, air quality and noise. These aspects are covered in chapters 3 to 6 respectively. Technical reports covering these issues are also appended to this assessment.

1.2.8 The technical assessments that have been gathered establish the existing baseline position in relation to the specialist areas, such as existing noise levels in the area for example. The potential change resulting from the proposed access options is then considered against the baseline as an assessment of effects.

2.0 Technical Assessment Overview

2.1 Introduction

2.1.1 This chapter provides an overview of the technical assessments that have been undertaken part of the evidence gathering process that will be used to inform the masterplanning process for Area B. As described in section one above, the technical assessment are provided a separate standalone documents.

2.2 Topographical Survey

2.2.1 The topographical survey extends over the Area B part of the Tiverton EUE. In addition, adjacent roads at Mayfair, Post Hill and Manley Lane have been surveyed to inform the access feasibility study. The width of these roads is of particular consequence to their ability to accommodate traffic associated with the Area B part of the Tiverton EUE.

2.2.2 The topographical survey has the added benefit of informing the masterplanning of Area B and is required for a number of other technical assessments, such as the arboricultural survey for example.

2.3 Arboricultural Survey

2.3.1 The topographical survey has surveyed the locations of all trees of note within the site. This has been used to produce an Arboricultural Survey, which details the species and quality of trees. An Arboricultural Survey is an essential component of the masterplanning process as it identifies the protection areas of trees and their roots systems from development. The identification of trees in the vicinity of the potential access points to the development is also a key consideration.

2.4 Ground Conditions Desktop Survey

2.4.1 The Ground Conditions desktop survey has provided details of the geology, hydrogeology, hydrology, radon, history, geotechnical hazards and preliminary ground contamination assessment in relation to both Area A and Area B. The survey has assessed the Ground Conditions reports submitted with the two outline applications at Area A and has reviewed known records in relation to Area B.

2.4.2 The Ground Conditions desktop survey would inform a number of further detailed studies such as foundation design and drainage strategies. For the purposes on the Area B masterplanning exercise, the survey confirms that ground conditions and contamination will have little impact upon the location of development within the

allocated urban extension area. It considers that the former railway line may potentially be a source of hydrocarbon (fuel) contamination that should be investigated at a later date. This part of the site is not proposed to be developed in any event.

2.5 Ecological Walkover Survey

2.5.1 Like the Ground Conditions Survey, the Ecological Walkover Survey has reviewed known ecology studies on parts of the urban extension and has carried out further assessments to provide a full picture of how ecological issues might affect the masterplanning of Area B.

2.5.2 The two outline application at Area A were accompanied by habitat surveys and detailed survey for protected species. One of the Area B landowners has commissioned a recent habitat survey and detailed surveys for protected species on part of Area B. A habitat survey was carried out in 2013 for both Area A and Area B. Given its age a revised habitat survey has been undertaken.

2.5.3 The combined recent surveys and newly provided surveys as part of this evidence gathering exercise has provided sufficient ecological to inform the masterplanning process of Area B. The main conclusions and mitigation measures include the retention of hedges with 5 metre buffers. Whilst sufficient information has been collected for masterplanning purposes, further details protected species surveys would be required in support of a planning application for those parts of Area B that haven't been fully surveyed.

2.6 Noise assessment

2.6.1 The Noise Assessment describes that the existing noise levels in the vicinity of Area B have been assessed. This is referred to as the baseline noise levels.

2.6.2 The baseline noise levels can be used to predict noise levels arising from the development when it is complete. A Noise Assessment will be required in support of any future planning application for Area B.

2.6.3 Noise modelling has also been undertaken to show the effects in terms of noise upon residents through the different highway access options at Mayfair and Manley Lane. This topic is discussed in chapter 6 of this report.

2.7 Air Quality Assessment

2.7.1 Like the Noise Assessment, the Air Quality Assessment describes that the air quality in the vicinity of Area B have been assessed. This is referred to as the baseline level that

has been used to assess the impact of the development upon the air quality of the area locality.

2.7.2 Modelling has also been undertaken to show the effects in terms of noise upon residents through the different highway access options at Mayfair and Manley Lane. This topic is discussed in chapter 5 of this report.

2.8 Area B Vehicle Trip Forecast and Capacity Assessment

2.8.1 This document has been prepared to provide explanation as to how forecast traffic associated with Area B of the Tiverton Urban Extension has been calculated along with a junction capacity review of the Posthill / Mayfair priority junction.

2.8.2 The vehicle trip forecasts have been used to inform the noise and air quality assessments that are based upon the predicted number of vehicles serving the development.

2.8.3 The trip forecasts are referred to at section 3.4 of this report in relation to consideration of the proposed alternative access options to Area B.

3.0 Access Feasibility Options

3.1 Introduction

3.1.1 The access feasibility options study assesses the ability in highway engineering terms of Manley Lane and Mayfair, either individually and/or in combination, to accommodate additional traffic movements associated with an alternative primary access to Area B.

3.1.2 In order to meet the housing needs of the District, the Council has commissioned this access feasibility study to assess the feasibility of alternative assess points to Area B via Manley Lane and Mayfair.

3.1.3 Manley Lane forms the east boundary of Area B and could readily access the site in a number of locations. The narrow nature of parts of Manley Lane means that it is unlikely to provide a suitable primary access to Area B on its own.

3.1.4 It has been brought to the attention of the Council that one of the Area B landowners is in the control of a residential property at 10 Mayfair, the south boundary of which is adjacent to Area B. The landowner proposes to provide a short vehicular link along the access drive to 10 Mayfair to Area B. This would link Area B to the existing Post Hill and Mayfair Junction.

3.1.5 On this basis, the access feasibility study assesses a number of options utilising the potential access points at Manley Lane and Mayfair. These potential options are as follows:

- Access and egress via Mayfair
- Access and egress via Manley Lane
- Access via Mayfair and egress via Manley Lane
- Access via Manley Lane and egress via Mayfair Lane.

3.2 Area A and Area B Development Timescales

3.2.1 As described in section 1 of this report, the masterplan SPD envisaged connection to Area B of the Tiverton EUE from Area A once it nears completion. The Chettiscombe Trust Estate application (14/00881/MOUT) that proposes up to 700 dwellings in Area A is located immediately adjacent to the boundary of Area B. It is likely that this development would commence with a new access formed at Blundells Road and then gradually develop southward in phases. This natural southward progression means that development on the border with Area B is likely to be one of the last phases of that development.

3.2.2 The adopted Area A SPD and the Local Plan Review 2013 – 2033 (proposed submission) both contain the same housing trajectories for the Tiverton EUE that combine both areas A and B. These are reproduced in **table 1** below.

Tiverton EUE anticipated housing completions		
	Annual completions	Running total
2013 / 2014	-	-
2014 / 2015	-	-
2015 / 2016	12	12
2016 / 2017	75	87
2017 / 2018	75	162
2018 / 2019	75	237
2019 / 2020	150	387
2020 / 2021	150	537
2021 / 2022	150	687
2022 / 2023	150	837
2023 / 2024	150	987
2024 / 2025	150	1137
2025 / 2026	150	1287
2026 / 2027	150	1437
2027 / 2028	83	1520

Table 1 – Tiverton EUE Housing Delivery Rates

Source: Adopted Tiverton EUE Masterplan SPD

3.2.3 In WYG's experience, a single housebuilder would aim to build approximately 50 dwellings per year. This rate can be accelerated if more than one developer operating at a site at the site time. When looking at the access arrangements for Area B for robustness we have assumed the same housing completion rates as shown above.

3.2.4 **Table 2** below divides the total Tiverton EUE housing completions into the expected delivery rates from the Waddeton Park, Chettiscombe Trust applications and Area B. As described at paragraph 3.2.1 above, **table 2** shows the commencement of Area B towards the end of the Chettiscombe Trust build period.

Table 2 – Tiverton EUE Delivery Rates				
1	12	12		
2	75	50	25	
3	75	50	25	
4	75	50	25	
5	150	75	75	
6	150	63	87	
7	150		150	
8	150		150	
10	150		38	112
11	150			150
12	150			150
13	83			83

3.2.5 As highlighted in **table 2**, it would take approximately 9 years for an access via Area A to be delivered to the site boundary with Area B. If an alternative means of access to Area B was provided we would anticipate commencement approximately 5 years sooner as shown in the alternative **table 3** below.

Table 3 – Tiverton EUE Delivery Rates with Area B Alternative Access				
1	12	12		
2	75	50	25	
3	75	50	25	
4	100	50	25	
5	262	75	75	25
6	300	63	87	112
7	300		150	150
8	233		150	150
10	38		38	

3.2.6 **Table 3** shows the accelerated delivery affect over the whole urban extension through the earlier delivery of Area B via an alternative access arrangement. Instead of Area B starting nine years after the first residential completion, an alternative access would see the near completion of Area B by the ninth year.

3.2.7 **Table 3** notionally shows the completion of Area B in nine years. It may be that a proportion of housing at Area B is still dependent upon an access from Area A depending in the highway and/or environmental capacity of the assessed alternative access arrangements. The following section considers the highway capacity of alternative access arrangements to Area B.

3.3 Site Context

3.3.1 This Amenity Study has been prepared within the context of planned changes to the highway network along Posthill. Development of the northern parcels of Area A, land adjacent to Uplowman Road, incorporates a reduction in the speed limit along Posthill.

3.3.2 The current speed limit along Posthill at the junctions with Mayfair and Manley Lane is 40mph however planning permission for the development of the northern parcels of Area A confirms that a reduction to 30mph will apply. The start / end of the 30mph limit will be in the location of the existing 40mph repeater signs located between Golf Course Lane and Manley Lane. If it were to be the case that the speed limit had not been amended at the time development of Area B is sought it is expected that the change in speed limit would be brought forward as part of the Area B scheme.

3.4 Traffic Assessment

Trip Forecast

3.4.1 A detailed Area B Trip Forecast and Capacity Assessment for alternative means of access to Area B has been undertaken and is provided as a standalone technical assessment that should be read in conjunction with this report.

3.4.2 **Tables 4 and 5** set out below provides detail as to the AM and PM peak vehicle trips forecast for Area B up to a total of 500 dwellings. Transport Assessments when prepared to support planning applications focus assessment upon the morning and evening 'commuter' peaks, this is the peak hours in the morning and evening that residential developments generate the highest volume of trips and therefore provide assessment for the busiest part of the day.

3.4.3 The information in the tables confirms the additional forecast volume of cars if applying either one-way or two-way operation to access the site.

Figure 1: Local Highway Context

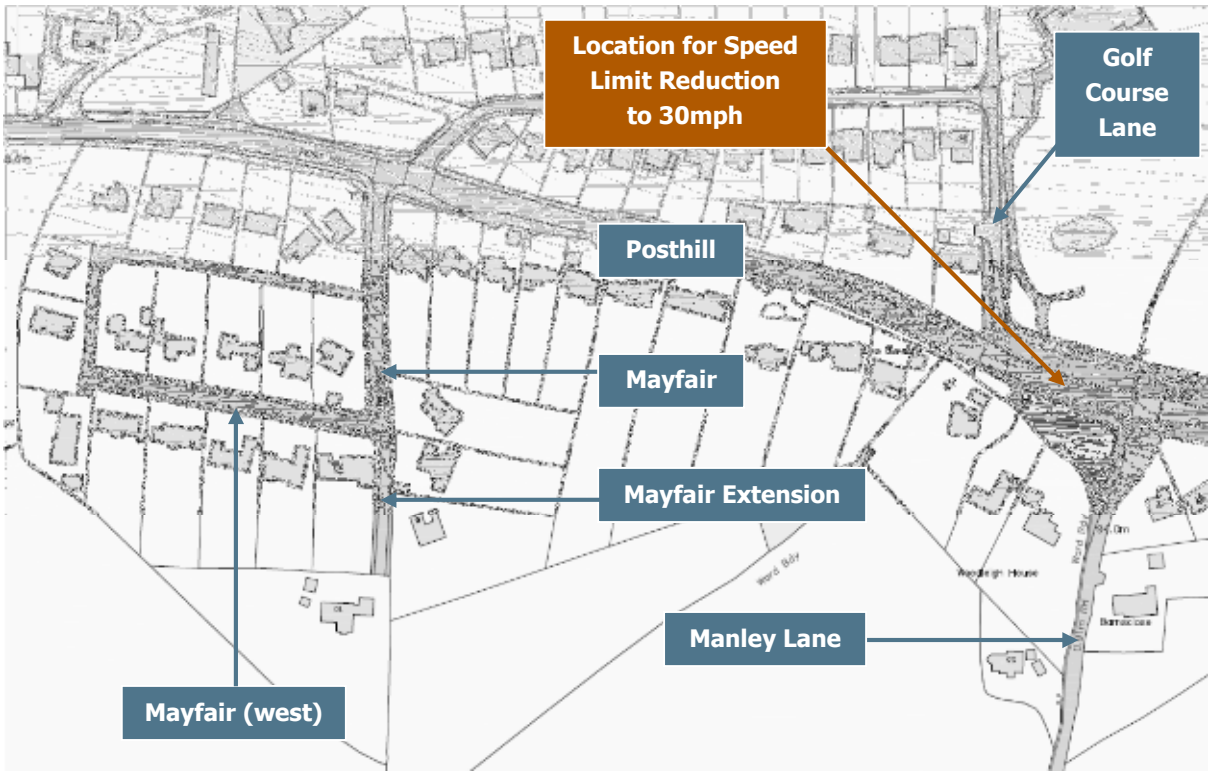


Table 4 - Area B Development Trip Profile - AM Peak					
25	4	10	0.1	0.2	0.2
75	11	30	0.2	0.5	0.7
150	22	60	0.4	1.0	1.4
225	32	90	0.5	1.5	2.0
300	43	119	0.7	2.0	2.7
375	54	149	0.9	2.5	3.4
450	65	179	1.1	3.0	4.1
475	68	189	1.1	3.2	4.3
500	72	199	1.2	3.3	4.5

Table 5 - Area B Development Trip Profile - PM Peak					
25	9	5	0.2	0.1	0.3
75	28	16	0.5	0.3	0.7
150	56	32	0.9	0.5	1.5

Table 5 - Area B Development Trip Profile - PM Peak					
225	85	48	1.4	0.8	2.2
300	113	64	1.9	1.1	3.0
375	141	80	2.4	1.3	3.7
450	169	96	2.8	1.6	4.4
475	179	102	3.0	1.7	4.7
500	188	107	3.1	1.8	4.9

Highway Capacity

3.4.4 The scale of development on Area B will be constrained by a number of factors. In terms of highway considerations one of the key constraints to development is capacity of the existing road network. The allocation of Area B is such that the wider network impact of development has been accepted with new infrastructure proposed as part of the combined Area A and Area B urban extension. However at the local level, access on to Posthill, this is considered more specifically as part of this review.

3.4.5 Given the possible access options identified in this report it is necessary to ensure that the Mayfair / Posthill junction is adequate to accommodate all development traffic under two way operation.

3.4.6 The detail of how traffic forecast for the development has been identified is described in the separate Area B Trip Forecast and Capacity Assessment technical report. This report also provides a capacity assessment of the Mayfair / Posthill junction. The findings of the forecast assessment and capacity review shows that adequate capacity is available within the Mayfair / Posthill junction were all development, up to a total of 500 dwellings, to be accommodated on Area B. This would be the scenario if access to Area B was by way of two way operation along Mayfair.

Review of Access Options

3.4.7 In order to consider the pros and cons of each scenario a traffic light system has been utilised to with each category defined as follows:

Confirms why that element of the scheme is acceptable and that it would not require action beyond a planning application or associated pre construction / occupation requirements.

A factor that has the potential to cause road user conflict which cannot be designed

3.4.8 A summary of the pros and cons of each access option is supplied as follows:

Two Way Access from Mayfair Only

Pros	*Cons*

Two Way Access from Manley Lane Only

Pros	*Cons*

Two Way Access from Mayfair and Manley Lane

Pros	*Cons*

One Way Working – In via Manley Lane / out via Mayfair

Pros	*Cons*

	routed through Area B including agricultural vehicles.

One Way Working – In via Mayfair / out via Manley Lane

Pros	*Cons*

	routed through Area B including agricultural vehicles

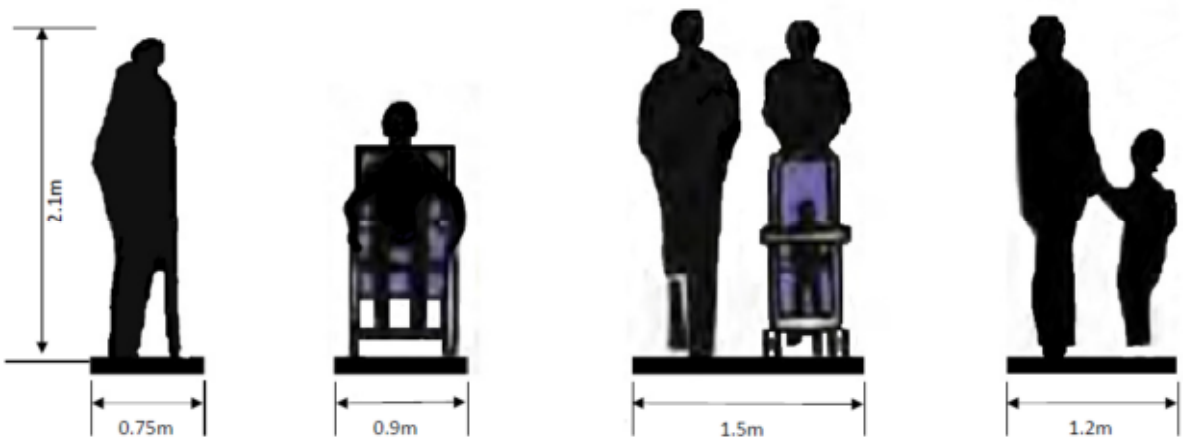
Preferred Access Solution

3.4.9 Taking account of the above identified review the Two Way Access from Mayfair only is considered the most viable option. This is based on the context of seeking to minimise conflict between road users. Furthermore the traffic review has shown that two way operation along Mayfair can adequately accommodate traffic associated with 500 dwellings on Area A and that pedestrian access is possible under such an arrangement.

3.4.10 To provide confidence that a two way arrangement along Mayfair can be delivered a likely design solution has been prepared. This would incorporate a priority to oncoming traffic arrangement and flat top road humps in order to manage the likely speed of traffic along Mayfair. Furthermore by managing traffic speeds adequate visibility is possible at all driveways as well as along Mayfair. The plan (A095750 - SK06 - Proposed Site Access Via Mayfair) provided at **Appendix 1** confirms the arrangement possible although alternatives to some aspects of the design may be viable.

3.4.11 Providing two-way access along Mayfair would enable a footway with a minimum width of 1.5m to be provided from Posthill along Mayfair into Area B. This is below the preferred minimum of 2m but would nevertheless be wide enough, when considering mobility guidance, (DfT inclusive mobility and Manual for Streets) to accommodate a pedestrian passing alongside a wheelchair user or pushchair. Figure 3 and extract of Manual for Streets confirms.

Figure 3: Extract of Figure 6.8 of Manuel for Streets



3.5 Other Highway Considerations

Funding of Highway Works

3.5.1 The costs for the highway works to deliver either a one or two way access solution would need to be funded by the developer of Area B. The necessary highway works would be secured by planning condition or requirements of a Section 106.

Considerations for Construction Traffic

Construction Traffic Volumes

3.5.2 The proportional impact of construction traffic is expected to be low when considered against forecast development traffic volumes. The initial mobilisation of the site to import relevant plant and infrastructure materials is likely to be one of the key construction periods in terms of construction traffic volumes. At this time total traffic volumes associated with Area B will be low and as such the capacity of the adjacent highway network more than sufficient to accommodate construction traffic. Subsequently capacity will remain adequate to accommodate the combined impact of both construction and residential traffic arising from Area B.

Measures to Manage Construction Traffic

3.5.3 A clear and well considered Construction Traffic Management Plan (CTMP) will need to be developed in order to minimise conflict between existing road users, future residents of early phases of Area B and construction traffic. This will need to be in place prior to commencing construction with agreement of a CTMP provided by Mid Devon District Council. This would be secured via a planning condition tied to any planning consent subsequently granted for the development of Area B.

3.5.4 In order to manage arrivals of construction traffic it is envisaged that a vehicle booking system will be introduced. This is common practice on construction sites in order to limit the number of vehicles arriving at site at any one time. It will also minimise the frequency of a departing vehicle and an arriving vehicle meeting one another on

Mayfair with two way traffic operation applied along Mayfair. Such arrangement could be complemented by requiring HGV traffic, associated with the construction of Area B, to operate to a one way system with construction vehicles entering via one of either Mayfair or Manley Lane and exiting via the other.

3.5.5 Additionally it is common practice for hours of construction to be controlled by planning conditions associated with development. Common hours of construction are as follows:

- Monday – Friday: 8.00am – 6.00pm; and,
- Saturday: 8.00am – 1.00pm

Access By Emergency Vehicles

3.5.6 The scale of development is such that an emergency access should be provided that is independent of the primary access.

3.5.7 The requirement of the emergency access is less onerous than a full access road. Were the site access solution to be two-way access via Mayfair an emergency access could be secured on Manley Lane. The use of a removal bollard would be an option to secure the access for use by emergency vehicles only.

3.5.8 If one way working is applied then a secondary, emergency access, is available for emergency vehicles to access the site.

Arrangements Following Area A Access being Provided into Area B

3.5.9 Provision of access into Area B from Mayfair and / or Manley Lane is intended as a temporary access solution. Once the access road from Area A is provided the requirement to maintain primary vehicular access via Mayfair and / or Manley Lane is removed. Whilst temporary the access would be constructed to adoptable highway design standards.

3.5.10 Whilst specific options have not been considered for this future scenario one option could be to remove vehicular access via the Mayfair extension and replace with a pedestrian and cycle only route. Vehicular access would be retained to existing properties on Mayfair.

4.0 Landscape and Visual Amenity

4.1 Introduction

4.1.1 This chapter of the residential amenity assessment considers the potential impacts on **landscape and visual amenity,** as experienced by residents adjacent to the access routes. Landscape and visual amenity is part of 'residential amenity', considered alongside traffic, air quality and noise in chapters 3, 5 and 6 of this report.

4.1.2 For the purposes of this study, views from each property are considered 'in the round' including the potential views from inside the dwelling as well as those available from the 'domestic curtilage' (domestic gardens and access driveway).

4.1.3 The existing landscape and visual amenity of each property will include the following appraisal of the character and sensitivity of the existing environment:

- the **landscape context** of the property and its domestic curtilage in terms of character, landform, land cover and pattern and the presence of visual foci, both natural and man-made and their distance from the viewer;
- the **orientation of views** from the property and its domestic cartilage towards the proposed access;
- the **context of views** possible from the property and its domestic curtilage considering the differences between viewing experiences in different directions, and particularly towards the proposed access;
- the **nature and extent of views** from the property and its domestic curtilage, whether they are open and panoramic or subject to any restrictions by nearby buildings or vegetation; and
- the **scenic qualities** of the views from the property and its domestic curtilage.

4.1.4 This assessment has been prepared to inform the selection of the most appropriate access option for the proposed development. It also considers the level of usage of each access option and relating impact on residential amenity.

4.2 Existing situation (baseline)

4.2.1 The residential properties included within this assessment are those within the immediate vicinity of each access option or those where perceptible change in amenity is possible.

4.2.2 The properties included within this assessment are located on **Figure RAS.01 in Appendix 2** and listed within **Table 6** below.

Table 6: List of residential properties

Property ref.				
	Woodleigh House			9 metres
	Highfield, No. 53 Manley Lane			18 metres
	Barns Close, Manley Lane			13 metres
	No. 55 Manley Lane			5 metres
	No. 57 Manley Lane			16 metres
	Corner House, No. 1 Mayfair			5 metres
	No. 2 Mayfair			3 metres

Property ref.				
	No. 3 Mayfair			5 metres
	No. 4 Mayfair			14 metres
	No. 34 Mayfair			20 metres
	No. 6 Mayfair			11 metres
	No. 8 Mayfair			10 metres
	No 10 Mayfair			
	No. 12 Mayfair			1 metre

4.2.3 A total of 14 residential properties have been identified from Ordnance Survey mapping, aerial photography and a field survey as those which could potentially perceive the changes relating to the access options. The extent of each access option which will be visible and the impact of intervening features for the 14 locations are described in **Table 7**.

Table 7: Properties with potential effects on residential amenity

Property Reference		
	Potential views of changes at **Manley Lane**. The house faces north and is elevated above road. It overlooks obliquely from the front and also has views from the side. From the rear there are views down the lane.	

Property Reference		

Property Reference		

Property Reference		

Property Reference		

Property Reference		
		

4.3 Assessment of Change

4.3.1 The methodology used for assessing the landscape and visual changes resulting from the proposed access routes is based on the recommendations in Guidelines for Landscape and Visual Assessment 3rd Edition published by The Landscape Institute and the Institute of Environmental Management & Assessment in 2013 (GLVIA3). The assessment process comprises a combination of desk studies and field surveys, with subsequent analyses, and involved:

- Evaluation of the features and elements of the landscape/townscape and their contribution to landscape/townscape character, context and setting;
- Analysis of the access route option and consideration of potential landscape and visual effects of the proposals on landscape and visual amenity;
- Identification of the extent of visibility of the access option and residents' views;
- Consideration of the route option and its future use at the traffic levels defined along with any potential mitigation measures to avoid, reduce or offset adverse effects;
- Assessment of magnitude of change, the degree and nature of effects on the landscape/townscape and on visual amenity.

4.3.2 The potential scale of effects on landscape and visual amenity will be assessed using a four level scale from Negligible/None to Major Adverse, as set out in **Table 8**.

Table 8: Potential scale of effect on landscape/townscape and visual amenity Methodology

Effect Level	
	The change in the view and landscape character is imperceptible or difficult to discern
	Minor deterioration in view experienced by residents or landscape/townscape character with little scope for mitigation -**'slight'** adverse effect
	Visual intrusion experienced by residents or landscape/townscape character with medium magnitude of change and little scope for mitigation - **'moderate'** adverse effect
	Major visual intrusion experienced by residents or landscape/townscape character with large magnitude of change on sensitive/primary views and little scope for mitigation -**'substantial'** adverse effect

4.3.3 The assessment of landscape and visual amenity requires a combination of objective analysis and subjective professional judgment. It involves analysis and evaluation of the current views and character of Mayfair and Manley Lane, including landscape/townscape features, character, and views available of the highway and the effects on them likely to arise from the proposed access options.

4.3.4 The four access scenarios are considered in turn below:

Access Scenario 1: Two Way Access from Mayfair Only

4.3.5 This scenario allows for two way access to the site along Mayfair with all necessary improvements to the highway being carried out on land within the highway corridor. All existing highway boundaries will be retained, which will maintain current levels of screening for existing residents.

4.3.6 Existing boundaries are effective at screening views potential from the gardens and ground floor windows, typically restricting views of Mayfair to a narrow view through the access gates for each house. Garden boundary fences and vegetation also reduce the influence of the Mayfair street character on the amenity of each of the properties.

4.3.7 Several properties have first floor views towards Mayfair and one property, No. 2, has second floor views towards Mayfair. At elevation the changes to Mayfair and additional traffic will become more apparent, although the views are more likely to be secondary when compared to the primary views from the ground floor.

Table 9: Potential effect on landscape and visual amenity

Property ref.				
	The highway boundary offers a degree of separation from both Mayfair and Post Hill. Glimpsed views would be available through the access gates. Traffic along Post Hill is currently a feature of the context of the property.			
	Close boarded fence 1.8 metres in height around front garden, part of house and part of rear garden. Remainder of rear garden has 2m high hedge.			
	Close boarded fence 1.8 metres in height around rear garden, house and part of front garden, partly topped and backed by mature hedge.			
	Mature Hedges vary in height from 1.2 to 1.8 metres. Drive entrance reasonably wide and open. Mature tree to corner of boundary.			

Property ref.				
	The highway boundary and extent of garden offers separation from Mayfair. The dwelling set well back from road.			
	Some mature hedge as boundary with no.4 which provides a small amount of additional screening.			
	Brick wall 1 metre in height with entrance gate and mature/overgrown vegetation up to 3 metres in height.			
	Located beyond southern end of Mayfair			
	Low stone wall to most of the front, mature hedge to corner and the garage is abutting the boundary.			

Access Scenario 2: Two Way Access from Manley Lane Only

4.3.8 This scenario allows for two way access to the site along Manley Lane with all necessary improvements to the highway being carried out on land within the highway corridor. All existing highway boundaries will be retained, which will maintain current levels of screening for existing residents.

4.3.9 Existing boundaries are effective at screening views potential from the gardens and ground floor windows, typically restricting views of Manley Lane to narrow views through the access gates for each house. Houses are generally set back from the road with boundary walls, fences and vegetation creating a self setting for each house to an extent. This reduces the influence of the Manley Lane character on the amenity of each of the properties. The houses at the junction are located adjacent to Post Hill, which

forms part of the setting of those houses, but Woodleigh House and No. 55 and 57 are set back from both Manley Lane and Post Hill.

Table 10: Potential effect on landscape and visual amenity

Property ref.				
	House is elevated above road and overlooks not only to the front and side, but also has a view from the rear windows down the lane. Front garden form the corner of Manley Road and Post Hill and is populated by many mature trees.			
	House is elevated above the level of road but orientated so all but one window are looking parallel to road.			
	Land rises beyond road so house is elevated to a degree relative to the road.			
	Entrance/gap in hedge very narrow.			
	Land descends away from the road bring increasing effective height of boundary treatment, but it also brings upper floor windows closer to the road level.			

Access Scenario 3: Two Way Access from Mayfair and Manley Lane

4.3.10 This scenario allows for two way access to the site along both Manley Lane and Mayfair with all necessary improvements to the highway being carried out on land within the highway corridor.

4.3.11 At Mayfair the existing boundaries are effective at screening views potential from the gardens and ground floor windows, typically restricting views of Mayfair to a narrow view through the access gates for each house. Garden boundary fences and vegetation also reduce the influence of the Mayfair street character on the amenity of each of the properties.

4.3.12 Several properties have first floor views towards Mayfair and one property, No. 2, has second floor views towards Mayfair. At elevation the changes to Mayfair and additional traffic will become more apparent, although the views are more likely to be secondary when compared to the primary views from the ground floor.

4.3.13 At Manley Lane, existing boundaries are effective at screening views potential from the gardens and ground floor windows, typically restricting views of Manley Lane to narrow views through the access gates for each house. Houses are generally set back from the road with boundary walls, fences and vegetation creating a self setting for each house to an extent. This reduces the influence of the Manley Lane character on the amenity of each of the properties. The houses at the junction are located adjacent to Post Hill, which forms part of the setting of those houses, but Woodleigh House and No. 55 and 57 are set back from both Manley Lane and Post Hill.

Table 11: Potential effect on landscape and visual amenity

Property ref.				
	House is elevated above road and overlooks not only to the front and side, but also has a view from the rear windows down the lane. Front garden form the corner of Manley Road and Post Hill and is populated by many mature trees.			

Property ref.				
	House is elevated above the level of road but orientated so all but one window are looking parallel to road.			
	Land rises beyond road so house is elevated to a degree relative to the road.			
	Entrance/gap in hedge very narrow.			
	Land descends away from the road bring increasing effective height of boundary treatment, but it also brings upper floor windows closer to the road level.			
	The highway boundary offers a degree of separation from both Mayfair and Post Hill. Glimpsed views would be available through the access gates. Traffic along Post Hill is currently a feature of the context of the property.			

Property ref.				
	Close boarded fence 1.8 metres in height around front garden, part of house and part of rear garden. Remainder of rear garden has 2m high hedge.			
	Close boarded fence 1.8 metres in height around rear garden, house and part of front garden, partly topped and backed by mature hedge.			
	Mature Hedges vary in height from 1.2 to 1.8 metres. Drive entrance reasonably wide and open. Mature tree to corner of boundary.			
	The highway boundary and extent of garden offers separation from Mayfair. The dwelling set well back from road.			
	Some mature hedge as boundary with no.4 which provides a small amount of additional screening.			
	Brick wall 1 metre in height with entrance gate and mature/overgrown vegetation up to 3 metres in height.			

Property ref.				
	Located beyond southern end of Mayfair			
	Low stone wall to most of the front, mature hedge to corner and the garage is abutting the boundary.			

Access Scenario 4: One Way Access utilising Mayfair and Manley Lane

4.3.14 This scenario allows for one way access to and from the site utilising both Manley Lane and Mayfair with all necessary improvements to the highway being carried out on land within the highway corridor.

4.3.15 At Mayfair the existing boundaries are effective at screening views potential from the gardens and ground floor windows, typically restricting views of Mayfair to a narrow view through the access gates for each house. Garden boundary fences and vegetation also reduce the influence of the Mayfair street character on the amenity of each of the properties.

4.3.16 Several properties have first floor views towards Mayfair and one property, No. 2, has second floor views towards Mayfair. At elevation the changes to Mayfair and additional traffic will become more apparent, although the views are more likely to be secondary when compared to the primary views from the ground floor.

4.3.17 At Manley Lane, existing boundaries are effective at screening views potential from the gardens and ground floor windows, typically restricting views of Manley Lane to narrow views through the access gates for each house. Houses are generally set back from the road with boundary walls, fences and vegetation creating a self setting for each house to an extent. This reduces the influence of the Manley Lane character on the amenity of each of the properties. The houses at the junction are located adjacent to Post Hill, which forms part of the setting of those houses, but Woodleigh House and No. 55 and 57 are set back from both Manley Lane and Post Hill.

Table 12: Potential effect on landscape and visual amenity

Property ref.				
	House is elevated above road and overlooks not only to the front and side, but also has a view from the rear windows down the lane. Front garden form the corner of Manley Road and Post Hill and is populated by many mature trees.			
	House is elevated above the level of road but orientated so all but one window are looking parallel to road.			
	Land rises beyond road so house is elevated to a degree relative to the road.			
	Entrance/gap in hedge very narrow.			
	Land descends away from the road bring increasing effective height of boundary treatment, but it also brings upper floor windows closer to the road level.			

Property ref.				
	The highway boundary offers a degree of separation from both Mayfair and Post Hill. Glimpsed views would be available through the access gates. Traffic along Post Hill is currently a feature of the context of the property.			
	Close boarded fence 1.8 metres in height around front garden, part of house and part of rear garden. Remainder of rear garden has 2m high hedge.			
	Close boarded fence 1.8 metres in height around rear garden, house and part of front garden, partly topped and backed by mature hedge.			
	Mature Hedges vary in height from 1.2 to 1.8 metres. Drive entrance reasonably wide and open. Mature tree to corner of boundary.			
	The highway boundary and extent of garden offers separation from Mayfair. The dwelling set well back from road.			

Property ref.				
	Some mature hedge as boundary with no.4 which provides a small amount of additional screening.			
	Brick wall 1 metre in height with entrance gate and mature/overgrown vegetation up to 3 metres in height.			
	Located beyond southern end of Mayfair			
	Low stone wall to most of the front, mature hedge to corner and the garage is abutting the boundary.			

Construction Traffic

4.3.18 A clear and well considered Construction Traffic Management Plan (CTMP) will need to be developed in order to minimise conflict between existing road users, future residents of early phases of Area B and construction traffic. In order to manage arrivals of construction traffic it is envisaged that a vehicle booking system will be introduced. It will also minimise the frequency of a departing vehicle and an arriving vehicle meeting one another on Mayfair with two way traffic operation applied along Mayfair. Such arrangement could be complemented by requiring HGV traffic, associated with the construction of Area B, to operate to a one way system with construction vehicles entering via one of either Mayfair or Manley Lane and exiting via the other.

4.4 Visual Assessment Conclusion

4.4.1 The residential amenity assessment considers the potential impacts of the proposed development on the visual amenity as experienced by residents at 14 local properties. In conclusion, it is confirmed that properties at Manley Lane would be less susceptible

to changes in views and landscape/townscape character resulting from the proposed increase in traffic levels along Manley Lane.

4.4.2 Properties along Mayfair are more sensitive to changes in traffic levels along Mayfair but garden boundary vegetation offers a good degree of separation for several of the houses. No 10, Mayfair is most sensitive to change of all properties along Mayfair because it is currently accessed along a private drive which would become a public road should the access to Site 'B' be directed along Mayfair. This property is however within the ownership of one of the Area B landowners.

5.0 Air Quality

5.1 Introduction

5.1.1 A detailed standalone Air Quality Assessment has been prepared in relation to the proposed development. This section summarises the key findings of the assessment.

5.1.2 An assessment of operational phase traffic flows has been undertaken to assess the potential impact of the proposed development with regards to increases in traffic flows along the local road network. Principal pollutants of concern considered within this assessment are nitrogen dioxide (NO_2) and particulate matter (PM_{10}).

5.1.3 The DMRB Screening Calculation Sheet V1.03c has been used to calculate pollutant concentrations. Screening receptor locations have been selected at existing property facades at locations where higher than average pollution concentrations are likely to be experienced, i.e. within the AQMA. Selecting receptors at such locations ensures a 'worst case scenario' prediction of pollutant concentrations. An assessment of the impact of existing air quality on proposed receptors has also been included.

5.1.4 Traffic data has been provided by WYG Transport Consultants for a number of different potential assessment scenarios as follows:

- AADT Calculations 2-Way – All traffic is assigned via Mayfair. AADT data provided is recorded on Mayfair at the approach to the junction with Posthill.
- AADT Calculations 1-Way – Inbound traffic is assigned southbound along Manley Lane outbound traffic northbound along Mayfair. Two way traffic movements will be retained at the top end of Mayfair and Manley Lane so that existing dwellings have two way access but all new development traffic will operate one way under this scenario.

5.1.5 The data is provided for the two traffic flow scenarios as follows:

- Without development traffic.
- With development traffic associated with 500 dwellings.

5.1.6 This Air Quality assessment has only considered the 500 dwelling scenario as a worst case assessment.

5.2 Air Quality Assessment Criteria

5.2.1 The assessment compares the 'with development' scenario and the 'without development' scenario for the selected residential receptors considered to be worst case in terms of their proximity to the different route changes. For the purposes of assessing the significance of any effects, the criteria in **Table 13** has been used. The

criteria detailed below have been derived from standards and design guidance within the IAQM document "*Land-Use Planning & Development Control: Planning for Air Quality (May 2015)"*

Table 13: Criteria and Actions

Effect Level		
	Change in Air Quality Levels against the AQAL	**'negligible'** to **'slight'** adverse effect
	Change in Air Quality Levels against the AQAL	**'moderate'** adverse effect
	Change in Air Quality Levels against the AQAL	**'substantial'** adverse effect

5.3 Assessment Methodology

5.3.1 The potential environmental effects of the operational phase of the proposed development are identified, in so far as current knowledge of the site and development allows. The significance of potential environmental effects is assessed according to the latest guidance produced by EPUK and IAQM in May 2015.

5.3.2 The methodology used to determine the potential air quality effects of the construction phase of the proposed development has been derived from the IAQM 'Guidance on the Assessment of the Impacts of Dust from Demolition and Construction' document.

5.4 Determining Significance of the Air Quality Effects

5.4.1 The significance of the effects during the operational phase of the development is based on the latest guidance produced by EPUK and IAQM in May 2015. The guidance provides a basis for a consistent approach that could be used by all parties associated with the planning process to professionally judge the overall significance of the air quality effects based on severity of air quality impacts.

5.4.2 The following rationale is used in determining the severity of the air quality effects at individual receptors:

1. The change in concentration of air pollutants, air quality effects, are quantified and evaluated in the context of air quality objectives. The effects are provided as percentage of the Air Quality Assessment Level (AQAL), which may be an air quality objective, EU limit or target value, or an Environment Agency 'Environmental Assessment Level (EAL)';
2. The absolute concentrations are also considered in terms of the AQAL and are divided into categories for long term concentrations. The categories are based on the sensitivity of the individual receptor in terms of harm potential. The degree of

harm potential – to change - increases as absolute concentrations are close to or above the AQAL;

3. Severity of the effect is described as qualitative descriptors, negligible, slight, moderate or substantial, by taking into account in combination the harm potential and air quality effect. This means that a small increase at a receptor which is already close to or above the AQAL will have higher severity compared to a relatively large change at a receptor which is significantly below the AQAL, >75% AQAL;
4. The effects can be adverse when air quality concentration increase or beneficial when concentration decrease as a result of development;
5. The judgement of overall significance of the effects is then based on severity of effects on all the individual receptors considered; and,
6. Where a development is not resulting in any change in emissions itself, the significance of effect is based on the effect of surrounding sources on new residents or users of the development, i.e., will they be exposed to levels above the AQAL.

Table 14: Impact Descriptors for Individual Receptors

Long term average concentration at receptor in assessment year				
≤75% of AQAL				
76-94% of AQAL				
95-102% of AQAL				
103-109 of AQAL				
≥110 of AQAL				

5.5 Air Quality Constraints Assessment

5.5.1 An initial constraints model was created using ADMS Roads 3.2, based on indicative traffic flows provided by the traffic consultant for the project.

5.5.2 The table below shows the results of the model comparing the 'with' and 'without' development traffic.

Table 15: Predicted Annual Average Concentrations of NO_2 at Receptor Locations

Receptor				
R1	10 Mayfair	5.58	6.19	0.61
R2	12 Mayfair	5.69	8.77	3.08
R3	3 Mayfair	5.68	8.69	3.01
R4	34 Mayfair	5.64	7.98	2.34
R5	Corner House	5.65	7.97	2.32
R6	2 Mayfair	5.67	8.38	2.71

Receptor				
R7	4 Mayfair	5.65	7.87	2.22
R8	6 Mayfair	5.65	7.78	2.13
R9	8 Mayfair	5.64	7.48	1.84
R10	Highfield	7.26	7.99	0.73
R11	Woodleigh House	7.86	8.83	0.97
R12	Barns Close	9.30	10.78	1.48
R13	55 Post Lane	10.13	11.93	1.80
R14	57 Post Lane	5.50	6.01	0.51
Annual Mean AQO not to be exceeded		**40 µg/m³**		

5.5.3 The significance of changes in traffic flow associated with the development with respect to annual mean NO_2 exposure has been assessed. The outcomes of the assessment are summarised in **Table 16**.

Table 16: Significance of Effects at Key Receptors (NO_2)

NO_2 Significance Effects at Key Receptors				
R1	0.61	2-5%	<75% of AQAL	
R2	3.08	6-10%	<75% of AQAL	
R3	3.01	6-10%	<75% of AQAL	
R4	2.34	6-10%	<75% of AQAL	
R5	2.32	6-10%	<75% of AQAL	
R6	2.71	6-10%	<75% of AQAL	
R7	2.22	6-10%	<75% of AQAL	
R8	2.13	2-5%	<75% of AQAL	
R9	1.84	2-5%	<75% of AQAL	
R10	0.73	2-5%	<75% of AQAL	
R11	0.97	2-5%	<75% of AQAL	
R12	1.48	2-5%	<75% of AQAL	
R13	1.80	2-5%	<75% of AQAL	
R14	0.51	2-5%	<75% of AQAL	
0% means a change of <0.5%				

Particulate Matter

5.5.4 **Table 17** presents a summary of the predicted change in annual mean PM_{10} concentrations at relevant receptor locations, due to changes in traffic flow associated with the development, based on modelled 'no development' and 'with development' scenarios.

Table 17: Predicted Annual Average Concentrations of PM10 at Receptor Locations

Receptor				
R1	10 Mayfair	13.54	13.64	0.10
R2	12 Mayfair	13.56	14.04	0.49
R3	3 Mayfair	13.55	14.03	0.48
R4	34 Mayfair	13.55	13.92	0.37
R5	Corner House	13.55	13.92	0.37
R6	2 Mayfair	13.55	13.98	0.43
R7	4 Mayfair	13.55	13.90	0.35
R8	6 Mayfair	13.55	13.89	0.34
R9	8 Mayfair	13.55	13.84	0.29
R10	Highfield	13.90	14.06	0.16
R11	Woodleigh House	13.93	14.10	0.17
R12	Barns Close	14.22	14.51	0.28
R13	55 Post Lane	14.29	14.60	0.31
R14	57 Post Lane	13.25	13.34	0.09
Annual Mean AQO not to be exceeded		**40 µg/m³**		

5.5.5 The significance of changes in traffic flow associated with the development with respect to annual mean PM_{10} exposure has been assessed. The outcomes of the assessment are summarised in **Table 18**.

Table 18: Significance of Effects at Key Receptors (Particulate Matter)

PM_{10} Significance Effects at Key Receptors				
R1	0.10	0%	<75% of AQAL	
R2	0.49	1%	<75% of AQAL	
R3	0.48	1%	<75% of AQAL	
R4	0.37	1%	<75% of AQAL	
R5	0.37	1%	<75% of AQAL	
R6	0.43	1%	<75% of AQAL	
R7	0.35	1%	<75% of AQAL	
R8	0.34	1%	<75% of AQAL	
R9	0.29	1%	<75% of AQAL	
R10	0.16	0%	<75% of AQAL	
R11	0.17	0%	<75% of AQAL	
R12	0.28	1%	<75% of AQAL	
R13	0.31	1%	<75% of AQAL	
R14	0.09	0%	<75% of AQAL	
0% means a change of <0.5%				

5.6 Air Quality Conclusion

5.6.1 An air quality DMRB screening assessment has been undertaken for the proposed development in Tiverton, Devon.

5.6.2 Assessment results of air quality impacts during the construction phase indicate that dust emissions associated with the construction phase are not predicted to be significant following the implementation of the mitigation measures detailed in Section 7 of the standalone Air Quality Assessment report.

5.6.3 During the operational phase, the magnitude of the effects of changes in traffic flow as a result of the proposed development, with respects to NO_2 and PM_{10} exposure, is determined to 'negligible'.

5.6.4 Taking into the consideration the assessment methodology criteria established in section 3, air quality baseline conditions and the DMRB screening assessment result, it has been determined that the proposed development site does not require a detailed air quality assessment.

6.0 Noise Assessment

6.1 Introduction

6.1.1 A detailed standalone Noise Assessment has been prepared in relation to the proposed development. This section summarises the key findings of the assessment.

6.2 Traffic Noise Assessment Criteria

6.2.1 The assessment compares the 'with development' scenario and the 'without development' scenario for the selected of residential receptors considered to be worst case in terms of their proximity to the different route changes. For the purposes of assessing the significance of any effects, the criteria in **Table 19** has been used. The noise level criteria detailed below have been derived from standards and design guidance from Table 3.2 of HD213/11 published in November 2011 *(Design Manual for Roads and Bridges).*

Table 19: Noise Level Criteria and Actions (Traffic Noise Assessment)

Effect Level		
	Change in Traffic Noise Levels	Change in Noise Levels $L_{A10\ 18hr}$ ≥ 0 dB and < 5 dB
	Change in Traffic Noise Levels	Change in Noise Levels $L_{A10\ 18hr}$ ≥ 5 dB and < 10 dB
	Change in Traffic Noise Levels	Change in Noise Levels $L_{A10\ 18hr}$ ≥ 10 dB

6.3 Noise Insulation Regulations

6.3.1 The 1975 Noise Insulation Regulations and subsequent amendment Regulations [noise insulation (amendment) regulations 1988] provide criteria for assessing the eligibility for noise mitigation or properties based on variations in traffic noise due to a new or improved road scheme. Noise level criteria are given within the Regulations which, if satisfied, indicate whether properties in the vicinity may be entitled to the installation of additional noise insulation or to a grant to cover the cost of the noise insulation.

6.3.2 The entitlement conditions of the Noise Insulation Regulations are triggered when:

i. 'the $L_{A10\ (18\ hour)}$ predicted figure is greater by at least 1 dB than the prevailing noise level'

ii. 'the $L_{A10\ (18\ hour)}$ predicted figure is not less than the specified level ($L_{A10\ (18\ hour)}$ = 68 dB)'

iii. 'the noise caused, or expected to be caused, by traffic using or expected to use the new highway makes an effective contribution to the $L_{A10\ (18\ hour)}$ predicted figure of at least 1 dB'

6.4 Noise Assessment

6.4.1 The tables below shows the results of the traffic noise assessment comparing the 'with' and 'without' development traffic noise levels for the first and last phases of the proposed development. A visual representation is shown in SK03 and SK04 of the separate Noise Assessment report.

6.4.2 It should be noted however that the access to site B, as modelled in this assessment, will only be for the first five years. After this time, access to site B will be from a purpose built junction on Post Hill and via Site A. The noise levels will subsequently reduce at the identified receivers.

- **Scenario 1a** is defined as the traffic noise with 300 houses within the proposed development with all traffic entering and exiting the site via Mayfair
- **Scenario 1b** is defined as the traffic noise with 300 houses within the proposed development with traffic entering site via Manley Lane and exiting site via Mayfair.
- **Scenario 2** (shown on Table 22) is defined as the traffic noise with 475 houses within the proposed development with all traffic entering and exiting the site via Mayfair.
- **Scenario 3a** is defined as the traffic noise with 500 houses within the proposed development with all traffic entering and exiting the site via Mayfair
- **Scenario 3b** is defined as the traffic noise with 500 houses within the proposed development with traffic entering site via Manley Lane and exiting site via Mayfair.

Table 20: Difference Between With and Without Scenarios (One Way Traffic)

Location						
10 Mayfair	46.8	53.7	6.9	46.8	56.0	9.2
8 Mayfair	48.1	55.7	7.6	48.1	57.9	9.8
12 Mayfair	47.9	54.3	6.4	47.9	56.5	8.6
6 Mayfair	47.0	54.4	7.4	47.0	56.8	9.8
4 Mayfair	43.9	51.7	7.8	43.9	53.9	10.0
3 Mayfair	46.1	52.3	6.2	46.1	54.5	8.4
2 Mayfair	49.9	56.3	6.4	49.9	58.8	8.9
34 Mayfair	51.6	52.5	0.9	51.6	53.0	1.4

Location						
Corner House Post Hill	58.1	59.2	1.1	58.1	60.0	1.9
57 Post Hill	62.8	62.8	0.0	62.8	62.9	0.1
55 Post Hill	56.6	56.7	0.1	56.6	56.8	0.2
Woodleigh House, Manley Lane	54.3	54.4	0.1	54.3	54.5	0.2
Barns Close Manley Lane	52.4	52.5	0.1	52.4	52.5	0.1
Highfield, Manley Lane	50.2	50.2	0.0	50.2	50.3	0.1
R15 47A Post Hill	65.5	65.9	0.4	65.5	66.1	0.6

Table 21: Difference Between With and Without Scenarios (Two Way Traffic)

Location						
10 Mayfair	46.8	51.3	4.5	46.8	53.6	6.8
8 Mayfair	48.2	53.3	5.1	48.2	55.8	7.6
12 Mayfair	48.0	52.2	4.2	48.0	54.5	6.5
6 Mayfair	47.0	51.8	4.8	47.0	54.2	7.2
4 Mayfair	44.4	49.3	4.9	43.8	51.5	7.7
3 Mayfair	46.0	50.2	4.2	46.0	52.5	6.5
2 Mayfair	49.9	53.7	3.8	49.9	56.2	6.3
34 Mayfair	51.6	52.4	0.8	51.6	53.0	1.4
Corner House Post Hill	58.1	58.9	0.8	58.1	59.6	1.5
57 Post Hill	62.8	63.3	0.5	62.8	64.0	1.2
55 Post Hill	56.9	60.1	3.2	56.9	64.4	7.5
Woodleigh House, Manley Lane	54.9	59.6	4.7	54.9	64.6	9.7
Barns Close Manley Lane	53.4	59.5	6.1	53.4	65.5	12.1

Location						
Highfield, Manley Lane	51.3	57.8	6.5	51.3	63.0	11.7
R15 47A Post Hill	65.2	65.6	0.4	65.2	65.7	0.5

Table 22 Difference Between With and Without Scenarios (Two Way Traffic)

Location			
10 Mayfair	46.8	55.7	8.9
8 Mayfair	48.1	57.7	9.6
12 Mayfair	47.9	56.2	8.3
6 Mayfair	47.0	56.5	9.5
4 Mayfair	43.9	53.6	9.7
3 Mayfair	46.1	54.2	8.1
2 Mayfair	49.9	58.5	8.6
34 Mayfair	51.6	52.9	1.3
Corner House Post Hill	58.1	59.9	1.8
57 Post Hill	62.8	62.9	0.1
55 Post Hill	56.6	56.8	0.2
Woodleigh House, Manley Lane	54.3	54.5	0.2
Barns Close Manley Lane	52.4	52.5	0.1
Highfield, Manley Lane	50.2	50.3	0.1
R15 47A Post Hill	65.5	65.7	0.2

6.4.3 The assessments in Tables 20 to 22 above show a worst case scenario with the highest predicted traffic flows in the first five years. The levels of change indicated in Tables 20 to 22 are expected when there are large increases in traffic flows on previously low flow roads.

6.4.4 Additionally the assessment indicates that for the temporary period during the introduction of 300 properties on site B there are impacts where the noise level change is greater than 5 dB but less than 10 dB at properties along Mayfair in both the one way and two way assessments and along Manley Lane for the one way assessment. This is also true for the development of 475 properties on site B with two way access via Mayfair.

6.4.5 During the temporary period the introduction of 500 properties on Site B, the one way traffic route indicates noise change impacts for properties along Mayfair of greater than 5 dB and but less than 10 dB, however noise change impacts greater than 10 dB along Manley Lane. The two way traffic route indicates noise change levels for properties along Mayfair of up to 10 dB. Given that the one way traffic scenario with 500 properties exceeds 12 dB along Manley lane, this route is not being considered further.

6.4.6 **Table 23** below summarises the assessment findings under the different scenarios

Table 23: Summary of Traffic Impacts

	Mayfair (2-Way)		
300 Properties	**Scenario 1A >5dB - <10dB**	**Scenario 1B >5dB - <10dB**	**Scenario 1B >5dB - <10d**
475 Properties	**Scenario 2 Up to 10 dB**	**Not Assessed**	**Not Assessed**
500 Properties	**Scenario 3A >=10dB**	**Scenario 3B >5dB - <10dB**	**Scenario 3B >10dB**

6.4.7 It should be noted however that the access to site B, as modelled in this assessment, will only be for the first five years, as shown in **table 3** (see section 3.2 of this report). After this time, access to site B will be from a purpose built junction on Post Hill and via Site A. The noise levels will subsequently reduce at the identified receivers.

6.4.8 In respect to external areas, additional predictions of the noise level changes indicate that the noise level in the gardens of the identified receivers will not exceed 55dB LAeq,16h where they did not do so already.

6.4.9 In respect to the Noise Insulation Regulations, none of the residential receptors have exceeded 68dB LA10,18h and so based on the predicted traffic flows the findings of this assessment indicate no eligibility under these regulations.

7.0 Conclusions

7.1.1 The purpose of this study was to provide a number of technical assessment reports to aid the masterplanning Area B of the Tiverton EUE and to assess the amenity impact of alternative access arrangements.

7.1.2 The technical reports described at paragraph 1.2.2 are all provided as standalone reports to be read in conjunction with this study.

7.1.3 To accelerate the delivery of Area B a number of access options have been assessed. These options were as follows:

- Access and egress via Mayfair (a two-way system)
- Access and egress via Manley Lane (a two-way system)
- Access via Mayfair and egress via Manley Lane (a one-way system)
- Access via Manley Lane and egress via Mayfair Lane (a one-way system)

7.1.4 The review of the access options quickly established that access and egress to the whole of Area B via Manley Lane would not be possible due to restricted road widths and level changes at the junction with Post Hill. Whilst this problem would be largely overcome by a one-way system, particularly entry via Manley Lane and exit via Mayfair other problems would arise. The main concern in relation to a one-way system is the potential for drivers who are seeking to access Area B being misled by residents of existing properties turning into Mayfair, or Manley Lane, despite signage to advise otherwise.

7.1.5 The only option therefore supported by the access option review was access and egress via Mayfair.

7.1.6 Construction traffic would be controlled by a Construction Traffic Management Plan (CTMP) and planning conditions controlling the hours of construction during the day. The impact of construction traffic could be further reduced by operating a one way system with construction vehicles entering via one of either Mayfair or Manley Lane and exiting via the other.

7.1.7 In addition to highway engineering considerations, the impact of traffic levels associated with the proposed access options was considered in terms of landscape and visual amenity, air quality and noise impacts.

7.1.8 The residential amenity assessment considers the potential impacts of the proposed development on the visual amenity as experienced by residents at 14 local properties. It is considered that properties at Manley Lane would be less susceptible to changes in views and landscape/townscape character resulting from the proposed increase in traffic levels along Manley Lane. Properties along Mayfair are more sensitive to changes

in traffic levels along Mayfair but garden boundary vegetation offers a good degree of separation for several of the houses.

7.1.9 Whilst Mayfair is regarded as more sensitive to change, the overall impact of the various options is considered to have a slight adverse impact upon the amenity of residents in terms of landscape, visual and amenity impact. In this respect the degree of change would be within levels reasonably expected with urban extension developments.

7.1.10 The air quality impacts of the proposed development options are shown to be negligible. Again, the degree of change would be within levels reasonably expected with urban extension developments, particularly in locations such as this where there isn't an existing air quality concern.

7.1.11 The noise modelling assessment considered the change in noise levels as a result of the access options together with two levels of traffic associated firstly with 300 homes and secondly with 500 homes.

7.1.12 Under the 300 homes scenario, the change in noise level was not considered significant within any access option. Under the 500 home scenario, the change in noise level was considered significant in relation to access and egress via Mayfair and at Manley Lane under a one-way system.

7.1.13 Following the above results further modelling was undertaken reducing the number of homes (and therefore traffic volumes) until the impact fell outside of the significant impact category. This exercise was only undertaken for the access and egress via Mayfair option given that the Highway Authority did not support the one-way system.

7.1.14 Under the 475 homes scenario, the change in noise level associated with access and egress via Mayfair was not considered to be significant.

7.1.15 The noise assessment also noted that none of the access options resulted in predicted noise levels in excess of existing noise levels currently experienced at properties that front onto Post Hill. In other words the proposed access arrangements would not increase noise levels over and above noise levels experienced by properties in the locality already. The noise implications of the proposed access arrangements would therefore be within levels reasonably expected as a result of urban extension developments.

7.1.16 It should be noted that the development would not deliver 475 homes all at once and additional traffic flows would be significantly lower at the start of the development construction period. Put into context, at the busiest times of the day (1 hour in the morning and 1 hour in the afternoon) the traffic assessment shows that 225 homes would result in only 2 additional cars per minute using Mayfair. Additional traffic flows would be less than this for most of the day.

7.1.17 Planning conditions are routinely used to control the amount of development that can occur before certain types of infrastructure are in place. A planning condition could be used to prevent the development of more than 475 homes at Area B until such time that access is provided from Area A. A planning condition could also require any access via Mayfair to revert to a pedestrian, cycle and emergency access only once an access between Area A and Area B is provided.

7.1.18 In conclusion the preferred option to accelerate the delivery of Area B is through a two-way access via Mayfair to facilitate the construction of up to 475 homes. Whilst this would result in some adverse impacts upon the amenity of neighbouring properties, such impacts would not be significant and would be within levels reasonably expected with urban extension developments.

Appendix 1 – Proposed Site Access Via Mayfair - Drawing SK06

POST HILL

PROPOSED NEW 1.6m WIDE PEDESTRIAN CROSSING REFUGE

PROPOSED NEW VARIABLE WIDTH FOOTWAY. 1.6m WIDE MINIMUM WIDTH

REMOVAL OF EXISTING BUS LAY-BY AND REPLACEMENT WITH ON ROAD BUS STOP

BUS STOP

POTENTIAL CANTILEVER STYLE BUS SHELTER

EXISTING GRASS VERGE TO BE REMOVED AND REPLACED WITH FOOTWAY

2.4m

MAYFAIR WIDENED TO 5.5m WIDE THROUGH LENGTH OF ROAD

2.2m

5.5m

1.4m

PROPOSED UNCONTROLLED PEDESTRIAN CROSSING.

2.3m

MAYFAIR

1.5m

5.5m

VARIABLE WIDTH FOOTWAY. 0.9M WIDE MINIMUM

55.4m

47.0m

1.5m WIDE FOOTWAY

PROPOSED 4.0m WIDE SPEED HUMP

PROPOSED UNCONTROLLED PEDESTRIAN CROSSING

FOR CONTINUATION SEE INSET

INSET

PRIORITY OVER ON COMING TRAFFIC

ROAD SIGN TO DIAGRAM NUMBER 811 AND 811.1 OF THE TRAFFIC SIGNS MANUAL. PRIORITY OVER ONCOMING VEHICLE

Priority over oncoming vehicles

6.8m

CARRIAGEWAY WIDTH REDUCED TO BE 3.50m WIDE

51.0m

7.4m

ROAD SIGN TO DIAGRAM NUMBER 615 AND 615.1 OF THE TRAFFIC SIGNS MANUAL. GIVE WAY TO ONCOMING VEHICLES

Give way to oncoming vehicles

GIVEWAY TO ON COMING TRAFFIC

PROPOSED 4.0m WIDE SPEED HUMP

5.5m

1.5m

NOTES

1. Do no scale from this drawing.
2. This drawing is for illustrative purposes only and not for construction.
3. This drawing is to be read and printed in colour.

REV	DETAILS	DRAWN BY	CHECKED BY	DATE

CLIENT:

Mid Devon District Council

PROJECT:

Tiverton Eastern Urban Extension

DRAWING TITLE:

Proposed Highway Alterations
Mayfair and Posthill

SCALES:	SHEET SIZE:
1:250	A1

DRAWN:	CHECKED:	DATE:
DD	PD	10.06.2016

WYG Transport
part of WYG group
Hawkridge House, Chelston Business Park
Wellington, Somerset, TA21 8YA
t: 01823 666 150 f: 01823 666 631

DRAWING NUMBER: A095750 - SK06

REVISION: -

Appendix 2 – Residential Amenity Study Property Locations – Drawing RAS01

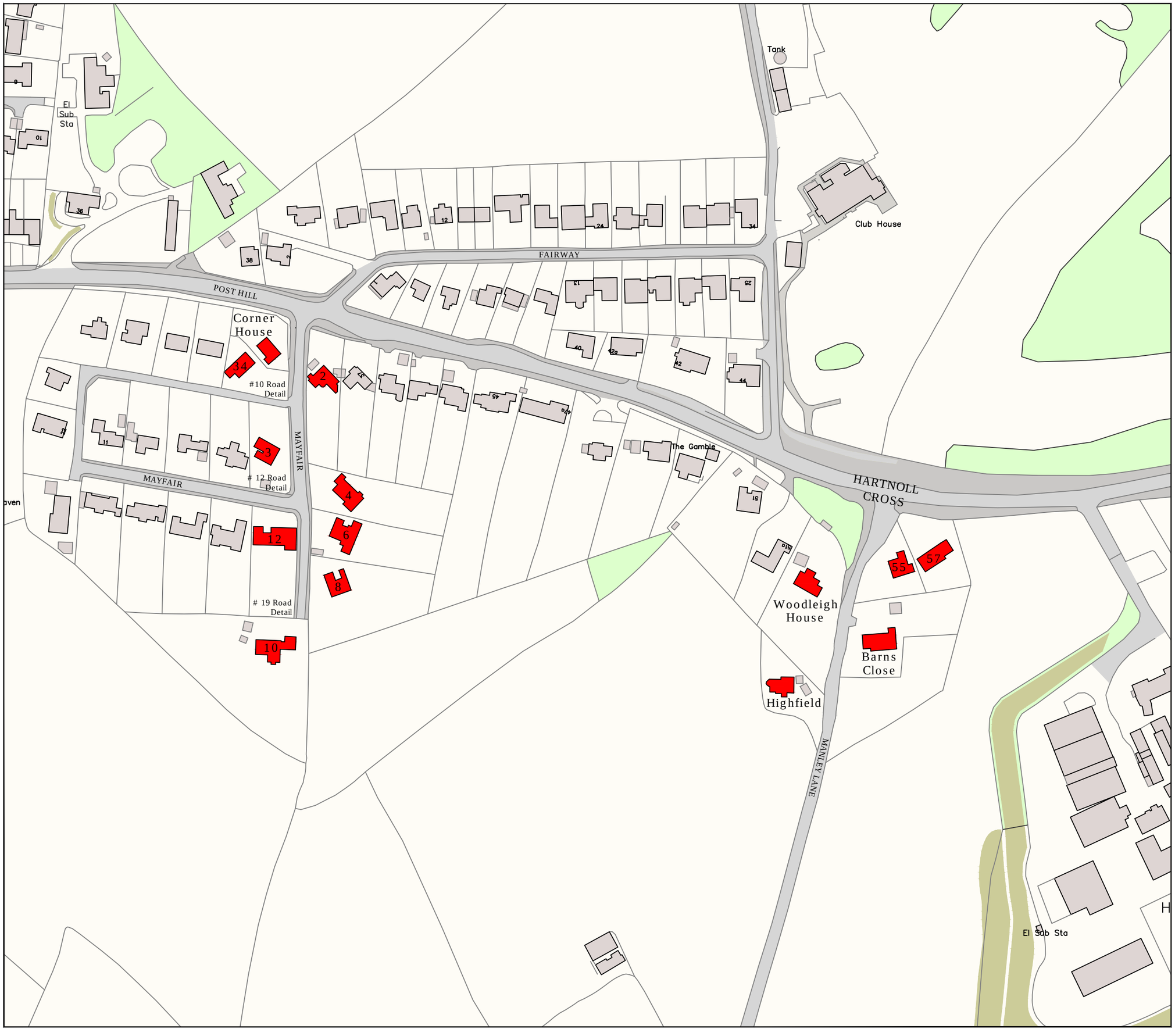
Mid Devon DISTRICT COUNCIL

wyg

Tiverton EUE

Residential Amenity Study

RAS.01



Key

Residential properties included within Residential Amenity Assessment

0 100 200 300 400 500 m

Scale @ A3 - 1:2,000

North

A095750 RAS01.dwg 23 Feb 2016

5th Floor, Longcross Court, 47 Newport Road, Cardiff CF24 0AD
☎ +44 (0)29 2082 9200 ✉ cardiff@wyg.com ● www.wyg.com